ENSAFE
a global professional services company

creative thinking. **custom solutions.** ®

*220 Athens Way, Suite 410 | Nashville, Tennessee 37228 | Telephone 615-255-9300 | Facsimile 615-255-9345 | www.ensafe.com*

July 21, 2014

Mr. Jim Ozment
Tennessee Department of Transportation
Dept. Environmental Planning and Permits
505 Deaderick Street, Suite 900
Nashville, TN 37243-0334

Re: Asbestos Inspection Report
Sumner County; SR-25 Bridge over Liberty Branch
Bridge #: 83SR0250013 (LM 10.88)
TDOT Project # 83005-4246-04, PIN 120026.00
TDOT Contract: E1647; Work Order: 076

Dear Mr. Ozment:

Enclosed is the asbestos inspection report for the above-referenced bridge. A total of 20 samples were obtained during the inspection. Asbestos was detected in the utility pipe wrap located on the western side of the bridge.

In its current condition, this asbestos containing material (ACM) was determined to be non-friable; that is, it could not be pulverized using hand pressure alone. Accordingly, it is classified under Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAP) rules (40 Code of Federal Regulations [CFR] 61) as a Category II non-friable ACM, and it is not considered a "Regulated Asbestos-Containing Material" (RACM) in its current state. However, if it is expected that demolition or renovation methods used would render the material friable, this material should be removed by trained workers or segregated such that it cannot be rendered friable.

The Occupational Safety and Health Administration (OSHA) would consider the abatement of this ACM to be a Class II activity, which would require trained workers and a competent person to oversee the work (an asbestos supervisor). Additionally, State of Tennessee asbestos accreditation requirements (Tennessee Code Annotated [TCA] 1200-01-20) mandate that such work be performed by an accredited firm (contractor) using accredited abatement workers and supervisors.

If you should have any questions, please call me at 615-255-9300.

Sincerely,

EnSafe Inc.

Tammy Keim Williams

By: Tammy Keim Williams
*Project Manager*

Enclosure

# TENNESSEE DEPARTMENT OF TRANSPORTATION
# ASBESTOS INSPECTION REPORT

Bridge over Liberty Branch
Bridge No. 83SR0250013 (LM10.88)
State Route 25
Sumner County

Prepared by:

**ENSAFE INC.**
220 Athens Way, Suite 410
Nashville, Tennessee 37228

July 21, 2014
EnSafe Project Number: 0888815773

Robert Thomas (Signature)
Tennessee Asbestos Inspector Accreditation No:A-I-48812-33075

## TABLE OF CONTENTS

# 1.0 INTRODUCTION

This report presents the findings of an inspection for asbestos containing materials (ACM) completed on the bridge identified in Section 1.1. The inspection was completed by EnSafe Inc. 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: 83005-4246-04
TDOT PIN Number: 120026.00
Bridge Inventory Number: 83SR0250013
State Route (SR) Number: SR-25
Log Mile (LM) Number: 10.88

## 1.2 GENERAL DESCRIPTION

The bridge, located on SR-25 at LM 10.88, is a 2-span 65-foot bridge over Liberty Branch, in Sumner County, Tennessee). Figure – 1 shows the general location of the bridge.

# 2.0 INSPECTION

The identification of ACM is performed by collecting bulk samples of suspect materials and having those samples analyzed by a laboratory. ACM are those materials found to contain greater than 1% 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 July 7, 2014, by Robert Thomas and Todd Maresca, Accredited State of Tennessee Asbestos Inspectors. A copy of the inspectors' and EnSafe's current accreditation from the State of Tennessee is included in Appendix A. A photograph documenting the bridge identification where the survey took place is included in Appendix B.

## 2.2 VISUAL SURVEY

EnSafe'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 (HAs) 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 bridge deck was covered with asphalt and therefore not sampled. Traffic control was not required for the inspection of the top of the bridge deck.

