SURVEY REPORT

PRE-RENOVATION INVESTIGATIVE SURVEY FOR HAZARDOUS BUILDING MATERIALS

SALT SHED ROOF REPLACEMENTS STAFFORD, UNION & VERNON, CONNECTICUT

Project No. 171-429

Prepared for

State of Connecticut
Department of Transportation
Newington, Connecticut

Prepared by

TRC
Windsor, Connecticut

Issued
August 2019

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Stephen R. Arienti, CHMM
Senior Project Manager – Program Manager

Erik R. Plimpton, P.E., CHMM, CMC
Vice President – Engineer in Charge

TRC Project No. 289951.6040.0710
Issued-August 2019

TRC
21 Griffin Road North
Windsor, Connecticut 06095
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PROJECT OUTLINE

DOT Project No.:	171-429
Assignment No.:	519-6040
DOT Project Manager:	Cornato R. Vella
Site Address:	Salt Shed Roof Replacements Stafford, Union & Vernon, CT
TRC Project No.:	289951.6040.0710
Asbestos Inspector:	Cathryn Lemire (LIC #001000)
Lead Inspector:	Cathryn Lemire
Environmental Technical Assistant:	Tyler Noll
Date(s) of Inspection:	8/14/19 & 8/20/19
Asbestos Identified:	None
Lead Paint Identified:	None
Gen. Bldg. Mat. Haz Waste:	No, per EPA/CTDEEP memo dated January 26, 2004
Add'l Haz./Reg. Mat./Waste/Items:	Yes (see Table 6)

Additional Notes:

The properties consist of one-story salt storage sheds which will undergo roof replacement and associated repair projects. Asphalt shingles and building paper are to be removed and replaced with a PVC roof system; damaged louvers will be replaced and additional louvers may be installed in the rear wall of the sheds. All existing trim will be removed and replaced. All gaps at the truss system to ledge of timber barrier wall will be sealed and all existing cedar shingles, louvers and soffits will be stained. Existing personnel doors, canopies and fabric doors will be removed; personnel doors will be in-filled and canopies will be retrofitted to match cedar shingles. The existing interior divider barrier wall will also be removed. No water/sanitary systems service the buildings; however, there is electrical power. No "Mega Door" present. Any existing brine, MgCl, CaCl, etc. solution tanks outside sheds not included in renovation/inspection.

TABLES

TABLE 1
BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Sample No.	Sample Location	Type of Homogeneous Material	% and Type Asbestos
1	Vernon salt shed	C1 – white caulking	ND[1]
2	Vernon salt shed	C1 – white caulking	ND
3	Union salt shed	C2 – pliable white caulk	ND[1]
4	Union salt shed	C2 – pliable white caulk	ND
5	Vernon salt shed	SH1 – black/grey rock (bottom layer) shingle	ND[1]
6	Vernon salt shed	SH1 – black/grey rock (bottom layer) shingle	ND
7	Vernon salt shed	SH2 – black/brown rock (top layer) shingle	ND[1]
8	Vernon salt shed	SH2 – black/brown rock (top layer) shingle	ND
9	Union salt shed	SH3 – black/grey shingle bottom layer	ND[1]
10	Union salt shed	SH3 – black/grey shingle bottom layer	ND
11	Union salt shed	SH4 – black/brown shingle top layer	ND[1]
12	Union salt shed	SH4 – black/brown shingle top layer	ND
13	Stafford salt shed	SH5 – black/dark brown shingle	ND[1]
14	Stafford salt shed	SH5 – black/dark brown shingle	ND
15	Stafford salt shed	SH6 – black/brown shingle	ND[1]
16	Stafford salt shed	SH6 – black/brown shingle	ND
17	Vernon salt shed	T1 – black tar between wooden beams	ND[1]
18	Vernon salt shed	T1 – black tar between wooden beams	ND
19	Vernon salt shed	VB1 – black vapor barrier under roof shingles	ND[1]
20	Vernon salt shed	VB1 – black vapor barrier under roof shingles	ND
21	Vernon salt shed	VB2 – black vapor barrier on walls	ND[1]
22	Vernon salt shed	VB2 – black vapor barrier on walls	ND
23	Union salt shed	VB3 – black vapor barrier	ND[1]
24	Union salt shed	VB3 – black vapor barrier	ND

NA/PVA Not analyzed/positive via inseparable association with a confirmed positive ACM
NA/PS Not analyzed/positive stop, homogeneous to sample proven to contain asbestos
ND<1% Non-detected, less than 1%
NAD No asbestos detected
\+ Although found to be negative by analysis, material is homogeneous to a determined ACM and therefore must be considered positive
1 NOB Result confirmed by TEM analyses
* Quantified by EPA 400 Point Count Method

TABLE 1 (...continued)
BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Sample No.	Sample Location	Type of Homogeneous Material	% and Type Asbestos
25	Union salt shed	VB4 – black vapor barrier	ND[1]
26	Union salt shed	VB4 – black vapor barrier	ND
27	Stafford salt shed	VB5 – black vapor barrier on roof	ND[1]
28	Stafford salt shed	VB5 – black vapor barrier on roof	ND
29	Vernon salt shed	WP1 – black waterproofing	Trace chrysotile[1]
30	Vernon salt shed	WP1 – black waterproofing	ND
31	Stafford salt shed	T2 – black tar on interior wall	ND
32	Stafford salt shed	T2 – black tar on interior wall	ND[1]
33	Stafford salt shed	VB6 – vapor barrier behind cedar shakes	ND
34	Stafford salt shed	VB6 – vapor barrier behind cedar shakes	ND[1]

NA/PVA Not analyzed/positive via inseparable association with a confirmed positive ACM
NA/PS Not analyzed/positive stop, homogeneous to sample proven to contain asbestos
ND<1% Non-detected, less than 1%
NAD No asbestos detected
\+ Although found to be negative by analysis, material is homogeneous to a determined ACM and therefore must be considered positive
1 NOB Result confirmed by TEM analyses
* Quantified by EPA 400 Point Count Method

TABLE 2
IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%)
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Material	Sampled/ Assumed (mo/yr)	General Location	NESHAP Category	AHERA Category	Estimated Quantity
STAFFORD SALT SHED					
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					
UNION SALT SHED					
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					
VERNON SALT SHED					
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					

AHERA Categories = thermal system insulation (TSI), surfacing material or miscellaneous
NESHAP Categories = friable, category I non-friable or category II non-friable
Friable = crumbled, pulverized or reduced to powder by hand pressure when dry
Category I Non-friable = packings, gaskets, resilient floor covering and asphalt roofing
Category II Non-friable = all non-friable that is not Category I

TABLE 3
CONFIRMED NON-ASBESTOS CONTAINING MATERIALS (<1%)
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Material	General Location
C1 – white caulking	Vernon salt shed – D-side wood/conc junction
C2 – pliable white caulk	Union salt shed – C-side personnel door
SH1 – black/grey rock (bottom layer) shingle	Vernon salt shed (bottom layer) roof
SH2 – black/brown rock (top layer) shingle	Vernon salt shed (top layer) roof
SH3 – black/grey shingle bottom layer	Union salt shed (bottom layer) roof
SH4 – black/brown shingle top layer	Union salt shed (top layer) roof
SH5 – black/dark brown shingle	Stafford salt shed roof
SH6 – black/brown shingle	Stafford salt shed roof
T1 – black tar between wooden beams	Vernon salt shed – between wooden beams
VB1 – black vapor barrier under roof shingles	Vernon salt shed – roof under shingles
VB2 – black vapor barrier on walls	Vernon salt shed – exterior walls
VB3 – black vapor barrier	Union salt shed roof under shingle
VB4 – black vapor barrier	Union salt shed beneath siding
VB5 – black vapor barrier on roof	Stafford salt shed – roof under shingles
WP1 – black waterproofing	Vernon salt shed C/D corner
T2 – black tar on interior wall	Stafford salt shed – between wooden beams
VB6 – vapor barrier behind cedar shakes	Stafford salt shed – behind cedar shakes

** However, associated layers are positive.*

TABLE 4
SUMMARY OF LEAD PAINT XRF MEASUREMENTS
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Structure	No. of Measurements	Calibrations	Void	Lead Detected	No Lead Detected
Stafford Salt Shed	9	3	0	0	6
Union Salt Shed	11	0	0	3	8
Vernon Salt Shed	15	4	0	3	8

See Lead Paint XRF Measurement Table in Appendix H.

TABLE 5
SUMMARY OF COMPOSITE BUILDING MATERIAL WASTE CHARACTERIZATION
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Waste Stream	Metal	mg/L Leachate	Hazardous/Non-Hazardous
Stafford Salt Shed Bldg. Material Composite (Excluding metal substrates)	**No TCLP sample for Lead warranted as XRF readings on non-metallic components were all below 1.0 mg/cm² and therefore the debris is presumed as non-hazardous per CTDEEP/USEPA clarification memo of January 26, 2004.**		
Union Salt Shed Bldg. Material Composite (Excluding metal substrates)	**No TCLP sample for Lead warranted as XRF readings on non-metallic components were all below 1.0 mg/cm² and therefore the debris is presumed as non-hazardous per CTDEEP/USEPA clarification memo of January 26, 2004.**		
Vernon Salt Shed Bldg. Material Composite (Excluding metal substrates)	**No TCLP sample for Lead warranted as XRF readings on non-metallic components were all below 1.0 mg/cm² and therefore the debris is presumed as non-hazardous per CTDEEP/USEPA clarification memo of January 26, 2004.**		

Note: Any metal components should be recycled to promote waste minimization efforts, rather than disposed of, and the recycling operation is exempt from the USEPA RCRA and CTDEEP Hazardous Waste regulations.

See Appendix I for CTDEEP/USEPA clarification memo of January 26, 2004.

BDL - Below Detection Limit
ND - Not Detected

TABLE 6
INVENTORY OF ADDITIONAL HAZARDOUS/REGULATED MATERIALS, WASTES AND ITEMS IDENTIFIED
SALT SHED ROOF REPLACEMENT PROJECT
STAFFORD, UNION & VERNON, CONNECTICUT

Quantity	Size	Material/Item	General Location	Potential Hazard
15		Halogen Lights (Lamps)	Vernon Salt Shed	UW – Hg lamps
		Bird guano	Vernon Salt Shed	IH
17		Halogen Lights (Lamps)	Union Salt Shed	UW – Hg lamps
		Bird Guano	Union Salt Shed	IH
1		Old mega door lift panels	Union Salt Shed	UW – used electronics (printed circuit boards)
		Mold	Union Salt Shed	IH
15		Halogen Lights (Lamps)	Stafford Salt Shed	UW – Hg lamps
		Bird guano	Stafford Salt Shed	IH

CRW- Connecticut Regulated Waste – PCBs (CR01), Oils (CR02/CR03), waste chemical liquids - antifreeze, latex & solvent paints, sludges, etc. (CR04), waste chemical solids (CR05)
UW- Universal Waste (batteries, thermostat ampoules, fluorescent lamps, used electronics)
IH- Inhalation hazard (silicas, etc.)
I- Ignitable - may contain ingredients which are ignitable (materials which have a flashpoint <140°F) (D001)
C- Corrosive - may contain ingredients which are alkaline or acidic (materials with a PH<2 or >12.5) (D002)
T- Toxic - may contain ingredients which are harmful if swallowed or which release vapors that can cause irritation
R- Reactive – may contain ingredients which are unstable, react violently with water or are explosive (D003)

APPENDIX A

SITE PHOTOS WITH DOT ASSIGNMENT AND MAP

PHOTO 1. Stafford Salt Shed Interior.

PHOTO 2.
Stafford Salt Shed
D-side.

TRC

PHOTO 3.
Union Salt Shed
A-side.

PHOTO 4. Union Salt Shed B-side.

