Limited Soil Assessment Report

12 North Main Street, Westford, Massachusetts
Release Tracking Number 3-31455
Site Assessment and Remediation Support Services V
Massachusetts Department of Environmental Protection
Contract No.: BWSC-2008-001
Watermark Project No.: 08403-19

Watermark
Engineering • Construction • Operations

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EXECUTIVE SUMMARY

This Limited Soil Assessment Report has been prepared by Watermark Environmental, Inc. (Watermark) on behalf of the Massachusetts Department of Environmental Protection (MassDEP) for the site located at 12 North Main Street in Westford, Massachusetts (the Site), as shown on Figure 1-1. A release of Oil and Hazardous Materials (OHM) including arsenic, cadmium, chromium, copper, lead, nickel, zinc, and several polynuclear aromatic hydrocarbons (PAHs) has occurred at this Site and it has been assigned Release Tracking Number (RTN) 3-31455. MassDEP procured the services of Watermark under its Site Assessment and Remediation Support Services (SARRS) V contract number BWSC 2008-001 as project number 101640 to complete this investigation.

This Limited Soil Assessment Report documents the soil screening and sampling/analysis activities that were performed in accordance with the Sampling and Analysis Plan (SAP), which was prepared by Watermark and submitted to MassDEP on October 25, 2013. The SAP was approved by MassDEP on October 30, 2013

The scope of this investigation, as requested by MassDEP, included the collection of, and field screening of surface soil samples collected from 44 individual locations throughout the Site using a X-Ray Fluorescence (XRF) instrument, a photoionization detector (PID), and field indicators (visual and olfactory). Subsequent to the field screening activities, a subset of these samples was submitted to Con-Test Analytical Laboratory for analysis of select metals (arsenic, cadmium, total chromium, lead, nickel, zinc, and mercury), cyanide, hexavalent chromium, pH, oxygen reduction potential (ORP), semivolatile organic compounds (SVOCs), dioxins [polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs)], and polychlorinated biphenyls (PCBs).

Based on the results of the soil screening and sampling activities, the following conclusions can be made:

- PID screening results for volatile organic compounds (VOCs) were consistent with background.
- XRF indicated elevated metals concentrations at various locations for arsenic, cadmium, chromium, lead, nickel, and zinc.
- Lab results indicate that concentrations in one or more locations exceed the MassDEP RCS-1 Reportable Concentrations for: arsenic, cadmium, total chromium, lead, nickel, zinc, cyanide, benzo(a)pyrene, dibenz(a,h)anthracene, and dioxins. The cyanide concentration in one soil sample (SS-D6) also exceeded the concentration that could pose an imminent hazard (CPIH). Note that although total chromium exceeded the RCS-1 Reportable Concentration at several locations, analytical data from five locations which were analyzed for total and hexavalent chromium indicate that chromium is primarily in trivalent form at the Site.
- No PCBs were detected in soil samples collected near the transformer pad.

Refer to Figure 1-1 for a Site Location Map and Figure 1-2 for a Site Map with Sampling Locations.

1.0 FIELD PROGRAM

Field activities were conducted at the Site on November 6, 2013 and November 12-14, 2013.

1.1 Screening Location Mark Out and Utility Locating

Field activities performed on November 6, 2013 consisted of locating the approximate property bounds and marking all of the proposed soil screening locations with pin flags, painted wooden stakes, or white marking paint to make them visible to utility locating personnel. Soil sample locations were placed on an approximate 40-foot grid over the Site as described in the SAP. Following completion of the screening location mark out, Dig Safe® was contacted to provide the required utility notification and locating. Note that soil screening locations SS-J6, SS-K6, and IC-H7 were moved slightly in order to be proximal to drums which were observed on-site on November 6, 2013. These drums were rusted and empty. In addition, soil screening location SS-B1 was moved slightly to the north due to safety issues posed by loose bricks observed in the vicinity of, and on the nearby smokestack.

1.2 Soil Screening

On November 12-13, 2013, field activities consisted of performing field screening on soil collected from 44 locations on-Site using a X-Ray Fluorescence (XRF) instrument, a photoionization detector (PID), and field indicators (visual and olfactory). Soil screening samples were collected from 0-1 foot below grade after a hole was dug using a shovel. The XRF screening sample was collected directly into a re-sealable plastic bag with disposable nitrile gloves and homogenized in the bag by shaking the bag. The PID screening sample was placed directly into a glass jar.

The XRF instrument used was an Olympic Delta X. Calibration was checked daily against National Institute of Standards (NIST) standards. Soil jar headspace readings were conducted at the Site using a MiniRAE 3000 PID equipped with a 11.7 eV bulb. Calibration was performed daily using 100 ppmV isobutylene calibration gas.

Following homogenization, excess air was removed from the re-sealable plastic bag, to allow for optimum surface contact between with the XRF lens, and the soil sample was screened a minimum of three times using the XRF instrument. Each screening run was performed for a duration of 60 seconds and the XRF instrument was moved to a different part of the sample for each of the three screening runs to evaluate for the effectiveness of homogenization. One duplicate sample was performed each day by repeating the XRF screening to evaluate for consistency. Relative percent difference (RPD) was then calculated between the sample value and the duplicate sample value. RPD values ranged from zero to approximately 54 percent. Additionally, a precision sample was performed each day to evaluate the consistency of the XRF instrument by screening the same sample seven times in replicate. Relative Standard Deviation (RSD) was then calculated between the values. RSD values ranged from 1.3 to 32 percent. These RPD and RSD values are considered acceptable for metals in soil as part of this investigation.

The PID headspace screening jar was capped with aluminum foil and gently agitated to cause any volatile organic compounds (VOCs) present in the soil volatilize and become available for the PID. Prior to screening, the sample was allowed to rest briefly to allow potential soil vapors to accumulate prior to screening. The jar was then screened by puncturing the aluminum foil cap with the tip of the PID probe allowing the PID to measure headspace vapors.

Based on field observations and the results of the PID screening, no samples were submitted for VOCs, VPH, or EPH.

A summary of the soil screening results is provided in Table 2-1.

1.3 Soil Sampling

Following the completion of field screening activities, samples were collected from each of the 44 screening location in accordance with Table 1-1 of the SAP and on-Site MassDEP guidance based on the results of field screening. Samples were placed into a cooler containing ice. Samples were submitted to Con-Test Analytical

Laboratory (Con-Test) of East Longmeadow Massachusetts for analysis. Note that the SAP included quality assurance (QA) samples; however, none were collected per MassDEP's direction.

1.4 Investigation Derived Waste

No investigation derived waste (IDW) was generated during sampling activities. Excess soil was returned to the point of generation.

1.5 GPS Survey

On November 14, 2013, Watermark personnel performed a location survey of soil screening/sampling locations using a Trimble GeoXH handheld GPS. On December 11, 2013, MassDEP collected manual measurements of various locations, including the samples collected on the D-line, using a tape measure to confirm the accuracy of the GPS locations. Based on the results of these two surveys, two locations (SS-H11 and SS-B1) appear to have been collected outside of the Site. As discussed above, SS-B1 had to be moved due to loose bricks on and in the vicinity of the smokestack near the planned soil screening location. SS-H11 was inadvertently collected off the Site (e.g., on an adjacent property).

2.0 SUMMARY OF RESULTS

2.1 Soil Screening

Soil at the Site consists primarily of silty sand with gravel overlain with topsoil of varying thicknesses. The area to the south of the former incinerator consisted of a mixture of topsoil with clinker and small amounts of ash presumably dumped in the area between the incinerator and Stony Brook as materials were incinerated. Much of the observed soil types are presumed to have accumulated as the result of former Site activities or placement of historic fill and do not represent native soil found in the surrounding vicinity. Bedrock was not encountered during the on-site investigation. No odors were observed during soil screening indicating VOC or petroleum contamination.

XRF screening results indicate elevated concentrations of arsenic, cadmium, total chromium, lead, nickel, and zinc in several screening samples collected from the Site.

Results of the soil screening ranged from 0.0 to maximum reading of 0.9 parts per million Volume (ppmV) in IC-I7. Note that the 0.9 ppmV reading is considered questionable since the PID experienced a temporary lamp malfunction shortly after acquiring the reading and a subsequent duplicate measurement at IC-I7 after the lamp was fixed indicated a reading of 0.0 ppmV.

Table 2-1 summarizes the soil screening data collected during the soil screening activities.

2.2 Soil Analytical Data

Samples were collected and analyzed in accordance with the Compendium of Analytical Methods (CAM). CAM certification forms were provided for all CAM analyses. Although some of the narratives in the analytical reports mention some minor data qualifications, these minor data qualifications should not affect the overall usability of the data.

Results discussed below have been compared to the MassDEP RCS-1 Reportable Concentrations since residences are present less than 500 feet from the Site. Results discussed below have also been compared to Could Pose an Imminent Hazard (CPIH) values for various compounds as described in 310 CMR 40.0321(2)(b).

Metals and Cyanide

The RCS-1 Reportable Concentrations were exceeded for arsenic, cadmium, total chromium, lead, nickel, and zinc at one or more of the sampling locations across the Site. Note that the analytical data indicates that the chromium concentrations consist primarily of trivalent chromium (calculated to be greater than 98.5 percent) rather than hexavalent chromium. Additionally, the RCS-1 and CPIH value for cyanide was exceeded at sampling location SS-D6. Refer to Table 2-2 for a summary of the metals and cyanide analytical data.

Dioxins and Furans

The MCP RCS-1 Reportable Concentration of 20 picograms per gram (pg/g) expressed as a toxicity equivalence to 2,3,7,8 TCDD was exceeded in the sample collected from location IC-I7. The value is expressed as a World Health Organization (WHO)-2005 toxicity equivalence. Refer to Table 2-3 for a summary of the dioxins and furans analytical data.

SVOCs

Benzo(a)pyrene values exceeded the RCS-1 values in soil samples collected from locations IC-I7, SS-H10, SS-H8, and SS-I9. Dibenz(a,h)anthracene exceeded the RCS-1 value in the sample collected from location SS-H8. Refer to Table 2-4 for a summary of SVOC analytical data.

PCBs

There were no PCBs detected in the samples collected from the Site. Refer to Table 2-4 for a summary of PCB analytical data.

Laboratory data reports are included in Appendix B.

3.0 REFERENCES

Watermark, 2013. Sampling and Analysis Plan, Watermark Environmental, Inc. October.

TABLES

Table 2-1
Summary of Soil Screening Data
Westford Anodizing
12 North Main Street, Westford, Massachusetts

Screening Location	X-Ray Fluorescence Metals (ppm)		Visual/Olfactory Field Observations				External Laboratory Analysis (Yes/No)					
	Metals	Average (All)	Soil Staining Present (yes/no)	Odors Present (yes/no)	PID Headspace (ppmV)	Soil Description	Metals	Cyanide	Chrome VI /pH/ORP	Dioxins	SVOCs	PCBs
IC-H7	Arsenic	10.2	No	No	0.0	Topsoil, Dark Brown	No	No	No	Yes	Yes	No
	Cadmium	< 11										
	Chromium	40.3										
	Lead	84.7										
	Nickel	< 14										
	Zinc	53.9										
IC-I7 / IC-I7 DUP	Arsenic	116.7/ 202.7	No	No	0.9/0.0	Topsoil, Dark Brown	Yes	Yes	Yes	Yes	Yes	No
	Cadmium	14.7/ 17.3										
	Chromium	1210.7/ 1675.3										
	Lead	4434.3/ 4428.0										
	Nickel	28.3/ 41.3										
	Zinc	6626.3/ 6724.0										
IC-I7 DUP	Arsenic	202.7	No	No	0.0	XRF Duplicate PID Lamp Failed During Measurment	Yes	Yes	Yes	Yes	Yes	No
	Cadmium	17.3										
	Chromium	1675.3										
	Lead	4428.0										
	Nickel	41.3										
	Zinc	6724.0										
IC-J7	Arsenic	32.3	No	No	0.0	Topsoil, Dark Brown	No	No	No	No	Yes	No
	Cadmium	< 11										
	Chromium	51.7										
	Lead	395.0										
	Nickel	< 16										
	Zinc	203.3										
SS-B1	Arsenic	8.3	No	No	0.0	Mixed Sand and Topsoil	No	No	No	No	No	No
	Cadmium	< 11										
	Chromium	< 39										
	Lead	180.7										
	Nickel	< 14										
	Zinc	61.0										
SS-B4	Arsenic	40.3	No	No	0.0	Topsoil with Concrete	Yes	Yes	Yes	No	No	No
	Cadmium	< 13										
	Chromium	393.7										
	Lead	471.7										
	Nickel	234.3										
	Zinc	3527.0										
SS-B5	Arsenic	54.0	No	No	0.0	Sand, Organics, Brown	Yes	Yes	No	No	No	No
	Cadmium	17.7										
	Chromium	203.0										
	Lead	783.7										
	Nickel	95.7										
	Zinc	641.3										
SS-C4	Arsenic	20.3	No	No	0.0	Silty Sand, Organics, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	146.0										
	Lead	381.3										
	Nickel	77.0										
	Zinc	271.3										
SS-C5	Arsenic	19.0	No	No	0.0	Silty Sand, Organics, Brown	Yes	Yes	No	No	No	No
	Cadmium	< 12										
	Chromium	93.3										
	Lead	335.3										
	Nickel	51.0										
	Zinc	230.3										
SS-C6	Arsenic	11.9	No	No	0.0	Silty Sand, Organics, Brown, Precision Sample	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	74.3										
	Lead	88.3										
	Nickel	62.0										
	Zinc	94.3										
SS-C7	Arsenic	90.0	No	No	0.0	Topsoil, Sand, Brown	Yes	Yes	No	No	No	No
	Cadmium	< 12										
	Chromium	106.3										
	Lead	1138.7										
	Nickel	120.7										
	Zinc	764.3										
SS-D4	Arsenic	24.3	No	No	0.0	Sand, Organics, Brown Gravel	Yes	Yes	Yes	No	No	No
	Cadmium	43.0										
	Chromium	339.3										
	Lead	220.7										
	Nickel	176.3										
	Zinc	778.7										

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Screening Location	X-Ray Fluorescence Metals (ppm)		Visual/Olfactory Field Observations				External Laboratory Analysis (Yes/No)					
	Metals	Average (All)	Soil Staining Present (yes/no)	Odors Present (yes/no)	PID Headspace (ppmV)	Soil Description	Metals	Cyanide	Chrome VI /pH/ORP	Dioxins	SVOCs	PCBs
SS-D5	Arsenic	9.5	No	No	0.0	Silty Sand, Organics, Brown	Yes	Yes	Yes	No	No	No
	Cadmium	11.3										
	Chromium	321.0										
	Lead	157.3										
	Nickel	248.3										
	Zinc	441.3										
SS-D6	Arsenic	64.0	No	No	0.0	Silty Sand, Organics, Brown	Yes	Yes	No	No	No	No
	Cadmium	< 13										
	Chromium	334.0										
	Lead	459.3										
	Nickel	96.3										
	Zinc	1041.0										
SS-D7	Arsenic	18.4	No	No	0.0	Sand, Gravel, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	69.0										
	Lead	99.8										
	Nickel	35.7										
	Zinc	151.0										
SS-D8	Arsenic	38.7	No	No	0.0	Topsoil, Some Gravel	Yes	Yes	No	No	No	No
	Cadmium	< 11										
	Chromium	71.0										
	Lead	544.3										
	Nickel	27.7										
	Zinc	232.3										
SS-E3	Arsenic	8.3	No	No	0.0	Fine Sand	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	55.0										
	Lead	35.6										
	Nickel	26.7										
	Zinc	50.4										
SS-F1	Arsenic	13.7	No	No	0.0	Mixed Sand, Some Loam, Brown	No	No	No	Yes	No	No
	Cadmium	< 11										
	Chromium	59.3										
	Lead	160.0										
	Nickel	< 15										
	Zinc	89.0										
SS-G1	Arsenic	20.3	No	No	0.0	Mixed Sand and Gravel, Brown	Yes	Yes	No	No	No	No
	Cadmium	< 12										
	Chromium	52.7										
	Lead	475.0										
	Nickel	16.7										
	Zinc	93.0										
SS-G3	Arsenic	12.8	No	No	0.0	Mixed Sand and Gravel	Yes	Yes	No	No	No	No
	Cadmium	< 12										
	Chromium	52.3										
	Lead	101.7										
	Nickel	18.3										
	Zinc	84.7										
SS-H1	Arsenic	16.2	No	No	0.0	Fine/Medium Sand, Some Gravel	No	No	No	No	No	Yes
	Cadmium	< 11										
	Chromium	49.7										
	Lead	161.7										
	Nickel	17.0										
	Zinc	70.7										
SS-H2	Arsenic	10.6	No	No	0.0	Mixed Sand and Gravel, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	< 40										
	Lead	38.8										
	Nickel	< 15										
	Zinc	33.4										
SS-H3	Arsenic	11.9	No	No	0.0	Mixed Sand and Gravel, Brown	Yes	Yes	Yes	No	No	No
	Cadmium	< 11										
	Chromium	79.7										
	Lead	93.0										
	Nickel	14.7										
	Zinc	69.7										
SS-H4	Arsenic	14.5	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	52.0										
	Lead	61.3										
	Nickel	24.7										
	Zinc	62.3										

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Screening Location	X-Ray Fluorescence Metals (ppm)		Visual/Olfactory Field Observations				External Laboratory Analysis (Yes/No)					
	Metals	Average (All)	Soil Staining Present (yes/no)	Odors Present (yes/no)	PID Headspace (ppmV)	Soil Description	Metals	Cyanide	Chrome VI /pH/ORP	Dioxins	SVOCs	PCBs
SS-H5	Arsenic	15.6	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	90.3										
	Lead	76.0										
	Nickel	28.0										
	Zinc	51.9										
SS-H6	Arsenic	14.0	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	81.7										
	Lead	38.8										
	Nickel	30.0										
	Zinc	49.2										
SS-H7	Arsenic	11.6	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	Yes	Yes	No
	Cadmium	< 12										
	Chromium	58.7										
	Lead	102.3										
	Nickel	20.3										
	Zinc	82.7										
SS-H8	Arsenic	22.8	No	No	0.0	Topsoil, Dark Brown	Yes	Yes	No	No	Yes	No
	Cadmium	< 12										
	Chromium	60.0										
	Lead	165.7										
	Nickel	22.3										
	Zinc	142.7										
SS-H9	Arsenic	23.8	No	No	0.0	Topsoil with Clinker, Black	No	No	No	No	No	No
	Cadmium	< 10										
	Chromium	117.0										
	Lead	215.3										
	Nickel	53.7										
	Zinc	157.0										
SS-H10	Arsenic	46.7	No	No	0.0	Topsoil with Clinker	Yes	Yes	No	No	Yes	No
	Cadmium	< 12										
	Chromium	79.0										
	Lead	326.3										
	Nickel	57.3										
	Zinc	106.7										
SS-H11	Arsenic	16.2	No	No	0.0	Topsoil with Clinker	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	58.0										
	Lead	50.8										
	Nickel	45.7										
	Zinc	90.0										
SS-I4	Arsenic	11.7	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	Yes	Yes	No	No	No	No
	Cadmium	< 11										
	Chromium	< 39										
	Lead	67.2										
	Nickel	< 14										
	Zinc	52.2										
SS-I5	Arsenic	11.0	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	48.7										
	Lead	56.5										
	Nickel	23.7										
	Zinc	45.2										
SS-I6	Arsenic	15.7	No	No	0.0	Fine and Medium Sand, Some Gravel, Tan and Brown	Yes	Yes	No	No	No	No
	Cadmium	< 11										
	Chromium	45.0										
	Lead	213.3										
	Nickel	16.3										
	Zinc	77.7										
SS-I7	Arsenic	11.9	No	No	0.0	Mixed Sand, Gravel, Topsoil, Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	71.7										
	Lead	46.1										
	Nickel	22.7										
	Zinc	41.8										
SS-I8	Arsenic	35.3	No	No	0.0	Topsoil, Dark Brown	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	49.0										
	Lead	527.3										
	Nickel	21.3										
	Zinc	162.0										

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	Metals	Average (All)	Soil Staining Present (yes/no)	Odors Present (yes/no)	PID Headspace (ppmV)	Soil Description	Metals	Cyanide	Chrome VI /pH/ORP	Dioxins	SVOCs	PCBs
SS-I9	Arsenic	90.0	No	No	0.0	Topsoil/Ash, Black to Brown	Yes	Yes	No	No	Yes	No
	Cadmium	< 11										
	Chromium	< 41										
	Lead	1316.7										
	Nickel	20.0										
	Zinc	420.7										
SS-J4 / SS-J4 DUP	Arsenic	15.5/ 16.5	No	No	0.0	Topsoil with Clinker, Black	No	No	No	No	No	No
	Cadmium	< 12/ < 12										
	Chromium	71.7/ 73.0										
	Lead	82.8/ 79.5										
	Nickel	48.7/ 24.0										
	Zinc	56.2/ 54.3										
SS-J5	Arsenic	38.7	No	No	0.0	Topsoil with Clinker, Black, Precison Sample	No	No	No	No	No	No
	Cadmium	< 12										
	Chromium	49.7										
	Lead	234.7										
	Nickel	16.7										
	Zinc	236.0										
SS-J6	Arsenic	18.6	No	No	0.0	Organics/Topsoil, Dark Brown	No	No	No	No	No	No
	Cadmium	< 10										
	Chromium	< 38										
	Lead	147										
	Nickel	< 14										
	Zinc	438.0										
SS-K5	Arsenic	18.5	No	No	0.0	Sand, Organics, Trace Gravel, Dark Brown	Yes	Yes	No	No	No	No
	Cadmium	< 11										
	Chromium	53.7										
	Lead	142.0										
	Nickel	17.3										
	Zinc	109.0										
SS-K6	Arsenic	6.8	No	No	0.0	Sand, Trace Gravel, Tan and Brown	No	No	No	No	No	No
	Cadmium	< 11										
	Chromium	41.3										
	Lead	43.6										
	Nickel	15.0										
	Zinc	38.7										
SS-K7	Arsenic	14.0	No	No	0.0	Sand, Organics, Trace Gravel, Dark Brown	Yes	Yes	No	No	No	No
	Cadmium	< 12										
	Chromium	48.0										
	Lead	146.3										
	Nickel	19.3										
	Zinc	76.0										
TR-H1	Arsenic	3.9	No	No	0.0	Gravel Fill, Gray, Dry, Heterogeneous	No	No	No	No	No	Yes
	Cadmium	< 14										
	Chromium	72.0										
	Lead	27.7										
	Nickel	< 21										
	Zinc	67.7										

Notes:

All samples collected from 0 - 1 foot below ground surface
ppm = parts per million
ppmV = parts per million Volume
ORP = Oxidation Reduction Potential
PID = Photoionization Detector
XRF = X-Ray Fluoresence
SVOCs = Semivolatile Organic Compounds
PCB = Polychlorinated Biphenyl

Created by: SDP
Checked by: CAM

Table 2-2
Summary of Inorganic Analytical Data
Former Westford Anodizing
12 Main Street, Westford, Massachusetts

Parameter	Current Reportable Concentrations (RCs)	Could Pose an Imminent Hazard (CPIH)	Sample Locations																			
	RCS-1		SS-H3	SS-H7	IC-I7	SS-B4	SS-D4	SS-D5	SS-G1	SS-G3	SS-I4	SS-I6	IC-J7	SS-B5	SS-C5	SS-C7	SS-D6	SS-D8	SS-H10	SS-H8	SS-I9	SS-K5	SS-K7
Sampling Date			11/12/2013	11/12/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/12/2013	11/12/2013	11/12/2013	11/12/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013
Sample Depth (ft)			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
SW-846 6010C (mg/Kg dry) Metals Digestion																							
ARSENIC	20	40	7.8	12	**23**	17	11	8.6	12	11	9.6	9.8	NT	**27**	7.9	**25**	15	16	15	17	16	9.6	8.7
CADMIUM	2	60	0.54	0.76	**13**	**2.5**	**33**	**9.3**	0.83	1.5	0.65	0.77	NT	**12**	1.8	**2.1**	**3.0**	1.0	1.0	1.1	1.4	0.66	0.54
CHROMIUM (total data only)	30	200	SDO	25	SDO	SDO	SDO	SDO	**39**	**31**	24	27	NT	**150**	**76**	**62**	**150**	27	13	30	26	23	23
CHROMIUM (total) if hexavalent data available	~	~	34	NT	300	180	190	290	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
CHROMIUM Trivalent (calculated)	1000	~	33.53	NT	300	180	190	290	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
CHROMIUM Hexavalent	30	200	0.47	NT	ND (2.4)	ND (1.8)	ND (1.7)	ND (0.88)	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
LEAD	300	~	70	71	**6200**	**550**	250	140	250	140	42	170	NT	**640**	290	**1000**	**390**	**400**	240	120	**920**	94	97
NICKEL	20	~	20	17	**110**	**130**	**170**	**210**	**25**	**24**	16	15	NT	**120**	**56**	**100**	**51**	19	15	**23**	**22**	16	15
ZINC	2500	~	60	65	**5900**	1300	690	320	82	80	40	76	NT	560	230	710	760	170	76	97	270	69	48
SW-846 7471B (mg/Kg dry) Metals Digestion																							
MERCURY	20	300	0.040	0.11	0.31	2.4	0.12	0.32	ND (0.027)	0.053	0.032	0.084	NT	0.98	0.25	1.3	0.32	0.38	0.099	0.14	0.17	0.052	0.091
SW-846 9014 (mg/Kg dry)																							
CYANIDE	100	100	1.1	ND (0.48)	1.9	92	45	16	ND (0.55)	ND (0.54)	ND (0.54)	ND (0.56)	NT	5.6	3.0	1.6	**130**	ND (0.52)	ND (0.59)	ND (0.56)	9.8	ND (0.56)	0.84

Notes:
1. ND = Not detected above the lab reporting limits shown in parenthesis
2. NT = Not tested
3. ~ = No MCP Reportable Concentration or CPIH value available
4. Shaded bold values exceed the MCP Reportable Concentrations (RCs)
5. CPIH = Could Pose Imminent Hazard
6. White text on a black background indicates a CPIH exceedance
7. RCS-1 and CPIH values from MCP dated December 14, 2007
8. SDO = Speciated Data Obtained (e.g., total and hexavalent chromium)

Prepared By: SP
Checked By: CAM

Table 2-3
Summary of Dioxin Analytical Data
Former Westford Anodizing
12 Main Street, Westford, Massachusetts

Parameter		Current Reportable Concentrations (RCs)	SAMPLING LOCATION			
		RCS-1	SS-F1	SS-F1	IC-H7	IC-I7
Sampling Date			11/14/2013	11/12/2013	11/13/2013	11/13/2013
Sample Depth			0 - 1	0 - 1	0 - 1	0 - 1
Dioxins						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
SW-846 8290A (pg/g)						
Analytes	2,3,7,8-TCDD	~	0.144 J	0.149 J	*0.223 J*	19.8
	1,2,3,7,8-PeCDD	~	1.37 J	0.952 J	*0.589 J*	81.3
	1,2,3,4,7,8-HxCDD	~	2.36	1.63 J	0.675 J	79.9
	1,2,3,6,7,8-HxCDD	~	5.82	3.99	2.77	175
	1,2,3,7,8,9-HxCDD	~	5.06	3.27	1.44 J	131
	1,2,3,4,6,7,8-HpCDD	~	118	75.2	60.4	1,330
	OCDD	~	826	558	523	3,030
	2,3,7,8-TCDF	~	1.59	2.37	29.4	241
	1,2,3,7,8-PeCDF	~	0.67 J	0.637 J	ND (0.113)	291
	2,3,4,7,8-PeCDF	~	4.22	5.38	8.85	609
	1,2,3,4,7,8-HxCDF	~	2.28	1.87 J	6.05	585
	1,2,3,6,7,8-HxCDF	~	2.24	2 J	3.56	582
	2,3,4,6,7,8-HxCDF	~	3.35	3.38	5.37	857
	1,2,3,7,8,9-HxCDF	~	0.193 J	0.131 J	0.404 J	54.4
	1,2,3,4,6,7,8-HpCDF	~	27	19.7	36.4	2,480
	1,2,3,4,7,8,9-HpCDF	~	1.96 J	1.39 J	2.38 J	255
	OCDF	~	48.1	34	63.6	1,010
Totals	Total Tetra-Dioxins	~	*2.67*	*2.44*	*5.01*	*961*
	Total Penta-Dioxins	~	*8.26*	*6.48*	*8.08*	*1,600*
	Total Hexa-Dioxins	~	*39.5*	*28.7*	*21.4*	*2,490*
	Total Hepta-Dioxins	~	*209*	*138*	*114*	*2,700*
	Total Tetra-Furans	~	*25.8*	*32.4*	*114*	*7,360*
	Total Penta-Furans	~	*53*	*56.6*	*139*	*7,590*
	Total Hexa-Furans	~	*47.6*	*46*	*74.5*	*6,170*
	Total Hepta-Furans	~	*62.5*	*46.4*	*92.9*	*3,660*
Total PCDDs/PCDFs		~	*1,320*	*949*	*1150*	*36,600*
WHO-2005 TEQ		20*	6.82	5.74	9.6	**605**

Notes:

1. ND = Not detected above the lab reporting limits shown in parenthesis.
2. ~ = No MCP Reportable Concetration available
3. *= MCP Reportable concentration is expressed as an equivalent of 2,3,7,8 TCDD.
4. J = Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve).
5. **Bold** and shaded values indicate an exceedance of the MCP Reportable Concentration.
6. TEQ = Toxic Equivalence value in accordance with protocol from the World Health Organization 2005
7. *Italic* values are reported as Estimated Maximum Possible Concetrations (EMPCs). EMPCs arise in cases where the signal/noise is not sufficient for peak identification, or where there is a co-eluting interference.
8. TEQs were calculated using non-detect values at the instrument detection limit value.
9. pg/g = picograms per gram
10. RCS-1 values from MCP dated December 14, 2007.

