

TIERRA

May 22, 2012

E.C. Driver and Associates, Inc.
500 North Westshore Boulevard, Suite 500
Tampa, Florida 33609

Attn: Ms. Ann Venables, AICP

RE: NESHAP Asbestos and Protective Coatings Survey Report
Beckett Bridge over Whitcomb Bayou (Bridge No. 154000)
Beckett Bridge Project Development & Environment (PD&E) Study
From Chesapeake Drive to Forest Avenue
Pinellas County, Florida
PID 2161; ETDM #: 13040; FPN: 424385-1-28-01
Tierra Project No.: 6511-11-265

Ms. Venables:

The purpose of this report is to present the results of an asbestos survey performed on April 29, 2012, at the above referenced project. We understand that this survey was requested due to planned rehabilitation and/or demolition of the existing bridge structure.

No Asbestos Containing Materials (ACM) or Lead Based Paints (LBP) were identified at the site. Please refer to the attached report for details.

Tierra appreciates the opportunity to provide this service to E.C. Driver and Associates. If you have any questions regarding this report, please contact our office at your earliest convenience.

Respectfully Submitted,

TIERRA INC.



Scott S. Crandall, P.E.
Florida Licensed Asbestos Consultant
License No. EA0000060



Donald R. Polanis, CGC
Environmental Scientist

NESHAP ASBESTOS AND PROTECTIVE COATINGS SURVEY REPORT

**Beckett Bridge over Whitcomb Bayou
Bridge No. 154000**

**Beckett Bridge Project Development & Environment (PD&E) Study
From Chesapeake Drive to Forest Avenue
Pinellas County, Florida**

PID 2161; ETDM #: 13040; FPN: 424385-1-28-01

May 2012



Prepared for:

**E.C. Driver and Associates, Inc.
500 North Westshore Boulevard, Suite 500
Tampa, Florida 33609**

Prepared by:

**Tierra, Inc.
7351 Temple Terrace Highway
Tampa, Florida 33637**

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EXECUTIVE SUMMARY

Pinellas County, in coordination with the Florida Department of Transportation (FDOT) District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to remove, rehabilitate or replace the existing Beckett Bridge (Bridge No. 154000) in Tarpon Springs, Pinellas County, Florida.

Tierra, Inc. (Tierra) conducted an asbestos survey of the Beckett Bridge structure as part of the PD&E Study. The purpose of this survey was to identify and sample suspect asbestos-containing materials (ACM) and heavy metals based protective coatings to provide information regarding the identity, location, condition and approximate quantities of these materials so that proper remediation and disposal methods can be evaluated.

The survey was conducted on April 29, 2012 by an Asbestos Hazard Emergency Response Act (AHERA) accredited inspector in general accordance with the sampling protocols established in Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763. Thirteen bulk samples were collected from four homogeneous areas of suspect ACM. No Asbestos Containing Materials were identified as a result of the survey.

Three painted surfaces, suspected of containing heavy metal based paints, were observed during the survey and sampled. None of the sample results indicated that the paints were Lead Based Paint (LBP). Please review the complete report for additional details.

1.0 INTRODUCTION

Tierra conducted an asbestos survey of the Beckett Bridge structure over Whitcomb Bayou in Pinellas County, Florida. The bridge is identified as FDOT Bridge Number 154000. The survey was conducted on April 29, 2012 by an Asbestos Hazard Emergency Response Act (AHERA) accredited asbestos inspector. Suspect asbestos-containing material (ACM) samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763. Samples were delivered to an accredited laboratory for analysis by polarized light microscopy.

1.1 Project Purpose

Pinellas County, in coordination with the Florida Department of Transportation (FDOT) District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to remove, rehabilitate or replace the existing Beckett Bridge (Bridge No. 154000) in Tarpon Springs, Pinellas County, Florida.

This asbestos survey was conducted as part of the ongoing PD&E Study. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers and other hazardous air pollutants to the atmosphere during rehabilitation or demolition activities. The asbestos NESHAP requires that potentially regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities.

1.2 Project Description

The existing bridge was originally constructed in 1924 as a timber structure with a steel movable span. The fixed timber approach spans were replaced with concrete approach spans in 1956. The bridge is considered historic, and is the only highway single-leaf rolling-lift bascule bridge remaining in Florida. Major repairs were performed in 1979, 1998 and in 2011. Major rehabilitation or replacement of the bridge is needed to keep the bridge open and operating efficiently.

The project limits extend along Riverside Drive from Chesapeake Drive across Whitcomb Bayou to Forest Avenue, a distance of approximately 0.3 mile. The existing two-lane bridge connects areas west and north of the Bayou to downtown Tarpon Springs. The bridge is also located on a popular route for access to Fred Howard Park, a Pinellas County park located approximately 3.1 miles west on the Gulf of Mexico. Riverside Drive/North Spring Boulevard is an extension of Tarpon Avenue, which is a designated evacuation route. (See Figure 1, Project Location.) Beckett Bridge provides access to major north/south arterials including Alternate US 19 and US 19 for coastal residents during hurricane evacuation. The bridge also provides access for emergency vehicles, including police, ambulance and fire.

