



October 4, 2011

Mr. John Pekala  
ENVIRON International Corporation  
560 West Lake Mead Parkway  
Henderson, Nevada 89015

**Regarding: *Limited Asbestos Survey*  
*Soil Adjacent to the CB-Outfall*  
**Nevada Environmental Response Trust**  
**560 West Lake Mead Parkway**  
**Henderson, Nevada 89015**  
**Project – CON111106****

Dear Mr. Pekala,

Logistical Solutions, LLC (LoSo) is pleased to provide ENVIRON International Corporation the results of the *Limited Asbestos Survey* conducted for the Nevada Environmental Response Trust site located at 560 West Lake Mead Parkway in Henderson, Nevada. The purpose of the limited asbestos survey (LAS) was to identify, within reason, the presence and location of asbestos fibers that may have been deposited in surface soil from drainage water adjacent to the CB-Outfall (project area).

The scope-of-work performed as part of this LAS included a visual survey of the project area, bulk-material sample collection of suspect ACMs, laboratory analysis, and preparation of this report.

## **ASBESTOS REGULATIONS**

### **EPA – National Emission Standard for Hazardous Air Pollutants (NESHAP)-Asbestos**

The *United States Environmental Protection Agency* (EPA) regulates the emission of asbestos in Title 40 of the *Code of Federal Regulations* (CFR), Chapter I, Subchapter C, Part 61, Subpart M, *National Emissions Standards for Hazardous Air Pollutants* (NESHAP). The NESHAP provides regulatory standards for the control of asbestos emissions during the removal and/or abatement of regulated asbestos containing material (RACM).

RACM is defined by NESHAP as meeting any of the following definitions: 1) a friable asbestos material; 2) a Category I non-friable ACM that has become friable; 3) a Category I non-friable asbestos containing building materials (ACBM) that will be or has been subject to sanding, grinding, cutting, or abrading, or 4) a Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

The NESHAP provides the following definitions for friable, non-friable, Category I non-friable, and Category II non-friable asbestos material:

- ◆ **Friable asbestos material** means any material containing more than one percent asbestos.... that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- ◆ **Non-friable asbestos material** means any material containing more than one percent

asbestos.... that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

- ◆ **Category I non-friable asbestos-containing material (ACM)** means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos.
- ◆ **Category II non-friable ACM** means any material, excluding Category I non-friable ACM, containing more than one percent asbestos...that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

According to the NESHAP, RACM must be removed prior to a demolition or renovation of a building. The NESHAP also requires State and local notifications, proper handling, and proper disposal of RACM that may be removed or disturbed during any demolition, repair, or maintenance activities involving the RACM.

### **OSHA - General Construction Standard**

The *Occupational Safety and Health Administration (OSHA)* regulates exposure to airborne asbestos for construction workers in Title 29 CFR, Part 1926.1101, *General Construction Standard (GCS)*. The GCS regulates exposure in all work as defined in 29 CFR 1910.12(b), including, but not limited to the following:

- ◆ Demolition or salvage of structures where asbestos is present;
- ◆ Removal or encapsulation of materials containing asbestos;
- ◆ Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos;
- ◆ Installation of products containing asbestos;
- ◆ Asbestos spill/emergency cleanup;
- ◆ Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed;
- ◆ Coverage under this standard shall be based on the nature of the work operation involving asbestos exposure; and
- ◆ This section does not apply to asbestos-containing asphalt roof coatings, cements, and mastics.

The GCS, which requires proper training of workers prior to the commencement of work, classifies asbestos-related work under this section into four classes:

- ◆ **Class I** – activities involving the removal of thermal system insulation (TSI) and surfacing asbestos-containing material (ACM) and potential asbestos-containing material (PACM);
- ◆ **Class II** – activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics;
- ◆ **Class III** – repair and maintenance operations, where “ACM” including TSI ACM, surfacing ACM, and PACM may be disturbed; and
- ◆ **Class IV** – maintenance and custodial activities during which employees contact, but do not disturb, ACM or PACM and activities to clean up dust, waste, and debris resulting from Class I, Class II, and Class III activities.

## LIMITED ASBESTOS SURVEY

### Material Survey

On September 29, 2011, a Nevada-licensed asbestos building inspector visually surveyed an area of soil just to the south of the CB-Outfall. There was a concern that asbestos fibers or materials may have been deposited within the soil at this location that may have been washed into Tronox facility drains within the main plant area. As a result, three bulk material samples were collected at the locations marked by three wooden stakes that were identified as CB-Outfall-01, CB-Outfall-02, and CB-Outfall-03. Photographs of the sample locations are attached in the photograph log. The suspect ACM samples were placed in plastic Zip-Loc™ bags. The bags were sealed, labeled, and transported to Forensic Analytical Laboratories, Inc., a National Voluntary Laboratory Accreditation Program (NVLAP) laboratory. The bulks samples were analyzed for asbestos using the method specified in Appendix E, Subpart E, 40 Code of Federal Regulations, Part 763, Section 1, Polarized Light Microscopy (PLM).