Prepared By: SP
Checked By: CAM

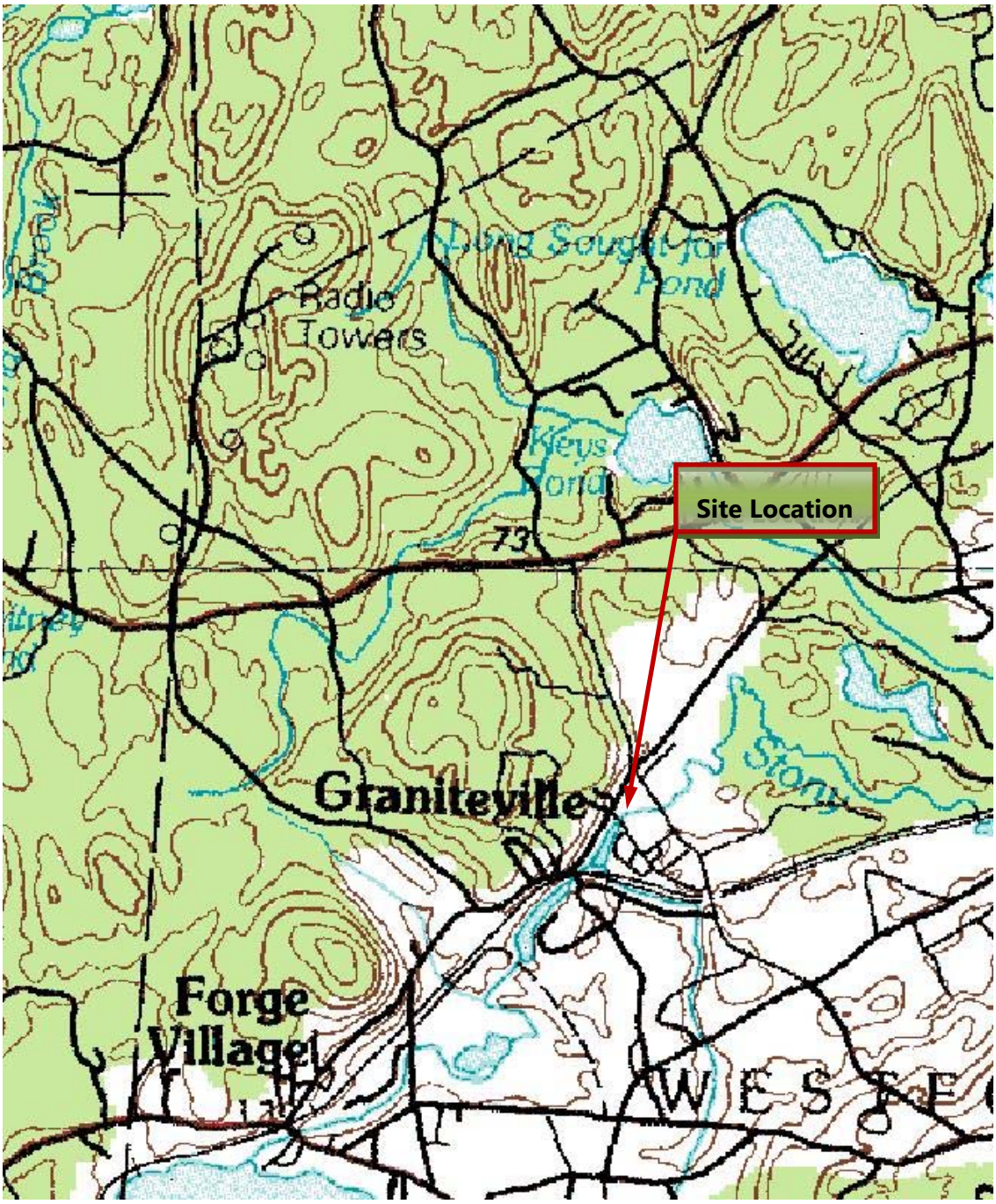
Table 2-4
Summary of SVOCs and PCBs Aanalytical Data
Former Westford Anodizing
12 Main Street, Westford, Massachusetts

Parameter	Current Reportable Concentrations (RCs)	Could Pose an Imminent Hazard (CPIH)	Sampling Location							
	RCS-1		IC-H7	IC-I7	IC-J7	SS-H10	SS-H8	SS-I9	SS-H1	TR-H1
Sampling Date			11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/13/2013	11/12/2013	11/12/2013
Sample Depth (ft)			0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1
Semi-Volatile Organic Compounds SW-846 8270D (mg/Kg dry)										
ACENAPHTHENE	4	~	ND (0.21)	ND (0.26)	ND (0.22)	0.53	0.45	1.0	---	---
ACENAPHTHYLENE	1	~	0.50	0.27	0.33	0.38	0.58	ND (0.22)	---	---
ACETOPHENONE	1000	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
ANILINE	1000	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
ANTHRACENE	1000	~	0.47	ND (0.26)	0.41	1.4	1.3	2.4	---	---
BENZO(A)ANTHRACENE	7	~	1.9	0.49	1.9	4.7	4.5	3.9	---	---
BENZO(A)PYRENE	2	~	2.0	0.61	**2.1**	**3.7**	**4.3**	**3.1**	---	---
BENZO(B)FLUORANTHENE	7	~	2.7	0.84	2.8	5.0	5.2	3.9	---	---
BENZO(G,H,I)PERYLENE	1000	~	1.0	0.50	1.8	1.8	2.2	1.9	---	---
BENZO(K)FLUORANTHENE	70	~	0.96	0.30	0.97	1.7	2.0	1.2	---	---
BIS(2-CHLOROETHOXY)METHANE	500	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
BIS(2-CHLOROETHYL)ETHER	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
BIS(2-CHLOROISOPROPYL)ETHER	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
BIS(2-ETHYLHEXYL)PHTHALATE	200	~	1.0	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
4-BROMOPHENYL PHENYL ETHER	100	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
BUTYLBENZYLPHTHALATE	100	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
4-CHLOROANILINE	1	~	ND (0.82)	ND (1.0)	ND (0.87)	ND (0.83)	ND (1.5) *	ND (0.84)	---	---
2-CHLORONAPHTHALENE	1000	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2-CHLOROPHENOL	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
CHRYSENE	70	~	2.2	0.66	2.1	4.4	4.6	3.7	---	---
DIBENZ(A,H)ANTHRACENE	0.7	~	0.35	ND (0.26)	0.41	0.49	**0.72**	0.45	---	---
DIBENZOFURAN	100	~	ND (0.42)	ND (0.52)	ND (0.45)	0.51	ND (0.76)	1.0	---	---
DI-N-BUTYLPHTHALATE	50	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
1,2-DICHLOROBENZENE	9	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
1,3-DICHLOROBENZENE	1	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
1,4-DICHLOROBENZENE	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
3,3'-DICHLOROBENZIDINE	1	~	ND (0.21)	ND (0.26)	ND (0.22)	ND (0.21)	ND (0.38)	ND (0.22)	---	---
2,4-DICHLOROPHENOL	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
DIETHYLPHTHALATE	10	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2,4-DIMETHYLPHENOL	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
DIMETHYLPHTHALATE	30	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2,4-DINITROPHENOL	3	~	ND (0.82)	ND (1.0)	ND (0.87)	ND (0.83)	ND (1.5)	ND (0.84)	---	---
2,4-DINITROTOLUENE	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
2,6-DINITROTOLUENE	100	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
DI-N-OCTYLPHTHALATE	1000	~	ND (0.83)	ND (1.0)	ND (0.88)	ND (0.84)	ND (1.5)	ND (0.85)	---	---
1,2-DIPHENYLHYDRAZINE (AZOBENZI	50	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
FLUORANTHENE	1000	~	3.1	0.88	3.4	9.3	8.1	9.7	---	---
FLUORENE	1000	~	ND (0.21)	ND (0.26)	ND (0.22)	0.57	0.56	1.3	---	---
HEXACHLOROBENZENE	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
HEXACHLOROBUTADIENE	6	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
HEXACHLOROETHANE	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
INDENO(1,2,3-CD)PYRENE	7	~	1.3	0.59	2.0	2.3	2.6	2.3	---	---
ISOPHORONE	100	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2-METHYLNAPHTHALENE	0.7	~	ND (0.21)	ND (0.26)	ND (0.22)	0.52	ND (0.38)	0.50	---	---
O-CRESOL	500	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
M/P-CRESOL	500	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
NAPHTHALENE	4	~	ND (0.21)	ND (0.26)	0.27	0.72	ND (0.38)	1.1	---	---
NITROBENZENE	500	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2-NITROPHENOL	100	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
4-NITROPHENOL	100	~	ND (0.82)	ND (1.0)	ND (0.87)	ND (0.83)	ND (1.5)	ND (0.84)	---	---
PENTACHLOROPHENOL	3	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
PHENANTHRENE	10	~	2.2	0.50	2.1	6.6	6.2	9.7	---	---
PHENOL	1	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
PYRENE	1000	~	2.9	1.0	4.0	7.8	6.7	6.3	---	---
1,2,4-TRICHLOROBENZENE	2	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2,4,5-TRICHLOROPHENOL	4	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76)	ND (0.43)	---	---
2,4,6-TRICHLOROPHENOL	0.7	~	ND (0.42)	ND (0.52)	ND (0.45)	ND (0.43)	ND (0.76) *	ND (0.43)	---	---
Polychlorinated Biphenyls SW-846 8082A (mg/Kg dry)										
PCB 1016	2	10 total	---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1221	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1232	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1242	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1248	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1254	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1260	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1262	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)
PCB 1268	2		---	---	---	---	---	---	ND (0.11)	ND (0.11)

Notes:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. ~ = No MCP Reportable Concentration of CPIH value available
4. Shaded values exceed the MCP Reportable Concentrations (RCs).
5. --- = No sample collected for this analysis.
6. RCS-1 values from MCP dated December 14, 2007.

Prepared By: SP
Checked By: CAM

FIGURES



SITE LOCATION MAP			
12 North Main Street Westford, MA			
M=-15.61 G=-1.57	**Soil Screening Summary Report**	Source: www.terraserverusa.com July 1988 Lowell Quad	**FIGURE 1-1**

Legend

- Drums Found on Site
- Sampled Locations
- 40' x 40' Grid
- Site Boundary (Approximate)
- Former Structure (Location, Size, and Shape Approximate)
- Tax Parcel

CONCRETE PAD FOR FORMER TRANSFORMER

FORMER INDUSTRIAL INCINERATOR

TR-H1, SS-H1, SS-H2, SS-H3, SS-H4, SS-H5, SS-H6, SS-H7, SS-H8, SS-H9, SS-H10, SS-H11, SS-F1, SS-G1, SS-G3, SS-I4, SS-I5, SS-I6, SS-I7, IC-H7, SS-I8, IC-J7, IC-I7, SS-I9, SS-J4, SS-J5, SS-J6, SS-K5, SS-K6, SS-K7, SS-B1, SS-B4, SS-B5, SS-C4, SS-C5, SS-C6, SS-C7, SS-D4, SS-D5, SS-D6, SS-D7, SS-D8, SS-E3

N

0 30 60 120 Feet

Scale: 1" = 60'

Watermark
175 Cabot Street • Lowell • MA • 01854
Ph. 978-452-9696 Fax 978-453-9988

FORMER WESTFORD ANODIZING
12 MAIN STREET
WESTFORD, MA

Notes:

1. Sample locations were collected using aTrimble GeoXH GPS Receiver cabable of sub meter accuracy withthe exception of sample locations D4-D8, which were manually measured from known site features.

PROJECT NO: 08403-19

PREPARED FOR: MassDEP

DATE: 10/9/2013

DRAWN BY: SDP

CHK'D BY: CAM

APP'D BY: OW

SITE MAP WITH SAMPLING LOCATIONS

FIGURE 1-2

Path: J:\01 Projects\08XXX\08403 - SARSS\19 Westford\11.0 Working Files\11.1 Drawings\11.1.1 Sheet Files\Site Map Grid.mxd

APPENDIX A

Field Forms

11/12/13 Completed by Cory Mahony

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm) Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc	PID Headspace (ppmV)	Visual/Olfactory Field Observations: Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
TP-H1	<3.7	<13	58	34.4	<19	71	0.0	NO	NO	Gravelly Fill; gray; dry; non Homogenous
↓	4.6	<15	105	23.2	<23	64				
↓	<3.5	<13	<53	25.5	<20	68				
H1	12.6	<11	51	154	15	65	0.0	N	N	Fine, medium, Sand, some gravel.
	15	<11	<40	172	18	72				
	21	<11	58	159	18	75				
G1	28	<12	54	261	18	88	0.0	N	N	Mixed SAND and gravel, Brown
	20	<12	60	190	17	82				
	<13	<12	44	974	<15	109				
F1	17.0	<11	54	153	<15	80	0.0	NO	NO	Mixed SAND, some loam, Brown, no
	18	<11	49	151	<16	2696				
	<6	<12	75	176	<15	85				
B1	<5.0	<11	<39	117	<14	50.1	0.0	NO	NO	Mixed SAND and Topsoil
	8	<11	<39	241	<14	70				
	12	<12	<39	184	<15	63				
H2	9.9	<12	<39	38.4	<15	32.7	0.0	NO	NO	Mixed Sand gravel, Brown.
	11.5	<12	<40	38.3	<15	52.1				
	10.3	<12	<41	39.8	<14	35.3				
H3	13.6	<11	111	92	15	75	0.0	N	N	Same as ↑
	11.5	<11	57	100	<15	75				
	10.6	<12	71	87	44	59				
G3	11.7	<12	48	110	20	97	0.0	N	N	Same as ↑
	11.1	<12	65	92	<15	72				
	15.6	<12	<44	103	20	85				

Comments:

11/12/13

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm)						PID Headspace (ppmV)	Visual/Olfactory Field Observations		
	Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc		Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
SS-H4	13.4	<12	63	68	<16	64	0.0	N	N	Mixed Sand, gravel, topsoil, brown
	18.7	<13	53	46.7	37	60				
	11.4	<11	<40	67.2	21	63				
H5	16.2	<12	64	93	18	44.7	0.0	N	N	Same as ↑
	17.6	<12	101	98	28	55				
	13.0	<13	106	37.0	38	56				
H6	18.9	<12	103	24.5	32	46.3	0.0	N	N	Same as ↑
	12.4	<12	71	38.0	30	47.3				
	10.8	<11	71	53.8	22	54.1				
I6	12	<11	<40	195	20	78	0.0	N	N	Fine & medium Sand, some gravel, Tan & Brown
	14	<11	54	192	14	73				
	21	<12	<41	253	<15	82				
H7	13.0	<12	60	107	<15	81	0.0	N	N	Mixed Sand, gravel, topsoil, brown
	9.2	<12	66	105	27	89				
	12.7	<12	50	95	19	78				
I7	13.8	<12	70	41.6	22	47.4	0.0	N	N	Same as ↑
	13.2	<12	97	47.9	26	40.7				
	8.8	<12	48	48.9	20	37.2				
I5	9.9	<11	<40	54.5	20	40.6	0.0	N	N	Same as ↑
	10.4	<13	46	58.3	31	46				
	12.6	<11	60	56.8	20	49.0				
I4	10.6	<11 ~~<39~~	<39	67.0	<13	53.8	0.0	N	N	Same as ↑
	12.4	<11	<39	63.7	<13	53.6				
	11.8	<11	<41	71	<15	49.2				

Comments:

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm)						PID Headspace (ppmV)	Visual/Olfactory Field Observations		
	Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc		Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
SS-J4	15.5	<12	78	96	19	60	0.0	N	NO	Same as previous
	16.2	<12	77	89	29	60				
	14.8	<12	60	63.5	98	48.7				
~~SS-J5~~	15.7	<12	64	90	<15	59				XRF Duplicate
~~SS-J6~~ SS-J4	16.2	<12	99	66.5	26	48.9				
	17.5	<12	56	82	31	55				
SS-J5	39	<12	56	232	20	236	0.0	N	N	Precision Sample
	40	<11	48	236	<15	236				Same soil as 4
	37	<12	45	236	<15	236				
	38	<12	<42	234	19	243				
	39	<11	69	230	21	238				
	39	<12	81	232	<15	243				
	33	<11	50	239	<15	235				
SS-J6	18.0	<10	<41	142.	<16	436	0.0	N	N	organics/Topsoil Dark brown
	21.5	<11	<36	160	43	438				
	16.2	<10	<37	136	<14	440				
SS-K6	6.8	<12	<39	36.0	<14	36.5	0.0	N	N	Sand, Trace gravel, Tan and Brown
	10.0	<11	<39	50.3	<14	39.8				
	<3.5	<11	40	44.6	17	39.9				
SS-K7	13	<12	44	162	<15	66	0.0	N	N	Sand, Organics, Trace gravel, Dark Brown
	15.0	<12	53	124	19	100				
	14	<12	47	153	24	62				
SS-K5	20.4	<11	58	143	19	112	0.0	N	N	Same as 4
	21.5	<12	52	134	<15	114	0.0			
	13.4	<11	51	149	20	101				

11/12/13

11/13/13

Comments:

11/13/13

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm)						PID Headspace (ppmV)	Visual/Olfactory Field Observations		
	Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc		Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
H10	49	<12	116	420	54	114	0.0	N	N	Topsoil w/ clinker
	43	<10	54	322	42	106				
	50	<13	67	239	76	100				
H11	16.8	<11	<47	38.0	45	67	0.0	N	N	Same as ↑
	15.1	<12	61	60	60	115				
	16.8	<12	66	54.3	32	89				
E3	8.7	<12	<41	32.7	22	47.1	0.0	N	N	Tan Sand
	9.1	<12	54	35.0	28	47.0				
	7.9	<12	70	39.2	30	57.				
D4	25	54	329	237	197	840	0.0	N	N	Sand, organics, Brown, some gravel
	30	32	397	185	180	704				
	18	43	292	236	152	792				
D5	9.4	12	336	162	283	557	0.0	N	N	Silty Sand, organics, Brown
	12.4	<11	357	149	261	421				
	6.8	<11	268	161	201	346				
C4	28	<12	136	292	67	266		N	N	Same as ↑
	<10	<12	171	542	96	295				
	23	<12	131	310	68	253				
~~D6~~ D5	~~12.8~~	~~<12~~	~~499~~	~~137~~	~~692~~	~~330~~	~~0.0~~	~~N~~	~~N~~	~~Same as ↑~~
	24	<12	365	233	259	320				~~Recorded as D6 in XRF~~
	~~7.3~~	~~<12~~	~~365~~	160	311	333				
C5	27	<12	120	259	45	217	0.0	N	N	Same as ↑
	19	<12	89	360	48	216				
	11	<12	71	387	60	256				

Disregard Data - unsure if D5 or D6

Comments:

11/13/13

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm)						PID Headspace (ppmV)	Visual/Olfactory Field Observations		
	Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc		Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
C6	13.4	<12	87	88	89	98	0.0	N	N	Same as C5
	11.5	<12	63	85	46	90				Previous Sample
	10.7	<12	73	92	51	95				
	14.0	<13	95	89	54	91				
	13.0	<12	75	85	48	92				
	14.7	<12	75	68.4	58	103				
	10.8	<12	127	86	47	93				
B5	72	<12	190	790	101	675	0.0	N	N	Sand organics; Brown
	47	18	181	740	82	602				
	43	23	238	821	101	647				
B4	40	<12	413	439	209	2402	0.0	N	N	Topsoil and concrete bits.
	32	<12	444	596	284	2262				
	49	<14	324	400	210	5917				
D6	53	<12	264	531	97	1211	0.0	N	N	Silty sand organics, Brown
	69	<13	323	455	99	1063				
	70	<15	415	392	93	849				
C7	126	<12	141	1257	145	768	0.0	N	N	Topsoil & Sand, Brown
	83	<12	77	1047	116	780				
	61	<11	101	1112	101	744				
D7	27	<13	90	123	36	204	0.0	N	N	Sand & gravel; brown
	12.1	<12	<38	56.3	26	82				
	16.2	<12	79	120	25	167				
D8	32	<11	55	600	17	223	0.0	N	N	Topsoil; Sand & gravel
	43	<12	94	529	32	236				
	41	<11	64	504	34	238				

Comments:

11/13/17

Westford Anodizing Soil Screening Log

Screening Location	X-Ray Fluorescence Metals (ppm)						PID Headspace (ppmV)	Visual/Olfactory Field Observations		
	Arsenic	Cadmium	Chromium (total)	Lead	Nickel	Zinc		Odors Present (yes/no)	Staining Present (yes/no)	Soil Description
IC-H7	9.0	<11	41	96	<13	54.9	0.0	N	N	Topsoil; Dark Brown
	13.3	<11	<39	83	<14	55.7				
	8.4	<12	<41	75	<15	51				
IC-I7	109	18	1058	3669	25	5363	0.5	N	N	Same As 4
	137	<13	1141	4667	34	7048				Field Duplicate for- PCBs, PCDFs, 6 Met.ls,
	104	<13	1433	4967	<26	6268				+ Hex chrom, Hg, cyanide, ORP, PH, Sulfide
IC-I7 DP	101	<13	1409	3794	<24	5770	0.0	N	N	PID Lamp failed during measurement
	387	21	2339	4140	<56	7724				
	118	18	1283	5150	44	6678				
SS-I8	22	<12	67	557	19	161	0.0	N	N	Topsoil; Dark brown
	32	<12	<43	580	32	190				
~~SS~~	32	<11	<37	445	<13	129				
SS-H8	233	<11	<39	161	20	140	0.0	N	N	Topsoil; Dark Brown
	23	<12	80	168	26	153				
	22	<12	61	168	21	135				
IC-J7	32	<12	<43	392	<16	190	0.0	N	N	Topsoil same as A
	38	<11	62	362	<16	227				
	27	<11	50	431	<16	193				
I9	86	<11	<42	1021	20	374	0.0	N	N	Topsoil/asA; Black to Brown
	95	<12	<40	1373	25	422				
	89	<11	<42	1556	<15	466				
H9	~~89~~ 26	<11	144	231	62	158	0.0			Topsoil with Klinker Block
	23.4	<10	86	174	34	163				
	22	<10	121	241	65	150				

Comments:

APPENDIX B

Laboratory Data Reports

November 19, 2013

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

November 19, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K0505

Enclosed are results of analyses for samples received by the laboratory on November 12, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 11/19/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0505

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TR-H1	13K0505-01	Soil		SM 2540G	
				SW-846 8082A	
SS-H1	13K0505-02	Soil		SM 2540G	
				SW-846 8082A	
SS-H3	13K0505-07	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 9014	
				SW-846 9045C	
SS-H7	13K0505-13	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	

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

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 As, Cd, Cr, Pb, Ni and Zn were requested and reported.

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

13K0505-07[SS-H3], B085422-MS1, B085422-MS2, B085422-MS3, B085422-MSD1

SW-846 8082A

Qualifications:

A five times dilution was performed as part of the standard analytical procedure.

Analyte & Samples(s) Qualified:

13K0505-01[TR-H1]

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

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: TR-H1 | Sampled: 11/12/2013 00:00

Sample ID: 13K0505-01

Sample Matrix: Soil

Sample Flags: O-32

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:38	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	104	30-150		11/16/13 0:38
Decachlorobiphenyl [2]	96.8	30-150		11/16/13 0:38
Tetrachloro-m-xylene [1]	86.1	30-150		11/16/13 0:38
Tetrachloro-m-xylene [2]	101	30-150		11/16/13 0:38

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: TR-H1 | Sampled: 11/12/2013 00:00

Sample ID: 13K0505-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/18/13	11/19/13 7:36	MXG

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H1 | Sampled: 11/12/2013 10:35

Sample ID: 13K0505-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1221 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1232 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1242 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1248 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1254 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1260 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1262 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB
Aroclor-1268 [1]	ND	0.11	mg/Kg dry	5		SW-846 8082A	11/14/13	11/16/13 0:51	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.5	30-150		11/16/13 0:51
Decachlorobiphenyl [2]	96.5	30-150		11/16/13 0:51
Tetrachloro-m-xylene [1]	74.7	30-150		11/16/13 0:51
Tetrachloro-m-xylene [2]	87.6	30-150		11/16/13 0:51

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H1 | Sampled: 11/12/2013 10:35

Sample ID: 13K0505-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/18/13	11/19/13 7:36	MXG

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H3 | Sampled: 11/12/2013 11:55

Sample ID: 13K0505-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	7.8	2.6	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP
Cadmium	0.54	0.26	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP
Chromium	34	0.51	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP
Lead	70	0.77	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP
Mercury	0.040	0.026	mg/Kg dry	1		SW-846 7471B	11/15/13	11/18/13 11:57	SAJ
Nickel	20	0.51	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP
Zinc	60	1.0	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:12	OP

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H3 | Sampled: 11/12/2013 11:55

Sample ID: 13K0505-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	1.1	0.46	mg/Kg dry	1		SW-846 9014	11/18/13	11/19/13 10:00	VLA
Hexavalent Chromium	0.47	0.33	mg/Kg dry	2	MS-16	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	110		mV	1		SM2580 A	11/13/13	11/13/13 9:00	LL
pH @20.4°C	5.8		pH Units	1		SW-846 9045C	11/13/13	11/13/13 9:00	LL
% Solids	94.0		% Wt	1		SM 2540G	11/18/13	11/19/13 7:36	MXG

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H7 | Sampled: 11/12/2013 13:15

Sample ID: 13K0505-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	12	2.6	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP
Cadmium	0.76	0.26	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP
Chromium	25	0.52	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP
Lead	71	0.78	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP
Mercury	0.11	0.028	mg/Kg dry	1		SW-846 7471B	11/14/13	11/15/13 14:44	AMP
Nickel	17	0.52	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP
Zinc	65	1.0	mg/Kg dry	1		SW-846 6010C	11/13/13	11/15/13 19:57	OP

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0505

Date Received: 11/12/2013

Field Sample #: SS-H7 | Sampled: 11/12/2013 13:15

Sample ID: 13K0505-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.48	mg/Kg dry	1		SW-846 9014	11/18/13	11/19/13 10:00	VLA
% Solids	90.6		% Wt	1		SM 2540G	11/18/13	11/19/13 7:36	MXG

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

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13K0505-01 [TR-H1]	B085386	11/18/13
13K0505-02 [SS-H1]	B085386	11/18/13
13K0505-07 [SS-H3]	B085386	11/18/13
13K0505-13 [SS-H7]	B085386	11/18/13

SM2580 A

Lab Number [Field ID]	Batch	Initial [g]	Date
13K0505-07 [SS-H3]	B085015	20.0	11/13/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-13 [SS-H7]	B085074	1.06	50.0	11/13/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-07 [SS-H3]	B085165	1.04	50.0	11/14/13

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-07 [SS-H3]	B085422	2.55	100	11/19/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-13 [SS-H7]	B085199	0.601	50.0	11/14/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-07 [SS-H3]	B085260	0.603	50.0	11/15/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-01 [TR-H1]	B085203	10.1	10.0	11/14/13
13K0505-02 [SS-H1]	B085203	10.0	10.0	11/14/13

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-07 [SS-H3]	B085396	1.15	50.0	11/18/13

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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0505-13 [SS-H7]	B085396	1.14	50.0	11/18/13

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
13K0505-07 [SS-H3]	B085021	20.0	11/13/13

