February 7, 2018

Mr. Adam G. 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: Amie Maines, P.E. / Michael Bedson, EIT

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance
Agreement No. 04.27-01(15)
HazMat Inspection – Bridge No. 06676 (ACCMPA culvert), Route 1 over unnamed brook, East Lyme, CT
ConnDOT Assignment No. 514-5712
ConnDOT Project No. 44-157
TRC Project No. 222165.5712.0710

Dear Mr. Fox:

TRC performed a limited hazardous materials site investigation associated with the planned replacement of Bridge No. 06676 (asphalt coated corrugated metal pipe arch (ACCMPA) culvert) in East Lyme, Connecticut. There were no painted surfaces identified on the bridge/culvert components scheduled for impact at Bridge No. 06676, therefore no lead based paint was identified at the site. The black asphalt material inside and outside the metal pipe arch of Bridge No. 06676 was sampled and found to contain no detectable asbestos. Laboratory results, site photos and site description/map are attached.

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

Very Truly Yours,

TRC

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

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

SHEET NO. _____ OF _____

PROJECT NO. _____

DATE _____

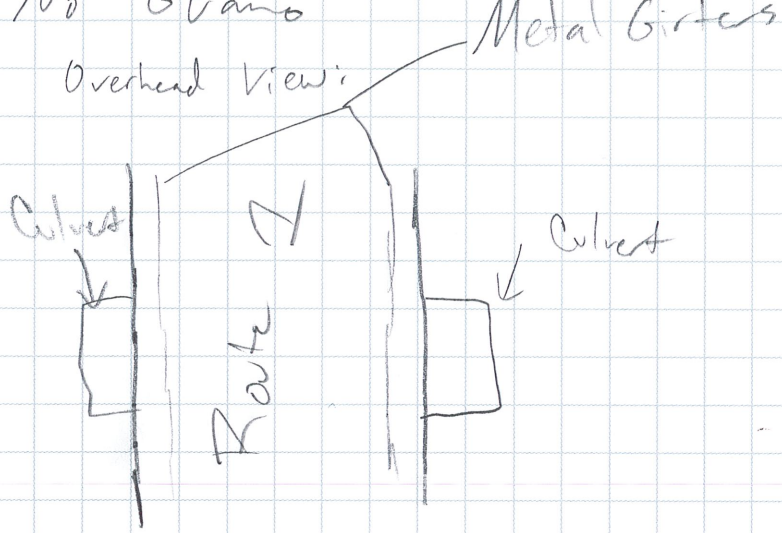
BY _____

CHK'D _____

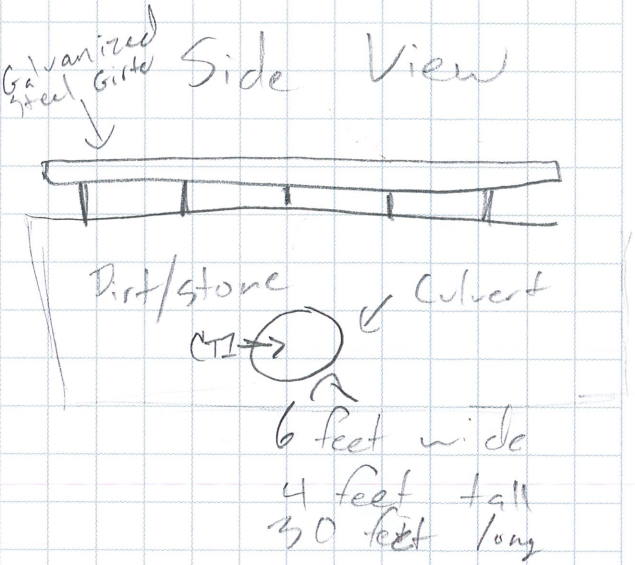
SUBJECT East Lyme Culvert (Bridge 066676)

- No Paint
- No Guard
- No Concrete wingwall

Overhead View:



Side View



(1) CT1: Black tar Coating

A

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 #. 51842

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
222165. ~~0576~~ 5712 EC# .0710	CT DOT Replacement Culvert in East Lyme		PLM: 8hr 24hr X 48hr 3day TEM: 24hr X 48hr 3day 5day
SIGNATURE: Eric Gilberg	INSPECTOR: Eric Gilberg		

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
01	1/22/18	1405		X	Culvert	X					Black Tar Coating
02	"	1409		X	"					X	"

Relinquished by: (Signature)	Date:	Received by: (Signature) 1/22/18	Relinquished by: (Signature)	Date:	Received by: (Signature)
(Printed)	Time:	(Printed) 1600	(Printed)	Time:	(Printed)

Remarks:

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

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 #:	0051842
Project #:	222165.5712.0710
Date Received:	01/22/2018
Date Analyzed:	01/23/2018

Site: Replacement Culvert in East Lyme, CT

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 (tar)	Yes	No	- -	- - -	ND	None
02	Black (tar)	Yes	No	- -	- - -	ND	None

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

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

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2018. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: K. Williamson
Kathleen Williamson, Laboratory Manager

Reviewed by: Cathryn Lemire
Cathryn Lemire, Approved Signatory

Date Issued
01/25/2018

NT 17010

Proscience Analytical Services, Inc.

