SURVEY REPORT

PRE-RENOVATION INVESTIGATIVE SURVEY FOR HAZARDOUS BUILDING MATERIALS

ORANGE SALT SHED
ORANGE, CONNECTICUT

Project No. 170-1387

Prepared for

State of Connecticut
Department of Transportation
Newington, Connecticut

Prepared by

TRC
Windsor, Connecticut

Issued
August 2010

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TRC
Windsor, Connecticut

Erik R. Plimpton, P.E., CHMM
Program Manager

Edmund J. Burke, P.E.
Engineer in Charge

TRC Project No. 151990.4116.0710
Issued-August 2010

TRC
21 Griffin Road North
Windsor, Connecticut 06095
Telephone (860) 298-9692
Facsimile (860) 298-6380

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PROJECT OUTLINE

DOT Project No.:	170-1387
Assignment No.:	503-4116
DOT Project Manager:	Felix Mathieu
Site Address:	Orange Salt Shed, Orange, CT
TRC Project No.:	151990.4116.0710
Asbestos Inspector:	Jonathan Gentile (LIC #000603)
	Michael Kostruba (LIC #000694)
Lead Inspector:	Michael Kostruba (LIC #002207)
Date(s) of Inspection:	8/11/10
Asbestos Identified:	None
Lead Paint Identified:	None
Add'l Haz./Reg. Mat./Waste/Items: (potentially impacted by renovation)	Yes (See Table 5)

Asbestos Removal Cost Estimate:	**$ 0**
Haz/Reg Materials/Wastes/Items Removal Cost Estimate: (assuming impacted by renovation)	**$ 1,850**

Additional Notes:

The property consists of a salt storage facility which is scheduled for roof replacement and other minor upgrades. Note: the large covered vents on each end of the salt shed were not accessible due to height.

TABLES

TABLE 1 BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS ORANGE SALT SHED ORANGE, CONNECTICUT			
Sample No.	**Sample Location**	**Type of Homogeneous Material**	**% and Type Asbestos**
1	Exterior	Black vapor barrier behind cedar shakes (VB1)	ND<1%
2	Exterior	Black vapor barrier behind cedar shakes (VB1)	ND<1%
3	Exterior	Black vapor barrier behind cedar shakes (VB1)	ND<1%
4	Roof	Red asphalt shingles (R1)	ND<1%
5	Roof	Red asphalt shingles (R1)	ND<1%[1]
6	Roof	Black tar paper under R1 (R2)	ND<1%
7	Roof	Black tar paper under R1 (R2)	ND<1%[1]
8	Interior	Black caulk between timbers lining lower inside walls (C1)	ND<1%
9	Interior	Black caulk between timbers lining lower inside walls (C1)	ND<1%[1]
10	Exterior	Grey door caulk (C2)	ND<1%
11	Exterior	Grey door caulk (C2)	ND<1%[1]

Note: survey/sampling limited to areas of projected renovation impact

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 Result confirmed by TEM analyses
* Quantified by PLM Point Counting techniques

TABLE 2 IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%) ORANGE SALT SHED ORANGE, CONNECTICUT					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA SCHEDULED FOR RENOVATION IMPACT					

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%)
ORANGE SALT SHED
ORANGE, CONNECTICUT

Material	General Location
Black vapor barrier behind cedar shakes (VB1)	Exterior
Red asphalt shingles (R1)	Roof
Black tar paper under R1 (R2)	Roof
Black caulk between timbers lining lower inside walls (C1)	Interior
Grey door caulk (C2)	Exterior

TABLE 4 SUMMARY OF LEAD PAINT XRF MEASUREMENTS ORANGE SALT SHED ORANGE, CONNECTICUT					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
Salt storage shed	15	8	0	0	7

See Lead Paint XRF Measurement Table in Appendix G.

TABLE 5 INVENTORY OF ADDITIONAL HAZARDOUS/REGULATED MATERIALS, WASTES AND ITEMS IDENTIFIED ORANGE SALT SHED ORANGE, CONNECTICUT				
Quantity	**Size**	**Material/Item**	**General Location**	**Potential Hazard**
Twelve		Halogen light bulbs	Interior	UW – Hg lamps
Five (5)		Halogen light bulbs	Exterior	UW – Hg lamps
One (1)		Hydraulic overhead door lift	Interior	CRW – oil

Inventory limited to areas of potential renovation impact.

