TENNESSEE DEPARTMENT OF TRANSPORTATION
ASBESTOS INSPECTION REPORT

Interstate 75 Over State Route 63
07I00750018
Interstate 75
Campbell County

Prepared by:

Terracon
5217 Linbar Drive, Suite 309
Nashville, Tennessee 37211

June 23, 2014
Terracon Project Number: 18147070

James A. Duncan, P.E.
Environmental Department Manager

Joel Russell
Tennessee Asbestos Inspector Accreditation [A-I-48757-25461]

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the findings of an inspection for asbestos containing materials completed on the bridge identified in Section 1.1. The inspection was completed in accordance with the State of Tennessee, Department of Transportation Environmental Division, Social and Cultural Resources Office, Hazardous Materials Section requirements

1.1 TDOT BRIDGE IDENTIFICATION

The bridge is identified in the TDOT Project System/Bridge Management System as:

TDOT PE Number: 07100-0125-94
TDOT PIN Number: 115642.00
Bridge Inventory Number: 07I00750018
State Route Number: I0075
Log Mile Number: 11.24

1.2 GENERAL DESCRIPTION

The Campbell County south bound Interstate 75 bridge overpasses State Route 63. All bridge components were observed to be concrete. Figure – 1 shows the general location of the bridge.

2.0 INSPECTION

The identification of asbestos containing materials (ACM) is performed by collecting bulk samples of suspect materials and having those samples analyzed by a laboratory. Asbestos-containing materials (ACM) are those materials found to contain greater than one percent asbestos by calibrated visual area estimation (CVAE) by Polarized Light Microscopy (PLM).

Bulk sampling is a procedure in which representative homogeneous sampling areas in a structure are identified and then sampled. A homogeneous sampling area is defined as an area that contains material of the same type (uniform in color and texture) and is applied during the same general time period. Once the homogeneous sampling areas are identified, bulk samples of suspect materials are obtained at the discretion of our inspectors, based on site conditions and past experience.

2.1 PERSONNEL AND DATE(S) OF INSPECTION

The sampling and field activities were performed on May 30 and June 17, 2014 by Joel Russell and James Jackson, Accredited State of Tennessee Asbestos Inspectors. A copy of Mr. Russell and Mr. Jackson's current accreditation from the State of Tennessee is included in Appendix A.

2.2 VISUAL SURVEY

Terracon's survey began with a walk-through and visual survey of the structures located on the property. The visual survey consisted of:

- sketching the structure and/or verifying the plans provided

- locating and identifying homogeneous areas of suspect materials that may contain asbestos minerals
- determining applicable sampling locations

2.3 ACCESS TO BRIDGE COMPONENTS

Individual bridge components were accessed by the following methods:

2.3.1 Top of Bridge Deck

The top of the concrete bridge deck was accessed and sampled along the shoulders and at abutment corners. TDOT traffic control was not deemed necessary as sample collection and visual assessment was achieved from the shoulder along the side rails. Furthermore, Terracon used signage and cones to delineate the work zone.

2.3.2 Underside of Bridge Deck/Beams

The underside of the concrete bridge deck and concrete beams were accessed and sampled from the ground surface. No drainage pipes were observed on the underside of the deck. TDOT traffic control was not deemed necessary as sample collection and visual assessment was achieved beneath the bridge. Furthermore, Terracon used signage and cones to delineate the work zone.

2.3.3 Bridge Piers/Bents and Supports

The concrete supports were accessed and sampled from an extension ladder and the ground surface. TDOT traffic control was not deemed necessary as visual assessment and sampling was achieved beneath the bridge. Furthermore, Terracon used signage and cones to delineate the work zone.

2.3.4 Side Rails

The concrete side rails were accessed and sampled from shoulders and abutment corners. TDOT traffic control was not deemed necessary as visual assessment and sample collection was achieved from the shoulders at the abutment corners. Furthermore, Terracon used signage and cones to delineate the work zone.

2.3.5 Abutments

The concrete abutments were accessed and sampled from beneath the bridge. TDOT traffic control was not deemed necessary as sample collection and visual assessment was achieved beneath the bridge. Furthermore, Terracon used signage and cones to delineate the work zone.