### 2.3.2 Underside of Bridge Deck

The underside of the bridge deck was accessed by foot and samples were obtained either by foot or by use of a ladder. Samples were obtained using hammers and chisels. Samples obtained from the underside of the deck were labeled as 25HA-7A through 25HA-7C. A metal utility pipe coated with a wrap was observed on the western side of the bridge. The wrap was sampled as 25HA-5A and 25HA-5B.

### 2.3.3 Bridge Beams

The bridge beams were constructed of steel and therefore not sampled.

### 2.3.4 Bridge Piers/Bents and Supports

The bridge bent was accessed by foot and using ladders. The bridge support consisted of a single pier. Samples 25HA-4A and 25HA-4C were obtained from the pier.

### 2.3.5 Side Rails

There was a concrete parapet extending the length of both sides of the bridge. Both sides were accessible on foot. Three samples were obtained of the cement (25HA-1A through 25HA-1C) and of what appeared to be a thin bridge coating (25HA-2A through 25HA-2C) on the parapet by using hammers, chisels, and scrapers.

### 2.3.6 Abutments

The abutments on both sides of the bridge were accessed on foot. Samples were obtained using hammers and chisels. Samples 25HA-3A through 25HA-3C were obtained from the abutments. Samples 25HA-6A through 25HA-6C were obtained from the isolator pads located between the bridge beams and the abutments.

### 2.3.7 Bridge Drainage

Drainage from the bridge is through steel piping cored through the bridge deck on the east side and no samples were taken.

## 3.0 ANALYTICAL PROCEDURES

### 3.1 ASBESTOS ANALYSIS PROCEDURES

The bulk samples are analyzed in the laboratory using 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 HA are analyzed on a “first positive stop” basis. “First positive stop” means that if one sample from a HA of material is found to contain greater than 1% asbestos, the remaining samples from that HA 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** | SanAir Technologies Laboratory, Inc. |
| **NVLAP Number** | 200870-0 |

# 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

A total of 20 samples were obtained from the bridge. Multiple samples of each HA 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 HAs of suspect materials, as described in Section 2.2.

Table – 2 below, summarizes the sampled material which was found to contain greater than 1% asbestos minerals. Photographs of the HA sampled that was 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 |
|---|---|---|---|---|---|
| **14017786-013_25HA5A** | HA-5 Pipe Wrap | Utility pipe, west side of bridge | 65 LF | N | 35% Chrysotile |
| **14017786-014_25HA5B *** | HA-5 Pipe Wrap | Utility pipe, west side of bridge | 65 LF | N | assumed 35% Chrysotile-Not analyzed |

***** Sample not analyzed. Assumed to be asbestos-containing using "First Positive Stop" method.
HA Homogeneous Area
LF Linear Feet
SF Square Feet
CF Cubic Feet

## 6.0 QUALIFICATIONS

The information presented herein is based on information obtained during the site visit(s) and from previous experience. If additional information becomes available which might impact our conclusions or recommendations, EnSafe 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

