



May 16, 2017

Mr. Adam Fox, P.E.
Principal Engineer
Environmental Compliance Section
Bureau of Engineering and Highway Operations
State of Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, CT 06131-7546

Attention: Judith Nemecek, P.E. / Stephen Clout

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance
Agreement No. 04.27-01(15)
HazMat Inspection - Bridge Nos. 03163 & 03164, Route 160 over I-91 SB/NB, Rocky Hill,
CT
ConnDOT Assignment No. 514-5147
ConnDOT Project No. 118-169
TRC Project No. 222165.5147.0710

Dear Mr. Fox:

TRC performed a limited survey for hazardous building materials associated with the replacements of Bridge Nos. 03163 & 03164, Route 160 over I-91 SB/NB in Rocky Hill, Connecticut. Results of the survey identified lead paint to be present on the structural steel/metal/railing bridge components of Bridge Nos. 03163 & 03164. Results obtained from TCLP waste stream sampling and analysis for leachable lead from the paint on the structural steel/metal bridge components characterized the paint waste streams at both Bridge Nos. 03163 & 03164 as CTDEEP/RCRA hazardous waste. At Bridge Nos. 03163 & 03164, brittle white caulking at base of the bridge railings and black tar coating on the 10" fiberglass insulated pipe under the bridges were sampled and found to contain asbestos. Other various caulking and black paper pipe wrapping on 10" fiberglass pipe were sampled and found to contain no asbestos. Bird/pigeon guano accumulations were observed in accessible areas of the both bridges. Associated laboratory data, inspector notes, project description and site map are attached.

If you have any questions, please call TRC at (860) 298-9692.

Very Truly Yours,

TRC

A handwritten signature in black ink, appearing to read "Stephen R. Arienti".

Stephen R. Arienti, CHMM
Senior Project Scientist - Project Manager

A handwritten signature in black ink, appearing to read "Erik R. Plimpton".

Erik R. Plimpton, P.E., CHMM, CMC
Vice President - Program Manager



Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #25555) X Ray Fluorescence (XRF) Spectrum Analyzer
 Site: Bridge Nos. 3163 and 3164 Rocky Hill, CT
 Project # : 222165.5147.0710
 Date(s): 8/31/2015
 Inspector: Mike Stewart (Lead Inspector #002115)

