

**APPENDIX D**

**QUALITY ASSURANCE PROJECT PLAN  
(QAPP)**

**QUALITY ASSURANCE PROJECT PLAN  
REMOVAL ACTION**

ZONOLITE/W.R.GRACE SITE  
WEMELCO WAY  
EASTHAMPTON, MA  
U.S. EPA REGION I

Prepared for

Remedium Group, Inc.  
A Subsidiary of W.R. Grace & Co.  
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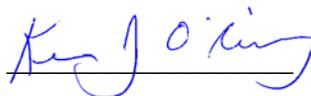
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## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 PROJECT INFORMATION.....	2
1.1 Distribution List.....	2
1.2 Project / Task Organization.....	2
1.3 Problem Definition.....	3
1.4 Problem/Task Description.....	3
1.5 Quality Objectives and Criteria for Measurement Data.....	3
1.6 Special Training / Certification Requirements.....	7
1.7 Documentation and Records.....	8
2.0 DATA GENERATION AND ACQUISITION.....	8
2.1 Sampling Process Design.....	8
2.2 Sample Method Requirements.....	9
2.3 Sample Handling and Custody Requirements.....	10
2.4 Analytical Method Requirements.....	10
2.5 Quality Control Requirements.....	11
2.6 Instrument / Equipment Testing, Inspection, and Maintenance Requirements.....	12
2.7 Instrument Calibration and Frequency.....	12
2.8 Inspection / Acceptance Requirements for Supplies and Consumables.....	12
2.9 Non-Direct Measurement Requirements.....	12
2.10 Data Management.....	13
3.0 ASSESSMENT AND OVERSIGHT.....	13
3.1 Assessment and Response Action.....	13
3.2 Corrective Action.....	13
3.3 Reports to Management.....	13
4.0 DATA VALIDATION AND USABILITY.....	14
4.1 Data Review, Verification, and Validation Requirements.....	14
4.2 Verification and Validation Methods.....	14
4.3 Reconciliation of the Data to the Project-Specific DQOs.....	14

## TABLES

<u>Table</u>	<u>Page</u>
Table 1 Sample Summary.....	15
Table 2 Performance or Acceptance Criteria.....	16
Table 3 Field Equipment and Supplies.....	17

**QUALITY ASSURANCE PROJECT PLAN  
ZONOLITE REMOVAL ACTION**

**Site Name: ZONOLITE/W.R. GRACE SITE, WEMELCO WAY, EASTHAMPTON**

<b>Prepared</b>		<b>Date:</b>
<b>By:</b>	O'Reilly, Talbot & Okun Associates, Inc.	09/09/2010

<b>Approved</b>		<b>Signature:</b>
<b>By:</b>	Valerie D. Tillinghast	

<b>Title:</b>	Quality Assurance Manager	<b>Date:</b>
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<b>Approved</b>		<b>Signature:</b>
<b>By:</b>	Kevin J. O'Reilly, LSP	

<b>Title:</b>	Project Manager	<b>Date:</b>
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<b>Approved</b>		<b>Signature:</b>
<b>By:</b>	John McKeown	

<b>Title:</b>	EPA On-Scene Coordinator	<b>Date:</b>
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<b>Approved</b>		<b>Signature:</b>
<b>By:</b>	Catherine Wanat	

<b>Title:</b>	MassDEP Site Manager	<b>Date:</b>
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**1.0 PROJECT INFORMATION**

**1.1 Distribution List**

EPA Region I: John McKeown

Massachusetts DEP, Western Region: Catherine Wanat

O'Reilly, Talbot & Okun Associates, Inc.: Kevin O'Reilly; Robert Kirchherr; Valerie Tillinghast; Joel Harris

**1.2 Project/ Task Organization**

John McKeown/U.S. Environmental Protection Agency (EPA) On-Site Coordinator, will serve as the EPA Task Monitor for the activities described in the Quality Assurance Project Plan (QAPP). Valerie Tillinghast will serve as the OTO Quality Assurance Officer and is responsible for maintaining an approved version of this QAPP. Kevin O'Reilly will serve as the OTO Project Manager and is responsible for providing OTO approval of and implementation of this QAPP. OTO field personnel will include Joel Harris and others who will be identified before mobilization.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**1.3 Problem Definition/**

**Background:**

Description attached.

Description in  
 referenced reports:

Site Specific Work Plan,  
 Zonolite/W.R. Grace  
 Easthampton Superfund  
 Removal Action Site  
 Easthampton, MA

September 2010

**Title**

**Date**

**1.4 Problem/ Task**

**Description:**

Description attached.

Description in  
 referenced reports:

Same as above

**Title**

**Date**

Asbestos-containing soil removal and selected areas of interior building cleanup (the removal action) are scheduled to occur during the period from September through December 2010.

**1.5 Quality Objectives and Criteria for Measurement Data:**

Identification of the seven steps of the data quality objectives (DQO) process: DQOs were established for the Zonolite/W.R. Grace site to define the quantity and quality of the data to be collected to support the objectives of the Site Specific Work Plan. DQOs were developed using the seven-step process outlined in the following EPA guidance documents: "EPA Requirements for Quality Assurance Project Plans," EPA QA/R-5, March 2001; "Guidance for Quality Assurance Project Plans," EPA QA/G-5, December 2002; and "Guidance on Systematic Planning Using the Data Quality Objectives Process," EPA QA/G-4, February 2006.

In summary, the objective is to generate data of adequate quality to support the removal action and protect human health, including identification of clean soil limits, building air, and ambient air during the removal.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**Step 1: Stakeholders:** EPA, W.R. Grace (former tenant); Oldon Limited  
**State the Problem** Partnership (current owner); owners of abutting parcels  
(Elastomerics; Cernak, and DOS parcels);  
City of Easthampton; community

**Site History/ Conceptual Site Model:**

The former Zonolite facility was previously used to process vermiculite concentrate into bagged Zonolite products. Incoming vermiculite concentrate was transported via rail on tracks abutting the site building. Asbestos fibers are present in soils outside the building, including abutting parcels along the railroad tracks. The release appears to be due to spillage of bulk materials during handling, as well as deposits of air-borne fibers. Released asbestos-containing materials are located primarily in surface soil. Asbestos fibers were also locally found on interior building surfaces. The building is currently vacant.

**Statement of Problem:**

Asbestos fibers from vermiculate processing may have been released to the building interior, and to surficial soil outside the building, including abutting parcels along the railroad tracks. The city plans to redevelop the former rail line as a bicycle path. Asbestos-impacted soils are planned to be excavated from the abutting parcels and consolidated in a placement area on the former Zonolite parcel. The placement area will then be capped with clean soil, and use restrictions will be implemented to limit potential future exposure to the material.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**Identify the Goals of the Study**

**Step 2: Study Questions:** The overall goal of the project is to reduce asbestos levels in accessible media at the site. Specific goals include achievement of federal asbestos abatement standards inside the building, and the safe removal of asbestos containing soils from various parcels, with consolidation and capping on the former Zonolite parcel.

**Decision Statements:** Sampling and laboratory analysis will be conducted to determine (1) the presence or absence of asbestos fibers in the collected samples, (2) the concentrations of asbestos fibers in the collected samples, (3) the concentrations of asbestos fibers in ambient air during remediation actions; and (4) the concentrations of asbestos fibers in indoor air following building abatement. Ultimately, the data will be used to assess whether or not further action is required at the site.

**Identify Information Inputs**

**Step 3: Inputs:** Site history, including delineation of asbestos in soil outside the building, is contained in the 2007 Phase II/III Report, as well as in Section 2.0 of the September 2010 Site Specific Work Plan for the removal action.

**Define Study Boundaries**

**Step 4: Spatial Boundary:** The site includes portions of five properties: the former Zonolite facility at 19 Wemelco Way; a portion of the railroad right-of-way abutting the Zonolite property to the southeast; a portion of the Cernak property south of the railroad parcel; a portion of the DOS property northwest of the facility; and portion of the Elastomerics parcels south of Wemelco Way. The limits of the release have been largely defined in existing documents. Some supplemental lateral delineation is planned as described in the Sampling and Analysis Plan (Section 3.3 of Site Specific Work Plan). Refer to Figure 3 of the Site Specific Work Plan for a depiction of the approximate release boundary.

**Temporal Boundaries:** In accordance with the Agreement and Order on Consent, unless otherwise approved by EPA, field activities will be completed within 180 days of EPA approval of the Site Specific Work Plan for the removal action.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**Step 5: Analytical Methods:**  
**Develop the Analytical Approach**

Three types of sampling and analysis will be conducted during this activity. (1) Pre- and post-excavation confirmatory soil sampling will be conducted as required to determine whether the excavation achieved the desired goal. (2) Ambient air sampling will be conducted to evaluate potential human exposures during soil handling activities (3) Interior air samples will be collected from the building following abatement to confirm clearance goals have been met.

Soil samples will be analyzed for asbestos in accordance with EPA bulk sample Method 600/R-93/116 using the polarized light microscopy (PLM) visual estimation method.

Air monitoring will be conducted during soil excavation and handling activities to confirm that dust and asbestos levels generated are within acceptable limits. Asbestos in air will be evaluated by collection of air samples on filters with subsequent analysis by OTO personnel using phase contrast microscopy (PCM) according to NIOSH Method 7400. Ambient air sampling will include collection of samples to establish background levels. In addition, weather will be monitored to establish values for variables such as wind direction and speed.

Asbestos clearance air sampling will be performed following abatement and decontamination of the building interior. The clearance air monitoring will be performed using high volume industrial hygiene sampling pumps with 0.8 micron mixed cellulose ester fiber air sampling cassettes. The samples will be analyzed according to the NIOSH 7400. The samples may also be analyzed by Transmission Electron Microscopy (TEM) according to the EPA Level II methodology to determine the specific amphibole fiber content. The post abatement clearance sampling procedures will be performed in accordance with the MassDEP and EPA protocol.

**Comparison Criteria:**

Soil analytical results will be assessed based on analysis by EPA Method 600/R-93/116 (visual estimation).

Ambient air analytical results will be compared with background air sample results. For indoor air, an Asbestos Project Monitor licensed by the Massachusetts Division of Occupational Safety will confirm in a report that the building meets all applicable state and federal regulatory requirements for post asbestos abatement clearance in accordance with 40 CFR Part 763 Subpart 3 (ASHERA).

**Decision Rules:** Comparison of data as described above will allow the Decision Statements No. 1 through No. 4 listed in Step 2 to be addressed.

**Step 6: Specify Performance or Acceptance Criteria** Initial acceptance of the laboratory analytical data will be determined through data validation conducted by the Quality Assurance Officer. A data validation report will be prepared that will indicate any rejected data and the reasons for their rejection, and will present the limitations to the data based upon the review of the data quality. Field quality control samples will be collected to monitor sampling precision and to assess the cleanliness of the air sampling media and other sampling equipment. See Table 1 of this QAPP for a summary of proposed sample types, designations, and rationales for field QC samples.

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**Step 7: Develop the Plan for Obtaining Data** **Optimized Design:** Pre-excavation testing is planned to fully define the lateral limits of soil requiring excavation. Refer to the September 2010 Site Specific Work Plan for information regarding specific sample locations that were selected for this purpose. If necessary for complete delineation, post-excavation soil samples will be collected at a rate of one 5-point composite per 2500 square feet within the excavation area.

Ambient air sampling will be conducted during excavation at upwind and downwind locations. Approximately twenty indoor air post abatement samples will be collected as part of the building clearance activities.

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#### **1.6 Special Training/Certification Requirements:**

OSHA 29 CFR 1910.120 Hazwoper training, including annual refreshers and specific asbestos training in accordance with 29 CFR 1926.1101, is required of all staff on site.

Special training and health monitoring requirements are required for personnel working at sites suspected of containing asbestos, including an asbestos awareness training class and Asbestos Workers medical surveillance. The level of asbestos training will depend upon the work activities being performed. Training, including record retention, will be conducted in accordance with 29 CFR 1926.1101(n) The OTO Director of Health and Safety maintains personnel training records.

NIOSH Method 7400 analyses will be performed by OTO who have completed the NIOSH 582 equivalency training and are licensed by Massachusetts as an Asbestos Project Monitor.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**1.7 Documentation and Records**

The most current version of this QAPP will be distributed to the entire distribution list presented in Section 1.1. The OTO QA Officer will be responsible for maintaining the most current version of this QAPP and for distributing it to all personnel and parties involved in the field effort. Field records that may be generated include the following:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Chain-of-Custody Forms                 | <input checked="" type="checkbox"/> Health and Safety Plan |
| <input checked="" type="checkbox"/> Field Instrument Calibration Logs      | <input checked="" type="checkbox"/> Photographic log       |
| <input checked="" type="checkbox"/> Field Monitoring and Screening Results | <input checked="" type="checkbox"/> Site Logbook           |
| <input type="checkbox"/> Soil Borings and Well Logs                        | <input checked="" type="checkbox"/> Site Maps and Drawings |

The formal deliverables to EPA that will be generated for this project will include reports generated every two weeks during field activities to summarize completed and planned activities, and a final report upon project completion. Records under OTO's control will be maintained in a secure location. Field documentation, project correspondence, and laboratory analytical records will be maintained for a period of at least 20 years.

**2.0 DATA GENERATION AND ACQUISITION**

**2.1 Sampling Process Design**

The September 2010 Site Specific Work Plan (SSWP) presents details on determining the types and numbers of samples to be collected, including sample matrices, sample locations, and fixed laboratory analytical methods (see Sections 2.0, 3.0 and Appendix A of the SSWP). The rationale for this sampling process design is based on the DQO process discussed in Section 1.5 of this QAPP.

**QUALITY ASSURANCE PROJECT PLAN**  
ZONOLITE REMOVAL ACTION

**2.2 Sampling Method Requirements**

Matrix	Sampling Method	EPA and OTO Standard Operating Procedures and Guidance
Soil	Manual; hand auger or trowel	OTO SOP 3.1, Rev. 1, Soil Sample Collection by Hand, 2/27/2003.
Air	Air pump with 0.8 um MCE air sampling cassette	NIOSH Method 7400 OSHA Method ID 160

**Other Sample Requirements:**

Sample collection will be documented in bound field logbooks, or on individual sample sheets referenced in bound logbooks. Samples will be assigned unique identifiers, and will be labeled in the field with permanent ink. Logbook entries will be made in ink. Errors will be struck with a single line such that the crossed-out entry is still legible. Entries will include the date, weather condition, name(s) of individuals on site, activities performed, levels of protection, methods used, any deviation from protocols, relevant observations, and the signature of the person making the entry.

Information recorded to document sample collection will include: date and time, sample number, medium, depth, physical description of sample, documentation of exact sample location, equipment used, measurements made, and other relevant observations made, such as the visible presence of micaceous materials.

Decontamination of soil sampling equipment will be conducted in between sample locations, and will include physical removal of adhering particular materials, a soapy water wash, and a water rinse.

Air samples will be collected by a Massachusetts licensed Asbestos Project Monitor.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

### **2.3 Sample Handling and Custody Requirements**

Sample handling, chain-of-custody record keeping, and shipping procedures for processing and submitting samples to laboratories will be conducted in accordance with OTO's SOP No. 3.0, Rev. 1, Sample Handling and Chain of Custody, dated January 6, 2000. Samples are considered to be in an individual's custody when samples are in their physical possession. When not in physical possession, custody is maintained when the samples are within the custody holder's visual range, or in a secured location such as a locked car or office. The OTO field team leader will ensure that custody of samples is maintained until they are shipped to the laboratory. Chain-of-custody forms and associated field records will be used to document the samples from collection through delivery to the laboratory. Copies of completed chain-of-custody forms counter-signed by the laboratory will be maintained with the laboratory reports in the permanent project record.

### **2.4 Analytical Method Requirements**

Soil samples will be analyzed by EMSL for asbestos in accordance with EPA Method 600/R-93/116 using the PLM visual estimation method. EMSL is a NVLAP accredited and DLI licensed laboratory. A laboratory turnaround time of two business days will be requested from EMSL for these analyses.

Ambient air and indoor air clearance samples will be analyzed by OTO according to the NIOSH 7400 methodology by phase contrast microscopy. OTO's in-house analysis is typically completed on the day of sample collection.

A portion of the ambient air sample filter may also be submitted to EMSL for analysis by Transmission Electron Microscopy (TEM) analysis according to the EPA Level II methodology to determine the specific amphibole fiber content. The indoor air post abatement clearance sampling procedures will be performed in accordance with the MassDEP and EPA protocol 40 CFR Part 763 Subpart 3 (AHERA).

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

## **2.5 Quality Control Requirements**

Quality control requirements will include field and laboratory components. Field QC will include the collection of duplicate samples at a rate of one per 20 or fewer samples of any given matrix (soil, ambient air, indoor air). Duplicate results will be considered acceptable if the relative percent difference (RPD) between the two values is within 50% for numeric results, and the same result (greater or less than 1%, or nondetect) for bulk asbestos samples.