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 SKETCHES

SHEET NO. _____ OF _____

PROJECT NO. 151990.4110.0710

DATE 8/11/10

BY J. Gentile / M. Kostruba

SUBJECT ORANGE SALT SHED

CHK'D _____

VB_1 = Black Vapor Barrier behind cedar shakes ≈ 3000 SF

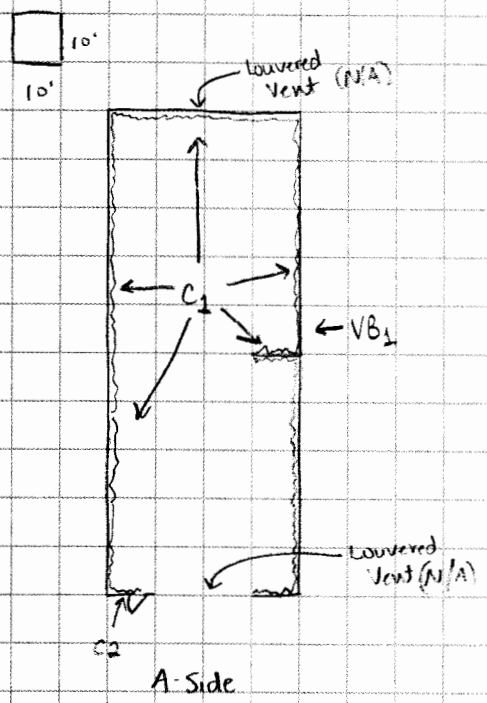
R_1 = Red Asphalt Shingles ≈ 8400 SF

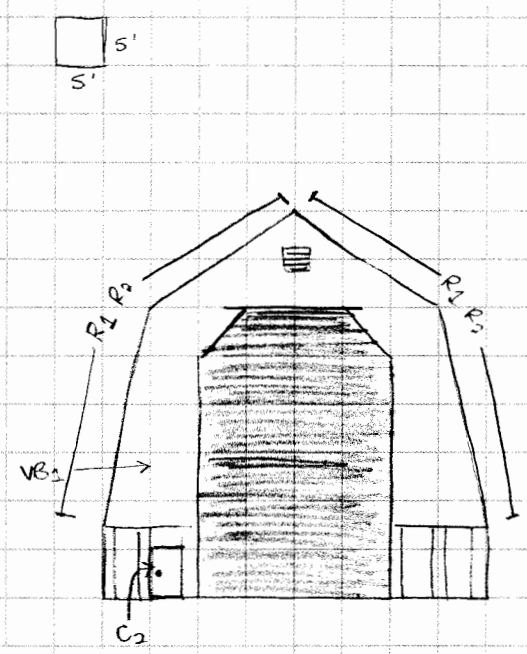
R_2 = Black tar paper under R_1 ≈ 8400 SF

C_1 = Black caulk b/w timbers lining lower walls of structure ≈ 2800 LF

C_2 = Grey Door caulk ≈ 17 LF

* Louvered vents not accessable due to extreme height





HAZ

Halogen Bulbs = 12 inside

5 outside

Hydrolic O/H Door lift

A

APPENDIX B

TRC INSPECTORS LICENSES/CERTIFICATIONS

0002437 FP **PRSRT T7 0 0564 06098
JONATHAN D. GENTILE
88 WHEELER STREET
WINSTED CT 06098

Dear Licensed/Certified Professional,
Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health **(860) 509-7603**
P.O. Box 340308
M.S.#12MQA **http://www.dph.state.ct.us**
Hartford, CT 06134-0308

Sincerely,

J Robert Galvin, MD, MPH & MBA

J. ROBERT GALVIN, MD, MPH, COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

1. Detach and sign each of the cards on this form.
2. Display the large card in a prominent place in your office or place of business.
3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet card, place it in a secure place.
4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
THE INDIVIDUAL NAMED BELOW IS LICENSED BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT - INSPECTOR

JONATHAN D. GENTILE

LICENSE NO.
000603
CURRENT THROUGH
10/31/10
VALIDATION NO.
03-986014

SIGNATURE

COMMISSIONER

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
JONATHAN D. GENTILE

VALIDATION NO.	LICENSE NO.	CURRENT THROUGH
03-986014	000603	10/31/10

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE

COMMISSIONER

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
JONATHAN D. GENTILE

VALIDATION NO.	LICENSE NO.	CURRENT THROUGH
03-986014	000603	10/31/10

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE

COMMISSIONER

CERTIFICATE OF ACHIEVEMENT

This certifies that

Jonathan Gentile

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

ATC Associates Inc.
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Gregory J. Morsch
Principal Instructor