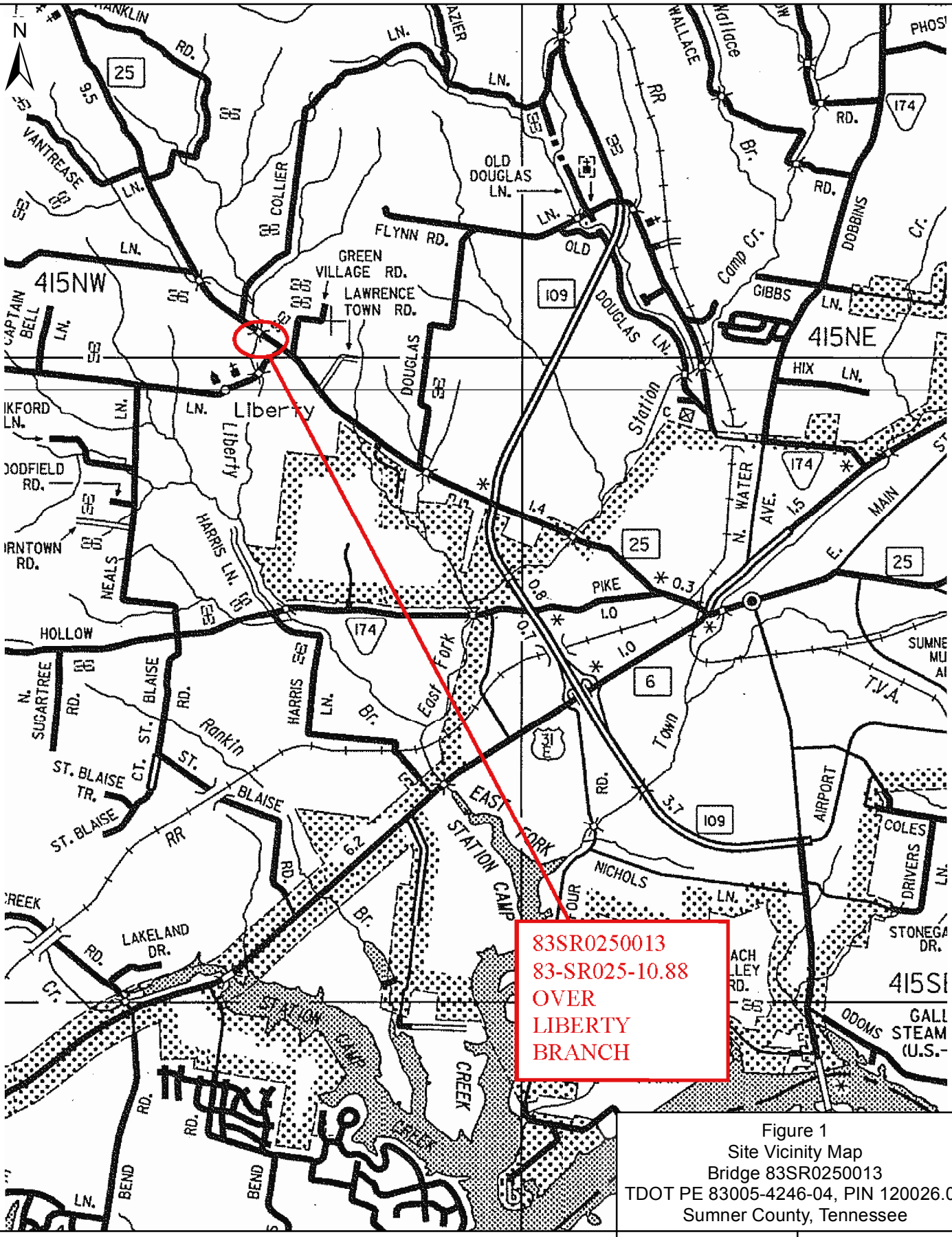



Figure 1
Site Vicinity Map
Bridge 83SR0250013
TDOT PE 83005-4246-04, PIN 120026.00
Sumner County, Tennessee

Source: Obtained from TDOT Bridge Inspection Reports; Used with permission from TDOT

0 0.5 1 1.5 Miles

Approximate Scale

| | |
|---|---|
| REQUESTED BY: T. Keim | |
| DRAWN BY: N. Rinehart | |
| DATE: 7/2/2014 | |
| PROJECT NO: 0888815773 | |

ENSAFE
(800) 588-6972
WWW.ENSAFE.COM

X:\TDOT\BridgeSampling\SiteLocation_83SR0250013.mxd

# APPENDIX A:
# ASBESTOS INSPECTION ACCREDITATIONS

# 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:**

## EnSafe

5724 Summer Trees Dr. Memphis TN, 38134

**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-214-29290 | August 01, 2013 | August 31, 2014 |

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

This **7th** Day of **August 2013**

Division of Solid Waste Management
Toxic Substance Program

**CN-1324** **(Rev 6/13)** **RDA-3020**

# THE STATE OF TENNESSEE

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

## Robert A. Thomas

| DOB | Sex | HGT | WGT |
|---|---|---|---|
| 11-Oct-1976 | M | 6' 0" | 165 |

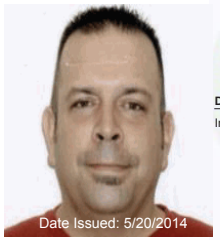
| Discipline | Accreditation | Expiration |
|---|---|---|
| Inspector | A-I-48812-33075 | Jan-31-2015 |

