SURVEY REPORT

PRE-RENOVATION INVESTIGATIVE SURVEY FOR HAZARDOUS BUILDING MATERIALS

SALT SHED ROOF REPLACEMENTS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT

Project No. 173-444

Prepared for

State of Connecticut
Department of Transportation
Newington, Connecticut

Prepared by

TRC
Windsor, Connecticut

Issued
May 2014

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Program Manager

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

TRC Project No. 183572.4951.0710
Issued-May 2014

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21 Griffin Road North
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PROJECT OUTLINE

DOT Project No.:	173-444
Assignment No.:	504-4951
DOT Project Manager:	Jeffrey A. Portal
Site Address:	Salt Shed Roof Replacements, Westport, Darien, Wilton & Trumbull, CT
TRC Project No.:	183572.4951.0710
Asbestos Inspector:	Jonathan Gentile (LIC #000603) Brian Behrens (LIC #000857)
Lead Inspector:	Brian Behrens
Date(s) of Inspection:	4/7/14
Asbestos Identified:	None
Lead Paint Identified:	Yes, however all XRF readings on non-metallic components tested <1.0 mg/cm^2
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)

Asbestos Removal Cost Estimate:	**$ 0**
Haz/Reg Materials/Wastes/Items Removal Cost Estimate:	**$ 3,815**

Additional Notes:

The properties consist of one-story salt storage sheds which will undergo roof replacement and associated repair projects. Asphalt shingles are to be removed and replaced with a PVS roof system; louvers will be installed in the rear wall of the sheds, mega-doors will be removed along with other minor improvements. No water/sanitary systems service the buildings. However, there is electrical power. 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 DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT			
Sample No.	**Sample Location**	**Type of Homogeneous Material**	**% and Type Asbestos**
WESTPORT SALT SHED			
1	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%
2	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%[1]
3	Roof under R1	Black Paper Vapor Barrier (VB2)	ND<1%
4	Roof under R1	Black Paper Vapor Barrier (VB2)	ND<1%[1]
5	Roof	Brown Asphalt Shingles (R1)	ND<1%
6	Roof	Brown Asphalt Shingles (R1)	ND<1%[1]
7	Between Railroad Ties	Tan Brittle Glue (G1)	ND<1%
8	Between Railroad Ties	Tan Brittle Glue (G1)	ND<1%[1]
DARIEN SALT SHED			
9	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%
10	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%[1]
11	Roof under R2	Black Paper Vapor Barrier (VB2)	ND<1%
12	Roof under R2	Black Paper Vapor Barrier (VB2)	ND<1%[1]
13	Roof (top layer)	Red/Brown Asphalt Shingles (R1)	ND<1%
14	Roof (top layer)	Red/Brown Asphalt Shingles (R1)	ND<1%[1]
15	Roof (bottom layer)	Black Asphalt Shingles (R2)	ND<1%
16	Roof (bottom layer)	Black Asphalt Shingles (R2)	Trace anthophyllite[1]
17	Between Railroad Ties	Black Tar Sealant (TS1)	ND<1%
18	Between Railroad Ties	Black Tar Sealant (TS1)	ND<1%[1]
WILTON SALT SHED			
19	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%
20	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%[1]
21	Roof under R1	Black Paper Vapor Barrier (VB2)	ND<1%
22	Roof under R1	Black Paper Vapor Barrier (VB2)	ND<1%[1]
23	Roof	Red/Brown Asphalt Shingles (R1)	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 Result confirmed by TEM analyses
* Quantified by PLM Point Counting techniques

TABLE 1 (...continued) BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT			
Sample No.	**Sample Location**	**Type of Homogeneous Material**	**% and Type Asbestos**
24	Roof	Red/Brown Asphalt Shingles (R1)	ND<1%[1]
25	Between Railroad Ties	Tan Brittle Glue (G1)	ND<1%
26	Between Railroad Ties	Tan Brittle Glue (G1)	ND<1%[1]
TRUMBULL SALT SHED			
27	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%
28	Behind Cedar Shakes	Black Paper Vapor Barrier (VB1)	ND<1%[1]
29	Roof under R2	Black Paper Vapor Barrier (VB2)	ND<1%
30	Roof under R2	Black Paper Vapor Barrier (VB2)	ND<1%[1]
31	Interior Around Base Concrete	Brittle Tar Coating Vapor Barrier (VB3)	ND<1%
32	Interior Around Base Concrete	Brittle Tar Coating Vapor Barrier (VB3)	Trace chrysotile[1]
33	Roof	Brown Asphalt Shingles (R1)	ND<1%
34	Roof	Brown Asphalt Shingles (R1)	ND<1%[1]
35	Between Railroad Ties	Black Tar Sealant (TS1)	ND<1%
36	Between Railroad Ties	Black Tar Sealant (TS1)	ND<1%[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 Result confirmed by TEM analyses
* Quantified by PLM Point Counting techniques

TABLE 2
IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%)
DOT SALT SHEDS
WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT

WESTPORT SALT SHED					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					
DARIEN SALT SHED					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					
WILTON SALT SHED					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
NO ASBESTOS CONTAINING MATERIALS WERE IDENTIFIED IN THE SUBJECT AREA					
TRUMBULL SALT SHED					
Material	**Sampled/ Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
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%) DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT	
Material	**General Location**
WESTPORT SALT SHED	
Black Paper Vapor Barrier (VB1)	Behind Cedar Shakes
Black Paper Vapor Barrier (VB2)	Roof under R1
Brown Asphalt Shingles (R1)	Roof
Tan Brittle Glue (G1)	Between Railroad Ties
DARIEN SALT SHED	
Black Paper Vapor Barrier (VB1)	Behind Cedar Shakes
Black Paper Vapor Barrier (VB2)	Roof under R2
Red/Brown Asphalt Shingles (R1)	Roof (top layer)
Black Asphalt Shingles (R2)	Roof (bottom layer)
Black Tar Sealant (TS1)	Between Railroad Ties
WILTON SALT SHED	
Black Paper Vapor Barrier (VB1)	Behind Cedar Shakes
Black Paper Vapor Barrier (VB2)	Roof under R1
Red/Brown Asphalt Shingles (R1)	Roof
Tan Brittle Glue (G1)	Between Railroad Ties
TRUMBULL SALT SHED	
Black Paper Vapor Barrier (VB1)	Behind Cedar Shakes
Black Paper Vapor Barrier (VB2)	Roof under R2
Brittle Tar Coating Vapor Barrier (VB3)	Interior Around Base Concrete
Brown Asphalt Shingles (R1)	Roof
Black Tar Sealant (TS1)	Between Railroad Ties

**** However, associated layers are positive.***

TABLE 4 SUMMARY OF LEAD PAINT XRF MEASUREMENTS DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT					
WESTPORT SALT SHED					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
One-story salt shed	13	4	0	3*	6
DARIEN SALT SHED					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
One-story salt shed	6	0	0	0	6
WILTON SALT SHED					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
One-story salt shed	9	0	0	0	9
TRUMBULL SALT SHED					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
One-story salt shed	10	3	0	0	7

*Metal substrates only

See Lead Paint XRF Measurement Table in Appendix H.

TABLE 5 SUMMARY OF COMPOSITE BUILDING MATERIAL WASTE CHARACTERIZATION DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT			
Waste Stream	**Metal**	**mg/L Leachate**	**Hazardous/Non-Hazardous**
Salt Sheds 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/cm^2 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 DOT SALT SHEDS WESTPORT, DARIEN, WILTON & TRUMBULL, CONNECTICUT				
Quantity	**Size**	**Material/Item**	**General Location**	**Potential Hazard**
WESTPORT SALT SHED				
Twelve (12)		Mercury vapor bulbs	Interior salt shed	UW – Hg lamps
Four (4)		Mercury vapor bulbs	Exterior salt shed	UW – Hg lamps
One (1)		CFL	Exterior salt shed	UW – Hg lamps
DARIEN SALT SHED				
Twelve (12)		Mercury vapor bulbs	Interior salt shed	UW – Hg lamps
Four (4)		Mercury vapor bulbs	Exterior salt shed	UW – Hg lamps
One (1)		CFL	Exterior salt shed	UW – Hg lamps
WILTON SALT SHED				
Ten (10)		Mercury vapor bulbs	Interior salt shed	UW – Hg lamps
Four (4)		Mercury vapor bulbs	Exterior salt shed	UW – Hg lamps
One (1)		CFL	Exterior salt shed	UW – Hg lamps
TRUMBULL SALT SHED				
Ten (10)		Mercury vapor bulbs	Interior salt shed	UW – Hg lamps
Five (5)		Mercury vapor bulbs	Exterior salt shed	UW – Hg lamps
One (1)		CFL	Exterior salt shed	UW – Hg lamps

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)

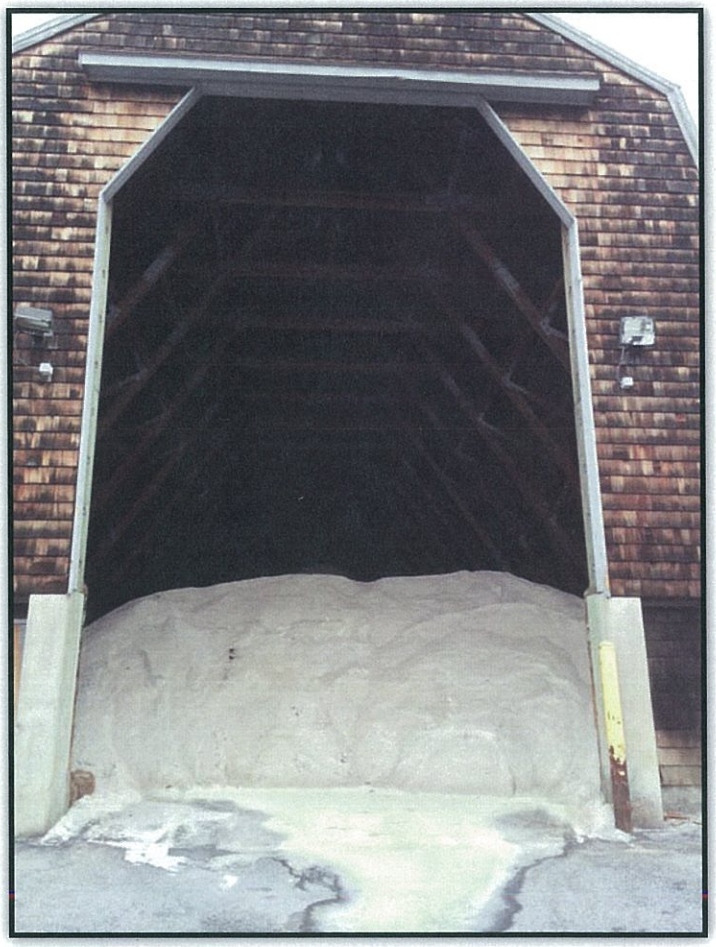


Figure 1.
Darien, CT, Salt Shed.