For air samples, blank cellulose sampling cassettes will be submitted at a rate of one per 10 or fewer samples to evaluate the sampling medium. Blank results will be considered acceptable if asbestos is not detectable in the unused cartridges.

Laboratory QC will be consistent with the published analytical methods, EPA Method 600/R-93/116 (visual estimation) for soil, and NIOSH 7400 by phase contrast microscopy (PCM). At least one air sample per work day will be submitted for confirmatory laboratory analysis by transmission electron microscopy (TEM) according to the EPA Level II methodology, which can identify asbestos, as opposed to the total fibers counted by PCM. However, if PCM fiber counts are low to non-detect, and do not exceed the action level (0.01 fibers/cc), confirmatory analysis by TEM will not be required.

OTO is a Massachusetts licensed asbestos air laboratory for PCM analysis. OTO asbestos analysts have completed the NIOSH 582 equivalency course and are licensed by Massachusetts as Asbestos Project Monitors. OTO personnel participate in the American Industrial Hygiene Association (AIHA) Asbestos Analyst Registry Program on a quarterly basis and also participate in an inter-laboratory round robin quality control program every six months. These programs require personnel to analyze asbestos air samples and maintain quality proficiency analyzing asbestos air samples.

The OTO field team leader, in coordination with the EPA OSC, will be responsible for identifying failures in sampling and field measurement systems, overseeing any corrective actions, ensuring that the corrective actions are documented in site logbooks and other appropriate records, and assessing the effectiveness of corrective actions.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**2.6 Instrument/Equipment Testing, Inspection, and Maintenance Requirements**

Table 3 of this QAPP contains a list of field equipment that will be used during this sampling event. Refer to manufacturer's operating manuals for instructions on equipment maintenance.

Laboratory instrument testing, inspection, and maintenance requirements are presented in the analytical methods (EPA Method 600/R-93/116 (visual estimation) for soil, and NIOSH 7400 for air).

**2.7 Instrument Calibration and Frequency**

Air sampling pumps used to collect air samples will be pre and post calibrated on a daily basis using a primary standard. The air samples will also be periodically checked during the sampling period with a precision rotometer. The precision rotometer will be calibrated at the start of the project using a primary standard.

Instrument calibration and frequency requirements for laboratory analytical methods are presented in the analytical methods (EPA Method 600/R-93/116 (visual estimation) and NIOSH 7400), the instrument manufacturer's operating manuals associated with the analytical methods, and the OTO asbestos laboratory quality assurance manual.

**2.8 Inspection/ Acceptance Requirements for Supplies and Consumables**

Supplies and consumables required for this sampling event will be inspected and accepted by the OTO field team leader or designated field team member and will include those materials and equipment presented in Table 3 of this QAPP and the personal protective equipment (PPE) identified in the HASP.

**2.9 Non-Direct Measurement Requirements**

Information pertaining to the site (including photographs, maps, etc.) has been compiled during our review of site history. The extent to which this information is used, if at all, to achieve the objectives of this project will be determined by OTO in cooperation with the EPA OSC. Any justification and qualifications required for the use of these data and information will be provided in the reports generated for this project.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**2.10 Data Management**

Reference materials generated during this investigation and included in the final reports will be submitted to the OSC in electronic format on compact disc. Analytical results will be summarized on Excel spreadsheets, which will be submitted to the OSC with the final reports. Field-generated data will be managed as part of the permanent field record for the project. All laboratory analytical data will be managed in accordance with the requirements of the methods, and applicable federal regulations. Project records will be retained for a minimum of 20 years.

**3.0 ASSESSMENT AND OVERSIGHT**

**3.1 Assessment and Response Actions**

Field and laboratory audits are not anticipated as part of this project, but may be performed if deemed appropriate based on the quality of analytical results.

**3.2 Corrective Action**

The OTO Project Manager and field team leader, in coordination with the EPA OSC, will be responsible for identifying failures in sampling and field measurements systems, overseeing any corrective actions, ensuring that the corrective actions are documented in site logbooks and other appropriate records, and assessing the effectiveness of corrective actions.

**3.3 Reports to Management**

OTO is responsible for notifying the EPA OSC in a timely manner if any circumstances arise during the field investigation that may adversely impact the quality of the data collected.

OTO will prepare status reports at two week intervals, summarizing field activities completed, and activities planned for the upcoming two week period. Status reports will be submitted to the EPA OSC. A final report will be prepared upon project completion.

All formal deliverables that OTO contributes to in whole or part, including the final reports, will be subject to an internal corporate review process, which includes a technical/quality control review. The final report will also be subject to an editorial review.

**QUALITY ASSURANCE PROJECT PLAN  
ZONOLITE REMOVAL ACTION**

**4.0 DATA VALIDATION AND USABILITY**

**4.1 Data Review, Verification, and Validation Requirements**

All field-generated data and records (such as field sampling sheets, global positioning system (GPS) coordinates of sample and other locations, and field logbook notes) will be reviewed for completeness and accuracy by the OTO project manager, field team member, or other appropriate designee. Field data and records will be reviewed at the end of each day or as soon as possible so that corrective actions, if necessary, can be made before field crews demobilize from the site.

The analytical data packages will be validated by the QA Officer. Within 14 business days after the analytical data are received, OTO will conduct a cursory review of the unvalidated data against the chain-of-custody records to ensure that results for all samples are received. Validation of the analytical data packages is anticipated to be completed within 30 days of the receipt of laboratory data packages, though that time frame may vary. The validated data will be reviewed to determine whether any data are rejected and whether any data qualifiers assigned during the validation process affect the usability of the data. OTO will notify the OSC of problems encountered, if any.

**4.2 Verification and Validation Methods**

All field-generated data will be maintained in the project file and included (as appropriate) in project deliverables in final form after all reviews and associated corrective actions. The laboratory analytical data packages will be validated by the QA Officer, and will include, at a minimum, evaluation of blank and duplicate results. A data validation report will be prepared that will indicate any rejected data and the reasons for their rejection, and will present the limitations to the data based upon the review of the data quality.

**4.3 Reconciliation of the Data to the Project-Specific DQOs:**

Limitations to the data and data rejection and qualification will be identified during the validation process conducted by the OTO QA Officer. All final laboratory data packages will be reviewed to the project-specific DQOs, as defined in Section 1.5 of this QAPP, are met. The data will be reconciled with the project-specific DQOs also in accordance with EPA guidance documents, including "Guidance on Systemic Planning Using the Data Quality Objectives Process," EPA QA/G-4, February 2006.

The OTO Project Manager, in cooperation with the EPA OSC, will be responsible for reconciling the data and other project results with the requirements specified in this QAPP, in the September 2010 Site Specific Work Plan, and by the data users and decision makers. Ultimate acceptance of the data is at the discretion of the EPA OSC. Depending in the nature of how specific data quality indicators do not meet the project's requirements, the data may be discarded and re-sampling and reanalysis of the subject samples may be required. Re-sampling, reanalysis, or other out-of-scope actions identified to address quality deficiencies and data gaps will require approval by the EPA OSC.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**TABLE 1: SAMPLE SUMMARY**

<b>ENVIRONMENTAL SAMPLES</b>							
No. of Samples	Matrix	Location	Purpose	Depth or other Descriptor	Sampling Method	Required Analysis	Analytical Methods
<b>ALL MATRICES</b>							
<p>Refer to Section 3.0 of the Site Specific Work Plan for the proposed field sampling program. Determination of the lateral and vertical limits of the excavation area will include additional pre-excavation sampling and analysis, and post-excavation sampling if required. Final sampling locations will be based on reconnaissance and observations made while in the field.</p> <p>Soil delineation is expected to include approximately thirty soil samples for analysis by EPA Method 600/R-93/116 (visual estimation).</p> <p>Ambient air sampling will include a minimum of four stations on a daily basis. The purpose of that sampling will be to assess air-borne fibers resulting from the soil excavation and handling.</p> <p>Asbestos clearance air sampling will be performed using high volume industrial hygiene sampling pumps with 0.8 micron mixed cellulose ester fiber air sampling cassettes. The samples will be analyzed according to the NIOSH 7400 methodology by phase contrast microscopy. The samples may also be analyzed by Transmission Electron Microscopy (TEM) according to the EPA Level II methodology to determine the specific amphibole fiber content. The post abatement clearance sampling procedures will be performed in accordance with the MassDEP and EPA protocol. Twenty indoor air samples are expected to be analyzed to support building clearance.</p>							
<b>QUALITY CONTROL SAMPLES</b>							
<p>Quality control samples collected in the field will include duplicates and blanks, as described below. QC samples will be collected a rate of two per 20 or fewer samples of the same matrix. For soils, duplicate samples will be homogenized in a stainless steel bowl prior to apportioning to two sample jars or baggies. For air samples, duplicates will be collected using side-by-side air pumps located within one foot of each other. Blank samples for air will consist of MCE air sampling cassettes which have unpackaged in the field, but through which no air has been pumped. Blank samples will not be submitted for the soil matrix.</p>							

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**TABLE 2: PERFORMANCE OR ACCEPTANCE CRITERIA**

<b>Medium / Analysis</b>	<b>Analytical Method</b>
Asbestos in soil	EPA Method 600/R-93/116 (Polarized Light Microscopy)
Asbestos in air	NIOSH 7400 (Phase Contrast Microscopy)  EPA Level II Methodology (Transmission Electron Microscopy)
<b>Data Quality Measurements</b>	
<b>Accuracy</b>	Laboratory accuracy for microscopic methods is typically monitored through the use of in-house control charts. For the purposes of this project, results of microscopic methods are assumed to have adequate accuracy if the samples are analyzed in accordance with the specified method, and the required detection limit is met.
<b>Precision</b>	The precision of laboratory data will be assessed through the use of field duplicates. Duplicate results will be considered acceptable if the relative percent difference (RPD) between the two values is within 50% or, for bulk samples, the same value (greater or less than 1%, or not detected).
<b>Representativeness</b>	Samples are deemed representative of the larger area from which they are collected if there is no evidence of cross-contamination or sample bias. The samples collected for this program will be arranged in a grid pattern. Biased sampling will not be conducted.
<b>Completeness</b>	Upon completion of the project, in consideration of the entire data set available, the OTO Project Manager and EPA OSC are responsible for determining if the available data achieve the level of completeness required to meet the project objectives.
<b>Comparability</b>	Sample and data comparability of results, both internally and to previously existing data, is expected to be achieved through conducting all field and fixed laboratory work using the same, well-documented, and uniform procedures, such as published analytical methods. The data generated during this project are anticipated to be comparable to prior results.

**QUALITY ASSURANCE PROJECT PLAN**  
**ZONOLITE REMOVAL ACTION**

**TABLE 3: FIELD EQUIPMENT AND SUPPLIES**

Field Instruments	Sample Containers	Sampling Equipment and Supplies	Sample Processing Supplies	Decontamination Supplies	Miscellaneous Supplies
SKC or Gillian air sample pumps	8-ounce glass sample jars with Teflon lined lids	Hand auger/trowel	Mixing bowl and spoon	Potable water (gallon jugs and spray bottle)	Digital camera
Rotameter	Resealable sample baggies		Field logbooks	Paper towels	Measuring tape
Real-time dust monitors	25-mm 0.8-um mixed cellulose ester filter cassettes		Permanent markers	Alconox (or similar soap)	Poly sheeting for daily cover
Wind sock/weather station			Sample labels		Trash bags
Tripods/stands for air samplers			Chain of custody forms		Coolers
					First aid kit

Notes:  
um=micrometer; mm=millimeter. Health & Safety supplies not included on this table.

**APPENDIX E**

**RAIL ROAD RIGHT OF WAY SOIL DATA**

**Table 1**  
**Railroad Composite Soil Analytical Results: Organic Parameters**  
**Concentrations in mg/kg**  
**Wemelco Way**  
**Easthampton, MA**

Sample No.:	Comp-1	Comp-2	Comp-3	Comp-4	MassDEP Ash Fill Background	MCP Method 1 Standards		
Depth (feet):	0-6 inches	0-6 inches	0-6 inches	0-6 inches		S-1 / GW-1	S-1 / GW-2	S-1 / GW-3
Date Collected:	6/29/10	6/29/10	6/29/10	6/29/10				
<b>Total Petroleum Hydrocarbons</b>								
TPH-Method 8100	370	230	210	600	NA	1,000	1,000	1,000
<b>PAHs by Method 8270</b>								
Acenaphthene	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.19)	2	4	1,000	1,000
Acenaphthylene	0.94	0.35	0.5	0.82	1	1	600	10
Anthracene	0.58	0.25	0.19	0.41	4	1,000	1,000	1,000
Benzo(a)anthracene	4.7	1.6	1.6	2.6	9	7	7	7
Benzo(a)pyrene	3.3	1.3	1.5	2.3	7	2	2	2
Benzo(b)fluoranthene	5.9	2.1	2.5	4.7	8	7	7	7
Benzo(g,h,i)perylene	1.8	0.61	0.65	1.1	3	1,000	1,000	1,000
Benzo(k)fluoranthene	1.9	0.79	0.96	1.8	4	70	70	70
Chrysene	5.1	1.7	1.9	3.5	7	70	70	70
Dibenzo(a,h)anthracene	0.66	0.19	0.21	0.38	1	0.7	0.7	0.7
Fluoranthene	8.5	2.3	2.2	3.9	10	1,000	1,000	1,000
Fluorene	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.19)	2	1,000	1,000	1,000
Indeno(1,2,3-cd)pyrene	2.6	0.89	0.89	1.5	3	7	7	7
2-Methylnaphthalene	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.19)	1	0.7	80	300
Naphthalene	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.19)	1	4	40	500
Phenanthrene	1	0.96	0.52	0.81	20	10	500	500
Pyrene	8	2.5	2.3	3.6	20	1,000	1,000	1,000
<b>PCBs (total)</b>	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.11)		2	2	2

NOTES:

1. Concentrations in mg/kg (parts per million) on a dry weight basis.
2. "<" indicates not detected; value is sample-specific quantitation limit.
3. MCP Method 1 soil standards from 310 CMR 40.0975(6).
4. Background values from MassDEP "Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil", May 23, 2002.
5. "PID"=Photoionization detector soil headspace measurement in parts per million by volume.
6. Values shown in **bold** exceed Method 1 standards.

Table 2  
 Railroad Composite Soil Analytical Results: Inorganic Parameters  
 Inorganic Analytes  
 Concentrations in mg/kg  
 Wemelco Way  
 Easthampton, MA

Sample No.:	Comp-1	Comp-2	Comp-3	Comp-4	Comp-4, S-1	Comp-4, S-2	Comp-4, S-3	MassDEP Natural Soil Background	MassDEP Ash Fill Background	S-1 / GW-1 Standard	S-1 / GW-2,3 Standard
Depth:	0-6 inches	0-6 inches	0-6 inches								
Date Collected:	6/29/10	6/29/10	6/29/10	6/29/10	6/29/10	6/29/10	6/29/10				
Arsenic	49	21	13	31	---	---	---	20	20	20	20
Barium	47	170	400	490	---	---	---	50	50	1,000	1,000
Cadmium	0.65	0.49	0.48	0.63	---	---	---	2	3	2	2
Chromium (III)	17	110	310	430	28	770	850	30	40	1,000	1,000
Chromium (VI or total)*	--	--	--	--	ND (0.33)	ND (0.36)	ND (0.88)	30	40	30	30
Chromium-TCLP (mg/L)	--	--	ND (0.01)	ND (0.01)	---	---	---	NA	NA	NS	NS
Lead	29	33	34	38	---	---	---	100	600	300	300
Mercury	0.027	ND (0.025)	0.037	0.023	---	---	---	0.3	1	20	20
Selenium	ND (5.9)	ND (5.2)	ND (5.7)	ND (5.4)	---	---	---	0.5	1	400	400
Silver	ND (0.59)	ND (0.52)	ND (0.57)	ND (0.54)	---	---	---	0.6	5	100	100
Flashpoint	> 212 °F	> 212 °F	> 212 °F	> 212 °F	---	---	---	NA	NA	NS	NS
Percent Solids	90.3	90.6	91.1	86.9	---	---	---	NA	NA	NS	NS
Percent Solids	90.3	90.6	91.1	86.9	---	---	---	NA	NA	NS	NS

NOTES:

1. Concentrations in milligrams per kilogram (mg/kg, or parts per million) on a dry weight basis.
  2. "<" indicates not detected; value is sample-specific quantitation limit.
  3. MCP Method 1 soil standards from 310 CMR 40.0975(6).
  4. Background values from MassDEP "Technical Update: Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil", May 23, 2002.
  5. Values shown in **bold** exceed Method 1 standards.
  6. "NA" = Not applicable or not available. "NS" indicates no standard.
  7. "---" indicates not analyzed for this parameter.
- \* Per the 4/06 MCP, chromium is assumed to be hexavalent unless testing is done to prove otherwise.