January 6, 2010
Date of Course

January 6, 2011
Expiration Date

Gregory J. Morsch
Regional Manager

SIAR-3328
Certificate Number

January 6, 2010
Examination Date

State of Connecticut

Lookup Detail View

Name

Name
MICHAEL C KOSTRUBA

License Information

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Past Discipline or Pending Charges
Asbestos Consultant-Inspector	694	11/30/2010	01/08/2008	Michael C. Kostruba	ACTIVE	None

Generated on: 3/10/2010 11:31:05 AM

CERTIFICATE OF ACHIEVEMENT

This certifies that

Mike Kostruba

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

ATC Associates Inc.
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Gregory J. Morsch
Principal Instructor

August 20, 2009
Date of Course

August 20, 2010
Expiration Date

Gregory J. Morsch
Regional Manager

SIAR-3200
Certificate Number

August 20, 2009
Examination Date

State of Connecticut

Lookup Detail View

Name

Name
MICHAEL C KOSTRUBA

License Information

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Past Discipline or Pending Charges
Lead Inspector Risk Assessor	2207	11/30/2010	07/30/2008	Michael C. Kostruba	ACTIVE	None

Generated on: 1/28/2010 5:41:16 PM

CERTIFICATE OF ACHIEVEMENT

This certifies that

Mike Kostruba
77 Cedar St., Wethersfield, CT 06109
047-68-6999

has successfully completed the

INSPECTOR RISK ASSESSOR REFRESHER

Training Course
conducted by
ATC Associates Inc.
73 William Franks Drive
West Springfield, MA 01089
(413) 781-0070

Edward Kolodziej
Principal Instructor

Gregory J. Morsch
Training Manager

October 27, 2009
Date of Course

October 27, 2009
Exam Date

CTLIRAR-249
Certificate Number

October 27, 2010
Expiration Date

Training received complies with the requirements of the Connecticut Department of Public Health pursuant to Section 477 of the Connecticut General Statutes.

APPENDIX C

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:

ASBESTOS

AIR-FIBER COUNTING - PCM

BULK IDENTIFICATION - PLM

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES December 31, 2011 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 2nd DAY OF December 2009

Registration No.

PH- 0426

SUZANNE BLANCAFLOR, MS
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:

BULK 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).

2010-07-01 through 2011-06-30

Effective dates

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

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
E-Mail: kwilliamson@trcsolutions.com
URL: http://www.trcsolutions.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101424-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2010-07-01 through 2011-06-30

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

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.

EMSL ANALYTICAL, INC. - CT

LOCATED AT 4 Fairfield Blvd. IN Wallingford, CT 06492

AND REGISTERED IN THE NAME OF Wayne Froehlich

THIS CERTIFICATE IS ISSUED IN THE NAME OF Gloria Oriol - Director
Wayne Froehlich - Co-Director 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:

Drinking Water, Non-potable Water/Wastewater
Examination for:
Bacteria

ASBESTOS
Examination for:
Air – PCM, TEM
Bulk Materials – PLM, TEM
Water - TEM

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES September 30, 2010 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 5th DAY OF September 2008

Registration No.

PH-0322

SUZANNE BLANCAFLOR, MS
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: 200700-0

EMSL Analytical, Inc.

Wallingford, CT

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

BULK 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).

2010-01-01 through 2010-12-31

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMSL Analytical, Inc.
4 Fairfield Boulevard
Wallingford, CT 06492
Ms. Gloria Oriol
Phone: 203-284-5948 Fax: 203-284-5978
E-Mail: goriol@emsl.com
URL: http://www.emsl.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 200700-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2010-01-01 through 2010-12-31

Effective dates

Sally S. Bruce

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

APPENDIX D

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS

TRC

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

Edition: October 2009
Supersede Previous Edition

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 38598

PROJECT NUMBER	PROJECT NAME
151990.4116.0710	CONN DOT Orange Salt Shed
SIGNATURE	INSPECTOR
	Jonathan D. Gentile