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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
Batch B085203 - SW-846 3546										
Blank (B085203-BLK1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.204*		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.207*		mg/Kg wet	0.200		103	30-150			
Surrogate: Tetrachloro-m-xylene	*0.166*		mg/Kg wet	0.200		83.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.209*		mg/Kg wet	0.200		104	30-150			
LCS (B085203-BS1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Aroclor-1016	0.17	0.10	mg/Kg wet	0.200		85.6	40-140			
Aroclor-1016 [2C]	0.21	0.10	mg/Kg wet	0.200		106	40-140			
Aroclor-1260	0.16	0.10	mg/Kg wet	0.200		82.4	40-140			
Aroclor-1260 [2C]	0.19	0.10	mg/Kg wet	0.200		94.8	40-140			
Surrogate: Decachlorobiphenyl	*0.212*		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.193*		mg/Kg wet	0.200		96.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.178*		mg/Kg wet	0.200		89.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.204*		mg/Kg wet	0.200		102	30-150			
LCS Dup (B085203-BSD1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Aroclor-1016	0.18	0.10	mg/Kg wet	0.200		91.3	40-140	6.45	30	
Aroclor-1016 [2C]	0.23	0.10	mg/Kg wet	0.200		114	40-140	7.17	30	
Aroclor-1260	0.18	0.10	mg/Kg wet	0.200		88.9	40-140	7.53	30	
Aroclor-1260 [2C]	0.21	0.10	mg/Kg wet	0.200		103	40-140	8.15	30	
Surrogate: Decachlorobiphenyl	*0.225*		mg/Kg wet	0.200		113	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.203*		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		92.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.213*		mg/Kg wet	0.200		107	30-150			

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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
Batch B085203 - SW-846 3546										
Matrix Spike (B085203-MS1)	**Source: 13K0505-02**			Prepared: 11/14/13 Analyzed: 11/16/13						
Aroclor-1016	0.18	0.11	mg/Kg dry	0.213	ND	85.2	40-140			
Aroclor-1016 [2C]	0.22	0.11	mg/Kg dry	0.213	ND	103	40-140			
Aroclor-1260	0.17	0.11	mg/Kg dry	0.213	ND	78.1	40-140			
Aroclor-1260 [2C]	0.21	0.11	mg/Kg dry	0.213	ND	97.2	40-140			
Surrogate: Decachlorobiphenyl	*0.201*		mg/Kg dry	0.213		94.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.206*		mg/Kg dry	0.213		96.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.171*		mg/Kg dry	0.213		80.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.201*		mg/Kg dry	0.213		94.3	30-150			
Matrix Spike Dup (B085203-MSD1)	**Source: 13K0505-02**			Prepared: 11/14/13 Analyzed: 11/16/13						
Aroclor-1016	0.17	0.11	mg/Kg dry	0.213	ND	80.8	40-140	5.29	30	
Aroclor-1016 [2C]	0.21	0.11	mg/Kg dry	0.213	ND	97.9	40-140	5.31	30	
Aroclor-1260	0.16	0.11	mg/Kg dry	0.213	ND	74.7	40-140	4.36	30	
Aroclor-1260 [2C]	0.19	0.11	mg/Kg dry	0.213	ND	90.6	40-140	7.03	30	
Surrogate: Decachlorobiphenyl	*0.192*		mg/Kg dry	0.213		90.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.196*		mg/Kg dry	0.213		92.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.163*		mg/Kg dry	0.213		76.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.190*		mg/Kg dry	0.213		89.5	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085074 - SW-846 3050B										
Blank (B085074-BLK1)				Prepared: 11/13/13 Analyzed: 11/15/13						
Arsenic	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							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B085074-BS1)				Prepared: 11/13/13 Analyzed: 11/15/13						
Arsenic	96.3	5.6	mg/Kg wet	99.6		96.7	83-117.6			
Cadmium	169	0.56	mg/Kg wet	182		92.7	83.1-116.9			
Chromium	135	1.1	mg/Kg wet	136		99.0	81.6-117.6			
Lead	100	1.7	mg/Kg wet	115		87.3	82.4-117.8			
Nickel	144	1.1	mg/Kg wet	153		94.3	84.4-115.6			
Zinc	148	2.2	mg/Kg wet	161		92.1	81.9-117.6			
LCS Dup (B085074-BSD1)				Prepared: 11/13/13 Analyzed: 11/15/13						
Arsenic	101	5.4	mg/Kg wet	99.6		102	83-117.6	5.13	30	
Cadmium	171	0.54	mg/Kg wet	182		94.0	83.1-116.9	1.40	30	
Chromium	137	1.1	mg/Kg wet	136		101	81.6-117.6	1.60	30	
Lead	104	1.6	mg/Kg wet	115		90.4	82.4-117.8	3.51	30	
Nickel	145	1.1	mg/Kg wet	153		94.8	84.4-115.6	0.525	30	
Zinc	150	2.2	mg/Kg wet	161		93.1	81.9-117.6	1.08	30	
Duplicate (B085074-DUP1)	**Source: 13K0505-13**			Prepared: 11/13/13 Analyzed: 11/15/13						
Arsenic	10.0	2.7	mg/Kg dry		11.5			14.1	35	
Cadmium	0.709	0.27	mg/Kg dry		0.762			7.22	35	
Chromium	23.8	0.54	mg/Kg dry		24.6			3.43	35	
Lead	71.9	0.81	mg/Kg dry		71.4			0.729	35	
Nickel	16.4	0.54	mg/Kg dry		17.2			4.78	35	
Zinc	59.6	1.1	mg/Kg dry		65.0			8.55	35	
MRL Check (B085074-MRL1)				Prepared: 11/13/13 Analyzed: 11/15/13						
Lead	0.739	0.78	mg/Kg wet	0.780		94.7	80-120			
Matrix Spike (B085074-MS1)	**Source: 13K0505-13**			Prepared: 11/13/13 Analyzed: 11/15/13						
Arsenic	122	2.7	mg/Kg dry	109	11.5	101	75-125			
Cadmium	111	0.27	mg/Kg dry	109	0.762	101	75-125			
Chromium	140	0.54	mg/Kg dry	109	24.6	106	75-125			
Lead	177	0.81	mg/Kg dry	109	71.4	97.3	75-125			
Nickel	125	0.54	mg/Kg dry	109	17.2	99.6	75-125			
Zinc	166	1.1	mg/Kg dry	109	65.0	93.5	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085165 - SW-846 3050B										
Blank (B085165-BLK1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	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							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B085165-BS1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	94.4	5.0	mg/Kg wet	99.6		94.8	83-117.6			
Cadmium	169	0.50	mg/Kg wet	182		92.7	83.1-116.9			
Chromium	132	1.0	mg/Kg wet	136		97.3	81.6-117.6			
Lead	113	1.5	mg/Kg wet	115		98.6	82.4-117.8			
Nickel	143	1.0	mg/Kg wet	153		93.4	84.4-115.6			
Zinc	145	2.0	mg/Kg wet	161		90.3	81.9-117.6			
LCS Dup (B085165-BSD1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	97.0	5.0	mg/Kg wet	99.6		97.4	83-117.6	2.75	30	
Cadmium	172	0.50	mg/Kg wet	182		94.5	83.1-116.9	2.02	30	
Chromium	133	0.99	mg/Kg wet	136		98.1	81.6-117.6	0.732	30	
Lead	112	1.5	mg/Kg wet	115		97.6	82.4-117.8	0.975	30	
Nickel	145	0.99	mg/Kg wet	153		94.5	84.4-115.6	1.20	30	
Zinc	147	2.0	mg/Kg wet	161		91.5	81.9-117.6	1.42	30	
MRL Check (B085165-MRL1)				Prepared: 11/14/13 Analyzed: 11/19/13						
Lead	0.674	0.73	mg/Kg wet	0.735		91.7	80-120			
Batch B085199 - SW-846 7471										
Blank (B085199-BLK1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Mercury	ND	0.025	mg/Kg wet							
LCS (B085199-BS1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Mercury	4.09	0.33	mg/Kg wet	4.05		101	71.6-128.1			
LCS Dup (B085199-BSD1)				Prepared: 11/14/13 Analyzed: 11/15/13						
Mercury	4.11	0.33	mg/Kg wet	4.05		101	71.6-128.1	0.365	30	
Duplicate (B085199-DUP1)	**Source: 13K0505-13**			Prepared: 11/14/13 Analyzed: 11/15/13						
Mercury	0.113	0.027	mg/Kg dry		0.113			0.0886	35	
Matrix Spike (B085199-MS1)	**Source: 13K0505-13**			Prepared: 11/14/13 Analyzed: 11/15/13						
Mercury	0.287	0.028	mg/Kg dry	0.184	0.113	94.6	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085260 - SW-846 7471										
Blank (B085260-BLK1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	ND	0.025	mg/Kg wet							
LCS (B085260-BS1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	3.37	0.29	mg/Kg wet	4.05		83.3	71.6-128.1			
LCS Dup (B085260-BSD1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	3.26	0.27	mg/Kg wet	4.05		80.5	71.6-128.1	3.46	30	

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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
Batch B085015 - SM2580 A										
Duplicate (B085015-DUP1)	**Source: 13K0505-07**			Prepared & Analyzed: 11/13/13						
Oxidation/Reduction Potential	99.0		mV		107			7.77	17.5	
Batch B085021 - SW-846 9045C										
LCS (B085021-BS1)				Prepared & Analyzed: 11/13/13						
pH	6.05		pH Units	6.00		101	99-102			
Duplicate (B085021-DUP1)	**Source: 13K0505-07**			Prepared & Analyzed: 11/13/13						
pH	5.8		pH Units		5.8			0.690	6.77	
Batch B085386 - % Solids										
Duplicate (B085386-DUP5)	**Source: 13K0505-13**			Prepared: 11/18/13 Analyzed: 11/19/13						
% Solids	90.7		% Wt		90.6			0.110	20	
Batch B085396 - SW-846 9014										
Blank (B085396-BLK1)				Prepared: 11/18/13 Analyzed: 11/19/13						
Cyanide	ND	0.50	mg/Kg wet							
LCS (B085396-BS1)				Prepared: 11/18/13 Analyzed: 11/19/13						
Cyanide	34	0.50	mg/Kg wet	33.2		102	80-120			
LCS Dup (B085396-BSD1)				Prepared: 11/18/13 Analyzed: 11/19/13						
Cyanide	32	0.48	mg/Kg wet	32.3		97.9	80-120	6.99	20	
Matrix Spike (B085396-MS1)	**Source: 13K0505-13**			Prepared: 11/18/13 Analyzed: 11/19/13						
Cyanide	16	0.53	mg/Kg dry	17.4	0.43	90.0	75-125			
Matrix Spike Dup (B085396-MSD1)	**Source: 13K0505-13**			Prepared: 11/18/13 Analyzed: 11/19/13						
Cyanide	17	0.50	mg/Kg dry	16.5	0.43	99.4	75-125	4.33	35	
Batch B085422 - SW-846 7196A										
Blank (B085422-BLK1)				Prepared & Analyzed: 11/19/13						
Hexavalent Chromium	ND	0.16	mg/Kg wet							
LCS (B085422-BS1)				Prepared & Analyzed: 11/19/13						
Hexavalent Chromium	78	2.0	mg/Kg wet	93.7		83.2	80-120			

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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
Batch B085422 - SW-846 7196A											
LCS Dup (B085422-BSD1)				Prepared & Analyzed: 11/19/13							
Hexavalent Chromium	76	1.9	mg/Kg wet	89.2		85.7		80-120	2.05	20	
Matrix Spike (B085422-MS1) Soluble MS	**Source: 13K0505-07**			Prepared & Analyzed: 11/19/13							
Hexavalent Chromium	25	0.83	mg/Kg dry	41.7	0.47	**60.0**	*	75-125			MS-16
Matrix Spike (B085422-MS2) PDMS	**Source: 13K0505-07**			Prepared & Analyzed: 11/19/13							
Hexavalent Chromium	28	0.85	mg/Kg dry	42.6	0.47	**63.9**	*	75-125			MS-16
Matrix Spike (B085422-MS3) Insoluble MS	**Source: 13K0505-07**			Prepared & Analyzed: 11/19/13							
Hexavalent Chromium	330	17	mg/Kg dry	678	0.47	**48.6**	*	75-125			MS-16
Matrix Spike Dup (B085422-MSD1) Soluble MS Dup	**Source: 13K0505-07**			Prepared & Analyzed: 11/19/13							
Hexavalent Chromium	27	0.84	mg/Kg dry	42.2	0.47	**62.3**	*	75-125	4.91	35	MS-16

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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.
	No results have been blank subtracted unless specified in the case narrative section.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
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.
O-32	A five times dilution was performed as part of the standard analytical procedure.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
W-06	Elevated method reporting limit due to intense color of sample

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7196A in Soil	
Hexavalent Chromium	NY,CT,NH,NC,ME,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,NJ
Aroclor-1262	NC
Aroclor-1262 [2C]	NC
Aroclor-1268	NC
Aroclor-1268 [2C]	NC
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA,NJ

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

con-test® ANALYTICAL LABORATORY

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

CHAIN OF CUSTODY RECORD

13K0505

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Company Name: Watermark
Address: 175 Cabot St. Lowell MA 01854
Attention: Olaf Westphalen
Project Location: Westford Analyzing
Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

Telephone: 978 452 9696
Project # 08403-13
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ⊘ EMAIL ○ WEBSITE
Fax #
Email: olaf.westphalen@watermarkcp...
Format: ⊘ PDF ⊘ EXCEL ○ GIS ○ OTHER ○ "Enhanced Data Package"

	PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom
# of Containers	1	1			1
** Preservation	-	-			1
***Container Code	A	A			A

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom
01	TR-H1	11/12/13			✓	S	U	✓	H	H	H	
02	SS-H1		1035		✓	S	U	✓	H	H	H	
03	SS-G1		1100		✓	S	U		H	H	H	
04	SS-E1		1115		✓	S	U		H	H	H	
05	SS-B1		1125		✓	S	U		H	H	H	
06	SS-H2		1135		✓	S	U		H	H	H	
07	SS-H3		1155		✓	S	U		R	R	R	R
08	SS-G3		1210		✓	S	U		H	H	H	
09	SS-H4		1220		✓	S	U		H	H	H	
10	SS-H5		1235		✓	S	U		H	H	H	

Comments: H = Hold
R = Run
Only Run pH + ORP on Sample-07 Per Olaf W. MC 11/13/2013

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

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Signature	Date/Time
Relinquished by: (signature) [signature] 11/12/13	1535
Received by: (signature) [signature] 11/12/13	1600
Relinquished by: (signature) [signature] 11/12/13	1810
Received by: (signature) [signature] 4.8° 11/12/13	1810

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: ______
Connecticut: ______
Other: ______

Is your project MCP or RCP ?
⊘ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

CHAIN OF CUSTODY RECORD

13K0505

Rev. 04.06.12

con-test ANALYTICAL LABORATORY
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Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Page 1 of 2

Company Name: Interweb Telephone: 978 456 9611

Address: 175 Cabot St. Project # 01403-19

Lowell MA 01854 Client PO#

Attention: Chet Westphalen

Project Location: Westford Landfill

Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: See B1
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code
11	SS-H6	11/12/13	1250		✓	S	U
12	SS-I6		1300		✓	S	U
13	SS-H7		1315		✓	S	U
13	SS-H7-MS		1315		✓	S	U
14	SS-I7		1340		✓	S	U
15	SS-I5		1405		✓	S	U
16	SS-I4		1425		✓	S	U
17	SS-J4		1450		✓	S	U
18	SS-J5		1520		✓	S	U
19	SS-J6		1535		✓	S	U

# of Containers	1	1	1	1
** Preservation	-	-	-	-
***Container Code	A	A	A	A

ANALYSIS REQUESTED

	PCBs	Cobalt (see B1)	Hg	Cyanide	pH, ORP, Chlor. #6
11		H	*	H	
12		H	H	H	
13		R	R	R	
13		R	R		
14		H	H	H	
15		H	H	H	
16		H	H	H	
17		H	H	H	
18		H	H	H	
19		H	H	H	

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:
H = Hold
R = Run

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

Relinquished by: (signature)	Date/Time:
	11/12/13 1555
Received by: (signature)	Date/Time:
	11/12/13 1600
Relinquished by: (signature)	Date/Time:
	11/12/13 1800
Received by: (signature)	Date/Time:
4.8°	11/12/13 1810

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

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East Longmeadow, MA. 01028
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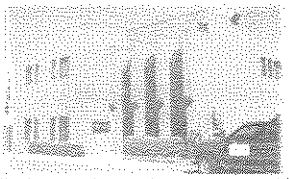

Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: K.W DATE: 11-12-2013

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included
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 N/A Temperature °C by Temp gun 4.8
5) Are there Dissolved samples for the lab to filter? Yes (No)
Who was notified _____ Date _____ Time _____
6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
Who was notified _____ Date _____ Time _____
7) Location where samples are stored: 19
Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature:
8) Do all samples have the proper Acid pH: Yes No (N/A)
9) Do all samples have the proper Base pH: Yes No (N/A)
10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No (N/A)

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	23
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:
H = Hold (on COC)
R = Run (on COC)

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

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? Date/Time: 11-12-2013

 Log-In Technician Initials: L.W Date/Time: 19:10

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13K0505
Project Location: Westford Anodizing	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13K0505-01 thru 13K0505-13

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 (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 (X)	9014 Total Cyanide/PAC CAM VI A (X)	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	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?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	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).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

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

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]

<u>Data User Note:</u> 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.

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *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: 11/19/13

November 25, 2013

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

November 25, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K0566

Enclosed are results of analyses for samples received by the laboratory on November 13, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

con-test® ANALYTICAL LABORATORY

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 11/25/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0566

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
IC-H7	13K0566-03	Soil		SM 2540G	
				SW-846 8270D	
IC-I7	13K0566-04	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9045C	
SS-D4	13K0566-13	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 9014	
				SW-846 9045C	
SS-D5	13K0566-14	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 9014	
				SW-846 9045C	
SS-D5	13K0566-16	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 9014	
				SW-846 9045C	
SS-B4	13K0566-20	Soil		SM 2540G	
				SM2580 A	
				SW-846 6010C	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 9014	
				SW-846 9045C	

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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 As, Cd, Cr, Pb, Ni and Zn were requested and reported.

SW-846 7196A

Qualifications:

Elevated method reporting limit due to intense color of sample

Analyte & Samples(s) Qualified:

Hexavalent Chromium

13K0566-04[IC-I7], 13K0566-13[SS-D4], 13K0566-14[SS-D5], 13K0566-16[SS-D5], 13K0566-20[SS-B4]

SW-846 8270D

Qualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Acetophenone

B085293-BS1

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

13K0566-03[IC-H7], 13K0566-04[IC-I7], B085293-BLK1, B085293-BS1, B085293-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Di-n-octylphthalate

13K0566-03[IC-H7], 13K0566-04[IC-I7]

SW-846 9014

Qualifications:

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possiblity of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Cyanide

13K0566-20RE1[SS-B4], B085692-MS1, B085692-MSD1

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

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

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

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-H7 | Sampled: 11/13/2013 09:55

Sample ID: 13K0566-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Acenaphthylene	0.50	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Aniline	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Anthracene	0.47	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Benzo(a)anthracene	1.9	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Benzo(a)pyrene	2.0	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Benzo(b)fluoranthene	2.7	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Benzo(g,h,i)perylene	1.0	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Benzo(k)fluoranthene	0.96	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Bis(2-Ethylhexyl)phthalate	1.0	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
4-Chloroaniline	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Chrysene	2.2	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Dibenz(a,h)anthracene	0.35	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4-Dinitrophenol	ND	0.82	mg/Kg dry	1	V-04	SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Di-n-octylphthalate	ND	0.83	mg/Kg dry	1	V-05	SW-846 8270D	11/15/13	11/20/13 21:58	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Fluoranthene	3.1	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Indeno(1,2,3-cd)pyrene	1.3	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-H7 | Sampled: 11/13/2013 09:55

Sample ID: 13K0566-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
4-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Phenanthrene	2.2	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
Pyrene	2.9	0.21	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 21:58	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.9	30-130		11/20/13 21:58
Phenol-d6	65.8	30-130		11/20/13 21:58
Nitrobenzene-d5	70.7	30-130		11/20/13 21:58
2-Fluorobiphenyl	77.6	30-130		11/20/13 21:58
2,4,6-Tribromophenol	77.7	30-130		11/20/13 21:58
p-Terphenyl-d14	67.0	30-130		11/20/13 21:58

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-H7 | Sampled: 11/13/2013 09:55

Sample ID: 13K0566-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.8		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-I7 | Sampled: 11/13/2013 10:05

Sample ID: 13K0566-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Acenaphthylene	0.27	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Acetophenone	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Aniline	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Anthracene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Benzo(a)anthracene	0.49	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Benzo(a)pyrene	0.61	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Benzo(b)fluoranthene	0.84	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Benzo(g,h,i)perylene	0.50	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Benzo(k)fluoranthene	0.30	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Bis(2-chloroethoxy)methane	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Bis(2-chloroethyl)ether	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Bis(2-chloroisopropyl)ether	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
4-Bromophenylphenylether	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Butylbenzylphthalate	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
4-Chloroaniline	ND	1.0	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2-Chloronaphthalene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2-Chlorophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Chrysene	0.66	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Dibenz(a,h)anthracene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Dibenzofuran	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Di-n-butylphthalate	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
1,2-Dichlorobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
1,3-Dichlorobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
1,4-Dichlorobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
3,3-Dichlorobenzidine	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4-Dichlorophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Diethylphthalate	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4-Dimethylphenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Dimethylphthalate	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4-Dinitrophenol	ND	1.0	mg/Kg dry	1	V-04	SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4-Dinitrotoluene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,6-Dinitrotoluene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Di-n-octylphthalate	ND	1.0	mg/Kg dry	1	V-05	SW-846 8270D	11/15/13	11/20/13 22:27	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Fluoranthene	0.88	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Fluorene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Hexachlorobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Hexachlorobutadiene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Hexachloroethane	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Indeno(1,2,3-cd)pyrene	0.59	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Isophorone	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2-Methylnaphthalene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-I7 | Sampled: 11/13/2013 10:05

Sample ID: 13K0566-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
3/4-Methylphenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Naphthalene	ND	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Nitrobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2-Nitrophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
4-Nitrophenol	ND	1.0	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Pentachlorophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Phenanthrene	0.50	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Phenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
Pyrene	1.0	0.26	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
1,2,4-Trichlorobenzene	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4,5-Trichlorophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR
2,4,6-Trichlorophenol	ND	0.52	mg/Kg dry	1		SW-846 8270D	11/15/13	11/20/13 22:27	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	44.0	30-130		11/20/13 22:27
Phenol-d6	49.5	30-130		11/20/13 22:27
Nitrobenzene-d5	52.3	30-130		11/20/13 22:27
2-Fluorobiphenyl	49.8	30-130		11/20/13 22:27
2,4,6-Tribromophenol	68.9	30-130		11/20/13 22:27
p-Terphenyl-d14	59.0	30-130		11/20/13 22:27

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-I7 | Sampled: 11/13/2013 10:05

Sample ID: 13K0566-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	23	3.8	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP
Cadmium	13	0.38	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP
Chromium	300	0.76	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP
Lead	6200	1.1	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP
Mercury	0.31	0.038	mg/Kg dry	1		SW-846 7471B	11/15/13	11/18/13 13:13	SAJ
Nickel	110	0.76	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP
Zinc	5900	1.5	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:23	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: IC-I7 | Sampled: 11/13/2013 10:05

Sample ID: 13K0566-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	1.9	0.77	mg/Kg dry	1		SW-846 9014	11/19/13	11/20/13 9:00	VLA
Hexavalent Chromium	ND	2.4	mg/Kg dry	10	W-06	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	94		mV	1		SM2580 A	11/14/13	11/14/13 8:00	LL
pH @18.9°C	7.2		pH Units	1		SW-846 9045C	11/14/13	11/14/13 8:00	LL
% Solids	64.9		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D4 | Sampled: 11/13/2013 13:45

Sample ID: 13K0566-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	11	2.8	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP
Cadmium	33	0.28	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP
Chromium	190	0.55	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP
Lead	250	0.83	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP
Mercury	0.12	0.027	mg/Kg dry	1		SW-846 7471B	11/15/13	11/18/13 13:22	SAJ
Nickel	170	0.55	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP
Zinc	690	1.1	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:34	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D4 | Sampled: 11/13/2013 13:45

Sample ID: 13K0566-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	45	5.5	mg/Kg dry	10		SW-846 9014	11/19/13	11/20/13 9:00	VLA
Hexavalent Chromium	ND	1.7	mg/Kg dry	10	W-06	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	92		mV	1		SM2580 A	11/14/13	11/14/13 8:25	LL
pH @19.2°C	6.9		pH Units	1		SW-846 9045C	11/14/13	11/14/13 8:25	LL
% Solids	90.6		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D5 | Sampled: 11/13/2013 13:50

Sample ID: 13K0566-14

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	6.6	2.7	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP
Cadmium	8.0	0.27	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP
Chromium	210	0.54	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP
Lead	140	0.81	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP
Mercury	0.21	0.028	mg/Kg dry	1		SW-846 7471B	11/15/13	11/18/13 13:24	SAJ
Nickel	180	0.54	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP
Zinc	350	1.1	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 21:40	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D5 | Sampled: 11/13/2013 13:50

Sample ID: 13K0566-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	15	0.53	mg/Kg dry	1		SW-846 9014	11/19/13	11/20/13 9:00	VLA
Hexavalent Chromium	ND	0.88	mg/Kg dry	5	W-06	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	95		mV	1		SM2580 A	11/14/13	11/14/13 8:25	LL
pH @18.9°C	6.6		pH Units	1		SW-846 9045C	11/14/13	11/14/13 8:25	LL
% Solids	89.9		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D5 | Sampled: 11/13/2013 14:40

Sample ID: 13K0566-16

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	8.6	2.8	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP
Cadmium	9.3	0.28	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP
Chromium	290	0.55	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP
Lead	140	0.83	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP
Mercury	0.32	0.028	mg/Kg dry	1		SW-846 7471B	11/15/13	11/18/13 13:25	SAJ
Nickel	210	0.55	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP
Zinc	320	1.1	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:11	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-D5 | Sampled: 11/13/2013 14:40

Sample ID: 13K0566-16

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	16	0.54	mg/Kg dry	1		SW-846 9014	11/19/13	11/20/13 9:00	VLA
Hexavalent Chromium	ND	0.88	mg/Kg dry	5	W-06	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	98		mV	1		SM2580 A	11/14/13	11/14/13 8:25	LL
pH @19.3°C	6.6		pH Units	1		SW-846 9045C	11/14/13	11/14/13 8:25	LL
% Solids	89.8		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-B4 | Sampled: 11/13/2013 15:30

Sample ID: 13K0566-20

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	17	2.9	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP
Cadmium	2.5	0.29	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP
Chromium	180	0.57	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP
Lead	550	0.86	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP
Mercury	2.4	0.28	mg/Kg dry	10		SW-846 7471B	11/15/13	11/18/13 14:11	SAJ
Nickel	130	0.57	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP
Zinc	1300	1.1	mg/Kg dry	1		SW-846 6010C	11/14/13	11/17/13 22:17	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0566

Date Received: 11/13/2013

Field Sample #: SS-B4 | Sampled: 11/13/2013 15:30

Sample ID: 13K0566-20

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	92	5.5	mg/Kg dry	10	MS-07A	SW-846 9014	11/21/13	11/21/13 9:00	VLA
Hexavalent Chromium	ND	1.8	mg/Kg dry	10	W-06	SW-846 7196A	11/19/13	11/19/13 13:00	LL
Oxidation/Reduction Potential	71		mV	1		SM2580 A	11/14/13	11/14/13 8:25	LL
pH @19.9°C	9.2		pH Units	1		SW-846 9045C	11/14/13	11/14/13 8:25	LL
% Solids	86.0		% Wt	1		SM 2540G	11/20/13	11/20/13 14:14	MLA

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13K0566-03 [IC-H7]	B085523	11/20/13
13K0566-04 [IC-I7]	B085523	11/20/13
13K0566-13 [SS-D4]	B085523	11/20/13
13K0566-14 [SS-D5]	B085523	11/20/13
13K0566-16 [SS-D5]	B085523	11/20/13
13K0566-20 [SS-B4]	B085523	11/20/13

SM2580 A

Lab Number [Field ID]	Batch	Initial [g]	Date
13K0566-04 [IC-I7]	B085106	20.0	11/14/13
13K0566-13 [SS-D4]	B085106	20.0	11/14/13
13K0566-14 [SS-D5]	B085106	20.0	11/14/13
13K0566-16 [SS-D5]	B085106	20.0	11/14/13
13K0566-20 [SS-B4]	B085106	20.0	11/14/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-04 [IC-I7]	B085165	1.02	50.0	11/14/13
13K0566-13 [SS-D4]	B085165	1.00	50.0	11/14/13
13K0566-14 [SS-D5]	B085165	1.02	50.0	11/14/13
13K0566-16 [SS-D5]	B085165	1.01	50.0	11/14/13
13K0566-20 [SS-B4]	B085165	1.01	50.0	11/14/13