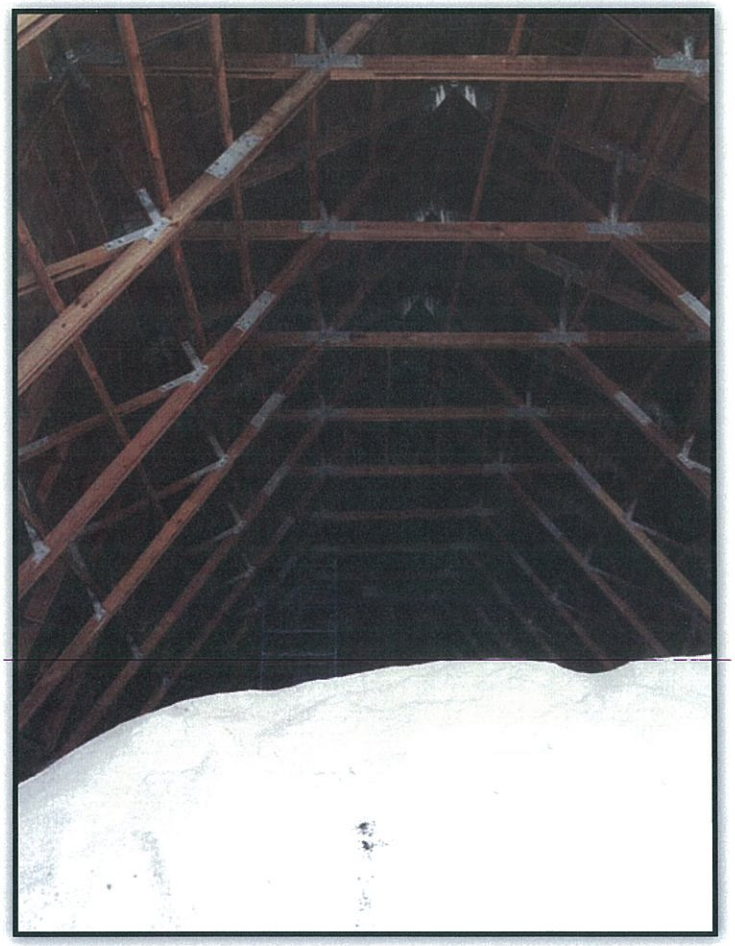


Figure 2.
Darien, CT Salt Shed,
Interior.

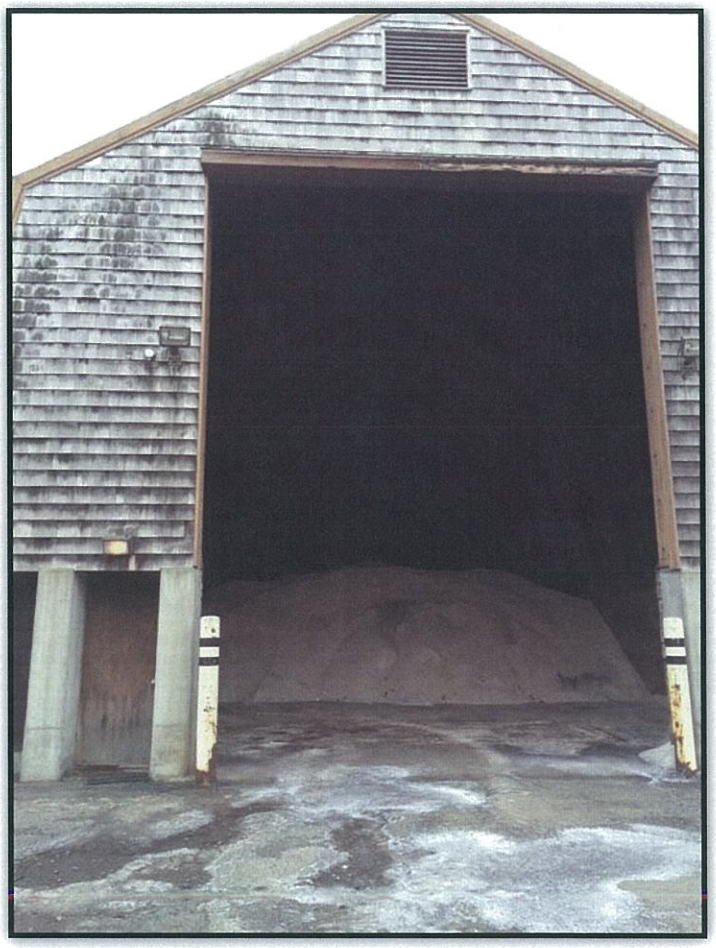


Figure 3.
Trumbull, CT, Salt Shed, Front.

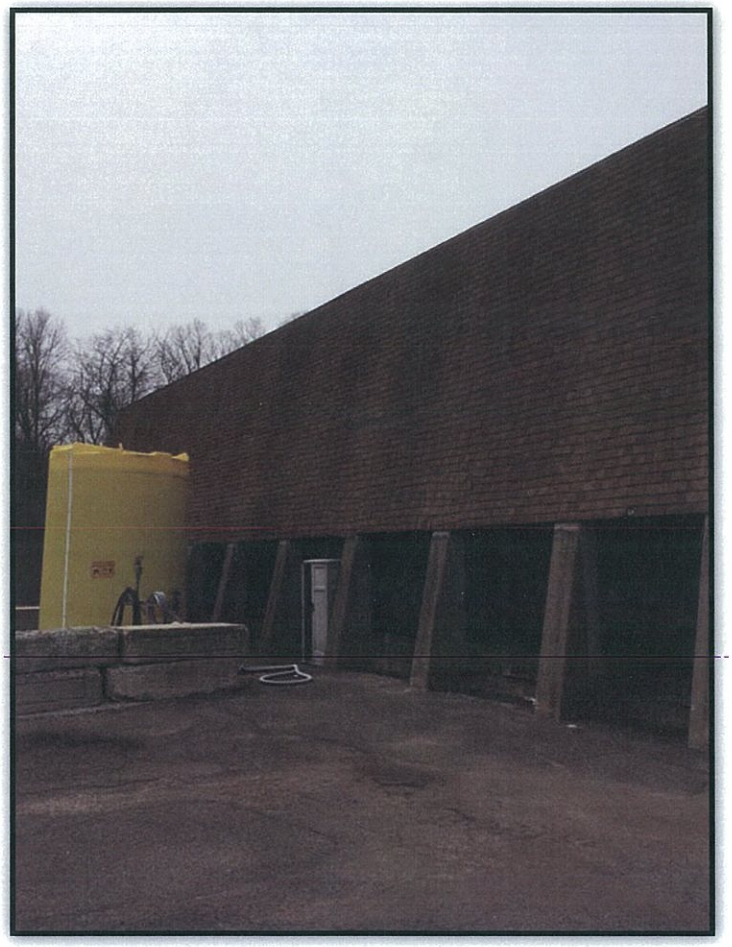


Figure 4.
Trumbull, CT Salt Shed, Side.

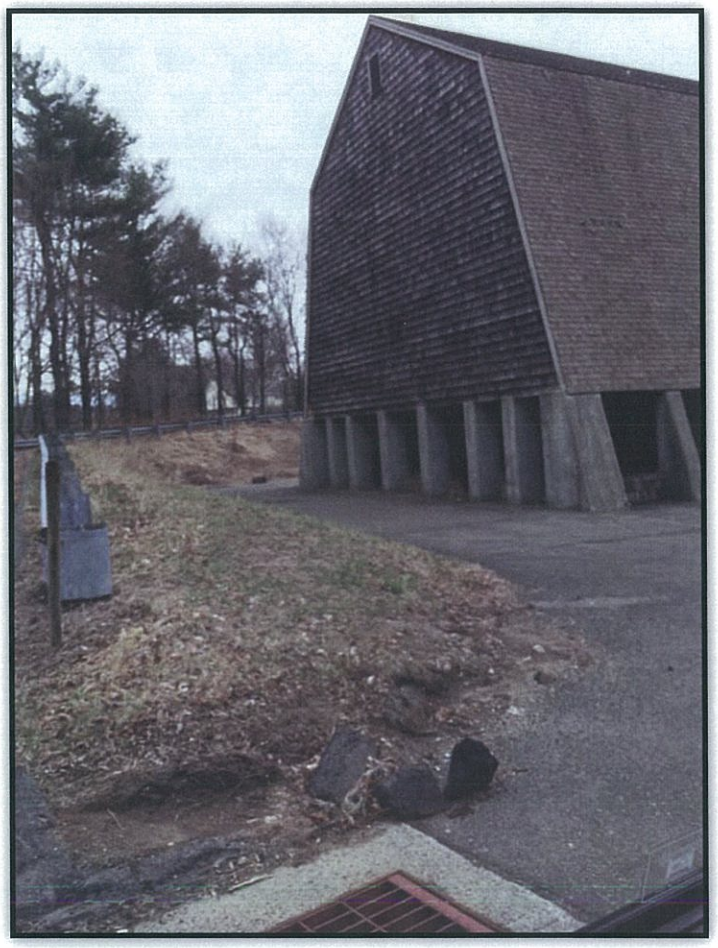


Figure 5.
Westport, CT, Salt Shed, Rear.

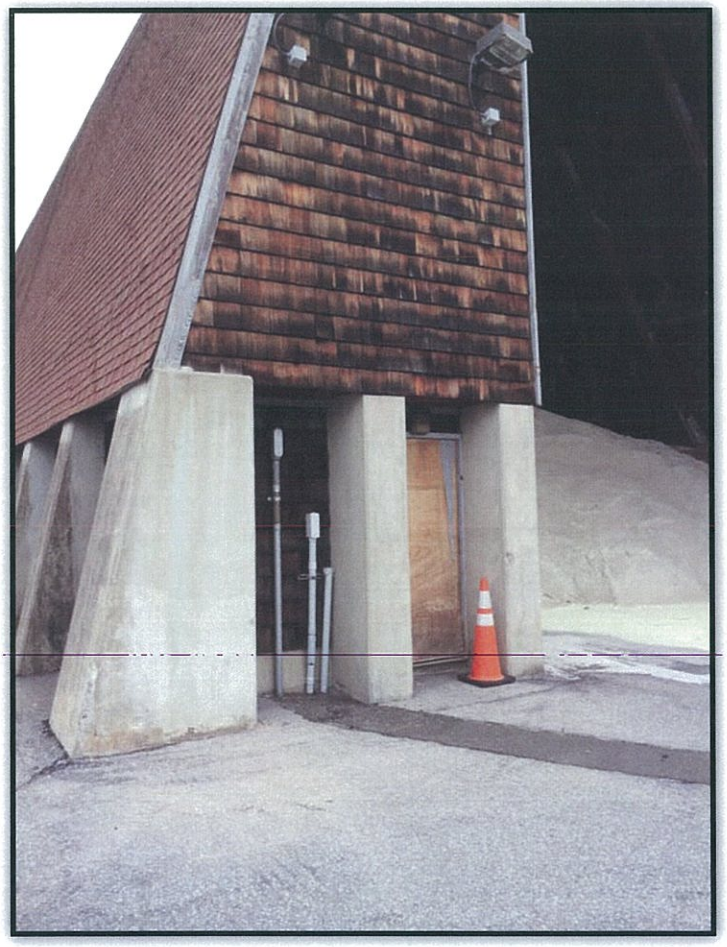
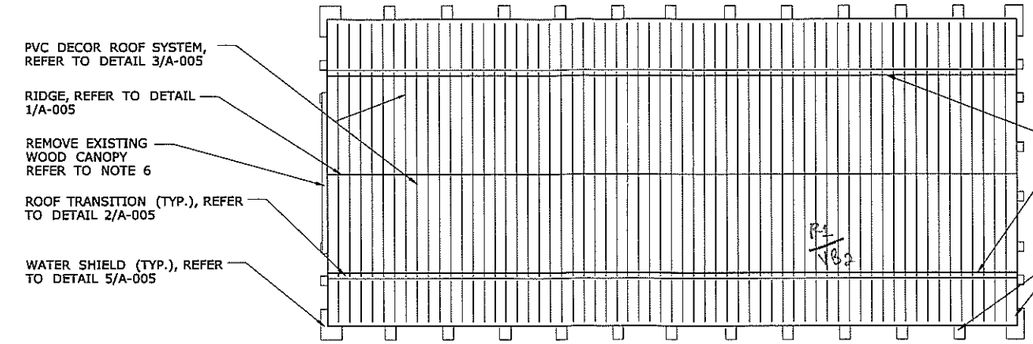