Beckett Bridge is owned and operated by Pinellas County. A bridge tender is only present when required to open the drawbridge for a vessel; there are no full-time bridge tenders. US Coast Guard drawbridge opening regulations (33CFR117.341) states that "The draw of the Beckett Bridge, mile 0.5, at Tarpon Springs, Florida shall open on signal if at least two hours' notice is given." Whitcomb Bayou connects to the Gulf of Mexico via the Anclote River to the north. Boats docked along Whitcomb, Spring and Minetta Bayous, and along artificial canals which connect to the southeastern portion of the Whitcomb Bayou, must pass the Beckett Bridge to access the Gulf of Mexico.

[illegible]

1.3 Bridge Description

The existing bascule bridge was originally constructed in 1924 as a timber structure with a steel movable span. The fixed timber approach spans were replaced with concrete approach spans in 1956. The current bridge provides two lanes servicing both east and west bound traffic which span Whitcomb Bayou. The bridge is approximately 360 feet long and has a total of ten spans including nine concrete approach spans and a steel single-leaf rolling-lift bascule span over the main navigation channel. It is constructed on driven concrete piles with concrete bent caps supporting concrete I beams with a cast in place concrete bridge deck. Asphalt pavement has been placed over the concrete decking. Major repairs were performed on the bridge in 1979, 1998 and in 2011. There is a small bridge tender house on the north side of the bridge. The tender house is constructed of concrete and galvanized steel beams and columns with a metal roof. Walls are open chain link and aluminum framed Plexiglas. No interior finishes were observed in the tender house.

2.0 FIELD ACTIVITIES

The survey was conducted by Mr. Scott Crandall, PE, an AHERA-accredited asbestos inspector. A copy of Mr. Crandall's asbestos inspector certificate is presented in **Appendix C**. The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763, the AHERA. A summary of the survey activities performed is provided below.

2.1 Visual Assessment

Our survey activities began with visual observation of the structure to identify homogeneous areas of suspect ACM and painted coatings. A homogeneous material consists of building materials that appear similar throughout in terms of color, texture and date of application. Building materials identified as steel, concrete, glass, wood, masonry, metal or rubber were not considered suspect ACM. If surfaces are painted and/or otherwise covered with protective coating those materials are noted and sampled.

2.2 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

2.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM and protective coatings were collected in general accordance with industry sampling protocols. Representative samples of suspect materials were collected in each homogeneous area. Tierra personnel collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Thirteen bulk samples were collected from four homogeneous materials of suspect ACM. A summary of suspect ACM samples collected during the survey is included in Section 5.0.



Three painted surfaces suspected of containing Lead Based Paint (LBP) or other heavy metals were observed at the structure. A composite sample of each painted surface was sampled for the laboratory analysis of cadmium, chromium, lead and zinc.

2.4 Sample Analysis

Bulk samples of ACM were submitted, under chain of custody to EMSL Analytical Inc. in Orlando, Florida, for analysis by polarized light microscopy with dispersion staining techniques per EPA methodology 600/R-93/116 (40 CFR 763, Subpart F). The percentage of asbestos, where applicable, was determined by microscopic visual estimation. EMSL is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP Accreditation No. 101151-0).

The U.S. Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) define asbestos containing material (ACM) as any material which contains greater than one percent asbestos. When samples analyzed by Polarized Light Microscopy contain asbestos in amounts less than ten percent ($< 10\%$), a more exact method of analysis called point counting may be performed at the client's request. The EPA point count method allows a sample in which asbestos was visually detected, but which is visually estimated to have 10% or less asbestos, to be quantified using a point count procedure. If not point counted, a sample in which asbestos was visually detected and estimated (including trace to $\leq 1\%$) must be assumed to be greater than 1% and treated as an ACM. The EPA point counting procedure is as follows: an ocular reticule (cross hair or point array) is used to visually superimpose a point or points on the microscope field of view. A total of 400 points superimposed on either asbestos fibers or non-asbestos matrix material must be counted over at least eight different preparations of representative sub-samples. If an asbestos fiber and matrix particle overlap so that a point is superimposed on their visual intersection, a point is scored for both categories. Point counting provides a quantification of the area percent asbestos. Per EPA's regulations, materials which have been point-counted and, therefore, quantitatively determined to have less than or equal to one percent ($\leq 1\%$) asbestos, can be treated as non-ACM. **No samples were point counted during this survey.**

Suspect heavy metal paint samples were submitted under chain-of-custody to PEL Laboratories, Inc. PEL Laboratories is an accredited environmental laboratory under the National Environmental Laboratory Accreditation Conference (NELAC) and Florida Department of Health for testing of lead and other heavy metals in solid matrices.