July 7, 2010

Valerie Tillinghast  
OTO Associates  
293 Bridge St. Suite 500  
Springfield, MA 01103

Project Location: W.Way  
Client Job Number:  
Project Number: 2118-01-01  
Laboratory Work Order Number: 10F0796

Enclosed are results of analyses for samples received by the laboratory on June 29, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Susan M. Burney  
Project Manager

OTO Associates  
 293 Bridge St. Suite 500  
 Springfield, MA 01103  
 ATTN: Valerie Tillinghast

REPORT DATE: 7/7/2010

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 2118-01-01

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 10F0796

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: W.Way

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Comp-1	10F0796-01	Soil		SM 2540G	
				SW-846 1010	
				SW-846 6010B	
				SW-846 7471A	
				SW-846 8082	
				SW-846 8100 Modified	
				SW-846 8270C	
Comp-2	10F0796-02	Soil		SW-846 9045D	
				SM 2540G	
				SW-846 1010	
				SW-846 6010B	
				SW-846 7471A	
				SW-846 8082	
				SW-846 8100 Modified	
Comp-3	10F0796-03	Soil		SW-846 8270C	
				SW-846 9045D	
				SM 2540G	
				SW-846 1010	
				SW-846 6010B	
				SW-846 7471A	
				SW-846 8082	
Comp-4	10F0796-04	Soil		SW-846 8100 Modified	
				SW-846 8270C	
				SW-846 9045D	
				SM 2540G	
				SW-846 1010	
				SW-846 6010B	
				SW-846 7471A	
SW-846 8082					
				SW-846 8100 Modified	
				SW-846 8270C	
				SW-846 9045D	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only RCRA 8 metals were requested and reported.

For method 8270, only PAHs were requested and reported.

**Login**

**Qualifications:**

---

Samples were recieved directly from the field at ambient temperature.

**Analyte & Samples(s) Qualified:**

10F0796-01[Comp-1], 10F0796-02[Comp-2], 10F0796-03[Comp-3], 10F0796-04[Comp-4]

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The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson  
Laboratory Director

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Field Sample #: Comp-1

Sampled: 6/29/2010 09:30

Sample ID: 10F0796-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Acenaphthylene	0.94	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Anthracene	0.58	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Benzo(a)anthracene	4.7	0.94	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 13:35	BGL
Benzo(a)pyrene	3.3	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Benzo(b)fluoranthene	5.9	0.94	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 13:35	BGL
Benzo(g,h,i)perylene	1.8	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Benzo(k)fluoranthene	1.9	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Chrysene	5.1	0.94	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 13:35	BGL
Dibenz(a,h)anthracene	0.66	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Fluoranthene	8.5	0.94	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 13:35	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Indeno(1,2,3-cd)pyrene	2.6	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Phenanthrene	1.0	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 10:12	BGL
Pyrene	8.0	0.94	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 13:35	BGL
Surrogates	% Recovery		Recovery Limits		Flag				
Nitrobenzene-d5	68.3		30-130			7/2/10 10:12			
Nitrobenzene-d5	75.3		30-130			7/7/10 13:35			
2-Fluorobiphenyl	67.4		30-130			7/2/10 10:12			
2-Fluorobiphenyl	80.9		30-130			7/7/10 13:35			
Terphenyl-d14	61.0		30-130			7/2/10 10:12			
Terphenyl-d14	84.2		30-130			7/7/10 13:35			

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 09:30

Field Sample #: Comp-1

Sample ID: 10F0796-01

Sample Matrix: Soil

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:01	JMB
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		89.8	30-150					7/3/10 17:01	
Decachlorobiphenyl [2]		114	30-150					7/3/10 17:01	
Tetrachloro-m-xylene [1]		85.6	30-150					7/3/10 17:01	
Tetrachloro-m-xylene [2]		84.7	30-150					7/3/10 17:01	

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 09:30

Field Sample #: Comp-1

Sample ID: 10F0796-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH as Diesel	370	92	mg/Kg dry	5		SW-846 8100 Modified	6/30/10	7/1/10 9:43	CJM

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 09:30

Field Sample #: Comp-1

Sample ID: 10F0796-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	49	3.0	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Barium	47	3.0	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Cadmium	0.65	0.30	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Chromium	17	0.59	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Lead	29	0.89	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Mercury	0.027	0.023	mg/Kg dry	1		SW-846 7471A	6/30/10	7/1/10 13:37	MPF
Selenium	ND	5.9	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP
Silver	ND	0.59	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:44	AMP

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 09:30

Field Sample #: Comp-1

Sample ID: 10F0796-01

Sample Matrix: Soil

**Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010	6/30/10	6/30/10 19:15	AED
pH @22.3°C	5.7		pH Units	1		SW-846 9045D	7/1/10	7/1/10 13:00	LL
% Solids	90.3		% Wt	1		SM 2540G	7/1/10	7/1/10 14:05	NH

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:15

Field Sample #: Comp-2

Sample ID: 10F0796-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Acenaphthylene	0.35	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Anthracene	0.25	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Benzo(a)anthracene	1.6	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Benzo(a)pyrene	1.3	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Benzo(b)fluoranthene	2.1	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Benzo(g,h,i)perylene	0.61	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Benzo(k)fluoranthene	0.79	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Chrysene	1.7	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Dibenz(a,h)anthracene	0.19	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Fluoranthene	2.3	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Indeno(1,2,3-cd)pyrene	0.89	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Phenanthrene	0.96	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Pyrene	2.5	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 13:37	BGL
Surrogates	% Recovery		Recovery Limits		Flag				
Nitrobenzene-d5	64.2		30-130			7/2/10 13:37			
2-Fluorobiphenyl	61.7		30-130			7/2/10 13:37			
Terphenyl-d14	66.1		30-130			7/2/10 13:37			

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:15

Field Sample #: Comp-2

Sample ID: 10F0796-02

Sample Matrix: Soil

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:16	JMB
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		90.9	30-150					7/3/10 17:16	
Decachlorobiphenyl [2]		102	30-150					7/3/10 17:16	
Tetrachloro-m-xylene [1]		90.1	30-150					7/3/10 17:16	
Tetrachloro-m-xylene [2]		87.7	30-150					7/3/10 17:16	

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:15

Field Sample #: Comp-2

Sample ID: 10F0796-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH as Diesel	230	91	mg/Kg dry	5		SW-846 8100 Modified	6/30/10	7/1/10 8:48	CJM

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:15

Field Sample #: Comp-2

Sample ID: 10F0796-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	21	2.6	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Barium	170	2.6	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Cadmium	0.49	0.26	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Chromium	110	0.52	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Lead	33	0.78	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471A	6/30/10	7/1/10 13:39	MPF
Selenium	ND	5.2	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP
Silver	ND	0.52	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:48	AMP

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:15

Field Sample #: Comp-2

Sample ID: 10F0796-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010	6/30/10	6/30/10 19:15	AED
pH @22.4°C	5.9		pH Units	1		SW-846 9045D	7/1/10	7/1/10 13:00	LL
% Solids	90.6		% Wt	1		SM 2540G	7/1/10	7/1/10 14:05	NH

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Field Sample #: Comp-3

Sampled: 6/29/2010 10:45

Sample ID: 10F0796-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Acenaphthylene	0.50	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Anthracene	0.19	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Benzo(a)anthracene	1.6	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Benzo(a)pyrene	1.5	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Benzo(b)fluoranthene	2.5	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Benzo(g,h,i)perylene	0.65	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Benzo(k)fluoranthene	0.96	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Chrysene	1.9	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Dibenz(a,h)anthracene	0.21	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Fluoranthene	2.2	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Indeno(1,2,3-cd)pyrene	0.89	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Phenanthrene	0.52	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Pyrene	2.3	0.18	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:06	BGL
Surrogates	% Recovery	Recovery Limits	Flag						
Nitrobenzene-d5	74.2	30-130	7/2/10 14:06						
2-Fluorobiphenyl	64.1	30-130	7/2/10 14:06						
Terphenyl-d14	68.2	30-130	7/2/10 14:06						

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:45

Field Sample #: Comp-3

Sample ID: 10F0796-03

Sample Matrix: Soil

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:30	JMB
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		83.5	30-150					7/3/10 17:30	
Decachlorobiphenyl [2]		92.9	30-150					7/3/10 17:30	
Tetrachloro-m-xylene [1]		85.5	30-150					7/3/10 17:30	
Tetrachloro-m-xylene [2]		83.8	30-150					7/3/10 17:30	

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:45

Field Sample #: Comp-3

Sample ID: 10F0796-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH as Diesel	210	91	mg/Kg dry	5		SW-846 8100 Modified	6/30/10	7/1/10 9:06	CJM

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:45

Field Sample #: Comp-3

Sample ID: 10F0796-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	13	2.9	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Barium	400	2.9	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Cadmium	0.48	0.29	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Chromium	310	0.57	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Lead	34	0.86	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Mercury	0.037	0.027	mg/Kg dry	1		SW-846 7471A	6/30/10	7/1/10 13:41	MPF
Selenium	ND	5.7	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP
Silver	ND	0.57	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:51	AMP

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 10:45

Field Sample #: Comp-3

Sample ID: 10F0796-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010	6/30/10	6/30/10 19:15	AED
pH @22.3°C	6.3		pH Units	1		SW-846 9045D	7/1/10	7/1/10 13:00	LL
% Solids	91.1		% Wt	1		SM 2540G	7/1/10	7/1/10 14:05	NH

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Field Sample #: Comp-4

Sampled: 6/29/2010 11:30

Sample ID: 10F0796-04

Sample Matrix: Soil

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Acenaphthylene	0.82	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Anthracene	0.41	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Benzo(a)anthracene	2.6	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Benzo(a)pyrene	2.3	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Benzo(b)fluoranthene	4.7	0.97	mg/Kg dry	5		SW-846 8270C	6/30/10	7/7/10 14:10	BGL
Benzo(g,h,i)perylene	1.1	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Benzo(k)fluoranthene	1.8	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Chrysene	3.5	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Dibenz(a,h)anthracene	0.38	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Fluoranthene	3.9	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Indeno(1,2,3-cd)pyrene	1.5	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Phenanthrene	0.81	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Pyrene	3.6	0.19	mg/Kg dry	1		SW-846 8270C	6/30/10	7/2/10 14:36	BGL
Surrogates		% Recovery	Recovery Limits		Flag				
Nitrobenzene-d5		57.0	30-130					7/2/10 14:36	
Nitrobenzene-d5		58.3	30-130					7/7/10 14:10	
2-Fluorobiphenyl		52.7	30-130					7/2/10 14:36	
2-Fluorobiphenyl		61.2	30-130					7/7/10 14:10	
Terphenyl-d14		46.9	30-130					7/2/10 14:36	
Terphenyl-d14		71.1	30-130					7/7/10 14:10	

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 11:30

Field Sample #: Comp-4

Sample ID: 10F0796-04

Sample Matrix: Soil

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	1		SW-846 8082	6/30/10	7/3/10 17:45	JMB
Surrogates		% Recovery	Recovery Limits		Flag				
Decachlorobiphenyl [1]		83.7	30-150					7/3/10 17:45	
Decachlorobiphenyl [2]		112	30-150					7/3/10 17:45	
Tetrachloro-m-xylene [1]		86.0	30-150					7/3/10 17:45	
Tetrachloro-m-xylene [2]		85.4	30-150					7/3/10 17:45	

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 11:30

Field Sample #: Comp-4

Sample ID: 10F0796-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH as Diesel	600	96	mg/Kg dry	5		SW-846 8100 Modified	6/30/10	7/1/10 9:25	CJM

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 11:30

Field Sample #: Comp-4

Sample ID: 10F0796-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	31	2.7	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Barium	490	2.7	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Cadmium	0.63	0.27	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Chromium	430	0.54	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Lead	38	0.81	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Mercury	0.023	0.021	mg/Kg dry	1		SW-846 7471A	6/30/10	7/1/10 13:42	MPF
Selenium	ND	5.4	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP
Silver	ND	0.54	mg/Kg dry	1		SW-846 6010B	7/1/10	7/2/10 11:55	AMP

Project Location: W.Way

Sample Description:

Work Order: 10F0796

Date Received: 6/29/2010

Sampled: 6/29/2010 11:30

Field Sample #: Comp-4

Sample ID: 10F0796-04

Sample Matrix: Soil

**Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Flashpoint	> 212 °F		°F	1		SW-846 1010	6/30/10	6/30/10 19:15	AED
pH @22°C	5.9		pH Units	1		SW-846 9045D	7/1/10	7/1/10 13:00	LL
% Solids	86.9		% Wt	1		SM 2540G	7/1/10	7/1/10 14:05	NH

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
10F0796-01 [Comp-1]	B015627	07/01/10
10F0796-02 [Comp-2]	B015627	07/01/10
10F0796-03 [Comp-3]	B015627	07/01/10
10F0796-04 [Comp-4]	B015627	07/01/10

**SW-846 1010**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015617	50.0	50.0	06/30/10
10F0796-02 [Comp-2]	B015617	50.0	50.0	06/30/10
10F0796-03 [Comp-3]	B015617	50.0	50.0	06/30/10
10F0796-04 [Comp-4]	B015617	50.0	50.0	06/30/10

**Prep Method: SW-846 3050B-SW-846 6010B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015633	0.934	50.0	07/01/10
10F0796-02 [Comp-2]	B015633	1.07	50.0	07/01/10
10F0796-03 [Comp-3]	B015633	0.958	50.0	07/01/10
10F0796-04 [Comp-4]	B015633	1.06	50.0	07/01/10

**Prep Method: SW-846 7471A-SW-846 7471A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015595	0.119	25.0	06/30/10
10F0796-02 [Comp-2]	B015595	0.108	25.0	06/30/10
10F0796-03 [Comp-3]	B015595	0.102	25.0	06/30/10
10F0796-04 [Comp-4]	B015595	0.139	25.0	06/30/10

**Prep Method: SW-846 3546-SW-846 8082**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015566	10.2	50.0	06/30/10
10F0796-02 [Comp-2]	B015566	10.2	50.0	06/30/10
10F0796-03 [Comp-3]	B015566	10.0	50.0	06/30/10
10F0796-04 [Comp-4]	B015566	10.1	50.0	06/30/10

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015567	30.0	2.00	06/30/10
10F0796-02 [Comp-2]	B015567	30.3	2.00	06/30/10
10F0796-03 [Comp-3]	B015567	30.2	2.00	06/30/10
10F0796-04 [Comp-4]	B015567	30.1	2.00	06/30/10

**Sample Extraction Data**

**Prep Method: SW-846 3546-SW-846 8270C**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10F0796-01 [Comp-1]	B015568	30.1	1.00	06/30/10
10F0796-01RE1 [Comp-1]	B015568	30.1	1.00	06/30/10
10F0796-02 [Comp-2]	B015568	30.3	1.00	06/30/10
10F0796-03 [Comp-3]	B015568	30.3	1.00	06/30/10
10F0796-04 [Comp-4]	B015568	30.1	1.00	06/30/10
10F0796-04RE1 [Comp-4]	B015568	30.1	1.00	06/30/10

**SW-846 9045D**

Lab Number [Field ID]	Batch	Initial [g]	Date
10F0796-01 [Comp-1]	B015659	20.0	07/01/10
10F0796-02 [Comp-2]	B015659	20.0	07/01/10
10F0796-03 [Comp-3]	B015659	20.0	07/01/10
10F0796-04 [Comp-4]	B015659	20.0	07/01/10

**QUALITY CONTROL**

**Semivolatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B015568 - SW-846 3546**

**Blank (B015568-BLK1)**

Prepared: 06/30/10 Analyzed: 07/02/10

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.56		mg/Kg wet	3.33		76.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.61		mg/Kg wet	3.33		78.2	30-130			
Surrogate: Terphenyl-d14	2.60		mg/Kg wet	3.33		77.9	30-130			

**LCS (B015568-BS1)**

Prepared: 06/30/10 Analyzed: 07/02/10

Acenaphthene	0.910	0.17	mg/Kg wet	1.67		54.6	40-140			
Acenaphthylene	0.932	0.17	mg/Kg wet	1.67		55.9	40-140			
Anthracene	0.955	0.17	mg/Kg wet	1.67		57.3	40-140			
Benzo(a)anthracene	0.978	0.17	mg/Kg wet	1.67		58.7	40-140			
Benzo(a)pyrene	0.963	0.17	mg/Kg wet	1.67		57.8	40-140			
Benzo(b)fluoranthene	0.862	0.17	mg/Kg wet	1.67		51.7	40-140			
Benzo(g,h,i)perylene	1.08	0.17	mg/Kg wet	1.67		65.1	40-140			
Benzo(k)fluoranthene	0.928	0.17	mg/Kg wet	1.67		55.7	40-140			
Chrysene	0.965	0.17	mg/Kg wet	1.67		57.9	40-140			
Dibenz(a,h)anthracene	0.979	0.17	mg/Kg wet	1.67		58.8	40-140			
Fluoranthene	1.01	0.17	mg/Kg wet	1.67		60.8	40-140			
Fluorene	0.902	0.17	mg/Kg wet	1.67		54.1	40-140			
Indeno(1,2,3-cd)pyrene	1.02	0.17	mg/Kg wet	1.67		61.4	40-140			
2-Methylnaphthalene	1.05	0.17	mg/Kg wet	1.67		63.3	40-140			
Naphthalene	0.888	0.17	mg/Kg wet	1.67		53.3	40-140			
Phenanthrene	0.946	0.17	mg/Kg wet	1.67		56.7	40-140			
Pyrene	0.823	0.17	mg/Kg wet	1.67		49.4	40-140			
Surrogate: Nitrobenzene-d5	2.44		mg/Kg wet	3.33		73.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.47		mg/Kg wet	3.33		74.0	30-130			
Surrogate: Terphenyl-d14	2.37		mg/Kg wet	3.33		71.0	30-130			