Re-Accreditation

**Asbestos Accreditation**

# THE STATE OF TENNESSEE

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




Initial

## Todd M Maresca

| DOB | Sex | HGT | WGT |
|---|---|---|---|
| 03-Dec-1971 | M | 5' 11" | 300 |

| Discipline | Accreditation | Expiration |
|---|---|---|
| Inspector | A-I-89713-36102 | May-31-2015 |

## Asbestos Accreditation

*Is hereby Accredited pursuant to Rule 1200-01-20 Asbestos Accreditation Requirements to perform Asbestos Activities associated with the Discipline(s) listed on the front of this card. A false statement pertaining to accreditation(s) is subject to the penalties of perjury.*

Date Issued: 5/20/2014

***Note: In order for this Tennessee issued accreditation to remain valid through the expiration date, the individual must maintain current applicable accredited asbestos refresher training course(s)***

THIS CARD IS NOT TO BE USED FOR ANY OTHER IDENTIFICATION PURPOSES. IF FOUND, RETURN TO:
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

CN-1324 (Rev 6/13) RDA-3020

# APPENDIX B:
# PHOTOGRAPHS


**Photo 1:** Bridge Identification photograph.


**Photo 2:** Asbestos-containing sample of the utility pipe wrap, located on the west side of the bridge.


**Photo 3:** View of the asbestos-containing material: pipe wrap (HA-5).

# APPENDIX C:
# ASBESTOS SAMPLE LABORATORY ANALYSIS DATA

# SanAir Technologies Laboratory

## Analysis Report

**prepared for**

## EnSafe Inc.

**Report Date: 7/10/2014**
**Project Name: TDOT-Sumner SR25-Amended Report 7/10/14 JT**
**Project #: 0888815773**
**SanAir ID#: 14017786**

NVLAP LAB CODE 200870-0

Virginia SBE Certification # 652931

Texas Licensed Mold Analysis Laboratory License # LAB0166

SanAir Technologies Laboratory

804.897.1177 www.sanair.com

# SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com


**EnSafe Inc.**
**5724 Summer Trees Drive**
**Memphis, TN 38134**

July 10, 2014

SanAir ID # 14017786
Project Name: TDOT-Sumner SR25-Amended Report 7/10/14 JT
Project Number: 0888815773

Dear Robert Thomas,

We at SanAir would like to thank you for the work you recently submitted. The 20 sample(s) were received on Wednesday, July 09, 2014 via FedEx. The final report(s) is enclosed for the following sample(s): 25HA1A, 25HA1B, 25HA1C, 25HA2A, 25HA2B, 25HA2C, 25HA3A, 25HA3B, 25HA3C, 25HA4A, 25HA4B, 25HA4C, 25HA5A, 25HA5B, 25HA6A, 25HA6B, 25HA6C, 25HA7A, 25HA7B, 25HA7C.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:
20 sample(s) in Good condition

# SanAir Technologies Laboratory, Inc.

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Web: http://www.sanair.com E-mail: iaq@sanair.com


**SanAir ID Number**

**14017786**

**FINAL REPORT**

**Name:** EnSafe Inc.
**Address:** 5724 Summer Trees Drive
Memphis, TN 38134

**Project Number:** 0888815773
**P.O. Number:** 17198
**Project Name:** TDOT-Sumner SR25-Amended Report 7/10/14 JT

**Collected Date:** 7/8/2014
**Received Date:** 7/9/2014 10:20:00 AM
**Report Date:** 7/10/2014 12:47:02 PM
**Analyst:** Szabo, Philip M.