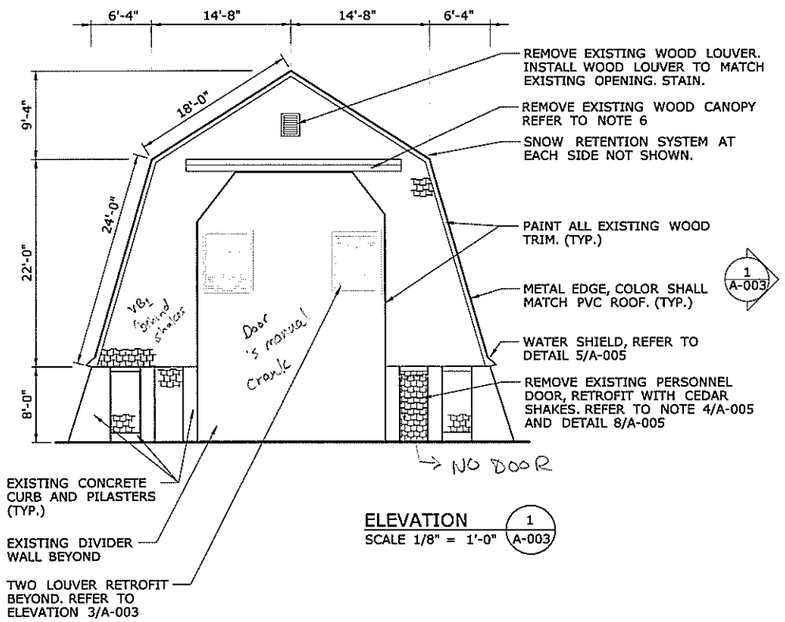
Figure 6.
Wilton, CT Salt Shed.

APPENDIX B

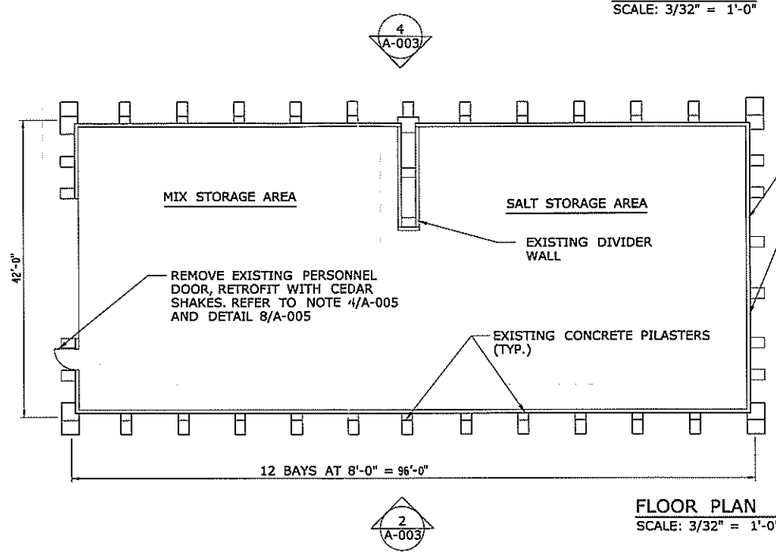
SITE SKETCHES



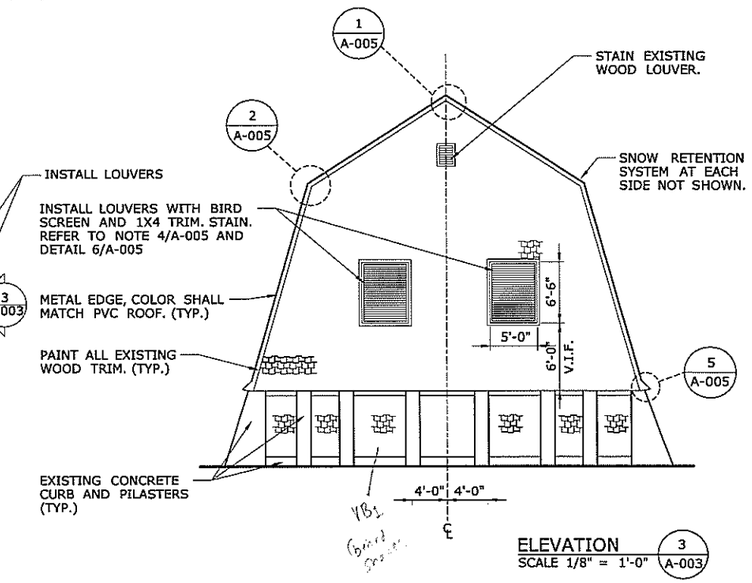
ROOF PLAN
SCALE: 3/32" = 1'-0"



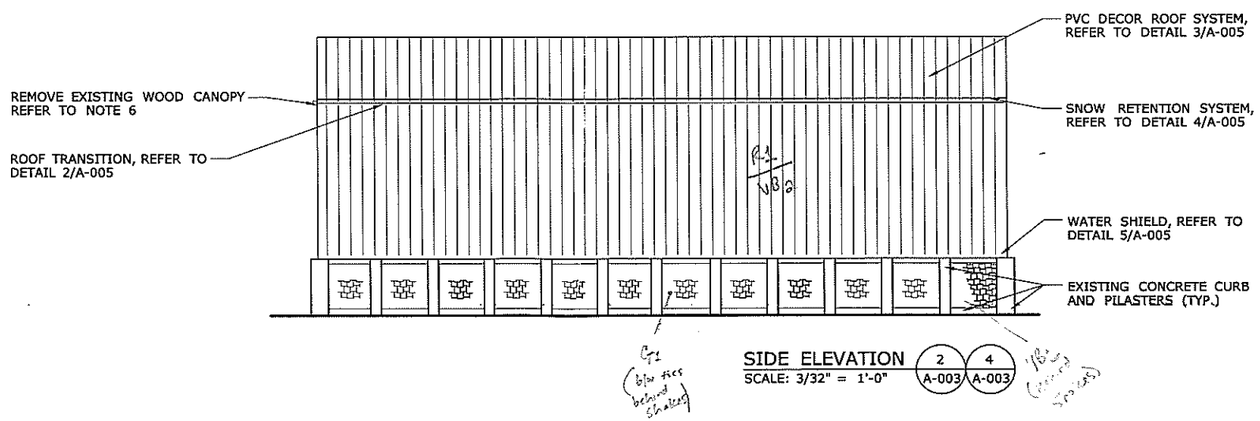
ELEVATION 1 A-003
SCALE 1/8" = 1'-0"



FLOOR PLAN
SCALE: 3/32" = 1'-0"



ELEVATION 3 A-003
SCALE 1/8" = 1'-0"



SIDE ELEVATION 2 A-003 4 A-003
SCALE: 3/32" = 1'-0"

NOTES

1. CONTRACTOR SHALL VERIFY IN THE FIELD (V.I.F.) ALL DIMENSIONS AND CONDITIONS.
2. ALL ITEMS ON PLANS ARE PROPOSED UNLESS LABELED EXISTING.
3. ELECTRICAL APPURTENANCES NOT SHOWN.
4. STAIN CEDAR SHAKES.
5. REMOVE AND DISCARD EXISTING ASPHALT ROOF SHINGLES AND VAPOR BARRIER.
6. IN-FILL SALVAGED CEDAR SHAKES, WHERE CANOPY WAS REMOVED. REFER TO NOTE 4 ON DRAWING A-005.
7. CONTRACTOR SHALL INSTALL FULL LENGTH DECOR RIB ABOVE THE WATER SHIELD, SHORTER PIECES NEAR THE GROUND ARE NOT PERMITTED.
8. DESIGN LIVE LOADS ARE 53 PSF OVER HALF OF THE ROOF, 43 PSF OVER ENTIRE ROOF.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/3/2014

DESIGNER/DRAFTER: SLM
CHECKED BY: MJS
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FD_MSH_ARC_0172_406_A001.dgn

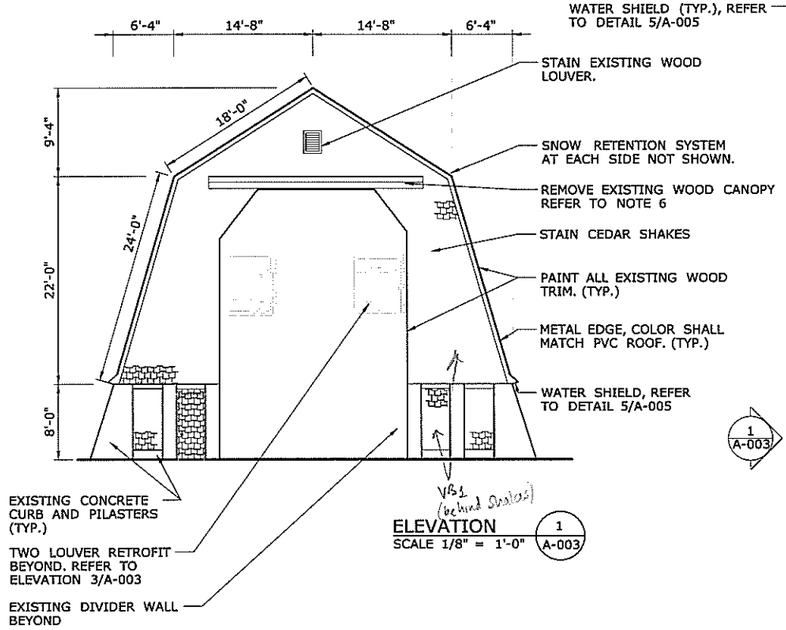
SIGNATURE/BLOCK:
OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE:
REHABILITATION OF THE DARIEN, TRUMBULL, WESTPORT, WILTON SALT STORAGE FACILITIES

TOWN: DARIEN, TRUMBULL, WESTPORT, WILTON

DRAWING TITLE: WESTPORT PLANS AND ELEVATIONS

PROJECT NO. 173-444
DRAWING NO. A-003
SHEET NO.



