TENNESSEE DEPARTMENT OF TRANSPORTATION
ASBESTOS INSPECTION REPORT

SR-238 Bridge over Spring Creek
Bridge ID Number 63S63520005
Montgomery County, Tennessee

Prepared by:

K. S. WARE & ASSOCIATES, L.L.C.
54 Lindsley Avenue
Nashville, Tennessee 37210

April 15, 2014
KSWA Project Number: 100-14-0019

Daryl Corlew

Daryl Corlew
Tennessee Asbestos Inspector Accreditation [A-I-78606-34727]

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: 98301-4229-04
TDOT PIN Number: 120198.00
Bridge Inventory Number: 63S63520005
State Route Number: SR-238
Log Mile Number: 8.23

1.2 GENERAL DESCRIPTION

The SR-238 Bridge is a four-span concrete structure over Spring Creek in Montgomery County, Tennessee. The existing bridge measures at 114 feet in length and consists of concrete and steel components. 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) using 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 April 3, 2014 by Daryl Corlew. Mr. Corlew is an accredited State of Tennessee Asbestos Inspectors. A copy of Daryl Corlew's current accreditation from the State of Tennessee is included in Appendix A.

2.2 VISUAL SURVEY

KSWA's survey began with a walk-through and visual survey of the structure 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

Table-1 lists the homogeneous areas identified during our visual survey.

2.3 ACCESS TO BRIDGE COMPONENTS

Individual bridge components were accessed by the following methods.

2.3.1 Top of Bridge Deck

The asphalt bridge deck was accessed and sampled from the top and shoulders of the bridge.

2.3.2 Underside of Bridge Deck

The underside of the concrete bridge deck was accessed and sampled from beneath the bridge.

2.3.3 Bridge Beams

The concrete bridge beams were accessed and sampled from beneath the bridge.

2.3.4 Bridge Piers/Bents and Supports

The concrete and steel bridge supports were accessed and sampled from beneath the bridge. No steel samples were taken from the bridge piers.

2.3.5 Guardrails

The bridge consisted of two sets of guardrails, inner and outer, both of which were accessed and sampled from the top of the bridge.

2.3.6 Abutments

The concrete bridge abutments were accessed and sampled from beneath the bridge.

2.3.7 Cementitious Down Drains

The cementitious down drains were accessed and sampled from beneath the bridge.

Table – 1: Bridge Component Descriptions

Homogeneous Area	Description	No. Of Samples
A	Asphalt Overlay	4
B	Concrete Guardrail (Inner)	4
C	Concrete Guardrail (Outer)	4
D	Concrete Abutment	4
E	Concrete Beams	4
F	Concrete Underdecking	4
G	Concrete Pier	3
H	Cementitious Down Drains	3

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 are indicated in Table - 2:

Table – 2: Analytical Laboratory

Laboratory	EMSL Analytical, Inc.
NVLAP Number	102104-0

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.

4.1.1 Definitions

Significant definitions related to regulation of asbestos under NESHAPS include:

Friable asbestos-containing material (ACM), is defined by the Asbestos 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.

Friable materials are defined as those which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. The NESHAP regulations also establish specific notification and control requirements for renovation and demolition work.

5.0 RESULTS

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

5.1 RESULTS OF ASBESTOS BULK SAMPLE ANALYSIS

Thirty samples were obtained from the SR-238 Bridge over Spring Creek. 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.

Building material homogeneous areas sampled included: concrete abutments, concrete piers, concrete under decking, concrete beams, inner and outer concrete guardrails, cementitious down drains, and asphalt overlay. Photographs of the subject Montgomery County Bridge are presented in Appendix B and the analytical results of all the samples collected from the property, along with the chain-of-custody records, are included in Appendix C.

Of the various material sampled, the cementitious down drains was found to be asbestos-containing. Table – 3 summarizes the various sampled materials which were found to contain asbestos. Photographs of the different homogeneous areas sampled that tested positive for containing asbestos are presented in Appendix B.