Number	Interior/ Exterior	Location	Bridge No.	Structure	Feature	Material	Color	Condition	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1			Self Calibration										
2			0.7 Calibration										
3			1.6 Calibration										
4			3.6 Calibration										
5	Exterior	Rocky Hill	Bridge 3163	Rail		Metal	Tan/Beige	DEFECTIVE	0.7	0.1	1.1	62.3	9/1/2015 9:31
6	Exterior	Rocky Hill	Bridge 3163	Rail	Bracket	Metal	Tan/Beige	DEFECTIVE	2.6	0.5	1.5	10.4	9/1/2015 9:35
7	Exterior	Rocky Hill	Bridge 3163	Beam		Metal	Green	DEFECTIVE	15.4	1.7	2.1	10.4	9/1/2015 9:35
8	Exterior	Rocky Hill	Bridge 3163	Beam		Metal	Green	DEFECTIVE	18.9	1.8	2.2	10.9	9/1/2015 9:36
9	Exterior	Rocky Hill	Bridge 3163	Brace		Metal	Green	DEFECTIVE	14.3	1.6	2.0	7.8	9/1/2015 9:41
10	Exterior	Rocky Hill	Bridge 3163	Pipe		Metal	Green	DEFECTIVE	3.5	0.2	1.3	6.5	9/1/2015 9:45
11	Exterior	Rocky Hill	Bridge 3163	Pipe	Support	Metal	Green	DEFECTIVE	14.7	2.1	2.0	7.4	9/1/2015 9:46
12	Exterior	Rocky Hill	Bridge 3164	Rail		Metal	Tan/Beige	DEFECTIVE	14.3	1.6	2.0	7.4	9/1/2015 9:47
13	Exterior	Rocky Hill	Bridge 3164	Rail	Support	Metal	Tan/Beige	DEFECTIVE	0.0	0.0	4.1	11.7	9/1/2015 9:47
14	Exterior	Rocky Hill	Bridge 3164	Beam		Metal	Green	DEFECTIVE	14.7	2.1	2.0	4.8	9/1/2015 9:48
15	Exterior	Rocky Hill	Bridge 3164	Cross Brace		Metal	Green	DEFECTIVE	1.3	0.1	1.2	6.1	9/1/2015 10:03
16	Exterior	Rocky Hill	Bridge 3164	Cross Brace		Metal	Tan/Beige	DEFECTIVE	3.0	0.3	1.5	5.2	9/1/2015 10:04
17	Exterior	Rocky Hill	Bridge 3164	Beam		Metal	Green	DEFECTIVE	11.6	1.6	2.0	6.5	9/1/2015 10:11
18	Exterior	Rocky Hill	Bridge 3164	Cross Brace		Metal	Green	DEFECTIVE	11.4	1.9	2.0	4.8	9/1/2015 10:14
19	Exterior	Rocky Hill	Bridge 3164	Cross Brace		Metal	Green	DEFECTIVE	9.9	1.5	1.8	5.7	9/1/2015 10:16
20	Exterior	Rocky Hill	Bridge 3164	Beam		Metal	Green	DEFECTIVE	23.2	1.9	2.1	8.3	9/1/2015 10:17
21	Exterior	Rocky Hill	Bridge 3164	Bearing		Metal	Green	DEFECTIVE	0.1	0.0	1.3	7.8	9/1/2015 10:18
22	Exterior	Rocky Hill	Bridge 3164	Bearing		Metal	Green	DEFECTIVE	0.0	0.0	1.8	8.7	9/1/2015 10:19
23	Exterior	Rocky Hill	Bridge 3164	Beam		Metal	Green	DEFECTIVE	9.3	1.2	1.9	8.3	9/1/2015 10:37
24	Exterior	Rocky Hill	Bridge 3164	Beam		Metal	Green	DEFECTIVE	10.7	1.7	2.0	5.2	9/1/2015 10:38
25	Exterior	Rocky Hill	Bridge 3164	Pipe Support		Metal	Green	DEFECTIVE	13.8	1.7	2.4	6.5	9/1/2015 10:41
23			0.7 Calibration										
24			1.6 Calibration										
25			3.6 Calibration										

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

80 Lupes Drive
Stratford, CT 06615



Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. Michael Stewart
TRC Environmental Consultants
21 Griffin Rd., North
Windsor, CT 06095

Analytical Report

CET# 5090032

Report Date: September 09, 2015
Project: CTDOT
Project Number: 222165.5147.0710, Bridge 3163+3164

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903



New York Certification: 11982
Rhode Island Certification: 199

CET # : 5090032

Project: CTDOT

Project Number: 222165.5147.0710, Bridge 3163+3164

SAMPLE SUMMARY

The sample(s) were received at 25.3°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
Bridge 3163	5090032-01	Paint Chip	9/01/2015 10:50	09/01/2015
Bridge 3164	5090032-02	Paint Chip	9/01/2015 11:35	09/01/2015

Analyte: TCLP Lead [EPA 6020A]

Analyst: SS

Prep: EPA 3005A-1311

Matrix: Extract

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
5090032-01	Bridge 3163	230	0.013	mg/L	1	B5I0918	09/09/2015	09/09/2015 12:25	
5090032-02	Bridge 3164	240	0.013	mg/L	1	B5I0918	09/09/2015	09/09/2015 12:30	

CET # : 5090032

Project: CTDOT

Project Number: 222165.5147.0710, Bridge 3163+3164

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,



David Ditta
Laboratory Director

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- *C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- *C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- *F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- *F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at the specified detection limit

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CET # : 5090032

Project: CTDOT

Project Number: 222165.5147.0710, Bridge 3163+3164

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 6020A in Soil</i>	
Lead	CT,NY

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2016
NY	New York Certification (NELAC)	11982	04/01/2016



21 Griffin Road North
Windsor, Connecticut 06095
Telephone 860-298-9692

CH.