ELEVATION 1/A-003
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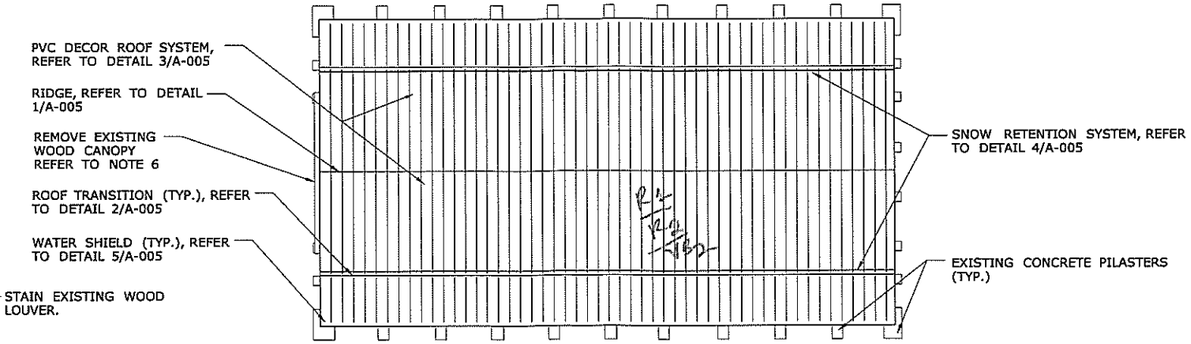
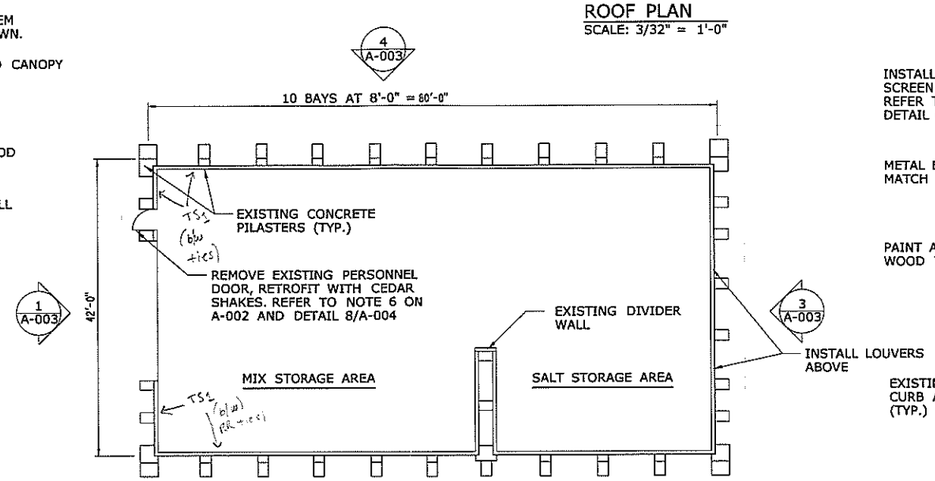
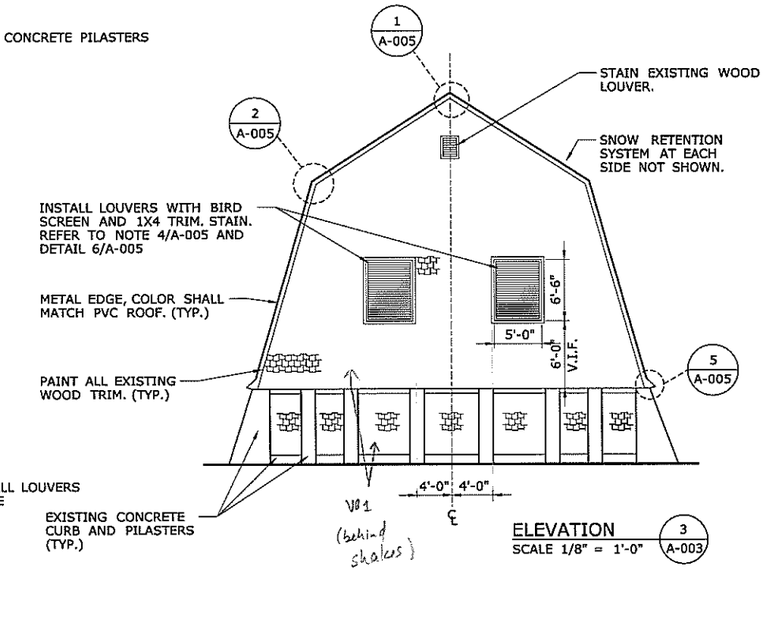


ROOF PLAN
SCALE: 3/32" = 1'-0"



FLOOR PLAN
SCALE: 3/32" = 1'-0"



ELEVATION 3/A-003
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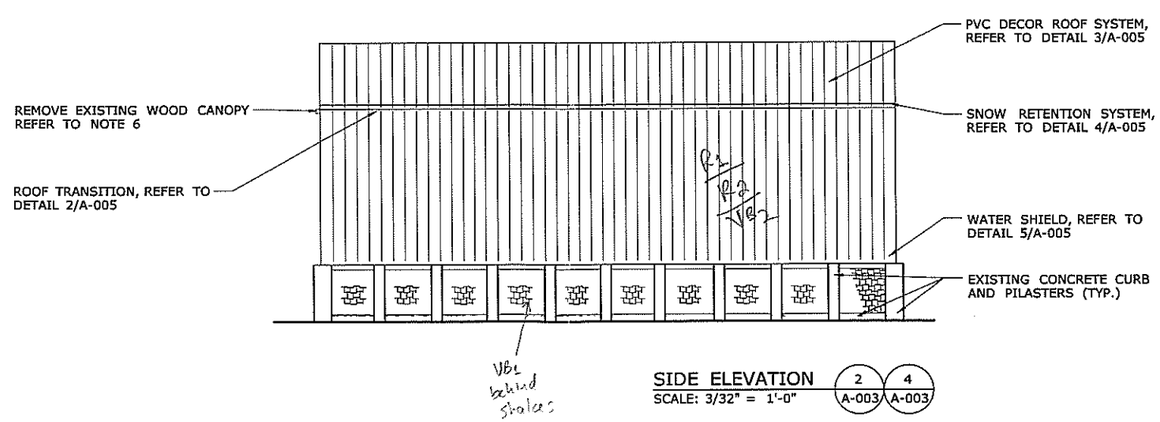

SIDE ELEVATION 2/A-003 4/A-003
SCALE: 3/32" = 1'-0"

NOTES

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4. STAIN CEDAR SHAKES.
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/3/2014

DESIGNER/DRAFTER: SLM
CHECKED BY: MJS
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FD_MSH_ARC_0172_406_A003.dgn

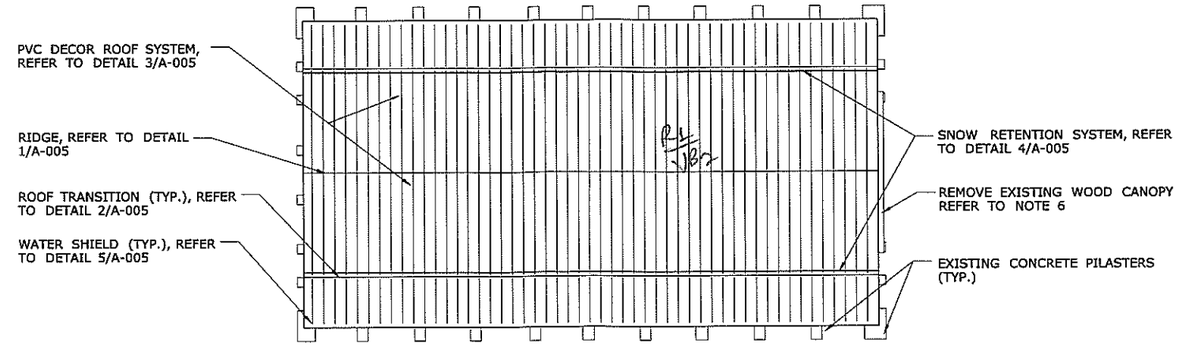
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: REHABILITATION OF THE DARIEN, TRUMBULL, WESTPORT, WILTON SALT STORAGE FACILITIES

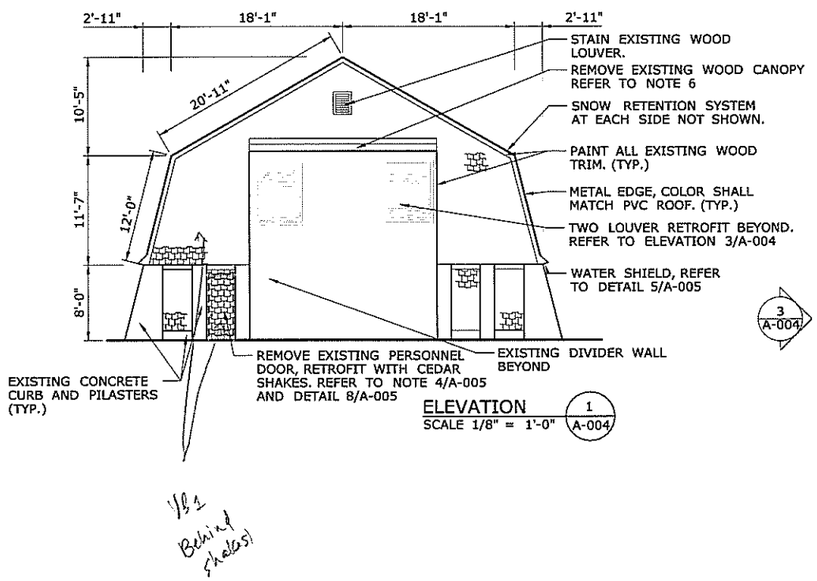
TOWN: DARIEN, TRUMBULL, WESTPORT, WILTON

DRAWING TITLE: DARIEN PLANS AND ELEVATIONS

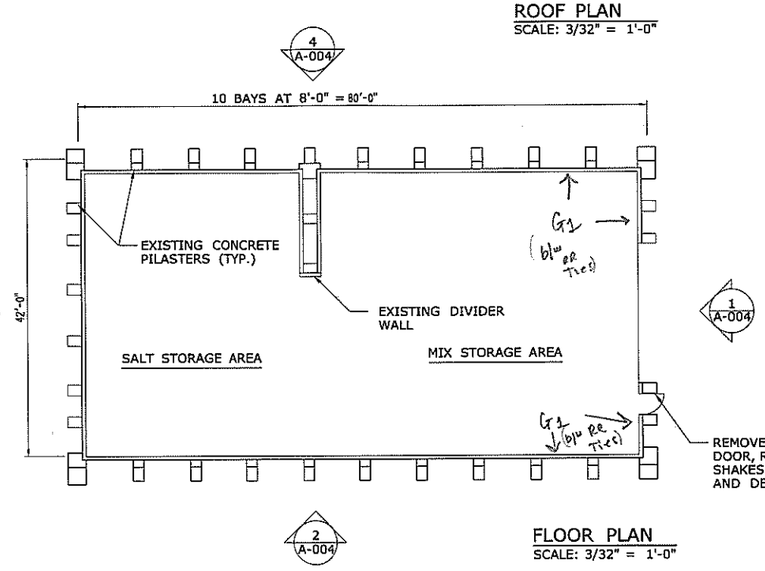
PROJECT NO. 173-444
DRAWING NO. A-001
SHEET NO.