3.0 ANALYTICAL PROCEDURES

3.1 ASBESTOS ANALYSIS PROCEDURES

The bulk samples are analyzed in the laboratory using Polarized Light Microscopy (PLM) coupled with dispersion staining. PLM is an analytical method for asbestos identification, which identifies the specific asbestos minerals by their unique optical properties. The optical properties are a result of the mineral's chemical composition, physical atomic structure, and visual morphology. This is the U.S. Environmental Protection Agency (EPA) recommended method of analysis for asbestos identification in bulk samples.

In most instances samples from each homogeneous area are analyzed on a “first positive stop” basis. “First positive stop” means that if one sample from a homogeneous area of material is found to contain greater than one percent asbestos, the remaining samples from that homogeneous area are not analyzed and the material is assumed to contain asbestos. In addition, samples which contain multiple layers, or that have associated mastic or adhesive backing, are analyzed as two or more separate samples. Samples that are identified to contain 1% or less asbestos minerals have been point counted by the laboratory for confirmation.

3.2 LABORATORY NAME AND ACCREDITATION

The bulk samples collected for this inspection were analyzed by a laboratory that has received accreditation from the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). The name and accreditation number of the analytical laboratory that analyzed the samples for this inspection is indicated in Table - 1:

Table – 1: Analytical Laboratory

Laboratory	Steve Moody Micro Services, LLC
NVLAP Number	102056

4.0 REGULATORY OVERVIEW

4.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

The EPA’s National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR 61, Subpart B) requires that all regulated asbestos-containing materials (RACM) be properly removed prior to any renovation or demolition activities that will disturb them. These regulations define RACM as:

- Friable ACM.
- Category I non-friable ACM that has become friable.
- Category I non-friable ACM that will be or has been subject to sanding, grinding, cutting, or abrading.
- Category II non-friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

The NESHAP regulations also establish specific notification and control requirements for renovation and demolition work.

4.1.1 Definitions

Significant definitions related to regulation of asbestos under NESHAPS include:

Friable asbestos-containing material (ACM), is defined by the NESHAP, as any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. (Sec. 61.141)

Non-friable ACM is any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. EPA also defines two categories of non-friable ACM, Category I and Category II non-friable ACM, which are described as follows:

Category I non-friable ACM is any asbestos-containing packing, gasket, resilient floor covering or asphalt roofing product which contains more than one percent (1%) asbestos as determined using polarized light microscopy (PLM) according to the method specified in Appendix A, Subpart F, 40 CFR Part 763. (Sec. 61.141)

Category II non-friable ACM is any material, excluding Category I non-friable ACM, containing more than one percent (1%) asbestos as determined using polarized light microscopy according to the methods specified in Appendix A, Subpart F, 40 CFR Part 763 that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. (Sec. 61.141)

"Regulated Asbestos-Containing Material" (RACM) is (a) friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

5.0 RESULTS

The results of the asbestos inspection are presented in the following sections.

5.1 RESULTS OF ASBESTOS BULK SAMPLE ANALYSIS

Thirty-one (31) samples were obtained from the bridge. Multiple samples of each homogeneous area were collected in accordance with State of Tennessee, Department of Transportation Environmental Division, Social and Cultural Resources Office, Hazardous Materials Section requirements and delivered to the laboratory for visual observation and microscopic analysis. The samples were selected based on homogeneous areas of suspect materials, as described in Section 2.2.

Table – 2 below, summarizes the various sampled materials which were found to contain greater than 1% asbestos minerals. Table – 3 summarizes the various sampled materials which were found to contain trace amounts of asbestos (<1% asbestos). Figure – 2 delineates the sample locations of asbestos containing materials on the property. Photographs of the different homogeneous areas sampled that were found to be asbestos-containing are presented in Appendix B and the analytical result of all the samples collected from the property along with the chain-of-custody records are included in Appendix C.