Edition: September 2005
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Page 5 of 5

PROJECT NO. 022165, 514, 070		PROJECT NAME Conn DOT Bridges 3163+3164				PARAMETERS						REMARKS	
SAMPLERS: (Signature) <i>[Signature]</i>		(Printed)				NO. OF CONTAINERS TEMP-A							
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION								
1	9/1/15	10:50	✓		Bridge 3163	1	✓						Composite paint chips ↓
2	L	11:35	✓		Bridge 3164	1	✓						
Relinquished by: (Signature) <i>[Signature]</i>		Date / Time 9/1/15 13:25		Received by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature) <i>[Signature]</i>		Date / Time 9-1-15		Received by: (Signature) <i>[Signature]</i>			
(Printed) Michael Stuart				(Printed) ROBERT PERMAN		(Printed) ROBERT PERMAN		1545		(Printed)			
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks					
(Printed)				(Printed)				TEMP N 25.3					
(Printed)				(Printed)		Condition of Sample Acceptable Y__ N__		Comments					



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

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 46671

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME												
								PLM:	8hr	X 24hr	<input checked="" type="checkbox"/> 48hr	3day								
SIGNATURE		INSPECTOR		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											
FIELD SAMPLE NUMBER	DATE	TIME	TYPE											SAMPLE LOCATION						
222165.5147.0710		Bridge #3163 – Rocky Hill							<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>TEM:</td> <td>X 24hr</td> <td><input checked="" type="checkbox"/> 48hr</td> <td></td> <td>3day</td> <td></td> <td>5day</td> </tr> </table>					TEM:	X 24hr	<input checked="" type="checkbox"/> 48hr		3day		5day
TEM:	X 24hr	<input checked="" type="checkbox"/> 48hr		3day		5day														
Robert Belding		Robert Belding																		
			COMP	GRAB																
1	9/1	1012		X	Under Bridge 3163	X								Black Pipe Insulation – P11						
2	9/1	1014		X	Under Bridge 3163	X								Black Pipe Insulation – P11						
3	9/1	1030		X	Under Bridge 3163	X								Black Pipe Insulation – P11						
4	9/1	1020		X	Under Bridge 3163	X								Black Tar Coating – TC1						
5	9/1	1030		X	Under Bridge 3163				X					Black Tar Coating – TC1						
6	9/1	1030		X	Under Bridge 3163	X								Tan Caulking – C1						
7	9/1	1035		X	Under Bridge 3163				X					Tan Caulking – C1						
8	9/1	1039		X	Top of Bridge 3163	X								White Caulking – C2						
9	9/1	1100		X	Top of Bridge 3163				X					White Caulking – C2						
10	9/1	1051		X	Top of Bridge 3163	X								Black Caulking – C3						
11	9/1	1105		X	Top of Bridge 3163				X					Black Caulking – C3						

Relinquished by: (Signature) 	Date: 9/3/15	Received by: (Signature) <u>9/3/15</u> 	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Robert Belding	Time: 1200	(Printed) 1500 	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 1 of 4



21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
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ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

21 GRIFFIN
WINDSOR,
TELEPHONE
FAX (860) 2

PROJECT NUMBER 222165.5147.0710	PROJECT NAME Bridge #3163 – Rocky Hill	PARAMETERS	TURNAROUND TIME				
			PLM:	8hr	X	24hr	48hr
			TEM:	X	24hr	48hr	3day

SIGNATURE 	INSPECTOR Robert Belding	LAB ID #. 46671
----------------------	------------------------------------	------------------------

FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLM EPA 600/R93/I16 (POSITIVE STOP)	PLM EPA 600/R93/I16 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL	FIELD SAMPLE NUMBER
			COMP	GRAB								
12	9/1/15	1046		X	Top of Bridge 3163	X					Black Tar-like Caulking – C4	1
13	9/1/15	1108		X	Top of Bridge 3163				X		Black Tar-like Caulking – C4	2
												3
												4
												5
												6
												7
												8
												9
												10
												11

Relinquished by: (Signature) 	Date: 9/3/15	Received by: (Signature) 	Date: 9/3/15	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Robert Belding	Time: 1200	(Printed) William Williamson	Time: 1500	(Printed)	Time:	(Printed)
Remarks:				Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 2 of 4

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #: 0046671
 Project #: 222165.5147.0710
 Date Received: 09/03/2015
 Date Analyzed: 09/04/2015

Site: Bridge #3163, Rocky Hill, CT

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
1	Black	Yes	No	--	30% cellulose	ND	None
2	Black	Yes	No	--	30% cellulose	ND	None
3	Black	Yes	No	--	30% cellulose	ND	None
4	Black	Yes	No	--	---	30%	Chrysotile
5	--	--	--	--	--	NA/PS	--
6	Tan	Yes	No	--	---	ND	None
7	Tan	Yes	No	--	---	ND	None
8	White	Yes	No	--	---	Trace	Anthophyllite
9	White	Yes	No	--	---	Trace	Anthophyllite
10	Black	Yes	No	--	---	ND	None
11	Black	Yes	No	--	---	ND	None
12	Black	Yes	No	--	---	ND	None
13	Black	Yes	No	--	---	ND	None

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

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



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 - asbestos was not detected

Trace - asbestos was observed at level of less than 1%

NA/PS - Not Analyzed / Positive Stop

SNA- Sample Not Analyzed- See Chain of Custody for details

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

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. 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 Reviewed by: Aud Park **Date Issued**
 Kathleen Williamson, Laboratory Manager Amanda Parkins, Approved Signatory 09/05/2015

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP.J.L.C #100122 CT #PH-0426 ME LA-0075.LB-0071 MA #AA000052 NY #10980 WV#LT000411
 RI #AAL-007 TX #300354 VT #AI.014538 LA#05011 VA #3333 000283 AZ #A20944 HI #I-09-004 NJ #CT004 CA #2907
 CO# AL-15020 PHIL# 461 PA#68-03387

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 #: 222165.5139.0710
 Client Reference: CT DOT - Bridge # 3163
 PO #: C222165
 Client #: 297
 Client Name: TRC Environmental Corp. (CT)

Batch: NT 15419
Method: NOB
Date Received: 9/9/2015
Date Analyzed: 9/10/2015
Date of Report: 9/10/2015

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						
NT117725	7	Tan Caulking		.2843	.00	.00	.00	.00	.00	.00	30.71	29.23	40.06	ND	Yes	No
NT117726	9	White Caulking		.3243	9.48	.00	.00	.00	4.74	.00	17.39	11.81	56.58	14.22	Yes	No
NT117727	11	Black Caulking		.6038	.00	.00	.00	.00	.00	.00	29.63	65.62	4.75	ND	Yes	No
NT117728	13	Black Tar-like Caulking		.4169	.00	.00	.00	.00	.00	.00	14.63	46.73	38.64	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

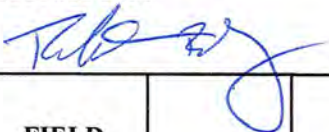


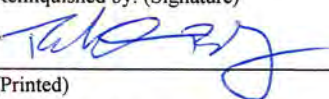
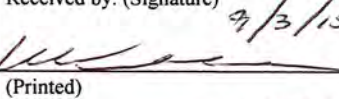
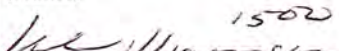
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WINDSOR, CONNECTICUT 06095
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FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 46672