TURNAROUND TIME

PLM:		8hr		24hr	X	48hr	X	3day
TEM:		24hr		48hr		3day		5day

PARAMETERS

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	8/11/10	1229		X	Exterior	X					Black Vapor Barrier behind Cedar Shakes (VB1)
2	8/11/10	1230		X	Exterior	X					Black Vapor Barrier behind Cedar Shakes (VB1)
3	8/11/10	1231		X	Exterior	X					Black Vapor Barrier behind Cedar Shakes (VB1)
4	8/11/10	1240		X	Roof	X					Red Asphalt Shingles (R1)
5	8/11/10	1241		X	Roof					X	Red Asphalt Shingles (R1)
6	8/11/10	1243		X	Roof	X					Black Tar Paper under R1 (R2)
7	8/11/10	1245		X	Roof					X	Black Tar Paper under R1 (R2)
8	8/11/10	1250		X	Interior	X					Black Caulk b/w Timbers Lining Lower Inside Walls (C2)
9	8/11/10	1251		X	Interior					X	Black Caulk b/w Timbers Lining Lower Inside Walls (C2)
10	8/11/10	1254		X	Exterior	X					Grey Door Caulk (C2)

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/12/10	8/12/10 K. Williams			
(Printed) Jonathan D. Gentile	Time:	(Printed) 1615 K Williams	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: OK
Acceptable: Yes ✓ No ____
Comments:

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 #. 38598

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME							
151990.4116.0710	CONN DOT Orange Salt Shed		PLM:		8hr		24hr	X	48hr	X	3day
			TEM:		24hr		48hr		3day		5day
SIGNATURE	INSPECTOR									
	Jonathan D. Gentile									

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
11	8/11/10	1256		X	Exterior					X	Grey Door Caulk (C2)

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	8/12/10	8/12/10 K. Williamson			
(Printed) Jonathan D. Gentile	Time:	(Printed) 1615 K. Williamson	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: ✓
Acceptable: Yes ✓ No ____
Comments:

241002842

EMSL

4 Fairfield Blvd, Wallingford, CT 06492 Phone: 203-284-5948 Fax: 203-284-5978

TEM Bulk Chain of Custody Record

Date: 08/16/10

Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC
Client Job#: 151990.4116.0710
Client Job Ref./Loc.: CT DOT- Orange Salt Shed
Relinquished by: K. Williamson- Kwilliamson@trcsolutions.com
Received by:
Report to: E. Plimpton- EPlimpton@trcsolutions.com & EBouley@trcsolutions.com
Samplers Name: J. Gentile

RECEIVED AUG 17 2010 FedEx By RD 10:05

Turn Around 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**
5	38598	Shingle	See COC		
7	38598	TP			
9	38598	Caulk			
11	38598	Caulk			

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

APPENDIX E

PLM LABORATORY ANALYSIS DATA

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

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Site: Orange Salt Shed
Lab Log #: 38598
Project #: 151990.4116.0710
Date Received: 08/12/10
Date Analyzed: 08/13/10

RESULTS

Sample No.	Color	Homogeneous	Multi-Layered	Layer No.	Other Matrix Mat'ls	Asbestos %	Asbestos Type
1	Black	Yes	No	--	80% cellulose	ND<1%	None
2	Black	Yes	No	--	80% cellulose	ND<1%	None
3	Black	Yes	No	--	80% cellulose	ND<1%	None
4	Black/Red	Yes	No	--	10% fiberglass	ND<1%	None
5	Black/Red	Yes	No	--	10% fiberglass	ND<1%	None
6	Black	Yes	No	--	80% cellulose	ND<1%	None
7	Black	Yes	No	--	80% cellulose	ND<1%	None
8	Black	Yes	No	--	20% cellulose	ND<1%	None
9	Black	Yes	No	--	20% cellulose	ND<1%	None
10	Grey	Yes	No	--	--	ND<1%	None
11	Grey	Yes	No	--	--	ND<1%	None

NA/PS- Not Analyzed/Positive Stop

Reporting limit- asbestos present at 1%
ND<1% - asbestos was not detected
Trace- asbestos was observed at level of less than 1%

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, negative results must 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), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes 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, 2011. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2010. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

Analyst: Kathleen Williamson

QC Analyst: Kathleen Williamson

Reviewed by: _____
Laboratory Analyst

Approved _____
Kathleen Williamson
Signatory: Laboratory Manager

Date Issued: 8/16/10

APPENDIX F

TEM LABORATORY ANALYSIS DATA

EMSL Analytical, Inc.
4 Fairfield Boulevard, Wallingford, CT 06492
Phone: 203-284-5948 Fax: (203) 284-5978 Email: wallingfordlab@emsl.com

Attn: **Kathleen Williamson**
TRC Environmental Consultants
21 Griffin Road North
Windsor, CT 06095

Fax: (860) 298-6399 Phone: (860) 298-9692
Project: **CT DOT-Orange Salt Shed 151990.4116.0710**