**QUALITY CONTROL**

**Semivolatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B015568 - SW-846 3546</b>										
<b>LCS Dup (B015568-BSD1)</b>										
					Prepared: 06/30/10 Analyzed: 07/02/10					
Acenaphthene	1.11	0.17	mg/Kg wet	1.67		66.5	40-140	19.7	30	
Acenaphthylene	1.14	0.17	mg/Kg wet	1.67		68.4	40-140	20.0	30	
Anthracene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140	18.5	30	
Benzo(a)anthracene	1.18	0.17	mg/Kg wet	1.67		70.7	40-140	18.5	30	
Benzo(a)pyrene	1.18	0.17	mg/Kg wet	1.67		70.5	40-140	19.9	30	
Benzo(b)fluoranthene	1.09	0.17	mg/Kg wet	1.67		65.2	40-140	23.1	30	
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.67		72.2	40-140	10.3	30	
Benzo(k)fluoranthene	1.18	0.17	mg/Kg wet	1.67		70.5	40-140	23.6	30	
Chrysene	1.17	0.17	mg/Kg wet	1.67		70.0	40-140	18.9	30	
Dibenz(a,h)anthracene	1.08	0.17	mg/Kg wet	1.67		64.7	40-140	9.62	30	
Fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.8	40-140	18.0	30	
Fluorene	1.05	0.17	mg/Kg wet	1.67		63.1	40-140	15.4	30	
Indeno(1,2,3-cd)pyrene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	10.0	30	
2-Methylnaphthalene	1.28	0.17	mg/Kg wet	1.67		77.1	40-140	19.7	30	
Naphthalene	1.09	0.17	mg/Kg wet	1.67		65.3	40-140	20.2	30	
Phenanthrene	1.14	0.17	mg/Kg wet	1.67		68.4	40-140	18.6	30	
Pyrene	1.02	0.17	mg/Kg wet	1.67		61.0	40-140	21.1	30	
Surrogate: Nitrobenzene-d5	3.12		mg/Kg wet	3.33		93.6	30-130			
Surrogate: 2-Fluorobiphenyl	3.16		mg/Kg wet	3.33		94.8	30-130			
Surrogate: Terphenyl-d14	2.94		mg/Kg wet	3.33		88.3	30-130			

**QUALITY CONTROL**

**Polychlorinated Biphenyls By GC/ECD - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B015566 - SW-846 3546**

**Blank (B015566-BLK1)**

Prepared: 06/30/10 Analyzed: 07/03/10

Aroclor-1016	ND	0.10	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1221	ND	0.10	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1232	ND	0.10	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1242	ND	0.10	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1248	ND	0.10	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1254	ND	0.10	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1260	ND	0.10	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1262	ND	0.10	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.10	mg/Kg wet							
Aroclor-1268	ND	0.10	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.191		mg/Kg wet	0.200		95.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.190		mg/Kg wet	0.200		94.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.193		mg/Kg wet	0.200		96.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			

**LCS (B015566-BS1)**

Prepared: 06/30/10 Analyzed: 07/03/10

Aroclor-1016	0.19	0.10	mg/Kg wet	0.200		93.1	40-140			
Aroclor-1016 [2C]	0.21	0.10	mg/Kg wet	0.200		104	40-140			
Aroclor-1260	0.20	0.10	mg/Kg wet	0.200		102	40-140			
Aroclor-1260 [2C]	0.20	0.10	mg/Kg wet	0.200		102	40-140			
Surrogate: Decachlorobiphenyl	0.213		mg/Kg wet	0.200		107	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.211		mg/Kg wet	0.200		105	30-150			
Surrogate: Tetrachloro-m-xylene	0.215		mg/Kg wet	0.200		108	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.210		mg/Kg wet	0.200		105	30-150			

**LCS Dup (B015566-BSD1)**

Prepared: 06/30/10 Analyzed: 07/03/10

Aroclor-1016	0.17	0.10	mg/Kg wet	0.200		85.0	40-140	9.02	30	
Aroclor-1016 [2C]	0.19	0.10	mg/Kg wet	0.200		93.0	40-140	10.8	30	
Aroclor-1260	0.18	0.10	mg/Kg wet	0.200		91.9	40-140	10.2	30	
Aroclor-1260 [2C]	0.18	0.10	mg/Kg wet	0.200		92.2	40-140	9.80	30	
Surrogate: Decachlorobiphenyl	0.185		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.183		mg/Kg wet	0.200		91.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.186		mg/Kg wet	0.200		92.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.182		mg/Kg wet	0.200		91.0	30-150			

**QUALITY CONTROL**

**Petroleum Hydrocarbons Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B015567 - SW-846 3546</b>										
<b>Blank (B015567-BLK1)</b>					Prepared: 06/30/10 Analyzed: 07/01/10					
TPH as Diesel	ND	8.3	mg/Kg wet							
<b>LCS (B015567-BS1)</b>					Prepared: 06/30/10 Analyzed: 07/01/10					
TPH as Diesel	25.6	8.3	mg/Kg wet	33.3		76.9	40-140			
<b>LCS Dup (B015567-BSD1)</b>					Prepared: 06/30/10 Analyzed: 07/01/10					
TPH as Diesel	26.5	8.3	mg/Kg wet	33.3		79.5	40-140	3.35	30	

**QUALITY CONTROL**

**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B015595 - SW-846 7471A</b>										
<b>Blank (B015595-BLK1)</b> Prepared: 06/30/10 Analyzed: 07/01/10										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B015595-BS1)</b> Prepared: 06/30/10 Analyzed: 07/01/10										
Mercury	0.953	0.025	mg/Kg wet	0.894		107	66-132			
<b>LCS Dup (B015595-BSD1)</b> Prepared: 06/30/10 Analyzed: 07/01/10										
Mercury	0.961	0.025	mg/Kg wet	0.936		103	66-132	0.905	30	
<b>Batch B015633 - SW-846 3050B</b>										
<b>Blank (B015633-BLK1)</b> Prepared: 07/01/10 Analyzed: 07/02/10										
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
<b>LCS (B015633-BS1)</b> Prepared: 07/01/10 Analyzed: 07/02/10										
Arsenic	124	5.0	mg/Kg wet	107		116	81.6-118.4			
Barium	365	5.0	mg/Kg wet	330		111	80.7-119.3			
Cadmium	280	0.50	mg/Kg wet	243		115	82.4-117.6			
Chromium	91.3	1.0	mg/Kg wet	80.4		113	78.8-120.7			
Lead	114	1.5	mg/Kg wet	107		107	79.1-120.3			
Selenium	213	10	mg/Kg wet	177		120	78.4-120.9			
Silver	45.5	1.0	mg/Kg wet	46.1		98.8	66.2-133.6			
<b>LCS (B015633-BS2)</b> Prepared: 07/01/10 Analyzed: 07/02/10										
Lead	0.843	0.75	mg/Kg wet	0.750		112	79.1-120.3			
<b>LCS Dup (B015633-BSD1)</b> Prepared: 07/01/10 Analyzed: 07/02/10										
Arsenic	116	4.9	mg/Kg wet	105		110	81.6-118.4	6.93	30	
Barium	349	4.9	mg/Kg wet	325		107	80.7-119.3	4.71	30	
Cadmium	281	0.49	mg/Kg wet	240		117	82.4-117.6	0.400	30	
Chromium	90.7	0.98	mg/Kg wet	79.2		115	78.8-120.7	0.660	30	
Lead	113	1.5	mg/Kg wet	105		107	79.1-120.3	0.991	30	
Selenium	200	9.8	mg/Kg wet	174		115	78.4-120.9	6.11	30	
Silver	43.7	0.98	mg/Kg wet	45.4		96.2	66.2-133.6	4.19	30	

**QUALITY CONTROL**

**Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B015617 - SW-846 1010</b>										
<b>Blank (B015617-BLK1)</b>										
Prepared & Analyzed: 06/30/10										
Flashpoint	> 212 °F		°F							
<b>LCS (B015617-BS1)</b>										
Prepared & Analyzed: 06/30/10										
Flashpoint	82		°F	81.0	101	98.8-101				
<b>LCS Dup (B015617-BSD1)</b>										
Prepared & Analyzed: 06/30/10										
Flashpoint	81		°F	81.0	99.5	98.8-101	1.11			

**FLAG/QUALIFIER SUMMARY**

- \* QC result is outside of established limits.
  - † Wide recovery limits established for difficult compound.
  - ‡ Wide RPD limits established for difficult compound.
  - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- T-04 Samples were recieved directly from the field at ambient temperature.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 6010B in Soil</i></b>	
Arsenic	CT,NH,NY
Barium	CT,NH,NY
Cadmium	CT,NH,NY
Chromium	CT,NH,NY
Lead	CT,NH,NY,AIHA
Selenium	CT,NH,NY
Silver	CT,NH,NY
<b><i>SW-846 7471A in Soil</i></b>	
Mercury	CT,NH,NY
<b><i>SW-846 8082 in Soil</i></b>	
Aroclor-1016	CT,NH,NY
Aroclor-1016 [2C]	CT,NH,NY
Aroclor-1221	CT,NH,NY
Aroclor-1221 [2C]	CT,NH,NY
Aroclor-1232	CT,NH,NY
Aroclor-1232 [2C]	CT,NH,NY
Aroclor-1242	CT,NH,NY
Aroclor-1242 [2C]	CT,NH,NY
Aroclor-1248	CT,NH,NY
Aroclor-1248 [2C]	CT,NH,NY
Aroclor-1254	CT,NH,NY
Aroclor-1254 [2C]	CT,NH,NY
Aroclor-1260	CT,NH,NY
Aroclor-1260 [2C]	CT,NH,NY
<b><i>SW-846 8270C in Soil</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
Naphthalene	CT,NY,NH
Phenanthrene	CT,NY,NH
Pyrene	CT,NY,NH

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2010
WA	State of Washington Department of Ecology	C2065	02/23/2011





**Sample Receipt Checklist**

CLIENT NAME: OTO RECEIVED BY: ALA DATE: 6-29-10

- 1) Was the chain(s) of custody relinquished and signed?  Yes  No
- 2) Does the chain agree with the samples?  Yes  No  
If not, explain:
- 3) Are all the samples in good condition?  Yes  No  
If not, explain:

4) How were the samples received:

On Ice  Direct from Sampling  Ambient  In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes  No  N/A

Temperature °C by Temp blank \_\_\_\_\_ Temperature °C by Temp gun 9.6

5) Are there Dissolved samples for the lab to filter? Yes  No   
Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Are there any samples "On Hold"? Yes  No  Stored where:

7) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No   
Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

8) Location where samples are stored:

Permission to subcontract samples? Yes  No   
(Walk-in clients only) if not already approved  
Client Signature: \_\_\_\_\_

**Containers received at Con-Test**

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)	<u>8</u>	2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below		SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments:

40 mL vials: # HCl \_\_\_\_\_ # Methanol \_\_\_\_\_  
# Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_  
# Thiosulfate \_\_\_\_\_ Unpreserved \_\_\_\_\_

Time and Date Frozen:

Do all samples have the proper Acid pH: Yes  No  N/A

Do all samples have the proper Base pH: Yes  No  N/A

**MADEP MCP Analytical Method Report Certification Form**

Laboratory Name: Con-Test Analytical Laboratory	Project #: 10F0796
Project Location: W.Way	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 10F0796-01 thru 10F0796-04

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
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**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature: _____ 	Position: Laboratory Director
Printed Name: Michael A. Erickson	Date: 07/07/10

July 15, 2010

Valerie Tillinghast  
OTO Associates  
293 Bridge St. Suite 500  
Springfield, MA 01103

Project Location: W.Way  
Client Job Number:  
Project Number: 2118-01-01  
Laboratory Work Order Number: 10G0202

Enclosed are results of analyses for samples received by the laboratory on July 8, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Susan M. Burney  
Project Manager



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

OTO Associates  
293 Bridge St. Suite 500  
Springfield, MA 01103  
ATTN: Valerie Tillinghast

REPORT DATE: 7/15/2010

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 2118-01-01

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 10G0202

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: W.Way

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Comp-3	10G0202-01	Soil		SW-846 1311 SW-846 6010B	
Comp-4	10G0202-02	Soil		SW-846 1311 SW-846 6010B	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only TCLP Cr was requested and reported.

**Login**

**Qualifications:**

---

Samples were recieved directly from the field at ambient temperature.

**Analyte & Samples(s) Qualified:**

10G0202-01[Comp-3], 10G0202-02[Comp-4]

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The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson  
Laboratory Director

Project Location: W.Way

Sample Description:

Work Order: 10G0202

Date Received: 7/8/2010

Sampled: 6/29/2010 10:45

Field Sample #: Comp-3

Sample ID: 10G0202-01

Sample Matrix: Soil

**TCLP - Metals Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010B	7/9/10	7/9/10 13:42	OP

Project Location: W.Way

Sample Description:

Work Order: 10G0202

Date Received: 7/8/2010

Sampled: 6/29/2010 11:30

Field Sample #: Comp-4

Sample ID: 10G0202-02

Sample Matrix: Soil

**TCLP - Metals Analyses**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	ND	0.010	mg/L	1		SW-846 6010B	7/9/10	7/9/10 13:47	OP

**Sample Extraction Data**

**Prep Method: SW-846 3010A-SW-846 6010B**

**Leachates were extracted on 7/8/2010 per SW-846 1311 in Batch B015960**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [mL]</b>	<b>Final [mL]</b>	<b>Date</b>
10G0202-01 [Comp-3]	B015981	50.0	50.0	07/09/10
10G0202-02 [Comp-4]	B015981	50.0	50.0	07/09/10

**QUALITY CONTROL**

**TCLP - Metals Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B015981 - SW-846 3010A</b>										
<b>Blank (B015981-BLK1)</b>				Prepared & Analyzed: 07/09/10						
Chromium	ND	0.010	mg/L							
<b>LCS (B015981-BS1)</b>				Prepared & Analyzed: 07/09/10						
Chromium	0.497	0.010	mg/L	0.500		99.5	80-120			
<b>LCS Dup (B015981-BSD1)</b>				Prepared & Analyzed: 07/09/10						
Chromium	0.499	0.010	mg/L	0.500		99.9	80-120	0.404	20	

**FLAG/QUALIFIER SUMMARY**

- \* QC result is outside of established limits.
  - † Wide recovery limits established for difficult compound.
  - ‡ Wide RPD limits established for difficult compound.
  - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- T-04 Samples were recieved directly from the field at ambient temperature.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 6010B in Water</i>	

Chromium NY,CT

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2010
WA	State of Washington Department of Ecology	C2065	02/23/2011





**Sample Receipt Checklist**

CLIENT NAME: OTO RECEIVED BY: ACA DATE: 6-29-10

- 1) Was the chain(s) of custody relinquished and signed?  Yes  No
- 2) Does the chain agree with the samples?  Yes  No  
If not, explain:
- 3) Are all the samples in good condition?  Yes  No  
If not, explain:

4) How were the samples received:

On Ice  Direct from Sampling  Ambient  In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)? Yes  No  N/A

Temperature °C by Temp blank \_\_\_\_\_ Temperature °C by Temp gun 9.6

5) Are there Dissolved samples for the lab to filter? Yes  No

Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Are there any samples "On Hold"? Yes  No  Stored where:

7) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No

Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

8) Location where samples are stored:

Permission to subcontract samples? Yes  No   
(Walk-in clients only) if not already approved  
Client Signature: \_\_\_\_\_

**Containers received at Con-Test**

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)	<u>8</u>	2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below		SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments: \_\_\_\_\_

40 mL vials: # HCl \_\_\_\_\_ # Methanol \_\_\_\_\_  
# Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_  
# Thiosulfate \_\_\_\_\_ Unpreserved \_\_\_\_\_

Time and Date Frozen: \_\_\_\_\_

Do all samples have the proper Acid pH: Yes  No  N/A

Do all samples have the proper Base pH: Yes  No  N/A

**MADEP MCP Analytical Method Report Certification Form**

Laboratory Name: Con-Test Analytical Laboratory	Project #: 10G0202
Project Location: W.Way	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 10G0202-01 thru 10G0202-02

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
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**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature: _____ 	Position: Laboratory Director
Printed Name: Michael A. Erickson	Date: 07/15/10

July 16, 2010

Valerie Tillinghast  
OTO Associates  
293 Bridge St. Suite 500  
Springfield, MA 01103

Project Location: Wemel Co. Way, Easthampton  
Client Job Number:  
Project Number: J2118-01-01]  
Laboratory Work Order Number: 10G0296

Enclosed are results of analyses for samples received by the laboratory on July 9, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Susan M. Burney  
Project Manager



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

OTO Associates  
293 Bridge St. Suite 500  
Springfield, MA 01103  
ATTN: Valerie Tillinghast

REPORT DATE: 7/16/2010

PURCHASE ORDER NUMBER:

PROJECT NUMBER: J2118-01-01]

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 10G0296

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Wemel Co. Way, Easthampton

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Comp 4, S-1	10G0296-01	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010B	
				SW-846 7196A	
Comp 4, S-2	10G0296-02	Soil		SW-846 9045D	
				SM 2540G	
				SM2580 A	
				SW-846 6010B	
Comp 4, S-3	10G0296-03	Soil		SW-846 7196A	
				SW-846 9045D	
				SM 2540G	
				SM2580 A	
				SW-846 6010B	
				SW-846 7196A	
				SW-846 9045D	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only Cr results were requested and reported.