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME				
								PLM:	8hr	X 24hr	<input checked="" type="checkbox"/> 48hr	3day
222165.5147.0710		Bridge #3164 – Rocky Hill						TEM:	X 24hr	<input checked="" type="checkbox"/> 48hr	3day	5day
SIGNATURE			INSPECTOR			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	
 Robert Belding			Robert Belding									
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION							
			COMP	GRAB								
1	9/1	1125		X	Under Bridge 3164	X					Black Pipe Insulation – PI1	
2	9/1	1127		X	Under Bridge 3164	X					Black Pipe Insulation – PI1	
3	9/1	1130		X	Under Bridge 3164	X					Black Pipe Insulation – PI1	
4	9/1	1120		X	Under Bridge 3164	X					Black Tar Coating – TC1	
5	9/1	1121		X	Under Bridge 3164				X		Black Tar Coating – TC1	
6	9/1	1120		X	Under Bridge 3164	X					White Caulking – C1	
7	9/1	1145		X	Under Bridge 3164				X		White Caulking – C1	
8	9/1	1122		X	Top of Bridge 3164	X					Black Caulking – C2	
9	9/1	1146		X	Top of Bridge 3164				X		Black Caulking – C2	
10	9/1	1124		X	Top of Bridge 3164	X					Black Tar-like Caulking – C3	
11	9/1	1150		X	Top of Bridge 3164				X		Black Tar-like Caulking – C3	

Relinquished by: (Signature) 	Date: 9/3/15	Received by: (Signature) 	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Robert Belding	Time: 1200	(Printed) 1500 	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 1 of 4



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

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 46672

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME														
								PLM:	8hr	X	24hr	48hr	3day									
SIGNATURE		INSPECTOR		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													
FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION											COMP	GRAB	TEM:	X	24hr	48hr	3day	5day	
222165.5147.0710	Bridge #3164 – Rocky Hill																					
<i>Robert Belding</i>		Robert Belding																				
12	9/1/15	1135	Top of Bridge 3164	X																	Black Caulking – C4	
13	9/1/15	1137	Top of Bridge 3164	X					X												Black Caulking – C4	

Relinquished by: (Signature) <i>Robert Belding</i>	Date: 9/3/15	Received by: (Signature) <i>William</i>	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed) Robert Belding	Time: 1200	(Printed) 1500 <i>William</i>	(Printed)	Time:	(Printed)
Remarks:			Condition of Samples: Acceptable: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Page 2 of 4

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #: 0046672
 Project #: 222165.5147.0710
 Date Received: 09/03/2015
 Date Analyzed: 09/04/2015

Site: Bridge #3164, Rocky Hill, CT

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
1	Black	Yes	No	--	30% cellulose 10% fibrous glass	ND	None
2	Black	Yes	No	--	30% cellulose 10% fibrous glass	ND	None
3	Black	Yes	No	--	30% cellulose 10% fibrous glass	ND	None
4	Black	Yes	No	--	---	20%	Chrysotile
5	--	--	--	--	--	NA/PS	--
6	White	Yes	No	--	---	Trace	Anthophyllite
7	White	Yes	No	--	---	Trace	Anthophyllite
8	Black	Yes	No	--	---	ND	None
9	Black	Yes	No	--	---	ND	None
10	Black	Yes	No	--	---	ND	None
11	Black	Yes	No	--	---	ND	None
12	Black	Yes	No	--	---	ND	None
13	Black	Yes	No	--	---	ND	None

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

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

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

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type
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Reporting limit- asbestos present at 1%

ND - asbestos was not detected

Trace - asbestos was observed at level of less than 1 %

NA/PS - Not Analyzed / Positive Stop

SNA- Sample Not Analyzed- See Chain of Custody for details

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

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), 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, 2016. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2016. 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: Aud Pat
 Amanda Parkins, Approved Signatory

Date Issued
 09/05/2015

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

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

Proscience Analytical Services, Inc.