Customer ID: TRC51
Customer PO: 13366
Received: 08/17/10 10:05 AM
EMSL Order: 241002842

EMSL Proj:
Analysis Date: 8/19/2010

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
5 *241002842-0001*	Shingle	Black Fibrous Heterogeneous	100.0	None	No Asbestos Detected
7 *241002842-0002*	TP	Black Fibrous Heterogeneous	100.0	None	No Asbestos Detected
9 *241002842-0003*	Caulk	Black Non-Fibrous Heterogeneous	100.0	None	No Asbestos Detected
11 *241002842-0004*	Caulk	Gray Non-Fibrous Heterogeneous	100.0	None	No Asbestos Detected

Initial report from 08/19/2010 09:56:46

Analyst(s)
Edward Leary (4)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may r reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted.
Samples analyzed by EMSL Analytical, Inc. 4 Fairfield Boulevard, Wallingford CT

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APPENDIX G

LEAD PAINT XRF MEASUREMENT TABLE

Lead Based Paint Measurement Summary Table

Device(s):	Niton 7007 X Ray Fluorescence (XRF) Spectrum Analyzer, Serial #V1044
	Niton XL-309 X Ray Fluorescence (XRF) Spectrum Analyzer, Serial #U688
Site:	Orange Salt Shed, Orange, Connecticut
Project # :	151990-4116-0710
Date(s):	8/11/2010
Inspector:	Michael Kostruba (State of Connecticut License No. 002207)
Ranges:	(NEG<INC<POS): 0.0<0.05<0.05 (OSHA Compliance)

Number	Room	Side	Structure	Feature	Material	Color	Condition	Result	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1	**Shutter calibration**							...	5.4	0.0		62.46	8/11/2010 12:23
2	**0.0 calibration**							...	0.0	0.0	1.0	1.78	8/11/2010 12:25
3	**0.3 calibration**							...	0.3	0.1	1.2	8.92	8/11/2010 12:25
4	**1.0 calibration**								1.1	0.1	1.2	10.74	8/11/2010 12:25
5	Salt shed	A	Door		Wood	Grey		NEG	0.0	0.0	1.0	2.68	8/11/2010 12:28
6	Salt shed	A	Door trim		Wood	Grey		NEG	0.0	0.0	1.0	5.35	8/11/2010 12:28
7	Salt shed	A	main entrance	fascia board	Wood	White		NEG	0.0	0.0	1.0	3.59	8/11/2010 12:31
8	Exterior	A	roof line	fascia board	Wood	White		NEG	0.0	0.0	1.0	3.13	8/11/2010 12:34
9	Exterior	D	Ext trim		Wood	White		NEG	0.0	0.0	1.0	2.23	8/11/2010 12:35
10	Exterior	A	Door		Wood	Grey		NEG	0.0	0.0	1.7	2.24	8/11/2010 12:36
11	Exterior	A	Door trim		Wood	Grey		NEG	0.0	0.0	1.0	2.24	8/11/2010 12:37
12	**0.0 calibration**	--	--		--				0.0	0.0	1.0	2.24	8/11/2010 12:43
13	**0.3 calibration**	--	--		--				0.3	0.1	1.1	4.93	8/11/2010 12:44
14	**1.0 calibration**	--	--		--				1.0	0.1	1.1	17.88	8/11/2010 12:44
15	**1.0 calibration**	--	--		--				1.1	0.1	1.2	10.72	8/11/2010 12:44

All XRF readings <0.1 mg/cm2 = Below Detectable Levels (BDL)

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

APPENDIX H

ITEMIZED COST ESTIMATE FOR ASBESTOS ABATEMENT

TRC
Asbestos Abatement Cost Estimate
CTDAS Contract # 03PSX0374A
(Effective: March 5, 2004 – September 30, 2010)

Site: Orange Salt Shed, Orange, Connecticut
TRC Project #: 151990.4116.0710 **DOT Project #: 170-1387**