TRC

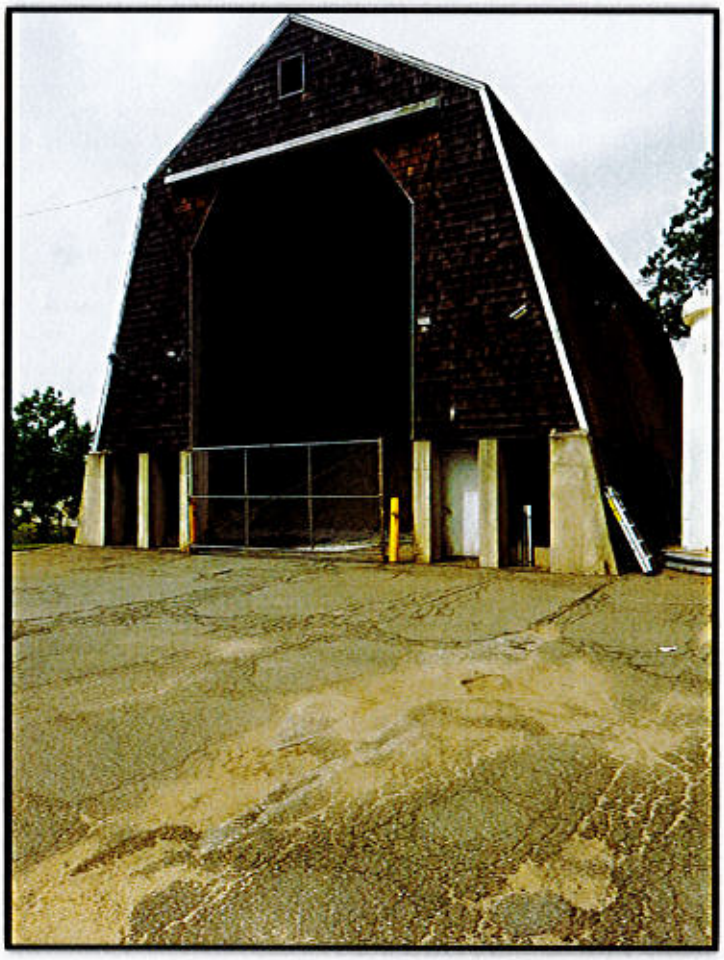


PHOTO 5.
Union Salt Shed
C-side.

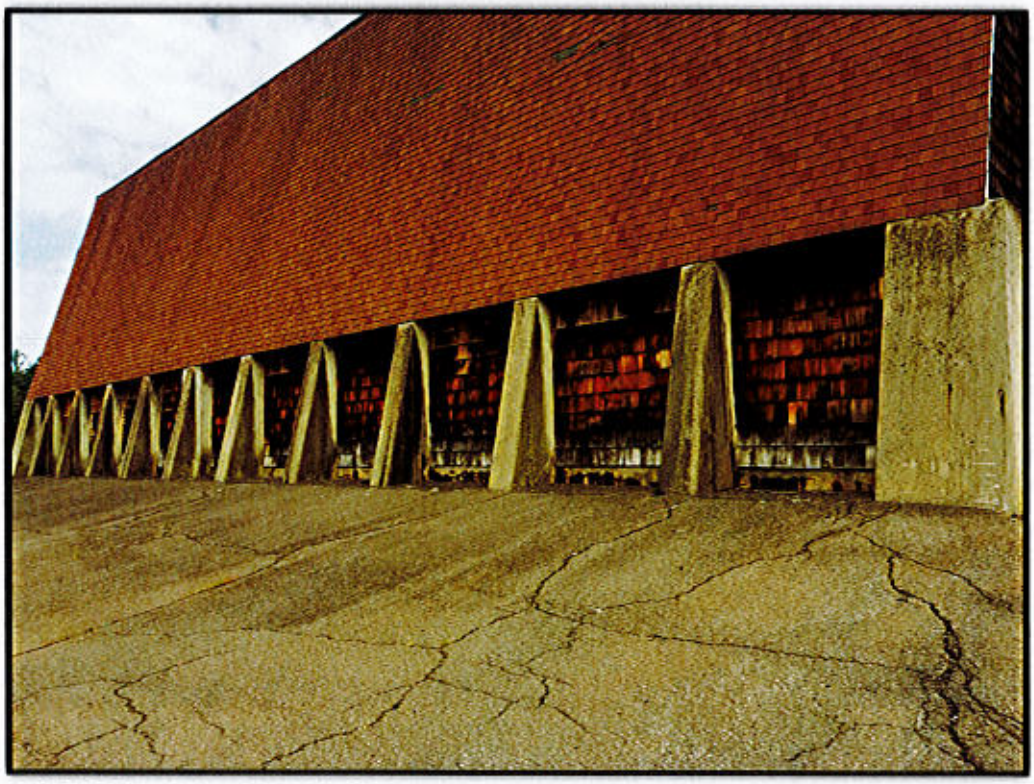


PHOTO 6. Union Salt Shed D-side.

TRC

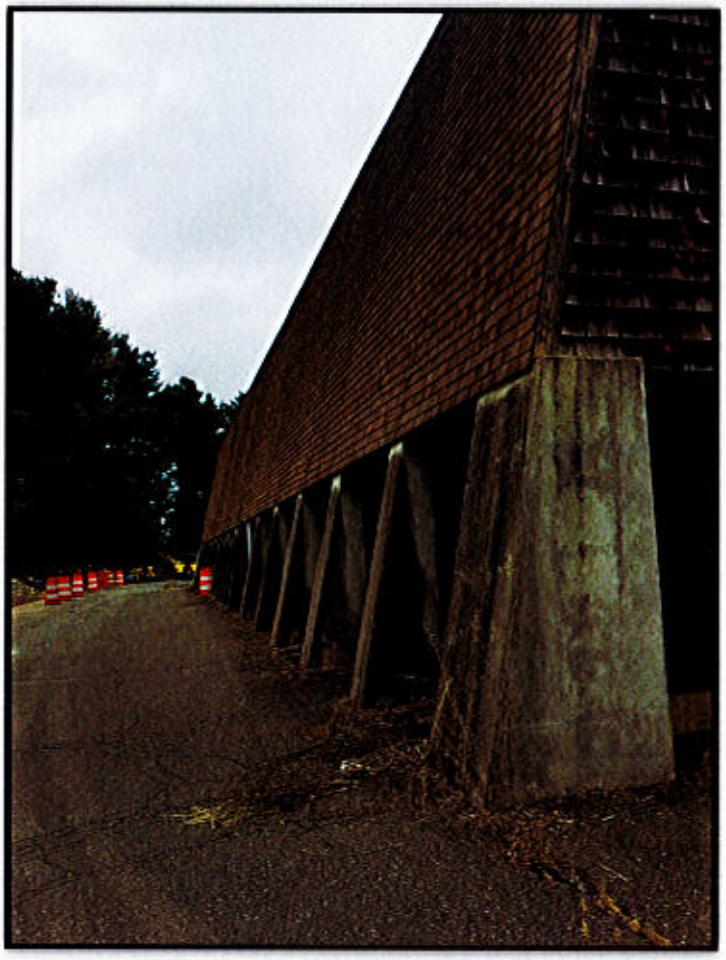


PHOTO 7.
Vernon Salt Shed
A-side.

PHOTO 8. Vernon Salt Shed B-side.

TRC

PHOTO 9. Vernon Salt Shed C-side.

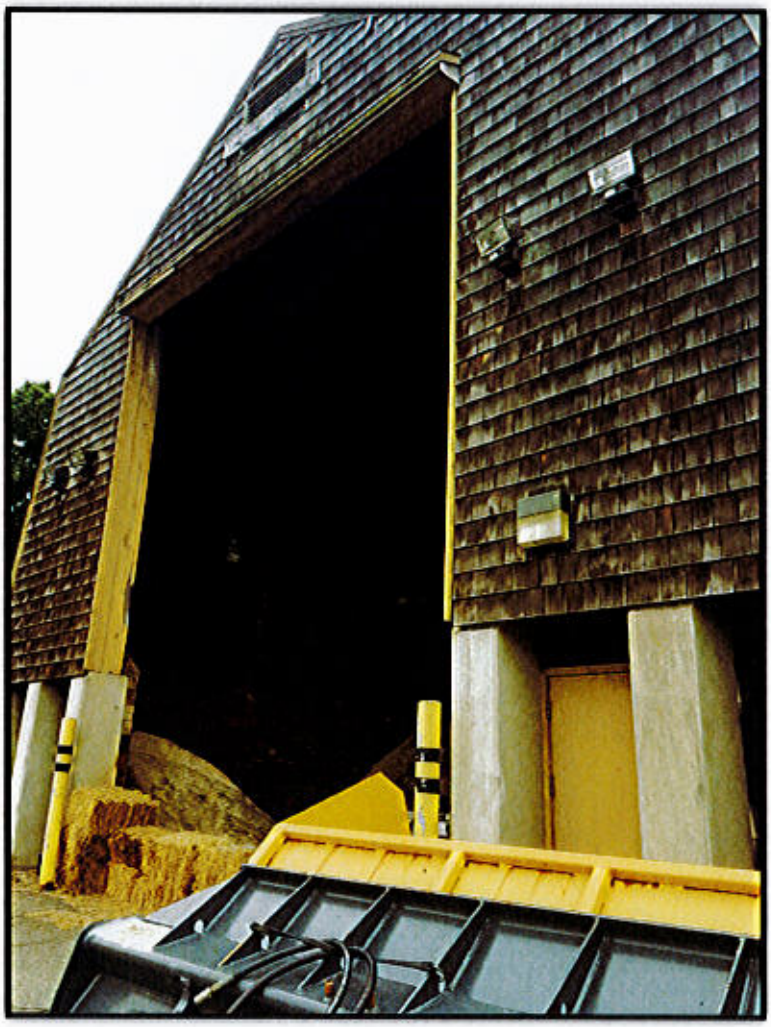
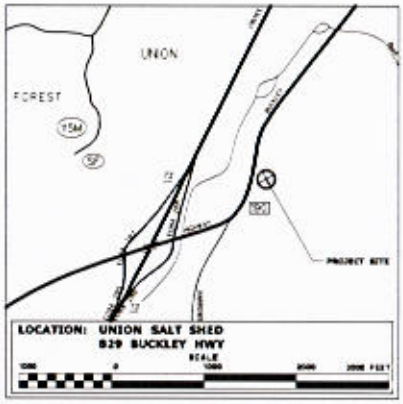
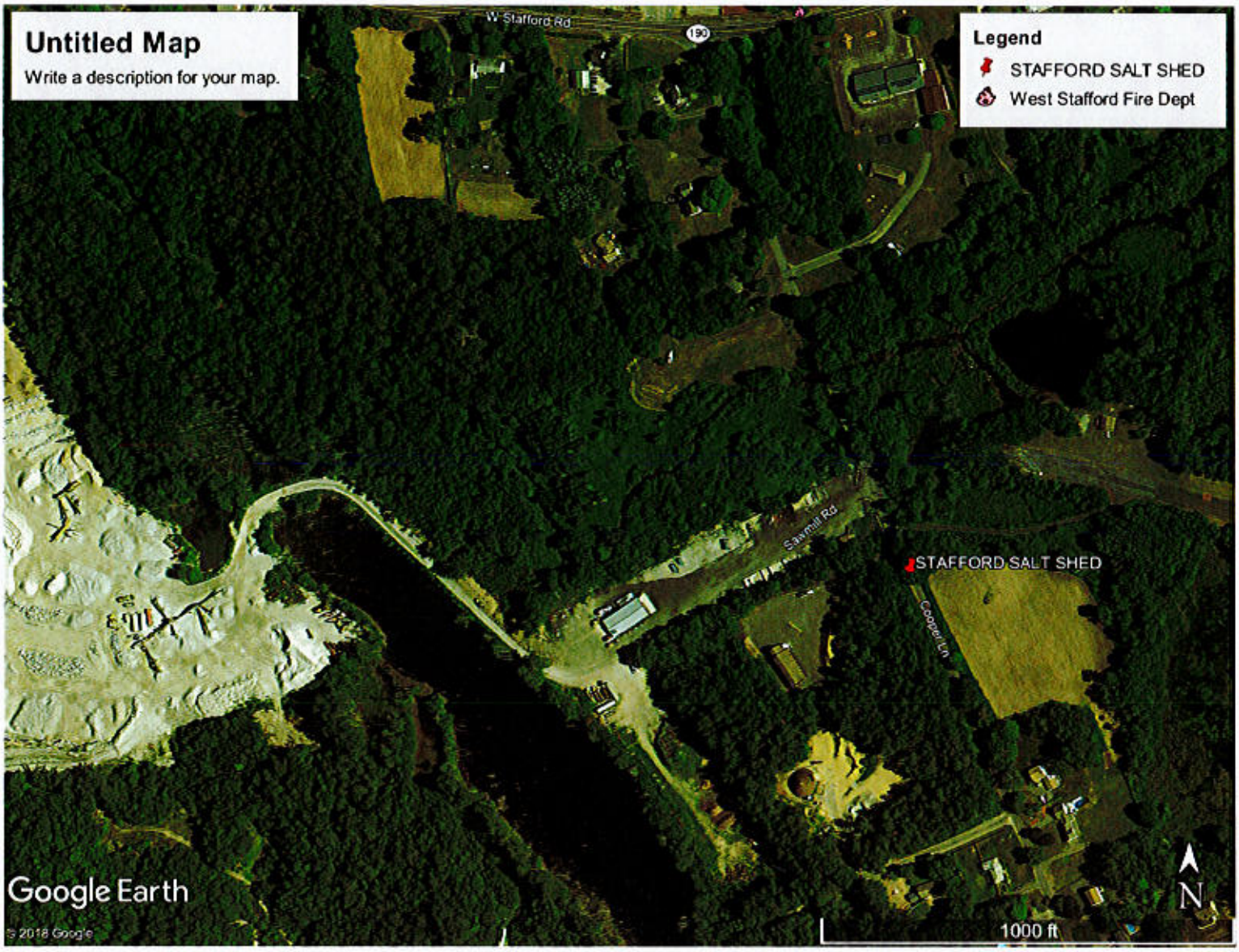