Table – 2: Materials Containing Greater than 1% Asbestos

Sample No.	HA/Material Description	Location (Bridge Component)	Approx Qty.	Friable (Y/N)	Type Asbestos and Content
06784-005	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	No Asbestos - concrete 2% Chrysotile - filler
06784-011	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	2% Chrysotile - texture
07404-027	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	3% Chrysotile - texture
07404-028*	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	Not analyzed
07404-029*	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	Not analyzed
07404-030*	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	Not analyzed
07404-031*	HA 06 – Texture (off-white)	Side rail barrier (barrier wall inside of original bridge side rail)	1,000 ft^2 per side rail barrier totaling 2,000 ft^2	Y	Not analyzed

* Sample not analyzed. Assumed to be asbestos-containing using "First Positive Stop" method.
HA Homogeneous Area

Table – 3: Materials Containing Trace (<1% Asbestos)

No trace asbestos-containing materials were identified

6.0 QUALIFICATIONS

The information presented herein is based on information obtained during the site visits and from previous experience. If additional information becomes available which might impact our conclusions or recommendations, Terracon requests the opportunity to review the information, reassess the potential concerns, and modify opinions, if warranted.

This report has been prepared on behalf of the Tennessee Department of Transportation. This document is not a Bid Document or a Contract Document. Use of this report or reliance upon information contained in this report by any other party implies an agreement by that party to the same terms and conditions under which service was provided. Furthermore, any party, other than our Client, relying on this document is cautioned that all conclusions made or decisions arrived at based on their review of this document are those solely of the third party, without warranty, guarantee or promise by the author. These findings are relevant to the dates of our services and should not be relied upon to represent conditions at substantially earlier or later dates.