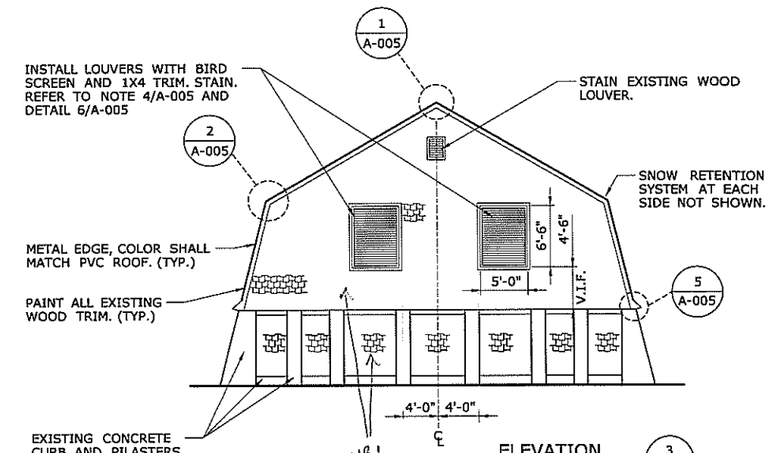
ROOF PLAN
SCALE: 3/32" = 1'-0"



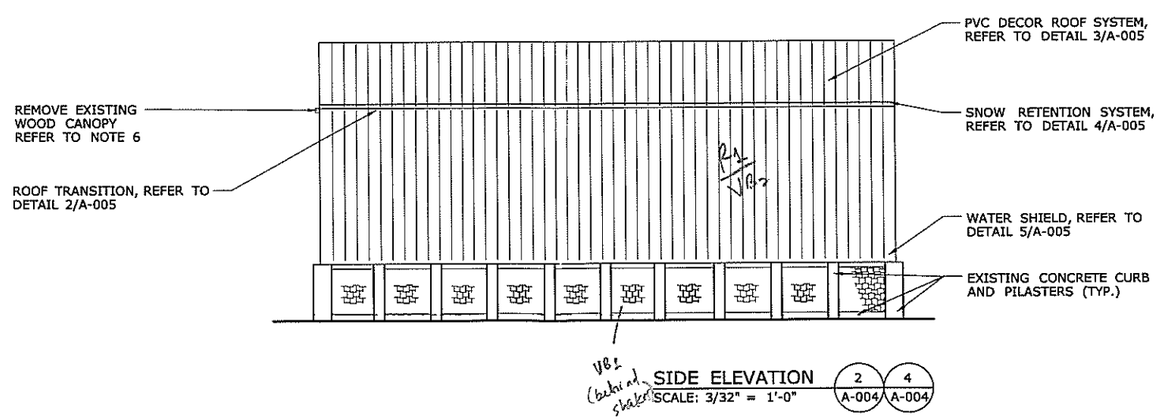
ELEVATION 1/A-004
SCALE 1/8" = 1'-0"



FLOOR PLAN
SCALE: 3/32" = 1'-0"



ELEVATION 3/A-004
SCALE 1/8" = 1'-0"



SIDE ELEVATION 2/A-004 4/A-004
SCALE: 3/32" = 1'-0"

NOTES

1. CONTRACTOR SHALL VERIFY IN THE FIELD (V.I.F.) ALL DIMENSIONS AND CONDITIONS.
2. ALL ITEMS ON PLANS ARE PROPOSED UNLESS LABELED EXISTING.
3. ELECTRICAL APPURTENANCES NOT SHOWN.
4. STAIN CEDAR SHAKES.
5. REMOVE AND DISCARD EXISTING ASPHALT ROOF SHINGLES AND VAPOR BARRIER.
6. IN-FILL SALVAGED CEDAR SHAKES, WHERE CANOPY WAS REMOVED. REFER TO NOTE 4 ON DRAWING A-005.
7. CONTRACTOR SHALL INSTALL FULL LENGTH DECOR RIB ABOVE THE WATER SHIELD, SHORTER PIECES NEAR THE GROUND ARE NOT PERMITTED.
8. DESIGN LIVE LOADS ARE 53 PSF OVER HALF OF THE ROOF, 43 PSF OVER ENTIRE ROOF.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/3/2014

DESIGNER/DRAFTER: SLM
CHECKED BY: MJS
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FD_MSH_ARC_0172_405_A003.dgn

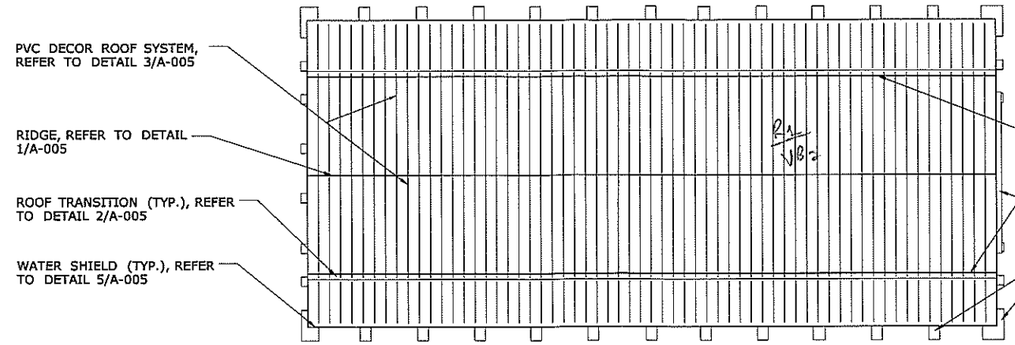
SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: REHABILITATION OF THE DARIEN, TRUMBULL, WESTPORT, WILTON SALT STORAGE FACILITIES

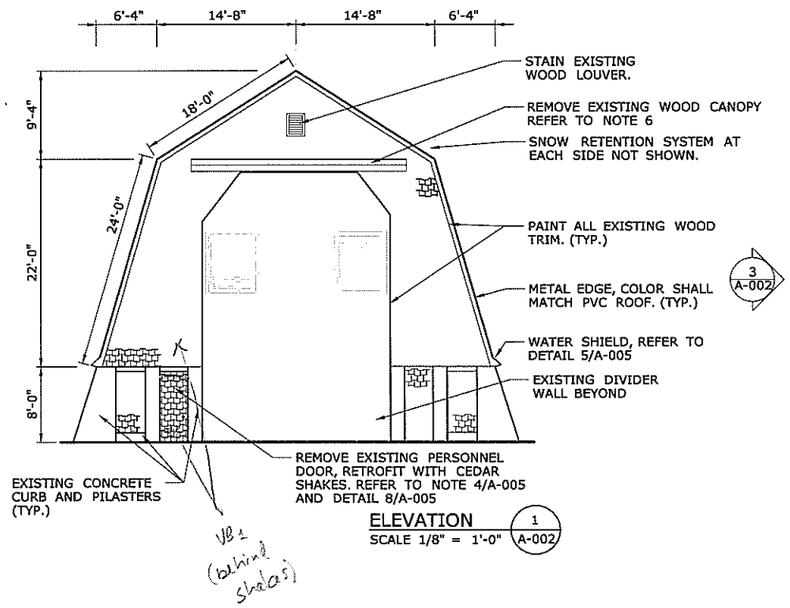
TOWN: DARIEN, TRUMBULL, WESTPORT, WILTON

DRAWING TITLE: WILTON PLANS AND ELEVATIONS

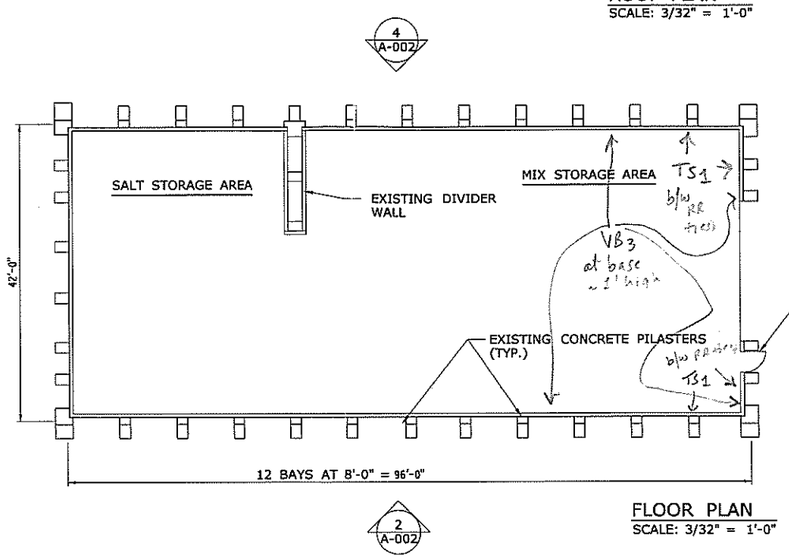
PROJECT NO. 173-444
DRAWING NO. A-004
SHEET NO.



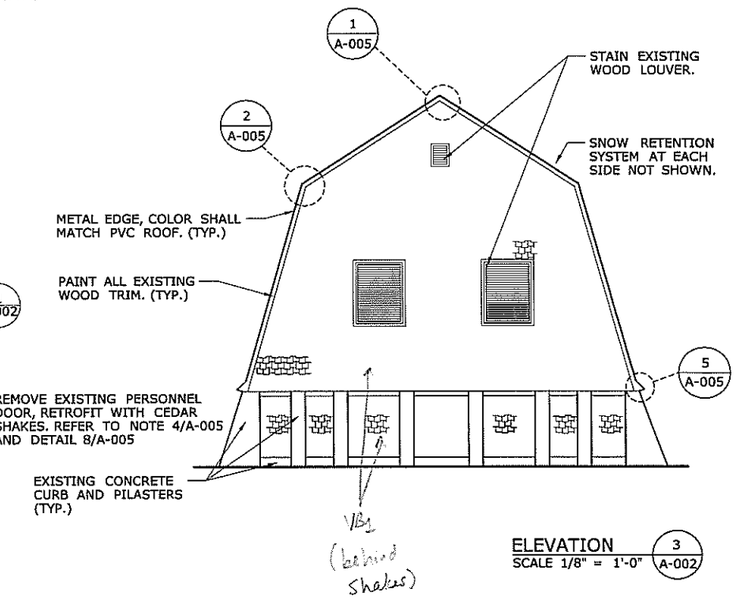
ROOF PLAN
SCALE: 3/32" = 1'-0"



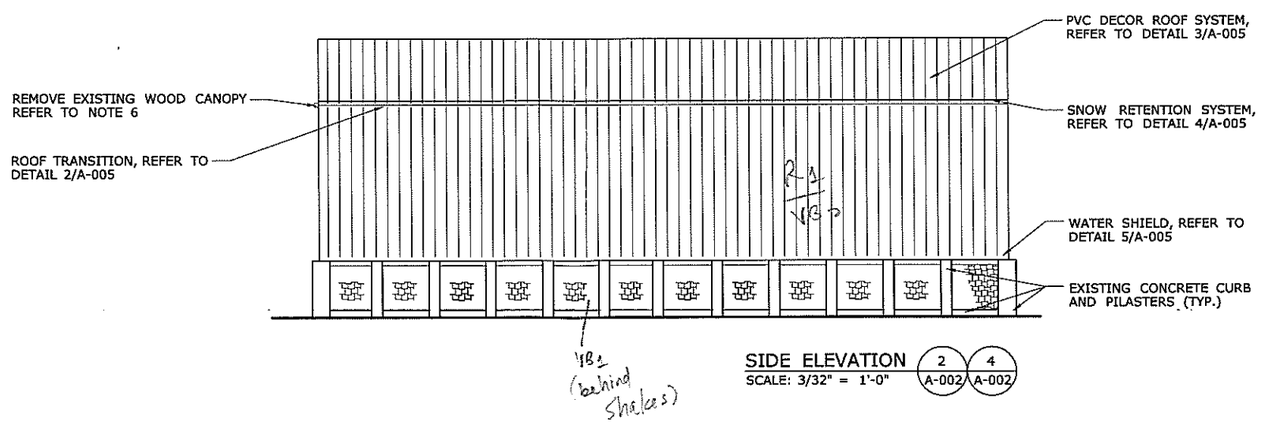
ELEVATION 1 A-002
SCALE 1/8" = 1'-0"



FLOOR PLAN
SCALE: 3/32" = 1'-0"



ELEVATION 3 A-002
SCALE 1/8" = 1'-0"



SIDE ELEVATION 2 A-002 4 A-002
SCALE: 3/32" = 1'-0"

NOTES

1. CONTRACTOR SHALL VERIFY IN THE FIELD (V.I.F.) ALL DIMENSIONS AND CONDITIONS.
2. ALL ITEMS ON PLANS ARE PROPOSED UNLESS LABELED EXISTING.
3. ELECTRICAL APPURTENANCES NOT SHOWN.
4. STAIN CEDAR SHAKES.
5. REMOVE AND DISCARD EXISTING ASPHALT ROOF SHINGLES AND VAPOR BARRIER.
6. IN-FILL SALVAGED CEDAR SHAKES, WHERE CANOPY WAS REMOVED. REFER TO NOTE 4 ON DRAWING A-005.
7. CONTRACTOR SHALL INSTALL FULL LENGTH DECOR RIB ABOVE THE WATER SHIELD, SHORTER PIECES NEAR THE GROUND ARE NOT PERMITTED.
8. DESIGN LIVE LOADS ARE 53 PSF OVER HALF OF THE ROOF, 43 PSF OVER ENTIRE ROOF.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/3/2014

DESIGNER/DRAFTER: SLM
CHECKED BY: MJS
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FD_MSH_ARC_0172_406_A001.dgn

SIGNATURE/BLOCK: OFFICE OF ENGINEERING
APPROVED BY:

PROJECT TITLE: REHABILITATION OF THE DARIEN, TRUMBULL, WESTPORT, WILTON SALT STORAGE FACILITIES

TOWN: DARIEN, TRUMBULL, WESTPORT, WILTON

DRAWING TITLE: TRUMBULL PLANS AND ELEVATIONS

PROJECT NO. 173-444
DRAWING NO. A-002
SHEET NO.