3.0 REGULATORY OVERVIEW

3.1 Asbestos Regulations

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or rehabilitation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.



Friable ACM, Category I and Category II non-friable ACM which are in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated rehabilitation or demolition activities are considered Regulated ACM (RACM).

In the State of Florida, asbestos activities are regulated by the Florida Department of Environmental Protection (FDEP). RACM must be removed prior to demolition activities which will disturb the materials. The owner or operator must provide the FDEP with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by a State of Florida licensed asbestos abatement contractor.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

3.2 Heavy Metals Based Protective Coatings and Lead Based Paint Regulations

Cadmium, chromium, zinc and lead have historically been used in paints and coating. Specific regulations regarding lead based paints have been developed by the USEPA. Lead-based paint is defined as a surface coating or paint containing lead in excess of 1.0 milligram per square centimeter (mg/cm²) or 0.5% by weight (USEPA Toxic Substance Control Act, Section 401). 0.5% is equivalent to 5000 parts per million (ppm). Based on regulations contained in the Lead-Based Paint Poisoning Prevention Act (LBPPPA) and promulgated by the Consumer Product Safety Commission (CPSC), lead-based paint is defined as paint containing more than 0.06% lead as of June 1977. In 1978, the CPSC banned the sale of lead-based paint to consumers.

Under EPA regulations lead, chromium and cadmium impacted wastes generated during abatement activities are handled as either a solid waste or a hazardous waste, depending on the amount and form of each of the heavy metals. If the maximum level of the metal in an extract of a representative sample of the waste stream proposed for disposal, as determined by a Toxicity Characteristic Leaching Procedure (TCLP) laboratory analysis, is less than the regulatory level set in 40 CFR 261.24, then EPA regulations allow the material to be disposed of as solid waste at a solid waste landfill. If the TCLP analysis equals or exceeds the regulatory level, the material must be managed as a hazardous waste. The regulatory levels for cadmium, chromium and lead are 1.0, 5.0 and 5.0 milligram per liter (mg/L), respectively. Impacted materials that are recycled, such as painted steel beams sent to a scrap metal yard, are not considered waste; therefore, they are exempt from waste disposal regulations; however, other occupational and recycling regulations may apply.

The OSHA established the Lead Standard for the Construction Industry, 29 CFR 1926.62, which applies to all construction work where an employee may be exposed to lead. These exposures include demolition and salvage of structures where lead or material containing lead are present and removal or encapsulation of materials containing lead, as well as alterations and repairs including painting and decorating. The standard defines the occupationally permissible exposure limit and specific requirements for construction work with and in lead materials. OSHA does not have a percentage lead in paint action level in their current construction lead standard.

OSHA considers the lead regulation enforceable if the presence of *any* lead in paint at detectable concentrations is present when demolition or rehabilitation activities are performed. Any abatement of the lead-based paint or cutting, sanding, and/or grinding of the structures painted with lead based paint (LBP) should be performed in accordance with OSHA regulations.

Demolition activities are regulated under the NESHAP statute for general dust control. Specifications for the proper work practices, controls and disposal should be developed to document compliance with all applicable regulations.

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Asbestos

Thirteen bulk samples were collected from four homogeneous areas of suspect ACM. A summary of suspect ACM is provided in the table below, along with the results from the laboratory. The analytical results are included in **Appendix A**.

Table 1 – Summary of ACM

Homo. No.	Sample No.	Material Description	Approx. Quantity	Lab Results % Asbestos	NESHAP Category
1	1	Tar paper on all bent caps	600 ft ²	Not Detected	N/A
	2				
	3				
2	1	Black expansion joint board between beam ends	100 ft ²	Not Detected	N/A
	2				
	3				
3	1	Rubber joint filler on decking	20 ft ²	Not Detected	N/A
	2				
	3				
4	1	Concrete decking, piles, beams and guardrail	Not Measured	Not Detected	N/A
	2				
	3				
	4				

None of the thirteen samples tested positive for the presence of asbestos.

It should be noted that suspect materials, other than those identified during the survey could exist within the structure in areas not accessible to the inspector at the time of the survey. Should suspect materials other than those which were identified during this survey be uncovered during the rehabilitation/demolition process, those materials should be assumed to be ACM until sampling and analysis can confirm or refute their asbestos content.

4.2 Lead Based Paint

Three paint samples were taken from painted surfaces observed at the bridge. The results are provided in Table 2 on the following page. Complete copies of the analytical results are included in **Appendix A**.