**SM2580 A**

**Qualifications:**

---

Sample received after recommended holding time was exceeded.

**Analyte & Samples(s) Qualified:**

**Oxidation/Reduction Potential**

10G0296-01[Comp 4, S-1], 10G0296-02[Comp 4, S-2], 10G0296-03[Comp 4, S-3]

**SW-846 7196A**

**Qualifications:**

---

For solid method SW846-7196A, the matrix spike is outside of control limits. pH and ORP results were indicative of reducing conditions. Reanalysis is not required. Analysis is in control based on LCS recoveries.

**Analyte & Samples(s) Qualified:**

**Hexavalent Chromium**

10G0296-03[Comp 4, S-3]

---

Elevated method detection limit due to intense color of sample

**Analyte & Samples(s) Qualified:**

**Hexavalent Chromium**

10G0296-01[Comp 4, S-1], 10G0296-02[Comp 4, S-2], 10G0296-03[Comp 4, S-3]

**SW-846 9045D**

**Qualifications:**

---

Sample received after recommended holding time was exceeded.

**Analyte & Samples(s) Qualified:**

**pH**

10G0296-01[Comp 4, S-1], 10G0296-02[Comp 4, S-2], 10G0296-03[Comp 4, S-3]

---

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson  
Laboratory Director

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-1

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	28	0.56	mg/Kg dry	1		SW-846 6010B	7/13/10	7/13/10 16:36	OP

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-1

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexavalent Chromium	ND	0.33	mg/Kg dry	2	W-06	SW-846 7196A	7/14/10	7/15/10 14:55	AED
Oxidation/Reduction Potential	190		mV	1	H-03	SM2580 A	7/10/10	7/10/10 10:00	LL
pH @22.8°C	6.1		pH Units	1	H-03	SW-846 9045D	7/10/10	7/10/10 10:00	LL
% Solids	93.9		% Wt	1		SM 2540G	7/13/10	7/14/10 9:33	NH

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-2

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	770	0.60	mg/Kg dry	1		SW-846 6010B	7/13/10	7/13/10 16:40	OP

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-2

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexavalent Chromium	ND	0.36	mg/Kg dry	2	W-06	SW-846 7196A	7/14/10	7/15/10 14:55	AED
Oxidation/Reduction Potential	310		mV	1	H-03	SM2580 A	7/10/10	7/10/10 10:00	LL
pH @22.9°C	6.2		pH Units	1	H-03	SW-846 9045D	7/10/10	7/10/10 10:00	LL
% Solids	88.4		% Wt	1		SM 2540G	7/13/10	7/14/10 9:33	NH

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-3

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Chromium	850	0.59	mg/Kg dry	1		SW-846 6010B	7/13/10	7/13/10 16:44	OP

Project Location: Wemel Co. Way, Easthampton

Sample Description:

Work Order: 10G0296

Date Received: 7/9/2010

Field Sample #: Comp 4, S-3

Sampled: 6/29/2010 09:30

Sample ID: 10G0296-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/PHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexavalent Chromium	ND	0.88	mg/Kg dry	5	MS-16, W-06	SW-846 7196A	7/14/10	7/15/10 14:55	AED
Oxidation/Reduction Potential	280		mV	1	H-03	SM2580 A	7/10/10	7/10/10 10:00	LL
pH @22.8°C	6.4		pH Units	1	H-03	SW-846 9045D	7/10/10	7/10/10 10:00	LL
% Solids	90.6		% Wt	1		SM 2540G	7/13/10	7/14/10 9:33	NH

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
10G0296-01 [Comp 4, S-1]	B016199	07/13/10
10G0296-02 [Comp 4, S-2]	B016199	07/13/10
10G0296-03 [Comp 4, S-3]	B016199	07/13/10

**SM2580 A**

Lab Number [Field ID]	Batch	Initial [g]	Date
10G0296-01 [Comp 4, S-1]	B016061	20.0	07/10/10
10G0296-02 [Comp 4, S-2]	B016061	20.0	07/10/10
10G0296-03 [Comp 4, S-3]	B016061	20.0	07/10/10

**Prep Method: SW-846 3050B-SW-846 6010B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10G0296-01 [Comp 4, S-1]	B016177	0.946	50.0	07/13/10
10G0296-02 [Comp 4, S-2]	B016177	0.942	50.0	07/13/10
10G0296-03 [Comp 4, S-3]	B016177	0.931	50.0	07/13/10

**SW-846 7196A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
10G0296-01 [Comp 4, S-1]	B016340	2.56	100	07/14/10
10G0296-02 [Comp 4, S-2]	B016340	2.52	100	07/14/10
10G0296-03 [Comp 4, S-3]	B016340	2.51	100	07/14/10

**SW-846 9045D**

Lab Number [Field ID]	Batch	Initial [g]	Date
10G0296-01 [Comp 4, S-1]	B016062	20.0	07/10/10
10G0296-02 [Comp 4, S-2]	B016062	20.0	07/10/10
10G0296-03 [Comp 4, S-3]	B016062	20.0	07/10/10

**QUALITY CONTROL**

**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B016177 - SW-846 3050B</b>										
<b>Blank (B016177-BLK1)</b>										
					Prepared & Analyzed: 07/13/10					
Chromium	ND	0.50	mg/Kg wet							
<b>LCS (B016177-BS1)</b>										
					Prepared & Analyzed: 07/13/10					
Chromium	85.2	1.0	mg/Kg wet	82.1	104	78.8-120.7				
<b>LCS Dup (B016177-BSD1)</b>										
					Prepared & Analyzed: 07/13/10					
Chromium	83.0	1.0	mg/Kg wet	82.2	101	78.8-120.7	2.65	30		

**QUALITY CONTROL**

**Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B016340 - SW-846 7196A</b>										
<b>Blank (B016340-BLK1)</b>										
Prepared & Analyzed: 07/15/10										
Hexavalent Chromium	ND	0.16	mg/Kg wet							
<b>LCS (B016340-BS1)</b>										
Prepared & Analyzed: 07/15/10										
Hexavalent Chromium	130	3.9	mg/Kg wet	130		96.2	80-120			
<b>LCS Dup (B016340-BSD1)</b>										
Prepared & Analyzed: 07/15/10										
Hexavalent Chromium	130	3.9	mg/Kg wet	130		102	80-120	5.69	35	

**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
H-03	Sample received after recommended holding time was exceeded.
MS-16	For solid method SW846-7196A, the matrix spike is outside of control limits. pH and ORP results were indicative of reducing conditions. Reanalysis is not required. Analysis is in control based on LCS recoveries.
W-06	Elevated method detection limit due to intense color of sample

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 6010B in Soil</i>	
Chromium	CT,NH,NY
<i>SW-846 7196A in Soil</i>	
Hexavalent Chromium	NY,CT,NH,NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2010
WA	State of Washington Department of Ecology	C2065	02/23/2011



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com  
 www.contestlabs.com

Company Name: OTO  
 Address: Springfield  
 Attention: Val Tillinghast  
 Project Location: Wemelco Way, East Hampton  
 Sampled By: Joel Harris

Telephone: ( ) \_\_\_\_\_  
 Project # 1218-01-01  
 Client PO # \_\_\_\_\_

**DATA DELIVERY (check one):**  
 FAX  EMAIL  WEBSITE CLIENT  
 Fax # : \_\_\_\_\_  
 Email: tillinghast@oto-env.com  
 Format:  EXCEL  PDF  GIS KEY  
 OTHER \_\_\_\_\_

Proposal Provided? (For Billing purposes)  
 yes  proposal date \_\_\_\_\_  
 no

Field ID	Sample Description	Lab #	Date Sampled	Start Date/Time	Stop Date/Time	Comp. osite	Grab	*Matrix Code	Conc. Code
	Comp 1, S-1	01	6/29/10	0930		X		S	
	↓ S-2	02		↓		X		S	
	↓ S-3	03		↓		X		S	

Analysis	Requested	Client	Comments
Hexavalent Chromium	X	X	
Total Chromium	X	X	
	X	X	

# of containers	**Preservation	-Cont. Code	-Cont. Code

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:  
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

**\*Matrix Code:**  
 GW = groundwater  
 WW = wastewater  
 DW = drinking water  
 A = air  
 S = soil/solid  
 SL = sludge  
 O = other

**\*\*Preservation Codes:**  
 I = Iced X = Na hydroxide  
 H = HCL T = Na thiosulfate  
 M = Methanol  
 N = Nitric Acid  
 S = Sulfuric Acid  
 B = Sodium bisulfate  
 O = Other

**Detection Limit Requirements**  
 Regulations?   
 Data Enhancement Project/RCP?  Y  N  
 Special Requirements or DL's: \_\_\_\_\_

**Turnaround \*\***  
 7-Day  
 10-Day  
 Other 5  
RUSH \* Day  
 \*24-Hr  \*48-Hr  
 \*72-Hr  \*4-Day  
 \* Require lab approval

Relinquished by: (signature) \_\_\_\_\_  
 Date/Time: 7/6/10 3:30pm  
 Received by: (signature) \_\_\_\_\_  
 Date/Time: 7/6/10 9:07  
 Relinquished by: (signature) \_\_\_\_\_  
 Date/Time: 7/9 1735  
 Received by: (signature) \_\_\_\_\_  
 Date/Time: 7-9 1735

Laboratory Comments: \_\_\_\_\_

\*\*\* TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

AIHA, NELAC & WBE/DBE Certified

www.contestlabs.com



39 Spruce St.  
East Longmeadow, MA.  
01028  
P: 413-525-2332  
F: 413-525-6405

**Sample Receipt Checklist**

CLIENT NAME: OTO RECEIVED BY: RB DATE: 7-9-10

- 1) Was the chain(s) of custody relinquished and signed?  Yes  No
- 2) Does the chain agree with the samples?  Yes  No  
If not, explain:
- 3) Are all the samples in good condition?  Yes  No  
If not, explain:

4) How were the samples received:

On Ice  Direct from Sampling  Ambient  In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)?  Yes  No  N/A

Temperature °C by Temp blank \_\_\_\_\_ Temperature °C by Temp gun 2.0

5) Are there Dissolved samples for the lab to filter? Yes  No   
Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Are there any samples "On Hold"? Yes  No  Stored where:

7) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No   
Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

8) Location where samples are stored:  Permission to subcontract samples? Yes  No   
(Walk-in clients only) if not already approved  
Client Signature: \_\_\_\_\_

**Containers received at Con-Test**

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)	<u>RB 6</u>	2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below		SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments:

40 mL vials: # HCl \_\_\_\_\_ # Methanol \_\_\_\_\_  
# Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_  
# Thiosulfate \_\_\_\_\_ Unpreserved \_\_\_\_\_

Time and Date Frozen:

Do all samples have the proper Acid pH: Yes  No  N/A

Do all samples have the proper Base pH: Yes  No  N/A

**MADEP MCP Analytical Method Report Certification Form**

Laboratory Name: Con-Test Analytical Laboratory	Project #: 10G0296
Project Location: Wemel Co. Way, Easthampton	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 10G0296-01 thru 10G0296-03

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B (X)	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Signature: _____ 	Position: Laboratory Director
Printed Name: Michael A. Erickson	Date: 07/16/10

**APPENDIX F**  
**JULY 2010 ACS DATA**

## **APPENDIX F.1**

### **Cernak Parcel Asbestos Soil Data**

- **Figure F-1: Cernak Parcel – Soil Sample Location Plan**
- **EMSL Analytical Results**

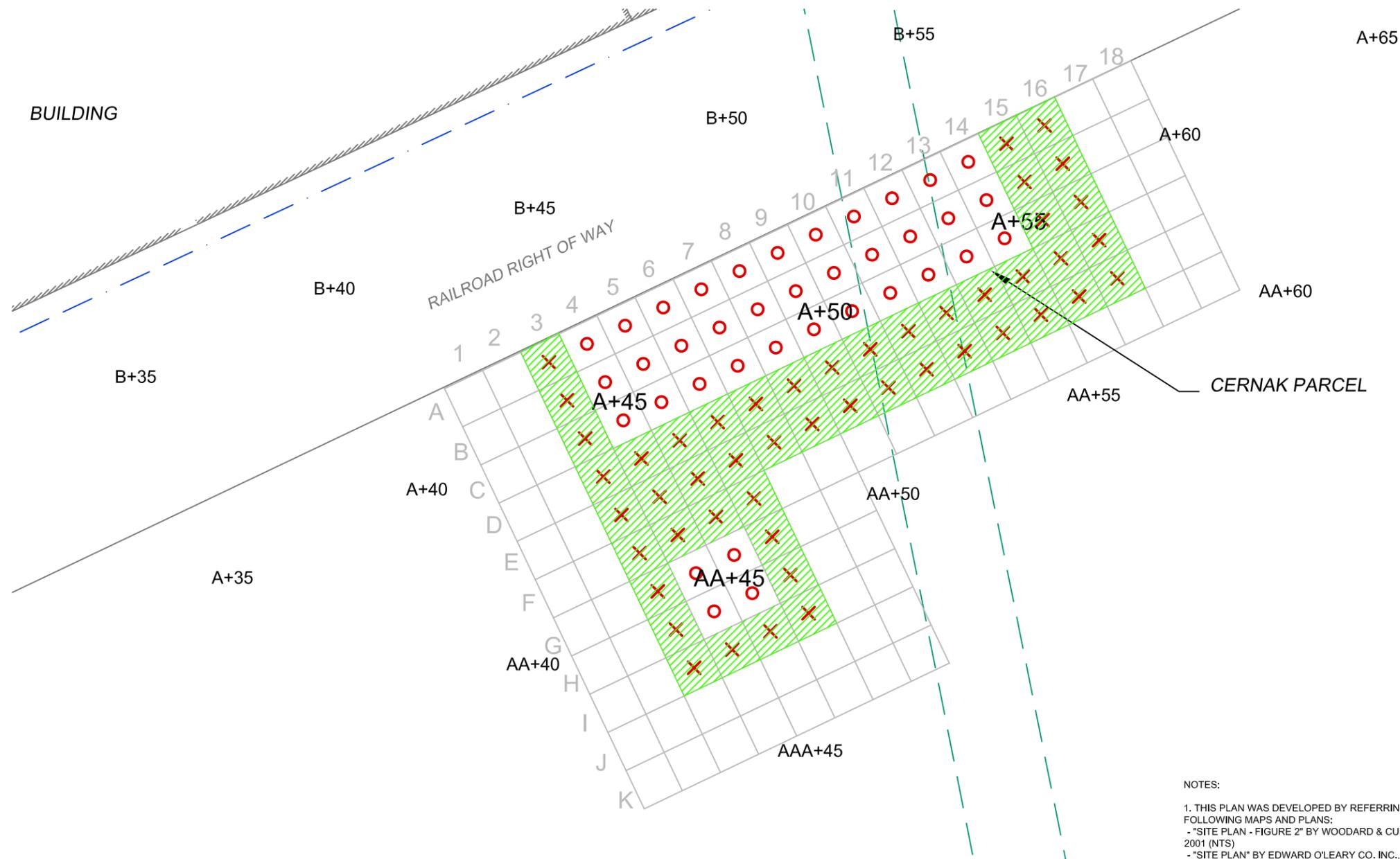
**LEGEND:**

**B+50** SURFACE SAMPLE LOCATIONS (OCTOBER TO DECEMBER 2000)

○ GRID LOCATION NOT SAMPLED

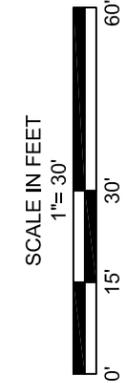
✕ GRID SOIL SAMPLES COLLECTED JULY, 2010

▨ NO ASBESTOS DETECTED



DESIGNED BY: KJO  
 CHECKED BY: MJT  
 DRAWN BY: CDA  
 DATE: JULY 19, 2007  
 REVISED: JULY, 2010/ CDA

**O'REILLY, TALBOT & OKUN**  
 ASSOCIATES  
 ENGINEERING  
 293 BRIDGE STREET  
 SUITE 307  
 SPRINGFIELD, MA 01103  
 PHONE: (413) 798-6222  
 EMAIL: OFFICE@OTO-ENV.COM



**W.R. GRACE & CO.**  
**FORMER ZONOLITE FACILITY**  
 19 WEMELCO WAY - EASTHAMPTON, MASSACHUSETTS  
**CERNAK PARCEL**  
**SAMPLE LOCATION PLAN**

PROJECT No.  
**J2118-01-01**  
 FIGURE No.  
**F-1**

**NOTES:**

- THIS PLAN WAS DEVELOPED BY REFERRING TO THE FOLLOWING MAPS AND PLANS:  
 - "SITE PLAN - FIGURE 2" BY WOODARD & CURRAN, DATED MAY, 2001 (NTS)  
 - "SITE PLAN" BY EDWARD O'LEARY CO. INC., DATED AUG. 30, 1963, REVISED MAY 26, 1993 (1"=40')  
 - TOWN OF EASTHAMPTON CARTOGRAPHIC ASSESSORS MAPS, DATED APRIL 8, 1994-MARCH 31, 1995 (NTS)
- ALL DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD(S) USED.