PHOTO 10.
Vernon Salt Shed
D-side.

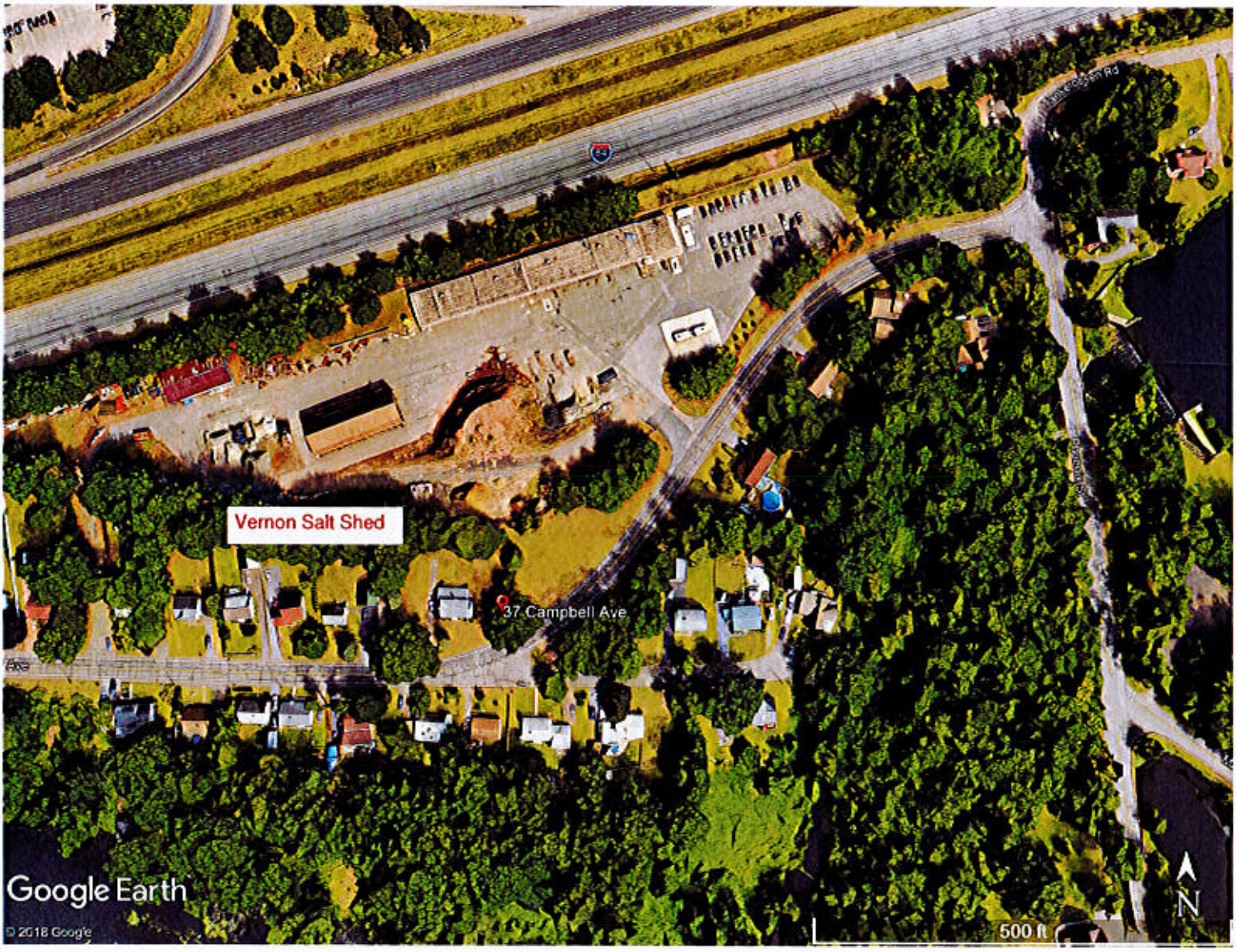
TRC



1	CT	STAFFORD, UNION, VERNON	-	8171-0425	2019	-	0-2	1-33


Untitled Map
Write a description for your map.
W Stafford Rd
190
Legend
STAFFORD SALT SHED
West Stafford Fire Dept
Sawmill Rd
STAFFORD SALT SHED
Cooper Ln
Google Earth
© 2018 Google
1000 ft
N