NT 15421

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857
 TEM Bulk Chain of Custody Record

Date: 09/08/15

PO#: C222165
Client: TRC
Client Job#: 222165.5139.0710
Client Job Ref./Loc.: CT DOT- Bridge #3164, Rocky Hill, CT
Relinquished by: K. Williamson - KWilliamson@trcsolutions.com
Received by: *Donna Loureiro* 99-150 10:00 am
Report to: E. Plimpton - EPlimpton@trcsolutions.com
Samplers Name: R. Belding

Analysis Type: Chatfield EPA N.O.B Qualitative

Turn Around Time: <12 Hour <24 Hour <48 Hour <3 Day 5 Day Other:

Client ID #	Lab ID#	Description	Location	For Lab Use Only		
				Acceptable on Receipt	Comments	
7	46672	Caulking	See COC			
9	46672	Caulking				
11	46672	Caulking				
13	46672	Caulking				
For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

ProScience Analytical Services, Inc.

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

Laboratory Report

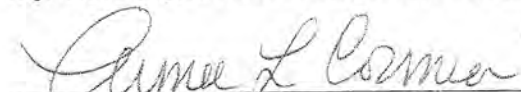
Client Project #: 222165.5139.0710
Client Reference: CT DOT - Bridge #3164, Rocky Hill, CT
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: **NT 15421**
Method: NOB
Date Received: 9/9/2015
Date Analyzed: 9/10/2015
Date of Report: 9/10/2015

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						
NT117730	7	White Caulking		.4593	8.86	.00	.00	.00	4.43	.00	16.25	13.87	56.59	13.29	Yes	No
NT117731	9	Black Caulking		.5266	.00	.00	.00	.00	.00	.00	24.44	67.87	7.69	ND	Yes	No
NT117732	11	Black Tar-like Caulking		.4142	.00	.00	.00	.00	.00	.00	4.18	66.15	29.67	ND	Yes	No
NT117733	13	Black Caulking		.2696	.00	.00	.00	.00	.00	.00	28.15	67.92	3.93	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

I-91 South, Bridge 3163, West Abutment

East Abutment
Same as
West Abutment

- 10" pipe with Black paper wrapping & fiberglass insulation with Black tar sealant (PII) (TCI) ✓
- Potential Guano on bridge support pier
- Paint severely deteriorated
- 2 electrical lines with support cables
- 6 metal pipes → severely rusted (Water?, waste?)
- Rubber pads under metal bridge spans on abutment
- No visible paint chips
- No homeless activity
- Metal spans look newly repainted at abutment w/ concrete repairs

Top Side - Bridge 3163

- C2 ✓ on metal railing stations
- C3 on curbs (white Silicone caulking on curbs where C4 meets curbs)
- C4 on seams from Bridge Road to Road

Bridge 3164, I-91 North, West Abutment

East Abutment Identical
(except for rubber footpads)

- Apparent continuation of 10" pipe from bridge 3163.
 - ↳ Black paper wrapping (PII) with fiberglass insulation & black tar coating (TCI) ✓
- Potential Guano on support piers
- Deteriorated Paint on spans
- 2 Electrical lines with support cables
- 6 rusted pipes (Water?, waste?)
- No rubber pads on metal span footpads
- No paint chips or homeless activity on ground
- Black tar-like caulking found in metal drains in concrete abutments (C4)

Top Side - Bridge 3164

- C1 ✓ on metal railing stations
- C2 on curbs (white Silicone where seam meets curb)
- C3 on road at bridge seams



SUBJECT Bridges 3163/3164

SHEET NO. _____ OF _____

PROJECT NO. _____

DATE 9/1/15

BY RS + MS

CHK'D _____

Bridge 3163

- PI1 - Black Pipe Insulation
- TC1 - Black Tar Coating ✓
- C1 - Tan caulking on cement footpad for metal bridge span
- C2 - White caulking (railings) ✓
- C3 - Black caulking (curbs)
- C4 - Black Tar-Like caulking
- ~~_____~~