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-04 [IC-I7]	B085422	2.54	100	11/19/13
13K0566-13 [SS-D4]	B085422	2.58	100	11/19/13
13K0566-14 [SS-D5]	B085422	2.53	100	11/19/13
13K0566-16 [SS-D5]	B085422	2.53	100	11/19/13
13K0566-20 [SS-B4]	B085422	2.56	100	11/19/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-04 [IC-I7]	B085273	0.608	50.0	11/15/13
13K0566-13 [SS-D4]	B085273	0.616	50.0	11/15/13
13K0566-14 [SS-D5]	B085273	0.600	50.0	11/15/13
13K0566-16 [SS-D5]	B085273	0.605	50.0	11/15/13
13K0566-20 [SS-B4]	B085273	0.614	50.0	11/15/13

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-03 [IC-H7]	B085293	30.2	1.00	11/15/13
13K0566-04 [IC-I7]	B085293	30.0	1.00	11/15/13

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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-04 [IC-I7]	B085490	1.00	50.0	11/19/13
13K0566-13 [SS-D4]	B085490	1.01	50.0	11/19/13
13K0566-14 [SS-D5]	B085490	1.04	50.0	11/19/13

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-16 [SS-D5]	B085492	1.03	50.0	11/19/13

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0566-20RE1 [SS-B4]	B085692	1.06	50.0	11/21/13

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
13K0566-04 [IC-I7]	B085110	20.0	11/14/13
13K0566-13 [SS-D4]	B085110	20.0	11/14/13
13K0566-14 [SS-D5]	B085110	20.0	11/14/13
13K0566-16 [SS-D5]	B085110	20.0	11/14/13
13K0566-20 [SS-B4]	B085110	20.0	11/14/13

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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
Batch B085293 - SW-846 3546										
Blank (B085293-BLK1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	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							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.67	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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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	
Batch B085293 - SW-846 3546												
Blank (B085293-BLK1)				Prepared: 11/15/13 Analyzed: 11/18/13								
Phenol	ND	0.34	mg/Kg wet									
Pyrene	ND	0.17	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet									
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet									
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet									
Surrogate: 2-Fluorophenol	*5.10*		mg/Kg wet	6.67		76.6		30-130				
Surrogate: Phenol-d6	*5.16*		mg/Kg wet	6.67		77.3		30-130				
Surrogate: Nitrobenzene-d5	*2.98*		mg/Kg wet	3.33		89.5		30-130				
Surrogate: 2-Fluorobiphenyl	*2.89*		mg/Kg wet	3.33		86.8		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.44*		mg/Kg wet	6.67		96.6		30-130				
Surrogate: p-Terphenyl-d14	*3.19*		mg/Kg wet	3.33		95.7		30-130				
LCS (B085293-BS1)				Prepared: 11/15/13 Analyzed: 11/18/13								
Acenaphthene	1.32	0.17	mg/Kg wet	1.67		79.4		40-140				
Acenaphthylene	1.34	0.17	mg/Kg wet	1.67		80.3		40-140				
Acetophenone	0.663	0.34	mg/Kg wet	1.67		**39.8**	*	40-140			L-07	
Aniline	0.796	0.34	mg/Kg wet	1.67		47.8		40-140				
Anthracene	1.31	0.17	mg/Kg wet	1.67		78.4		40-140				
Benzo(a)anthracene	1.34	0.17	mg/Kg wet	1.67		80.2		40-140				
Benzo(a)pyrene	1.43	0.17	mg/Kg wet	1.67		85.7		40-140				
Benzo(b)fluoranthene	1.39	0.17	mg/Kg wet	1.67		83.1		40-140				
Benzo(g,h,i)perylene	1.27	0.17	mg/Kg wet	1.67		76.3		40-140				
Benzo(k)fluoranthene	1.33	0.17	mg/Kg wet	1.67		79.6		40-140				
Bis(2-chloroethoxy)methane	1.46	0.34	mg/Kg wet	1.67		87.6		40-140				
Bis(2-chloroethyl)ether	1.41	0.34	mg/Kg wet	1.67		84.8		40-140				
Bis(2-chloroisopropyl)ether	1.49	0.34	mg/Kg wet	1.67		89.3		40-140				
Bis(2-Ethylhexyl)phthalate	1.29	0.34	mg/Kg wet	1.67		77.2		40-140				
4-Bromophenylphenylether	1.36	0.34	mg/Kg wet	1.67		81.7		40-140				
Butylbenzylphthalate	1.27	0.34	mg/Kg wet	1.67		76.0		40-140				
4-Chloroaniline	0.870	0.66	mg/Kg wet	1.67		52.2		15-140				†
2-Chloronaphthalene	1.19	0.34	mg/Kg wet	1.67		71.3		40-140				
2-Chlorophenol	1.31	0.34	mg/Kg wet	1.67		78.7		30-130				
Chrysene	1.25	0.17	mg/Kg wet	1.67		74.8		40-140				
Dibenz(a,h)anthracene	1.35	0.17	mg/Kg wet	1.67		80.8		40-140				
Dibenzofuran	1.36	0.34	mg/Kg wet	1.67		81.8		40-140				
Di-n-butylphthalate	1.41	0.34	mg/Kg wet	1.67		84.6		40-140				
1,2-Dichlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.3		40-140				
1,3-Dichlorobenzene	1.27	0.34	mg/Kg wet	1.67		76.1		40-140				
1,4-Dichlorobenzene	1.30	0.34	mg/Kg wet	1.67		78.0		40-140				
3,3-Dichlorobenzidine	0.771	0.17	mg/Kg wet	1.67		46.3		40-140				
2,4-Dichlorophenol	1.38	0.34	mg/Kg wet	1.67		83.0		30-130				
Diethylphthalate	1.44	0.34	mg/Kg wet	1.67		86.1		40-140				
2,4-Dimethylphenol	1.43	0.34	mg/Kg wet	1.67		85.7		30-130				
Dimethylphthalate	1.40	0.34	mg/Kg wet	1.67		84.1		40-140				
2,4-Dinitrophenol	0.455	0.66	mg/Kg wet	1.67		27.3		15-140			V-04	†
2,4-Dinitrotoluene	1.37	0.34	mg/Kg wet	1.67		82.1		40-140				
2,6-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.5		40-140				
Di-n-octylphthalate	1.41	0.67	mg/Kg wet	1.67		84.7		40-140				
1,2-Diphenylhydrazine (as Azobenzene)	1.44	0.34	mg/Kg wet	1.67		86.6		40-140				
Fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.5		40-140				
Fluorene	1.37	0.17	mg/Kg wet	1.67		81.9		40-140				
Hexachlorobenzene	1.41	0.34	mg/Kg wet	1.67		84.5		40-140				

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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
Batch B085293 - SW-846 3546										
LCS (B085293-BS1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Hexachlorobutadiene	1.41	0.34	mg/Kg wet	1.67		84.7	40-140			
Hexachloroethane	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
Indeno(1,2,3-cd)pyrene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140			
Isophorone	1.46	0.34	mg/Kg wet	1.67		87.9	40-140			
2-Methylnaphthalene	1.35	0.17	mg/Kg wet	1.67		81.0	40-140			
2-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.4	30-130			
3/4-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.0	30-130			
Naphthalene	1.33	0.17	mg/Kg wet	1.67		80.1	40-140			
Nitrobenzene	1.47	0.34	mg/Kg wet	1.67		88.3	40-140			
2-Nitrophenol	1.34	0.34	mg/Kg wet	1.67		80.1	30-130			
4-Nitrophenol	1.52	0.66	mg/Kg wet	1.67		91.5	15-140			†
Pentachlorophenol	1.19	0.34	mg/Kg wet	1.67		71.4	30-130			
Phenanthrene	1.30	0.17	mg/Kg wet	1.67		78.1	40-140			
Phenol	1.40	0.34	mg/Kg wet	1.67		83.8	15-140			†
Pyrene	1.18	0.17	mg/Kg wet	1.67		70.6	40-140			
1,2,4-Trichlorobenzene	1.34	0.34	mg/Kg wet	1.67		80.1	40-140			
2,4,5-Trichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.0	30-130			
2,4,6-Trichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.2	30-130			
Surrogate: 2-Fluorophenol	*5.53*		mg/Kg wet	6.67		82.9	30-130			
Surrogate: Phenol-d6	*5.42*		mg/Kg wet	6.67		81.3	30-130			
Surrogate: Nitrobenzene-d5	*3.03*		mg/Kg wet	3.33		90.8	30-130			
Surrogate: 2-Fluorobiphenyl	*2.85*		mg/Kg wet	3.33		85.5	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.83*		mg/Kg wet	6.67		102	30-130			
Surrogate: p-Terphenyl-d14	*2.57*		mg/Kg wet	3.33		77.1	30-130			
LCS Dup (B085293-BSD1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Acenaphthene	1.31	0.17	mg/Kg wet	1.67		78.4	40-140	1.22	30	
Acenaphthylene	1.34	0.17	mg/Kg wet	1.67		80.3	40-140	0.0250	30	
Acetophenone	0.669	0.34	mg/Kg wet	1.67		40.1	40-140	0.851	30	
Aniline	0.675	0.34	mg/Kg wet	1.67		40.5	40-140	16.4	30	
Anthracene	1.40	0.17	mg/Kg wet	1.67		83.9	40-140	6.83	30	
Benzo(a)anthracene	1.41	0.17	mg/Kg wet	1.67		84.8	40-140	5.62	30	
Benzo(a)pyrene	1.42	0.17	mg/Kg wet	1.67		85.3	40-140	0.514	30	
Benzo(b)fluoranthene	1.39	0.17	mg/Kg wet	1.67		83.7	40-140	0.648	30	
Benzo(g,h,i)perylene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140	8.96	30	
Benzo(k)fluoranthene	1.37	0.17	mg/Kg wet	1.67		81.9	40-140	2.85	30	
Bis(2-chloroethoxy)methane	1.41	0.34	mg/Kg wet	1.67		84.4	40-140	3.77	30	
Bis(2-chloroethyl)ether	1.41	0.34	mg/Kg wet	1.67		84.6	40-140	0.283	30	
Bis(2-chloroisopropyl)ether	1.40	0.34	mg/Kg wet	1.67		83.8	40-140	6.33	30	
Bis(2-Ethylhexyl)phthalate	1.32	0.34	mg/Kg wet	1.67		79.3	40-140	2.66	30	
4-Bromophenylphenylether	1.55	0.34	mg/Kg wet	1.67		92.9	40-140	12.9	30	
Butylbenzylphthalate	1.29	0.34	mg/Kg wet	1.67		77.1	40-140	1.52	30	
4-Chloroaniline	0.869	0.66	mg/Kg wet	1.67		52.1	15-140	0.0767	30	†
2-Chloronaphthalene	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	1.30	30	
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.67		73.9	30-130	6.40	30	
Chrysene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140	8.13	30	
Dibenz(a,h)anthracene	1.46	0.17	mg/Kg wet	1.67		87.5	40-140	7.96	30	
Dibenzofuran	1.36	0.34	mg/Kg wet	1.67		81.3	40-140	0.613	30	
Di-n-butylphthalate	1.39	0.34	mg/Kg wet	1.67		83.4	40-140	1.52	30	
1,2-Dichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.7	40-140	4.57	30	
1,3-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		72.9	40-140	4.24	30	
1,4-Dichlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.2	40-140	3.63	30	

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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	
Batch B085293 - SW-846 3546											
LCS Dup (B085293-BSD1)				Prepared: 11/15/13 Analyzed: 11/18/13							
3,3-Dichlorobenzidine	1.01	0.17	mg/Kg wet	1.67		60.5	40-140	26.6	30		
2,4-Dichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130	4.81	30		
Diethylphthalate	1.38	0.34	mg/Kg wet	1.67		82.9	40-140	3.86	30		
2,4-Dimethylphenol	1.36	0.34	mg/Kg wet	1.67		81.3	30-130	5.24	30		
Dimethylphthalate	1.39	0.34	mg/Kg wet	1.67		83.6	40-140	0.644	30		
2,4-Dinitrophenol	0.348	0.66	mg/Kg wet	1.67		20.9	15-140	26.6	30	V-04	†
2,4-Dinitrotoluene	1.27	0.34	mg/Kg wet	1.67		76.4	40-140	7.24	30		
2,6-Dinitrotoluene	1.38	0.34	mg/Kg wet	1.67		82.9	40-140	1.89	30		
Di-n-octylphthalate	1.28	0.67	mg/Kg wet	1.67		77.0	40-140	9.52	30		
1,2-Diphenylhydrazine (as Azobenzene)	1.62	0.34	mg/Kg wet	1.67		97.4	40-140	11.7	30		
Fluoranthene	1.30	0.17	mg/Kg wet	1.67		78.3	40-140	3.67	30		
Fluorene	1.33	0.17	mg/Kg wet	1.67		79.7	40-140	2.77	30		
Hexachlorobenzene	1.51	0.34	mg/Kg wet	1.67		90.8	40-140	7.19	30		
Hexachlorobutadiene	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	4.02	30		
Hexachloroethane	1.21	0.34	mg/Kg wet	1.67		72.4	40-140	5.03	30		
Indeno(1,2,3-cd)pyrene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140	6.00	30		
Isophorone	1.43	0.34	mg/Kg wet	1.67		85.8	40-140	2.42	30		
2-Methylnaphthalene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140	4.31	30		
2-Methylphenol	1.25	0.34	mg/Kg wet	1.67		74.9	30-130	9.51	30		
3/4-Methylphenol	1.25	0.34	mg/Kg wet	1.67		75.0	30-130	8.84	30		
Naphthalene	1.30	0.17	mg/Kg wet	1.67		77.7	40-140	2.99	30		
Nitrobenzene	1.42	0.34	mg/Kg wet	1.67		85.5	40-140	3.29	30		
2-Nitrophenol	1.30	0.34	mg/Kg wet	1.67		77.9	30-130	2.78	30		
4-Nitrophenol	1.26	0.66	mg/Kg wet	1.67		75.3	15-140	19.3	30		†
Pentachlorophenol	1.03	0.34	mg/Kg wet	1.67		61.6	30-130	14.7	30		
Phenanthrene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140	6.64	30		
Phenol	1.28	0.34	mg/Kg wet	1.67		76.7	15-140	8.95	30		†
Pyrene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140	3.59	30		
1,2,4-Trichlorobenzene	1.28	0.34	mg/Kg wet	1.67		76.7	40-140	4.28	30		
2,4,5-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.5	30-130	5.89	30		
2,4,6-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.4	30-130	6.30	30		
Surrogate: 2-Fluorophenol	*5.33*		mg/Kg wet	6.67		80.0	30-130				
Surrogate: Phenol-d6	*5.61*		mg/Kg wet	6.67		84.1	30-130				
Surrogate: Nitrobenzene-d5	*3.01*		mg/Kg wet	3.33		90.4	30-130				
Surrogate: 2-Fluorobiphenyl	*2.97*		mg/Kg wet	3.33		89.1	30-130				
Surrogate: 2,4,6-Tribromophenol	*6.36*		mg/Kg wet	6.67		95.5	30-130				
Surrogate: p-Terphenyl-d14	*2.73*		mg/Kg wet	3.33		81.8	30-130				

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085165 - SW-846 3050B										
Blank (B085165-BLK1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	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							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B085165-BS1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	94.4	5.0	mg/Kg wet	99.6		94.8	83-117.6			
Cadmium	169	0.50	mg/Kg wet	182		92.7	83.1-116.9			
Chromium	132	1.0	mg/Kg wet	136		97.3	81.6-117.6			
Lead	113	1.5	mg/Kg wet	115		98.6	82.4-117.8			
Nickel	143	1.0	mg/Kg wet	153		93.4	84.4-115.6			
Zinc	145	2.0	mg/Kg wet	161		90.3	81.9-117.6			
LCS Dup (B085165-BSD1)				Prepared: 11/14/13 Analyzed: 11/17/13						
Arsenic	97.0	5.0	mg/Kg wet	99.6		97.4	83-117.6	2.75	30	
Cadmium	172	0.50	mg/Kg wet	182		94.5	83.1-116.9	2.02	30	
Chromium	133	0.99	mg/Kg wet	136		98.1	81.6-117.6	0.732	30	
Lead	112	1.5	mg/Kg wet	115		97.6	82.4-117.8	0.975	30	
Nickel	145	0.99	mg/Kg wet	153		94.5	84.4-115.6	1.20	30	
Zinc	147	2.0	mg/Kg wet	161		91.5	81.9-117.6	1.42	30	
MRL Check (B085165-MRL1)				Prepared: 11/14/13 Analyzed: 11/19/13						
Lead	0.674	0.73	mg/Kg wet	0.735		91.7	80-120			
Batch B085273 - SW-846 7471										
Blank (B085273-BLK1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	ND	0.025	mg/Kg wet							
LCS (B085273-BS1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	3.92	0.33	mg/Kg wet	4.05		96.9	71.6-128.1			
LCS Dup (B085273-BSD1)				Prepared: 11/15/13 Analyzed: 11/18/13						
Mercury	3.68	0.33	mg/Kg wet	4.05		90.7	71.6-128.1	6.55	30	

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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
Batch B085106 - SM2580 A										
Duplicate (B085106-DUP2)	**Source: 13K0566-16**			Prepared & Analyzed: 11/14/13						
Oxidation/Reduction Potential	106		mV		98			7.84	17.5	
Batch B085110 - SW-846 9045C										
LCS (B085110-BS1)				Prepared & Analyzed: 11/14/13						
pH	6.03		pH Units	6.00		100	99-102			
LCS (B085110-BS2)				Prepared & Analyzed: 11/14/13						
pH	6.01		pH Units	6.00		100	99-102			
LCS (B085110-BS3)				Prepared & Analyzed: 11/14/13						
pH	6.01		pH Units	6.00		100	99-102			
Duplicate (B085110-DUP2)	**Source: 13K0566-16**			Prepared & Analyzed: 11/14/13						
pH	6.7		pH Units		6.6			0.300	6.77	
Batch B085422 - SW-846 7196A										
Blank (B085422-BLK1)				Prepared & Analyzed: 11/19/13						
Hexavalent Chromium	ND	0.16	mg/Kg wet							
LCS (B085422-BS1)				Prepared & Analyzed: 11/19/13						
Hexavalent Chromium	78	2.0	mg/Kg wet	93.7		83.2	80-120			
LCS Dup (B085422-BSD1)				Prepared & Analyzed: 11/19/13						
Hexavalent Chromium	76	1.9	mg/Kg wet	89.2		85.7	80-120	2.05	20	
Batch B085490 - SW-846 9014										
Blank (B085490-BLK1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Cyanide	ND	0.47	mg/Kg wet							
LCS (B085490-BS1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Cyanide	32	0.50	mg/Kg wet	33.3		95.6	80-120			
LCS Dup (B085490-BSD1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Cyanide	31	0.50	mg/Kg wet	33.2		94.3	80-120	1.62	20	
Batch B085492 - SW-846 9014										
Blank (B085492-BLK1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Cyanide	ND	0.47	mg/Kg wet							

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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
Batch B085492 - SW-846 9014											
LCS (B085492-BS1)				Prepared: 11/19/13 Analyzed: 11/20/13							
Cyanide	32	0.50	mg/Kg wet	33.3		95.0		80-120			
LCS Dup (B085492-BSD1)				Prepared: 11/19/13 Analyzed: 11/20/13							
Cyanide	30	0.50	mg/Kg wet	33.2		90.0		80-120	5.71	20	
Batch B085523 - % Solids											
Duplicate (B085523-DUP2)	**Source: 13K0566-20**			Prepared & Analyzed: 11/20/13							
% Solids	86.9		% Wt		86.0				1.04	20	
Batch B085692 - SW-846 9014											
Blank (B085692-BLK1)				Prepared & Analyzed: 11/21/13							
Cyanide	ND	0.48	mg/Kg wet								
LCS (B085692-BS1)				Prepared & Analyzed: 11/21/13							
Cyanide	29	0.50	mg/Kg wet	33.3		88.3		80-120			
LCS Dup (B085692-BSD1)				Prepared & Analyzed: 11/21/13							
Cyanide	28	0.50	mg/Kg wet	33.2		85.4		80-120	3.66	20	
Matrix Spike (B085692-MS1)	**Source: 13K0566-20RE1**			Prepared & Analyzed: 11/21/13							
Cyanide	180	5.4	mg/Kg dry	178	92	**51.8**	*	75-125			MS-07A
Matrix Spike Dup (B085692-MSD1)	**Source: 13K0566-20RE1**			Prepared & Analyzed: 11/21/13							
Cyanide	160	5.3	mg/Kg dry	176	92	**36.7**	*	75-125	16.1	35	MS-07A

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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.
	No results have been blank subtracted unless specified in the case narrative section.

L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possiblity of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
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.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
W-06	Elevated method reporting limit due to intense color of sample

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7196A in Soil	
Hexavalent Chromium	NY,CT,NH,NC,ME,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	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
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA,NJ

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

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CHAIN OF CUSTODY RECORD

13K0566

Rev 04.05.12

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East longmeadow, MA 01028

Page 1 of 3

Company Name: Wetervak
Address: 175 Cabot St.
Lowell MA 01854
Attention: olaf westphalen
Project Location: Westford Anodizing
Sampled By: Cory McHarg

Project Proposal Provided? (for billing purposes)
○ yes ____________ proposal date

Telephone: 978 452 9696
Project # 08403-15
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ☒ WEBSITE
Fax #
Email:
Format: ○ PDF ○ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

	6 metals (As, Cd, Cr, Pb, Ni, Zn)	Hg	Cyanide	PCDDs & PCDFs	Chrome+6, pH, ORP	~~Hold~~ SVOCs	~~Run~~	/		Run	Hold
# of Containers	1	→	→	1	1	1					
** Preservation	I	→	→	–	–	–					
***Container Code	A	→	→	A	A	A					

ANALYSIS REQUESTED

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	6 metals	Hg	Cyanide	PCDDs & PCDFs	Chrome+6, pH, ORP	SVOCs		/		Run	Hold
01	SS-K7	11/13/13	0930		✓	S	U	✓	✓	✓								✓
02	SS-K5		0940		✓	S	U	✓	✓	✓								✓
03	IC-H7		0955		✓	S	U				✓		✓	[scribbled]			✓	
04	IC-I7		1005		✓	S	U	✓	✓	✓	✓	✓	✓	[scribbled]			✓	
05	SS-I8		1105		✓	S	U	✓	✓	✓								✓
06	SS-H8		1115		✓	S	U	✓	✓	✓			✓					✓
07	IC-J7		1130		✓	S	U				✓		✓					✓
08	SS-I9		1155		✓	S	U											✓
09	SS-H9	↓	1215		✓	S	U	✓	✓	✓								✓
~~10~~	~~Field Duplicate 1~~	~~11/13/13~~	~~xxxx~~		~~✓~~	~~✓~~	~~U~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	[scribbled]			~~✓~~	

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:
(A) only run pH i ORP on samples that say "Run" per Olaf W. MOD 11/13/2013
(B) Cancel per Olaf W. MD 11/19/2013

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

Relinquished by: (signature)	Date/Time:
[signature] 11/13/13	1735
Received by: (signature) Paul Racicot 11/13/13	1735
Relinquished by: (signature) Paul Racicot 11/13/13	19:25
Received by: (signature) [signature] 4.6° 11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

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nelac

†† 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. 19:45

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

13K0566

Rev. 04.05.12

Company Name: Watermark
Address: 175 Cabot St. Lowell MA 01854
Attention: Matt Westphalen
Project Location: Westford Landfill
Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Telephone: 978 452 9696
Project # 08403-19
Client PO#

DATA DELIVERY (check all that apply)
FAX EMAIL ○ WEBSITE
Fax #
Email:
Format: PDF EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code
10	SS-H10	11/13/13	1230		✓	S	M
12	SS-E3		1330		✓	S	M
13	SS-D4		1345		✓	S	M
14	SS-D5		1350		✓	S	M
15	SS-C4		1425		✓	S	M
16	SS-D5		1440		✓	S	M
17	SS-C5		1450		✓	S	M
18	SS-C6		1500		✓	S	M
19	SS-B5		1520		✓	S	M
20	SS-B4		1530		✓	S	M

ANALYSIS REQUESTED

											# of Containers
		→									** Preservation
A		→	A	A	A						***Container Code

6 Metals (As, Ba, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PCBs 8 Pest	Chrom 6, pH, ORP	Sieves				Rem	Total
✓	✓	✓			✓					✓
✓	✓	✓								✓
✓	✓	✓		✓					✓	
✓	✓	✓		✓					✓	
✓	✓	✓								✓
✓	✓	✓		✓					✓	
✓	✓	✓								✓
✓	✓	✓								✓
✓	✓	✓								✓
✓	✓	✓		✓					✓	

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:

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

Relinquished by: (signature)	Date/Time:
[signature] 11/13/13	1725
Received by: (signature) [signature] 11/13/13	1735
Relinquished by: (signature) [signature] 11/13/13	1945
Received by: (signature) [signature] 11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☑ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

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WBE/DBE Certified

†† 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.

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19.5° C Blue Temp (1) 11-12-13

CHAIN OF CUSTODY RECORD

13K0566

Rev. 04.05.12

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Company Name: Lutronik Telephone: 978 452 9611

Address: 175 Cabot St. Project # 08902-19

Lowell, MA 01854 Client PO#

Attention: Kat Lostchuck

Project Location: Westford Academy

Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ◉ EMAIL ○ WEBSITE
Fax #
Email: See pg 1
Format: ◉ PDF ◉ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Container Code	# of Containers	** Preservation	***Container Code	Methyl	Cyanide	HTS	Lead	Hold
21	SS-D6	11/13/13	1540		✓	S	4	1	1	A	✓	✓	✓		✓
22	SS-C7	11/13/13	1555		✓	S	4	1	1	A	✓	✓	✓		✓
23	SS-D7	11/13/13	1600		✓	S	4	1	1	A	✓	✓	✓		✓
24	SS-D8	11/13/13	1610		✓	S	4	1	1	A	✓	✓	✓		✓
⊗ 25	SS-K6							1	1	A	X	X	X		✓
26	SS-H11							1	1	A					

Comments: ⊗ on hold per Cory M. 11/14/13

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

***Cont. Code:
A=amber glass
G=glass
P=plastic
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O=Other

**Preservation
I = Iced
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S = Sulfuric Acid
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X = Na hydroxide
T = Na thiosulfate
O = Other

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

Relinquished by: (signature)	Date/Time:
[signature] 11/13/13	1735
Received by: (signature) [signature] 11/13/13	Date/Time: 1735
Relinquished by: (signature) [signature] 11/13/13	Date/Time: 19:45
Received by: (signature) [signature] 11/13/13	Date/Time: 1945

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

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
◉ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

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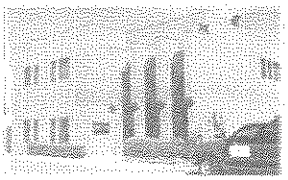
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test ANALYTICAL LABORATORY



Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: LW DATE: 11-13-2013

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included

2) Does the chain agree with the samples? LW (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 4.6 C

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

Who was notified _____ Date _____ Time _____

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

Who was notified LW Date _____ Time 1730 LW

7) Location where samples are stored: 19

Permission to subcontract samples? Yes No

(Walk-in clients only) if not already approved

Client Signature: _____

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

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

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No (N/A)

Containers received at Con-Test

	# of containers			# of containers
1 Liter Amber			8 oz amber/clear jar	20
500 mL Amber			4 oz amber/clear jar	20
250 mL Amber (8oz amber)			2 oz amber/clear jar	
1 Liter Plastic			Plastic Bag / Ziploc	
500 mL Plastic			SOC Kit	
250 mL plastic			Non-ConTest Container	
40 mL Vial - type listed below			Perchlorate Kit	
Colisure / bacteria bottle			Flashpoint bottle	
Dissolved Oxygen bottle			Other glass jar	
Encore			Other	

Laboratory Comments:
received two samples: SS-H11, SSK6 not on COC

40 mL vials: # HCl _____ # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	n/a	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? Date/Time: 19:45

Doc #277 Rev. 4 August 2013 Log-In Technician Initials: CW Date/Time: 11-13-2013

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13K0566
Project Location: Westford Anodizing	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13K0566-03 thru 13K0566-20

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 (X)	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 ( )	9014 Total Cyanide/PAC CAM VI A (X)	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	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?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	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).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

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

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

<u>Data User Note:</u> 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.

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *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: 11/25/13

November 26, 2013

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 26, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K0748

Enclosed are results of analyses for samples received by the laboratory on November 19, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 11/26/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0748

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-G1	13K0748-01	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-G3	13K0748-03	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-I6	13K0748-04	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-I4	13K0748-05	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	

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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 As, Cd, Cr, Pb, Ni and Zn were requested and reported.

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.