Table – 3: Materials Containing Asbestos

Sample No.	HA / Material Description	Location (Bridge Component)	Approx. Qty.	Friable (Y/N)	Type Asbestos and Content
238-28**	Cementitious Down Drains	North East	10 Total Pipes in 2 ft sections	No	3.25% Chrysotile 1.50% Crocidolite
238-29*	Cementitious Down Drains	Middle East	24 Total Pipes in 2 ft sections	No	First Positive Stop
238-30*	Cementitious Down Drains	South East	24 Total Pipes in 2 ft sections	No	First Positive Stop

*Sample was not analyzed. Assumed to be asbestos-containing using "First Positive Stop" (FPS) method

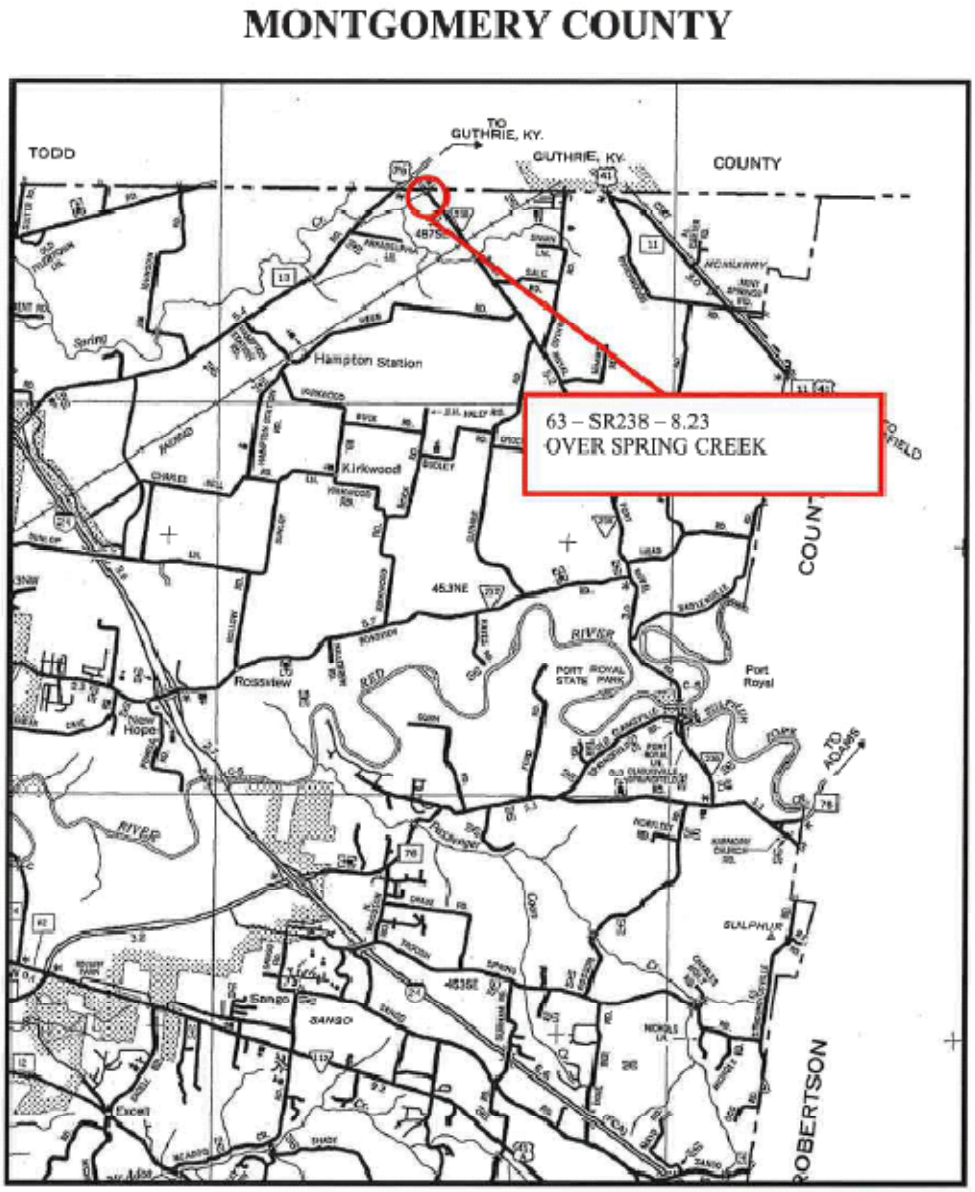
**Sample was Point Counted for confirmation

6.0 QUALIFICATIONS

The information presented herein is based on information obtained during the site visit and from previous experience. If additional information becomes available which might impact our conclusions or recommendations, K. S. Ware & Associates, L.L.C. 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