Table 2 – Composite Samples for Total Metals

Sample No.	Location	Lead (mg/kg)	Cadmium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
1	Blue paint on structural steel of bascule bridge	4.6	0.178l	2820	4.91
2	Yellow paint on west barricade support	36.9	1.71	1260	34.8
3	Light gray paint on guardrails	4.0	0.0928 l	89	7.52

The lab results indicate the painted surfaces present at the bridge do not meet the definition of Lead Based Paint. Additionally based on the results for the total concentration of the metals, it does not appear that the coating materials would be classified as a hazardous waste per 40 CFR 261. However, prior to disposal of any waste materials containing coating, a TCLP analysis of the waste should be performed to make a final determination.

5.0 GENERAL COMMENTS

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the subject bridge structure. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. Tierra does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied, is made.

APPENDIX A

Laboratory Results

**EMSL Analytical, Inc.**

5125 Adanson Street, Suite 900, Orlando, FL 32804

Phone/Fax: (407) 599-5887 / (407) 599-9063

<http://www.emsl.com>orlandolab@emsl.com

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CustomerID: TIRA78

CustomerPO:

ProjectID:

Attn: **Scott Crandall**
Tierra, Inc.
7351 Temple Terrace Highway
Tampa, FL 33673

Phone: (813) 335-5341
Fax:
Received: 05/02/12 9:50 AM
Analysis Date: 5/7/2012
Collected: 4/30/2012

Project: 6511-11-265A

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
1-1 341203278-0001	Tar Paper	Black Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
1-2 341203278-0002	Tar Paper	Black Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
1-3 341203278-0003	Tar Paper	Black Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
2-1 341203278-0004	Expansion Board	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
2-2 341203278-0005	Expansion Board	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
2-3 341203278-0006	Expansion Board	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-1 341203278-0007	Joint Filler	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-2 341203278-0008	Joint Filler	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Jerry Cherian (13)

Jonathan Teda, Asbestos Lab Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. None Detected = <1%

Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 05/08/2012 11:44:37

**EMSL Analytical, Inc.**

5125 Adanson Street, Suite 900, Orlando, FL 32804

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EMSL Order: 341203278

CustomerID: TIRA78

CustomerPO:

ProjectID:

Attn: **Scott Crandall**
Tierra, Inc.
7351 Temple Terrace Highway
Tampa, FL 33673

Phone: (813) 335-5341
Fax:
Received: 05/02/12 9:50 AM
Analysis Date: 5/7/2012
Collected: 4/30/2012

Project: 6511-11-265A

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
3-3 341203278-0009	Joint Filler	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
4-1 341203278-0010	Concrete Various	Gray Non-Fibrous Heterogeneous		70% Non-fibrous (other) 30% Quartz	None Detected
4-2 341203278-0011	Concrete Various	Gray Non-Fibrous Heterogeneous		70% Non-fibrous (other) 30% Quartz	None Detected
4-3 341203278-0012	Concrete Various	Gray Non-Fibrous Heterogeneous		70% Non-fibrous (other) 30% Quartz	None Detected
4-4 341203278-0013	Concrete Various	Gray Non-Fibrous Heterogeneous		70% Non-fibrous (other) 30% Quartz	None Detected

Analyst(s)

Jerry Cherian (13)

Jonathan Teda, Asbestos Lab Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL NVLAP Lab Code 101151-0

Initial report from 05/08/2012 11:44:37



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Chain of Custody

EMSL Order Number (Lab Use Only):