ITEM DESCRIPTION	QTY	UNIT	COST	MULT	TOTAL
ASBESTOS REMOVAL					
HEPA VACUUMING		SF	$ 0.50	0.35	$ -
PIPING REMOVAL <6" INCL FITTINGS		LF	$ 5.00	0.35	$ -
PIPING REMOVAL 6"-12" INCL FITTINGS		LF	$ 7.50	0.35	$ -
PIPING REMOVAL >12" INCL FITTINGS		LF	$ 10.00	0.35	$ -
GLOVE BAG FIRST 25		EA	$ 70.00	0.35	$ -
GLOVEBAG 25-50		EA	$ 60.00	0.35	$ -
GLOVEBAG OVER 50		EA	$ 50.00	0.35	$ -
REMOVE EQUIPMENT INSULATION		SF	$ 10.00	0.35	$ -
REMOVE HVAC DUCT INSULATION		SF	$ 10.00	0.35	$ -
REMOVE HVAC DUCT FLEX CONN		SF	$ 7.50	0.35	$ -
FLOOR TILE AND MASTIC		SF	$ 3.00	0.35	$ -
FLOOR TILE (NO MASTIC)		SF	$ 1.50	0.35	$ -
SPRAY ON FIREPROOFING		SF	$ 6.00	0.35	$ -
PLASTER LATHE AND BLACK IRON		SF	$ 7.50	0.35	$ -
ACCOUSTIC OR METAL PAN CEILING INCL GRID		SF	$ 5.00	0.35	$ -
ACCOUSTIC PANELS CLEAN GRID FOR REUSE		SF	$ 4.00	0.35	$ -
ACCOUSTIC PLASTER FINISH MTL (SCRAPE)		SF	$ 6.50	0.35	$ -
PATCH/SEAL DAMAGED INSULATION		SF	$ 3.00	0.35	$ -
CONTAMINATED SOIL (2" DEPTH)		SF	$ 4.00	0.35	$ -
TRANSITE MATERIAL		SF	$ 2.50	0.35	$ -
ROOFING OR FLASHING		SF	$ 3.50	0.35	$ -
UNDERGROUND PIPE OR INSULATION (HAND EXCAVATION)		LF	$ 30.00	0.35	$ -
CARPET OVER TILE		SF	$ 2.50	0.35	$ -
WALL BASE AND MASTIC		LF	$ 2.50	0.35	$ -
REMOVAL OF DRYWALL PARTITIONS INCL FRAMING		SF	$ 2.00	0.35	$ -
REMOVAL OF CMU WALL		SF	$ 5.00	0.35	$ -
PREP WORK AREA		SF	$ 3.00	0.35	$ -
SOLID BARRIER OR ACCESS TUNNELS 2X4 AND PLYWOOD		SF/SA	$ 2.50	0.35	$ -
STANDBY ABATEMENT PERSONNEL		HR	$ 50.00	0.35	$ -
SELECTIVE DEMOLITION TO ACCESS ACM		SF	$ 3.00	0.35	$ -
REMOVAL OF FLOOR LEVELING MATERIAL		SF	$ 2.00	0.35	$ -
MISCELLANEOUS ITEMS					
MOBILIZATION (1 PER WORK AREA)		EA	$ 250.00	1	$ -
WORKER DECON (1 PER WORK AREA)		EA	$ 250.00	1	$ -
TEMP ELECTRICAL CONNECTION (LICENSED ELECTRICIAN)		EA		1.1	$ -
TEMP GENERATOR		DY	$ 250.00	1.1	$ -
ACM DISPOSAL (INCLUDES TRANSPORTATION)		CY	$ 55.00	1	$ -
HAZARDOUS WASTE DISPOSAL (INCLUDES TRANS)		CY	$ 250.00	1	$ -
CONSTRUCTION DEBRIS DISPOSAL (INCLUDES TRANS)		CY	$ 25.00	1	$ -
FIXED SCAFFOLDING		SF		1.1	$ -
EXCAVATION TO EXPOSE UNDERGROUND PIPE		CY		1.1	$ -
PROJECT NOTIFICATION (1% OF ABATEMENT COST)	0	EA	$ 50.00	1.1	$ -
PROJECT BOND (2% OF TOTAL CONTRACT)		EA		1.1	$ -
ESCALATION FACTORS					
WORK SURFACES 10-20 FEET HIGH				15%	$ -
WORK SURFACES OVER 20 FEET HIGH				30%	$ -
NON REGULAR WORK HOURS 6:00PM-6:00AM AND WEEKEND				30%	$ -
EMERGENCY RESPONSE				30%	$ -
CONFINED SPACE WORK				15%	$ -
REMOVAL OF MULTIPLE LAYERS OF TILE (EACH ADDIT LAYER)				50%	$ -
REMOVE ON LIVE STEAM EQUIPMENT				25%	$ -
EXTERIOR WORK				30%	$ -
NEGOTIATED ITEMS					
		SF		1	$ -
		SF		1	$ -
				1	$ -
				1	$ -
				1	$ -
CONTINGENCY (10%)				10%	**$ -**
TOTAL					**$ -**