Bridge 3164

- PI1 - Black pipe insulation
- TC1 - Black tar coating ✓
- C1 - White caulking (railings) ✓
- C2 - Black caulking (curbs)
- C3 - Black Tar-like caulking
- C4 - Black caulking (Drain pipes)

Project Description

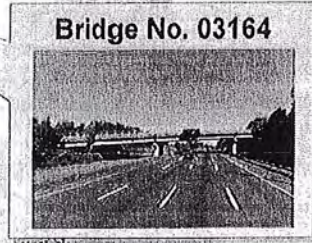
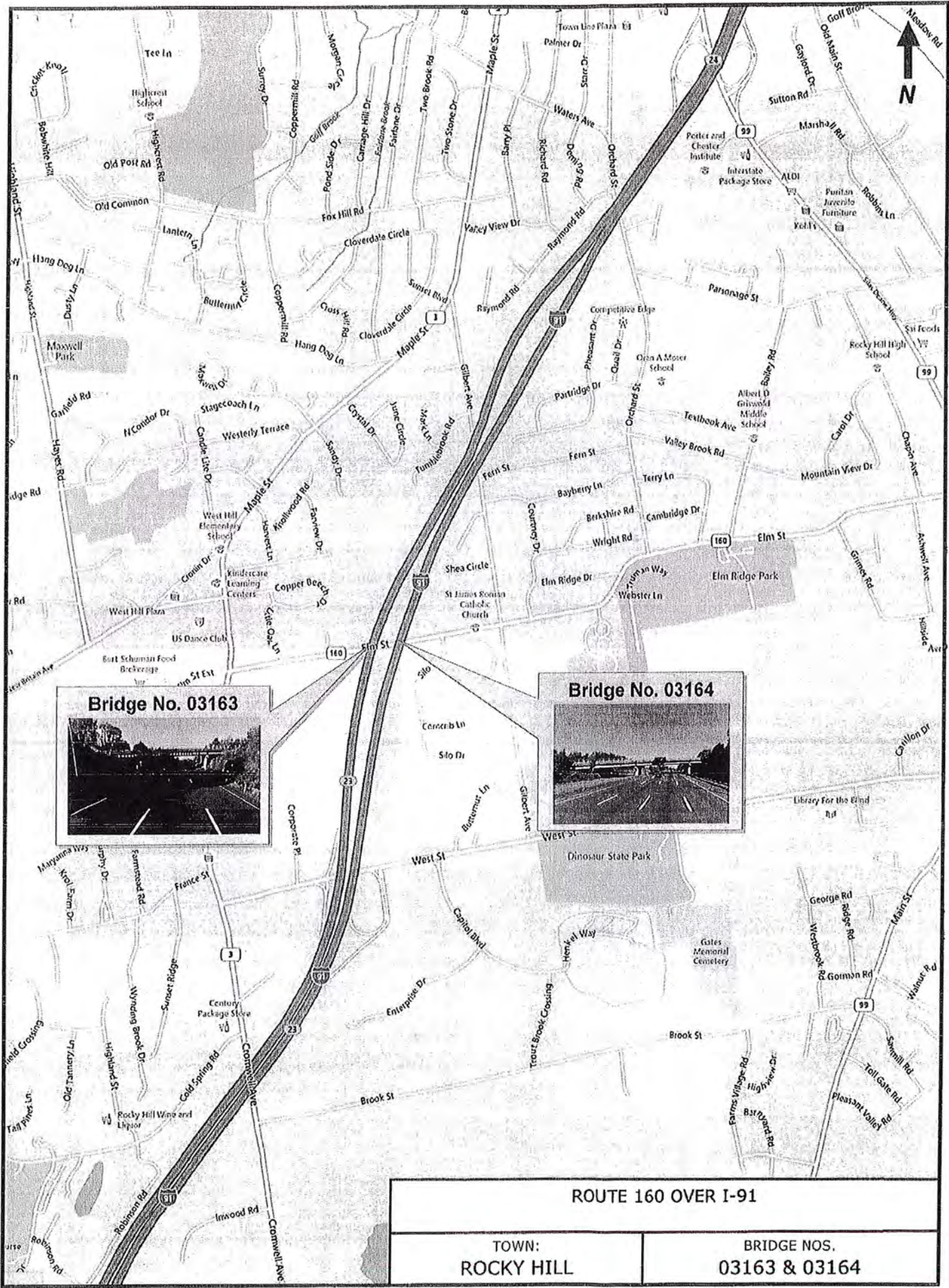
This project involves the replacement of Bridge Nos. 03163 and 03164, which carry Route 160 over Interstate 91 in Rocky Hill. Both structures, built in 1965, are three span steel beam superstructures with reinforced concrete decks on concrete abutments and piers. The curb-to-curb deck width is 30 feet across both structures, which is consistent with the approach roadway width. There are 18-inch safety walks located on either side of both bridges and a chain link fence located on top of each parapet in front of the two rail handrail. The total out-to-out width is 31.5 feet. The total structure length of Bridge No. 03163 is 193 feet, with a max span length of 109 feet, and the total structure length of Bridge No. 03164 is 261 feet, with a max span length of 109 feet. The minimum vertical underclearance is 16 feet measured at the edge of travel way at the left lane under Bridge No. 03164.