Figure – 1: Site Vicinity Map

CAMPBELL COUNTY

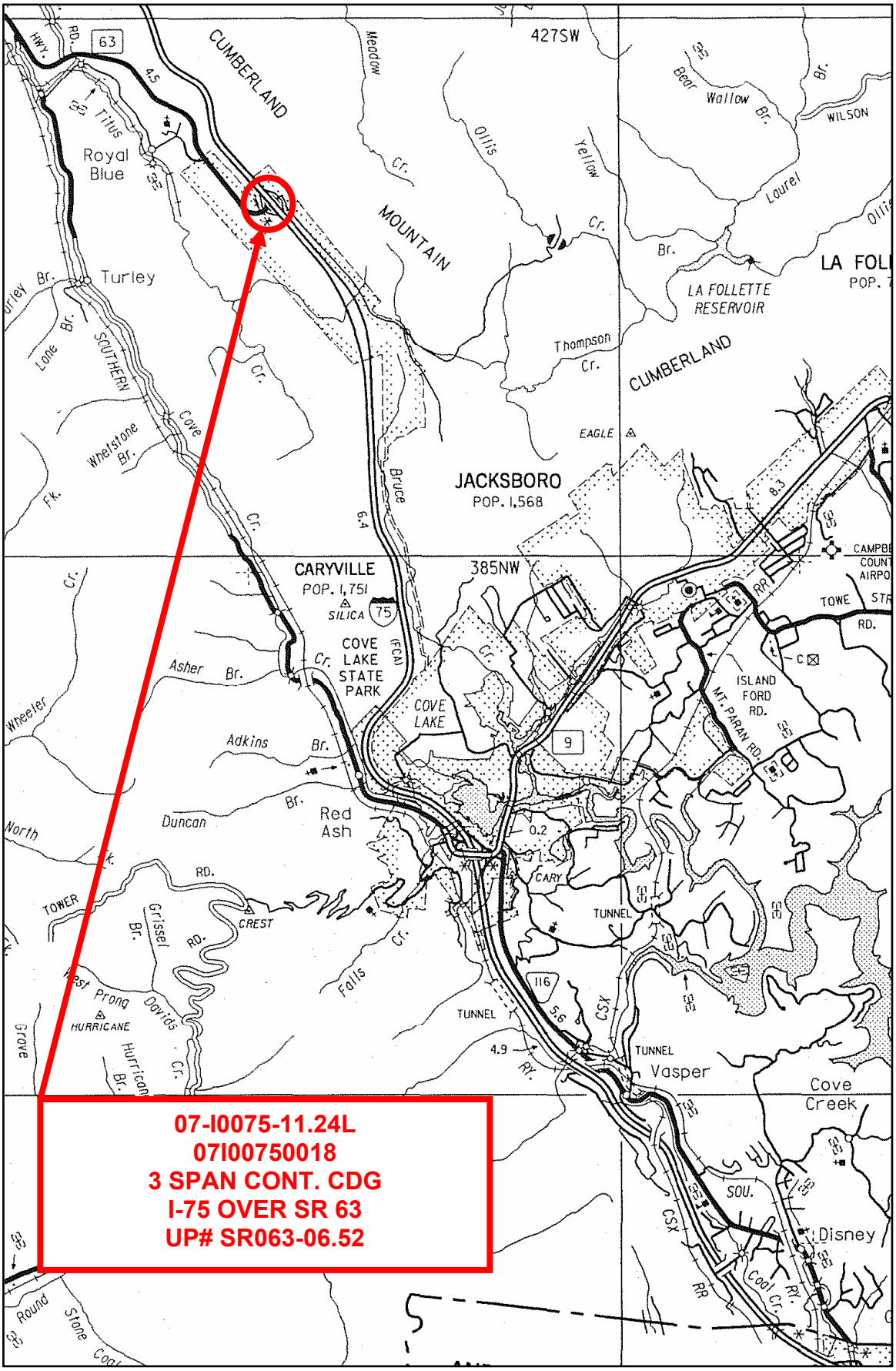


Figure – 2: Site Sketch/Plan(s) with Sampling Locations

FIGURE 2A

Project No. 18147070

Bridge No. 07I00750018

FIGURE 2B

Project No. 18147070

Bridge No. 07I00750018

FIGURE 2C

Project No. 18147070

Bridge No. 07I00750018

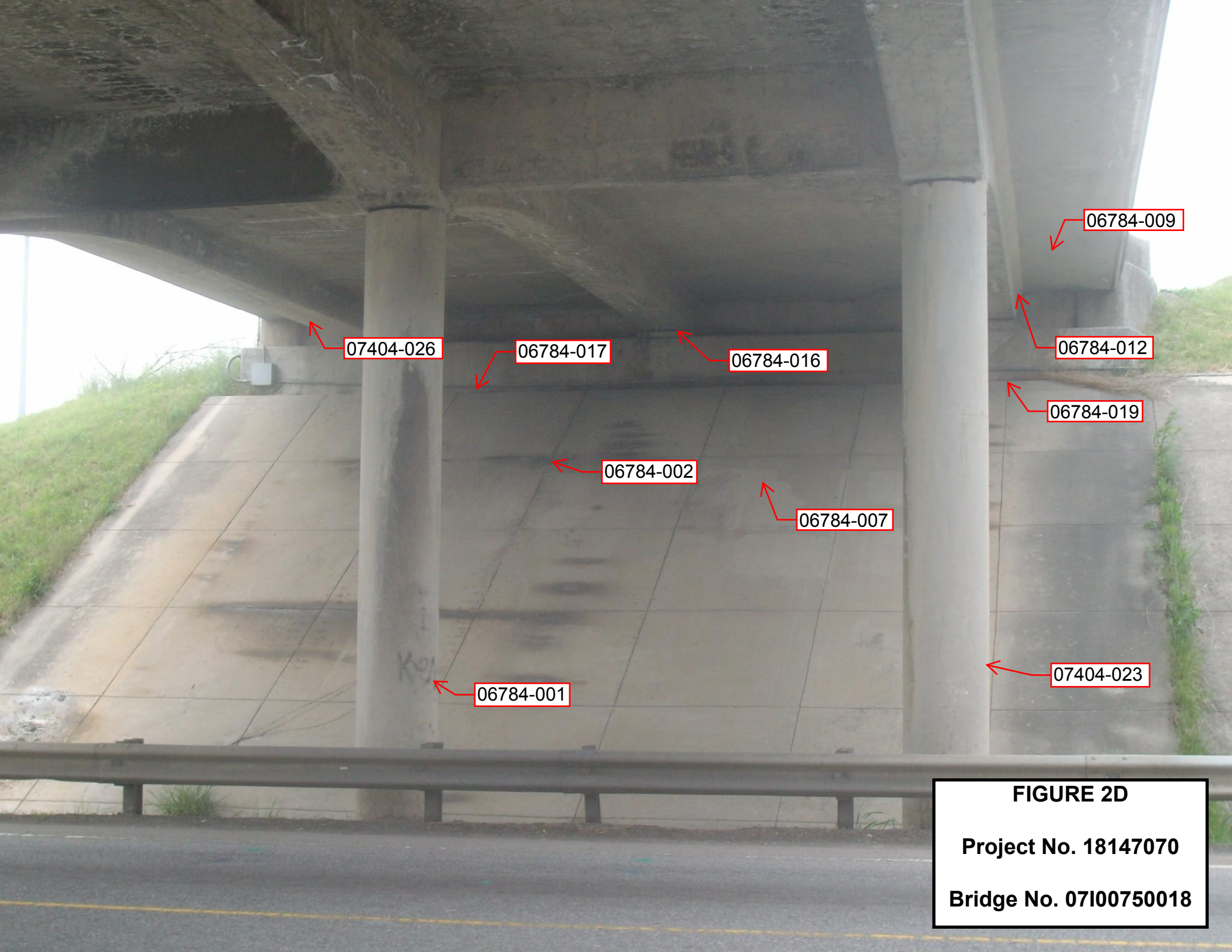


FIGURE 2D

Project No. 18147070

Bridge No. 07I00750018

FIGURE 2E

Project No. 18147070

Bridge No. 07I00750018

FIGURE 2F

Project No. 18147070

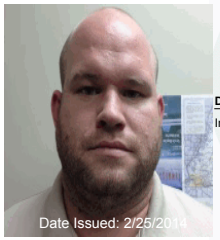
Bridge No. 07I00750018

APPENDIX A:
ASBESTOS INSPECTION PERSONNEL ACCREDITATIONS

THE STATE OF TENNESSEE

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

55182-20967



Joel T. Russell

DOB	Sex	HGT	WGT
14-Dec-1983	**M**	**6' 1"**	**285**

Discipline	Accreditation	Expiration
Inspector	A-I-48757-32745	Dec-31-2014

Re-Accreditation

Asbestos Accreditation

THE STATE OF TENNESSEE

Department of Environment and Conservation
Division of Solid Waste Management
Toxic Substances Program

James A. Jackson

DOB	Sex	HGT	WGT
17-Mar-1978	M	5' 7"	150

Discipline	Accreditation	Expiration
Inspector	A-I-48751-32742	Dec-31-2014
Management Planner	A-MP-48751-32743	Dec-31-2014
Project Monitor	A-PM-48751-34611	Apr-30-2015

Date Issued: 4/17/2014

Re-Accreditation

Asbestos Accreditation

THE STATE OF TENNESSEE