SHEET NO. _____ OF _____

PROJECT NO. 183572.4951.0710

DATE 4/7/14

BY JG | BB

CHK'D _____

TRC Results you can rely on

SUBJECT DOT Salt Sheds

ACM (WESTPORT)

(VV) R_1 = Brown Asphalt Shingles
(VV) VB_1 = Black Paper Vapor Barrier (behind Shakes)
(VV) VB_2 = Black Paper Vapor Barrier (under R_1)
(VV) G_1 = Tan Brittle Glue (b/w wall RR ties)

Haz
Hg Vapor Bulbs (12 I/s)
" (4 O/s)
CFL (1 O/s)

ACM (Darien)

(N) R_1 = Red/Brown Asphalt Shingles (Top Layer)
(VV) VB_1 = Black Paper Vapor Barrier (behind Shakes)
(VV) TS_1 = Black Tar Sealant (b/w RR Ties)
(VV) R_2 = Black Asphalt Shingles (Bottom Layer)
(VV) VB_2 = Black Paper Vapor Barrier (under R_2)

Haz
Hg Vapor Bulbs (12 I/s)
(4/O/s)
CFL (1 O/s)

ACM Wilton

(VV) VB_1 = Black Paper Vapor Barrier (behind Shakes)
(VV) VB_2 = " " " " (under R_1)
(VV) R_1 - Red/Brown Asphalt Shingles
(VV) G_1 = Tan Brittle Glue (b/w RR Ties)

Haz
Hg Vapor Bulbs (18 I/s)
4(O/s)
CFL (1 O/s)

ACM Trumbull

(VV) R_1 = Brown Asphalt Shingles
(W) VB_1 = Brown Paper Vapor Barrier (behind Shakes)
(VV) VB_2 = Black " " " (under R_1)
(VV) VB_3 = Black Brittle Tar Coating Vapor Barrier
(VV) TS_1 = Black Tar Sealant (b/w RR ties)

Haz
Hg Vapor bulbs (10 I/s)
(5 O/s)
CFL (1 O/s)

A

APPENDIX C

TRC INSPECTORS LICENSES/CERTIFICATIONS

0001022 FP **PRSRT T6 0 1464 06035
JONATHAN D. GENTILE
65 LAKESIDE DR
GRANBY CT 06035-1414

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,

JEWEL MULLEN, MD, MPH, MPA, 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.

VOID VOID VOID

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 10/31/14
VALIDATION NO. 03-667635

SIGNATURE COMMISSIONER

VOID VOID VOID

EMPLOYER'S COPY
STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
NAME
JONATHAN D. GENTILE

VALIDATION NO.	LICENSE NO.	CURRENT THROUGH
03-667635	000603	10/31/14

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

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

Gregory J. Morsch
Principal Instructor

December 12, 2013
Date of Course

December 12, 2014
Expiration Date

Gregory J. Morsch
Regional Manager

SIAR-4749
Certificate Number

December 12, 2013
Examination Date

State of Connecticut Online Enterprise Site | State of Connecticut

Lookup Detail View

Name

Name
BRIAN P BEHRENS

License Information
lookup

License Type	License Number	Expiration Date	Granted Date	License Name	License Status	Licensure Actions or Pending Charges
Asbestos Consultant-Inspector	857	05/31/2014	07/22/2013	BRIAN P BEHRENS	ACTIVE	None

Generated on: 4/28/2014 9:40:52 AM

CERTIFICATE OF ACHIEVEMENT

This certifies that

Brian Behrens

has successfully completed the

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

conducted by

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

Edward Kolodziej

Principal Instructor: Edward Kolodziej

January 23, 2014
Date of Course

January 23, 2015
Expiration Date

Gregory J. Morsch

Regional Manager: Gregory Morsch

SIAR-4759
Certificate Number

January 23, 2014
Examination Date

Thermo SCIENTIFIC

Online Training Certificate

This is to certify that

Brian Behrens

has successfully completed

Sealed Source XRF - Radiation Safety

On

February 1, 2013

I certify that the participant named above completed this training course.

Jason E. Kolbenson
Training Program Manager

Thermo SCIENTIFIC

Online Training Certificate

This is to certify that

Brian Behrens

has successfully completed

Sealed Source XRF
U.S. Licensing and Regulations Overview

On

February 1, 2013

I certify that the participant named above completed this training course.

Jason E. Kolbenson
Training Program Manager

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:

ASBESTOS
AIR-FIBER COUNTING - PCM
BULK IDENTIFICATION - PLM

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES December 31, 2015 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT THIS 19th DAY OF December, 2013

QUI TRANSTULIT SUSTINET

Registration No.

PH- 0426

SUZANNE BLANCAFLOR, MS
CHIEF, ENVIRONMENTAL HEALTH SECTION

United States Department of Commerce
National Institute of Standards and Technology

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).

2013-07-01 through 2014-06-30

Effective dates

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
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2013-07-01 through 2014-06-30

Effective dates

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.

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:
Trace Metals

ASBESTOS
Bulk Identification (PLM)
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

THIS CERTIFICATE EXPIRES December 31, 2014 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 4th DAY OF December 2012

Registration #
PH-0209

SUZANNE BLANCAFLOR, MS
CHIEF, ENVIRONMENTAL HEALTH SECTION

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:

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).

2014-01-01 through 2014-12-31

Effective dates

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

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

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 200090-0**

NVLAP Code	*Designation / Description*
18/A01	EPA 600/M4-82-020: Interim Method for 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

2014-01-01 through 2014-12-31
Effective dates

For the National Institute of Standards and Technology

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

APPENDIX E

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS

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 #. 43822

PROJECT NUMBER	PROJECT NAME
183572.4951.0710	CT DOT Fairfield Co Salt Sheds
SIGNATURE	INSPECTOR
	J. Gentile/B. Behrens

TURNAROUND TIME

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

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
WESTPORT SALT SHED											
01	4/7/14	949		X	Behind Cedar Shakes	X					Black Paper Vapor Barrier (VB1)
02	4/7/14	950		X	Behind Cedar Shakes	X				X	Black Paper Vapor Barrier (VB1)
03	4/7/14	1003		X	Roof under R1	X					Black Paper Vapor Barrier (VB2)
04	4/7/14	1003		X	Roof under R1	X				X	Black Paper Vapor Barrier (VB2)
05	4/7/14	945		X	Roof	X					Brown Asphalt Shingles (R1)
06	4/7/14	946		X	Roof	X				X	Brown Asphalt Shingles (R1)
07	4/7/14	954		X	Between Railroad Ties	X					Tan Brittle Glue (G1)
08	4/7/14	955		X	Between Railroad Ties	X				X	Tan Brittle Glue (G1)
DARIEN SALT SHED											
09	4/7/14	1106		X	Behind Cedar Shakes	X					Black Paper Vapor Barrier (VB1)

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	4/8/14	4/9/14			
(Printed) Jonathan D. Gentile	Time:	(Printed) 1000	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: ✓
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 #. 43822

PROJECT NUMBER	PROJECT NAME
183572.4951.0710	CT DOT Fairfield Co Salt Sheds
SIGNATURE	INSPECTOR
	J. Gentile/B. Behrens

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

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
10	4/7/14	1107		X	Behind Cedar Shakes	X				X	Black Paper Vapor Barrier (VB1)
11	4/7/14	1114		X	Roof under R2	X					Black Paper Vapor Barrier (VB2)
12	4/7/14	1115		X	Roof under R2	X				X	Black Paper Vapor Barrier (VB2)
13	4/7/14	1116		X	Roof (top layer)	X					Red/Brown Asphalt Shingles (R1)
14	4/7/14	1118		X	Roof (top layer)	X				X	Red/Brown Asphalt Shingles (R1)
15	4/7/14	1119		X	Roof (bottom layer)	X					Black Asphalt Shingles (R2)
16	4/7/14	1120		X	Roof (bottom layer)	X				X	Black Asphalt Shingles (R2)
17	4/7/14	1109		X	Between Railroad Ties	X					Black Tar Sealant (TS1)
18	4/7/14	1110		X	Between Railroad Ties	X				X	Black Tar Sealant (TS1)
WILTON SALT SHED											
19	4/7/14	1200		X	Behind Cedar Shakes	X					Black Paper Vapor Barrier (VB1)

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	4/8/14	4/9/14			
(Printed) Jonathan D. Gentile	Time:	(Printed) 1000 Williamson	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples: ✓
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 #. 43822

PROJECT NUMBER	PROJECT NAME
183572.4951.0710	CT DOT Fairfield Co Salt Sheds
SIGNATURE	INSPECTOR
	J. Gentile/B. Behrens

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

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
20	4/7/14	1201		X	Behind Cedar Shakes	X				X	Black Paper Vapor Barrier (VB1)
21	4/7/14	1204		X	Roof under R1	X					Black Paper Vapor Barrier (VB2)
22	4/7/14	1205		X	Roof under R1	X				X	Black Paper Vapor Barrier (VB2)
23	4/7/14	1207		X	Roof	X					Red/Brown Asphalt Shingles (R1)
24	4/7/14	1208		X	Roof	X				X	Red/Brown Asphalt Shingles (R1)
25	4/7/14	1210		X	Between Railroad Ties	X					Tan Brittle Glue (G1)
26	4/7/14	1211		X	Between Railroad Ties	X				X	Tan Brittle Glue (G1)
TRUMBULL SALT SHED											
27	4/7/14	1301		X	Behind Cedar Shakes	X					Black Paper Vapor Barrier (VB1)
28	4/7/14	1302		X	Behind Cedar Shakes	X				X	Black Paper Vapor Barrier (VB1)
29	4/7/14	1307		X	Roof under R2	X					Black Paper Vapor Barrier (VB2)

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	4/8/14	4/9/14			
(Printed) Jonathan D. Gentile	Time:	(Printed) 1000	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples:
Acceptable: Yes ✓ No
Comments:

TRC

Edition: October 2009
Supersede Previous Edition

21 GRIFFIN ROAD NORTH
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ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 43822

PROJECT NUMBER	PROJECT NAME
183572.4951.0710	CT DOT Fairfield Co Salt Sheds
SIGNATURE	INSPECTOR
	J. Gentile/B. Behrens

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

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
30	4/7/14	1308		X	Roof under R2	X				X	Black Paper Vapor Barrier (VB2)
31	4/7/14	1320		X	Interior Around Base Concrete	X					Brittle Tar Coating Vapor Barrier (VB3)
32	4/7/14	1321		X	Interior Around Base Concrete	X				X	Brittle Tar Coating Vapor Barrier (VB3)
33	4/7/14	1310		X	Roof	X					Brown Asphalt Shingles (R1)
34	4/7/14	1311		X	Roof	X				X	Brown Asphalt Shingles (R1)
35	4/7/14	1304		X	Between Railroad Ties	X					Black Tar Sealant (TS1)
36	4/7/14	1305		X	Between Railroad Ties	X				X	Black Tar Sealant (TS1)

Relinquished by: (Signature)	Date:	Received by: (Signature) 4/9/14	Relinquished by: (Signature)	Date:	Received by: (Signature)
	4/8/14				
(Printed) Jonathan D. Gentile	Time:	(Printed) 1000	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: ____ Acceptable: Yes ✓ No ____ Comments:		Page 4 of 4

Proscience Analytical Services, Inc.