The proposed project consists of replacing both structures with single-span steel girder superstructures on Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS) substructures. The proposed replacement is necessary because the existing structures are structurally deficient and functionally obsolete. Its structural deficiency is primarily due to the poor condition of the superstructure. The bridge is functionally obsolete due to the substandard curb-to-curb width across both structures.

The superstructures will consist of steel girders with a concrete deck topped with membrane waterproofing and bituminous overlay. The steel beams will be sized to accommodate the required 16'-3" minimum vertical underclearance over I-91. New abutments, consisting of GRS-IBS, will be placed behind the existing piers to create single span structures. Single span structures were chosen to minimize future maintenance costs and minimize construction costs. The new structure lengths will be approximately 130 feet. The curb-to-curb width will be increased to accommodate a 12-foot lane and 4-foot shoulder in each direction. Additionally, the deck width will be increased to accommodate a 5-foot sidewalk along the north side of the proposed structures. The existing piers will be removed in their entirety and the existing abutments will be removed below roadway subgrade.

Construction will be performed utilizing accelerated bridge construction techniques. Route 160 will be closed for approximately 4-6 weeks to allow for superstructure removal and installation. Prior to the detour period, the GRS-IBS substructures will be constructed behind the existing piers to a maximum elevation while the existing superstructures are in place. The proposed superstructures will be constructed in the open gore areas surrounding I-91 in the area. Once the majority of the superstructures and substructures are constructed, Route 160 will be closed at the site, the approach spans will be removed and construction of the proposed substructures will be completed. The existing center span will be removed and the new superstructure will be installed with SPMT's during night time closures of I-91. Four nights will be required to remove and install the new superstructures. Once the new superstructures are in place, full depth roadway reconstruction of Route 160 can be performed and the sidewalk can be installed. Additional off-peak lane closures of Route 160 and I-91 will be utilized to perform certain activities. All existing underground utilities at the site will be temporarily relocated to utility bridges prior to construction and will be relocated on to the new superstructures at the completion of construction.

Construction is anticipated to be completed in approximately 6 months starting in the Spring of 2017. The estimated construction cost for this project is \$10,600,000.



ROUTE 160 OVER I-91	
TOWN: ROCKY HILL	BRIDGE NOS. 03163 & 03164