341203278

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FAX: (856) 786-5974

Company: <u>TIERRA INC</u>		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <u>7351 TEMPLE TERRACE HWY</u>		Third Party Billing requires written authorization from third party	
City: <u>TAMPA</u>	State/Province: <u>FL</u>	Zip/Postal Code: <u>33637</u>	Country: <u>US</u>
Report To (Name): <u>SCOTT CRANDALL</u>		Fax #:	
Telephone #: <u>813-335-5341</u>		Email Address: <u>Scrandall@Quantumdataprocessing.com</u>	
Project Name/Number: <u>6511-11-265A</u>			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: U.S. State Samples Taken:	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input checked="" type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test. Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)			
Asbestos			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ 8hr. TWA TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA ONLY) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	PLM - Bulk <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> NYS 198.1 (friable-NY) <input type="checkbox"/> NYS 198.6 (non-friable-NY) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/ Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> EPA Reg. 1 Screening Protocol (Qualitative)	
TEM - Water Fibers $\geq 10\mu m$ <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe-ASTM D6480	Other:	
Lead (Pb)		Materials Science	
Flame Atomic Absorption <input type="checkbox"/> Chips SW846-7000B or AOAC 974.02 <input type="checkbox"/> Soil SW846-7000B/7420 <input type="checkbox"/> Air NIOSH 7082 <input type="checkbox"/> Wastewater SM3111B or SW846-7000B/7420 <input type="checkbox"/> ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> non ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> TCLP SW846-1311/7420/SM 3111B	ICP <input type="checkbox"/> Air NIOSH 7300 Modified <input type="checkbox"/> non ASTM Wipe SW846-6010B or C <input type="checkbox"/> ASTM Wipe SW846-6010B or C <input type="checkbox"/> Soil SW846-6010 B or C <input type="checkbox"/> Waste Water SW846-6010B or C <input type="checkbox"/> TCLP SW846-6010B or C	<input type="checkbox"/> Common Particle ID (large particles) <input type="checkbox"/> Full Particle ID (environmental dust) <input type="checkbox"/> Basic Material ID (solids) <input type="checkbox"/> Advanced Material ID <input type="checkbox"/> Physical Testing (Tensile, Compression) <input type="checkbox"/> Combustion-by-products (soot, char, etc.) <input type="checkbox"/> X-Ray Fluorescence (elem. analysis) <input type="checkbox"/> X-Ray Diffraction (Crystalline Part.) <input type="checkbox"/> MMVF's (Fibrous glass, RCF's) <input type="checkbox"/> Particle Size (sieve/microscopy/laser) <input type="checkbox"/> Combustible Dust <input type="checkbox"/> Petrographic Examination Other: <input type="checkbox"/>	
Graphite Furnace Atomic Absorption <input type="checkbox"/> Soil SW846-7421 <input type="checkbox"/> Wastewater EPA 200.9 <input type="checkbox"/> Air NIOSH 7105 <input type="checkbox"/> Drinking Water EPA 200.9		Other: <input type="checkbox"/>	
Microbiology			
Wipe and Bulk Samples <input type="checkbox"/> Mold & Fungi - Direct Examination <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi Culture (Genus & Species) <input type="checkbox"/> Bacterial Count & ID (Up to Three Types) <input type="checkbox"/> Bacterial Count & ID (Up to Five Types) <input type="checkbox"/> MRSA <input type="checkbox"/> <i>Pseudomonas aeruginosa</i>	Air Samples <input type="checkbox"/> Mold & Fungi (Spore Trap) <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi (Genus & Species) <input type="checkbox"/> Bacterial Culture & ID (Up to Three Types) <input type="checkbox"/> Bacterial Culture & ID (Up to Five Types) <input type="checkbox"/> Endotoxin Testing	Real Time Q-PCR (See Analytical Guide for Code) Code:	
Water Samples <input type="checkbox"/> Total Coliform & E.coli (P/A) <input type="checkbox"/> Fecal Coliform (SM 9222D) <input type="checkbox"/> Sewage Screen <input type="checkbox"/> Heterotrophic Plate Count (SM 9215)	Legionella <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Other: <input type="checkbox"/>	IAQ Nuisance Dust NIOSH <input type="checkbox"/> 0500 <input type="checkbox"/> 0600 Airborne Dust <input type="checkbox"/> PM10 <input type="checkbox"/> TSP Silica Analysis: <input type="checkbox"/> All Species Silica Analysis - Single Species <input type="checkbox"/> Alpha Quartz <input type="checkbox"/> Cristobalite <input type="checkbox"/> Tridymite <input type="checkbox"/> HVAC Efficiency <input type="checkbox"/> Carbon Black <input type="checkbox"/> Airborne Oil Mist Radon Testing: Call for Kit and COC Other: <input type="checkbox"/>	
**Comments/Special Instructions: <u>BILL SENT TO ANNE MIZE @ SAME ADDRESS</u>			
Client Sample #'s	<u>1-4 - A-4</u>	Total # of Samples:	<u>13</u>
Relinquished (Client):	<u>Scott Crandall</u>	Date:	<u>4/30/12</u>
Received (Lab):	<u>B. Disabatin</u>	Date:	<u>5/2/12</u>
		Time:	<u>10:01 AM</u>
		Time:	<u>9:50 AM</u>

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide
Controlled Document-OneChain-R2-1/12/2010



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Chain of Custody

EMSL Order Number (Lab Use Only):

341203278

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-1	TAR PAPER		
1-2			
1-3			
2-1	EXPANSION BOARD		
2-2			
2-3			
3-1	JOINT FILLER		
3-2			
3-3			
4-1	CONCRETE - VARIOUS		
4-2			
4-3			
4-4			

*Comments/Special Instructions:

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



SPECTRUM ANALYTICAL, INC.

**Featuring
HANIBAL TECHNOLOGY
Florida Division**



Florida # E84207
Texas # T104704408-11-3
South Carolina # 96011001
North Dakota # R-178



California # 07253CA
Louisiana # 02025
Kansas # E-10385
Arkansas # 11-036-1

- CERTIFICATE OF ANALYSIS -

Report Date: 05/04/2012

To: Scott Crandall
Scott Crandall
204 37th Ave North
St Petersburg, FL 33704

Work 813-335-5341
FAX

PROJECT ID: Beckett Bridge / 6511-11-265A
WORK ORDER: 3505915
DATE RECEIVED: Tuesday, May 01, 2012

Project Notes:

(†): Short Hold Time Analysis Date

Samples reported on wet weight basis unless method calls for dry weight
All test results in this report pertain only to the samples as submitted.