NT 14425

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

TEM Bulk Chain of Custody Record

Date: 04/014/14

PO#: **C183572** Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC

Client Job#: 183572.4951.0710

Client Job Ref./Loc.: CT DOT – Fairfield Co. Salt Sheds

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

Received by: [illegible] 4-15-14 10:00

Report to: E. Plimpton- EPlimpton@trcsolutions.com & EBouley@trcsolutions.com

Samplers Name: J. Gentile/B. Behrens

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**
02	43822	VB	See COC		
04	43822	VB			
06	43822	Shingle			
08	43822	Glue			
10	43822	VB			
12	43822	VB			
14	43822	Shingle			
16	43822	Shingle			
18	43822	Sealant			
20	43822	VB			
22	43822	VB			
24	43822	Shingle			
26	43822	Glue			
28	43822	VB			
30	43822	VB			
32	43822	VB			
34	43822	Shingle			
36	43822	Sealant			

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

APPENDIX F

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 #: 0043822
Project #: 183572.4951.0710
Date Received: 04/09/2014
Date Analyzed: 04/11/2014

Site: Fairfield Co. Salt Sheds- Westport, Darien, Wilton & Trumbull

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
01	Black	Yes	No	- -	80%	cellulose	ND<1%	None
02	Black	Yes	No	- -	80%	cellulose	ND<1%	None
03	Black	Yes	No	- -	80%	cellulose	ND<1%	None
04	Black	Yes	No	- -	80%	cellulose	ND<1%	None
05	Black/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
06	Black/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
07	Tan	Yes	No	- -		- - -	ND<1%	None
08	Tan	Yes	No	- -		- - -	ND<1%	None
09	Black	Yes	No	- -	80%	cellulose	ND<1%	None
10	Black	Yes	No	- -	80%	cellulose	ND<1%	None
11	Black	Yes	No	- -	80%	cellulose	ND<1%	None
12	Black	Yes	No	- -	80%	cellulose	ND<1%	None
13	Black/Red/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
14	Black/Red/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
15	Black	Yes	No	- -	10%	fibrous glass	ND<1%	None
16	Black	Yes	No	- -	10%	fibrous glass	ND<1%	None
17	Black	Yes	No	- -	20%	cellulose	ND<1%	None
18	Black	Yes	No	- -	20%	cellulose	ND<1%	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
19	Black	Yes	No	- -	80%	cellulose	ND<1%	None
20	Black	Yes	No	- -	80%	cellulose	ND<1%	None
21	Black	Yes	No	- -	80%	cellulose	ND<1%	None
22	Black	Yes	No	- -	80%	cellulose	ND<1%	None
23	Black/Red/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
24	Black/Red/Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
25	Tan	Yes	No	- -	10%	cellulose	ND<1%	None
26	Tan	Yes	No	- -	10%	cellulose	ND<1%	None
27	Tan	Yes	No	- -	90%	cellulose	ND<1%	None
28	Tan	Yes	No	- -	90%	cellulose	ND<1%	None
29	Black	Yes	No	- -	80%	cellulose	ND<1%	None
30	Black	Yes	No	- -	80%	cellulose	ND<1%	None
31	Black	Yes	No	- -	10%	cellulose	ND<1%	None
32	Black	Yes	No	- -	10%	cellulose	ND<1%	None
33	Black/ Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
34	Black/ Brown	Yes	No	- -	10%	fibrous glass	ND<1%	None
35	Black	Yes	No	- -	30%	cellulose	ND<1%	None
36	Black	Yes	No	- -	30%	cellulose	ND<1%	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

Reporting limit- asbestos present at 1%
ND<1% - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop

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, 2014. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2014. 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.

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

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued 04/14/2014

APPENDIX G

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 #: 183572.4951.0710
Client Reference: CT DOT - Fairfield Co. Salt Sheds
PO #: C183572
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: **NT 14425**
Method: NOB
Date Received: 4/15/2014
Date Analyzed: 4/17/2014
Date of Report: 4/17/2014

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						
NT109389	02	Black Paper Vapor Barrier		.1335	.00	.00	.00	.00	.00	.00	3.45	96.33	.22	**ND**	Yes	No
NT109390	04	Black Paper Vapor Barrier		.1117	.00	.00	.00	.00	.00	.00	4.38	95.17	.45	**ND**	Yes	No
NT109391	06	Brown Asphalt Shingles		.5180	.00	.00	.00	.00	.00	.00	53.11	21.41	25.48	**ND**	Yes	No
NT109392	08	Tan Brittle Glue		.2103	.00	.00	.00	.00	.00	.00	7.99	48.64	43.37	**ND**	Yes	No
NT109393	10	Black Paper Vapor Barrier		.1392	.00	.00	.00	.00	.00	.00	3.37	93.68	2.95	**ND**	Yes	No
NT109394	12	Black Paper Vapor Barrier		.1334	.00	.00	.00	.00	.00	.00	4.43	94.60	.97	**ND**	Yes	No
NT109395	14	Red/Brown Asphalt Shingles		.7669	.00	.00	.00	.00	.00	.00	46.27	19.45	34.28	**ND**	Yes	No
NT109396	16	Black Asphalt Shingles		.4533	.00	.00	.00	.00	.21	.00	41.65	20.96	37.39	**TR**	Yes	No
NT109397	18	Black Tar Sealant		.4420	.00	.00	.00	.00	.00	.00	2.60	51.70	45.70	**ND**	Yes	No
NT109398	20	Black Paper Vapor Barrier		.2048	.00	.00	.00	.00	.00	.00	4.05	95.07	.88	**ND**	Yes	No
NT109399	22	Black Paper Vapor Barrier		.1841	.00	.00	.00	.00	.00	.00	5.70	92.94	1.36	**ND**	Yes	No
NT109400	24	Red/Brown Asphalt Shingles		.7918	.00	.00	.00	.00	.00	.00	51.69	23.30	25.01	**ND**	Yes	No
NT109401	26	Tan Brittle Glue		.1932	.00	.00	.00	.00	.00	.00	7.82	54.76	37.42	**ND**	Yes	No
NT109402	28	Black Paper Vapor Barrier		.1719	.00	.00	.00	.00	.00	.00	12.57	60.38	27.05	**ND**	Yes	No
NT109403	30	Black Paper Vapor Barrier		.2244	.00	.00	.00	.00	.00	.00	2.23	96.57	1.20	**ND**	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 #:	183572.4951.0710	**Batch:**	**NT 14425**
Client Reference:	CT DOT - Fairfield Co. Salt Sheds	Method:	NOB
PO #:	C183572	Date Received:	4/15/2014
Client #:	297	Date Analyzed:	4/17/2014
Client Name:	TRC Environmental Corp. (CT)	Date of Report:	4/17/2014

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						
NT109404	32	Brittle Tar coating Vapor Barrier		.0894	.27	.00	.00	.00	.00	.00	13.65	77.18	9.17	**TR**	Yes	No
NT109405	34	Brown Asphalt Shingles		.6025	.00	.00	.00	.00	.00	.00	57.15	16.13	26.72	**ND**	Yes	No
NT109406	36	Black tar Sealant		.2015	.00	.00	.00	.00	.00	.00	3.27	52.31	44.42	**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 - Wesport, Darien, Wilton & Trumbull, Connecticut
Project # :	183572-4951-0710
Date(s):	4/7/2014
Inspector:	Brian Behrens

Number	Room	Side	Structure	Feature	Material	Color	Condition	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
Westport Salt Shed												
1	**Shutter calibration**							3.5	0.0		80.65	4/7/2014 9:41
2	**0.0 calibration**							< LOD	0.0	1	5.35	4/7/2014 9:43
3	**1.6 calibration**							1.5	0.1	1.1	12.68	4/7/2014 9:43
4	**1.0 calibration**							0.7	0.1	1.07	13.14	4/7/2014 9:44
5	Exterior		safety beam		Metal	Yellow	Defective	< LOD	0.0	1	5.85	4/7/2014 9:53
6	Exterior		safety beam		Metal	Yellow	Defective	< LOD	0.0	1.1	5.34	4/7/2014 9:53
7	Exterior		safety beam		Metal	Yellow	Defective	< LOD	0.0	1	5.32	4/7/2014 9:54
8	Exterior		wood trim		Wood	Tan/Beige	Intact	< LOD	0.0	1	5.84	4/7/2014 9:56
9	Exterior		wood trim		Wood	Tan/Beige	Intact	< LOD	0.0	1	5.38	4/7/2014 9:56
10	Exterior		wood trim		Wood	Tan/Beige	Intact	< LOD	0.0	1	5.35	4/7/2014 9:57
11	Exterior		hand crank		Metal	Orange	Intact	**1.4**	0.1	1.25	16.14	4/7/2014 10:03
12	Exterior		hand crank		Metal	Orange	Intact	**2.9**	0.7	1.6	15.56	4/7/2014 10:04
13	Exterior		hand crank		Metal	Orange	Intact	**0.2**	0.0	1.31	19.02	4/7/2014 10:05
Darien Salt Shed												
14	Exterior		safety beam		Metal	Yellow	Defective	< LOD	0.0	1.03	13.11	4/7/2014 11:02
15	Exterior		safety beam		Metal	Yellow	Defective	< LOD	0.0	1	5.85	4/7/2014 11:02
16	Exterior		wood trim lg door		Wood	Grey	Defective	< LOD	0.0	1	8.76	4/7/2014 11:04
17	Exterior		wood trim lg door		Wood	Grey	Defective	< LOD	0.0	1	8.74	4/7/2014 11:04
18	Exterior	A	Door small		Wood	Grey	Defective	< LOD	0.0	1.46	5.83	4/7/2014 11:05
19	Exterior	A	Door small	Casing	Wood	Grey	Defective	< LOD	0.0	1	5.34	4/7/2014 11:06
Wilton Salt Shed												
20	Exterior	A	wood trim lg door		Wood	Tan/Beige	Defective	< LOD	0.0	1	5.38	4/7/2014 12:00
21	Exterior	A	wood trim lg door		Wood	Tan/Beige	Defective	< LOD	0.0	1	8.8	4/7/2014 12:00
22	Exterior	A	safety beam		Metal	Yellow	Defective	< LOD	0.0	1.81	12.1	4/7/2014 12:01