APPENDIX I

HAZARDOUS/REGULATED MATERIALS, WASTES AND ITEMS REMOVAL COST ESTIMATE

TRC
Hazardous/Regulated Materials, Wastes & Items Removal Cost Estimate
(excluding asbestos abatement)
CTDAS Contract # 04PSX0275
(Effective: February 1, 2005 – January 31, 2011)

Site: Orange Salt Shed, Orange, Connecticut **DOT Project #: 170-1387**
TRC Project #: 151990.4116.0710

Item	Item #	Quantity	Units	Rate	Total
Operations Supervisor	1	0	hrs	$57.50	$0.00
Equipment Operator	4	0	hrs	$51.25	$0.00
Equipment Operator OT	4	0	hrs	$76.88	$0.00
Laborer	9	16	hrs	$38.75	$620.00
Laborer OT	9	0	hrs	$58.13	$0.00
Driver (Mobilization/Disposal/Vac)	5	8	hrs	$40.75	$326.00
Driver (Mobilization/Disposal/Vac) OT	5	0	hrs	$61.13	$0.00
Vacuum Truck (oil)	13	0	hrs	$60.00	$0.00
Box truck	19	8	hrs	$23.50	$188.00
Utility Trucks (< 18000 GVW)	18	0	hrs	$13.40	$0.00
Loader/Backhoe (12' dig depth)	33	0	hrs	$35.00	$0.00
Loader/Backhoe (15' dig depth)	34	0	hrs	$59.00	$0.00
Lowbed Trailer/Tractor	28	0	hrs	$59.50	$0.00
Triaxle Dump Truck	24	0	hrs	$31.50	$0.00
Roll-off Truck	31	0	hrs	$52.50	$0.00
Roll-off Container (30 CY)	93	0	days	$20.00	$0.00
Roll-off Liners (haz waste/CRW soil)	118	0	ea	$70.00	$0.00
* Highlift		0	days	$125.00	$0.00
Water Wagon	30	0	hrs	$22.00	$0.00
Hoses (dust suppression)	65	0	hrs	$15.00	$0.00
Frac Tank (20,000 gal)	83	0	days	$75.00	$0.00
5,000 psi Hi-Pressure Cleaner	75	0	hrs	$42.50	$0.00
Silt Fence	119	0	LF	$1.00	$0.00
Level C PPE (Pb)	84	0	person-hrs	$18.00	$0.00
Poly (10-mil sheeting 28'x100')	110	0	ea	$115.00	$0.00
Speedi-Dry (50 lb bag)	120	1	bag	$20.00	$20.00
17C DOT 55 gal Drums (haz items)	107	0	ea	$60.00	$0.00
Generator (5 kw)	74	0	days	$150.00	$0.00
* Dispose of haz-waste/regulated items		5	ea	$100.00	$500.00
* Dispose of AST/UST/sump contents (oil)		25	gal	$1.00	$25.00
* Dispose of trench/drain sludge (CRW)		0	CY	$50.00	$0.00
* Dispose of sediment/concrete (CRW)		0	CY	$50.00	$0.00
* Dispose of contaminated soil (CRW)		0	CY	$50.00	$0.00
* Dispose of Pb-painted components (haz)		0	CY	$125.00	$0.00
* Dispose of contaminated wood (haz)		0	CY	$125.00	$0.00
* Dispose of boiler/fly ash (haz)		0	CY	$125.00	$0.00
* CFC Reclaim (subcontractor)		0	day	$1,000.00	$0.00
Contingency (10%)					$167.90
				TOTAL ESTIMATE	**$1,846.90**

* Line items not included in Contract 04PSX0275, rate estimated by TRC
Cost estimate based on assumption of day for hazardous/regulated item removal (assuming items will be impacted by renovation).

APPENDIX J

RELATED CORRESPONDENCE

ORANGE SALT SHED
SCOPE OF WORK FOR ROOF REPLACEMENT AND REPAIR
Project No. XX-XXXX
As of 06/28/10

GENERAL:

1. The existing roof of the salt storage facility will be replaced with a fully adhered polyvinyl chloride membrane roofing system.
2. The storage facility has no known or visible evidence of structural failure or impairment that may compromise its overall integrity. However, minor concerns include broken lateral braces damaged by moving trucks and salt/water penetration at certain areas, requiring repair or replacement.
3. All other restorations relate to improper and inadequate air ventilation.