**EMSL Analytical, Inc.**

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Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/19/10 11:15 AM  
EMSL Order: 041015726

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/20/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CN-A3 041015726-0001	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
CN-B3 041015726-0002	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
CN-C3 041015726-0003	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
CN-D3 041015726-0004	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
CN-E3 041015726-0005	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected
CN-F3 041015726-0006	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:35:05

Analyst(s)  

---

*Chris Dojliko (14)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



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EMSL Proj:  
Analysis Date: 7/20/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CN-G3 041015726-0007	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
CN-H3 041015726-0008	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
CN-I3 041015726-0009	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
CN-D4 041015726-0010	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected
CN-D5 041015726-0011	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected
CN-D6 041015726-0012	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	50% Cellulose	50% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:35:05

Analyst(s)  

---

*Chris Dojliko (14)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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EMSL Order: 041015726

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/20/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CN-D7 041015726-0013	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Black Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (other)	None Detected
CN-D8 041015726-0014	CERNAK NORTHEAST AREA SURFACE SOIL SAMPLE	Brown Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:35:05

Analyst(s)  

---

*Chris Dojlikdo (14)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

041015726

CINNAMINSON, NJ 08077  
 PHONE: (800) 220-3675  
 FAX: (856) 786-5974

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

Company: O'Reilly, Talbot & Okun Associates, Inc.  
 Street: 293 Bridge Street, Suite 500  
 City: Springfield

State/Province: MA

Zip/Postal Code: 01118

Fax #: 413-788-8830

Email Address: kirchherr@oto-env.com

Report To (Name): Robert Kirchherr

Telephone #: 413-788-6222

Project Name/Number: Wemelco Way/ J2118-01-01

Purchase Order: J2118-01-01

U.S. State Samples Taken: MA

Please Provide Results:  Fax  Email  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.

**PCM - Air**

NIOSH 7400

w/ OSHA 8hr. TWA

**PLM - Bulk (reporting limit)**

PLM EPA 600/R-93/116 (<1%)

PLM EPA NOB (<1%)

Point Count

400 (<0.25%)  1000 (<0.1%)

Point Count w/Gravimetric

400 (<0.25%)  1000 (<0.1%)

NYS 198.1 (friable in NY)

NYS 198.6 NOB (non-friable-NY)

NIOSH 9002 (<1%)

**TEM - Air**  4-4.5hr TAT (AHERA only)

AHERA 40 CFR, Part 763

NIOSH 7402

EPA Level II

ISO 10312

**TEM - Bulk**

TEM EPA NOB

NYS NOB 198.4 (non-friable-NY)

Chatfield SOP

TEM Mass Analysis-EPA 600 sec. 2.5

**TEM - Water:** EPA 100.2

Fibers >10µm  Waste  Drinking

All Fiber Sizes  Waste  Drinking

**TEM - Dust**

Microvac - ASTM D 5755

Wipe - ASTM D6480

Carpet Sonication (EPA 600/J-93/167)

**Soil/Rock/Vermiculite**

PLM CARB 435 - A (0.25% sensitivity)

PLM CARB 435 - B (0.1% sensitivity)

TEM CARB 435 - B (0.1% sensitivity)

TEM CARB 435 - C (0.01% sensitivity)

EPA Protocol (Semi-Quantitative)

EPA Protocol (Quantitative)

**Other:**

Check For Positive Stop - Clearly Identify Homogenous Group

Samplers Signature: *[Signature]*

Samplers Name: Andy Rolinger

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CN-A3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-B3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-C3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-D3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-E3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-F3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-G3	Cernak Northeast Area Surface Soil Sample		07/16/10
CN-H3	Cernak Northeast Area Surface Soil Sample		07/16/10

Total # of Samples: 14  
 Time: 1839

Client Sample # (s): CN-A3

Relinquished (Client): *[Signature]*

Date: 07/16/10

Received (Lab): *[Signature]*

Date:

Comments/Special Instructions: *TR UPS 930*





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Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 9:20 AM  
EMSL Order: 041015822

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRN-A15 041015822-0001	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-A16 041015822-0002	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-B15 041015822-0003	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-B16 041015822-0004	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-C15 041015822-0005	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-C16 041015822-0006	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-D9 041015822-0007	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 11:21:09

Analyst(s)  

---

*Erica Valent (35)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



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**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 9:20 AM  
EMSL Order: 041015822

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRN-D10 041015822-0008	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-D11 041015822-0009	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-D12 041015822-0010	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-D13 041015822-0011	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-D14 041015822-0012	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-D15 041015822-0013	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-D16 041015822-0014	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 11:21:09

Analyst(s)  

---

Erica Valent (35)

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



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**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 9:20 AM  
EMSL Order: 041015822

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRN-E4 041015822-0015	CERNAK NE AREA SURFACE SOIL SAMPLE	Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E5 041015822-0016	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E6 041015822-0017	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E7 041015822-0018	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E8 041015822-0019	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E9 041015822-0020	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-E10 041015822-0021	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 11:21:09

Analyst(s)  

---

*Erica Valent (35)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 9:20 AM  
EMSL Order: 041015822

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRN-E11 041015822-0022	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
CRN-E12 041015822-0023	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E13 041015822-0024	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-E14 041015822-0025	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E15 041015822-0026	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-E16 041015822-0027	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-F4 041015822-0028	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 11:21:09

Analyst(s)  

---

*Erica Valent (35)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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 Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
 Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRN-F5 041015822-0029	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRN-F6 041015822-0030	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-G6 041015822-0031	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-H6 041015822-0032	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-I4 041015822-0033	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-I5 041015822-0034	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRN-I6 041015822-0035	CERNAK NE AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 11:21:09

Analyst(s)  
 Erica Valent (35)

  
 Stephen Siegel, CIH, Laboratory Manager  
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



EMSL ANALYTICAL, INC.  
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# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

041015822

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

Company : O'Reilly, Talbot & Okun Associates, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 293 Bridge Street, Suite 500		Third Party Billing requires written authorization from third party	
City: Springfield	State/Province: MA	Zip/Postal Code: 01103	Country: US
Report To (Name): Robert Kirchherr		Fax #: 413-788-8830	
Telephone #: 413-788-6222		Email Address: kirchherr@oto-env.com	
Project Name/Number: Wemelco Way/ J2118-01-01			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: J2118-01-01	U.S. State Samples Taken: MA
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input checked="" type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 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.			
<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		<b>TEM - Air</b> <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	
<b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) 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%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		<b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 <b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)	
		<b>Soil/Rock/Vermiculite</b> <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"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)	
		<b>Other:</b> <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: Andrew Rolinger		Samplers Signature: <i>CA APR</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CRN-A15	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-A16	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-B15	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-B16	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-C15	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-C16	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D9	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D10	Cernak Northeast Area Surface Soil Sample		07/19/10
Client Sample # (s):	<i>CRN-A15 - CRN-16</i>	Total # of Samples:	<i>35</i>
Relinquished (Client):	<i>[Signature]</i>	Date:	<i>07/19/10</i>
Received (Lab):	<i>DMB-EX-920A</i>	Date:	<i>7-20-10</i>
Comments/Special Instructions:			

SAMPLES ACCEPTED FOR ANALYSIS BY EMSL ANALYTICAL INC  
 RECEIVED  
 7/20/10 11:10:40  
 CINNAMINSON, NJ



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## Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

04 1015822

200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CRN-D11	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D12	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D13	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D14	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D15	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-D16	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E4	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E5	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E6	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E7	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E8	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E9	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E10	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E11	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E12	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E13	Cernak Northeast Area Surface Soil Sample		07/19/10
*Comments/Special Instructions:			

RECEIVED  
 JUL 20 AM 10 40  
 EMSL ANALYTICAL INC.  
 ESTIMONT, NJ  
 SAMPLES ACCEPTED  
 FOR ANALYSIS BY  
 EMSL ANALYTICAL INC.



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## Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

041015822

200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077

PHONE: (800) 220-3675

FAX: (856) 786-5974

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CRN-E14	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E15	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-E16	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-F4	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-F5	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-F6	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-G6	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-H6	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-I4	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-I5	Cernak Northeast Area Surface Soil Sample		07/19/10
CRN-I6	Cernak Northeast Area Surface Soil Sample		07/19/10
*Comments/Special Instructions:			

RECEIVED  
EMSL  
WESTMONT, NJ

10-08-10 20 AM 10:10

SAMPLES ACCEPTED  
FOR ANALYSIS BY  
EMSL ANALYTICAL INC.

## **APPENDIX F.2**

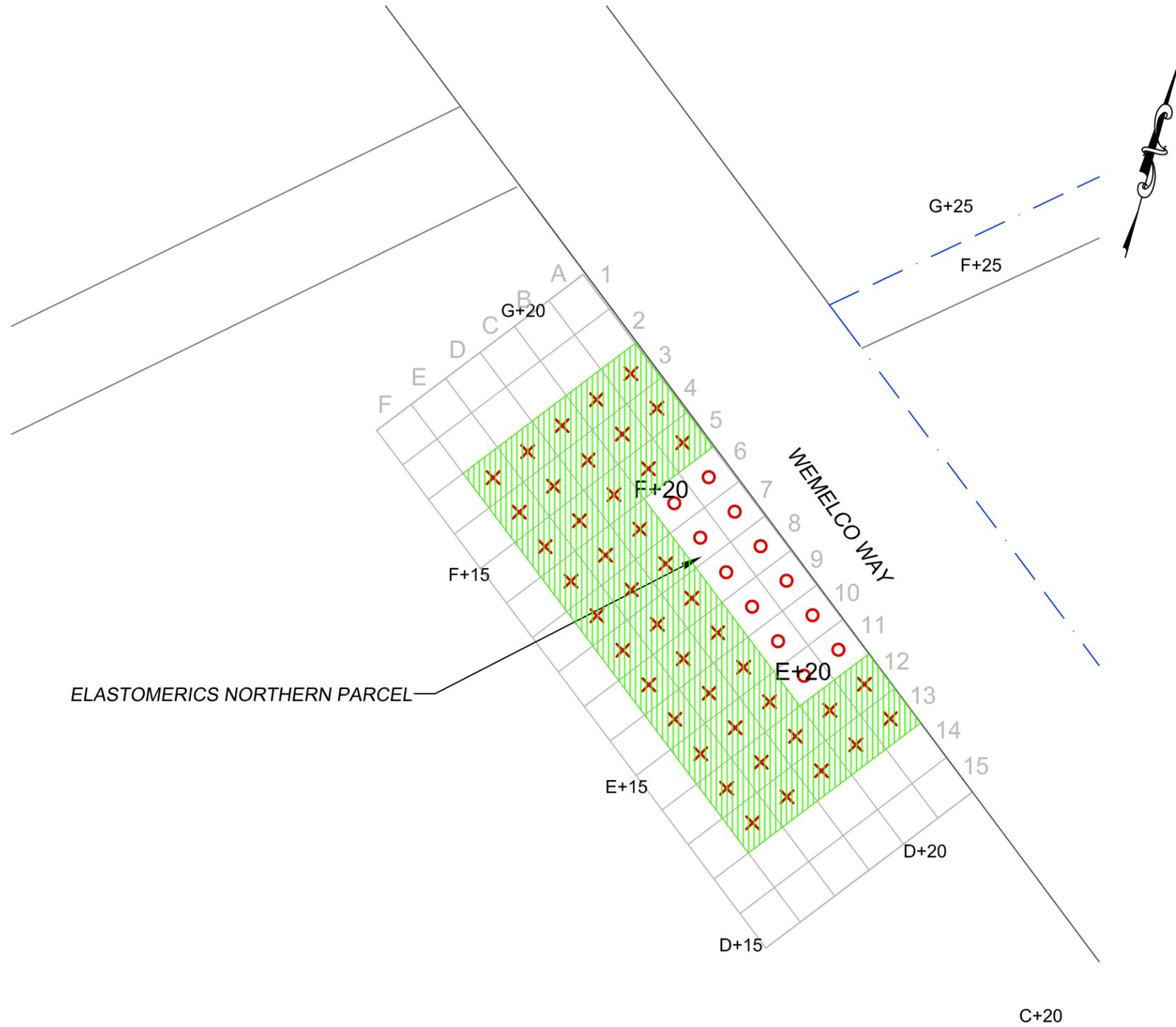
### **Elastomerics Northern Parcel Asbestos Soil Data**

- **Figure F-2: Elastomerics Northern Parcel – Sample Location Plan**
- **EMSL Analytical Results**

F:\J2118\00\2118 WR Grace & Co\01-01 WR Grace Wemelco Way Easthampton MA-Remediation Plan Prep\CAD Files\J2118-01-01 Wemelco Way Easthampton.dwg

**LEGEND:**

- G+20 SURFACE SAMPLE LOCATIONS (OCTOBER TO DECEMBER 2000)
- GRID LOCATION NOT SAMPLED
- ✕ GRID SOIL SAMPLES COLLECTED JULY, 2010
- NO ASBESTOS DETECTED



**NOTES:**

1. THIS PLAN WAS DEVELOPED BY REFERRING TO THE FOLLOWING MAPS AND PLANS:
  - "SITE PLAN - FIGURE 2" BY WOODARD & CURRAN, DATED MAY, 2001 (NTS)
  - "SITE PLAN" BY EDWARD O'LEARY CO. INC., DATED AUG. 30, 1963, REVISED MAY 26, 1993 (1"=40')
  - TOWN OF EASTHAMPTON CARTOGRAPHIC ASSESSORS MAPS, DATED APRIL 8, 1994-MARCH 31, 1995 (NTS)
2. ALL DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD(S) USED.