Union Salt Shed
829 BUCKLEY HIGHWAY
190
Google Earth
© 2018 Google
N
500 ft


Vernon Salt Shed
37 Campbell Ave
Google Earth
© 2018 Google
500 ft
N

APPENDIX B

SITE SKETCHES

SHEET NO. _____ OF _____

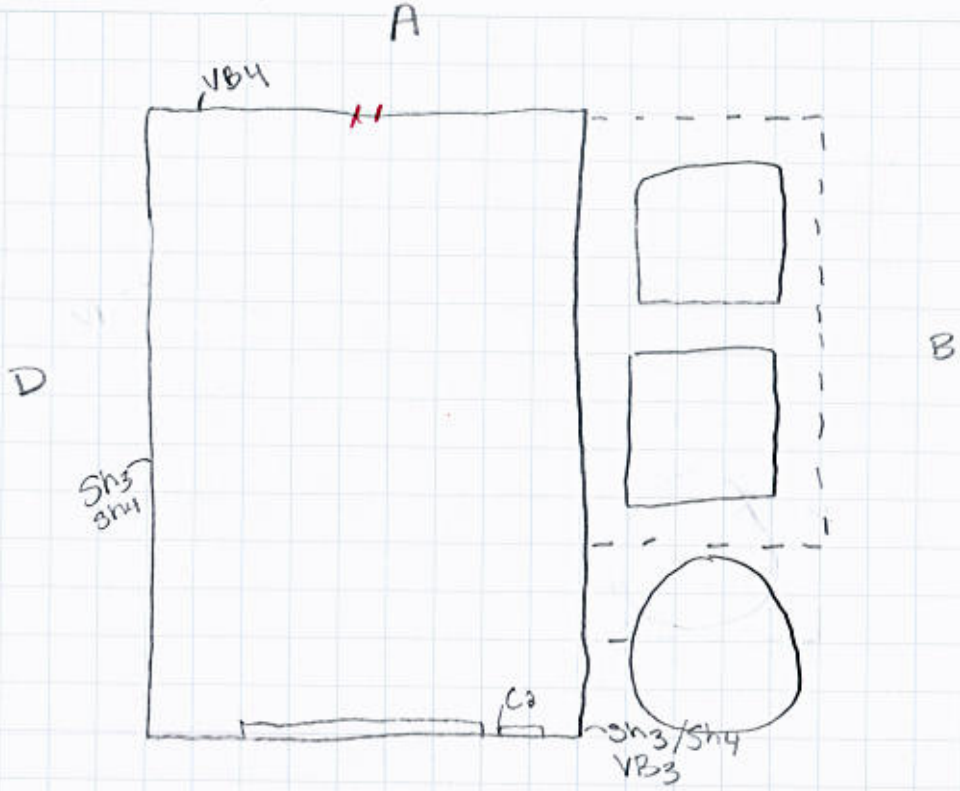
PROJECT NO. 289516040.0710

DATE _____

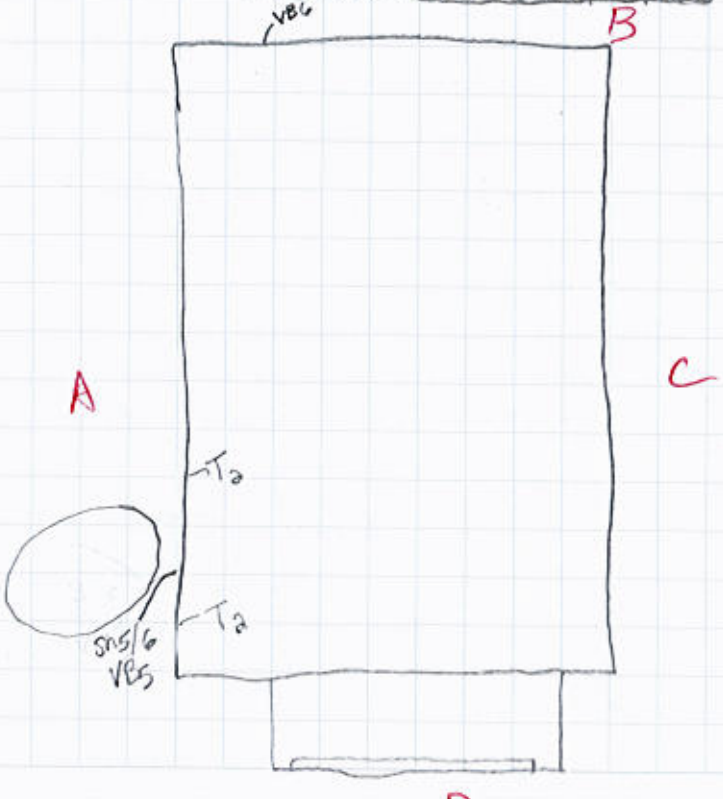
BY _____

CHK'D _____

SUBJECT Union Salt Shed



Stafford Salt Shed



A

SHEET NO. _____ OF _____

PROJECT NO. 289951.6040.0710

DATE _____

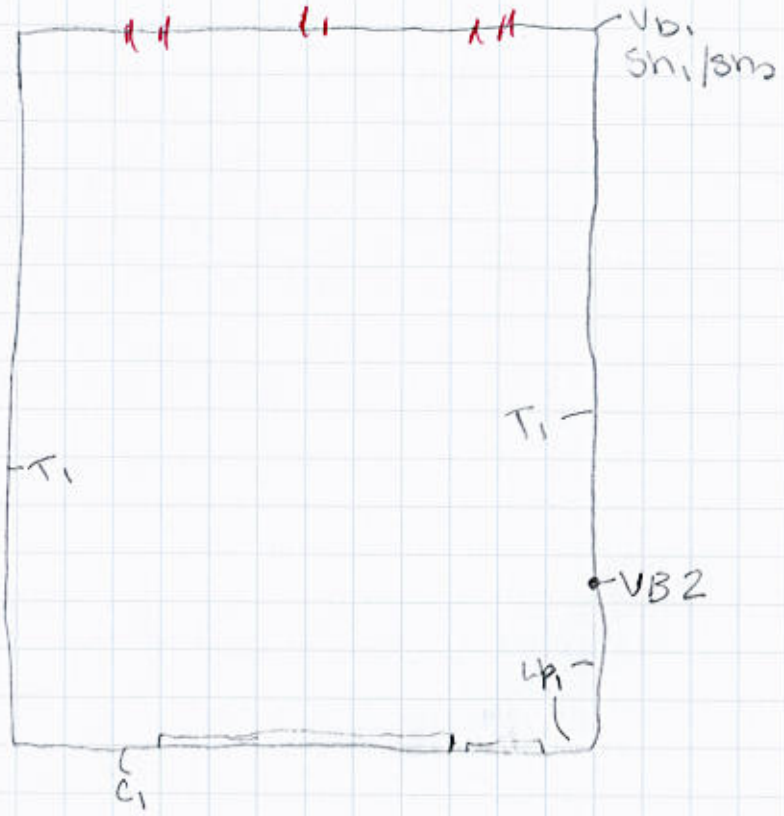
BY _____

CHK'D _____

TRC
Results you can rely on

SUBJECT Vernon Salt Shed

B



C

A

D

A

APPENDIX C

TRC INSPECTORS LICENSES/CERTIFICATIONS

State of Connecticut

Lookup Detail View

Name

Name
CATHRYN R LEMIRE

License Information

lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status		Licensure Actions or Pending Charges
Asbestos Consultant-Inspector	1000	07/31/2020	02/13/2018	CATHRYN R LEMIRE	ACTIVE	CURRENT	None

Generated on: 8/17/2019 11:13:19 AM

Certificate of Training

Awarded to

CATHRYN LEMIRE

For successful completion of a 4 Hour, 1/2 Day

Asbestos Building Inspector
Annual Refresher Training
JUNE 7, 2019

This training was approved and given in accordance with the Regulations for Connecticut State Agencies RCSA 20 - 440 - 1-9 and RCSA 20 - 441 and meets the requirements of the EPA Revised MAP under TSCA Title II of 4/4/94.

Presented by

Mystic Air Quality Consultants, Inc.
1204 North Road, Groton, CT 06340 (800) 247-7746

Certificate Number: ABIRF27651 **Exam Grade:** 100 **Expiration Date:** 06/07/2020

Exam Date: 06/07/2019

Christopher J. Eident, CIH, CSP, RS

George Williamson, Training Director

Richard Haffey, Training Director

Certificate of Achievement

This is to certify that

Cathryn Lemire

TRC

on the 19th of April, 2016 successfully completed the factory training for

Protec Instrument Corporation XRF Lead Paint Inspection System

Including, but not limited to, the topics of Radiation Safety, DOT Regulations, Haz-Mat Security Awareness and the Proper Use of the Instrument.

Verena Streber, President
Protec Instrument Corporation
38 Edge Hill Road, Waltham, MA 02451

NITON XLp 300 SERIES
ANALYZER TRAINING
(A. Minalga, RSO- April 2019)

- **INTRODUCTION and TRC PROCEDURES**
  - Instrument/case/components/accessories ✓
  - Radiation safety (Shutter operation) ✓
  - Storage/sign-out ✓
  - Transport requirements and outside packaging labels ✓
  - State/Federal regulations for use/shipping ✓
  - Leak Testing documentation ✓

- **INSTRUMENT USE**
  - Power on/off and menu options ✓
  - Calibrations ✓
  - K&L vs Standard Mode ✓
  - Collecting Measurements ✓
  - Data entry/deletion ✓
  - Downloading Procedures ✓

Training Completed by: Tyler Noll Date of Training: 7/14/19

Signature: [signature]

Instructor: A. Minalga, RSO

Instructor Signature: [signature]

TRC

APPENDIX D

LABORATORY ACCREDITATIONS

State of Connecticut, Department of Public Health

Approved Environmental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

TRC ENVIRONMENTAL CORPORATION

LOCATED AT 21 Griffin Road North IN Windsor, CT 06095

AND REGISTERED IN THE NAME OF Erik Plimpton

THIS CERTIFICATE IS ISSUED IN THE NAME OF Kathleen Williamson WHO HAS BEEN DESIGNATED BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

BUILDING MATERIALS
ASBESTOS FIBERS – PCM
BULK IDENTIFICATION – PLM

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

EFFECTIVE RENEWAL DATE JANUARY 1, 2018

THIS CERTIFICATE EXPIRES DECEMBER 31, 2019 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 19th DAY OF December, 2017

Registration No.

PH-0426

SUZANNE BLANCAFLOR, MS, MPH
CHIEF, ENVIRONMENTAL HEALTH SECTION

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101424-0

TRC Environmental Corporation

Windsor, CT

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-07-01 through 2020-06-30

Effective Dates

DEPARTMENT OF COMMERCE · UNITED STATES OF AMERICA

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TRC Environmental Corporation
21 Griffin Road North
Windsor, CT 06095
Ms. Kathleen Williamson
Phone: 860-298-6392 Fax: 860-298-6214
Email: kwilliamson@trccompanies.com
https://www.trccompanies.com/

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101424-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

State of Connecticut, Department of Public Health

Approved Environmental Laboratory

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

PROSCIENCE ANALYTICAL SERVICES, INC.

LOCATED AT 22 Cummings Park IN Woburn, MA 01801

AND REGISTERED IN THE NAME OF Harvey Yee

THIS CERTIFICATE IS ISSUED IN THE NAME OF Aimee Cormier WHO HAS BEEN DESIGNATED BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

SOLID WASTE/SOIL
Examination for:
Total Metals

ASBESTOS
Bulk Identification (PLM + TEM)
Air-Fiber Counting (PCM + TEM)

ENVIRONMENTAL HEALTH & HOUSING
Lead In Paint
Lead (Paint) in Soil
Lead in Dust Wipes

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

EFFECTIVE RENEWAL DATE January 1, 2019

THIS CERTIFICATE EXPIRES December 31, 2020 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 4th DAY OF December, 2018

Registration #
PH-0209

Barbara S. Cass

Barbara S. Cass, R.N.
Branch Chief
Healthcare Quality and Safety Branch

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200090-0

ProScience Analytical Services, Inc.

Woburn, MA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-01-01 through 2019-12-31

Effective Dates

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

ProScience Analytical Services, Inc.
22 Cummings Park
Woburn, MA 01801-2122
Ms. Aimee Cormier
Phone: 781-935-3212 Fax: 781-932-4857
Email: aimee.cormier@proscience.net
http://www.proscience.net

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 200090-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

APPENDIX E

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS

TRC
21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009
Supersede Previous Edition

LAB ID #. 54121

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
289951.6040.0710	ConnDOT — Vernon, Stafford, and Union salt sheds		PLM: [ ] 8hr [ ] 24hr [X] 48hr [ ] 3day TEM: [ ] 24hr [X] 48hr [ ] 3day [ ] 5day
SIGNATURE	INSPECTOR		
	Catie Lemire,Tyler Noll		

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
1	8/14/2019	10:11		X	Vernon salt shed	X				X	C1 - White caulking
2	8/14/2019	10:11		X	Vernon salt shed	X					C1 - White caulking
3	8/14/2019	11:25		X	Union salt shed	X				X	C2 - Pliable white caulk
4	8/14/2019	11:25		X	Union salt shed	X					C2 - Pliable white caulk
5	8/14/2019	09:35		X	Vernon salt shed	X				X	Sh1 - Black/Grey rock (bottom layer) shingle
6	8/14/2019	09:35		X	Vernon salt shed	X					Sh1 - Black/Grey rock (bottom layer) shingle
7	8/14/2019	09:35		X	Vernon salt shed	X				X	Sh2 - Black/brown rock (top layer) shingle
8	8/14/2019	09:35		X	Vernon salt shed	X					Sh2 - Black/brown rock (top layer) shingle
9	8/14/2019	11:12		X	Union salt shed	X				X	Sh3 - Black/Grey shingle bottom layer
10	8/14/2019	11:12		X	Union salt shed	X					Sh3 - Black/Grey shingle bottom layer
11	8/14/2019	11:12		X	Union salt shed	X				X	Sh4 - Black/Brown shingle top layer
12	8/14/2019	11:12		X	Union salt shed	X					Sh4 - Black/Brown shingle top layer

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/14/19	8/14/19			
(Printed) C.Lemire	Time: 1450	(Printed) 1600 K Williamson	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: Acceptable: Yes ✓ No ___ Comments:		Page 1 of 3

TRC
21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009
Supersede Previous Edition

LAB ID #. 54121

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
289951.6040.0710	ConnDOT — Vernon, Stafford, and Union salt sheds		PLM: [ ] 8hr [ ] 24hr [X] 48hr [ ] 3day TEM: [ ] 24hr [X] 48hr [ ] 3day [ ] 5day

SIGNATURE	INSPECTOR
	Catie Lemire,Tyler Noll

FIELD SAMPLE NUMBER	DATE	TIME	TYPE: COMP	TYPE: GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
13	8/14/2019	13:10		X	Stafford Salt Shed	X				X	Sh5 - Black/DK Brown Shingle
14	8/14/2019	13:10		X	Stafford Salt Shed	X					Sh5 - Black/DK Brown Shingle
15	8/14/2019	13:10		X	Stafford Salt Shed	X				X	Sh6 - Black/Brown Shingle
16	8/14/2019	13:10		X	Stafford Salt Shed	X					Sh6 - Black/Brown Shingle
17	8/14/2019	10:49		X	Vernon Salt Shed	X				X	T1 - Black tar between wooden beams
18	8/14/2019	10:49		X	Vernon Salt Shed	X					T1 - Black tar between wooden beams
19	8/14/2019	09:32		X	Vernon Salt Shed	X				X	VB1 - Black Vapor Barrier under roof shingles
20	8/14/2019	09:32		X	Vernon Salt Shed	X					VB1 - Black Vapor Barrier under roof shingles
21	8/14/2019	09:37		X	Vernon salt shed	X				X	VB2 - Black vapor barrier on walls
22	8/14/2019	09:37		X	Vernon salt shed	X					VB2 - Black vapor barrier on walls
23	8/14/2019	11:11		X	Union salt shed	X				X	VB3 - Black vapor barrier
24	8/14/2019	11:11		X	Union salt shed	X					VB3 - Black vapor barrier

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/14/19	8/14/19			
(Printed) C.Lemire	Time: 1450	(Printed) 1600	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: _____
Acceptable: Yes ___ No ___
Comments:

TRC
21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

Edition: October 2009
Supersede Previous Edition

LAB ID #. 54121

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
289951.6040.0710	ConnDOT — Vernon, Stafford, and Union salt sheds		PLM: [ ] 8hr [ ] 24hr [X] 48hr [ ] 3day TEM: [ ] 24hr [X] 48hr [ ] 3day [ ] 5day
SIGNATURE	INSPECTOR		
	Catie Lemire,Tyler Noll		

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
25	8/14/2019	11:11		X	Union salt shed	X				X	VB4 - Black vapor barrier
26	8/14/2019	11:11		X	Union salt shed	X					VB4 - Black vapor barrier
27	8/14/2019	13:10		X	Stafford Salt Shed	X				X	VB5 - Black vapor barrier on roof
28	8/14/2019	13:10		X	Stafford Salt Shed	X					VB5 - Black vapor barrier on roof
29	8/14/2019	10:05		X	Vernon Salt Shed	X				X	WP1 - Black Waterproofing
30	8/14/2019	10:05		X	Vernon Salt Shed	X					WP1 - Black Waterproofing

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/14/19	8/14/19			
(Printed) C.Lemire	Time: 1450	(Printed) 1600	(Printed)	Time:	(Printed)
Remarks:		Condition of Samples: Acceptable: Yes ___ No ___ Comments:			Page 3 of 3

TRC

Edition: October 2009
Supersede Previous Edition

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 541136

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
289951.6040.0710	CTDOT Vernon, Stafford and Union Salt Sheds		PLM: 8hr 24hr X 48hr 3day TEM: 24hr 48hr 3day 5day

SIGNATURE	INSPECTOR
	C. Lemire

FIELD SAMPLE NUMBER	DATE	TIME	TYPE: COMP	TYPE: GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
31					Stafford Salt Shed	X					Tar Black tarcon interior wall
32					"	X	X				"
33					"	X					VB6 - Vapor barrier behind Cedar Shakes
34					"	X	X				"

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/20/19	8/20/19			
(Printed) C. Lemire	Time:	(Printed) 1130	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples:
Acceptable: Yes ___ No ___
Comments:

NT17958 61

Proscience Analytical Services, Inc.