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

TEM Bulk Chain of Custody Record

Date: 01/24/17

PO#: **C222165** Analysis Type: Chatfield **EPA N.O.B** Qualitative

Client: TRC

Client Job#: 222165.5712.0710

Client Job Ref./Loc.: CT DOT- Culvert in East Lyme, CT

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

Received by: Doreen Sansser 1/25/18 9:35am

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

Samplers Name: E. Gitberg

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	51842	Tar	See COC		

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

REVISED 2/1/18 tw

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 #: 222165.5713.0710
Client Reference: CT DOT - Culvert in East Lyme, CT
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: **NT 17010**
Method: NOB
Date Received: 1/25/2018
Date Analyzed: 1/29/2018
Date of Report: 1/29/2018

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other	%	%	Total %	Analyzed /	Preped /
					CHR	AMO	ACT	CRO	ANT	TRE	Non-asb.	Organic	Carb.	Asbestos	Charged	Charged
NT128472	02	Black Tar Coating		.2622	.00	.00	.00	.00	.00	.00	.73	98.70	.57	ND	Yes	No

Comments:

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

Mark Derosier, Analyst

Photo 1
Bridge No. 06676 Culvert Inlet

Photo 2
Bridge No. 06676 Inside of Culvert

Photo 3
Bridge No. 06676 Outlet of Culvert

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

subject: **Task 100 Environmental Screening**

Project No. 0044-0157
Replacement of Bridge No. 06676
Route 1 over unnamed brook
Town of East Lyme

memorandum

date: October 25, 2017

to: Rabih M. Barakat
Transportation Principal Engineer
Bureau of Engineering and Construction

from: Adam G. Fox
Adam Fox 2017.10.25 15:25:47-04'00'
Transportation Principal Engineer
Bureau of Engineering and Construction

In response to your environmental screening request dated October 23, 2017 this project has been reviewed and determined that further investigations are warranted.

Upon receipt of approved Preliminary Design Plans, this project will be forwarded to the TRC Environmental Corp. who will survey structures that will be impacted by this project for lead-based paint and any other contaminated or hazardous materials (i.e. asbestos, guano, etc...). Plans, specifications, and cost estimates will be provided, if required, pending the results of the environmental investigation.

Attached is a copy of the Task 100, Environmental Screening Review form by which the project was evaluated.

If you have any questions, please contact Michael Bedson at extension 3004.

Attachment

Michael Bedson Digitally signed by Michael Bedson Date: 2017.10.25 10:36:28-04'00'

Michael F. Bedson

cc: Theodore H. Nezames – Louis D. Bacho – Lesgie M. Ruiz
Thomas M. Ryan – Mark F. Levesque – Jeffrey J. Fontaine (CJM)
Adam G. Fox – Judith A. Nemecek – Michael F. Bedson

Judith A. Nemecek, P.E. Digitally signed by Judith A. Nemecek, P.E. Date: 2017.10.25 15:12:05-04'00'

S:\Envircom\Bedson\Task 100s\0044-0157 Task 100\Barakat100x-0044-0157.doc

Project Description

Project No. 44-157
Replacement of Bridge No. 06676
U.S. Route 1 over unnamed brook in East Lyme

This project involves the replacement of Bridge No. 06676, which carries U.S. Route 1 over an unnamed brook in the Town of East Lyme. Bridge No. 06676, built in 1982, is a 72-inch wide by 44-inch tall asphalt coated corrugated steel plate pipe culvert. There are no formal end treatments at either end of the structure. The arch is topped with approximately 2.5 feet of ballast material. The culvert carries one lane of traffic in each direction with 3'-4' shoulders. There are no sidewalks on the structure or approaches. The curb-to-curb roadway width over the structure is 32 feet. The structure has a 15 degree skew and an overall length of 46 feet. The structure is situated approximately 1.4 miles south of Route 161. The estimated 2015 Average Daily Traffic (ADT) on the structure is 5,500 vehicles, with 5% truck traffic.

Based upon field investigation and engineering analysis of this structure, the existing structure is found to be structurally deficient and hydraulically inadequate. Its structural deficiency is primarily due to the deteriorated condition of the pipe. The corrugate metal pipe culvert has severe laminar rust, section loss and perforations. The structure is hydraulically inadequate due to its inability to pass the 50-year design storm.

The proposed project consists of replacing the existing structure with a 5' x 10' precast concrete box culvert with precast concrete wingwalls. The structure will remain in relatively the same location and the existing roadway profile will remain unchanged. The culvert invert will be buried 1-foot to allow for natural streambed material to be placed inside the structure. The existing underground utilities at the site will be maintained and aerial facilities will be installed on temporary alley arms to provide the required clearance for construction equipment. Solid concrete parapets with concrete barrier walls will be installed on either side of the roadway and guiderail will be attached and extend a minimal distance into the approaches. The proposed structure size has been increased for hydraulic adequacy.

Construction will be performed during a weekend closure at the site. Traffic will be detoured utilizing U.S. Route 1 and Interstate 95. Additional off-peak lane closures will be utilized before and after the detour period in order to perform certain activities. Construction is anticipated to begin the fall of 2019.

ROUTE 1 OVER UNNAMED BROOK

TOWN:	BRIDGE NO.
EAST LYME	06676