Department of Environment and Conservation Division of Solid Waste Management
Toxic Substances Program
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 14th Floor Nashville TN 37243

By virtue of the authority vested by the Division of Solid Waste Management, the Company named below is hereby accreditted to offer and/or conduct Asbestos activities pursuant to Rule 1200-01-20:

Terracon Consultants, Inc.

5217 Linbar Dr. Suite 309 Nashville TN, 37211

to conduct ASBESTOS ACTIVITIES in schools or public and commercial buildings in Tennessee. This firm is responsible for compliance with the applicable requirements of Rule 1200-01-20.

Discipline	Type	Accreditation Number	Effective Date	Expiration Date
Accreditation	Re-Accreditation	A-F-692-32280	December 01, 2013	December 31, 2014

Given under the Seal of the State of Tennessee in Nashville.

This **3rd** Day of **February 2014**

Division of Solid Waste Management
Toxic Substance Program

APPENDIX B:
PHOTOGRAPHS

Photo 1: View of the bridge location number.

Photo 2: View of asbestos containing texture located on the concrete side rail barrier

APPENDIX C:
ASBESTOS SAMPLE LABORATORY ANALYSIS DATA

PLM Summary Report

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge, I-75 over SR-63, South Bound, 07I00750018
Project # : 18147070 Sample Date : 05/30/2014
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 14B-06784 002
Report Date : 06/11/2014