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

TEM Bulk Chain of Custody Record

Date: 08/19/19

PO#: **C289951** Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC

Client Job#: 289951.6040.0710

Client Job Ref./Loc.: CT DOT- Vernon, Stafford & Union Salt Sheds

Relinquished by: K. Williamson- KWilliamson@trcsolutions.com

Received by: Pamela Jacinth-Cole 8/20/19 9:50

Report to: E. Plimpton- EPlimpton@trccompanies.com & SArienti@trccompanies.com

Samplers Name: C. Lemire & T. Noll

Turnaround Time: <12 Hour <24 Hour **<48 Hour** <3 Day 5 Day Other:

				For Lab Use Only	
Client ID #	**Lab ID#**	**Description**	**Location**	**Acceptable on Receipt**	**Comments**
1	54121	Caulk	See COC		
3	54121	Caulk			
5	54121	Shingle			
7	54121	Shingle			
9	54121	Shingle			
11	54121	Shingle			
13	54121	Shingle			
15	54121	Shingle			
17	54121	Tar			
19	54121	Vapor Barrier			
21	54121	Vapor Barrier			
23	54121	Vapor Barrier			
25	54121	Vapor Barrier			
26	54121	Vapor Barrier			
29	54121	Waterproofing			

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

NT 17964

Proscience Analytical Services, Inc.

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

TEM Bulk Chain of Custody Record

Date: 08/20/19

PO#: **C289951** Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC

Client Job#: 289951.6040.0710

Client Job Ref./Loc.: CT DOT- Vernon, Stafford & Union Salt Sheds

Relinquished by: K. Williamson- KWilliamson@trcsolutions.com

Received by: Valerie Berrill- Valerie Berrill 8/21/19 9:45

Report to: E. Plimpton- EPlimpton@trccompanies.com & SArienti@trccompanies.com

Samplers Name: C. Lemire

Turnaround Time: <12 Hour <24 Hour **<48 Hour** <3 Day 5 Day Other:

				For Lab Use Only	
Client ID #	**Lab ID#**	**Description**	**Location**	**Acceptable on Receipt**	**Comments**
32	54136	Tar	See COC		
34	54136	Vapor Barrier			

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

APPENDIX F

ASBESTOS PLM LABORATORY ANALYSIS DATA

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #:	0054121
Project #:	289951.6040.0710
Date Received:	08/14/2019
Date Analyzed:	08/16/2019

Site: Vernon, Stafford & Union Salt Sheds

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
1	White (caulking)	Yes	No	- -	- - -		ND	None
2	White (caulking)	Yes	No	- -	- - -		ND	None
3	White (caulk)	Yes	No	- -	- - -		ND	None
4	White (caulk)	Yes	No	- -	- - -		ND	None
5	Black/Grey (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
6	Black/Grey (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
7	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
8	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
9	Black/Grey (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
10	Black/Grey (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
11	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
12	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
13	Black/Dark Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
14	Black/Dark Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
15	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
16	Black/Brown (shingle)	Yes	No	- -	10%	fibrous glass	ND	None
17	Black (tar)	Yes	No	- -	10%	cellulose	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
18	Black (tar)	Yes	No	- -	10%	cellulose	ND	None
19	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
20	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
21	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
22	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
23	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
24	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
25	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
26	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
27	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
28	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
29	Black (waterproofing)	Yes	No	- -	10%	cellulose	ND	None
30	Black (waterproofing)	Yes	No	- -	10%	cellulose	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis. NVLAP Code 18/A01, effective through June 30, 2019. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2019. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: K. Williamson
Kathleen Williamson, Laboratory Manager

Reviewed by: Cathryn Lemire
Cathryn Lemire, Approved Signatory

Date Issued
08/18/2019

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 IH #L-09-4004 NJ #C T004 CA #2907
CO# AL-15020 PHIL# 461 PA#68-03387

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #:	0054136
Project #:	289951.6040.0710
Date Received:	08/20/2019
Date Analyzed:	08/20/2019

Site: Vernon, Stafford & Union Salt Sheds

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
31	Black (tar)	Yes	No	- -	30%	cellulose	ND	None
32	Black (tar)	Yes	No	- -	30%	cellulose	ND	None
33	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None
34	Black (vapor barrier)	Yes	No	- -	80%	cellulose	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2019. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP). LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2019. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Cathryn Lemire — Cathryn Lemire, Approved Signatory

Date Issued: 08/20/2019

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
CO# AL-15020 PHIL# 461 PA#68-03387

APPENDIX G

ASBESTOS TEM LABORATORY ANALYSIS DATA

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail:general@proscience.net

Laboratory Report

Client Project #: 289951.6040.0710
Client Reference: CT DOT - Vernon, Stafford & Union Salt Sheds
PO #: C289951
Client #: 297
Client Name: TRC Companies, Inc. (CT)

Batch: NT 17961
Method: NOB
Date Received: 8/20/2019
Date Analyzed: 8/22/2019
Date of Report: 8/22/2019

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types CHR	AMO	ACT	CRO	ANT	TRE	% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
NT135274	1	White Caulking		.6746	.00	.00	.00	.00	.00	.00	20.26	27.23	52.51	ND	Yes	No
NT135275	3	Pllable White Caulking		.6249	.00	.00	.00	.00	.00	.00	20.33	28.69	50.98	ND	Yes	No
NT135276	5	Black/Grey Rock (Bottom Layer) Shingle		.8256	.00	.00	.00	.00	.00	.00	51.32	22.06	26.62	ND	Yes	No
NT135277	7	Black/Brown Rock (Top Layer) Shingle		.7362	.00	.00	.00	.00	.00	.00	65.65	20.69	13.66	ND	Yes	No
NT135278	9	Black/Grey Shingle Bottom Layer		.4799	.00	.00	.00	.00	.00	.00	65.25	20.23	14.52	ND	Yes	No
NT135279	11	Black/Brown Shingle Top Layer		.8132	.00	.00	.00	.00	.00	.00	60.94	21.16	17.90	ND	Yes	No
NT135280	13	Black/DK Brown Shingle		.8146	.00	.00	.00	.00	.00	.00	58.01	17.71	24.28	ND	Yes	No
NT135281	15	Black/Brown Shingle		.8706	.00	.00	.00	.00	.00	.00	66.19	17.20	17.61	ND	Yes	No
NT135282	17	Black Tar		.2639	.00	.00	.00	.00	.00	.00	18.38	62.56	19.06	ND	Yes	No
NT135283	19	Black Vapor Barrier		.2732	.00	.00	.00	.00	.00	.00	.22	98.17	1.61	ND	Yes	No
NT135284	21	Black Vapor Barrier		.2652	.00	.00	.00	.00	.00	.00	.43	98.28	1.29	ND	Yes	No
NT135285	23	Black Vapor Barrier		.3455	.00	.00	.00	.00	.00	.00	2.09	94.70	3.21	ND	Yes	No
NT135286	25	Black Vapor Barrier		.2386	.00	.00	.00	.00	.00	.00	1.01	97.15	1.84	ND	Yes	No
NT135287	27	Black Vapor Barrier		.2694	.00	.00	.00	.00	.00	.00	.97	97.03	2.00	ND	Yes	No
NT135288	29	Black Waterproofing		.2482	.26	.00	.00	.00	.00	.00	12.81	80.90	6.29	TR	Yes	No

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

Laboratory Report

Client Project #:	289951.6040.0710
Client Reference:	CT DOT - Vernon, Stafford & Union Salt Sheds
PO #:	C289951
Client #:	297
Client Name:	TRC Companies, Inc. (CT)

Batch:	**NT 17961**
Method:	NOB
Date Received:	8/20/2019
Date Analyzed:	8/22/2019
Date of Report:	8/22/2019

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types CHR	AMO	ACT	CRO	ANT	TRE	% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

Mark Derosier, Analyst

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax 781-932-4857 ~ E-Mail general@proscience.net

Laboratory Report

Client Project #: 289951.6040.0710
Client Reference: CT DOT - Vernon, Stafford & Union Salt Sheds
PO #: C289951
Client #: 297
Client Name: TRC Companies, Inc. (CT)

Batch: **NT 17964**
Method: NOB
Date Received: 8/21/2019
Date Analyzed: 8/23/2019
Date of Report: 8/23/2019

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other Non-asb.	% Organic	% Carb.	Total % Asbestos	Analyzed / Charged	Preped / Charged
					CHR	AMO	ACT	CRO	ANT	TRE						
NT135307	32	Black Tar		.2549	.00	.00	.00	.00	.00	.00	20.01	59.12	20.87	ND	Yes	No
NT135308	34	Vapor Barrier		.2707	.00	.00	.00	.00	.00	.00	.45	93.31	6.24	ND	Yes	No

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

Aimee Cormier, Analyst

APPENDIX H

LEAD PAINT XRF MEASUREMENT TABLE

Lead Based Paint Measurement Summary Table

Device(s):	Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer
Site:	DOT Salt Sheds - Stafford, Vernon & Union, Connecticut
Project # :	289951-6040-0710
Date(s):	8/14/2019
Inspector:	Tyler Noll, Cathryn Lemire

Number	Room	Side	Structure	Feature	Material	Color	Conditio	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1	**Shutter calibration**							1.6	0.0		201.08	8/14/2019 9:12
2	**3.5 calibration**							3.7	0.3	1.29	3.86	8/14/2019 9:17
3	**1.6 calibration**							1.6	0.1	1.16	4.99	8/14/2019 9:17
4	**0.3 calibration**							0.3	0.0	1.04	9.34	8/14/2019 9:18
Vernon Salt Shed												
5	Exterior	C	Wall		Wood	Brown		0.0	0.0	1	1.13	8/14/2019 9:23
6	Exterior	C	Wall		Wood	Brown		0.0	0.0	1	1.25	8/14/2019 9:23
7	Exterior	d	Wall		Wood	Brown		0.0	0.0	1	1.37	8/14/2019 9:24
8	Exterior	d	Wall		Wood	Brown		0.0	0.0	1	1.25	8/14/2019 9:24
9	Exterior	d	Door		Wood	tan		0.0	0.0	1	1.37	8/14/2019 9:25
10	Exterior	d	Door		Wood	tan		0.0	0.0	1	1.25	8/14/2019 9:25
11	Exterior	B	Window		Wood	tan		0.0	0.0	1	4.01	8/14/2019 9:47
12	Exterior	D	--	Threshold	Wood	tan		0.0	0.0	1	4.25	8/14/2019 9:54
13	Exterior	D	Column	--	Concrete	Yellow		**0.1**	0.0	2.15	4.25	8/14/2019 9:55
14	Exterior	D	Column	--	Concrete	Yellow		**0.1**	0.1	2.42	3.86	8/14/2019 9:56
15	Exterior	D	Column	--	Concrete	Yellow		**0.1**	0.1	3.6	4.11	8/14/2019 9:56
Union Salt Shed												
16	Exterior	C	Wall	--	Wood	Brown		0.0	0.0	1	4.13	8/14/2019 11:13
17	Exterior	C	Door	--	Wood	White		0.0	0.0	1	4.62	8/14/2019 11:14
18	Exterior	C	Door	Casing	Wood	White		0.0	0.0	1	4.11	8/14/2019 11:15
19	Exterior	D	Wall	--	Wood	Brown		0.0	0.0	1	3.99	8/14/2019 11:16
20	Exterior	A	Wall	--	Wood	Brown		0.0	0.0	1	3.87	8/14/2019 11:17
21	Exterior	B	Wall	--	Wood	Brown		0.0	0.0	1	3.88	8/14/2019 11:18
22	Interior	C	Door mechanism	--	Metal	Orange		**1.3**	0.1	1.15	4.36	8/14/2019 11:21
23	Exterior	C	Column	--	Metal	Yellow		**0.2**	0.1	3.01	5.61	8/14/2019 11:23
24	Exterior	C	Column	--	Metal	Yellow		**0.2**	0.1	4.38	5.48	8/14/2019 11:24
25	Exterior	B	Fence	--	Metal	Green		0.0	0.0	1	3.99	8/14/2019 11:26
26	Exterior	C	Upper trim/facia	--	Wood	White		0.0	0.0	1	4.13	8/14/2019 11:44
Stafford Salt Shed												
27	Exterior	A	Wall	--	Wood	Brown		0.0	0.0	1	2.25	8/14/2019 12:22
28	Exterior	B	Wall	--	Wood	Brown		0.0	0.0	1	2.63	8/14/2019 12:23
29	Exterior	C	Wall	--	Wood	Brown		0.0	0.0	1	2.75	8/14/2019 12:24