## Asbestos Bulk PLM EPA 600/R-93/116

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA1A / 14017786-001<br>Parapet | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA1B / 14017786-002<br>Parapet | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA1C / 14017786-003<br>Parapet | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA2A / 14017786-004<br>Skim Coat | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA2B / 14017786-005<br>Skim Coat | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA2C / 14017786-006<br>Skim Coat | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA3A / 14017786-007<br>Abutment | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

## Certification

Signature: Philip Szabo Reviewed:

Date: 7/10/2014 Date: 7/10/2014

# SanAir Technologies Laboratory, Inc.

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**SanAir ID Number**

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**Analyst:** Szabo, Philip M.

## Asbestos Bulk PLM EPA 600/R-93/116

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA3B / 14017786-008<br>Abutment | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA3C / 14017786-009<br>Abutment | Brown<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA4A / 14017786-010<br>Pier | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA4B / 14017786-011<br>Pier | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA4C / 14017786-012<br>Pier | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA5A / 14017786-013<br>Pipe Wrap, Wrap | Various<br>Non-Fibrous<br>Homogeneous | | 65% Other | 35% Chrysotile |
| 25HA5A / 14017786-013<br>Pipe Wrap, Tar | Black<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

## Certification

Signature: Philip Szabo Reviewed:

Date: 7/10/2014 Date: 7/10/2014

# SanAir Technologies Laboratory, Inc.

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**Analyst:** Szabo, Philip M.

## Asbestos Bulk PLM EPA 600/R-93/116

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA5B / 14017786-014<br>Pipe Wrap, Wrap | | | | Not Analyzed |
| 25HA5B / 14017786-014<br>Pipe Wrap, Tar | Black<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA6A / 14017786-015<br>Isolator Pad | Black<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA6B / 14017786-016<br>Isolator Pad | Black<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA6C / 14017786-017<br>Isolator Pad | Black<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA7A / 14017786-018<br>Bottom Of Deck | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA7B / 14017786-019<br>Bottom Of Deck | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

## Certification

Signature: Philip Szabo Reviewed:

Date: 7/10/2014 Date: 7/10/2014

# SanAir Technologies Laboratory, Inc.

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**P.O. Number:** 17198
**Project Name:** TDOT-Sumner SR25-Amended Report 7/10/14 JT

**Collected Date:** 7/8/2014
**Received Date:** 7/9/2014 10:20:00 AM
**Report Date:** 7/10/2014 12:47:02 PM
**Analyst:** Szabo, Philip M.

## Asbestos Bulk PLM EPA 600/R-93/116

| SanAir ID / Description | Stereoscopic Appearance | Components % Fibrous | Components % Non-Fibrous | Asbestos Fibers |
|---|---|---|---|---|
| 25HA7C / 14017786-020<br>Bottom Of Deck | Grey<br>Non-Fibrous<br>Homogeneous | | 100% Other | None Detected |

**Certification**

Signature: Philip Szabo Reviewed:

Date: 7/10/2014 Date: 7/10/2014

## Disclaimer

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the clientôs sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

For NY state samples, method EPA 600/M4-82-020 is performed.

Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

NY ELAP lab ID 11983

SanAir Technologies Laboratory

1551 Oakbridge Drive Suite B
Powhatan, VA 23139
804-897-1177 / 888-895-1177
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www.sanair.com

# Asbestos Chain of Custody

SanAir ID Number: 14017786

| | | |
|---|---|---|
| Company: EnSafe | Project #: 0888815773 | Collected by: Robert Thomas |
| Address: 220 Athens Way Suite 410 | Project Name: TDOT-Sumner SR25 | Phone #: 615-255-9300 |
| City, St., Zip: Nashville, TN 37228 | Date Collected: 7/8/14 | Fax #: |
| State of Collection: TN Account#: 2304 | P.O. Number: 17198 | Email: rthomas@ensafe.com |