On 6/4/2014, twenty two (22) bulk material samples were submitted by James Jackson of Terracon - Nashville, TN for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
001	HA01, Concrete (Gray), Support	None Detected - Concrete
002	HA01, Concrete (Gray), Sloped Abutment Wall	None Detected - Concrete
003	HA01, Concrete (Gray), Abutment	None Detected - Concrete
004	HA01, Concrete (Gray), Deck	None Detected - Concrete
005	HA01, Concrete (Gray), Side Rail	None Detected - Concrete 2% Chrysotile - Filler
006	HA01, Concrete (Gray), Beam	None Detected - Concrete
007	HA02, Texture (Gray), Sloped Abutment Wall	None Detected - Texture
008	HA02, Texture (Gray), Beam	None Detected - Texture
009	HA02, Texture (Gray), Deck	None Detected - Texture
010	HA02, Texture (Gray), Abutment	None Detected - Texture
011	HA02, Texture (Gray), Side Rail	2% Chrysotile - Texture
012	HA02, Texture (Gray), Beam	None Detected - Texture
013	HA02, Texture (Gray), Support	None Detected - Texture
014	HA03, Bridge Pad (Black), Support	None Detected - Bridge Pad
015	HA03, Bridge Pad (Black), Abutment	None Detected - Bridge Pad
016	HA03, Bridge Pad (Black), Abutment	None Detected - Bridge Pad
017	HA04, Pressboard (Black), Abutment	None Detected - Pressboard
018	HA04, Pressboard (Black), Abutment	None Detected - Pressboard
019	HA04, Pressboard (Black), Sloped Abutment Wall	None Detected - Pressboard
020	HA05, Asphalt Vibration Pad (Black), Abutment and Deck Interface	None Detected - Vibration Pad

PLM Summary Report

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge, I-75 over SR-63, South Bound, 07I00750018
Project # : 18147070 Sample Date : 05/30/2014
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 14B-06784 002
Report Date : 06/11/2014

On 6/4/2014, twenty two (22) bulk material samples were submitted by James Jackson of Terracon - Nashville, TN for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
021	HA05, Asphalt Vibration Pad (Black), Abutment and Deck Interface	None Detected - Vibration Pad
022	HA05, Asphalt Vibration Pad (Black), Abutment and Deck Interface	None Detected - Vibration Pad

NVLAP® LAB #102056-0

Analyst(s): Beverly Lorenzana, Cindy Vongpradith

Lab Manager : Heather Lopez Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb Approved Signatory : Bruce Crabb

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge, I-75 over SR-63, South Bound, 07I00750018
Project # : 18147070

Lab Job No. : 14B-06784
Report Date : 06/11/2014

002

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
001	Concrete (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
002	Concrete (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
003	Concrete (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
004	Concrete (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
005	Concrete (Grey)	90%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
	Filler (Off-White)	10%	Chrysotile	2%		
			Perlite	5%		
			Pigment / Binders	93%		
006	Concrete (Grey)	100%	Aggregate	65%	06/11	BL
			Cement Binders	35%		
007	Texture (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
008	Texture (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
009	Texture (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
010	Texture (Grey)	100%	Aggregate	65%	06/06	CV
			Cement Binders	35%		
011	Texture (Off-White)	100%	Chrysotile	2%	06/06	CV
			Perlite	5%		
			Pigment / Binders	93%		
012	Texture (Grey)	100%	Aggregate	65%	06/11	BL
			Cement Binders	35%		

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge, I-75 over SR-63, South Bound, 07I00750018
Project # : 18147070

Lab Job No. : 14B-06784
Report Date : 06/11/2014

002

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
013	Texture (Grey)	100%	Aggregate	65%	06/11	BL
			Cement Binders	35%		
014	Bridge Pad (Black)	100%	Rubber	100%	06/06	CV
015	Bridge Pad (Black)	100%	Rubber	100%	06/06	CV
016	Bridge Pad (Black)	100%	Rubber	100%	06/06	CV
017	Pressboard (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		
018	Pressboard (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		
019	Pressboard (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		
020	Vibration Pad (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		
021	Vibration Pad (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		
022	Vibration Pad (Black)	100%	Cellulose Fibers	85%	06/06	CV
			Tar Binders	15%		

Asbestos Chain of Custody

PLM-Bulk: ☐ 1 day ♦ ☐ 2 day ♦ ☒ 3 day ♦ ☐ 5 day
☐ Immediate **(Call for quote)**
☐ **ANALYZE ALL** ♦ ☒ **POSITIVE STOP**
****Please call in advance for after-hour & weekend analysis****