Spectrum Analytical, Inc. FL Division Contact: Mark Gudnason / extension: 242
8405 Benjamin Road, Suite A • Tampa, Florida 33634
813-888-9507 • FAX: 813-889-7128
Website: www.spectrum-analytical.com

Spectrum Analytical, Inc. FL Division
featuring Hanibal Technology

DATA QUALIFIER CODES

State of Florida, Department of Environmental Protection and
Department of Health Rehabilitative Services / NELAC

- I** The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J** Estimated value; value not accurate. This code shall be used in the following instances:
1. Surrogate recovery limits have been exceeded.
 2. No known quality control criteria exists for the component.
 3. The reported value did not meet the established quality control criteria for either precision or accuracy but falls within the NELAC marginal exceedance range.
 - 3M. The reported value did not meet the established quality control criteria for either precision or accuracy and falls beyond the NELAC range for marginal exceedances.
 - 3R. The RPD for the LCSD exceeds the laboratory established control limits.
 4. The sample matrix interfered with the ability to make an accurate determination.
 5. The data is questionable because of improper laboratory or field protocols (e.g. composite sample was collected instead of a grab sample).
- L** Off-scale high. Actual value is known to be greater than the value given. To be used when the concentration of the analyte is above the acceptable limit for quantitation (exceeds the linear range of the highest calibration standard) and the calibration curve is known to exhibit a negative deflection.
- Q** Sample held beyond acceptable holding time. This code shall be used if the value is derived from a sample that was prepared or analyzed after the approved holding time restrictions for the sample preparation or analysis.
- U** Indicates that the compound was analyzed for but not detected above the method detection limit (MDL).
- V** Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value in the sample is less than 10 times the value found in the method blank.
- Y** The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

CASE NARRATIVE METALS

Spectrum Analytical Inc. Lab Reference No./SDG: 3505915

Client: Crandall

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. HOLDING TIMES

A. Sample Preparation: All holding times were met.

B. Sample Analysis: All holding times were met.

III. METHOD

Analyses were performed according to the Spectrum Analytical Inc. Standard Operating Procedures and EPA Method 6010B for ICP metals.

IV. PREPARATION

Soil samples were prepared according to Spectrum Analytical Inc. Laboratory's Standard Operating Procedures and EPA Method 3050B.

V. ANALYSIS

A. Calibration:

All acceptance criteria were met.

B. Blanks:

1. Calibration Blanks:

All acceptance criteria were met.

2. Method Blanks:

All acceptance criteria were met.

C. Spikes:

1. Laboratory Control Spikes (LCS):

All acceptance criteria were met

2. Post Digestion Spike:

All acceptance criteria were met with the exception of:
Post Digestion Spike 350591401A was analyzed with the soil samples on 05/03/12. The following analyte(s) were recovered below criteria: Zinc at 0 % with criteria of (80-120). The PDS is associated with the QC for a different

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505915

Client: Crandall

SDG. The LCS/LCSD pass all quality control criteria. No further action was taken.

3. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD):

No spikes requested by client.

D. Duplicate:

No sample duplicates are reported with this method. (Spike duplicates are referenced above in section C. Spikes.)

E. Serial Dilution:

All acceptance criteria were met with the exception of:
Serial Dilution 350591401L was analyzed with the soil samples on 05/03/12. The following analyte(s) exceeded criteria: Zinc at 14 % with criteria of (10). The SD is associated with the QC for a different SDG. The LCS/LCSD pass all quality control criteria. No further action was taken.
Samples coded accordingly.

F. ICP Interference Check Samples:

All acceptance criteria were met.

G. Samples:


Sample analysis proceeded normally.
Sample BLUE 1 required a 25X dilution due to high concentration of the following analyte(s): Zinc.
Sample YELLOW 1 required a 10X dilution due to high concentration of the following analyte(s): Zinc.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum Analytical Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

**CASE NARRATIVE
METALS**

Spectrum Analytical Inc. Lab Reference No./SDG: 3505915

Client: Crandall

Signature: 

Name: Troy L. Roberts Title: Inorg. Manager

SIGNED:

DATE: 05/04/2012

- CERTIFICATE OF ANALYSIS -



FLDOH #E84207

To: Scott Crandall
Scott Crandall

WORK ORDER: 3505915

PROJECT ID: Beckett Bridge / 6511-11-265A

Lab# : 350591501

Collection Information:

Client ID : BLUE 1

Sample Date: 4/29/2012 2:45:00 PM

Matrix : S

Parameter	Method	Results	Analysis Date	Prep Date	Units	MDL	RL	Dilution Factor
Cadmium	6010	0.178 I	05/03/2012 12:36	05/02/2012 8:35	MG/KG	0.0368	0.368	1
Chromium	6010	4.91	05/03/2012 12:36	05/02/2012 8:35	MG/KG	0.118	0.368	1
Lead	6010	4.6	05/03/2012 12:36	05/02/2012 8:35	MG/KG	0.25	0.589	1
Zinc	6010	2820	05/04/2012 13:48	05/02/2012 8:35	MG/KG	6.08	18.4	25

- CERTIFICATE OF ANALYSIS -



FLDOH #E84207

To: Scott Crandall
Scott Crandall

WORK ORDER: 3505915

PROJECT ID: Beckett Bridge / 6511-11-265A

Lab# : 350591502

Collection Information:

Client ID : YELLOW 1

Sample Date: 4/29/2012 2:55:00 PM

Matrix : S

Parameter	Method	Results	Analysis Date	Prep Date	Units	MDL	RL	Dilution Factor
Cadmium	6010	1.71	05/03/2012 12:41	05/02/2012 8:35	MG/KG	0.0279	0.279	1
Chromium	6010	34.8	05/03/2012 12:41	05/02/2012 8:35	MG/KG	0.0892	0.279	1
Lead	6010	36.9	05/03/2012 12:41	05/02/2012 8:35	MG/KG	0.19	0.446	1
Zinc	6010	1260	05/04/2012 13:53	05/02/2012 8:35	MG/KG	1.84	5.57	10

- CERTIFICATE OF ANALYSIS -



FLDOH #E84207

To: Scott Crandall
Scott Crandall

WORK ORDER: 3505915

PROJECT ID: Beckett Bridge / 6511-11-265A

Lab# : 350591503

Collection Information:

Client ID : LT GRAY 1

Sample Date: 4/29/2012 3:10:00 PM

Matrix : S

Parameter	Method	Results	Analysis Date	Prep Date	Units	MDL	RL	Dilution Factor
Cadmium	6010	0.0928 I	05/03/2012 12:46	05/02/2012 8:35	MG/KG	0.0455	0.455	1
Chromium	6010	7.52	05/03/2012 12:46	05/02/2012 8:35	MG/KG	0.146	0.455	1
Lead	6010	4	05/03/2012 12:46	05/02/2012 8:35	MG/KG	0.31	0.729	1
Zinc	6010	89	05/03/2012 12:46	05/02/2012 8:35	MG/KG	0.3	0.911	1

- CERTIFICATE OF ANALYSIS -



FLDOH #E84207

To: Scott Crandall
Scott Crandall

WORK ORDER: 3505915

PROJECT ID: Beckett Bridge / 6511-11-265A

QC SUMMARY

METHOD: 6010

Method Blank : 128794MB

Matrix : SQ

Associated Lab Samples : 128794MB 128795LCS 350591501 350591501DL1 350591502 350591502DL1 350591503

Parameter	Results	Analysis Date	Prep Date	Units	MDL	RL	Dilution Factor
Cadmium	U	5/3/2012	5/2/2012	MG/KG	0.0491	0.491	1
Chromium	U	5/3/2012	5/2/2012	MG/KG	0.157	0.491	1
Lead	U	5/3/2012	5/2/2012	MG/KG	0.334	0.786	1
Zinc	U	5/3/2012	5/2/2012	MG/KG	0.324	0.982	1

LABORATORY CONTROL SAMPLE: 128795LCS Matrix : SQ

PARAMETER	UNITS	SPIKE CONC	LCS RESULT	SPIKE % REC	% REC LIMITS	RPD	RPD LIMIT
Cadmium	mg/Kg	48.8	48.9	100.2	(80-120)		
Chromium	mg/Kg	48.8	49.4	101.2	(80-120)		
Lead	mg/Kg	48.8	49.7	101.8	(80-120)		
Zinc	mg/Kg	48.8	48.8	100	(80-120)		

- CERTIFICATE OF ANALYSIS -



FLDOH #E84207

To: Scott Crandall
Scott Crandall

WORK ORDER: 3505915

PROJECT ID: Beckett Bridge / 6511-11-265A

Brian C. Spann Laboratory Manager
 or
Mark Gudnason Technical Director

From: (813) 335-5341
Scott Crandall

Origin ID: SEFA



3600 10th Street NE

St Petersburg, FL 33704



J42101112190225

SHIP TO: (813) 888-9507

BILL THIRD PARTY

Sample receiving

PEL Labs

8405 BENJAMIN RD

TAMPA, FL 33634

Ship Date: 30APR12
ActWgt: 1.0 LB
CAD: 55574321NET3250

Delivery Address Bar Code



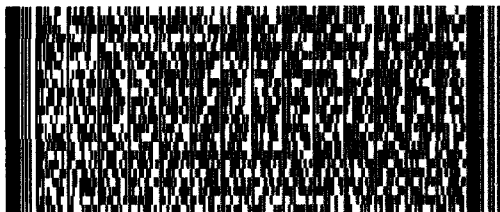
Ref # 6511 11 265A BeckettBridge ash
Invoice #
PO #
Dept #