### Results, Discussion, and Recommendations

Asbestos was not detected (ND) in bulk soil samples CB-Outfall-01, CB-Outfall-02, and CB-Outfall-03. A copy of the analytical report and chain-of-custody documentation indicating the sample locations and material descriptions are attached. Additional asbestos surveys of the surface soil located at the CB-Outfall do not appear to be warranted at this time.

### Limitations

This report has been prepared for the exclusive use of ENVIRON International Corporation. The findings presented herein are based upon observations of our field personnel, points of investigation, and results of laboratory tests performed by Forensic Analytical Laboratories, Inc. All accessible areas of the excavation zone as part of this survey were attempted to be visually surveyed for the presence of potential asbestos-containing materials. However, it is possible that not all potential ACMs located within the project area were identified in this survey.

Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended.

LoSo appreciates being of service to ENVIRON International Corporation on this project. If you have any questions or require additional information, please contact us at (702) 596-2021.

Sincerely,

**Logistical Solutions, LLC**



Kristopher Everett, CEM  
Project Manager  
NV Asbestos Consultant No. IM-1569



Ty L. Salazar, CEM, OHST  
Operations Manager  
NV Asbestos Consultant No. IM-1413

Attachments: Analytical Report and Chain-of-Custody Documentation  
Photograph Log



# Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Logistical Solutions, LLC  
Ty Salazar  
4780 W. Ann Road  
Suite 5-237  
N. Las Vegas, NV 89031

**Client ID:** L1349  
**Report Number:** B154752  
**Date Received:** 09/29/11  
**Date Analyzed:** 09/29/11  
**Date Printed:** 09/29/11  
**First Reported:** 09/29/11

**Job ID/Site:** CON111106; Tronox; CB-Outfall

**FALI Job ID:** L1349

**Date(s) Collected:** 09/29/2011

**Total Samples Submitted:** 3

**Total Samples Analyzed:** 3

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
<b>CB-Outfall-01</b>	01036262						
Layer: Brown Soil			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (2 %)							
<b>CB-Outfall-02</b>	01036263						
Layer: Brown Soil			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (2 %)							
<b>CB-Outfall-03</b>	01036264						
Layer: Brown Soil			<b>ND</b>				
Total Composite Values of Fibrous Components:		<b>Asbestos (ND)</b>					
Cellulose (2 %)							

Tracy Mitchell, Laboratory Supervisor, Las Vegas Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical Laboratories Inc. (FALI) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by FALI to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by FALI. The client is solely responsible for the use and interpretation of test results and reports requested from FALI. Forensic Analytical Laboratories Inc. is not able to assess the degree of hazard resulting from materials analyzed. FALI reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.



Client Name & Address: **Logistical Solutions, LLC**

PO / Job#: **CO111106** Date: **9/29/11**

Turn Around Time:  Same Day /  1Day /  2Day /  3Day /  4Day /  5Day

PCM:  NIOSH 7400A /  NIOSH 7400B  Rotometer

PLM:  Standard /  Point Count **400** /  1000 /  CARB 435

Contact: **Keis Everett**

Phone: **702-342-2574** Fax:

E-mail: **Keis.everett@logoson.com**

Site: **Tronox**

Site Location: **CB-outfall**

TEM Air:  AHERA /  Yamate2 /  NIOSH 7402  
 TEM Bulk:  Quantitative /  Qualitative /  Chatfield  
 TEM Water:  Potable /  Non-Potable /  Weight %  
 TEM Microvac:  Qual(+/-) /  D5755(str/area) /  D5756(str/mass)

IAQ Particle Identification (PLM LAB)  PLM Opaques/Soot  
 Particle Identification (TEM LAB)  Special Project

Metals Analysis: Method:

Matrix:

Analytes:

Comments:

Report Via:  Fax  E-Mail  Verbal

Sample ID	Date / Time	Sample Location / Description	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
CB-outfall-01	09/29 1255	CB outfall / Soil	A P C				
CB-outfall-02	09/29 1300	CB outfall / Soil	A P C				
CB-outfall-03	09/29 1305	CB outfall / Soil	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: **Kristopher Everett** Date: **09/29/11** Time: **1410**

Shipped Via:  Fed Ex  DHL  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: **Kristopher Everett** Relinquished By: Relinquished By:

Date / Time: **09/29/11 / 1415** Date / Time: Date / Time:

Received By: **[Signature]** Received By: Received By:

Date / Time: **09/29/11 / 1415** Date / Time: Date / Time:

Condition Acceptable?  Yes  No Condition Acceptable?  Yes  No Condition Acceptable?  Yes  No



1. View is south at sample locations CB-Outfall-01 and CB-Outfall-02.

2. View is south at sample locations CB-Outfall-01 and CB-Outfall-02.



3. View is south/southwest at sample location CB-Outfall-03. Sample locations CB-Outfall-01 and CB-Outfall-02 are in the background.

### SITE PHOTOGRAPHS

560 West Lake Mead Parkway  
Henderson, Nevada 89015

Project No:  
CON111106