**Bulk**

| | | |
|---|---|---|
| ABB | PLM EPA 600/R-93/116 | ☑ |
| | Positive Stop ☑ | |
| ABEPA | PLM EPA 400 Point Count | ☐ |
| ABB1K | PLM EPA 1000 Point Count | ☐ |
| ABBEN | PLM EPA NOB | ☐ |
| ABBCH | TEM Chatfield | ☐ |
| ABBTM | TEM EPA NOB | ☐ |

**Water**

| | | |
|---|---|---|
| ABHE | EPA 100.2 | ☐ |

**Air**

| | | |
|---|---|---|
| ABA | PCM NIOSH 7400 | ☐ |
| ABA-2 | OSHA w/ TWA* | ☐ |
| ABTEM | TEM AHERA | ☐ |
| ABATN | TEM NIOSH 7402 | ☐ |
| ABT2 | TEM Level II | ☐ |

**New York ELAP**

| | | |
|---|---|---|
| PLM NY | PLM EPA 600/M4-82-020 | ☐ |
| ABEPA2 | NY ELAP 198.1 | ☐ |
| ABENY | NY ELAP 198.6 PLM NOB | ☐ |
| ABBNY | NY ELAP 198.4 TEM NOB | ☐ |

**Soil/Vermiculite**

| | | |
|---|---|---|
| ABSE | PLM EPA 600/R-93/116 (Qual.) | ☐ |
| ABSP | PLM CARB 435 (LOD <1%) | ☐ |
| ABSP1 | PLM CARB 435 (LOD 0.25%) | ☐ |
| ABSP2 | PLM CARB 435 (LOD 0.1%) | ☐ |

**Dust**

| | | |
|---|---|---|
| ABWA | TEM Wipe ASTM D-6480 | ☐ |
| ABDMV | TEM Microvac ASTM D-5755 | ☐ |

| Matrix | Other | |
|---|---|---|
| | | ☐ |

| Turn Around Times | | | | |
|---|---|---|---|---|
| | 3 HR (4 HR TEM) ☐ | 6 HR (8HR TEM) ☐ | 12 HR ☐ | 24 HR ■ |
| | 2 Days ☐ | 3 Days ☐ | 4 Days ☐ | 5 Days ☐ |

**Special Instructions**

| Sample # | Sample Identification/Location | Volume or Area | Sample Type | Flow Rate* | Time* Start – Stop | |
|---|---|---|---|---|---|---|
| 25HA1A | Parapet | | | | | |
| 25HA1B | Parapet | | | | | |
| 25HA1C | Parapet | | | | | |
| 25HA2A | Skim Coat | | | | | |
| 25HA2B | Skim Coat | | | | | |
| 25HA2C | Skim Coat | | | | | |
| 25HA3A | Abutment | | | | | |
| 25HA3B | Abutment | | | | | |
| 25HA3C | Abutment | | | | | |
| 25HA4A | Pier | | | | | |
| 25HA4B | Pier | | | | | |
| 25HA4C | Pier | | | | | |

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Robert Thomas | 7/8/14 | 1420 | BB | JUL 09 2014 | 10:20am |
| | | | | | |

**Unless scheduled, the turn around time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed to Recipient will be charged a $10 shipping fee.**

140177Sb

| Sample # | Sample Identification/Location | Sample Type | Flow Rate* | Time* Start – Stop | |
|---|---|---|---|---|---|
| 25HA5A | Pipe wrap | | | | |
| 25HA5B | Pipe wrap | | | | |
| 25HA6A | Isolator Pad | | | | |
| 25HA6B | Isolator Pad | | | | |
| 25HA6C | Isolator Pad | | | | |
| 25HA7A | Bottom of deck | | | | |
| 25HA7B | Bottom of deck | | | | |
| 25HA7C | Bottom of deck | | | | |
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| Special Instructions | |
|---|---|

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Robert Thomas | 7/8/14 | 1420 | BB | JUL 09 2014 | 1020AM |
| | | | | | |

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