TUE - 01 MAY A1
STANDARD OVERNIGHT

TRK# 7983 3930 2670
0201

34 TPFA

33634
FL-US
TPA



512G361A4/A278

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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SAMPLE RECEIPT CONFIRMATION SHEET

Client Information

SDG:	3505915	Req:	90612
Client:	Crandall	Project:	Generic
Level:	1	Date Rec'd:	5/1/2012 9:45:00 AM
Rec'd via:	Fed-Ex	Due Date:	5/4/2012

Sample Verification

Samples/Cooler Secure?	<input type="text" value="Yes"/>	All Samples on COC accounted For?	<input type="text" value="Yes"/>
Temperature of Samples(Celsius)	<input type="text" value="ambient"/>	All Samples Rec'd Intact?	<input type="text" value="Yes"/>
pH Verified?	<input type="text" value="No"/>	Sample Vol. Sufficient For Analysis	<input type="text" value="Yes"/>
pH WNL?	<input type="text" value="No"/>	Samples Rec'd W/ Hold Time?	<input type="text" value="Yes"/>
Soil Origin (Domestic/Foreign):	<input type="text" value="Domestic"/>	Are All Samples to be Analyzed?	<input type="text" value="Yes"/>
Site Location/Project on COC?	<input type="text" value="Yes"/>	Correct Sample Containers?	<input type="text" value="Yes"/>
Client Project # on COC?	<input type="text" value="Yes"/>	COC Comments written on COC?	<input type="text" value="Yes"/>
Project Mgr. Indicated on COC?	<input type="text" value="Yes"/>	Samplers Initials on COC?	<input type="text" value="Yes"/>
COC relinquished/Dated by Client?	<input type="text" value="Yes"/>	Sample Date/Time Indicated?	<input type="text" value="Yes"/>
COC Received/Dated by SA?	<input type="text" value="Yes"/>	TAT Requested:	<input type="text" value="STD"/>
Specific Subcontract Indicated?	<input type="text" value="No"/>	Client Requests Verbal Results?	<input type="text" value="No"/>
Samples Received By	<input type="text" value="Fed-Ex"/>	Client Requests Faxed Results?	<input type="text" value="No"/>
SA to Conduct ALL Analyses?	<input type="text" value="Yes"/>		
Radioactivity Check?	<input type="text" value="No"/>		
COC Present?	<input type="text" value="Yes"/>		

LABEL REVIEW

PEER REVIEW

Tuesday, May 01, 2012

Page 1 of 1

End Of Report

APPENDIX B

Photograph Log



Homogeneous Material 1 – Black tar paper on all bent caps



Homogeneous Material 2 – Expansion joint board between beams



Homogenous Material 3 – Joint filler



Homogeneous Material 4 – Various concrete elements (bents, decking, piles and guardrail)



Blue painted structural steel and bascule bridge structure



Light gray painted concrete guardrail



Yellow paint on barricade support



View of bridge tender house

APPENDIX C

Training Certificates

Vern Roberts Environmental Training, Inc.
13987 94th Avenue N Seminole, FL 33776
727-593-3067
Asbestos Survey & Mechanical (inspector) Refresher
Training

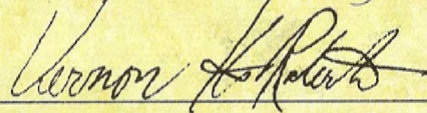
Scott Crandall

Has completed the requisite training for asbestos accreditation
under TSCA TITLE II

Date of Examination 10/04/2011

Date of Course: 10/04/2011 Expiration Date 10/04/2012
Certificate # 104111

Course # FL49-0006326322 Provider # FL49-0003810



Instructor

AC# 5330327

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
ASBESTOS LICENSING UNIT

SEQ# L10110401182

DATE	BATCH NUMBER	LICENSE NBR
11/04/2010	108106588	EA0000060

The ASBESTOS CONSULTANT - ENGINEER
Named below IS LICENSED
Under the provisions of Chapter 469 FS.
Expiration date: NOV 30, 2012

CRANDALL, SCOTT S
DIVERSIFIED PROFESSIONAL SERVICES CORP
3600 10TH ST NE
ST PETERSBURG FL 33704

CHARLIE CRIST
GOVERNOR

DISPLAY AS REQUIRED BY LAW

CHARLIE LIEM
SECRETARY