DESIGNED BY: KJO	DRAWN BY: CDA	ENGINEERING
CHECKED BY: MJT	DATE: JULY 19, 2007	PHONE: (413) 798-6222
	REVISED: JULY, 2010/ CDA	EMAIL: OFFICE@OTO-ENV.COM
<b>O'REILLY, TALBOT &amp; OKUN</b> ASSOCIATES		
293 BRIDGE STREET SUITE 307 SPRINGFIELD, MA 01103		

SCALE IN FEET  
1" = 30'

**W.R. GRACE & CO.**  
**FORMER ZONOLITE FACILITY**  
19 WEMELCO WAY - EASTHAMPTON, MASSACHUSETTS

---

**ELASTOMERICS NORTHERN PARCEL**  
**SOIL SAMPLE LOCATIONS**

PROJECT No.  
**J2118-01-01**

FIGURE No.  
**F-2**



**EMSL Analytical, Inc.**

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EMSL Order: 041015683

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-A3 041015683-0001	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-A4 041015683-0002	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-A5 041015683-0003	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-A12 041015683-0004	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-A13 041015683-0005	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-B3 041015683-0006	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:25:18

Analyst(s)  

---

*Will DiBella (43)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-B4 <i>041015683-0007</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-B5 <i>041015683-0008</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-B12 <i>041015683-0009</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-B13 <i>041015683-0010</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-C3 <i>041015683-0011</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-C4 <i>041015683-0012</i>	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>

Initial report from 07/21/2010 06:25:18

Analyst(s)  

---

*Will DiBella (43)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-C5 041015683-0013	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-C6 041015683-0014	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-C7 041015683-0015	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-C8 041015683-0016	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-C9 041015683-0017	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
EL-C10 041015683-0018	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Gray Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:25:18

Analyst(s)  

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*Will DiBella (43)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/19/10 11:15 AM  
EMSL Order: 041015683

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

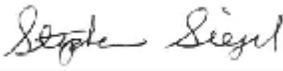
Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-C11 <i>041015683-0019</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-C12 <i>041015683-0020</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-C13 <i>041015683-0021</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-D3 <i>041015683-0022</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-D4 <i>041015683-0023</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-D5 <i>041015683-0024</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	15%	Cellulose	85% Non-fibrous (other) <b>None Detected</b>

Initial report from 07/21/2010 06:25:18

Analyst(s)  

---

*Will DiBella (43)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



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Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-D6 041015683-0025	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other) <b>None Detected</b>
EL-D7 041015683-0026	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other) <b>None Detected</b>
EL-D8 041015683-0027	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other) <b>None Detected</b>
EL-D9 041015683-0028	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	25%	Cellulose	75% Non-fibrous (other) <b>None Detected</b>
EL-D10 041015683-0029	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-D11 041015683-0030	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>

Initial report from 07/21/2010 06:25:18

Analyst(s)  

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*Will DiBella (43)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

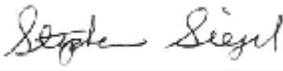
Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-D12 <i>041015683-0031</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-D13 <i>041015683-0032</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-E3 <i>041015683-0033</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-E4 <i>041015683-0034</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-E5 <i>041015683-0035</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>
EL-E6 <i>041015683-0036</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>

Initial report from 07/21/2010 06:25:18

Analyst(s)  

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*Will DiBella (43)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
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**Springfield, MA 01103**

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EMSL Order: 041015683

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **J2118-01-01/WEMELCO WAY**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-E7 <i>041015683-0037</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-E8 <i>041015683-0038</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-E9 <i>041015683-0039</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-E10 <i>041015683-0040</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-E11 <i>041015683-0041</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	20%	Cellulose	80% Non-fibrous (other) <b>None Detected</b>
EL-E12 <i>041015683-0042</i>	ELASTOMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30%	Cellulose	70% Non-fibrous (other) <b>None Detected</b>

Initial report from 07/21/2010 06:25:18

Analyst(s)  

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*Will DiBella (43)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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**Suite 500**  
**Springfield, MA 01103**

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EMSL Order: 041015683

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EMSL Proj:  
Analysis Date: 7/21/2010

Project: **J2118-01-01/WEMELCO WAY**

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

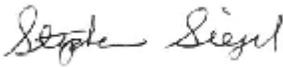
Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
EL-E13 041015683-0043	ELASTROMETRIC S AREA SURFACE SOIL SAMPLE	Brown Non-Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 06:25:18

Analyst(s)  

---

*Will DiBella (43)*

---

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or other approved signatory

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# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

041015683

CINNAMINSON, NJ 08077

PHONE: (800) 220-3675

FAX: (856) 786-5974

Company : O'Reilly, Talbot & Okun Associats, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 293 Bridge Street, Suite 500		Third Party Billing requires written authorization from third party	
City: Springfield	State/Province: MA	Zip/Postal Code: 01118	Country: US
Report To (Name): Robert Kirchherr		Fax #: 413-788-8830	
Telephone #: 413-788-6222		Email Address: kirchherr@oto-env.com	
Project Name/Number: Wemelco Way/ J2118-01-01			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email Purchase Order: J2118-01-01 U.S. State Samples Taken: MA			
<b>Turnaround Time (TAT) Options* – Please Check</b>			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input checked="" type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 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.			
<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		<b>TEM - Air</b> <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	
<b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) 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%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		<b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 <b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)	
		<b>Soil/Rock/Vermiculite</b> <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"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)	
		<b>Other:</b> <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop – Clearly Identify Homogenous Group			
Samplers Name: Andy Rolinger		Samplers Signature: <i>GA for APR</i>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
EL-A3	Elastrometrics Area Surface Soil Sample		07/16/10
EL-A4	Elastrometrics Area Surface Soil Sample		07/16/10
EL-A5	Elastrometrics Area Surface Soil Sample		07/16/10
EL-A12	Elastrometrics Area Surface Soil Sample		07/16/10
EL-A13	Elastrometrics Area Surface Soil Sample		07/16/10
EL-B3	Elastrometrics Area Surface Soil Sample		07/16/10
EL-B4	Elastrometrics Area Surface Soil Sample		07/16/10
EL-B5	Elastrometrics Area Surface Soil Sample		07/16/10
Client Sample # (s):	EL-A1 - EL-E13	Total # of Samples:	43
Relinquished (Client):	<i>[Signature]</i>	Date:	07/16/10
Received (Lab):	<i>RUPS 930</i>	Date:	07/16/10
Comments/Special Instructions:			



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## Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

04105683

PHONE:  
FAX:

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
EL-B12	Elastrometrics Area Surface Soil Sample		07/16/10
EL-B13	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C3	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C4	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C5	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C6	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C7	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C8	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C9	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C10	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C11	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C12	Elastrometrics Area Surface Soil Sample		07/16/10
EL-C13	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D3	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D4	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D5	Elastrometrics Area Surface Soil Sample		07/16/10
*Comments/Special Instructions: <div style="float: right; text-align: right; margin-top: 10px;">             RECEIVED              EMSL              WESTMONT, NJ              10 JUL 19 AM 11:15           </div>			



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# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

041015683

PHONE:

FAX:

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
EL-D6	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D7	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D8	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D9	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D10	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D11	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D12	Elastrometrics Area Surface Soil Sample		07/16/10
EL-D13	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E3	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E4	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E5	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E6	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E7	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E8	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E9	Elastrometrics Area Surface Soil Sample		07/16/10
EL-E10	Elastrometrics Area Surface Soil Sample		07/16/10
*Comments/Special Instructions:			

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## **APPENDIX F.3**

### **Elastomerics Southern Parcel Asbestos Soil Data**

- **Figure F-3: Elastomerics Southern Parcel – Sample Location Plan**
- **EMSL Analytical Results**

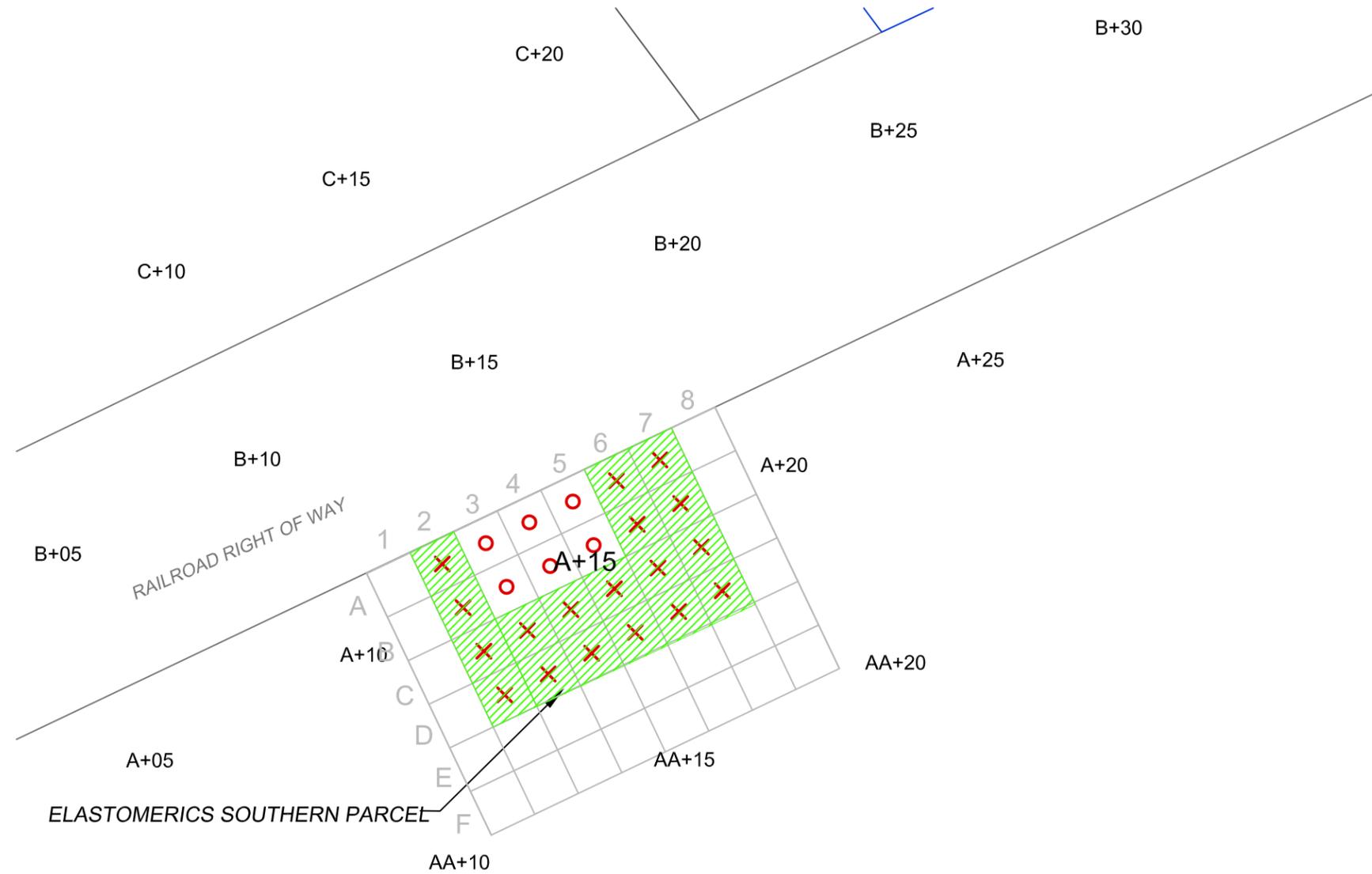
**LEGEND:**

C+20 SURFACE SAMPLE LOCATIONS (OCTOBER TO DECEMBER 2000)

○ GRID LOCATION NOT SAMPLED

✕ GRID SOIL SAMPLES COLLECTED JULY, 2010

▨ NO ASBESTOS DETECTED



DESIGNED BY: KJO  
 CHECKED BY: MJT  
 DRAWN BY: CDA  
 DATE: JULY 19, 2007  
 REVISED: JULY, 2010/CDA

**O'REILLY, TALBOT & OKUN**  
 ASSOCIATES

293 BRIDGE STREET  
 SUITE 307  
 SPRINGFIELD, MA 01103



PHONE: (413) 798-6222  
 EMAIL: OFFICE@OTO-ENV.COM



**W.R. GRACE & CO.**  
**FORMER ZONOLITE FACILITY**  
 19 WEMELCO WAY - EASTHAMPTON, MASSACHUSETTS  
**ELASTOMERICS SOUTHERN PARCEL**  
**SAMPLE LOCATION PLAN**

PROJECT No.  
**J2118-01-01**

FIGURE No.  
**F-3**

**NOTES:**

- THIS PLAN WAS DEVELOPED BY REFERRING TO THE FOLLOWING MAPS AND PLANS:
  - "SITE PLAN - FIGURE 2" BY WOODARD & CURRAN, DATED MAY, 2001 (NTS)
  - "SITE PLAN" BY EDWARD O'LEARY CO. INC., DATED AUG. 30, 1963, REVISED MAY 26, 1993 (1"=40')
  - TOWN OF EASTHAMPTON CARTOGRAPHIC ASSESSORS MAPS, DATED APRIL 8, 1994-MARCH 31, 1995 (NTS)

2. ALL DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD(S) USED.



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 10:00 AM  
EMSL Order: 041015821

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRS-A6 041015821-0001	CERNAK SW AREA SURFACE SOIL SAMPLE	Brown Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
CRS-A7 041015821-0002	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
CRS-B6 041015821-0003	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
CRS-B7 041015821-0004	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-C3 041015821-0005	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-C4 041015821-0006	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-C5 041015821-0007	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 12:15:40

Analyst(s)  

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*Dave Poitras (14)*

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Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/20/10 10:00 AM  
EMSL Order: 041015821

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/21/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRS-C6 041015821-0008	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
CRS-C7 041015821-0009	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-D3 041015821-0010	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-D4 041015821-0011	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-D5 041015821-0012	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
CRS-D6 041015821-0013	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
CRS-D7 041015821-0014	CERNAK SW AREA SURFACE SOIL SAMPLE	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

Initial report from 07/21/2010 12:15:40

Analyst(s)  

---

*Dave Poitras (14)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

041015821

EMSL ANALYTICAL, INC.  
710 Route 13, North  
Plainfield, NJ 07060  
Phone: 908-771-3838  
Fax: 908-771-5914

Company : O'Reilly, Talbot & Okun Associates, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 293 Bridge Street, Suite 500		Third Party Billing requires written authorization from third party	
City: Springfield	State/Province: MA	Zip/Postal Code: 01103	Country: US
Report To (Name): Robert Kirchherr		Fax #: 413-788-8830	
Telephone #: 413-788-6222		Email Address: kirchherr@oto-env.com	
Project Name/Number: Wemelco Way/ J2118-01-01		U.S. State Samples Taken: MA	
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: J2118-01-01	

**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.

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <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	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
<b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) 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%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	<b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5	<b>Soil/Rock/Vermiculite</b> <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"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative)
<b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		

Check For Positive Stop - Clearly Identify Homogenous Group

Samplers Name: Andrew Rolinger      Samplers Signature: *A Rolinger*

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CRS-A6	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-A7	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-B6	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-B7	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-C3	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-C4	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-C5	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-C6	Cernak Southwest Area Surface Soil Sample		07/19/10

Client Sample # (s): *CRS-A6 - CRS-D7*      Total # of Samples: *14*

Relinquished (Client): *[Signature]*      Date: *07/20/10 (for 07/19/10)*      Time: *4:53*

Received (Lab): *MMB-UPS-10A*      Date: *7-20-10*      Time: \_\_\_\_\_

Comments/Special Instructions:

SAMPLES ACCEPTED  
 FOR ANALYSIS BY  
 EMSL ANALYTICAL, INC.  
 WESTMINT, NJ  
 RECEIVED  
 EMSL  
 WESTMINT, NJ  
 JUL 20 AM 10:38





**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Robert Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENVI07  
Customer PO: J2118-01-01  
Received: 07/21/10 10:00 AM  
EMSL Order: 041016049

Fax: (413) 788-8830 Phone: (413) 788-6222

EMSL Proj:  
Analysis Date: 7/22/2010

Project: **WMELCO WAY/J2118-01-01**

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

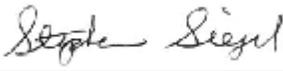
Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
CRS-A2 041016049-0001	CERNAK SOUTHWEST AREA SURFACE SOIL SAMPLE	Brown/Black Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
CRS-B2 041016049-0002	CERNAK SOUTHWEST AREA SURFACE SOIL SAMPLE	Brown/Black Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
CRS-C2 041016049-0003	CERNAK SOUTHWEST AREA SURFACE SOIL SAMPLE	Brown/Black Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
CRS-D2 041016049-0004	CERNAK SOUTHWEST AREA SURFACE SOIL SAMPLE	Brown/Black Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected

Initial report from 07/22/2010 07:08:13

Analyst(s)  

---

*Chris Little (4)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

041016049

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

Company : O'Reilly, Talbot & Okun Associates, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 293 Bridge Street, Suite 500		<i>Third Party Billing requires written authorization from third party</i>	
City: Springfield	State/Province: MA	Zip/Postal Code: 01103	Country: US
Report To (Name): Robert Kirchherr		Fax #: 413-788-8830	
Telephone #: 413-788-6222		Email Address: kirchherr@oto-env.com	
Project Name/Number: Wemelco Way/ J2118-01-01			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order: J2118-01-01	U.S. State Samples Taken: MA

**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.

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) 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%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	<b>TEM - Air</b> <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 <b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 <b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <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"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <b>Other:</b> <input type="checkbox"/>
---	--	--

Check For Positive Stop - Clearly Identify Homogenous Group

Samplers Name: Andrew Rolinger      Samplers Signature: *Andrew Rolinger*

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
CRS-A2	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-B2	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-C2	Cernak Southwest Area Surface Soil Sample		07/19/10
CRS-D2	Cernak Southwest Area Surface Soil Sample		07/19/10

Client Sample # (s): CRS-A2 - CRS-D2      Total # of Samples: 4

Relinquished (Client): *[Signature]*      Date: 07/20/10      Time: 1100

Received (Lab): *[Signature]*      Date: 7-21-10      Time:     

Comments/Special Instructions:

SAMPLES ACCEPTED FOR ANALYSIS BY EMSL ANALYTICAL INC. RECEIVED WESTMINSTER, NJ



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 858-4800 Fax: (856) 786-5974 Email: westmontaslab@EMSL.com

Attn: **Bob Kirchherr**  
**O'Reilly, Talbot & Okun Associates, Inc.**  
**293 Bridge Street**  
**Suite 500**  
**Springfield, MA 01103**

Customer ID: ENV107  
Customer PO:  
Received: 07/22/10 9:40 AM  
EMSL Order: 041016137

Fax: (413) 788-8830 Phone: (413) 788-6222  
Project: **WEMELCO WAY/J2118-01-01**

EMSL Proj:  
Analysis Date: 7/23/2010

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A+15 041016137-0001		Brown Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
A+45 041016137-0002		Brown Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
A+50 041016137-0003		Brown Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
A+55 041016137-0004		Brown Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
AA+45 041016137-0005		Brown Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
E+20 041016137-0006		Brown Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
F+20 041016137-0007		Brown Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected

Initial report from 07/23/2010 11:42:11

Analyst(s)  

---

*Chris Dojliko (7)*

---

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. The test results meet all NELAC requirements unless otherwise specified.  
Samples analyzed by EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

041016137

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

Company : O'Reilly, Talbot & Okun Assoc, Inc. EMSL-Bill to:  Same  Different  
If Bill to is Different note instructions in Comments\*\*

Street: 293 Bridge Street, Suite 500 Third Party Billing requires written authorization from third party

City: Springfield State/Province: MA Zip/Postal Code: 01002 Country: USA

Report To (Name): Bob Kirchherr Fax #:

Telephone #: 413-788-6222 Email Address: kirchherr@oto-env.com

Project Name/Number: Wemelco Way/J2118-01-01

Please Provide Results:  Fax  Email Purchase Order: U.S. State Samples Taken: MA

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.