PCM-Air: ☐ Immediate ♦ ☐ 1 day ♦ ☐ 2 day ♦ ☐ 5 day
TEM-Air: ☐ 6 hr ♦ ☐ 12 hr ♦ ☐ 24 hr
TEM-Bulk/Wipe/MVac: ☐ 1 day ♦ ☐ 2 day ♦ ☐ 3 day
TEM-7402/Modified: ☐ 1 day ♦ ☐ 2 day ♦ ☐ 3 day

Lab Job# 14B-01784 PLM22
Lab Job#
Lab Job#

Company Name and City: Terracon - Nashville
No. of Samples: 22

Submitter's Name: James Jackson
Sample date: May 30, 2014
P.O. No: ----------

Project: TDOT Bridge - I-75 over SR-63, South Bound - 07I00750018, Campbell County, Tennessee
Project No: 18147070

Contact Information: Name: Rhetta Sapp
Phone #: 615-333-6444

E-mail Address: rsapp@terracon.com
Mobile #: ----------

Invoice Address: 5217 Linbar Drive, Suite 309, Nashville, Tennessee 37211
Fax #: ----------

*** *Please review paperwork and samples before submitting to lab. Uncontained / improperly packaged samples or excessive administrative requests may incur additional fees.* ***

Notes:

Sample No.	Sample Description	~~Vol. / Area~~	Location / Notes
001	Concrete - gray	HA 01	Support
002	Concrete - gray	HA 01	Sloped Abutment Wall
003	Concrete - gray	HA 01	Abutment
004	Concrete - gray	HA 01	Deck
005	Concrete - gray	HA 01	Siderail
006	Concrete - gray	HA 01	Beam
007	Texture - gray	HA 02	Sloped Abutment Wall
008	Texture - gray	HA 02	Beam
009	Texture - gray	HA 02	Deck
010	Texture - gray	HA 02	Abutment
011	Texture - gray	HA 02	Siderail
012	Texture - gray	HA 02	Beam
013	Texture - gray	HA 02	Support
014	Bridge Pad - black	HA 03	Support
015	Bridge Pad - black	HA 03	Abutment

via Fed-Ex

Released by:	Date/Time:	Received By:	Date/Time:
	6/2/14 - 11:18 AM	Chelsea Au	6-4-14 9:30AM
Released by:	Date/Time:	Received By:	Date/Time:

SMMS LABS

Asbestos Chain of Custody

Project: 07I00750018 14B-00784

016	Bridge Pad - black	HA 03	Abutment
017	Pressboard - black	HA 04	Abutment
018	Pressboard - black	HA 04	Abutment
019	Pressboard - black	HA 04	Sloped Abutment Wall
020	Asphalt Vibration Pad - black	HA 05	Abutment and Deck Interface
021	Asphalt Vibration Pad - black	HA 05	Abutment and Deck Interface
022	Asphalt Vibration Pad - black	HA 05	Abutment and Deck Interface
023			
024			
025			
026			
027			
028			
029			
030			
031			
032			
033			
034			
035			
036			
037			
038			
039			
040			
041			
042			
043			
044			
045			
046			
047			
048			
049			
050			

PLM Summary Report

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge I-75 over SR-63, South Bound 07I00750018
Project # : 18147070 Sample Date : 06/17/2014
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 14B-07404
Report Date : 06/19/2014

On 6/18/2014, nine (9) bulk material samples were submitted by Joel Russell of Terracon - Nashville, TN for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
023	HA02, Texture (Gray), Support	None Detected - Texture
024	HA02, Texture (Gray), Sloped Abutment Wall	None Detected - Texture
025	HA02, Texture (Gray), Abutment	None Detected - Texture
026	HA02, Texture (Gray), Beam	None Detected - Texture
027	HA06, Texture (Off-White), Siderail Barrier	3% Chrysotile - Acoustic Texture
028	HA06, Texture (Off-White), Siderail Barrier	Not Analyzed - Positive Stop
029	HA06, Texture (Off-White), Siderail Barrier	Not Analyzed - Positive Stop
030	HA06, Texture (Off-White), Siderail Barrier	Not Analyzed - Positive Stop
031	HA06, Texture (Off-White), Siderail Barrier	Not Analyzed - Positive Stop