Daren J. Damboragian
Laboratory Manager

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-G1 | Sampled: 11/12/2013 11:00

Sample ID: 13K0748-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	12	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 19:53	OP
Cadmium	0.83	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 19:53	OP
Chromium	39	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 19:53	OP
Lead	250	0.81	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 17:23	AMP
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	11/20/13	11/20/13 16:10	SAJ
Nickel	25	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 19:53	OP
Zinc	82	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 19:53	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-G1 | Sampled: 11/12/2013 11:00

Sample ID: 13K0748-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.55	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	90.5		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-G3 | Sampled: 11/12/2013 12:10

Sample ID: 13K0748-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	11	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:14	OP
Cadmium	1.5	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:14	OP
Chromium	31	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:14	OP
Lead	140	0.81	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 17:28	AMP
Mercury	0.053	0.026	mg/Kg dry	1		SW-846 7471B	11/20/13	11/20/13 16:11	SAJ
Nickel	24	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:14	OP
Zinc	80	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:14	OP

con-test® ANALYTICAL LABORATORY
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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-G3 | Sampled: 11/12/2013 12:10

Sample ID: 13K0748-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.54	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	92.0		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-I6 | Sampled: 11/12/2013 13:00

Sample ID: 13K0748-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	9.8	2.6	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:19	OP
Cadmium	0.77	0.26	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:19	OP
Chromium	27	0.52	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:19	OP
Lead	170	0.78	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 17:34	AMP
Mercury	0.084	0.027	mg/Kg dry	1		SW-846 7471B	11/20/13	11/20/13 16:13	SAJ
Nickel	15	0.52	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:19	OP
Zinc	76	1.0	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:19	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-I6 | Sampled: 11/12/2013 13:00

Sample ID: 13K0748-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.56	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	89.4		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-I4 | Sampled: 11/12/2013 14:25

Sample ID: 13K0748-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	9.6	2.6	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:25	OP
Cadmium	0.65	0.26	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:25	OP
Chromium	24	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:25	OP
Lead	42	0.79	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 17:39	AMP
Mercury	0.032	0.027	mg/Kg dry	1		SW-846 7471B	11/20/13	11/20/13 16:15	SAJ
Nickel	16	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:25	OP
Zinc	40	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:25	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0748

Date Received: 11/19/2013

Field Sample #: SS-I4 | Sampled: 11/12/2013 14:25

Sample ID: 13K0748-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.54	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	93.0		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13K0748-01 [SS-G1]	B085779	11/22/13
13K0748-03 [SS-G3]	B085779	11/22/13
13K0748-04 [SS-I6]	B085779	11/22/13
13K0748-05 [SS-I4]	B085779	11/22/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0748-01 [SS-G1]	B085486	1.02	50.0	11/19/13
13K0748-03 [SS-G3]	B085486	1.00	50.0	11/19/13
13K0748-04 [SS-I6]	B085486	1.08	50.0	11/19/13
13K0748-05 [SS-I4]	B085486	1.02	50.0	11/19/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0748-01 [SS-G1]	B085560	0.612	50.0	11/20/13
13K0748-03 [SS-G3]	B085560	0.617	50.0	11/20/13
13K0748-04 [SS-I6]	B085560	0.612	50.0	11/20/13
13K0748-05 [SS-I4]	B085560	0.598	50.0	11/20/13

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0748-01 [SS-G1]	B085606	1.01	50.0	11/20/13
13K0748-03 [SS-G3]	B085606	1.01	50.0	11/20/13
13K0748-04 [SS-I6]	B085606	1.01	50.0	11/20/13
13K0748-05 [SS-I4]	B085606	1.00	50.0	11/20/13

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085486 - SW-846 3050B										
Blank (B085486-BLK1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	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							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B085486-BS1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	92.0	5.0	mg/Kg wet	99.6		92.4	83-117.6			
Cadmium	173	0.50	mg/Kg wet	182		95.3	83.1-116.9			
Chromium	134	0.99	mg/Kg wet	136		98.6	81.6-117.6			
Lead	103	1.5	mg/Kg wet	115		89.6	82.4-117.8			
Nickel	142	0.99	mg/Kg wet	153		92.9	84.4-115.6			
Zinc	142	2.0	mg/Kg wet	161		88.1	81.9-117.6			
LCS Dup (B085486-BSD1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	98.2	5.0	mg/Kg wet	99.6		98.6	83-117.6	6.46	30	
Cadmium	176	0.50	mg/Kg wet	182		96.5	83.1-116.9	1.29	30	
Chromium	141	0.99	mg/Kg wet	136		104	81.6-117.6	5.17	30	
Lead	101	1.5	mg/Kg wet	115		87.5	82.4-117.8	2.29	30	
Nickel	149	0.99	mg/Kg wet	153		97.2	84.4-115.6	4.45	30	
Zinc	149	2.0	mg/Kg wet	161		92.5	81.9-117.6	4.91	30	
MRL Check (B085486-MRL1)				Prepared: 11/19/13 Analyzed: 11/22/13						
Lead	0.766	0.73	mg/Kg wet	0.727		105	80-120			
Batch B085560 - SW-846 7471										
Blank (B085560-BLK1)				Prepared & Analyzed: 11/20/13						
Mercury	ND	0.025	mg/Kg wet							
LCS (B085560-BS1)				Prepared & Analyzed: 11/20/13						
Mercury	3.86	0.32	mg/Kg wet	4.05		95.3	71.6-128.1			
LCS Dup (B085560-BSD1)				Prepared & Analyzed: 11/20/13						
Mercury	4.26	0.34	mg/Kg wet	4.05		105	71.6-128.1	9.70	30	

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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
Batch B085606 - SW-846 9014										
Blank (B085606-BLK1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	ND	0.49	mg/Kg wet							
LCS (B085606-BS1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	29	0.50	mg/Kg wet	33.2		86.7	80-120			
LCS Dup (B085606-BSD1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	33	0.50	mg/Kg wet	33.2		98.1	80-120	12.1	20	

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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.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA,NJ

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

13K0748

CHAIN OF CUSTODY RECORD

~~13K0505~~ MB

Rev 04.05.12

con-test ANALYTICAL LABORATORY

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

39 Spruce Street
East longmeadow, MA 01028

Page 1 of 1

Company Name: Watermark
Address: 175 Cabot St.
Lowell MA 01854
Attention: Olaf Westphalen
Project Location: Westford Anodizing
Sampled By: Cory Mahoney

Project Proposal Provided? (for billing purposes)
○ yes ______ proposal date

Telephone: 978 452 9696
Project # 08403-13
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ⊗ EMAIL ⊗ WEBSITE
Fax #
Email: olaf.westphalen@watermark...
Format: ⊗ PDF ⊗ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

			PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom		metals	cyanide	dioxin 8290		
# of Containers			1	1	→	→	1						
** Preservation			-	-	→	→							
***Container Code			A	A	→	→	A						

ANALYSIS REQUESTED

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom		metals	cyanide	dioxin 8290		
01	TR-A1	10/12/13			✓	S	U	✓	H	H	H							
02	SS-H1		1035		✓	S	U	✓	H	H	H							
-01 ⊛ MB 03	SS-G1		1100		✓	S	U		H	H	H			X	X			
-02 ⊛ 04	SS-F1		1115		✓	S	U		H	H	H					X		
05	SS-B1		1125		✓	S	U		H	H	H							
06	SS-H2		1135		✓	S	U		H	H	H							
07	SS-H3		1155		✓	S	U		R	R	R	R						
-03 ⊛ 08	SS-G3		1210		✓	S	U		H	H	H			X	X			
09	SS-H4		1220		✓	S	U		H	H	H							
10	SS-H5		1235		✓	S	U		H	H	H							

Comments: H = Hold
R = Run
Only Run pH + ORP on Sample-07 per Olaf W. MB 11/13/2013

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

Relinquished by: (signature)	Date/Time:
[signature] 11/12/13	1535
Received by: (signature) [signature] 11/12/13	1600
Relinquished by: (signature) [signature] 11/12/13	1810
Received by: (signature) [signature] 4.8° 11/12/13	1810

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
⊗ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:**
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

⊛ Activate per attached email. MB 11/19/2013

13K0748

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Email: info@contestlabs.com
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CHAIN OF CUSTODY RECORD

~~BE 13K0505~~ MP

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Page 2 of 2

Company Name: Nitsch Eng
Telephone: 978 452 9691
Address: 175 Cabot St.
Lowell MA 01854
Project # 01403-17
Client PO#
Attention: Olaf Westphalen
Project Location: Westford Academy
Sampled By: Cory Mahony
Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: See pg 1
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

# of Containers									1	1	~~1~~					
** Preservation									–	–	–	+				
***Container Code									A	A	A	A				
Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCBs	6 Metals (See Pg 1)	Hg	Cyanide	pH, ORP, Chrom+6	Metals	Cyanide	dioxin	8270
11	SS-H6	11/12/13	1250		✓	S	U		*	*	H		X	X		
-04 12	SS-I6		1300		✓	S	U		H	H	H		X	X		
13	SS-H7		1315		✓	S	U		R	R	R					
13	SS-H7-MS		1315		✓	S	U		R	R						
14	SS-I7		1340		✓	S	U		H	H	H					
15	SS-I5		1405		✓	S	U		H	H	H					
-05 16	SS-I4		1425		✓	S	U		H	H	H		X	X		
17	SS-J4		1450		✓	S	U		H	H	H					
18 (MP)	SS-J5		1520		✓	S	U		H	H	H					
19	SS-J6		1535		✓	S	U		H	H	H					

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:
H = Hold
R = Run

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

Relinquished / Received	Date/Time
Relinquished by: (signature) [signature]	11/12/13
Received by: (signature) [signature] 11/12/13	1600
Relinquished by: (signature) [signature] 11/12/13	1805
Received by: (signature) [signature] 4.8° 11/12/13	1800

Turnaround ††
SS5 ☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

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Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: L.W DATE: 11-12-2013

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included
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 N/A Temperature °C by Temp gun 4.8
5) Are there Dissolved samples for the lab to filter? Yes (No)
Who was notified _____ Date _____ Time _____
6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
Who was notified _____ Date _____ Time _____
7) Location where samples are stored: 19
Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature:
8) Do all samples have the proper Acid pH: Yes No (N/A)
9) Do all samples have the proper Base pH: Yes No (N/A)
10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No (N/A)

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	23
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:
H = Hold (on COC)
R = Run

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

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? Date/Time: 11-12-2013

 Log-In Technician Initials: L.W Date/Time: 19:10

Westford Anodizing

12 North Main Street, Westford, MA

RTN 3-31455

Selection of Samples for Laboratory Analysis

Sample Location	Analysis					
	6 Metals + Hg	Cyanide	Chrom+6/pH/ORP	PCDDs & PCDFs	SVOCs	PCBs
SS-B5	H	H				
SS-C5	H	H				
SS-C7	H	H				
SS-D6	H	H				
SS-D8	H	H				
SS-F1				H		
SS-G1	H	H				
SS-G3	H	H				
SS-H8	H	H			H	
SS-H10	H	H			H	
SS-I4	H	H				
SS-I6	H	H				
SS-I9	H	H			H	
SS-K5	H	H				
SS-K7	H	H				
IC-J7					H	

= Sample selected for laboratory analysis of As, Cd, Cr, Pb, Ni, Zn) and Mercury

= Sample selected for laboratory analysis of cyanide

= Sample selected for laboratory analysis of Chromium IV, pH, and ORP

= Sample selected for laboratory analysis of dioxins (PCDDs and PCDFs)

= Sample selected for laboratory analysis of SVOCs

= Sample selected for laboratory analysis of PCBs

Meghan Kelley

From: Cory Mahony [cory.mahony@watermarkenv.com]
Sent: Tuesday, November 19, 2013 10:55 AM
To: Meghan E. Kelley
Cc: Andrew Clark (DEP) (andrew.clark@state.ma.us); Olaf Westphalen
Subject: Westford Anodizing - SPreadsheet of Samples to Activate Only
Attachments: Samples to Activate only.xlsx; Samples Submitted to Run on CoCs.xlsx

Hi Meghan, per our phone call, I have attached a spreadsheet of samples to be activated and have hidden all the sample rows that include samples that do not require analysis and samples that have already been submitted for analysis. I have also attached a spreadsheet summarizing the samples and analyses that were submitted to run on the CoCs.

Thanks,

Cory Mahony
Geologist
Watermark
Unique Approaches - Safe Solutions
175 Cabot Street
Lowell, MA 01854
(978) 452-9696
(978) 453-9988 fax
Cory.Mahony@watermarkenv.com
Watermark is a Certified 8(a) SDB Company
Check us out at www.watermarkenv.com

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13K0748
Project Location: Westford Anodizing	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13K0748-01 thru 13K0748-05

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 ( )	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 (X)	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	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?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	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).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]
	<u>Data User Note:</u> 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.		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *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 Manager

Printed Name: Daren J. Damboragian Date: 11/26/13

December 12, 2013

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 12, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K0751

Enclosed are results of analyses for samples received by the laboratory on November 19, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

con-test® ANALYTICAL LABORATORY

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 12/12/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0751

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-K7	13K0751-01	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-K5	13K0751-02	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-H8	13K0751-03	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8270D	
				SW-846 9014	
IC-J7	13K0751-04	Soil		SM 2540G	
				SW-846 8270D	
SS-I9	13K0751-05	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8270D	
				SW-846 9014	
SS-H10	13K0751-06	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 8270D	
				SW-846 9014	
SS-C5	13K0751-07	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-B5	13K0751-08	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-D6	13K0751-09	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	
SS-C7	13K0751-10	Soil		SM 2540G	
				SW-846 6010C	
				SW-846 7471B	
				SW-846 9014	

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Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 12/12/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0751

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-D8	13K0751-11	Soil		SM 2540G SW-846 6010C SW-846 7471B SW-846 9014	

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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 As, Cd, Cr, Pb, Ni and Zn were requested and reported.

SW-846 8270D

Qualifications:

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

4-Chloroaniline

13K0751-03[SS-H8], 13K0751-04[IC-J7], 13K0751-05[SS-I9], 13K0751-06[SS-H10], B085719-BLK1, B085719-BS1, B085719-BSD1

Elevated reporting limit due to high concentration of target compounds. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

13K0751-03[SS-H8]

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

13K0751-03[SS-H8], 13K0751-04[IC-J7], 13K0751-05[SS-I9], 13K0751-06[SS-H10]

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

4-Nitrophenol, Pentachlorophenol

13K0751-04[IC-J7], 13K0751-05[SS-I9], 13K0751-06[SS-H10]

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene

13K0751-04[IC-J7], 13K0751-05[SS-I9], 13K0751-06[SS-H10]

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

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

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.

Daren J. Damboragian
Laboratory Manager

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

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-K7 | Sampled: 11/13/2013 09:30

Sample ID: 13K0751-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	8.7	2.6	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:30	OP
Cadmium	0.54	0.26	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:30	OP
Chromium	23	0.52	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:30	OP
Lead	97	0.79	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:00	AMP
Mercury	0.091	0.028	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 13:50	SAJ
Nickel	15	0.52	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:30	OP
Zinc	48	1.0	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:30	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-K7 | Sampled: 11/13/2013 09:30

Sample ID: 13K0751-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	0.84	0.54	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	89.7		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-K5 | Sampled: 11/13/2013 09:40

Sample ID: 13K0751-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	9.6	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:36	OP
Cadmium	0.66	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:36	OP
Chromium	23	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:36	OP
Lead	94	0.81	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:05	AMP
Mercury	0.052	0.028	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 13:51	SAJ
Nickel	16	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:36	OP
Zinc	69	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:36	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-K5 | Sampled: 11/13/2013 09:40

Sample ID: 13K0751-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.56	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	89.7		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H8 | Sampled: 11/13/2013 11:15

Sample ID: 13K0751-03

Sample Matrix: Soil

Sample Flags: RL-05

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.45	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Acenaphthylene	0.58	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Aniline	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Anthracene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Benzo(a)anthracene	4.5	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Benzo(a)pyrene	4.3	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Benzo(b)fluoranthene	5.2	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Benzo(g,h,i)perylene	2.2	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Benzo(k)fluoranthene	2.0	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	R-05	SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Chrysene	4.6	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Dibenz(a,h)anthracene	0.72	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2	V-04	SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Fluoranthene	8.1	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Fluorene	0.56	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Indeno(1,2,3-cd)pyrene	2.6	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H8 | Sampled: 11/13/2013 11:15

Sample ID: 13K0751-03

Sample Matrix: Soil

Sample Flags: RL-05

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Phenanthrene	6.2	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
Pyrene	6.7	0.38	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	11/21/13	11/25/13 20:39	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	56.2	30-130		11/25/13 20:39
Phenol-d6	68.2	30-130		11/25/13 20:39
Nitrobenzene-d5	54.6	30-130		11/25/13 20:39
2-Fluorobiphenyl	60.8	30-130		11/25/13 20:39
2,4,6-Tribromophenol	60.3	30-130		11/25/13 20:39
p-Terphenyl-d14	54.4	30-130		11/25/13 20:39

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H8 | Sampled: 11/13/2013 11:15

Sample ID: 13K0751-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	17	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:41	OP
Cadmium	1.1	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:41	OP
Chromium	30	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:41	OP
Lead	120	0.80	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:11	AMP
Mercury	0.14	0.028	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 13:57	SAJ
Nickel	23	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:41	OP
Zinc	97	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:41	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H8 | Sampled: 11/13/2013 11:15

Sample ID: 13K0751-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.56	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	88.5		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: IC-J7 | Sampled: 11/13/2013 11:30

Sample ID: 13K0751-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Acenaphthylene	0.33	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Acetophenone	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Aniline	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Anthracene	0.41	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Benzo(a)anthracene	1.9	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Benzo(a)pyrene	2.1	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Benzo(b)fluoranthene	2.8	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Benzo(g,h,i)perylene	1.8	0.22	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Benzo(k)fluoranthene	0.97	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Bis(2-chloroethoxy)methane	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Bis(2-chloroethyl)ether	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Bis(2-chloroisopropyl)ether	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
4-Bromophenylphenylether	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Butylbenzylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
4-Chloroaniline	ND	0.87	mg/Kg dry	1	R-05	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2-Chloronaphthalene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2-Chlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Chrysene	2.1	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Dibenz(a,h)anthracene	0.41	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Dibenzofuran	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Di-n-butylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
1,2-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
1,3-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
1,4-Dichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4-Dichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Diethylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4-Dimethylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Dimethylphthalate	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4-Dinitrophenol	ND	0.87	mg/Kg dry	1	V-04	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4-Dinitrotoluene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,6-Dinitrotoluene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Di-n-octylphthalate	ND	0.88	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Fluoranthene	3.4	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Fluorene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Hexachlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Hexachlorobutadiene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Hexachloroethane	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Indeno(1,2,3-cd)pyrene	2.0	0.22	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Isophorone	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2-Methylnaphthalene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: IC-J7 | Sampled: 11/13/2013 11:30

Sample ID: 13K0751-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
3/4-Methylphenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Naphthalene	0.27	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Nitrobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2-Nitrophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
4-Nitrophenol	ND	0.87	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Pentachlorophenol	ND	0.45	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Phenanthrene	2.1	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Phenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
Pyrene	4.0	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
1,2,4-Trichlorobenzene	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4,5-Trichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR
2,4,6-Trichlorophenol	ND	0.45	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 12:55	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	45.4	30-130		11/26/13 12:55
Phenol-d6	53.1	30-130		11/26/13 12:55
Nitrobenzene-d5	48.8	30-130		11/26/13 12:55
2-Fluorobiphenyl	48.2	30-130		11/26/13 12:55
2,4,6-Tribromophenol	46.7	30-130		11/26/13 12:55
p-Terphenyl-d14	55.2	30-130		11/26/13 12:55

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: IC-J7 | Sampled: 11/13/2013 11:30

Sample ID: 13K0751-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.8		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-I9 | Sampled: 11/13/2013 11:55

Sample ID: 13K0751-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	1.0	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Acenaphthylene	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Aniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Anthracene	2.4	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Benzo(a)anthracene	3.9	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Benzo(a)pyrene	3.1	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Benzo(b)fluoranthene	3.9	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Benzo(g,h,i)perylene	1.9	0.22	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Benzo(k)fluoranthene	1.2	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
4-Chloroaniline	ND	0.84	mg/Kg dry	1	R-05	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Chrysene	3.7	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Dibenz(a,h)anthracene	0.45	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Dibenzofuran	1.0	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
3,3-Dichlorobenzidine	ND	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4-Dinitrophenol	ND	0.84	mg/Kg dry	1	V-04	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Di-n-octylphthalate	ND	0.85	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Fluoranthene	9.7	0.87	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:19	CMR
Fluorene	1.3	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Indeno(1,2,3-cd)pyrene	2.3	0.22	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2-Methylnaphthalene	0.50	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-I9 | Sampled: 11/13/2013 11:55

Sample ID: 13K0751-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Naphthalene	1.1	0.22	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
4-Nitrophenol	ND	0.84	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Pentachlorophenol	ND	0.43	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Phenanthrene	9.7	0.87	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:19	CMR
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
Pyrene	6.3	0.87	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:19	CMR
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:25	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	49.2	30-130		11/26/13 13:25
Phenol-d6	61.2	30-130		11/26/13 13:25
Nitrobenzene-d5	57.8	30-130		11/26/13 13:25
2-Fluorobiphenyl	59.8	30-130		11/26/13 13:25
2,4,6-Tribromophenol	74.8	30-130		11/26/13 13:25
p-Terphenyl-d14	62.7	30-130		11/26/13 13:25

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-I9 | Sampled: 11/13/2013 11:55

Sample ID: 13K0751-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	16	3.0	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:47	OP
Cadmium	1.4	0.30	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:47	OP
Chromium	26	0.59	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:47	OP
Lead	920	0.89	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:16	AMP
Mercury	0.17	0.032	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 13:59	SAJ
Nickel	22	0.59	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:47	OP
Zinc	270	1.2	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:47	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-I9 | Sampled: 11/13/2013 11:55

Sample ID: 13K0751-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	9.8	0.63	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	78.0		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H10 | Sampled: 11/13/2013 12:30

Sample ID: 13K0751-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.53	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Acenaphthylene	0.38	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Aniline	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Anthracene	1.4	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Benzo(a)anthracene	4.7	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Benzo(a)pyrene	3.7	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Benzo(b)fluoranthene	5.0	0.85	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:49	CMR
Benzo(g,h,i)perylene	1.8	0.21	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Benzo(k)fluoranthene	1.7	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Bis(2-Ethylhexyl)phthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
4-Chloroaniline	ND	0.83	mg/Kg dry	1	R-05	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Chrysene	4.4	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Dibenz(a,h)anthracene	0.49	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Dibenzofuran	0.51	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4-Dinitrophenol	ND	0.83	mg/Kg dry	1	V-04	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Di-n-octylphthalate	ND	0.84	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Fluoranthene	9.3	0.85	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:49	CMR
Fluorene	0.57	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Indeno(1,2,3-cd)pyrene	2.3	0.21	mg/Kg dry	1	V-06	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2-Methylnaphthalene	0.52	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H10 | Sampled: 11/13/2013 12:30

Sample ID: 13K0751-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Naphthalene	0.72	0.21	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
4-Nitrophenol	ND	0.83	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Pentachlorophenol	ND	0.43	mg/Kg dry	1	V-05	SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Phenanthrene	6.6	0.85	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:49	CMR
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
Pyrene	7.8	0.85	mg/Kg dry	4		SW-846 8270D	11/21/13	11/26/13 16:49	CMR
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	11/21/13	11/26/13 13:54	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	40.8	30-130		11/26/13 13:54
Phenol-d6	45.8	30-130		11/26/13 13:54
Nitrobenzene-d5	53.4	30-130		11/26/13 13:54
2-Fluorobiphenyl	52.6	30-130		11/26/13 13:54
2,4,6-Tribromophenol	59.7	30-130		11/26/13 13:54
p-Terphenyl-d14	50.2	30-130		11/26/13 13:54

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H10 | Sampled: 11/13/2013 12:30

Sample ID: 13K0751-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	15	3.0	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:52	OP
Cadmium	1.0	0.30	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:52	OP
Chromium	13	0.60	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:52	OP
Lead	240	0.90	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:22	AMP
Mercury	0.099	0.031	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 14:00	SAJ
Nickel	15	0.60	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:52	OP
Zinc	76	1.2	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:52	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-H10 | Sampled: 11/13/2013 12:30

Sample ID: 13K0751-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.59	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	79.2		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-C5 | Sampled: 11/13/2013 14:50

Sample ID: 13K0751-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	7.9	2.6	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:57	OP
Cadmium	1.8	0.26	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:57	OP
Chromium	76	0.51	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:57	OP
Lead	290	0.77	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:27	AMP
Mercury	0.25	0.026	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 14:02	SAJ
Nickel	56	0.51	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:57	OP
Zinc	230	1.0	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 20:57	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-C5 | Sampled: 11/13/2013 14:50

Sample ID: 13K0751-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	3.0	0.46	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	94.7		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-B5 | Sampled: 11/13/2013 15:20

Sample ID: 13K0751-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	27	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:03	OP
Cadmium	12	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:03	OP
Chromium	150	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:03	OP
Lead	640	0.81	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:33	AMP
Mercury	0.98	0.14	mg/Kg dry	5		SW-846 7471B	11/20/13	11/21/13 14:10	SAJ
Nickel	120	0.54	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:03	OP
Zinc	560	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:03	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-B5 | Sampled: 11/13/2013 15:20

Sample ID: 13K0751-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	5.6	0.53	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	88.6		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-D6 | Sampled: 11/13/2013 15:40

Sample ID: 13K0751-09

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	15	2.7	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:33	OP
Cadmium	3.0	0.27	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:33	OP
Chromium	150	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:33	OP
Lead	390	0.80	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:38	AMP
Mercury	0.32	0.027	mg/Kg dry	1		SW-846 7471B	11/20/13	11/21/13 14:05	SAJ
Nickel	51	0.53	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:33	OP
Zinc	760	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:33	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-D6 | Sampled: 11/13/2013 15:40

Sample ID: 13K0751-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	130	13	mg/Kg dry	25		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	87.9		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-C7 | Sampled: 11/13/2013 15:55

Sample ID: 13K0751-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	25	2.9	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:38	OP
Cadmium	2.1	0.29	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:38	OP
Chromium	62	0.57	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:38	OP
Lead	1000	0.86	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:43	AMP
Mercury	1.3	0.15	mg/Kg dry	5		SW-846 7471B	11/20/13	11/21/13 14:12	SAJ
Nickel	100	0.57	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:38	OP
Zinc	710	1.1	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:38	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-C7 | Sampled: 11/13/2013 15:55

Sample ID: 13K0751-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	1.6	0.58	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	84.7		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-D8 | Sampled: 11/13/2013 16:10

Sample ID: 13K0751-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	16	2.9	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:43	OP
Cadmium	1.0	0.29	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:43	OP
Chromium	27	0.58	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:43	OP
Lead	400	0.87	mg/Kg dry	1		SW-846 6010C	11/19/13	11/22/13 18:49	AMP
Mercury	0.38	0.029	mg/Kg dry	1		SW-846 7471B	11/20/13	11/20/13 16:16	SAJ
Nickel	19	0.58	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:43	OP
Zinc	170	1.2	mg/Kg dry	1		SW-846 6010C	11/19/13	11/20/13 21:43	OP

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Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0751

Date Received: 11/19/2013

Field Sample #: SS-D8 | Sampled: 11/13/2013 16:10

Sample ID: 13K0751-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.52	mg/Kg dry	1		SW-846 9014	11/20/13	11/21/13 11:00	VLA
% Solids	85.4		% Wt	1		SM 2540G	11/22/13	11/25/13 8:50	MLA

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
13K0751-01 [SS-K7]	B085779	11/22/13
13K0751-02 [SS-K5]	B085779	11/22/13
13K0751-03 [SS-H8]	B085779	11/22/13
13K0751-04 [IC-J7]	B085779	11/22/13
13K0751-05 [SS-I9]	B085779	11/22/13
13K0751-06 [SS-H10]	B085779	11/22/13
13K0751-07 [SS-C5]	B085779	11/22/13
13K0751-08 [SS-B5]	B085779	11/22/13
13K0751-09 [SS-D6]	B085779	11/22/13
13K0751-10 [SS-C7]	B085779	11/22/13
13K0751-11 [SS-D8]	B085779	11/22/13

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-01 [SS-K7]	B085486	1.06	50.0	11/19/13
13K0751-02 [SS-K5]	B085486	1.03	50.0	11/19/13
13K0751-03 [SS-H8]	B085486	1.06	50.0	11/19/13
13K0751-05 [SS-I9]	B085486	1.08	50.0	11/19/13
13K0751-06 [SS-H10]	B085486	1.05	50.0	11/19/13
13K0751-07 [SS-C5]	B085486	1.03	50.0	11/19/13
13K0751-08 [SS-B5]	B085486	1.05	50.0	11/19/13
13K0751-09 [SS-D6]	B085486	1.07	50.0	11/19/13
13K0751-10 [SS-C7]	B085486	1.03	50.0	11/19/13
13K0751-11 [SS-D8]	B085486	1.01	50.0	11/19/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-11 [SS-D8]	B085560	0.604	50.0	11/20/13