APPENDIX A:
ASBESTOS INSPECTION PERSONNEL ACCREDITATIONS

THE STATE OF TENNESSEE

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

Date Issued: 2/24/2

Initial

Daryl J Corlew

DOB	Sex	HGT	WGT
12-May-1988	M	5' 11"	180

Discipline	Accreditation	Expiration
Inspector	A-I-78606-34727	Feb-28-2015
Project Monitor	A-PM-78606-27982	Apr-30-2014

Asbestos Accreditation

APPENDIX B:
PHOTOGRAPHS

Photo 1: View of the SR-238 Bridge over Spring Creek in Montgomery County, Tennessee

Photo 2: View of the SR-238 Bridge over Spring Creek in Montgomery County, Tennessee from below

Photo 3: View of the cementitious down drains on SR-238 Bridge over Spring Creek in Montgomery County, Tennessee from below

Photo 4: Close-up view of the SR-238 Bridge cementitious down drains from below

APPENDIX C:
ASBESTOS SAMPLE LABORATORY ANALYSIS DATA

OrderID: 021401815

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 1815

EMSL Analytical, Inc.
706 Gralin Street

Kernersville, NC 27284
PHONE: (336) 992-1025
FAX: (336) 992-4175

Company : K.S. Ware and Associates	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 54 Lindsley Ave	
City: Nashville **State/Province:** TN	**Zip/Postal Code:** 37210 **Country:** United States
Report To (Name): Daryl Corlew	**Telephone #:** 615-255-9702
Email Address: dcorlew@kswarellc.com	**Fax #:** 615-256-5873 **Purchase Order:**
Project Name/Number: 100-14-0019	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: TN	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ■ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PLM - Bulk (reporting limit)	TEM – Bulk
■ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

■ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 4/3/2014

Samplers Name: Daryl Corlew **Samplers Signature:** Daryl Corlew

Sample #	HA #	Sample Location	Material Description
238-1	A	NW	Asphalt Overlay
238-2	A	NE	" "
238-3	A	SW	" "
238-4	A	SE	" "
238-5	B	NW	Inner Concrete Guardrail
238-6	B	NE	" "
238-7	B	SW	" "
238-8	B	SE	" "
238-9	C	NW	Outer Concrete Guardrail
238-10	C	NE	" "

Client Sample # (s): 1A - 30H **Total # of Samples:** 30

Relinquished (Client): Daryl Corlew **Date:** 4/3/14 **Time:** 3:00 pm

Received (Lab): [signature] **Date:** 4-7-14 **Time:** 10:30

Comments/Special Instructions:
SR-238 48 hr TAT
UPS: 1Z 245 3AR 03 9401 6446

OrderID: 021401815

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

EMSL Analytical, Inc.
706 Gralin Street

Kernersville, NC 27284
PHONE: (336) 992-1025
FAX: (336) 992-4175

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*:

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
238-11	C	SW	Outer Concrete Guardrail
238-12	C	SE	" "
238-13	D	NW	Concrete Abutment
238-14	D	NE	" "
238-15	D	SW	" "
238-16	D	SE	" "
238-17	E	NW	Concrete Beams
238-18	E	NE	" "
238-19	E	SW	" "
238-20	E	SE	" "
238-21	F	NW	Concrete Underdecking
238-22	F	NE	" "
238-23	F	SW	" "
238-24	F	SE	" "
238-25	G	North	Concrete Piers
238-26	G	Middle	" "
238-27	G	South	" "
238-28	H	NE	Cementitious Down Drains
238-29	H	Middle East	" "
238-30	H	SE	" "

***Comments/Special Instructions:**
SR-238 48 hr TAT

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021401815
CustomerID:	KSWA77
CustomerPO:	
ProjectID:	

Attn: **Daryl Corlew**
K.S. Ware LLC
54 Lindsley Avenue
Nashville, TN 37210

Phone:	(615) 742-7476
Fax:	(615) 256-5873
Received:	04/08/14 4:37 PM
Analysis Date:	4/9/2014
Collected:	