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 - Wesport, Darien, Wilton & Trumbull, Connecticut
Project # :	183572-4951-0710
Date(s):	4/7/2014
Inspector:	Brian Behrens

Number	Room	Side	Structure	Feature	Material	Color	Condition	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
23	Exterior	A	safety beam		Metal	Yellow	Defective	< LOD	0.0	1	5.36	4/7/2014 12:01
24	Exterior	A	safety beam		Metal	Yellow	Defective	< LOD	0.0	1	8.74	4/7/2014 12:02
25	Exterior	A	Door	Casing	Wood	Grey	Defective	< LOD	0.0	1.25	8.75	4/7/2014 12:02
26	Exterior	A	Door	Casing	Wood	Grey	Defective	< LOD	0.0	1	6.81	4/7/2014 12:03
27	Exterior	A	Door	Door	Wood	Grey	Defective	< LOD	0.0	1	5.34	4/7/2014 12:04
28	Exterior	--	safety beam	--	Metal	Yellow	Defective	< LOD	0.0	1	2.43	4/7/2014 12:46
Trumbull Salt Shed												
29	Exterior	--	safety beam	--	Metal	Yellow	Defective	< LOD	0.0	1	5.82	4/7/2014 12:46
30	Exterior	--	safety beam	--	Metal	Yellow	Defective	< LOD	0.0	1	8.73	4/7/2014 12:47
31	Exterior	--	trim lg door	--	Wood	Brown	Defective	< LOD	0.0	1	8.8	4/7/2014 12:48
32	Exterior	--	trim lg door	--	Wood	Brown	Defective	< LOD	0.0	1	5.86	4/7/2014 12:48
33	Exterior	--	Door	Door	Wood	Brown	Defective	< LOD	0.0	1	7.32	4/7/2014 12:49
34	Exterior	--	Door	Casing	Wood	Brown	Defective	< LOD	0.0	1	5.86	4/7/2014 12:49
35	Exterior	--	Door	Casing	Wood	Brown	Defective	< LOD	0.0	1	9.76	4/7/2014 12:49
36	**0.0 calibration**	--	--	--				< LOD	0.0	1	5.35	4/7/2014 12:52
37	**1.6 calibration**	--	--	--				1.5	0.1	1.1	12.71	4/7/2014 12:52
38	**1.0 calibration**	--	--	--				0.7	0.1	1.1	12.67	4/7/2014 12:52

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

ITEMIZED COST ESTIMATE FOR ASBESTOS ABATEMENT

TRC
Asbestos Abatement Cost Estimate
CTDAS Contract # 10PSX0238
(Effective: February 1, 2011 – January 31, 2016)

Site: DOT Salt Sheds - Westport, Darien, Wilton & Trumbull, Connecticut
TRC Project #: 183572.4951.0710 **DOT Project #: 170-1367**

ITEM DESCRIPTION	QTY	UNIT	COST	MULT	TOTAL
ASBESTOS REMOVAL					
HEPA VACUUMING		SF	$ 0.24	1	$ -
PIPING REMOVAL <6" INCL FITTINGS		LF	$ 1.45	1	$ -
PIPING REMOVAL 6"-12" INCL FITTINGS		LF	$ 2.17	1	$ -
PIPING REMOVAL >12" INCL FITTINGS		LF	$ 2.89	1	$ -
GLOVE BAG FIRST 25		EA	$ 20.23	1	$ -
GLOVEBAG 25-50		EA	$ 17.34	1	$ -
GLOVEBAG OVER 50		EA	$ 14.45	1	$ -
REMOVE EQUIPMENT INSULATION		SF	$ 2.89	1	$ -
REMOVE HVAC DUCT INSULATION		SF	$ 2.89	1	$ -
REMOVE HVAC DUCT FLEX CONN		SF	$ 2.17	1	$ -
FLOOR TILE AND MASTIC		SF	$ 0.87	1	$ -
FLOOR TILE (NO MASTIC)		SF	$ 0.43	1	$ -
SPRAY ON FIREPROOFING		SF	$ 1.73	1	$ -
PLASTER LATHE AND BLACK IRON		SF	$ 2.17	1	$ -
ACCOUSTIC OR METAL PAN CEILING INCL GRID		SF	$ 1.45	1	$ -
ACCOUSTIC PANELS CLEAN GRID FOR REUSE		SF	$ 1.16	1	$ -
ACCOUSTIC PLASTER FINISH MTL (SCRAPE)		SF	$ 1.88	1	$ -
PATCH/SEAL DAMAGED INSULATION		SF	$ 0.87	1	$ -
CONTAMINATED SOIL (2" DEPTH)		SF	$ 1.16	1	$ -
TRANSITE MATERIAL		SF	$ 0.72	1	$ -
ROOFING OR FLASHING		SF	$ 1.01	1	$ -
UNDERGROUND PIPE OR INSULATION (HAND EXCAVATION)		LF	$ 8.67	1	$ -
CARPET OVER TILE		SF	$ 0.72	1	$ -
WALL BASE AND MASTIC		LF	$ 0.72	1	$ -
REMOVAL OF DRYWALL PARTITIONS INCL FRAMING		SF	$ 0.58	1	$ -
REMOVAL OF CMU WALL		SF	$ 1.45	1	$ -
PREP WORK AREA		SF	$ 0.97	1	$ -
SOLID BARRIER OR ACCESS TUNNELS 2X4 AND PLYWOOD		SF/SA	$ 0.72	1	$ -
STANDBY ABATEMENT PERSONNEL		HR	$ 26.00	1	$ -
SELECTIVE DEMOLITION TO ACCESS ACM		SF	$ 0.87	1	$ -
REMOVAL OF FLOOR LEVELING MATERIAL		SF	$ 0.58	1	$ -
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	$ 250.00	1.1	$ -
TEMP GENERATOR		DY	$ 20.00	1.1	$ -
ACM DISPOSAL (INCLUDES TRANSPORTATION)		CY	$ 55.00	1.1	$ -
HAZARDOUS WASTE DISPOSAL (INCLUDES TRANS)		CY	$ 250.00	1.1	$ -
CONSTRUCTION DEBRIS DISPOSAL (INCLUDES TRANS)		CY	$ 25.00	1.1	$ -
FIXED SCAFFOLDING		SF	$ 10.00	1.1	$ -
EXCAVATION TO EXPOSE UNDERGROUND PIPE		CY	$ 15.00	1.1	$ -
PROJECT NOTIFICATION (1% OF ABATEMENT COST)	0	EA	$ 50.00	1.1	$ -
PROJECT BOND (3% 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 (<24 hr)				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				0	**$ -**

APPENDIX K

HAZARDOUS/REGULATED MATERIALS, WASTES AND ITEMS REMOVAL COST ESTIMATE

TRC
Hazardous/Regulated Materials, Wastes & Items Removal Cost Estimate
(excluding asbestos abatement)
CTDAS Contract # 10PSX0308
(Effective: March 1, 2011 – February 28, 2015)

Site: DOT Salt Sheds - Westport, Darien, Wilton & Trumbull, CT **DOT Project #: 107-1367**
TRC Project #: 183572.4951.0710

Item	Item #	Quantity	Units	Rate	Total
Operations Supervisor	1	0	hrs	$60.00	$0.00
Equipment Operator	4	0	hrs	$62.00	$0.00
Equipment Operator OT	4	0	hrs	$93.00	$0.00
Laborer	9	32	hrs	$49.00	$1,568.00
Laborer OT	9	0	hrs	$73.50	$0.00
Driver (Mobilization/Disposal/Vac)	5	8	hrs	$57.50	$460.00
Driver (Mobilization/Disposal/Vac) OT	5	0	hrs	$86.25	$0.00
Vacuum Truck (oil)	12	0	hrs	$65.00	$0.00
Box truck	18	24	hrs	$35.00	$840.00
Utility Trucks (< 18000 GVW)	17	0	hrs	$18.00	$0.00
Loader/Backhoe (12' dig depth)	33	0	hrs	$40.00	$0.00
Loader/Backhoe (15' dig depth)	34	0	hrs	$45.00	$0.00
Lowbed Trailer/Tractor	27	0	hrs	$75.00	$0.00
Triaxle Dump Truck	23	0	hrs	$55.00	$0.00
Roll-off Truck	30	0	hrs	$58.00	$0.00
Roll-off Container (30 CY)	31	0	hrs	$4.50	$0.00
Roll-off Liners (haz waste/CRW soil)	130	0	ea	$80.00	$0.00
* Highlift		0	hrs	$35.00	$0.00
Water Wagon	29	0	hrs	$40.00	$0.00
*Hoses (dust suppression)		0	hrs	$15.00	$0.00
Frac Tank (20,000 gal)	89	0	hrs	$7.50	$0.00
5,000 psi Hi-Pressure Cleaner	82	0	hrs	$60.00	$0.00
Silt Fence	131	0	LF	$1.50	$0.00
Level C PPE (Pb)	90	0	person-hrs	$23.00	$0.00
Poly (10-mil sheeting 28'x100')	124	0	ea	$110.00	$0.00
Speedi-Dry (50 lb bag)	132	0	bag	$13.50	$0.00
17C DOT 55 gal Drums (haz items)	119	2	ea	$50.00	$100.00
Generator (5 kw)	80	0	hrs	$22.50	$0.00
* Dispose of haz-waste/regulated items		5	ea	$100.00	$500.00
* Dispose of AST/UST/sump contents (oil)		0	gal	$1.00	$0.00
* 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%)					$346.80
				TOTAL ESTIMATE	**$3,814.80**

* Line items not included in Contract 10PSX0308, rate estimated by TRC
Cost estimate based on assumption of 1/2 day for hazardous/regulated item removal per site. No AST removal; no Pb component removal. Note: only those hazmat items scheduled for reno impact require removal.

APPENDIX L

RELATED CORRESPONDENCE

Plimpton, Erik

From: Portal, Jeffrey A <Jeffrey.Portal@ct.gov>
Sent: Monday, March 17, 2014 11:27 AM
To: Plimpton, Erik; Burke, Ed
Subject: Salt Shed Roof Replacements
Attachments: 173-444 D T W W Salt Sheds.pdf

Erik / Ed,

We have a multi-site project coming up involving the replacement of the roofs at several salt shed facilities. The work involves selective demolition including the removal of the existing roof and personnel door, the installation of PVS roofing, joint sealants, wooden louvers, and exterior painting and coatings. If there are any, mega doors will be removed. The sites involved are Darien, Trumbull, West Port, and Wilton Salt Sheds. We'll need the effected components of the salt sheds screened for lead & asbestos. We need the results of the investigations by August 13, 2014 to meet the September 2014 FDP.

See the attachment with floor plans, elevations, and section details to base your RFA off of.

We'll need more coordination than my usual L&A project on this one so I can ensure your guys can have access to the sites. As such, if you can come up with a schedule of when you would like to mobilize to the sites we can coordinate with Dave Hartley on when we plan to survey.

Please contact me with any questions related to this.

Thanks!

Jeff

Jeffrey A. Portal
Junior Project Engineer

Environmental Compliance
Connecticut Department of Transportation
Phone: 860-594-2657 Fax: 860-594-3372
E-Mail: Jeffrey.Portal@ct.gov