Lead paint includes paint found to contain **any detectable** amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

Side A = Street side; Sides B,C,D follow clockwise

Lead Based Paint Measurement Summary Table

Device(s):	Niton XLP301-A (Serial #24792) X Ray Fluorescence (XRF) Spectrum Analyzer
Site:	DOT Salt Sheds - Stafford, Vernon & Union, Connecticut
Project # :	289951-6040-0710
Date(s):	8/14/2019
Inspector:	Tyler Noll, Cathryn Lemire

Number	Room	Side	Structure	Feature	Material	Color	Conditio	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
30	Exterior	D	Wall	--	Wood	Brown		0.0	0.0	1	3.13	8/14/2019 12:26
31	Exterior	D	Wall	Threshold	Wood	Yellow		0.0	0.0	1	5.46	8/14/2019 12:28
32	Exterior	D	Wall	Threshold	Concrete	Yellow		0.0	0.0	1	3.63	8/14/2019 12:29
33	**0.0 calibration**	--	--	--	--			0.0	0.0	1	1.5	8/14/2019 13:05
34	**3.5 calibration**	--	--	--	--			3.7	0.3	1.31	3.86	8/14/2019 13:05
35	**1.6 calibration**	--	--	--	--			1.5	0.3	1.15	2.62	8/14/2019 13:05

Lead paint includes paint found to contain **any detectable** amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

Side A = Street side; Sides B,C,D follow clockwise

APPENDIX I

COMPOSITE BUILDING MATERIAL WASTE CHARACTERIZATION DATA

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

January 26, 2004

Mr. Erik R. Plimpton, P.E., CHMM, Senior Consulting Engineer
TRC Environmental Corporation
5 Waterside Crossing
Windsor, CT 06095

RE: Characterization of lead-based paint debris.

Dear Mr. Plimpton:

Pursuant to our recent discussions by email, I am writing to confirm that the policy elaborated in my July 22, 1997 letter to Steven Murdzia of ATC Associates concerning the use of XRF testing to characterize lead-based paint debris is still in effect. In particular, my statement in that letter that obtaining an XRF reading less than 1.0 mg/cm^2 is sufficient to demonstrate that a given debris is not a hazardous waste is still our current policy.

As noted in my July 22, 1997 letter, this policy is subject to the following limitations:

1.) The material being sampled consists only of building debris (such as painted wood or masonry). Non-debris materials (such as concentrated paint chips, sand blasting debris, or paint stripping wastes) may not be characterized in this manner.

2.) The material being sampled has only surficial lead contamination (i.e. lead-based paint). Materials which have more than just surficial contamination (such as floor boards soaked with lead plating solutions) may not be characterized in this manner.

3.) The material is sampled in accordance with appropriate protocols regarding sampling frequency and location, to ensure that the reading of 1.0 mg/cm^2 or less is truly representative of the material as a whole.

I should also note that this approach is only useful in situations in which all of a particular debris stream does not exceed 1.0 mg/cm^2. If portions of the debris stream exceed 1.0 mg/cm^2, you cannot use this standard to characterize the debris, and must resort to another method (such as composite sampling). In addition, in employing this method to characterize the debris, the areas which had XRF readings under the 1.0 mg/cm^2 limit must not be ignored (since falling below the standard only means they are not hazardous, not that they are lead-free).

My July 22, 1997 letter also addressed the use of the Connecticut Department of Public Health's 0.5 weight percent limit for a "toxic" level of lead under its lead abatement regulations in order to determine whether or not lead-based paint debris is hazardous. Unlike the 1.0 mg/cm^2 XRF standard, the weight percent number is not appropriate for waste characterization purposes, due to a lack of relevant data. The 1.0 mg/cm^2 XRF policy discussed above was based on certain data generated by EPA correlating XRF readings to TCLP sampling of architectural debris.[1] While EPA's data did not show a predictable relationship between these two measures, it did indicate that there was an XRF threshold below which such debris did not contain sufficient lead to fail TCLP. However, there is no similar data establishing a similar threshold for weight percent lead in lead-based paint below which debris does not fail TCLP.

I should also note that we intend to include the above policy in the next revision of our lead-based paint guidance document, Guidance for the Management and Disposal of Lead-Contaminated Materials Generated in the Lead Abatement, Renovation, and Demolition Industries, which was last revised in 1996, prior to the letter to Mr. Murdzia.

Sincerely,

Ross Q. Bunnell, Sanitary Engineer 3
Bureau of Waste Management
Engineering & Enforcement Division

RQB:rqb
Attachment: March, 1993 EPA Guidance Document

1 See in particular the March 1993 EPA guidance document entitled "Applicability of RCRA Disposal Requirements to Lead-Based Paint Abatement Wastes," Page 16, Table II. A copy of this guidance document is attached.

APPENDIX J

RELATED CORRESPONDENCE

SCOPE OF WORK

Project Name: The Roof Replacement of the Salt Sheds
Town Locations: Stafford, Union, Vernon,
Project No: 171-429
Project Manager: Michael Strong
Project Engineer: Shinel Mercado

Date: March 13, 2019

Objective:

The existing Asphalt Shingle Roof at the Salt Sheds in the towns of Stafford, Union and Vernon are detaching from the structure, falling off and exposing the substrate. As a result, the substrate is now unprotected from deterioration which is compromising the structural integrity of the salt shed.

This project will replace the existing roof of each salt shed and perform miscellaneous improvements.

Scope:

The scope of work includes the removal of the existing asphalt shingle roof and building paper. The existing plywood substrate will remain.

A Polyvinyl Chloride (PVC) Extrusion roof system inclusive of vapor retarder, roof board and water shield above the concrete pilaster will be installed.

Additional work includes;

1. All deteriorated plywood substrate will be repaired and/or removed as required for roof installation.
2. All existing louvers that are damaged will be replaced. Additional louvers will be installed at the rear of the shed where required.
3. Snow retention systems will be installed at the high to low roof transition.
4. All existing trim will be removed and replaced.
5. All existing gaps at the truss system to the ledge of timber barrier wall will be sealed.
6. All existing cedar shingles, louvers and soffits will be stained.
7. Existing personnel doors will be removed and in-filled to match exterior cedar shingles.
8. All existing canopies and fabric doors will be removed. Canopies will be retrofitted to match cedar shingles.
9. The existing interior divider barrier wall will be removed.

...SC	ASSET DESCRIPTION	ACQ. DATE	DEPT ID	LOCATION ID	LOCATION DESCRIPTION	STREET ADDRESS	CITY	STATE	ZIP	TOTAL COST
...364 093SI	DRAINAGE/ROAD SURFACING	6/1/1999	DOT57951	ADOT093364	DRAINAGE/ROAD SURFACE	DUMP ROAD	TORRINGTON	CT	06790	$ 45,000.00
09400426 094BC	COLD STORAGE	6/1/1969	DOT57284	AJES004027	Cold Storage	80 Fowler Avenue	Torrington	CT	06790	$ 20,042.00
09400429 094TC	MOTORCYCLE STORAGE CONTAINER	3/1/1989	DOT57533	AJES004030	Storage Container	University Of Conn.-University Drive	Torrington	CT	06790	$ 2,150.00
09400560 094SE	SALT SHED	6/1/2001	DOT57282	AJES004070	Salt Shed	Avenue "A"	Torrington	CT	06790	$ 970,424.00
						TOWN OF TORRINGTON:				**$ 1,765,163.00**
08100611 081GB	MAINTENANCE GARAGE	10/1/2000	DOT57273	AJES004057	Maintenance Garage	3020 Nichols Drive	Trumbull	CT	06611	$ 2,811,158.00
08100693 081GC	PROPERTY & FACILITIES REGION 3	2/18/2009	DOT57401	AJES004770	DOT LAND 8100693	3020 NICHOLAS AVE	TRUMBULL	CT	06611	$ 3,971,202.00
09300111 093SI	CHAIN FENCE	6/1/1990	DOT57273	ADOT093111	CHAIN FENCE	RTE 111	TRUMBULL	CT	06611	$ 6,500.00
09300174 093SI	DRAINAGE/GRADING/PAVING	6/1/1993	DOT57273	ADOT093174	DRAINAGE/GRADING/PAVING	RTE 111	TRUMBULL	CT	06611	$ 183,048.00
09300306 093SI	PAVING/DRAINAGE/FENCE	6/1/2001	DOT57273	ADOT093306	PAVING/DRAINAGE/FENCE	3020 NICHOLS DRIVE	TRUMBULL	CT	06611	$ 1,562,253.00
09400460 094SE	SALT SHED	3/1/1993	DOT57273	AJES004173	Salt Shed	Routes 111 & 25	Trumbull	CT	06611	$ 195,843.00
09400600 094SG	PERSONNEL SHELTER	1/1/1997	DOT57273	AJES003917	Personnel Shelter	Routes 25 & 111	Trumbull	CT	06611	$ 5,798.00
09400620 094SE	SALT SHED	11/1/1999	DOT57273	AJES004228	Salt Shed	Route 108	Trumbull	CT	06611	$ 375,000.00
						TOWN OF TRUMBULL:				**$ 9,110,802.00**
08100004 081GB	MAINTENANCE GARAGE	7/1/1961	DOT57252	AJES003665	Maintenance Garage	829 Buckley Highway, Route 190	Union	CT	06076	$ 58,422.00
09300120 093SI	DRAINAGE/GRADING/PAVING	8/1/1990	DOT57252	ADOT093120	DRAINAGE/GRADING/PAVING	RTE 190	UNION	CT	06076	$ 165,941.00
09400440 094SE	SALT SHED	12/1/1989	DOT57252	AJES004043	Salt Shed	Route 10	Union	CT	06076	$ 286,581.00
09400604 094 I	WIM BOOTH (WEIGH IN MOTION)	4/1/1997	DOT57399	AJES003926	WIM Booth (Weigh In Motion)	I-84 W/B	Union	CT	06076	$ 25,000.00
09400605 094 I	INSPECTION PIT	4/1/1997	DOT57399	AJES003928	Inspection Pit	I-84 W/B	Union	CT	06076	$ 200,000.00
09400606 094HE	SCALE HOUSE	4/1/1997	DOT57399	AJES003931	Scale House	I-84 W/B	Union	CT	06076	$ 275,000.00
						TOWN OF UNION:				**$ 1,010,944.00**
08100215 081BC	STORAGE BUILDING	7/1/1948	DOT57252	AJES003591	Storage Building	35 Campbell Avenue	Vernon	CT	06066	$ 13,077.00
08100633 081GB	MAINTENANCE GARAGE	3/1/1984	DOT57252	AJES003636	Maintenance Garage & Office	37 Campbell Avenue	Vernon	CT	06066	$ 855,193.00
08400373 084 I	LAND-RCKVLE BRANCH ROW-VERNON	3/1/1976	DOT57951	AJES004698	DOT LAND	ROCKVILLE BRANCH ROW	Vernon	CT	06066	$ 33,535.00
09300169 093SI	DRAINAGE/GRADING/PAVING	4/1/1993	DOT57252	ADOT093169	DRAINAGE/GRADING/PAVING	37 CAMPBELL AVENUE	VERNON	CT	06066	$ 163,800.00
09400220 094SE	SALT SHED	3/1/1993	DOT57252	AJES003949	Salt Shed	Campbell Avenue	Vernon	CT	06066	$ 283,200.00
09400248 094SO	BUS SHELTER	5/1/1978	DOT57931	AJES003961	Bus Shelter	Commuter Lot, Rte 30,.5mi E Vernon C	Vernon	CT	06066	$ 2,100.00
09400249 094SO	BUS SHELTER	5/1/1978	DOT57931	AJES003962	Bus Shelter	Intersection Of I-86 & Rte 31 Exit 98 C	Vernon	CT	06066	$ 2,100.00
09400515 094TF	MOBILE OFFICE TRAILER	6/1/1989	DOT57252	ADOT094515	MOBILE OFFICE TRAILER	37 CAMPBELL AVENUE	VERNON	CT	06066	$ 4,176.00