<p><b>PCM - Air</b></p> <p><input type="checkbox"/> NIOSH 7400</p> <p><input type="checkbox"/> w/ OSHA 8hr. TWA</p> <p><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NYS 198.1 (friable in NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p>	<p><b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only)</p> <p><input type="checkbox"/> AHERA 40 CFR, Part 763</p> <p><input type="checkbox"/> NIOSH 7402</p> <p><input type="checkbox"/> EPA Level II</p> <p><input type="checkbox"/> ISO 10312</p> <p><b>TEM - Bulk</b></p> <p><input type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (non-friable-NY)</p> <p><input type="checkbox"/> Chatfield SOP</p> <p><input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5</p> <p><b>TEM - Water:</b> EPA 100.2</p> <p>Fibers &gt;10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p> <p>All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p>	<p><b>TEM- Dust</b></p> <p><input type="checkbox"/> Microvac - ASTM D 5755</p> <p><input type="checkbox"/> Wipe - ASTM D6480</p> <p><input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)</p> <p><b>Soil/Rock/Vermiculite</b></p> <p><input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity)</p> <p><input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity)</p> <p><input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity)</p> <p><input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity)</p> <p><input type="checkbox"/> EPA Protocol (Semi-Quantitative)</p> <p><input type="checkbox"/> EPA Protocol (Quantitative)</p> <p><b>Other:</b></p> <p><input type="checkbox"/></p>
---	--	---

Check For Positive Stop - Clearly Identify Homogenous Group

Samplers Name: Joel A. Harris Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
A+15	6-12" Depth Soil ↓		7/21/10-12:30pm
A+45			12:35
A+50			12:55
A+55			1:00
AA+45			12:45
E+20			12:1000
F+20			12:15

Client Sample # (s): - Total # of Samples: 7

Relinquished (Client): Harris Date: 7/21/10 Time: 2:00 pm

Received (Lab): DMUB-UPS-940A Date: 7-22-10 Time:

Comments/Special Instructions:

**APPENDIX G**  
**STAFF RESUMES**

# Kevin J. O'Reilly, LSP

PRINCIPAL

## AREAS OF EXPERTISE

- Facility Assessments and Compliance
- Massachusetts Contingency Plan (MCP) Compliance
- Environmental Remediation Facility Assessments and Compliance
- Environmental Remediation

## PROFILE

Hydrogeologist and Licensed Site Professional (LSP) Kevin O'Reilly has more than 25 years of experience performing and managing a wide range of hazardous waste site investigations and remediation projects, and has supervised more than 300 groundwater studies in New England. His experience includes hydrogeological groundwater remediation, sludge disposal landfills, groundwater modeling, and soil and groundwater remediation. He has served as an expert witness in litigation cases determining responsible parties and remedial response costs at hazardous waste disposal sites.

## PROJECT EXPERIENCE

### Nathan Bill Park

Springfield, Massachusetts, 2001-2008

As LSP, managed fast-tracked assessment of fill materials that were deposited at site more than 60 years ago. Performed study, including a Method 3 Risk Characterization, that quickly demonstrated that surficial soils posed no risk to park users. Worked closely with Massachusetts Department of Environmental Protection (MassDEP) and OTO professional engineers to develop cost-effective cap design. Construction has been completed and the park is in use.

### Dry Cleaning Facility

East Longmeadow, 2004-2008

Served as LSP at dry cleaning business where solvent had contaminated the groundwater. Used innovative vapor testing methods and Method 3 Risk Characterization to eliminate the need for expensive remediation techniques that had been recommended by the previous consultant. Achieved site closure in months instead of years and reduced costs by over \$100,000.

### Metal Salvage Business

Chicopee, Massachusetts, 2006-2008

Served as LSP for investigation and remediation at an operating salvage yard with extensive metal and polychlorinated biphenyl (PCB) soil contamination. Implemented an innovative and cost-effective on-site remediation plan where contaminated soil was relocated to an unused portion of the property. Avoided expensive excavation procedures that would have jeopardized regular business operations.

## REGISTRATIONS and AFFILIATIONS

- Licensed Site Professional (LSP), Massachusetts
- Licensed Environmental Professional (LEP), Connecticut
- Former Member, Board of Directors, Licensed Site Professional Association (LSPA)

## EDUCATION

- M.S., Geotechnical Engineering, Massachusetts Institute of Technology, 1980
- B.S., Civil Engineering, University of Notre Dame, 1978
- B.S., Geology, University of Notre Dame, 1977

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# Robert F. Kirchherr

ASSOCIATE

## AREAS OF EXPERTISE

- Indoor Air Quality
- Asbestos Consulting
- Industrial Hygiene and Safety
- Facility Assessments and Compliance

## PROFILE

Bob Kirchherr is a senior health and safety engineer with 22 years of experience in industrial manufacturing. For the past seven years, he has worked for OTO as a consultant. Bob specializes in asbestos assessment, management and abatement, lead paint assessment, and emergency response training and safety program management. Bob formerly managed the safety, industrial hygiene, fire protection and medical departments of a 1,500-employee manufacturing facility. Recently, he served as a subcommittee chairman for the city of Springfield's Local Emergency Planning Committee.

## PROJECT EXPERIENCE

### College Campus Building Indoor Air Quality Response South Hadley, Massachusetts, *ongoing*

Performs asbestos surveys, post-abatement inspections, and air clearance testing for demolition and/or renovation activities. Performed air sampling for Leadership in Energy & Environmental Design (LEED) criteria to successfully qualify new science center as LEED building. Conducted immediate response actions over the years at the college including indoor air quality testing and microbiological sampling, including mold testing.

### Medical Center Industrial Hygiene Services Springfield, Massachusetts, *ongoing*

Performed initial asbestos abatement survey of building materials in accordance with NESHAP regulations, on-site asbestos project monitoring during asbestos abatement, and dust monitoring during building demolition. Also provides industrial hygiene testing services and safety consultation during excavation and building activities to be conducted over the next several years.

### Real Estate Management Company Holyoke, Massachusetts, 2003

Conducted emergency response actions and evaluations at a commercial building as a result of employees becoming suddenly ill. Met with safety officials, limited access to the building, and sent an OTO team in to evaluate the building's structure and environmental control systems. Quickly identified a critical flaw in the HVAC system, repairs were made that put a reliable indoor air quality monitoring system in place.

## REGISTRATIONS and AFFILIATIONS

- Certified Safety Professional (CSP)
- Emergency Medical Technician, Paramedic (NREMT-P)
- AIHA Asbestos Analysts Registry, Certified
- American Industrial Hygiene Association, Member
- National Fire Protection Association, Member
- American Society of Safety Engineers, Member
- Fire Service Instructors, Member

## EDUCATION

- Emergency Management Services, Springfield College, 1988 – 1990
- Marketing and Management, American International College, 1976 – 1986

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# Michael J. Talbot, P.E., LSP

PRINCIPAL

## AREAS OF EXPERTISE

- Geotechnical Engineering
- Environmental Remediation Services
- Massachusetts Contingency Plan (MCP) Compliance

## PROFILE

Mike Talbot is a civil engineer with more than 25 years of experience in geotechnical engineering, groundwater contamination assessments, and landfill and hazardous waste site design and closure. Mike has performed and managed a wide range of engineering projects including subsurface explorations, laboratory testing, computer analysis, engineering design, report and permit application preparation and construction monitoring. His projects include industrial buildings, schools, office buildings, parking garages, hospitals, earth dams and residential developments.

## PROJECT EXPERIENCE

### **Former American Bosch Factory Site** Springfield, Massachusetts, 2008

Principal-in-charge for investigation and cleanup of a large manufacturing complex at which contaminants were detected. Prepared Phase I, II and IV reports consistent with the MCP. Remediation activities included soil vapor extraction and bioventing of petroleum-contaminated soils. A Permanent Solution, Class A has been issued.

### **Springfield Riverfront / Basketball Hall of Fame** Springfield, Massachusetts, 2001

Principal-in-charge for investigation and cleanup of 18 acre site contaminated at six locations. Facilitated liability negotiations with former property owners and assisted with MCP compliance. Developed remedial plans for Massachusetts Department of Environmental Protection (MassDEP) approval. Prepared construction bid package.

### **Baystate Medical Center Hospital of the Future** Springfield, Massachusetts, *Ongoing*

Principal-in-charge for subsurface exploration, foundation design and construction observation of a 600,000 square foot building. Significant geotechnical issues included foundation support and settlement, seismic design, lateral earth support, groundwater control, and the monitoring and control of construction vibrations on nearby facilities.

### **Yankee Candle Office Building and Distribution Center** South Deerfield, Massachusetts, 2001

Principal-in-charge and chief geotechnical engineer for construction of 250,000 square foot distribution warehouse and three-story office building. Analyzed geotechnical issues related to construction of complex over 60-foot thick layer of varved clay. Advised on construction, pavements and post-construction settlements due to foundation and building floor loads.

## REGISTRATIONS and AFFILIATIONS

- Registered Professional Engineer (PE), Massachusetts, Connecticut and California
- Licensed Site Professional (LSP), Massachusetts
- Former President, Connecticut Society of Civil Engineers

## EDUCATION

- M.S., Civil Engineering, concentration: Geotechnical Engineering, University of California at Berkeley, 1982
- B.S., Civil Engineering, Merrimack College, 1978
- 40-Hour Hazardous Waste Site Operations Health and Safety Refresher Course, 2006
- OSHA 10-hour Construction Safety & Health, 2008

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# Valerie D. Tillinghast, LSP

SENIOR PROJECT MANAGER

## AREAS OF EXPERTISE

- Risk Assessment
- Data Validation / Analytical Quality Assurance
- Massachusetts Contingency Plan (MCP) Compliance

## PROFILE

Valerie Tillinghast is an environmental chemist with more than 20 years experience on projects ranging from initial site investigations to Superfund sites. Valerie's work focuses on data usability issues and human health risk characterizations. In this capacity, she provides data validation services, statistical evaluations of data scattering and trends, and fate and transport modeling to estimate exposure point concentrations. Her experience with laboratory and on-site analysis gives her insight into data quality and usability.

## PROJECT EXPERIENCE

### Millbury Perchlorate Site

Millbury, Massachusetts, *ongoing*

Conducted MCP investigations on groundwater and surface water at a large construction site where perchlorate had seeped into public drinking water supply. Perchlorate is an emerging contaminant that has only recently been assigned regulatory limits by MassDEP and EPA, making Val's expertise invaluable.

### Monsanto Company Chemical Plant Closure

Everett, Massachusetts, *ongoing*

Provided a range of MCP support services for a complex, 80-acre former chemical manufacturing site, including risk assessments, quarterly groundwater monitoring, preparation of plans for public involvement meetings, on-site emission testing, removal actions and MCP reports.

### Nathan Bill Park Brownfields Site

Springfield, Massachusetts, *ongoing*

Prepared a Brownfields Quality Assurance Project Plan (QAPP) for EPA approval. This project was a high-visibility public park for which rapid action was desirable. The QAPP was prepared by OTO and was EPA approved within a few weeks, allowing remedial response actions to begin.

### Former Hingham Shipyard

Hingham, Massachusetts, *ongoing*

Conducted MCP investigations and soil gas surveys at a contaminated shipyard being redeveloped for mixed commercial and residential use. Used Method 3 Risk Characterization and implemented an AUL to achieve a Response Action Outcome and ensure safe conditions for future users of the property.

## REGISTRATIONS and AFFILIATIONS

- Licensed Site Professional (LSP), Massachusetts
- Licensed Site Professional Association (LSPA), Full Member
- American Chemical Society (ACS)

## EDUCATION

- M.S., Analytical Chemistry, University of Connecticut, 1990
- B.A. *magna cum laude*, Chemistry and Biology, Brandeis University, 1983
- LSPA Courses:
  - Remediation Waste, 2009
  - Activity and Use Limitations, 2009
  - Vapor Intrusion, 2007
  - Environmental Chemistry, 2003
  - Light Nonaqueous Phase Liquid, 2009

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# O'Reilly, Talbot & Okun

[ A S S O C I A T E S ]

## Jeffrey J. Park

SENIOR ECOLOGIST

### AREAS OF EXPERTISE

- Ecological Risk Assessment
- Quantitative Ecological Studies and Impact Assessments
- Biostatistics and Mathematical Biology

### PROFILE

Senior Ecologist Jeffrey J. Park has 12 years of experience conducting ecological impact assessments for a diverse group of taxa including plants; fishes; amphibians; benthic macroinvertebrates; phytoplankton; zooplankton; and macroalgae.

Ecological studies have assessed (1) risk to ecological receptors associated with chemical compounds; (2) spatial and temporal patterns in abundance and species composition; and (3) abiotic interactions. Jeff's project experience has included hypothesis testing; development of study designs; reporting/data analysis for "measures of effect" studies associated with CERCLA baseline ecological risk assessments; and ecological impact studies geared at disentangling project-related effects from natural variation.

The key feature of Jeff's work includes quantitative methods with an emphasis on biostatistics e.g., Cluster Analysis. Jeff also has experience with mathematical biology including the modeling of fish/benthic macroinvertebrate population sizes; "forward projection" modeling of adult fish populations; and trend analyses, e.g., Mann-Kendall test and non-linear estimation. Software packages have included CHEMSTAT; ProUCL; SAS; and STATISTICA.

Jeff has conducted Ecological Risk Assessments and Ecological Studies associated with:

- Remedial investigations at Superfund and MCP Disposal Sites;
- Power plant entrainment and thermal plume impact studies;
- Post-closure landfill monitoring efforts;
- Contaminated/uncontaminated dredged sediment studies; and
- Studies examining the effects of Combined Sewer Overflow (CSO) discharges

This work has been conducted for the federal and state government; utilities; solid waste management; private developers; private engineering firms; and Brownfield's redevelopment.

### REGISTRATIONS AND AFFILIATIONS

- Society of Environmental Toxicology and Chemistry (SETAC), North Atlantic Chapter, Member

### EDUCATION

- M.A., Biology, Harvard University, 1998
- B.A., Anthropology, University of Maine, 1993

### CERTIFICATIONS

- 40-Hour OSHA HAZWOPER Training, 1995

**O'Reilly, Talbot & Okun**  
[ A S S O C I A T E S ]

**Jeffrey J. Park**  
SENIOR ECOLOGIST

**DCAM Medfield State Hospital, Long's Bulrush Survey**  
Medfield, MA 2010

Mr. Park conducted a rare species survey within impacted wetland and aquatic habitats slated for remediation at the Medfield State Hospital site. Review was provided by the Natural Heritage and Endangered Species Program (NHESP). Following NHESP approval of Mr. Park as a qualified botanist and the survey methodology, cover types were identified on the Site. Within each cover type, sample plots were used to characterize the vegetation and descriptive metrics were reported including: (1) species richness; (2) percent cover; (3) relative dominance; (4) relative frequency; and (5) an Importance Value (*IV*). Habitat data were collected including percent solids and total organic carbon (TOC) of wetland soils and water quality data in aquatic habitats. The survey did not confirm the presence of Long's bulrush. The NHESP agreed with the findings of the survey and concluded that the proposed project would not result in a prohibited "take". As such, the remediation project was allowed to proceed as planned.

**Former Shell-branded Gasoline Station, MCP Stage II Ecological Risk Assessment**  
Auburn, MA 2010-ongoing

Compounds of concern in wetland soil included PAHs and PCBs. Risk analyses included: additional wetland soil sampling; acute soil toxicity testing using earthworms; use of terrestrial biota-soil accumulation factors (BSAFs) and earthworm uptake models to estimate invertebrate tissue burdens; and biostatistical analyses. Food-web modeling was conducted for the American robin, American woodcock, and the northern short-tailed shrew whereby estimated daily doses were compared with published NOAEL and LOAEL Toxicity Reference Values (TRVs). The Weight of Evidence approach was used to conclude that a condition of no significant risk exists at the site.

**Wheelabrator Saugus, Waste-to-Energy Facility, Ecological Values Assessment**  
Putnam, CT 2009 - ongoing

Mr. Park conducted an ecological values assessment in accordance with guidance provided by the MADEP and the MCP. The assessment was conducted within a dry swale constructed to manage stormwater that had been impacted by a large volume release of process wastewater containing metals. Other tasks included a physical and chemical characterization of potential coal ash within the swale. The assessment concluded that the swale did not exhibit ecological value.