Project: **100-14-0019**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
238-1 *021401815-0001*	Asphalt Overlay	Brown/Black Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 95% Non-fibrous (other)	**None Detected**
238-2 *021401815-0002*	Asphalt Overlay	Brown/Black Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 95% Non-fibrous (other)	**None Detected**
238-3 *021401815-0003*	Asphalt Overlay	Brown/Black Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 95% Non-fibrous (other)	**None Detected**
238-4 *021401815-0004*	Asphalt Overlay	Black Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 95% Non-fibrous (other)	**None Detected**
238-5 *021401815-0005*	Inner Concrete Guardrail	Gray Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 15% Ca Carbonate 80% Non-fibrous (other)	**None Detected**
238-6 *021401815-0006*	Inner Concrete Guardrail	Gray/Tan/White Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 20% Ca Carbonate 75% Non-fibrous (other)	**None Detected**
238-7 *021401815-0007*	Inner Concrete Guardrail	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 15% Ca Carbonate 80% Non-fibrous (other)	**None Detected**

Analyst(s)

Kristie Elliott (21)
Nicole Shutts (7)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 04/09/2014 08:23:10

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
238-8 *021401815-0008*	Inner Concrete Guardrail	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 10% 85%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-9 *021401815-0009*	Outer Concrete Guardrail	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-10 *021401815-0010*	Outer Concrete Guardrail	Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 20% 75%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-11 *021401815-0011*	Outer Concrete Guardrail	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-12 *021401815-0012*	Outer Concrete Guardrail	Brown/Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 5% 90%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-13 *021401815-0013*	Concrete Abutment	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-14 *021401815-0014*	Concrete Abutment	Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**

Analyst(s)

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			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
238-15 *021401815-0015*	Concrete Abutment	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 20% 75%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-16 *021401815-0016*	Concrete Abutment	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 10% 85%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-17 *021401815-0017*	Concrete Beams	Gray/Tan Non-Fibrous Homogeneous			5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-18 *021401815-0018*	Concrete Beams	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-19 *021401815-0019*	Concrete Beams	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-20 *021401815-0020*	Concrete Beams	Brown/Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 15% 80%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**
238-21 *021401815-0021*	Concrete Underdecking	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% 10% 85%	Quartz Ca Carbonate Non-fibrous (other)	**None Detected**

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			Non-Asbestos			Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**	**% Type**
238-22 *021401815-0022*	Concrete Underdecking	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 10% Ca Carbonate 85% Non-fibrous (other)	**None Detected**
238-23 *021401815-0023*	Concrete Underdecking	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 10% Ca Carbonate 85% Non-fibrous (other)	**None Detected**
238-24 *021401815-0024*	Concrete Underdecking	Brown/Gray/Tan Non-Fibrous Homogeneous	1%	Cellulose	5% Quartz 10% Ca Carbonate 84% Non-fibrous (other)	**None Detected**
238-25 *021401815-0025*	Concrete Piers	Brown/Gray Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 15% Ca Carbonate 80% Non-fibrous (other)	**None Detected**
238-26 *021401815-0026*	Concrete Piers	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 15% Ca Carbonate 80% Non-fibrous (other)	**None Detected**
238-27 *021401815-0027*	Concrete Piers	Gray/Tan Non-Fibrous Homogeneous	<1%	Cellulose	5% Quartz 95% Non-fibrous (other)	**None Detected**
238-28 *021401815-0028*	Cementitious Down Drains	Gray/Beige Fibrous Homogeneous	<1%	Cellulose	96% Non-fibrous (other)	**3% Chrysotile** **1% Crocidolite**

Analyst(s)

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
238-29 *021401815-0029*	Cementitious Down Drains				**Stop Positive (Not Analyzed)**
238-30 *021401815-0030*	Cementitious Down Drains				**Stop Positive (Not Analyzed)**

Analyst(s)

Kristie Elliott (21)
Nicole Shutts (7)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 04/09/2014 08:23:10

EMSL Analytical, Inc.
706 Gralin Street, Kernersville, NC 27284
Phone/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com greensborolab@emsl.com

EMSL Order:	021401815
CustomerID:	KSWA77
CustomerPO:	
ProjectID:	

Attn: **Daryl Corlew**
K.S. Ware LLC
54 Lindsley Avenue
Nashville, TN 37210

Phone:	(615) 742-7476
Fax:	(615) 256-5873
Received:	04/08/14 4:37 PM
Analysis Date:	4/11/2014
Collected:	

Project: **100-14-0019**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy. Quantitation using 400 Point Count Procedure

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
238-28 *021401815-0028*	Cementitious Down Drains	Gray/Beige Fibrous Homogeneous		95.25% Non-fibrous (other)	**3.25% Chrysotile** **1.50% Crocidolite**

Analyst(s)

Kristie Elliott (1)

Stephen Bennett, Laboratory Manager
or other approved signatory

Initial report from 04/11/2014 11:56:18