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-01 [SS-K7]	B085593	0.601	50.0	11/20/13
13K0751-02 [SS-K5]	B085593	0.607	50.0	11/20/13
13K0751-03 [SS-H8]	B085593	0.608	50.0	11/20/13
13K0751-05 [SS-I9]	B085593	0.608	50.0	11/20/13
13K0751-06 [SS-H10]	B085593	0.616	50.0	11/20/13
13K0751-07 [SS-C5]	B085593	0.620	50.0	11/20/13
13K0751-08 [SS-B5]	B085593	0.605	50.0	11/20/13
13K0751-09 [SS-D6]	B085593	0.622	50.0	11/20/13
13K0751-10 [SS-C7]	B085593	0.604	50.0	11/20/13

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-03 [SS-H8]	B085719	30.5	1.00	11/21/13
13K0751-04 [IC-J7]	B085719	30.1	1.00	11/21/13
13K0751-05 [SS-I9]	B085719	30.2	1.00	11/21/13

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Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-05RE1 [SS-I9]	B085719	30.2	1.00	11/21/13
13K0751-06 [SS-H10]	B085719	30.3	1.00	11/21/13
13K0751-06RE1 [SS-H10]	B085719	30.3	1.00	11/21/13

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13K0751-01 [SS-K7]	B085606	1.02	50.0	11/20/13
13K0751-02 [SS-K5]	B085606	1.00	50.0	11/20/13
13K0751-03 [SS-H8]	B085606	1.00	50.0	11/20/13
13K0751-05 [SS-I9]	B085606	1.02	50.0	11/20/13
13K0751-06 [SS-H10]	B085606	1.07	50.0	11/20/13
13K0751-07 [SS-C5]	B085606	1.14	50.0	11/20/13
13K0751-08 [SS-B5]	B085606	1.06	50.0	11/20/13
13K0751-09 [SS-D6]	B085606	1.05	50.0	11/20/13
13K0751-10 [SS-C7]	B085606	1.02	50.0	11/20/13
13K0751-11 [SS-D8]	B085606	1.12	50.0	11/20/13

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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
Batch B085719 - SW-846 3546										
Blank (B085719-BLK1)				Prepared: 11/21/13 Analyzed: 11/25/13						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	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							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							R-05
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.67	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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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	
Batch B085719 - SW-846 3546											
Blank (B085719-BLK1)				Prepared: 11/21/13 Analyzed: 11/25/13							
Phenol	ND	0.34	mg/Kg wet								
Pyrene	ND	0.17	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet								
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet								
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet								
Surrogate: 2-Fluorophenol	*4.66*		mg/Kg wet	6.67		69.9	30-130				
Surrogate: Phenol-d6	*4.59*		mg/Kg wet	6.67		68.8	30-130				
Surrogate: Nitrobenzene-d5	*2.09*		mg/Kg wet	3.33		62.6	30-130				
Surrogate: 2-Fluorobiphenyl	*2.29*		mg/Kg wet	3.33		68.8	30-130				
Surrogate: 2,4,6-Tribromophenol	*5.05*		mg/Kg wet	6.67		75.7	30-130				
Surrogate: p-Terphenyl-d14	*3.05*		mg/Kg wet	3.33		91.4	30-130				
LCS (B085719-BS1)				Prepared: 11/21/13 Analyzed: 11/25/13							
Acenaphthene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140				
Acenaphthylene	1.27	0.17	mg/Kg wet	1.67		76.3	40-140				
Acetophenone	0.586	0.34	mg/Kg wet	0.833		70.4	40-140				
Aniline	1.01	0.34	mg/Kg wet	1.67		60.5	40-140				
Anthracene	1.48	0.17	mg/Kg wet	1.67		88.9	40-140				
Benzo(a)anthracene	1.44	0.17	mg/Kg wet	1.67		86.6	40-140				
Benzo(a)pyrene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140				
Benzo(b)fluoranthene	1.25	0.17	mg/Kg wet	1.67		74.9	40-140				
Benzo(g,h,i)perylene	1.29	0.17	mg/Kg wet	1.67		77.2	40-140				
Benzo(k)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140				
Bis(2-chloroethoxy)methane	1.31	0.34	mg/Kg wet	1.67		78.9	40-140				
Bis(2-chloroethyl)ether	1.20	0.34	mg/Kg wet	1.67		71.8	40-140				
Bis(2-chloroisopropyl)ether	1.25	0.34	mg/Kg wet	1.67		75.0	40-140				
Bis(2-Ethylhexyl)phthalate	1.51	0.34	mg/Kg wet	1.67		90.5	40-140				
4-Bromophenylphenylether	1.37	0.34	mg/Kg wet	1.67		82.4	40-140				
Butylbenzylphthalate	1.43	0.34	mg/Kg wet	1.67		86.1	40-140				
4-Chloroaniline	1.07	0.66	mg/Kg wet	1.67		63.9	15-140			R-05	†
2-Chloronaphthalene	1.32	0.34	mg/Kg wet	1.67		78.9	40-140				
2-Chlorophenol	1.15	0.34	mg/Kg wet	1.67		69.2	30-130				
Chrysene	1.45	0.17	mg/Kg wet	1.67		86.7	40-140				
Dibenz(a,h)anthracene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140				
Dibenzofuran	1.27	0.34	mg/Kg wet	1.67		76.4	40-140				
Di-n-butylphthalate	1.62	0.34	mg/Kg wet	1.67		97.3	40-140				
1,2-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.0	40-140				
1,3-Dichlorobenzene	1.04	0.34	mg/Kg wet	1.67		62.7	40-140				
1,4-Dichlorobenzene	1.04	0.34	mg/Kg wet	1.67		62.1	40-140				
3,3-Dichlorobenzidine	1.29	0.17	mg/Kg wet	1.67		77.2	40-140				
2,4-Dichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.4	30-130				
Diethylphthalate	1.45	0.34	mg/Kg wet	1.67		86.8	40-140				
2,4-Dimethylphenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130				
Dimethylphthalate	1.42	0.34	mg/Kg wet	1.67		84.9	40-140				
2,4-Dinitrophenol	0.480	0.66	mg/Kg wet	1.67		28.8	15-140				†
2,4-Dinitrotoluene	1.31	0.34	mg/Kg wet	1.67		78.7	40-140				
2,6-Dinitrotoluene	1.39	0.34	mg/Kg wet	1.67		83.6	40-140				
Di-n-octylphthalate	1.44	0.67	mg/Kg wet	1.67		86.3	40-140				
1,2-Diphenylhydrazine (as Azobenzene)	1.31	0.34	mg/Kg wet	1.67		78.3	40-140				
Fluoranthene	1.50	0.17	mg/Kg wet	1.67		90.2	40-140				
Fluorene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140				
Hexachlorobenzene	1.45	0.34	mg/Kg wet	1.67		87.2	40-140				

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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	
Batch B085719 - SW-846 3546											
LCS (B085719-BS1)				Prepared: 11/21/13 Analyzed: 11/25/13							
Hexachlorobutadiene	1.35	0.34	mg/Kg wet	1.67		80.9	40-140				
Hexachloroethane	1.20	0.34	mg/Kg wet	1.67		72.0	40-140				
Indeno(1,2,3-cd)pyrene	1.36	0.17	mg/Kg wet	1.67		81.4	40-140				
Isophorone	1.30	0.34	mg/Kg wet	1.67		77.8	40-140				
2-Methylnaphthalene	1.31	0.17	mg/Kg wet	1.67		78.7	40-140				
2-Methylphenol	1.23	0.34	mg/Kg wet	1.67		73.9	30-130				
3/4-Methylphenol	0.995	0.34	mg/Kg wet	1.67		59.7	30-130				
Naphthalene	1.17	0.17	mg/Kg wet	1.67		70.4	40-140				
Nitrobenzene	1.15	0.34	mg/Kg wet	1.67		68.9	40-140				
2-Nitrophenol	1.06	0.34	mg/Kg wet	1.67		63.6	30-130				
4-Nitrophenol	1.12	0.66	mg/Kg wet	1.67		67.1	15-140				†
Pentachlorophenol	0.728	0.34	mg/Kg wet	1.67		43.7	30-130				
Phenanthrene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140				
Phenol	1.14	0.34	mg/Kg wet	1.67		68.3	15-140				†
Pyrene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140				
1,2,4-Trichlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.9	40-140				
2,4,5-Trichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.8	30-130				
2,4,6-Trichlorophenol	1.25	0.34	mg/Kg wet	1.67		75.2	30-130				
Surrogate: 2-Fluorophenol	*4.95*		mg/Kg wet	6.67		74.3	30-130				
Surrogate: Phenol-d6	*4.76*		mg/Kg wet	6.67		71.4	30-130				
Surrogate: Nitrobenzene-d5	*2.28*		mg/Kg wet	3.33		68.4	30-130				
Surrogate: 2-Fluorobiphenyl	*2.45*		mg/Kg wet	3.33		73.5	30-130				
Surrogate: 2,4,6-Tribromophenol	*6.45*		mg/Kg wet	6.67		96.7	30-130				
Surrogate: p-Terphenyl-d14	*2.65*		mg/Kg wet	3.33		79.4	30-130				
LCS Dup (B085719-BSD1)				Prepared: 11/21/13 Analyzed: 11/25/13							
Acenaphthene	1.28	0.17	mg/Kg wet	1.67		76.8	40-140	1.58	30		
Acenaphthylene	1.24	0.17	mg/Kg wet	1.67		74.2	40-140	2.84	30		
Acetophenone	0.517	0.34	mg/Kg wet	0.833		62.1	40-140	12.5	30		
Aniline	0.760	0.34	mg/Kg wet	1.67		45.6	40-140	28.0	30		
Anthracene	1.49	0.17	mg/Kg wet	1.67		89.7	40-140	0.919	30		
Benzo(a)anthracene	1.45	0.17	mg/Kg wet	1.67		87.2	40-140	0.598	30		
Benzo(a)pyrene	1.46	0.17	mg/Kg wet	1.67		87.8	40-140	1.93	30		
Benzo(b)fluoranthene	1.26	0.17	mg/Kg wet	1.67		75.5	40-140	0.851	30		
Benzo(g,h,i)perylene	1.45	0.17	mg/Kg wet	1.67		86.9	40-140	11.7	30		
Benzo(k)fluoranthene	1.39	0.17	mg/Kg wet	1.67		83.2	40-140	1.86	30		
Bis(2-chloroethoxy)methane	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	8.46	30		
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		64.8	40-140	10.4	30		
Bis(2-chloroisopropyl)ether	1.13	0.34	mg/Kg wet	1.67		67.8	40-140	10.1	30		
Bis(2-Ethylhexyl)phthalate	1.53	0.34	mg/Kg wet	1.67		91.6	40-140	1.21	30		
4-Bromophenylphenylether	1.41	0.34	mg/Kg wet	1.67		84.4	40-140	2.37	30		
Butylbenzylphthalate	1.45	0.34	mg/Kg wet	1.67		86.8	40-140	0.902	30		
4-Chloroaniline	0.624	0.66	mg/Kg wet	1.67		37.4	15-140	**52.3**	* 30	R-05	†
2-Chloronaphthalene	1.24	0.34	mg/Kg wet	1.67		74.5	40-140	5.74	30		
2-Chlorophenol	1.07	0.34	mg/Kg wet	1.67		64.4	30-130	7.13	30		
Chrysene	1.45	0.17	mg/Kg wet	1.67		87.2	40-140	0.506	30		
Dibenz(a,h)anthracene	1.48	0.17	mg/Kg wet	1.67		88.7	40-140	6.93	30		
Dibenzofuran	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	1.32	30		
Di-n-butylphthalate	1.63	0.34	mg/Kg wet	1.67		97.6	40-140	0.246	30		
1,2-Dichlorobenzene	0.893	0.34	mg/Kg wet	1.67		53.6	40-140	20.8	30		
1,3-Dichlorobenzene	0.823	0.34	mg/Kg wet	1.67		49.4	40-140	23.8	30		
1,4-Dichlorobenzene	0.841	0.34	mg/Kg wet	1.67		50.5	40-140	20.7	30		

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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
Batch B085719 - SW-846 3546										
LCS Dup (B085719-BSD1)				Prepared: 11/21/13 Analyzed: 11/25/13						
3,3-Dichlorobenzidine	0.955	0.17	mg/Kg wet	1.67		57.3	40-140	29.6	30	
2,4-Dichlorophenol	1.15	0.34	mg/Kg wet	1.67		68.8	30-130	2.36	30	
Diethylphthalate	1.44	0.34	mg/Kg wet	1.67		86.3	40-140	0.578	30	
2,4-Dimethylphenol	1.27	0.34	mg/Kg wet	1.67		76.0	30-130	4.00	30	
Dimethylphthalate	1.40	0.34	mg/Kg wet	1.67		84.0	40-140	1.04	30	
2,4-Dinitrophenol	0.539	0.66	mg/Kg wet	1.67		32.4	15-140	11.6	30	†
2,4-Dinitrotoluene	1.28	0.34	mg/Kg wet	1.67		76.9	40-140	2.26	30	
2,6-Dinitrotoluene	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	1.01	30	
Di-n-octylphthalate	1.39	0.67	mg/Kg wet	1.67		83.1	40-140	3.78	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.32	0.34	mg/Kg wet	1.67		79.4	40-140	1.39	30	
Fluoranthene	1.50	0.17	mg/Kg wet	1.67		89.7	40-140	0.556	30	
Fluorene	1.37	0.17	mg/Kg wet	1.67		82.3	40-140	1.35	30	
Hexachlorobenzene	1.48	0.34	mg/Kg wet	1.67		89.1	40-140	2.09	30	
Hexachlorobutadiene	1.16	0.34	mg/Kg wet	1.67		69.5	40-140	15.2	30	
Hexachloroethane	0.967	0.34	mg/Kg wet	1.67		58.0	40-140	21.5	30	
Indeno(1,2,3-cd)pyrene	1.45	0.17	mg/Kg wet	1.67		87.1	40-140	6.79	30	
Isophorone	1.24	0.34	mg/Kg wet	1.67		74.5	40-140	4.25	30	
2-Methylnaphthalene	1.11	0.17	mg/Kg wet	1.67		66.3	40-140	17.0	30	
2-Methylphenol	1.15	0.34	mg/Kg wet	1.67		69.0	30-130	6.83	30	
3/4-Methylphenol	1.12	0.34	mg/Kg wet	1.67		67.3	30-130	11.9	30	
Naphthalene	1.07	0.17	mg/Kg wet	1.67		64.0	40-140	9.49	30	
Nitrobenzene	1.12	0.34	mg/Kg wet	1.67		67.0	40-140	2.77	30	
2-Nitrophenol	1.03	0.34	mg/Kg wet	1.67		62.0	30-130	2.55	30	
4-Nitrophenol	1.27	0.66	mg/Kg wet	1.67		76.1	15-140	12.6	30	†
Pentachlorophenol	0.837	0.34	mg/Kg wet	1.67		50.2	30-130	13.9	30	
Phenanthrene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140	2.33	30	
Phenol	1.06	0.34	mg/Kg wet	1.67		63.8	15-140	6.87	30	†
Pyrene	1.42	0.17	mg/Kg wet	1.67		85.1	40-140	7.36	30	
1,2,4-Trichlorobenzene	1.08	0.34	mg/Kg wet	1.67		64.5	40-140	9.48	30	
2,4,5-Trichlorophenol	1.28	0.34	mg/Kg wet	1.67		77.1	30-130	0.312	30	
2,4,6-Trichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.5	30-130	2.26	30	
Surrogate: 2-Fluorophenol	*4.55*		mg/Kg wet	6.67		68.3	30-130			
Surrogate: Phenol-d6	*4.51*		mg/Kg wet	6.67		67.7	30-130			
Surrogate: Nitrobenzene-d5	*2.17*		mg/Kg wet	3.33		65.1	30-130			
Surrogate: 2-Fluorobiphenyl	*2.33*		mg/Kg wet	3.33		70.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.43*		mg/Kg wet	6.67		96.4	30-130			
Surrogate: p-Terphenyl-d14	*2.85*		mg/Kg wet	3.33		85.4	30-130			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085486 - SW-846 3050B										
Blank (B085486-BLK1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	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							
Nickel	ND	0.50	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B085486-BS1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	92.0	5.0	mg/Kg wet	99.6		92.4	83-117.6			
Cadmium	173	0.50	mg/Kg wet	182		95.3	83.1-116.9			
Chromium	134	0.99	mg/Kg wet	136		98.6	81.6-117.6			
Lead	103	1.5	mg/Kg wet	115		89.6	82.4-117.8			
Nickel	142	0.99	mg/Kg wet	153		92.9	84.4-115.6			
Zinc	142	2.0	mg/Kg wet	161		88.1	81.9-117.6			
LCS Dup (B085486-BSD1)				Prepared: 11/19/13 Analyzed: 11/20/13						
Arsenic	98.2	5.0	mg/Kg wet	99.6		98.6	83-117.6	6.46	30	
Cadmium	176	0.50	mg/Kg wet	182		96.5	83.1-116.9	1.29	30	
Chromium	141	0.99	mg/Kg wet	136		104	81.6-117.6	5.17	30	
Lead	101	1.5	mg/Kg wet	115		87.5	82.4-117.8	2.29	30	
Nickel	149	0.99	mg/Kg wet	153		97.2	84.4-115.6	4.45	30	
Zinc	149	2.0	mg/Kg wet	161		92.5	81.9-117.6	4.91	30	
MRL Check (B085486-MRL1)				Prepared: 11/19/13 Analyzed: 11/22/13						
Lead	0.766	0.73	mg/Kg wet	0.727		105	80-120			
Batch B085560 - SW-846 7471										
Blank (B085560-BLK1)				Prepared & Analyzed: 11/20/13						
Mercury	ND	0.025	mg/Kg wet							
LCS (B085560-BS1)				Prepared & Analyzed: 11/20/13						
Mercury	3.86	0.32	mg/Kg wet	4.05		95.3	71.6-128.1			
LCS Dup (B085560-BSD1)				Prepared & Analyzed: 11/20/13						
Mercury	4.26	0.34	mg/Kg wet	4.05		105	71.6-128.1	9.70	30	
Batch B085593 - SW-846 7471										
Blank (B085593-BLK1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Mercury	ND	0.025	mg/Kg wet							

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B085593 - SW-846 7471										
LCS (B085593-BS1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Mercury	4.24	0.33	mg/Kg wet	4.05		105	71.6-128.1			
LCS Dup (B085593-BSD1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Mercury	4.04	0.32	mg/Kg wet	4.05		99.7	71.6-128.1	4.98	30	
Duplicate (B085593-DUP1)	**Source: 13K0751-01**			Prepared: 11/20/13 Analyzed: 11/21/13						
Mercury	0.0893	0.027	mg/Kg dry		0.0910			1.86	35	
Matrix Spike (B085593-MS1)	**Source: 13K0751-01**			Prepared: 11/20/13 Analyzed: 11/21/13						
Mercury	0.279	0.027	mg/Kg dry	0.183	0.0910	103	75-125			

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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
Batch B085606 - SW-846 9014										
Blank (B085606-BLK1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	ND	0.49	mg/Kg wet							
LCS (B085606-BS1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	29	0.50	mg/Kg wet	33.2		86.7	80-120			
LCS Dup (B085606-BSD1)				Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	33	0.50	mg/Kg wet	33.2		98.1	80-120	12.1	20	
Matrix Spike (B085606-MS1)		**Source: 13K0751-05**		Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	28	0.62	mg/Kg dry	20.6	9.8	90.8	75-125			
Matrix Spike (B085606-MS2)		**Source: 13K0751-11**		Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	17	0.55	mg/Kg dry	18.3	ND	93.0	75-125			
Matrix Spike Dup (B085606-MSD1)		**Source: 13K0751-05**		Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	32	0.64	mg/Kg dry	21.1	9.8	106	75-125	12.5	35	
Matrix Spike Dup (B085606-MSD2)		**Source: 13K0751-11**		Prepared: 11/20/13 Analyzed: 11/21/13						
Cyanide	17	0.58	mg/Kg dry	19.3	ND	87.1	75-125	1.32	35	
Batch B085779 - % Solids										
Duplicate (B085779-DUP1)		**Source: 13K0751-01**		Prepared: 11/22/13 Analyzed: 11/25/13						
% Solids	88.0		% Wt		89.7			1.91	20	

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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.
	No results have been blank subtracted unless specified in the case narrative section.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-05	Elevated reporting limit due to high concentration of target compounds. MA CAM reporting limit not met.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C in Soil	
Arsenic	CT,NH,NY,ME,NC,VA,NJ
Cadmium	CT,NH,NY,ME,NC,VA,NJ
Chromium	CT,NH,NY,ME,NC,VA,NJ
Lead	CT,NH,NY,AIHA,ME,NC,VA,NJ
Nickel	CT,NH,NY,ME,NC,VA,NJ
Zinc	CT,NH,NY,ME,NC,VA,NJ
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA,NJ
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	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
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA,NJ

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

con-test ® ANALYTICAL LABORATORY

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

CHAIN OF CUSTODY RECORD

East longmeadow, MA 01028

~~13K0566~~ 13K0751

Company Name: Weterwk
Address: 175 Cabot St, Lowell MA 01854
Attention: Ralf Westphalen
Project Location: Westford Academy
Sampled By: Cory Mahoney

Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

Telephone: 978 452 9696
Project #: 03403-15
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ☑ EMAIL ☑ WEBSITE
Fax #:
Email:
Format: ○ PDF ○ EXCEL ○ GIS ○ OTHER ____
○ "Enhanced Data Package"

# of Containers	1	1	1	1	1	1
** Preservation	—	—	—	—	—	—
***Container Code	—	—	A	A	A	

ANALYSIS REQUESTED

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	6 metals (As, Cd, Cr, Pb, Ni, Zn)	pH	Cyanide	PCDDs & PCDFs	Chrome+6, pH, ORP	~~Hold 5 days~~	metals, cyanide	dioxin	8270	Run	Hold
-01 01	SS-IR7	11/13/13	0930		√	S	M	√	√	√				X				√
-02 02	SS-K5		0940		√	S	M	√	√	√				X				√
03	IC-H7		0955		√	S	M				√		√				√	
04	IC-I7		1005		√	S	M	√	√	√	√	√	√				√	
05	SD-I8		1105		√	S	M	√	√	√								√
-03 06	SS-H8		1115		√	S	M	√	√	√			√	X		X		√
-04 07	IC-J7		1130		√	S	M				√		√			X		
-05 08	SS-I9		1155		√	S	M							X		X		√
09	SS-H9	↓	1215		√	S	M	√	√	√								√
10	Field Duplicate 1	11/13/13	XXXX		√	√	M	√	√	√	√	√	√				√	

Comments:
Only run pH & ORP on samples that say "Run" per Ralf W. MOD 11/13/13

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

		Date/Time:
Relinquished by: (signature)	11/13/13	1735
Received by: (signature) Paul Racca	11/13/13	1735
Relinquished by: (signature) Paul Racca	11/13/13	19:45
Received by: (signature) 4.6°	11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP?
☑ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

19:45 4.6 LW 11-13-13

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

CHAIN OF CUSTODY RECORD

13K0566 MC
13K0751

39 Spruce Street
East longmeadow, MA 01028

Page 2 of 3

Company Name: Watermark
Address: 175 Cabot St.
Lowell MA 01854
Attention: Olaf Westphalen
Project Location: Westford Academy
Sampled By: Cory Mahony
Project Proposal Provided? (for billing purposes) ○ yes ____ proposal date

Telephone: 978 452 9696
Project # 08403-19
Client PO#

DATA DELIVERY (check all that apply)
FAX ✓ EMAIL ✓ ○ WEBSITE
Fax #
Email
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

	6 metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PCDDs & PCDFs	Chrome 6, pH, ORP	SVOCs	Metals, Cyanide	8270		Run	Hold
# of Containers	1	→	1	1	1						
** Preservation	-	→	-	-	-						
*** Container Code	A	→	A	A	A						

Dissolved Metals
○ Field Filtered
○ Lab to Filter

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	6 metals	Cyanide	Hg	PCDDs & PCDFs	Chrome 6, pH, ORP	SVOCs	Metals, Cyanide	8270		Run	Hold
-06 10	SS-H10	11/13/13	1230		✓	S	U	✓	✓	✓			✓	X	X			✓
12	SS-E3		1330		✓	S	U	✓	✓	✓								✓
13	SS-D4		1345		✓	S	U	✓	✓	✓		✓					✓	
14	SS-D5		1350		✓	S	U	✓	✓	✓		✓					✓	
15	SS-C4		1425		✓	S	U	✓	✓	✓								✓
16 MC	SS-D5		1440		✓	S	U	✓	✓	✓		✓					✓	
-07 17	SS-C5		1450		✓	S	U	✓	✓	✓				X	X			✓
18	SS-C6		1500		✓	S	U	✓	✓	✓								✓
-08 19	SS-B5		1520		✓	S	U	✓	✓	✓				X	X			✓
20	SS-B4	↓	1530		✓	S	U	✓	✓	✓		✓					✓	

Comments:

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

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Relinquished / Received	Signature / Date	Date/Time
Relinquished by: (signature)	11/13/13	1735
Received by: (signature)	11/13/13	1735
Relinquished by: (signature)	Paul Racicot 11/13/13	1945
Received by: (signature)	11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

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13K0751

con-test ANALYTICAL LABORATORY

CHAIN OF CUSTODY RECORD

~~13K A566~~ MP

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

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Page 3 of 3

Company Name: Lutrand[illegible]
Address: 175 Cabot St.
Lowell, MA 01854
Attention: [illegible] Westphalen
Project Location: Westford Anodizing
Sampled By: [illegible]

Project Proposal Provided? (for billing purposes)
○ yes ________ proposal date

Telephone: 978 452 9616
Project # 08702-19
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ○ WEBSITE
Fax #
Email: See pg 1
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

# of Containers															1	1	1 (8)			
** Preservation															-	X	X			
***Container Code															A	P	P			
Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	Metals	Cyanide	Hg		Metals, Cyanide 8270							Run	Hold
-09 21	SS-D6	11/13/13	1540		✓	S	U	✓	✓	✓		X								✓
-10 22	SS-C7	11/13/13	1535		✓	S	U	✓	✓	✓		X								✓
23	SS-D7	11/13/13	1600		✓	S	U	✓	✓	✓										✓
-11 24	SS-D8	11/13/13	1610		✓	S	U	✓	✓	✓		X								✓
~~25~~	~~SS-K6~~							X	X	X										
~~26~~	~~SS-H11~~ MP																			

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:

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

Signature	Date/Time
Relinquished by: (signature) [signature] 11/13/13	1735
Received by: (signature) Paul Rac[illegible] 11/13/13	1735
Relinquished by: (signature) Paul Rac[illegible] 11/13/13	19:45
Received by: (signature) [signature] 11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ________

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: LW DATE: 11-13-2013

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included

2) Does the chain agree with the samples? LW (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 4.6 C

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

Who was notified _____ Date _____ Time _____

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

Who was notified LW Date _____ Time 1730 LW

7) Location where samples are stored: 19

Permission to subcontract samples? Yes No

(Walk-in clients only) if not already approved

Client Signature: _____

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

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

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No (N/A)

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	20
500 mL Amber		4 oz amber/clear jar	20
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:
received two samples: SS-H11, SSK6 not on COC

40 mL vials: # HCl _____ # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? Date/Time: 19:45

Doc #277 Rev. 4 August 2013 Log-In Technician Initials: CW Date/Time: 11-13-2013

Westford Anodizing

12 North Main Street, Westford, MA

RTN 3-31455

Selection of Samples for Laboratory Analysis

Sample Location	Analysis					
	6 Metals + Hg	Cyanide	Chrom+6/pH/ORP	PCDDs & PCDFs	SVOCs	PCBs
SS-B5	H	H				
SS-C5	H	H				
SS-C7	H	H				
SS-D6	H	H				
SS-D8	H	H				
SS-F1				H		
SS-G1	H	H				
SS-G3	H	H				
SS-H8	H	H			H	
SS-H10	H	H			H	
SS-I4	H	H				
SS-I6	H	H				
SS-I9	H	H			H	
SS-K5	H	H				
SS-K7	H	H				
IC-J7					H	

= Sample selected for laboratory analysis of As, Cd, Cr, Pb, Ni, Zn) and Mercury

= Sample selected for laboratory analysis of cyanide

= Sample selected for laboratory analysis of Chromium IV, pH, and ORP

= Sample selected for laboratory analysis of dioxins (PCDDs and PCDFs)

= Sample selected for laboratory analysis of SVOCs

= Sample selected for laboratory analysis of PCBs

Meghan Kelley

From: Cory Mahony [cory.mahony@watermarkenv.com]
Sent: Tuesday, November 19, 2013 10:55 AM
To: Meghan E. Kelley
Cc: Andrew Clark (DEP) (andrew.clark@state.ma.us); Olaf Westphalen
Subject: Westford Anodizing - SPreadsheet of Samples to Activate Only
Attachments: Samples to Activate only.xlsx; Samples Submitted to Run on CoCs.xlsx

Hi Meghan, per our phone call, I have attached a spreadsheet of samples to be activated and have hidden all the sample rows that include samples that do not require analysis and samples that have already been submitted for analysis. I have also attached a spreadsheet summarizing the samples and analyses that were submitted to run on the CoCs.

Thanks,

Cory Mahony
Geologist
Watermark
Unique Approaches - Safe Solutions
175 Cabot Street
Lowell, MA 01854
(978) 452-9696
(978) 453-9988 fax
Cory.Mahony@watermarkenv.com
Watermark is a Certified 8(a) SDB Company
Check us out at www.watermarkenv.com

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 13K0751
Project Location: Westford Anodizing	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

13K0751-01 thru 13K0751-11

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 ( )	9014 Total Cyanide/PAC CAM VI A (X)	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	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?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	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).	☐ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]
	<u>Data User Note:</u> 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.		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *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 Manager

Printed Name: Daren J. Damboragian Date: 11/27/13

December 12, 2013

Dioxins – 1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 12, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K0672

Enclosed are results of analyses for samples received by the laboratory on November 15, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 12/12/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K0672

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-F1	13K0672-01	Soil		SW-846 8290A	FL NELAC #E87634

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

CASE NARRATIVE SUMMARY

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

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

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K0672

Date Received: 11/15/2013

Field Sample #: SS-F1 | Sampled: 11/14/2013 11:30

Sample ID: 13K0672-01

Sample Matrix: Soil

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-		pg/g	1		SW-846 8290A			SGS

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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.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

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Email: info@contestlabs.com
www.contestlabs.com
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East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

13K0672

Rev 04.05.12

Company Name: Watermark
Address: 175 Cabot Street
Lowell, MA 01854
Attention: Olaf Westphalen
Project Location: Westford Anodizing
Sampled By: Cory Mahony

Telephone: 978.452.9696
Project # 08403-19
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ◉ EMAIL ◉ WEBSITE
Fax #
Email: olaf.westphalen@watermarkenv.com
Format: ◉ PDF ◉ EXCEL ○ GIS ○ OTHER ○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCDDs and PCDFs	# of Containers	** Preservation	***Container Code
01	SS-F1	11/14/2013	1130		x	S	U	✓	1	-	A

ANALYSIS REQUESTED

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:**
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments:

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

Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround ††
☐ 7-Day
☐ 10-Day
◉ Other 5 day
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
◉ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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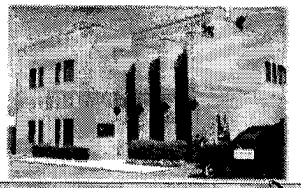

Sample Receipt Checklist

CLIENT NAME: Watermark **RECEIVED BY:** RW **DATE:** 11-15-2013

1) **Was the chain(s) of custody relinquished and signed?** **Yes** No No CoC Included
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 3.1 C

5) **Are there Dissolved samples for the lab to filter?** Yes **No**
   Who was notified _____ Date _____ Time _____
6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes **No**
   Who was notified _____ Date _____ Time _____

7) **Location where samples are stored:** 19

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

8) **Do all samples have the proper Acid pH:** Yes No **N/A** _____
9) **Do all samples have the proper Base pH:** Yes No **N/A** _____
10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes No **N/A**

Containers received at Con-Test

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

Laboratory Comments:

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

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	n/a	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	n/a	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	n/a	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	n/a	
21) Samples do not require splitting or compositing.	n/a	

Who notified of False statements? **Date/Time:** 11-15-13

Log-In Technician Initials: AW **Date/Time:** 20:10

4 December 2013

Meghan Kelley
Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028

Ph.: 413-525-2332
Email: mkelley@contestlabs.com

Subject: Certificate of Results

Dear Meghan;

Attached to this narrative are the analytical results you requested on the samples submitted for the determination of polychlorinated dibenzo-p-dioxins and dibenzofurans. The insert below summarizes the relevant information pertaining to your project. In particular, QC annotations bring to your attention specific analytical observations and assessments made during the sample handling and data interpretation phases. Results reported relate only to the items tested.

Project Information Summary	When applicable, see QC Annotations for details
Client Project No.	13K0672
AP Project #	**A6190**
Analytical Protocol	Method 8290A
No. Samples Submitted	1
No. Samples Analyzed	1
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
No. Outstanding Samples	0
Date Received	19-Nov-2013
Condition Received	good
Temperature upon Receipt (C)	1.1
Extraction within Holding Time	yes
Analysis within Holding Time	yes
Data meet QA/QC Requirements	yes
Exceptions	none
Analytical Difficulties	none

QC Annotations:

1. Please see Appendix A & B attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Analytical Perspectives Certification IDs:

SOUTH CAROLINA	99054
ARKANSAS	88-0628
NEW JERSEY-NELAP SECONDARY	NC005
FLORIDA-NELAP PRIMARY	E87608
LOUISIANA	4024
NORTH CAROLINA	37783
WASHINGTON	C2027
NEW YORK	11988
VIRGINIA	460180
MINNESOTA	037-999-448
OREGON	pending
TEXAS	T104704484-10-1
PENNSYLVANIA-NELAP SECONDARY	68-01849

SGS Analytical Perspectives remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS Analytical Perspectives welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at www.ultratrace.com and click on the 'Leave Your Feedback Here!' link on the Home Page. Thank you for choosing SGS Analytical Perspectives.

Sincerely,

Amy Boehm
cn=Amy Boehm, o=SGS, ou,
email=amy.boehm@sgs.com, c=US
2013.12.04 15:44:19 -05'00'

Amy J. Boehm
Senior Project Manager

APPENDIX A: DATA QUALIFIERS / DATA ATTRIBUTES	
>	Indicates high recoveries. Shown with the numeric value at the top of the range.[1]
B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve).
EMPC	Represents an Estimated Maximum Possible Concentration. EMPC's arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
ETH	Indicates the presence of a diphenyl ether that appears to interfere with the quantitation of a furan. The reported concentration is the maximum.
H/h	If the standard recovery is below the method or SOP specified value "H" is assigned. If the obtained value is less than half the specified value "h" is assigned.[1]
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve).
ND	Indicates a non-detect.
NR	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.[1]
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.
X	Indicates results reported from reinjection, refractionation, or repeat analyses.
APPENDIX B: LAB ID IDENTIFIERS	
AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

[1]Denotes data qualifiers/attributes whose use will be phased out over time

Sample ID: 13K0672-01 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6190	Date Received:	19-Nov-2013
Project ID:	13K0672	Weight/Volume:	11.67 g	Lab Sample ID	A6190_11604_DF_001	Date Extracted:	21-Nov-2013
Date Collected:	14-Nov-2013	% Solids:	89.4 %	QC Batch No:	11604	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	19:15:25

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	0.144			J	ES 2378-TCDD	93.4	
12378-PeCDD	1.37			J	ES 12378-PeCDD	83.5	
123478-HxCDD	2.36				ES 123478-HxCDD	75.2	
123678-HxCDD	5.82				ES 123678-HxCDD	76.3	
123789-HxCDD	5.06				ES 123789-HxCDD	76.3	
1234678-HpCDD	118				ES 1234678-HpCDD	70	
OCDD	826				ES OCDD	56.9	
2378-TCDF	1.59				ES 2378-TCDF	90.5	
12378-PeCDF	0.67			J	ES 12378-PeCDF	85	
23478-PeCDF	4.22				ES 23478-PeCDF	80.6	
123478-HxCDF	2.28				ES 123478-HxCDF	74.4	
123678-HxCDF	2.24				ES 123678-HxCDF	79.2	
234678-HxCDF	3.35				ES 234678-HxCDF	76.6	
123789-HxCDF	0.193			J	ES 123789-HxCDF	74.8	
1234678-HpCDF	27				ES 1234678-HpCDF	70.8	
1234789-HpCDF	1.96			J	ES 1234789-HpCDF	68.8	
OCDF	48.1				ES OCDF	59.2	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	102	
Total TCDD	2.59		2.67		CS 12347-PeCDD	91.3	
Total PeCDD	7.93		8.26		CS 12346-PeCDF	92.2	
Total HxCDD	39.5		39.5		CS 123469-HxCDF	85.3	
Total HpCDD	209		209		CS 1234689-HpCDF	75.4	
					AS 1368-TCDD	89.9	
Total TCDF	25.8		25.8		AS 1368-TCDF	87.1	
Total PeCDF	52.4		53				
Total HxCDF	47.3		47.6				
Total HpCDF	62.5		62.5				
Total PCDD/Fs	**1320**		**1320**				
WHO-2005 TEQs							
TEQ: ND=0	6.82		6.82				
TEQ: ND=DL/2	6.82	0.161	6.82				
TEQ: ND=DL	6.82	0.322	6.82				

2714 Exchange Drive
Wilmington, NC 28405 , USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290; Fax: +1 910 794-3919

Sample ID: Method Blank A6190 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6190	Date Received:	n/a
Project ID:	13K0672	Weight/Volume:	10.00 g	Lab Sample ID	MB1_11604_DF_SDS	Date Extracted:	21-Nov-2013
Date Collected:	n/a	% Solids:	100.0 %	QC Batch No:	11604	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	16:35:27

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.073			ES 2378-TCDD	92.9	
12378-PeCDD	ND	0.0542			ES 12378-PeCDD	84.2	
123478-HxCDD	ND	0.0848			ES 123478-HxCDD	77.7	
123678-HxCDD	ND	0.0874			ES 123678-HxCDD	78.1	
123789-HxCDD	ND	0.0827			ES 123789-HxCDD	80.2	
1234678-HpCDD	ND	0.13			ES 1234678-HpCDD	72.7	
OCDD	ND	0.203			ES OCDD	61.8	
2378-TCDF	ND	0.0526			ES 2378-TCDF	91	
12378-PeCDF	ND	0.0516			ES 12378-PeCDF	82.9	
23478-PeCDF	ND	0.0531			ES 23478-PeCDF	79.3	
123478-HxCDF	ND	0.0567			ES 123478-HxCDF	76	
123678-HxCDF	ND	0.0545			ES 123678-HxCDF	81.4	
234678-HxCDF	ND	0.0563			ES 234678-HxCDF	78.7	
123789-HxCDF	ND	0.067			ES 123789-HxCDF	78.2	
1234678-HpCDF	ND	0.0653			ES 1234678-HpCDF	73.7	
1234789-HpCDF	ND	0.103			ES 1234789-HpCDF	70.4	
OCDF	ND	0.19			ES OCDF	63.7	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	0.073	ND		CS 12347-PeCDD	91	
Total PeCDD	ND	0.0542	ND		CS 12346-PeCDF	91.7	
Total HxCDD	ND	0.0847	ND		CS 123469-HxCDF	87.6	
Total HpCDD	ND	0.13	ND		CS 1234689-HpCDF	78	
					AS 1368-TCDD	99.3	
Total TCDF	ND	0.0526	ND		AS 1368-TCDF	89.1	
Total PeCDF	ND	0.0524	ND				
Total HxCDF	ND	0.0583	ND				
Total HpCDF	ND	0.0823	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.101	0.101	0.101				
TEQ: ND=DL	0.202	0.202	0.202				

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Wilmington, NC 28405 , USA
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METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS Analytical Perspectives		
Initial Calibration:	ICAL: MM3_DF_11012012A_06SEP2013		
Instrument ID:	MM3	GC Column ID:	ZB-5ms
VER Data Filename:	131202R05	Analysis Date:	02-DEC-2013 13:55:27
Lab ID:	OPR1_11604_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	10.2	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	51.2	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	52.2	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	54.5	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	49.6	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	52.2	35	-	70	Y
OCDD	100	107	78	-	144	Y
2,3,7,8-TCDF	10	11.1	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	52.4	40	-	67	Y
2,3,4,7,8-PeCDF	50	54.2	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	51.2	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	52.8	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	52.5	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	49.1	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	55.2	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	52.1	39	-	69	Y
OCDF	100	105	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 03 Dec 2013 16:37 Analyst: AP

METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS Analytical Perspectives
Initial Calibration: ICAL: MM3_DF_11012012A_06SEP2013
Instrument ID: MM3 GC Column ID: ZB-5ms
VER Data Filename: 131202R05 Analysis Date: 02-DEC-2013 13:55:27
Lab ID: OPR1_11604_DF

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	90.5	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	85.4	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	77.6	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	78.6	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	78.6	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	73.1	26	-	166	Y
13C-OCDD	200	123	26	-	397	Y
13C-2,3,7,8-TCDF	100	89.6	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	82.8	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	79.4	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	76.4	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	80.5	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	79.8	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	78.1	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	72.5	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	72.5	20	-	186	Y
13C-OCDF	200	129	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	41.1	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

Processed: 03 Dec 2013 16:37 Analyst: AP

Sample Receipt Notification

2714 Exchange Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*19-Nov-13 at 09:30*
AP Project name:	*A6190*
Requested TAT:	*21 days*
Projected due date:	*10-Dec-13*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Meghan E. Kelley*
Company:	*CON-TEST ANALYTICAL LABORATORY*
Project Name & Site:	*13K0672*
Project PO#:	
QAAP/Contract #:	
Requested Analysis:	*D/F*
Phone#:	*413.525.2332*
Email Address:	*n/a*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
13K0672-01	A6190_001	Soil	1	8oz amber	14-Nov-13	11:30	1.1	1	7971 8407 6182

Preservation Type: Blue Ice - Good Condition **Sample Seals:** No

Notes/Comments:

Samples received intact

M8290 17+ Homologs
WHO - TBT's
OPR

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Barbara Hager *Logged in by: Barbara Hager* *QC'ed by:*

SUBCONTRACT ORDER

Con-Test Analytical Laboratory

13K0672

Subcontract lab must notify Con-Test Analytical Lab of any MCL exceedance within 24-hours of obtaining valid data.

SENDING LABORATORY:

Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Meghan E. Kelley

RECEIVING LABORATORY:

SGS North America, Inc.
5500 Business Drive
Wilmington, NC 28405
Phone :(910) 350-1903
Fax: (910) 350-1557

AW190

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 13K0672-01	**Soil**	**Sampled: 11/14/13 11:30**		**MA MCP**
Dioxins/Furans	11/22/13 12:00	11/21/13 11:30		Sub to SGS - Wilmington, SC
Containers Supplied:				
8 oz amber glass jar (A)				

Fed Ex

1.1°C

Released By	Date	Received By	Date
	11/18/13 1700		11/19/13 9:30
Released By	Date	Received By	Date

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **CON-TEST** Work Order No.: **A6190**

1. [X] Shipped
   [ ] Hand Delivered

2. [X] COC Present on Receipt
   [ ] No COC
   [ ] Additional Transmittal Forms

3. [ ] Custody Tape on Container
   [X] No Custody Tape

4. [X] Samples Intact
   [ ] Samples Broken / Leaking

5. [X] Chilled on Receipt Actual Temp.(s) in °C: 1.1 Thermometer ID#: ThermoTrace
   [ ] Ambient on Receipt
   [ ] Walk-in on Ice; Coming down to temp.
   [ ] Temperature Blank Present

6. [X] Sufficient Sample Submitted
   [ ] Insufficient Sample Submitted

7. [ ] Chlorine absent
   [ ] HNO3 < 2
   [ ] HCL < 2
   [ ] Additional Preservatives verified (see notes)

8. [X] Received Within Holding Time
   [ ] Not Received Within Holding Time

9. [X] No Discrepancies Noted
   [ ] Discrepancies Noted
   [ ] NCDENR notified of Discrepancies*

10. [ ] No Headspace present in VOC vials
    [ ] Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: BAH

Date: Tue-11/19/13 00:00

*NCDENR must be notified when collec

December 12, 2013

Dioxins – 2

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 12, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K1096

Enclosed are results of analyses for samples received by the laboratory on November 26, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 12/12/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K1096

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-F1	13K1096-01	Soil		SW-846 8290A	FL NELAC #E87634

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

CASE NARRATIVE SUMMARY

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

Dioxin originally on work order 13K0748, due to turnaround time sample was moved onto new work order 13K1096.

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

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K1096

Date Received: 11/26/2013

Field Sample #: SS-F1 | Sampled: 11/12/2013 11:15

Sample ID: 13K1096-01

Sample Matrix: Soil

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-		pg/g	1		SW-846 8290A			SGS

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

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.

No results have been blank subtracted unless specified in the case narrative section.

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

~~13K0744~~ 13K1096

con-test® ANALYTICAL LABORATORY

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

CHAIN OF CUSTODY RECORD

~~13K0505~~ MAC

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Page 1 of 1

Company Name: Watermark
Address: 175 Cabot st.
Lowell MA 01854
Attention: Olaf Westphalen
Project Location: Westford Anodizing
Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

Telephone: 978 452 9696
Project # 08403-13
Client PO#

DATA DELIVERY (check all that apply) ○ FAX ☒ EMAIL ○ WEBSITE
Fax #
Email: olaf.westphalen@watermarkcorp.com
Format: ☒ PDF ☒ EXCEL ○ GIS ○ OTHER ○ "Enhanced Data Package"

	PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom	metals	cyanide	dioxin 8270
# of Containers	1	1	→	1				
** Preservation	–	–	→	–				
***Container Code	A	A	→	A				

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	PCBs	Metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PH, ORP, Hex Chrom	metals	cyanide	dioxin 8270
01	TR-A1	10/12/13			✓	S	U	✓	H	H	H				
02	SS-H1		1035		✓	S	U	✓	H	H	H				
-01★ MAC 03	SS-G1		1100		✓	S	U		H	H	H		X	X	
-02★★ 04	SS-F1		1115		✓	S	U		H	H	H				X
05	SS-B1		1125		✓	S	U		H	H	H				
06	SS-H2		1135		✓	S	U		H	H	H				
07	SS-H3		1155		✓	S	U		R	R	R	R			
-03★ 08	SS-G3		1217		✓	S	U		H	H	H		X	X	
09	SS-H4		1220		✓	S	U		H	H	H				
10	SS-H5		1235		✓	S	U		H	H	H				

Comments: H = Hold
R = Run
Only Run pH ORP on Sample-07 Per Olaf W. MAC 11/13/2013

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

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Signature	Date/Time
Relinquished by: (signature) [signature] 11/12/13	1535
Received by: (signature) [signature] 11/12/13	1600
Relinquished by: (signature) [signature] 11/12/13	1810
Received by: (signature) [signature] 4.8° 11/12/13	1810

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

★ Activate per attached email. MAC 11/19/2013
★★ Dioxin analysis put on new workorder due to turnaround time. Orig...

13K0748

CHAIN OF CUSTODY RECORD

Rev. 04.06.12

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 2

Company Name: Watermark | Telephone: 978 452 9654
Address: 175 Cabot St. Lowell MA 01854 | Project # 0140-19 | Client PO#
Attention: Matt Westphalen
Project Location: Westford Academy
Sampled By: Cory Mahony

Project Proposal Provided? (for billing purposes) ○ Yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email: See Pg 1
Format: ☒ PDF ☒ EXCEL ○ GIS ○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Cont. Code
11	SS-A6	11/12/13	1250		✓	S	4
12	SS-I6		1300		✓	S	4
13	SS-H7		1315		✓	S	4
13	SS-H7-MS		1315		✓	S	4
14	SS-I7		1340		✓	S	4
15	SS-I5		1405		✓	S	4
16	SS-I4		1425		✓	S	4
17	SS-J4		1450		✓	S	4
18	SS-J5		1520		✓	S	4
19	SS-J6		1535		✓	S	4

	1	2	3	4	5	6	7	8	9	10
# of Containers	1	1	1	1						
** Preservation	-	-	-	+						
***Container Code	A	A	A	A						

ANALYSIS REQUESTED

1	PCBs
2	Metals (See Pg 1)
3	Hg
4	Cyanide
5	EPH, Target Analytes
6	VPH, Target Analytes
7	Metals
8	Cyanide
9	Dioxin 8290
10	

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Codes:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCl
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

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

Comments:
H = Hold
R = Rvn

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

Relinquished by: (signature)	Date/Time
	11/12/13 1555
Received by: (signature)	Date/Time
	11/12/13 1800
Relinquished by: (signature)	Date/Time
	11/12/13 1805
Received by: (signature)	Date/Time
4.8°	11/12/13 1810

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP?
☒ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

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†† 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.

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

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: L.W DATE: 11-12-2013

1) Was the chain(s) of custody relinquished and signed? (Yes) No No CoC Included

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 N/A Temperature °C by Temp gun 4.8

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

Who was notified _____ Date _____ Time _____

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

Who was notified _____ Date _____ Time _____

7) Location where samples are stored: 19

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

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

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

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	23
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Collisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:

H = Hold
R = Run } on CoC

40 mL vials: # HCl _____ # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:** 11-12-2013

 Log-In Technician Initials: L.W **Date/Time:** 19:10

Westford Anodizing

12 North Main Street, Westford, MA

RTN 3-31455

Selection of Samples for Laboratory Analysis

Sample Location	Analysis					
	6 Metals + Hg	Cyanide	Chrom+6/pH/ORP	PCDDs & PCDFs	SVOCs	PCBs
SS-B5	H	H				
SS-C5	H	H				
SS-C7	H	H				
SS-D6	H	H				
SS-D8	H	H				
SS-F1				H		
SS-G1	H	H				
SS-G3	H	H				
SS-H8	H	H			H	
SS-H10	H	H			H	
SS-I4	H	H				
SS-I6	H	H				
SS-I9	H	H			H	
SS-K5	H	H				
SS-K7	H	H				
IC-J7					H	

= Sample selected for laboratory analysis of As, Cd, Cr, Pb, Ni, Zn) and Mercury

= Sample selected for laboratory analysis of cyanide

= Sample selected for laboratory analysis of Chromium IV, pH, and ORP

= Sample selected for laboratory analysis of dioxins (PCDDs and PCDFs)

= Sample selected for laboratory analysis of SVOCs

= Sample selected for laboratory analysis of PCBs

Meghan Kelley

From: Cory Mahony [cory.mahony@watermarkenv.com]
Sent: Tuesday, November 19, 2013 10:55 AM
To: Meghan E. Kelley
Cc: Andrew Clark (DEP) (andrew.clark@state.ma.us); Olaf Westphalen
Subject: Westford Anodizing - SPreadsheet of Samples to Activate Only
Attachments: Samples to Activate only.xlsx; Samples Submitted to Run on CoCs.xlsx

Hi Meghan, per our phone call, I have attached a spreadsheet of samples to be activated and have hidden all the sample rows that include samples that do not require analysis and samples that have already been submitted for analysis. I have also attached a spreadsheet summarizing the samples and analyses that were submitted to run on the CoCs.

Thanks,

Cory Mahony
Geologist
Watermark
Unique Approaches - Safe Solutions
175 Cabot Street
Lowell, MA 01854
(978) 452-9696
(978) 453-9988 fax
Cory.Mahony@watermarkenv.com
Watermark is a Certified 8(a) SDB Company
Check us out at www.watermarkenv.com

4 December 2013

Meghan Kelley
Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028

Ph.: 413-525-2332
Email: mkelley@contestlabs.com

Subject: Certificate of Results

Dear Meghan;

Attached to this narrative are the analytical results you requested on the samples submitted for the determination of polychlorinated dibenzo-p-dioxins and dibenzofurans. The insert below summarizes the relevant information pertaining to your project. In particular, QC annotations bring to your attention specific analytical observations and assessments made during the sample handling and data interpretation phases. Results reported relate only to the items tested.

Project Information Summary	When applicable, see QC Annotations for details
Client Project No.	13K0748
AP Project #	**A6198**
Analytical Protocol	Method 8290A
No. Samples Submitted	1
No. Samples Analyzed	1
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
No. Outstanding Samples	0
Date Received	20-Nov-2013
Condition Received	good
Temperature upon Receipt (C)	1
Extraction within Holding Time	yes
Analysis within Holding Time	yes
Data meet QA/QC Requirements	yes
Exceptions	none
Analytical Difficulties	none

QC Annotations:

1. Please see Appendix A & B attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Analytical Perspectives Certification IDs:

SOUTH CAROLINA	99054
ARKANSAS	88-0628
NEW JERSEY-NELAP SECONDARY	NC005
FLORIDA-NELAP PRIMARY	E87608
LOUISIANA	4024
NORTH CAROLINA	37783
WASHINGTON	C2027
NEW YORK	11988
VIRGINIA	460180
MINNESOTA	037-999-448
OREGON	pending
TEXAS	T104704484-10-1
PENNSYLVANIA-NELAP SECONDARY	68-01849

SGS Analytical Perspectives remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS Analytical Perspectives welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at www.ultratrace.com and click on the 'Leave Your Feedback Here!' link on the Home Page. Thank you for choosing SGS Analytical Perspectives.

Sincerely,

Amy Boehm
cn=Amy Boehm, o=SGS, ou,
email=amy.boehm@sgs.com, c=US
2013.12.04 15:53:59 -05'00'

Amy J. Boehm
Senior Project Manager

APPENDIX A: DATA QUALIFIERS / DATA ATTRIBUTES	
>	Indicates high recoveries. Shown with the numeric value at the top of the range.[1]
B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve).
EMPC	Represents an Estimated Maximum Possible Concentration. EMPC's arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
ETH	Indicates the presence of a diphenyl ether that appears to interfere with the quantitation of a furan. The reported concentration is the maximum.
H/h	If the standard recovery is below the method or SOP specified value "H" is assigned. If the obtained value is less than half the specified value "h" is assigned.[1]
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve).
ND	Indicates a non-detect.
NR	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.[1]
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.
X	Indicates results reported from reinjection, refractionation, or repeat analyses.
APPENDIX B: LAB ID IDENTIFIERS	
AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

[1]Denotes data qualifiers/attributes whose use will be phased out over time

Sample ID: 13K0748-02 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6198	Date Received:	20-Nov-2013
Project ID:	13K0748	Weight/Volume:	11.88 g	Lab Sample ID	A6198_11604_DF_001	Date Extracted:	21-Nov-2013
Date Collected:	12-Nov-2013	% Solids:	90.9 %	QC Batch No:	11604	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	20:08:46

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	0.149			J	ES 2378-TCDD	93.8	
12378-PeCDD	0.952			J	ES 12378-PeCDD	84.2	
123478-HxCDD	1.63			J	ES 123478-HxCDD	77.4	
123678-HxCDD	3.99				ES 123678-HxCDD	77.1	
123789-HxCDD	3.27				ES 123789-HxCDD	78.8	
1234678-HpCDD	75.2				ES 1234678-HpCDD	75.3	
OCDD	558				ES OCDD	62.9	
2378-TCDF	2.37				ES 2378-TCDF	91.8	
12378-PeCDF	0.637			J	ES 12378-PeCDF	85.1	
23478-PeCDF	5.38				ES 23478-PeCDF	80.7	
123478-HxCDF	1.87			J	ES 123478-HxCDF	75.8	
123678-HxCDF	2			J	ES 123678-HxCDF	80.6	
234678-HxCDF	3.38				ES 234678-HxCDF	78.2	
123789-HxCDF	0.131			J	ES 123789-HxCDF	83	
1234678-HpCDF	19.7				ES 1234678-HpCDF	75.8	
1234789-HpCDF	1.39			J	ES 1234789-HpCDF	74	
OCDF	34				ES OCDF	62.3	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	105	
Total TCDD	2.26		2.44		CS 12347-PeCDD	88.4	
Total PeCDD	6.09		6.48		CS 12346-PeCDF	92.2	
Total HxCDD	28.7		28.7		CS 123469-HxCDF	85.4	
Total HpCDD	138		138		CS 1234689-HpCDF	80.8	
					AS 1368-TCDD	90.2	
Total TCDF	32.4		32.4		AS 1368-TCDF	86.8	
Total PeCDF	56.6		56.6				
Total HxCDF	46		46				
Total HpCDF	46.4		46.4				
Total PCDD/Fs	**948**		**949**				
WHO-2005 TEQs							
TEQ: ND=0	5.74		5.74				
TEQ: ND=DL/2	5.74	0.122	5.74				
TEQ: ND=DL	5.74	0.244	5.74				

2714 Exchange Drive
Wilmington, NC 28405 , USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290; Fax: +1 910 794-3919

Sample ID: Method Blank A6198 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6198	Date Received:	n/a
Project ID:	13K0748	Weight/Volume:	10.00 g	Lab Sample ID	MB1_11604_DF_SDS	Date Extracted:	21-Nov-2013
Date Collected:	n/a	% Solids:	100.0 %	QC Batch No:	11604	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	16:35:27

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.073			ES 2378-TCDD	92.9	
12378-PeCDD	ND	0.0542			ES 12378-PeCDD	84.2	
123478-HxCDD	ND	0.0848			ES 123478-HxCDD	77.7	
123678-HxCDD	ND	0.0874			ES 123678-HxCDD	78.1	
123789-HxCDD	ND	0.0827			ES 123789-HxCDD	80.2	
1234678-HpCDD	ND	0.13			ES 1234678-HpCDD	72.7	
OCDD	ND	0.203			ES OCDD	61.8	
2378-TCDF	ND	0.0526			ES 2378-TCDF	91	
12378-PeCDF	ND	0.0516			ES 12378-PeCDF	82.9	
23478-PeCDF	ND	0.0531			ES 23478-PeCDF	79.3	
123478-HxCDF	ND	0.0567			ES 123478-HxCDF	76	
123678-HxCDF	ND	0.0545			ES 123678-HxCDF	81.4	
234678-HxCDF	ND	0.0563			ES 234678-HxCDF	78.7	
123789-HxCDF	ND	0.067			ES 123789-HxCDF	78.2	
1234678-HpCDF	ND	0.0653			ES 1234678-HpCDF	73.7	
1234789-HpCDF	ND	0.103			ES 1234789-HpCDF	70.4	
OCDF	ND	0.19			ES OCDF	63.7	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	0.073	ND		CS 12347-PeCDD	91	
Total PeCDD	ND	0.0542	ND		CS 12346-PeCDF	91.7	
Total HxCDD	ND	0.0847	ND		CS 123469-HxCDF	87.6	
Total HpCDD	ND	0.13	ND		CS 1234689-HpCDF	78	
					AS 1368-TCDD	99.3	
Total TCDF	ND	0.0526	ND		AS 1368-TCDF	89.1	
Total PeCDF	ND	0.0524	ND				
Total HxCDF	ND	0.0583	ND				
Total HpCDF	ND	0.0823	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.101	0.101	0.101				
TEQ: ND=DL	0.202	0.202	0.202				

2714 Exchange Drive
Wilmington, NC 28405 , USA
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METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS Analytical Perspectives		
Initial Calibration:	ICAL: MM3_DF_11012012A_06SEP2013		
Instrument ID:	MM3	GC Column ID:	ZB-5ms
VER Data Filename:	131202R05	Analysis Date:	02-DEC-2013 13:55:27
Lab ID:	OPR1_11604_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	10.2	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	51.2	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	52.2	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	54.5	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	49.6	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	52.2	35	-	70	Y
OCDD	100	107	78	-	144	Y
2,3,7,8-TCDF	10	11.1	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	52.4	40	-	67	Y
2,3,4,7,8-PeCDF	50	54.2	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	51.2	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	52.8	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	52.5	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	49.1	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	55.2	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	52.1	39	-	69	Y
OCDF	100	105	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 03 Dec 2013 16:37 Analyst: AP

METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS Analytical Perspectives
Initial Calibration: ICAL: MM3_DF_11012012A_06SEP2013
Instrument ID: MM3 GC Column ID: ZB-5ms
VER Data Filename: 131202R05 Analysis Date: 02-DEC-2013 13:55:27
Lab ID: OPR1_11604_DF

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	90.5	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	85.4	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	77.6	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	78.6	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	78.6	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	73.1	26	-	166	Y
13C-OCDD	200	123	26	-	397	Y
13C-2,3,7,8-TCDF	100	89.6	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	82.8	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	79.4	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	76.4	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	80.5	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	79.8	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	78.1	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	72.5	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	72.5	20	-	186	Y
13C-OCDF	200	129	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	41.1	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

Processed: 03 Dec 2013 16:37 Analyst: AP

Sample Receipt Notification

2714 Exchange Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*20-Nov-13 at 11:28*
AP Project name:	*A6198*
Requested TAT:	*21 days*
Projected due date:	*11-Dec-13*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Meghan E. Kelley*
Company:	*CON-TEST ANALYTICAL LABORATORY*
Project Name & Site:	*13K0748*
Project PO#:	
QAAP/Contract #:	
Requested Analysis:	*D/F*
Phone#:	*413.525.2332*
Email Address:	*n/a*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
13K0748-02	A6198_001	Soil	1	4oz amber	12-Nov-13	11:15	1	1	7971 9863 3594

Preservation Type: Blue Ice - Good Condition **Sample Seals:** No

Notes/Comments:

Samples received intact

M8290 17+ Homologs, WHO TEF's QPR

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Barbara Hager *Logged in by: Barbara Hager* *QC'ed by:*

SUBCONTRACT ORDER

Con-Test Analytical Laboratory

13K0748

A6198

SENDING LABORATORY:

Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Meghan E. Kelley

RECEIVING LABORATORY:

SGS North America, Inc.
5500 Business Drive
Wilmington, NC 28405
Phone :(910) 350-1903
Fax: (910) 350-1557

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 13K0748-02	**Soil**	**Sampled: 11/12/13 11:15**		
Dioxins/Furans	11/26/13 12:00	11/19/13 11:15		Sub to SGS - Wilmington, SC
Containers Supplied:				
4 oz amber glass jar (B)				

11/19/13 1700

Released By Date Received By Date

Barbara Hagen 20-NOV-13 1128

Released By Date Received By Date

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **CON-TEST** Work Order No.: **A6198**

1. _X_ Shipped
   ___ Hand Delivered

2. _X_ COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 1 Thermometer ID#: ThermoTrace
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Temperature Blank Present

6. _X_ Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   ___ HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. _X_ Received Within Holding Time
   ___ Not Received Within Holding Time

9. _X_ No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

10. ___ No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: BAH

Date: Wed-11/20/13 00:00

*NCDENR must be notified when collec

December 12, 2013

Dioxins – 3

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 12, 2013

Olaf Westphalen
Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854

Project Location: Westford Anodizing
Client Job Number:
Project Number: 08403-19
Laboratory Work Order Number: 13K1026

Enclosed are results of analyses for samples received by the laboratory on November 13, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

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

Watermark Environmental, Inc.
175 Cabot Street, Suite 501
Lowell, MA 01854
ATTN: Olaf Westphalen

REPORT DATE: 12/12/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 08403-19

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13K1026

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

PROJECT LOCATION: Westford Anodizing

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
IC-H7	13K1026-01	Soil		SW-846 8290A	FL NELAC #E87634
IC-I7	13K1026-02	Soil		SW-846 8290A	FL NELAC #E87634

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CASE NARRATIVE SUMMARY

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

Dioxin originally on work order 13K0566, due to turnaround time sample was moved onto new work order 13K1026.

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

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K1026

Date Received: 11/13/2013

Field Sample #: IC-H7 | Sampled: 11/13/2013 09:55

Sample ID: 13K1026-01

Sample Matrix: Soil

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-		pg/g	1		SW-846 8290A			SGS

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Westford Anodizing | Sample Description: | Work Order: 13K1026

Date Received: 11/13/2013

Field Sample #: IC-I7 | Sampled: 11/13/2013 10:05

Sample ID: 13K1026-02

Sample Matrix: Soil

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-		pg/g	1		SW-846 8290A			SGS

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

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.

No results have been blank subtracted unless specified in the case narrative section.

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

con-test® ANALYTICAL LABORATORY

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

CHAIN OF CUSTODY RECORD

~~13K0566~~ KMe
Rev 04.05.12
13K1026

39 Spruce Street
East longmeadow, MA 01028

Page 1 of 3

Company Name: Laterpark
Address: 175 Cabot St. Lowell MA 01854
Attention: Olaf Westphalen
Project Location: Westford Anodizing
Sampled By: Cory Mahony
Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

Telephone: 978 452 9696
Project# 08403-15
Client PO#

DATA DELIVERY (check all that apply)
○ FAX ☑ EMAIL ☑ WEBSITE
Fax #
Email
Format: ○ PDF ○ EXCEL ○ GIS ○ OTHER ○ "Enhanced Data Package"

Analysis Requested: 6 metals (As, Cd, Cr, Pb, Ni, Zn); Hg; Cyanide; PCDDs & PCDFs; Chrome+6, pH, ORP; ~~Hex~~ Sieves; ~~[illegible]~~; /; Run; Hold

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code
01	SS-K7	11/13/13	0930		✓	S	U
02	SS-K5		0940		✓	S	U
03	IC-H7		0955		✓	S	U
04	IC-I7		1005		✓	S	U
05	SD-I8		1105		✓	S	U
06	SS-H8		1115		✓	S	U
07	IC-J7		1130		✓	S	U
08	SS-I9		1155		✓	S	U
09	SS-H9	↓	1215		✓	S	U
~~10~~	~~Field Duplicate 1~~	~~11/13/13~~	~~XXXX~~		~~✓~~	~~✓~~	~~U~~

# of Containers / ** Preservation / ***Container Code: A A A

Dissolved Metals: ○ Field Filtered ○ Lab to Filter

***Cont. Code: A=amber glass, G=glass, P=plastic, ST=sterile, V= vial, S=summa can, T=tedlar bag, O=Other

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

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

Comments:
Ⓐ only run pH + ORP on samples that say "Run" per Olaf W. MOD 11/13/2013
ⒶⒶ Cancel per Olaf W. KMe 11/19/2013

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

Relinquished / Received	Date/Time
Relinquished by: (signature) [signature] 11/13/13	1735
Received by: (signature) Paul Racine 11/13/13	1735
Relinquished by: (signature) Paul Racine 11/13/13	19:45
Received by: (signature) [signature] 4.6° 11/13/13	1945

Turnaround ††: ☐ 7-Day ☐ 10-Day ☑ Other
RUSH †: ☐ †24-Hr ☐ †48-Hr ☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
☑ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

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WBE/DBE Certified

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. 19:45 PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Ⓐ Dioxin analysis put on own work order due to turnaround time. original w[illegible]

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Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
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CHAIN OF CUSTODY RECORD

13K0566

Rev 04.05.12

39 Spruce Street
East longmeadow, MA 01028

Page 2 of 3

Company Name: Watermark
Telephone: 978 452 9696
Address: 175 Cabot St.
Lowell MA 01854
Project # 08403-19
Client PO#
Attention: Olaf Westphalen
Project Location: Westford Academy
Sampled By: Cory Mahony
Project Proposal Provided? (for billing purposes) ○ yes ______ proposal date

DATA DELIVERY (check all that apply)
○ FAX ⊗ EMAIL ○ WEBSITE
Fax #
Email:
Format: ⊗ PDF ⊗ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

	6 metals (As, Cd, Cr, Pb, Ni, Zn)	Cyanide	Hg	PCDDs & PCDFs	Chrome 6, pH, ORP	SiO..				Run	Hold	
# of Containers	1	→	→	1	1	1						
** Preservation	-	→	→	-	-	-						
***Container Code	A	→	→	A	A	A						

Dissolved Metals
○ Field Filtered
○ Lab to Filter

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	6 metals	Cyanide	Hg	PCDDs & PCDFs	Chrome 6, pH, ORP	SiO..				Run	Hold
10-01	SS-H10	11/13/13	1230		✓	S	U	✓	✓	✓			✓					✓
12	SS-E3		1330		✓	S	U	✓	✓	✓								✓
13	SS-D4		1345		✓	S	U	✓	✓	✓		✓					✓	
14	SS-D5		1350		✓	S	U	✓	✓	✓		✓					✓	
15	SS-C4		1425		✓	S	U	✓	✓	✓								✓
16	SS-D5		1440		✓	S	U	✓	✓	✓		✓					✓	
17	SS-C5		1450		✓	S	U	✓	✓	✓								✓
18	SS-C6		1500		✓	S	U	✓	✓	✓								✓
19	SS-B5		1520		✓	S	U	✓	✓	✓								✓
20	SS-B4	↓	1530		✓	S	U	✓	✓	✓		✓					✓	

Comments:

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

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

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

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

Signature	Date/Time
Relinquished by: (signature) [signature] 11/13/13	1735
Received by: (signature) [signature] 11/13/13	1735
Relinquished by: (signature) [signature] 11/13/13	1945
Received by: (signature) [signature] 11/13/13	1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other ?
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
⊗ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # ______

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†† 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.

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www.contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

13K0566
Rev. 04.05.12

Company Name: Intrinsik
Address: 175 Cabot St. Lowell, MA 01854
Attention: Kat Lashkun
Project Location: Westford Academy
Sampled By: Courtney
Telephone: 978 452 9696
Project #: 08902-19
Client PO#:

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ◉ EMAIL ○ WEBSITE
Fax #:
Email: Sample
Format: ◉ PDF ◉ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Container Code
21	SS-06	11/13/13	1540		✓	S	H
22	SS-07	11/13/13	1535		✓	S	H
23	SS-09	11/13/13	1600		✓	S	H
24	SS-08	11/13/13	1610		✓	S	H
25 @	SS-K6						
26 @	SSH11						

ANALYSIS REQUESTED

# of Containers	Methyl Mercury	Cyanide	1,4-D	Bun	Hold
1					
1					
1					
A					
1	✓	✓	✓		✓
1	✓	✓	✓		✓
1	✓	✓	✓		✓
1	✓	✓	✓		✓
1	X	X	X		✓

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

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

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

Comments: @ On hold per Cory M. 11/14/2013

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

Relinquished by: (signature)	Date/Time:
	11/13/13 1735
Received by: (signature)	11/13/13 1735
Relinquished by: (signature)	11/13/13 1945
Received by: (signature)	11/13/13 1945

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other 5
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP?
◉ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID #

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†† 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.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
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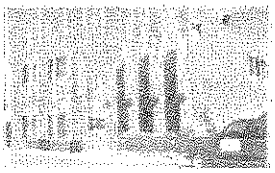
con-test ANALYTICAL LABORATORY



Sample Receipt Checklist

CLIENT NAME: Watermark RECEIVED BY: LW DATE: 11-13-2013

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included
2) Does the chain agree with the samples? LW 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 4.6 C
5) Are there Dissolved samples for the lab to filter? Yes No
Who was notified _____ Date _____ Time _____
6) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
Who was notified LW Date _____ Time 1730 LW
7) Location where samples are stored: 19
Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature:
8) Do all samples have the proper Acid pH: Yes No N/A
9) Do all samples have the proper Base pH: Yes No N/A
10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	20
500 mL Amber		4 oz amber/clear jar	20
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments:
received two samples: SS-H11, SSK6 not on COC

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

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	n/a	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? Date/Time: 19:45

Doc #277 Rev. 4 August 2013 Log-In Technician Initials: CW Date/Time: 11-13-2013

4 December 2013

Meghan Kelley
Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028

Ph.: 413-525-2332
Email: mkelley@contestlabs.com

Subject: Certificate of Results

Dear Meghan;

Attached to this narrative are the analytical results you requested on the samples submitted for the determination of polychlorinated dibenzo-p-dioxins and dibenzofurans. The insert below summarizes the relevant information pertaining to your project. In particular, QC annotations bring to your attention specific analytical observations and assessments made during the sample handling and data interpretation phases. Results reported relate only to the items tested.

Project Information Summary	When applicable, see QC Annotations for details
Client Project No.	13K0566
AP Project #	**A6181**
Analytical Protocol	Method 8290A
No. Samples Submitted	3
No. Samples Analyzed	2 (1 sample on HOLD)
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
No. Outstanding Samples	0
Date Received	15-Nov-2013
Condition Received	good
Temperature upon Receipt (C)	5
Extraction within Holding Time	yes
Analysis within Holding Time	yes
Data meet QA/QC Requirements	yes
Exceptions	none
Analytical Difficulties	none

QC Annotations:

1. Please see Appendix A & B attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Analytical Perspectives Certification IDs:

SOUTH CAROLINA	99054
ARKANSAS	88-0628
NEW JERSEY-NELAP SECONDARY	NC005
FLORIDA-NELAP PRIMARY	E87608
LOUISIANA	4024
NORTH CAROLINA	37783
WASHINGTON	C2027
NEW YORK	11988
VIRGINIA	460180
MINNESOTA	037-999-448
OREGON	pending
TEXAS	T104704484-10-1
PENNSYLVANIA-NELAP SECONDARY	68-01849

SGS Analytical Perspectives remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

The management and staff of SGS Analytical Perspectives welcomes customer feedback, both positive and negative, as we continually improve our services. Please visit our web site at www.ultratrace.com and click on the 'Leave Your Feedback Here!' link on the Home Page. Thank you for choosing SGS Analytical Perspectives.

Sincerely,

Amy Boehm
cn=Amy Boehm, o=SGS, ou,
email=amy.boehm@sgs.com, c=US
2013.12.04 15:25:02 -05'00'

Amy J. Boehm
Senior Project Manager

APPENDIX A: DATA QUALIFIERS / DATA ATTRIBUTES	
>	Indicates high recoveries. Shown with the numeric value at the top of the range.[1]
B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve).
EMPC	Represents an Estimated Maximum Possible Concentration. EMPC's arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
ETH	Indicates the presence of a diphenyl ether that appears to interfere with the quantitation of a furan. The reported concentration is the maximum.
H/h	If the standard recovery is below the method or SOP specified value "H" is assigned. If the obtained value is less than half the specified value "h" is assigned.[1]
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve).
ND	Indicates a non-detect.
NR	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.[1]
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.
X	Indicates results reported from reinjection, refractionation, or repeat analyses.
APPENDIX B: LAB ID IDENTIFIERS	
AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

[1]Denotes data qualifiers/attributes whose use will be phased out over time

Sample ID: 13K0566-03 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6181	Date Received:	15-Nov-2013
Project ID:	13K0566	Weight/Volume:	10.05 g	Lab Sample ID	A6181_11599_DF_001	Date Extracted:	20-Nov-2013
Date Collected:	13-Nov-2013	% Solids:	81.3 %	QC Batch No:	11599	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	17:28:46

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		0.223	J	ES 2378-TCDD	90.5	
12378-PeCDD	EMPC		0.589	J	ES 12378-PeCDD	80.6	
123478-HxCDD	0.675			J	ES 123478-HxCDD	76.4	
123678-HxCDD	2.77				ES 123678-HxCDD	75.3	
123789-HxCDD	1.44			J	ES 123789-HxCDD	74.9	
1234678-HpCDD	60.4				ES 1234678-HpCDD	71.1	
OCDD	523				ES OCDD	61.2	
2378-TCDF	29.4				ES 2378-TCDF	90.7	
12378-PeCDF	ND	0.113			ES 12378-PeCDF	83.4	
23478-PeCDF	8.85				ES 23478-PeCDF	78.4	
123478-HxCDF	6.05				ES 123478-HxCDF	73.4	
123678-HxCDF	3.56				ES 123678-HxCDF	78	
234678-HxCDF	5.37				ES 234678-HxCDF	75.8	
123789-HxCDF	0.404			J	ES 123789-HxCDF	73.4	
1234678-HpCDF	36.4				ES 1234678-HpCDF	71	
1234789-HpCDF	2.38			J	ES 1234789-HpCDF	71.1	
OCDF	63.6				ES OCDF	62.8	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	102	
Total TCDD	4.08		5.01		CS 12347-PeCDD	87.9	
Total PeCDD	6.36		8.08		CS 12346-PeCDF	90.9	
Total HxCDD	21.4		21.4		CS 123469-HxCDF	84	
Total HpCDD	114		114		CS 1234689-HpCDF	77.5	
					AS 1368-TCDD	93.9	
Total TCDF	114		114		AS 1368-TCDF	87	
Total PeCDF	139		139				
Total HxCDF	74.5		74.5				
Total HpCDF	92.9		92.9				
Total PCDD/Fs	**1150**		**1160**				
WHO-2005 TEQs							
TEQ: ND=0	8.79		9.6				
TEQ: ND=DL/2	8.88	0.173	9.6				
TEQ: ND=DL	8.97	0.347	9.6				

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Wilmington, NC 28405 , USA
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Sample ID: 13K0566-04 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6181	Date Received:	15-Nov-2013
Project ID:	13K0566	Weight/Volume:	10.06 g	Lab Sample ID	A6181_11599_DF_002	Date Extracted:	20-Nov-2013
Date Collected:	13-Nov-2013	% Solids:	65.3 %	QC Batch No:	11599	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	18:22:06

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	19.8				ES 2378-TCDD	93.5	
12378-PeCDD	81.3				ES 12378-PeCDD	87	
123478-HxCDD	79.9				ES 123478-HxCDD	81.2	
123678-HxCDD	175				ES 123678-HxCDD	83.9	
123789-HxCDD	131				ES 123789-HxCDD	82.2	
1234678-HpCDD	1330				ES 1234678-HpCDD	82.5	
OCDD	3030				ES OCDD	72.9	
2378-TCDF	241				ES 2378-TCDF	94.6	
12378-PeCDF	291				ES 12378-PeCDF	85.8	
23478-PeCDF	609				ES 23478-PeCDF	82.2	
123478-HxCDF	585				ES 123478-HxCDF	84.6	
123678-HxCDF	582				ES 123678-HxCDF	87.4	
234678-HxCDF	857				ES 234678-HxCDF	85.7	
123789-HxCDF	54.4				ES 123789-HxCDF	82.7	
1234678-HpCDF	2480				ES 1234678-HpCDF	84.4	
1234789-HpCDF	255				ES 1234789-HpCDF	78.7	
OCDF	1010				ES OCDF	72.7	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	102	
Total TCDD	961		961		CS 12347-PeCDD	93.4	
Total PeCDD	1600		1600		CS 12346-PeCDF	91.8	
Total HxCDD	2490		2490		CS 123469-HxCDF	91.2	
Total HpCDD	2700		2700		CS 1234689-HpCDF	84	
					AS 1368-TCDD	93.6	
Total TCDF	7360		7360		AS 1368-TCDF	86.7	
Total PeCDF	7590		7590				
Total HxCDF	6170		6170				
Total HpCDF	3660		3660				
Total PCDD/Fs	**36600**		**36600**				
WHO-2005 TEQs							
TEQ: ND=0	605		605				
TEQ: ND=DL/2	605	0.58	605				
TEQ: ND=DL	605	1.16	605				

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Sample ID: Method Blank A6181 — Method 8290A

Client Data		Sample Data		Laboratory Data			
Name:	CON-TEST ANALYTICAL LABORATORY	Matrix:	Solids	Lab Project ID:	A6181	Date Received:	n/a
Project ID:	13K0566	Weight/Volume:	10.00 g	Lab Sample ID	MB1_11599_DF_SDS	Date Extracted:	20-Nov-2013
Date Collected:	n/a	% Solids:	100.0 %	QC Batch No:	11599	Date Analyzed:	02-Dec-2013
		Split:	-	Dilution:	-	Time Analyzed:	15:42:07

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.0695			ES 2378-TCDD	89	
12378-PeCDD	ND	0.0888			ES 12378-PeCDD	80.3	
123478-HxCDD	ND	0.0887			ES 123478-HxCDD	72.1	
123678-HxCDD	ND	0.0899			ES 123678-HxCDD	77.2	
123789-HxCDD	ND	0.0936			ES 123789-HxCDD	72.4	
1234678-HpCDD	ND	0.194			ES 1234678-HpCDD	68.3	
OCDD	ND	0.232			ES OCDD	57.6	
2378-TCDF	ND	0.0567			ES 2378-TCDF	90.2	
12378-PeCDF	ND	0.0597			ES 12378-PeCDF	80.1	
23478-PeCDF	ND	0.0604			ES 23478-PeCDF	77.4	
123478-HxCDF	ND	0.0732			ES 123478-HxCDF	72.8	
123678-HxCDF	ND	0.0666			ES 123678-HxCDF	78.6	
234678-HxCDF	ND	0.0744			ES 234678-HxCDF	74.9	
123789-HxCDF	ND	0.0928			ES 123789-HxCDF	71.3	
1234678-HpCDF	ND	0.0884			ES 1234678-HpCDF	69	
1234789-HpCDF	ND	0.138			ES 1234789-HpCDF	67.4	
OCDF	ND	0.189			ES OCDF	60.5	
Totals					**Standard**	**CS/AS Recoveries**	
					CS 37Cl-2378-TCDD	98.9	
Total TCDD	ND	0.0695	ND		CS 12347-PeCDD	87.2	
Total PeCDD	ND	0.0888	ND		CS 12346-PeCDF	88.8	
Total HxCDD	ND	0.0906	ND		CS 123469-HxCDF	83.9	
Total HpCDD	ND	0.194	ND		CS 1234689-HpCDF	75.4	
					AS 1368-TCDD	94.6	
Total TCDF	ND	0.0567	ND		AS 1368-TCDF	90.9	
Total PeCDF	ND	0.0601	ND				
Total HxCDF	ND	0.0759	ND				
Total HpCDF	ND	0.111	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.123	0.123	0.123				
TEQ: ND=DL	0.246	0.246	0.246				

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METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS Analytical Perspectives		
Initial Calibration:	ICAL: MM3_DF_11012012A_06SEP2013		
Instrument ID:	MM3	GC Column ID:	ZB-5ms
VER Data Filename:	131202R04	Analysis Date:	02-DEC-2013 13:02:07
Lab ID:	OPR1_11599_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	9.79	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	49.4	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	49.6	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	51.8	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	47.4	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	48.8	35	-	70	Y
OCDD	100	102	78	-	144	Y
2,3,7,8-TCDF	10	10.4	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	49.5	40	-	67	Y
2,3,4,7,8-PeCDF	50	51.5	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	49.8	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	48.5	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	49.8	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	48.1	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	52.2	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	49.7	39	-	69	Y
OCDF	100	99.6	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 03 Dec 2013 14:13 Analyst: AP

METHOD 8290A **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS Analytical Perspectives
Initial Calibration: ICAL: MM3_DF_11012012A_06SEP2013
Instrument ID: MM3 GC Column ID: ZB-5ms
VER Data Filename: 131202R04 Analysis Date: 02-DEC-2013 13:02:07
Lab ID: OPR1_11599_DF

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	91.5	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	83.5	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	79.8	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	80.1	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	79.6	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	74	26	-	166	Y
13C-OCDD	200	128	26	-	397	Y
13C-2,3,7,8-TCDF	100	93.1	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	84.6	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	81.9	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	77	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	83.2	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	79.5	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	77.9	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	74.9	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	74.1	20	-	186	Y
13C-OCDF	200	134	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	41	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6, Method 1613. 10/94

Processed: 03 Dec 2013 14:13 Analyst: AP

Sample Receipt Notification

2714 Exchange Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*15-Nov-13 at 09:50*
AP Project name:	*A6181*
Requested TAT:	*21 days*
Projected due date:	*6-Dec-13*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Meghan E. Kelley*
Company:	*CON-TEST ANALYTICAL LABORATORY*
Project Name & Site:	*13K0566*
Project PO#:	" "
QAAP/Contract #:	
Requested Analysis:	*D/F MA MCP*
Phone#:	*413.525.2332*
Email Address:	~~n/a~~ mkelley@contestlabs.com

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
13K0566-03	A6181_001	soil	1	8oz amber	13-Nov-13	09:55	5	1	7971 5997 1254
13K0566-04	A6181_002	soil	1	8oz amber	13-Nov-13	10:05	5	1	7971 5997 1254
13K0566-10 HOLD	A6181_003	soil	1	8oz amber	13-Nov-13	00:00	5	1	7971 5997 1254

Preservation Type: Blue Ice - Good Condition **Sample Seals:** No

Notes/Comments:

MS290 17+ Homologs, WHO TEF's OPR

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Barbara Hager *Logged in by: Barbara Hager* *QC'ed by:*

Subcontract lab must notify Con-Test Analytical Lab of any MCL exceedance within 24-hours of obtaining valid data.

SUBCONTRACT ORDER

Con-Test Analytical Laboratory

13K0566

AC0181

SENDING LABORATORY:

Con-Test Analytical Laboratory
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Meghan E. Kelley

RECEIVING LABORATORY:

SGS North America, Inc.
5500 Business Drive
Wilmington, NC 28405
Phone :(910) 350-1903
Fax: (910) 350-1557
mkelley@contestlabs.com

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 13K0566-03	**Soil**	**Sampled: 11/13/13 09:55**		**MA MCP**
Dioxins/Furans	11/20/13 12:00	11/20/13 09:55		Sub to SGS - Wilmington, SC
Containers Supplied:				
8 oz amber glass jar (B)				
Sample ID: 13K0566-04	**Soil**	**Sampled: 11/13/13 10:05**		**MA MCP**
Dioxins/Furans	11/20/13 12:00	11/20/13 10:05		Sub to SGS - Wilmington, SC
Containers Supplied:				
8 oz amber glass jar (C)				
Sample ID: 13K0566-10	**Soil**	**Sampled: 11/13/13 00:00**		**MA MCP**
Dioxins/Furans	11/20/13 12:00	11/20/13 00:00		Sub to SGS - Wilmington, SC
Containers Supplied:				
8 oz amber glass jar (C)				

Released By	Date	Received By	Date
	11/14/13 1200	Barbara Hagen	15-NOV-13 0950
Released By	Date	Received By	Date

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **CON-TEST** Work Order No.: **A6181**

1. _X_ Shipped
   ___ Hand Delivered

2. _X_ COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 5 Thermometer ID#: ThermoTrace
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Temperature Blank Present

6. _X_ Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   ___ HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. _X_ Received Within Holding Time
   ___ Not Received Within Holding Time

9. _X_ No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

10. ___ No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: BAH

Date: Fri-11/15/13 00:00

*NCDENR must be notified when collec