BUILDING IMPROVEMENTS:

1. Removal of the existing overhead door system including hoist and other associated parts.
2. Existing asphalt shingle roof to be replaced with a PVC Décor roofing system (Basis of Design: Sika Sarnafil). Overall system includes re-nailing the existing plywood substrate and installing half inch roof board beneath membrane.
3. Existing canopy roof to be replaced with a PVC Décor roofing membrane.
4. Penetrations at truss and timber barrier ledge assemble to be sealed.
5. Two louver retrofit at rear wall of shed.
6. Snow guard retention and backer system to be installed at upper roof transition.
7. Roof and trim to be re-nailed as required.
8. Damaged wooden lateral bracings and trusses to be repaired or replaced as required.
9. Canopy fascia and trim to be painted.

s:\stdes\facil\170-1387\170-2428\Orange-EastGranby\Scope – Orange Salt Shed (No Pictures).doc

Plimpton, Erik (Windsor,CT-US)

From: Hartley, David [David.Hartley@ct.gov]
Sent: Monday, July 26, 2010 2:42 PM
To: Plimpton, Erik (Windsor,CT-US)
Subject: RE: orange & e. granby salt shed renovations

no

From: Plimpton, Erik (Windsor,CT-US) [mailto:EPlimpton@trcsolutions.com]
Sent: Monday, July 26, 2010 2:28 PM
To: Hartley, David
Cc: Burke, Ed (Windsor,CT-US)
Subject: FW: orange & e. granby salt shed renovations

Dave, you have any objection to me calling the sites directly to schedule times to do our inspections prior to the planned renovations?

Erik R. Plimpton, PE, CHMM
Managing Principal
Building Sciences Practice Leader

TRC
ENERGY STAR AWARD 2008
PARTNER OF THE YEAR

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21 Griffin Road North
Windsor, CT 06095
(860) 298-6280 (o)
(860) 798-4699 (c)
(860) 298-6380 (f)
eplimpton@trcsolutions.com

From: Mathieu Jr., Felix [mailto:Felix.Mathieu@ct.gov]
Sent: Monday, July 26, 2010 1:10 PM
To: Plimpton, Erik (Windsor,CT-US)
Subject: RE: orange & e. granby salt shed renovations

I am not sure it is Dave issue. I think you should get the tel # for the respected garage and call the garage supervisor and let them know you are coming.

Orange Tel # is 203-799-5072
East Granby Tel # is 860-688-0686

Felix

From: Plimpton, Erik (Windsor,CT-US) [mailto:EPlimpton@trcsolutions.com]
Sent: Monday, July 26, 2010 11:57 AM
To: Mathieu Jr., Felix

Cc: Nemecek, Judith A; Burke, Ed (Windsor,CT-US)
Subject: orange & e. granby salt shed renovations

Our assignment funding is in place
Should I coordinate with Dave Hartley regarding scheduling dates/times to have inspectors out at the sites to do the survey work?

Erik R. Plimpton, PE, CHMM
Managing Principal
Building Sciences Practice Leader

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eplimpton@trcsolutions.com

Plimpton, Erik (Windsor,CT-US)

From: Plimpton, Erik (Windsor,CT-US)
Sent: Tuesday, August 24, 2010 1:16 PM
To: Mathieu, Felix Jr.
Cc: 'Nemecek, Judith A'; Strong, Michael J; Burke, Ed (Windsor,CT-US)
Subject: orange & e. granby salt sheds

Both site inspections are done, reports are being finalized.

With respect to the planned renovations at each site

- We did not identify any asbestos in the way
- We did not identify any detectable levels of lead paint in the way
- At E. Granby there are some halogen lamps both on the interior and exterior that may be impacted (and also a 4500 gal magnesium chloride AST outside which does not appear it will be impacted)
- At Orange there are there are also some halogen lamps both on the interior and exterior that may be impacted, as well as what looks to be a hydraulic garage door lift which may be impacted.

No need for asbestos or lead spec items. We can do NTC and regulated/hazmat items spec items for each site if you want. Or you could handle them with just a NTC, etc. (that is assuming the lamps/lift are being impacted at all by the renovations)

Reports will be finalized and bound/delivered soon (as will pdf copies of the complete report).

Let me know if you want NTC or haz item specs if the hazmat items are being impacted.

I believe I saw somewhere 9/15 was FDP?

Erik R. Plimpton, PE, CHMM
Managing Principal
Building Sciences Practice Leader

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