		ASSET DESCRIPTION	ACQ. DATE	DEPT ID	LOCATION ID	LOCATION DESCRIPTION	STREET ADDRESS	CITY	STATE	ZIP	TOTAL COST
400737	094TF	WAITING ROOM TRAILER	2/1/2008	DOT57951	AJES004751	Waiting Room Trailer	Spruce St	Southport	CT	06490	$ 25,503.00
							TOWN OF SOUTHPORT:				**$ 25,503.00**
08200906	082GA	GRAVEL BANK	1/1/1944	DOT57252	ADOT082906	GRAVEL BANK	COOPER LANE	STAFFORD	CT	06075	$ 3,000.00
09300202	093SI	DRAINAGE/GRADING/PAVING	6/1/1994	DOT57252	ADOT093202	DRAINAGE/GRADING/PAVING	COOPER LANE	STAFFORD	CT	06075	$ 169,600.00
09400525	094SG	PERSONNEL SHELTER	12/1/1994	DOT57252	AJES003891	Personnel Shelter	Cooper Lane	Stafford	CT	06075	$ 12,368.00
09400531	094SE	SAND/SALT STORAGE SHED	2/1/1994	DOT57252	AJES003840	Sand/Salt Storage Shed	Cooper Lane	Stafford	CT	06075	$ 233,200.00
							TOWN OF STAFFORD:				**$ 418,168.00**
08400241	084 I	LAND - STATION PLACE -STAMFORD	6/1/1976	DOT57931	AJES004685	DOT LAND	Station Place	Stamford	CT	06901	$ 271,000.00
08400331	084 I	LAND	3/1/1984	DOT57931	AJES003698	Maintenance Garage/Office	Elm Court	Stamford	CT	06901	$ 196,022.00
08400361	084 I	LAND-GLENBROOK STATION PARKING	7/1/1991	DOT57951	AJES004686	DOT LAND	GLENBROOK STATION PARKING	Stamford	CT	06901	$ 182,000.00
08400362	084 I	LAND-SPRINGDALE STATION PARKNG	10/1/1992	DOT57951	AJES004687	DOT LAND	SPRINGDALE STATION PARKING	Stamford	CT	06901	$ 520,000.00
08500036	085 I	RAIL CAR WASH FACILITY	6/1/1995	DOT57951	AJES003875	Rail Car Wash Facility	Railroad Station	Stamford	CT	06901	$ 4,378,863.00
08500328	085GA	RAILYARD MAINTENANCE BUILDING	1/1/1997	DOT57951	AJES003932	Railyard Maintenance Building	18 Cherry Street	Stamford	CT	06901	$ 13,000,000.00
08500340	085GC	REPAIR SHOP	6/1/1999	DOT57951	AJES004226	Repair Shop	Rail Yard	Stamford	CT	06901	$ 2,421,604.00
08500591	085CD	STORAGE & OFFICE BUILDING	2/4/2004	DOT57931	AJES004163	Storage & Office Building	Elm Court	Stamford	CT	06901	$ 8,793,821.00
08500630	085CD	MAINTENANCE GARAGE/OFFICE	6/1/1983	DOT57931	AJES003698	Maintenance Garage/Office	Elm Court	Stamford	CT	06901	$ 6,554,355.00
08500704	085RA	RAILROAD STATION - WESTBOUND	12/1/1980	DOT57951	AJES003702	Railroad Station (Westbound)	Washington Boulevard	Stamford	CT	06901	$ 18,000.00
08500708	085RA	RAILROAD STATION - EASTBOUND	1/1/1981	DOT57951	AJES003703	Railroad Station (Eastbound)	South State Street	Stamford	CT	06901	$ 3,985,553.00
08500718	085GA	PARKING GAGAGE - 5 LEVELS	5/1/1983	DOT57931	AJES004168	Parking Garage - 5 Levels	McGee Avenue	Stamford	CT	06901	$ 25,000,000.00
08500743	085OB	OFFICE/WAREHOUSE	6/1/1993	DOT57951	AJES003708	Office/Warehouse	90-100 Viaduct Road	Stamford	CT	06901	$ 1,428,573.00
08500969	085SP	HIGH LEVEL CONCRETE PLATFORM	3/1/1975	DOT57951	AJES003776	High Level Concrete Platform	North State Street	Stamford	CT	06901	$ 453,239.00
08500974	085SP	HIGH LEVEL CONCRETE PLAT W/SHE	3/1/1975	DOT57951	AJES003782	Concrete Platform/Shelter	Crescent Avenue	Stamford	CT	06901	$ 138,807.00
08500975	085SP	HIGH LEVEL CONCRETE PLAT W/SHE	3/1/1975	DOT57951	AJES003783	Concrete Platform/Shelter	Hope Street	Stamford	CT	06901	$ 147,653.00
09300019	093SI	FENCE/LANDSCAPE/PAVING/TWR	3/1/1984	DOT57931	ADOT093019	FENCE/LANDSCAPE/PAVING/TW	ELM COURT	STAMFORD	CT	06901	$ 511,550.00
09300259	093SI	RAIL STAGING YARD	3/1/1997	DOT57951	ADOT093259	RAIL STAGING YARD	18 CHERRY STREET	STAMFORD	CT	06901	$ 20,711,241.00
09300329	093SI	HANDICAP RAMP-SIDEWALK & LIGHT	2/1/2003	DOT57951	ADOT093329	HANDICAP RAMP/SIDEWALK/LT	SOUTH STATE STREET	STAMFORD	CT	06901	$ 112,000.00
09300369	093SI	SITE IMPROVEMENT	6/30/2004	DOT57931	ADOT093369	SITE IMPROVEMENT	MCGEE AVENUE	STAMFORD	CT	06907	$ 5,000,000.00
09300374	093SI	GRADING/DRAINAGE/PAVEMENT	2/4/2004	DOT57931	ADOT093374	GRADING/DRAINAGE/PAVING	ELM COURT	STAMFORD	CT	06902	$ 997,744.00
09300429	093SI	SITE IMPROVEMENT- VARIOUS LAND	6/30/2005	DOT57931	ADOT093429	VARIOUS LANDSCAPING	ELM COURT	STAMFORD	CT	06292	$ 656,071.00

ConnDOT, Vernon, Stafford, and Union salt sheds., United States, Tolland County, , Connecticut, Vernon, 06066, Campbell Avenue,

Created	2019-08-14 13:01:39 UTC by Catie Lemire
Updated	2019-08-15 20:06:52 UTC by Catie Lemire
Location	41.8269851, -72.481608
Status	Survey Complete

Job Information

Site Name	Vernon, Stafford, and Union salt sheds.
Address	Campbell Avenue Vernon, Connecticut 06066
TRC Project Number	289951.6040.0710
Project Manager	Erik Plimpton, Stephen Arienti
Inspector(s)	Catie Lemire, Tyler Noll
Client	ConnDOT
Type of Asbestos Survey	Reno/Demo
Additional Analysis for NOB Materials (Calc)	TEM NY NOB 198.4
PLM Turnaround Time (TAT)	48-hour
TEM Turnaround Time (TAT)	48-hour
Date	2019-08-14
General Notes	Stafford Salt shed interior was inaccessable.
Surveys Performed	Asbestos, XRF, Hazardous Materials Inventory

Asbestos Section

(2), VB, 1, Black Vapor Barrier under roof shingles, 2

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:32

Sample Location Photo

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:32

Material Information

Sampled or Assumed?	Sampled
Material Acronym	VB, 1
Material Description	Black Vapor Barrier under roof shingles
Is Material a Non-Friable Organically Bound (NOB)	Yes
Homogeneous Area	3000sqft
Total Count	(2)
Total Count (number only)	2

(2), Sh1, Black/Grey rock (bottom layer) shingle, 2

Representative Photos

Vernon salt shed

Sample Location	Vernon salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:35

Vernon salt shed

Sample Location	Vernon salt shed
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:35

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh1
Material Description	Black/Grey rock (bottom layer) shingle
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), Sh2, Black/brown rock (top layer) shingle, 2

Vernon salt shed

Sample Location	Vernon salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:35

Vernon salt shed

Sample Location	Vernon salt shed
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:35

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh2
Material Description	Black/brown rock (top layer) shingle
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), VB, 2, Black vapor barrier on walls , 2

Representative Photos

Vernon salt shed c side

Sample Location	Vernon salt shed c side
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:37

Vernon salt shed c side

Sample Location	Vernon salt shed c side
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	09:37

Material Information

Sampled or Assumed?	Sampled
Material Acronym	VB, 2
Material Description	Black vapor barrier on walls
Is Material a Non-Friable Organically Bound (NOB)	Yes
Homogeneous Area	1500sqft
Total Count	(2)
Total Count (number only)	2

(2), C, 1, White caulking , 2

Representative Photos

D side vernon salt shed

Sample Location	D side vernon salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:11

D side vernon salt shed

Sample Location	D side vernon salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:11

Material Information

Sampled or Assumed?	Sampled
Material Acronym	C, 1
Material Description	White caulking
Is Material a Non-Friable Organically Bound (NOB)	Yes
Homogeneous Area	40lf
Total Count	(2)

Total Count (number only)	2

(2), VB, 3, Black vapor barrier , 2

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:11

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:11

Material Information

Sampled or Assumed?	Sampled
Material Acronym	VB, 3
Material Description	Black vapor barrier
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), Sh3, Black/Grey shingle bottom layer, 2

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:12

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:12

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh3
Material Description	Black/Grey shingle bottom layer
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), Sh4, Black/Brown shingle top layer, 2

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:12

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:12

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh4
Material Description	Black/Brown shingle top layer
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), C, 2, Pliable white caulk, 2

Representative Photos

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:25

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:25

Material Information

Sampled or Assumed?	Sampled
Material Acronym	C, 2
Material Description	Pliable white caulk
Is Material a Non-Friable Organically Bound (NOB)	Yes
Homogeneous Area	20lf
Total Count	(2)

Total Count (number only)	2

(2), VB, 4, Black vapor barrier , 2

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:11

Union salt shed

Sample Location	Union salt shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	11:11

Material Information

Sampled or Assumed?	Sampled
Material Acronym	VB, 4
Material Description	Black vapor barrier
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), Sh5, Black/DK Brown Shingle, 2

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh5
Material Description	Black/DK Brown Shingle
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), Sh6, Black/Brown Shingle, 2

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Material Information

Sampled or Assumed?	Sampled
Material Acronym	Sh6
Material Description	Black/Brown Shingle
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), VB, 5, Black vapor barrier on roof, 2

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Stafford Salt Shed

Sample Location	Stafford Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116

Grab or Composite	Grab
Date	2019-08-14
Time	13:10

Material Information

Sampled or Assumed?	Sampled
Material Acronym	VB, 5
Material Description	Black vapor barrier on roof
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), T1, Black tar between wooden beams, 2

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:49

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:49

Material Information

Sampled or Assumed?	Sampled
Material Acronym	T1
Material Description	Black tar between wooden beams
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

(2), WP1, Black Waterproofing , 2

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:05

Vernon Salt Shed

Sample Location	Vernon Salt Shed
Analyze by Layer	No
Asbestos Bulk Analysis	PLM EPA 600/R93/116
Grab or Composite	Grab
Date	2019-08-14
Time	10:05

Material Information

Sampled or Assumed?	Sampled
Material Acronym	WP1
Material Description	Black Waterproofing
Is Material a Non-Friable Organically Bound (NOB)	Yes
Total Count	(2)
Total Count (number only)	2

XRF Section

Niton XRF Model No.	24792
XRF Survey Completed	Yes
XRF Data Downloaded	N/A
XRF Shots >1.0 on non-metallic building materials	No

HAZMAT Inventory Section

Vernon Salt Shed

Inventory Area Description	Vernon Salt Shed

Universal Waste (UW), Halogen Lights (Lamps)

HAZMAT Item Description	Universal Waste (UW), Halogen Lights (Lamps)
HAZMAT Item Quantity	15
HAZMAT Item Photo	

Miscellaneous

HAZMAT Item Description	Miscellaneous
HAZMAT Item Common Name	Bird guano
HAZMAT Item Photo	

Union Salt Shed

Inventory Area Description	Union Salt Shed

Universal Waste (UW), Halogen Lights (Lamps)

HAZMAT Item Description	Universal Waste (UW), Halogen Lights (Lamps)
HAZMAT Item Quantity	17

HAZMAT Item Photo

Miscellaneous

HAZMAT Item Description	Miscellaneous
HAZMAT Item Common Name	Bird Guano

HAZMAT Item Photo

Connecticut Regulated Waste (CRW CR01-CR05), Hydraulic Lift (CR02/03)

HAZMAT Item Description	Connecticut Regulated Waste (CRW CR01-CR05), Hydraulic Lift (CR02/03)
HAZMAT Item Quantity	1

HAZMAT Item Photo

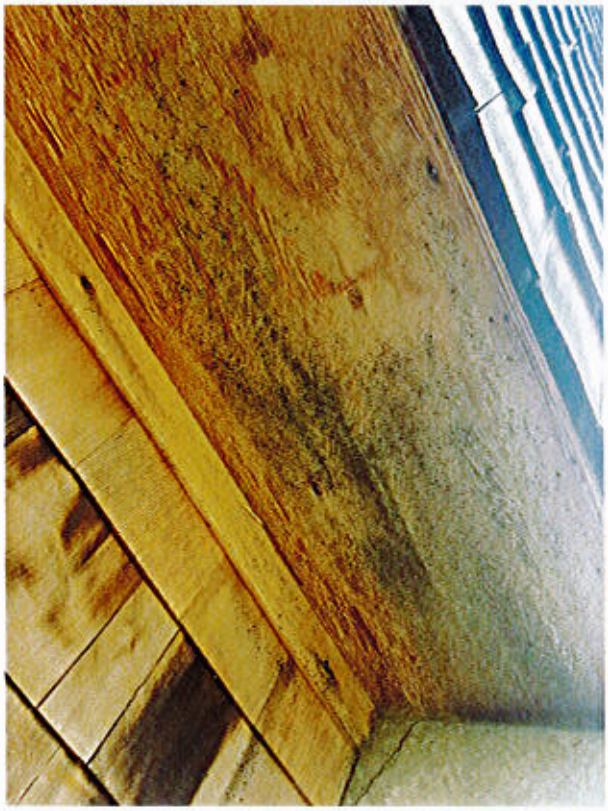
Universal Waste (UW), Emergency Lighting (Batteries/Hg Lamps)

HAZMAT Item Description	Universal Waste (UW), Emergency Lighting (Batteries/Hg Lamps)
HAZMAT Item Quantity	1

HAZMAT Item Photo

Miscellaneous

HAZMAT Item Description	Miscellaneous
HAZMAT Item Common Name	Mold
HAZMAT Item Photo	



Stafford Salt Shed

Inventory Area Description	Stafford Salt Shed

Universal Waste (UW), Halogen Lights (Lamps)

HAZMAT Item Description	Universal Waste (UW), Halogen Lights (Lamps)
HAZMAT Item Quantity	15

HAZMAT Item Photo

General Information

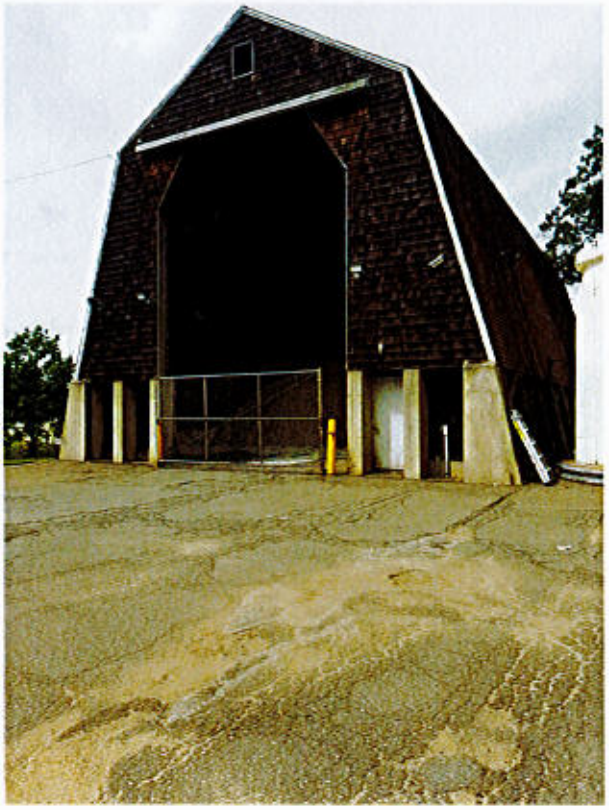
Site Sketch Diagrams

vernon b side

vernon c side

vernon d side

vernon salt shed a side

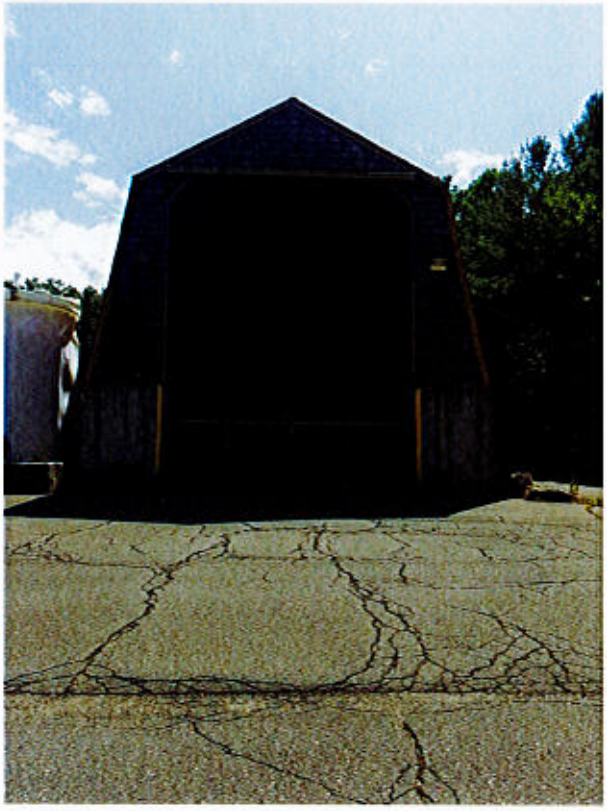


union salt shed c side

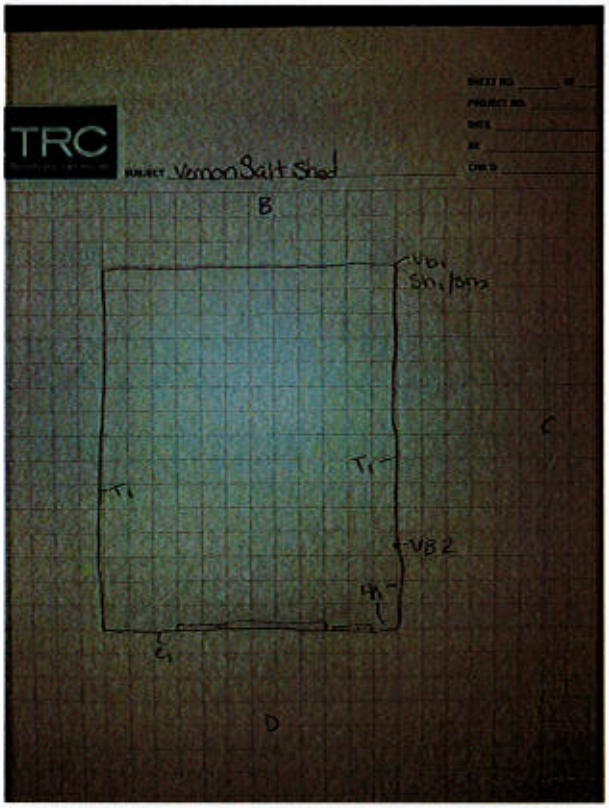
union salt shed b side

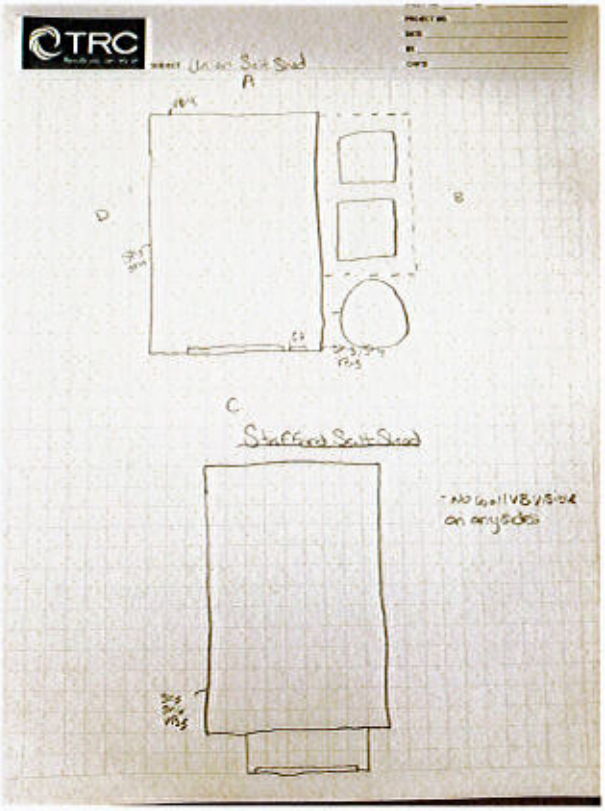
union salt shed d side

union salt shed a side



Stafford salt shed d side


TRC
Vernon Salt Shed
B
VB1
C
T1
T1
VB 2
C1
D


TRC
A
D
B
C
Stafford Salt Shed

Stafford Salt Shed interior locked

Signature

Signed 2019-08-15 20:02:45 UTC

Asbestos Samples Submitted to TRC Lab	Yes
Date Submitted to Lab	2019-08-14
App Name	WinBSI HBM Survey 1.0

Generate Report Documentation

Select one or more documents below to be generated. Once completed in the cloud, they will be sent to the listed email address. Please report any difficulties or errors to Justin Coleman.

What documents should be generated?	Asbestos chain-of-custody
Where should the document(s) be sent?	clemire@trcsolutions.com
Generate Documents	N/A