NVLAP LAB #102056-0

Analyst(s): Bruce Crabb
Lab Manager : Heather Lopez
Lab Director : Bruce Crabb

Approved Signatory : Heather Lopez
Approved Signatory : Bruce Crabb

Thank you for choosing Steve Moody Micro Services

This Page Left Intentionally Blank

Steve Moody Micro Services, LLC
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report

Supplement to PLM Summary Report

NVLAP Lab Code 102056-0
TDSHS License No. 30-0084

Client : Terracon - Nashville, TN
Project : TDOT Bridge I-75 over SR-63, South Bound 07I00750018
Project # : 18147070

Lab Job No. : 14B-07404
Report Date : 06/19/2014

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
023	Texture (Grey)	100%	Aggregate	20%	06/19	BC
			Calcite / Binders	80%		
024	Texture (Grey)	100%	Aggregate	20%	06/19	BC
			Calcite / Binders	80%		
025	Texture (Grey)	100%	Aggregate	20%	06/19	BC
			Calcite / Binders	80%		
026	Texture (Grey)	100%	Aggregate	20%	06/19	BC
			Calcite / Binders	80%		
027	Acoustic Texture (Off-White)	100%	Chrysotile	3%	06/19	BC
			Perlite	5%		
			Calcite / Pgment / Binders	15%		
028	Not Analyzed - Positive Stop	100%			06/19	BC
029	Not Analyzed - Positive Stop	100%			06/19	BC
030	Not Analyzed - Positive Stop	100%			06/19	BC
031	Not Analyzed - Positive Stop	100%			06/19	BC

Chain of Custody

Page 1 of 1

SMMS LABS

Lab Job # 14B-07404 PLM:9
Lab Job #
Lab Job #

Please call in advance for immediate, after-hour, & weekend pricing & availability.*
Turnaround of Culture Samples subject to Culture Growth*

ASBESTOS PLM
Bulk ☐ 1 day ☒ 2 day ☐ 3 day ☐ 5 day ☐ Immediate
☐ **Analyze All** ☒ **Positive Stop**

PCM Air (7400) ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day ☐ Immediate
TOTAL DUST (0500/0600) ☐ 1 day ☐ 2 day

MOLD
Non-culture (Tape / Bulk / Air) ☐ 1 day ☐ 2 day ☐ Immediate
☐ Air Standard Profile ☐ Air Expanded Profile
Analyze Blanks ☐ **Yes** ☐ **No**
Culture (Swab / Bulk / Plate) ☐ 7-14 day

OTHER:

ASBESTOS TEM
Air AHERA Method ☐ 6 hr ☐ 12hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Water ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ **Yes** ☐ **No**

BACTERIA
Heterotrophic Plate Count (HPC) ☐ 3 day
HPC + Gram Stain ☐ 3 day ☐ 5 day
HPC + 3 Gram Neg ID ☐ 6-8 day
HPC + 5 Gram Neg ID ☐ 6-8 day
Fecal Coliform (MPN) ☐ 3 day
Total Coliform & E Coli (P/A) ☐ 2-3 day

Billing Company / City: Terracon/Nashville
# of Samples: 9
Submitter's Company: Terracon
Sample Date: 6/17/14
Submitter's Name: Joel Russell
Project #: 18147070
Project: TDOT Bridge I-75 over SR-63, South Bound - 07100750018
Phone #: 615-333-6444
Contact Information: Name: Joel Russell
Mobile #:
E-mail Results to: rsapp@terracon.com & jtrussell@terracon.com
Fax #: 615-333-6443
Invoice Address: 5217 Linbar Dr. #309, Nashville, TN 37211
P.O. #:

— Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees—

Notes: If positive gypsum board samples, analyze all and composite and point count positive samples.

Sample #	Sample Description	Vol. / Area if applicable	Location / Notes
023	Texture - gray	HA 02	Support
024	" "	"	Sloped Abutment Wall
025	" "	"	Abutment
026	" "	"	Beam
027	Texture - off white	HA 06	Siderail barrier
028	" "	"	"
029	" "	"	"
030	" "	"	"
031	" "	"	"

via Fed-Ex

Released By:	Date / Time:	Received By:	Date / Time:
Joel Russell	6/17/14 15:00		6-18-14 9:40AM
Released By:	Date / Time:	Received By:	Date / Time: