# CMG Environmental, Inc.

August 17, 2015

Wayland Board of Selectmen % Town Administrator Nanette F. Balmer Wayland Town Building 41 Cochituate Road Wayland MA 01778

Re: Soil Sampling Addendum to July 21, 2015 Phase I ESA "Municipal Parcel" Portion of Wayland Town Center 400-440 Boston Post Road, Wayland MA CMG ID 2014-055

Dear Ms Balmer:

CMG Environmental, Inc. (CMG) prepared this letter as an addendum to our July 21, 2015 Phase I Environmental Site Assessment (ESA) Report on the 'Municipal Parcel' portion of the Wayland Town Center development addressed as 400-440 Boston Post Road in Wayland, Massachusetts. In conformance with our ESA Report, CMG will refer to the Municipal Parcel as "the Site" and the Wayland Town Center development as "the Property."

One of the findings of our ESA Report was that in October 2000 Haley & Aldrich, Inc. (H&A) had identified 1.25 mg/Kg of total polychlorinated biphenyls (PCBs) in their soil sample designated SS-6, collected adjacent to the former Raytheon Building 12 at the Site (0.51 mg/Kg Aroclor 1254 and 0.74 mg/Kg Aroclor 1260). H&A also identified trace concentrations of the PCB mixture Aroclor 1260 in their soil samples SS-1 (0.14 mg/Kg) and SS-12 (0.18 mg/Kg). At the time the applicable reportable RCS-1 concentration set forth by the Massachusetts Department of Environmental Protection (DEP) for PCBs in soil was 2 mg/Kg. DEP subsequently lowered the RCS-1 standard for PCBs in soil to 1 mg/Kg. Thus CMG noted that it may be prudent to collect an additional soil sample from the SS-6 location for PCB analysis to determine if a reporting condition currently exists.

On July 30, 2015 the Wayland Council on Aging – Community Center Advisory Committee voted to request collecting 8 soil samples at the Site for PCB analysis: Four samples at the SS-6 portion of the Site and four in the northeasterly portion of the Site (planned for future open recreation space). Mr. William Sterling of the Wayland Council on Aging provided CMG with a Concept Plan of the proposed Wayland Community Center that had the four open recreation space sample locations marked on it. CMG prepared a Change Order for this Sampling dated July 31, 2015, which the Board of Selectmen authorized on August 3, 2015.

CMG returned to the Property on August 6 to collect the eight soil samples. We collected four samples in the northeasterly portion of the Site (designated OS-1 through OS-4) in approximately the same locations as indicated on the Wayland Community Center Concept Plan and numbered 1 through 4. CMG field-measured the mapped location of H&A sample SS-6 and determined that it lies beneath the large monolithic block of weathered reinforced concrete located just west

of the current Site building (see Section 1.3 and Photograph 2 in Appendix A of our ESA Report). We believe this block, which measures approximately  $11 \times 12 \times 2\frac{1}{2}$  high, is a portion of the foundation of former Raytheon Building 12 that has occupied this position since circa 2000.

CMG collected three soil samples from under the edge of this monolith:

- Sample H6-1 approximately 2.2' northwest of the HA-6 location,
- Sample H6-2 approximately 6.9' northeast of the HA-6 location, and
- Sample H6-3 approximately 3.5' southwest of the HA-6 location.

CMG also collected a fourth sample in this area (designated H6-4) just off westerly corner of a poured-concrete pad located adjacent to the southwesterly wall of the existing Site building. There is an electrical shut-off box mounted on the building exterior wall at this location and holes through the building siding with insulated copper tubing in them, so we believe this pad was intended as the support for an air conditioning heat exchanger.

CMG decontaminated soil sampling equipment (a chrome-plated steel soil scoop) prior to sampling and after each sample location. We collected decontamination rinsate in a plastic bucket and properly disposed of this off-Property along with used wipes, paper towels, and latex gloves worn during sampling and decontamination.

The attached Figure 5 illustrates CMG's recent soil sampling locations along with other Site and Property features. The following table summarizes our field observations.

#### SOIL SAMPLING OBSERVATIONS (8/6/15)

LOCATION	DEPTH	SOIL DESCRIPTION
	0-1"	Dry grass and roots
OS-1	1-4"	Medium-brown topsoil, some gravel & stones, dry, loose (sample interval)
	0-3/4"	Very dry (or dead) grass and roots, some asphalt chunks & grains
OS-2	3/4-31/2"	Light-brown topsoil and coarse sand/fine gravel, dry (sample interval)
	0-1"	Dried-out sod
OS-3	1-4"	Light-brown topsoil, some gravel & stones, dead grass roots, dry, loose (sample interval)
	0-1"	Dried-out sod
OS-4	1-4"	Light-brown topsoil, some gravel & stones, dead grass roots, dry, loose (sample interval)
H6-1	0-4"	Gray-brown topsoil (next to animal burrow under concrete monolith), dry, loose
H6-2	0-4"	Medium-brown topsoil (under overhang of concrete monolith), not as dry
H6-3	0-4"	Gray-brown topsoil, some gravel (under edge of concrete monolith), dry, loose
H6-4	0-4"	Medium-brown organic topsoil, roots & decayed organic matter (at edge of concrete pad, under thick tangle of multiflora rose), relatively moist

CMG submitted eight soil samples to Spectrum Analytical, Inc. (Spectrum) of Agawam, Massachusetts for analysis of PCBs by EPA Method 8082. We also specified that Spectrum extract samples via EPA Method 3540C Exhibit D (Soxhlet extraction).

Spectrum identified trace to low concentrations of the PCB mixture Aroclor 1260 in each of the 8 soil samples tested, as tabulated below.

SAMPLE ID	AROCLOR 1260	OTHER AROCLOR MIXTURES
OS-1 (1-4")	0.220	BRL<0.0213
OS-2 (¾-3½")	0.0255	BRL<0.0213
OS-3 (1-4")	0.0335	BRL<0.0202
OS-4 (1-4")	0.0263	BRL<0.0202
H6-1 (0-4")	0.110	BRL<0.0197
H6-2 (0-4")	0.153	BRL<0.0232
H6-3 (0-4")	0.0364	BRL<0.0202
H6-4 (0-4")	0.217	BRL<0.0240

PCB ANALYTICAL RESULTS (MG/KG)

BRL = BELOW LABORATORY REPORTING LIMIT

CMG has attached a copy of the Spectrum certificates of analysis and chain-of-custody documentation to this letter. Please note that Spectrum reported PCB concentrations in  $\mu g/Kg$  units (parts per billion) whereas CMG has reported these in mg/Kg units (parts per million) for consistency with our ESA Report (and DEP reportable concentration standards). As noted above, the applicable RCS-1 soil standard for PCBs is 1 mg/Kg (equivalent to 1,000  $\mu g/Kg$ ). Thus the recent soil sampling and analysis did not identify any current reportable conditions at the Site.

Since testing identified PCBs (albeit at trace to low concentrations) in all soil samples CMG had analyzed, we performed limited statistical analysis of these data to evaluate the probability of an RCS-1 exceedance at the Site. Assuming a normal distribution, we calculated the 95% confidence level as:

95% Confidence = 
$$X + (t_{(1-\alpha)/2} \times s)$$

Where X = the arithmetic mean,  $t_{(1-\alpha)/2}$  = the one-sided Student's t-distribution value,  $\alpha$  = the desired confidence interval, and s = the standard deviation.

CMG calculates the average (arithmetic mean) concentration of Aroclor 1260 in the 8 soil samples that we collected to be 0.103 mg/Kg and the standard deviation to be 0.0848 mg/Kg. Since  $\alpha$  is 0.95 (95%), (1- $\alpha$ )/2 would be 0.025. There are eight samples in this data set, so the n-1 degrees of freedom would be 7. The one-sided Student's t-distribution value  $t_{0.025}$  for 7 degrees of freedom is 2.365. Substituting these values into the above equation yields:

95% Confidence = 
$$0.103 \text{ mg/Kg} + (2.365 \times 0.0848 \text{ mg/Kg}) = 0.303 \text{ mg/Kg}$$

This means that CMG is 95% confident that the average concentration of Aroclor 1260 in Site soils is no greater than 0.303 mg/Kg, which is less than one-third the most stringent applicable Method 1 risk characterization standard (S-1/GW-1) for PCBs in soil currently promulgated by DEP. In other words, the identified concentration of PCBs in soil would not pose a significant

risk of harm to human health, public welfare, safety, or the environment under any current or reasonable foreseeable future scenario of unrestricted use (including recreational, day care, or gardening use of the Site).

CMG has updated Table 1 of our ESA Report to include the recent soil data (copy attached). We have also included copies of the information letters required by DEP to the current Property owner (Twenty Wayland, LLC) regarding this soil sampling.

As always, please feel free to contact the undersigned if you have any questions regarding this Soil Sampling Addendum letter, or if CMG can otherwise be of assistance to you.

Sincerely,

CMG Environmental, Inc.

Benson R. Gould, LSP, LEP

Principal

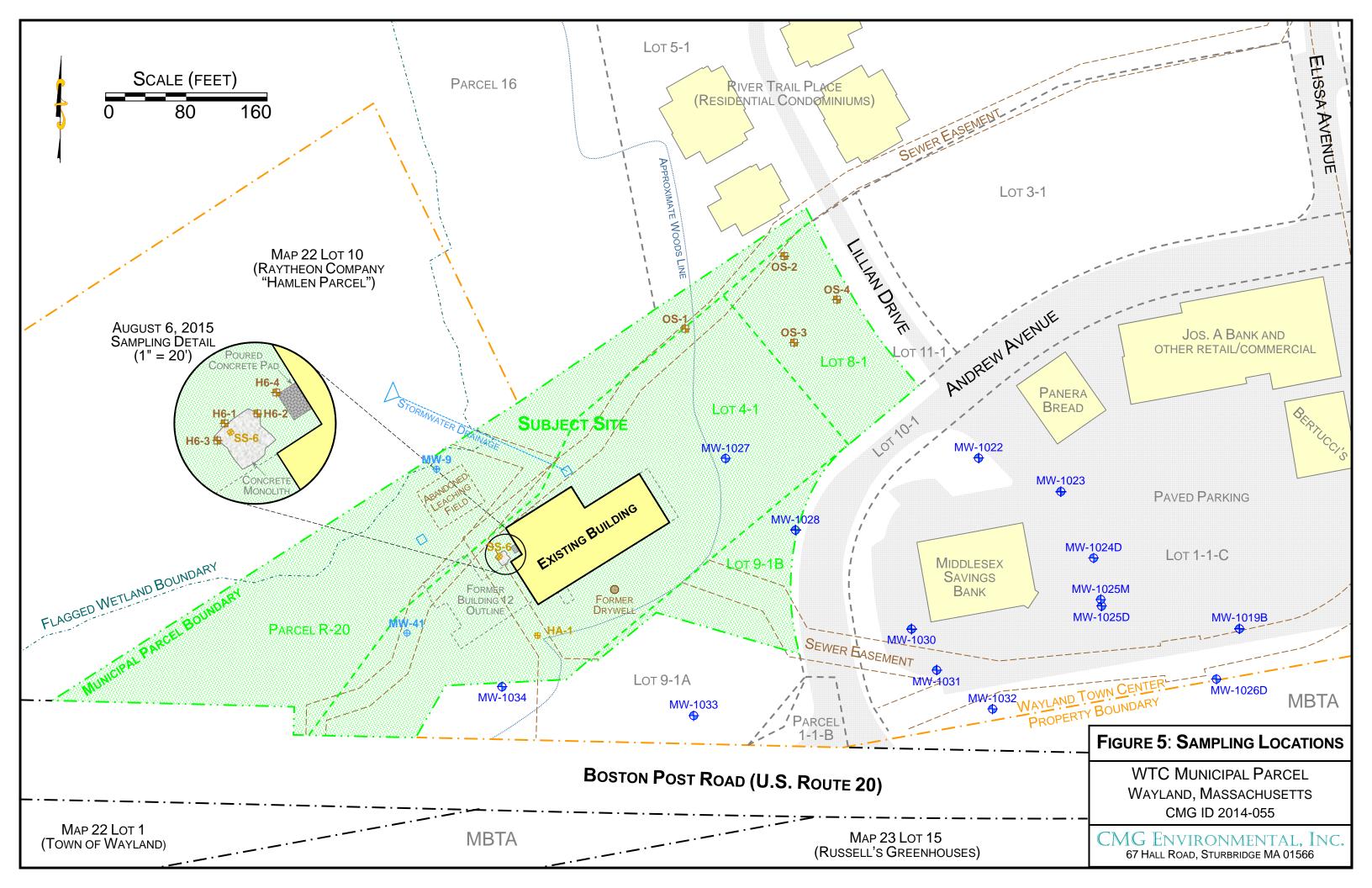
Attachments: Figure 5 (Sampling Locations)

Table 1 (Soil Quality Data)

Notification letters to Twenty Wayland, LLC

Spectrum Data Package SC10984

2014-055\Soil Sampling.doc



		(current) RCS-1	SB-9*	HA-1	[HA] SS-1	[HA] SS-4	[HA] SS-5	[HA] SS-6	[HA] SS-7	[HA] SS-8
Test	Parameter	Reportable	31/2-51/2"	6-12"	0-3"	0-3"	0-3"	0-3"	0-3"	0-3"
		Concentrations	10/13/95	11/15/95	10/11/00	10/11/00	10/11/00	10/11/00	10/11/00	10/11/00
EPH	C <sub>9</sub> -C <sub>18</sub> Aliphatics	1,000	NT	NT	BRL	BRL	BRL	BRL	BRL	BRL
	C <sub>19</sub> -C <sub>36</sub> Aliphatics	3,000	NT	NT	BRL	BRL	84	250	220	BRL
	C <sub>11</sub> -C <sub>22</sub> Aromatics	1,000	NT	NT	BRL	BRL	BRL	2,400	55	BRL
PAHs	Phenanthrene	10	BRL	NT	BRL	BRL	BRL	0.48	BRL	BRL
	Fluoranthene	1,000	BRL	NT	BRL	BRL	BRL	0.96	BRL	BRL
	Pyrene	1,000	BRL	NT	BRL	BRL	BRL	0.72	BRL	BRL
	Benzo(a)anthracene	7	BRL	NT	BRL	BRL	BRL	0.43	BRL	BRL
	Chrysene	70	BRL	NT	BRL	BRL	BRL	0.36	BRL	BRL
	Benzo(b)fluoranthene	7	BRL	NT	BRL	BRL	BRL	0.55	BRL	BRL
	Benzo(k)fluoranthene	70	BRL	NT	BRL	BRL	BRL	BRL	BRL	BRL
	Benzo(a)pyrene	2	BRL	NT	BRL	BRL	BRL	0.45	BRL	BRL
	Indeno(1,2,3-cd)pyrene	7	BRL	NT	BRL	BRL	BRL	BRL	BRL	BRL
	Benzo(g,h,i)perylene	1,000	BRL	NT	BRL	BRL	BRL	BRL	BRL	BRL
PCBs	Aroclor 1254		BRL	BRL	BRL	NT	NT	0.51	BRL	BRL
	Aroclor 1260		BRL	BRL	0.14	NT	NT	0.74	BRL	BRL
	Total Polychlorinated Biphenyl	1	BRL	BRL	0.14	NT	NT	1.25	BRL	BRL
Total	Arsenic	20	4.7	NT	BRL	BRL	BRL	7.5	BRL	7.2
Metals	Barium	1,000	22	NT	NT	NT	NT	NT	NT	NT
	Cadmium	70	9.6	NT	BRL	BRL	BRL	0.56	BRL	BRL
	Chromium (total)	100	BRL	NT	BRL	BRL	BRL	12	BRL	BRL
	Copper	1,000	NT	NT	BRL	25	BRL	26	27	BRL
	Lead	200	4.4	NT	12	BRL	13	19	15	BRL
	Mercury	20	BRL	NT	BRL	BRL	0.090	0.097	BRL	BRL
	Nickel	600	NT	NT	BRL	BRL	BRL	16	BRL	BRL
	Selenium	400	0.84	NT	BRL	BRL	BRL	BRL	BRL	BRL
	Zinc	1,000	NT	NT	61	BRL	62	85	64	BRL

Notes BRL = Below laboratory Reporting Limit

NT = Not Tested (for that parameter)

Blue highlighted text = Exceeds current RCS-1

<sup>\*</sup>Laboratory analysis identified 0.014 mg/Kg of methylene chloride in the sample from SB-9, but also detected this VOC in the laboratory blank for this batch of samples. Analysis did not identify any other VOCs above laboratory reporting limits in this sample.

		(current) RCS-1	[HA] SS-9	[HA] SS-11					[HA] SS-6C
Test	Parameter	Reportable	0-3"	0-3"	0-3"	0-3"	0-3"	0-3"	0-3"
		Concentrations	10/11/00	10/11/00	10/11/00	10/11/00	10/27/00	10/27/00	10/27/00
EPH	C <sub>9</sub> -C <sub>18</sub> Aliphatics	1,000	BRL	BRL	BRL	BRL	BRL	BRL	BRL
	C <sub>19</sub> -C <sub>36</sub> Aliphatics	3,000	BRL	56	53	BRL	47	39	BRL
	C <sub>11</sub> -C <sub>22</sub> Aromatics	1,000	BRL	140	40	BRL	BRL	BRL	BRL
PAHs	Phenanthrene	10	BRL	0.45	BRL	BRL	BRL	BRL	BRL
	Fluoranthene	1,000	BRL	1.8	BRL	BRL	BRL	BRL	BRL
	Pyrene	1,000	BRL	1.4	BRL	BRL	BRL	BRL	BRL
	Benzo(a)anthracene	7	BRL	0.92	BRL	BRL	BRL	BRL	BRL
	Chrysene	70	BRL	0.74	BRL	BRL	BRL	BRL	BRL
	Benzo(b)fluoranthene	7	BRL	1.2	BRL	BRL	BRL	BRL	BRL
	Benzo(k)fluoranthene	70	BRL	0.45	BRL	BRL	BRL	BRL	BRL
	Benzo(a)pyrene	2	BRL	1.0	BRL	BRL	BRL	BRL	BRL
	Indeno(1,2,3-cd)pyrene	7	BRL	0.48	BRL	BRL	BRL	BRL	BRL
	Benzo(g,h,i)perylene	1,000	BRL	0.45	BRL	BRL	BRL	BRL	BRL
PCBs	Aroclor 1254		BRL	BRL	BRL	BRL	NT	NT	NT
	Aroclor 1260		BRL	BRL	0.18	BRL	NT	NT	NT
	Total Polychlorinated Biphenyl	1	BRL	BRL	0.18	BRL	NT	NT	NT
Total	Arsenic	20	13	BRL	BRL	7.3	NT	NT	NT
Metals	Barium	1,000	NT	NT	NT	NT	NT	NT	NT
	Cadmium	70	BRL	BRL	BRL	BRL	NT	NT	NT
	Chromium (total)	100	BRL	BRL	BRL	BRL	NT	NT	NT
	Copper	1,000	BRL	BRL	BRL	BRL	NT	NT	NT
	Lead	200	BRL	BRL	14	16	NT	NT	NT
	Mercury	20	BRL	BRL	0.18	BRL	NT	NT	NT
	Nickel	600	11	BRL	BRL	11	NT	NT	NT
	Selenium	400	BRL	BRL	BRL	BRL	NT	NT	NT
	Zinc	1,000	BRL	BRL	BRL	65	NT	NT	NT

Notes BRL = Below laboratory Reporting Limit

NT = Not Tested (for that parameter)

Blue highlighted text = Exceeds current RCS-1

		(current) RCS-1	OS-1	OS-2	OS-3	OS-4	H6-1	H6-2	H6-3	H6-4
Test	Parameter	Reportable	1-4"	3/4-31/2"	1-4"	1-4"	0-4"	0-4"	0-4"	0-4"
		Concentrations	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15	8/6/15
EPH	C <sub>9</sub> -C <sub>18</sub> Aliphatics	1,000	NT							
	C <sub>19</sub> -C <sub>36</sub> Aliphatics	3,000	NT							
	C <sub>11</sub> -C <sub>22</sub> Aromatics	1,000	NT							
PAHs	Phenanthrene	10	NT							
	Fluoranthene	1,000	NT							
	Pyrene	1,000	NT							
	Benzo(a)anthracene	7	NT							
	Chrysene	70	NT							
	Benzo(b)fluoranthene	7	NT							
	Benzo(k)fluoranthene	70	NT							
	Benzo(a)pyrene	2	NT							
	Indeno(1,2,3-cd)pyrene	7	NT							
	Benzo(g,h,i)perylene	1,000	NT							
PCBs	Aroclor 1254		BRL<0.0213	BRL<0.0213	BRL<0.0202	BRL<0.0202	BRL<0.0197	BRL<0.0232	BRL<0.0202	BRL<0.0240
	Aroclor 1260		0.220	0.0255	0.0335	0.0263	0.110	0.153	0.0364	0.217
	Total Polychlorinated Biphenyl	1	0.220	0.0255	0.0335	0.0263	0.110	0.153	0.0364	0.217
Total	Arsenic	20	NT							
Metals	Barium	1,000	NT							
	Cadmium	70	NT							
	Chromium (total)	100	NT							
	Copper	1,000	NT							
	Lead	200	NT							
	Mercury	20	NT							
	Nickel	600	NT							
	Selenium	400	NT							
	Zinc	1,000	NT							

Notes BRL = Below laboratory Reporting Limit

NT = Not Tested (for that parameter)

Blue highlighted text = Exceeds current RCS-1

# CMG Environmental, Inc.

August 3, 2015

Mr. Anthony J. DeLuca, Manager Twenty Wayland, LLC 10 Memorial Drive, Suite 901 Providence RI, 02903

Re: Notice of Soil Sampling
Wayland Town Center "Municipal Parcel"
440 Boston Post Road, Wayland MA
CMG ID 2014-055

Dear Mr. DeLuca:

The Town of Wayland Board of Selectmen has retained CMG Environmental, Inc. (CMG) to conduct environmental investigation of the "Municipal Parcel" portion of the Wayland Town Center development in Wayland, Massachusetts. Publicly-available information indicates that Twenty Wayland, LLC is the current owner of this property and you are the Resident Agent and a Manager of this entity.

In accordance with environmental regulations published by the Massachusetts Department of Environmental Protection (DEP) at 310 CMR 40.1403(10)(a)2, CMG is hereby notifying you of our intent to collect shallow soil samples for laboratory analysis of polychlorinated biphenyls (PCBs). The purpose of this testing is to confirm or refute the results of soil sampling conducted at this location by Haley & Aldrich, Inc. in October 2000 on behalf of former property owner Wayland Business Center LLC. We have attached a copy of form BWSC 123 (Notice of Environmental Sampling) as required by DEP regulations. There is no cost to you for this testing, and CMG will provide a hardcopy of the results for your records.

Sincerely,

CMG ENVIRONMENTAL, INC.

Benson R. Gould, LSP, LEP

Principal

cc: Wayland Board of Selectmen

2014-055\Soil Sampling Notice.doc



## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

#### **BWSC123**

This Notice is Related to: Release Tracking Number

3 - [1	13302
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A.	The address of the disposal site related to this Notice and Release Tracking Number (provided above):						
1.	Street Address: 420 Boston Post Road						
	City/Town: Wayland MA	Zip Code:	017780000				
В.	This notice is being provided to the following	ing party:					
1.	Name: Twenty Wayland, LLC						
2.	Street Address: 10 Memorial Boulevard, Suit	te 901	· · · · · · · · · · · · · · · · · · ·				
	City/Town: Providence RI	Zip Code:	029030000				
C.	This notice is being given to inform its rec	ipient (the p	party listed in Section B)	:			
	1. That environmental sampling will be/ha	as been con	ducted at property owned	by the recipient of this notice.			
	2. Of the results of environmental sampli	ng conducte	d at property owned by the	e recipient of this notice.			
	3. Check to indicate if the analytical result the environmental sampling must be attached		•	hecked, the analytical results from			
D.	Location of the property where the environ	ımental sam	pling will be/has been c	onducted:			
1.	Street Address: 440 Boston Post Road ("Mur	nicipal Parce	l")				
	City/Town: Wayland MA	Zip Code:	017781824				
2.	MCP phase of work during which the sampling	g will be/has	been conducted:				
	☐ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-related Abatement Measure ☐ Phase I Initial Site Investigation ☐ Phase II Comprehensive Site Assessment	☐ Phase ☐ Phase ☑ Post-					
3.	Description of property where sampling will be	e/has been c	` · · · · · · · · · · · · · · · · · · ·				
	□ residential □ commercial □	industrial	school/playground	Other(specify)			
	Description of the sampling locations and type ne of this notice.	es (e.g., soil,	groundwater, indoor air, s	soil gas) to the extent known at the			
	Shallow soil samples for PCB testing a enter development.	t the "Muni	cipal Parcel" portion o	of the Wayland Town			
	Contact information related to the party pro	viding this	notice:				
	ntact Name: CMG Environmental, Inc. reet Address: 67 Hall Road		<del></del>				
	reet Address: 67 Hall Road ry/Town: Sturbridge MA	Zip Code:	015661472				
	lephone: (774) 241-0901	•	Gould@CMGenv.com				

Revised: 5/30/2014 Page 1 of 2



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

#### **BWSC123**

This Notice is Related to: Release Tracking Number

3

13302

#### NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

#### MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

#### THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

#### PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

**Section C** on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

**Section D** on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

#### FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <a href="http://www.mass.gov/eea/agencies/massdep/cleanup">http://www.mass.gov/eea/agencies/massdep/cleanup</a>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <a href="http://public.dep.state.ma.us/SearchableSites2/Search.aspx">http://public.dep.state.ma.us/SearchableSites2/Search.aspx</a> to view site-specific files on-line or <a href="http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html">http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html</a> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Revised: 5/30/2014 Page 2 of 2

# CMG Environmental, Inc.

August 17, 2015

Mr. Anthony J. DeLuca, Manager Twenty Wayland, LLC 10 Memorial Drive, Suite 901 Providence RI, 02903

Re: Notice of Soil Sampling

Wayland Town Center "Municipal Parcel" 440 Boston Post Road, Wayland MA

**CMG ID 2014-055** 

Dear Mr. DeLuca:

CMG Environmental, Inc. (CMG) recently (August 3, 2015) notified you of soil sampling planned for the "Municipal Parcel" portion of the Wayland Town Center development in Wayland, Massachusetts. We conducted this sampling on August 6, 2015. Laboratory analysis identified trace to low concentrations of the polychlorinated biphenyl (PCB) mixture Aroclor 1260 in each of the eight soil samples tested, ranging from 0.0255 to 0.220 mg/Kg. None of the soil samples exceed the applicable RCS-1 reportable concentration for PCBs of 1 mg/Kg (1,000  $\mu$ g/Kg).

CMG has attached copies of the analytical laboratory testing results to this letter, along with a form BWSC 123 (Notice of Environmental Sampling) as required by Massachusetts Department of Environmental Protection (DEP) regulations. Please contact CMG at 774-241-0901 if you have questions regarding this information in this letter or if we can otherwise be of assistance to you.

Sincerely,

CMG Environmental, Inc.

Benson R. Gould, LSP, LEP

**Principal** 

cc: Wayland Board of Selectmen

Attachment: Spectrum Data Package SC10984

2014-055\Soil Sampling Notice.doc



## Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

#### **BWSC123**

This Notice is Related to: Release Tracking Number

3	-	13302
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# NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A.	The address of the disposal site related to this Notice and Release Tracking Number (provided above):						
1.	Street Address: 420 Boston Post Road		<del></del>				
	City/Town: Wayland MA	Zip Code:	017780000				
В.	This notice is being provided to the follow	ing party:					
1.	Name: Twenty Wayland, LLC						
2.	Street Address: 10 Memorial Boulevard, Suit	te 901	· · · · · · · · · · · · · · · · · · ·				
	City/Town: Providence RI	Zip Code:	029030000				
C.	This notice is being given to inform its rec	ipient (the p	party listed in Section B)	:			
	1. That environmental sampling will be/ha	as been con	ducted at property owned	by the recipient of this notice.			
	2. Of the results of environmental sampli	ng conducte	d at property owned by the	e recipient of this notice.			
	3. Check to indicate if the analytical result the environmental sampling must be attached		,	hecked, the analytical results from			
D.	Location of the property where the environ	nmental sam	npling will be/has been c	onducted:			
1.	Street Address: 440 Boston Post Road ("Mur	nicipal Parce	l")				
	City/Town: Wayland MA	Zip Code:	017781824				
2.	MCP phase of work during which the sampling	g will be/has	been conducted:				
	<ul> <li>Immediate Response Action</li> <li>Release Abatement Measure</li> <li>Utility-related Abatement Measure</li> <li>Phase I Initial Site Investigation</li> <li>Phase II Comprehensive Site Assessment</li> </ul>	☐ Phase ☐ Phase ☑ Post-	·				
3	Description of property where sampling will be	a/has heen c	(specify)				
0.		industrial	school/playground	Other(specify)			
	Description of the sampling locations and type of this notice.	es (e.g., soil,	groundwater, indoor air, s	, , , , , , , , , , , , , , , , , , , ,			
	Shallow soil samples for PCB testing a enter development.	t the "Muni	icipal Parcel" portion o	of the Wayland Town			
	Contact information related to the party pro	viding this	notice:				
	ntact Name: CMG Environmental, Inc.		<del></del>				
	reet Address: 67 Hall Road ry/Town: Sturbridge MA	Zin Codo:	015661472				
	lephone: (774) 241-0901	Zip Code: Email: BC	Gould@CMGenv.com				

Revised: 5/30/2014 Page 1 of 2



# Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup

#### **BWSC123**

This Notice is Related to: Release Tracking Number

3

13302

#### NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

#### MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

#### THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

#### PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

**Section C** on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

**Section D** on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

#### FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <a href="http://www.mass.gov/eea/agencies/massdep/cleanup">http://www.mass.gov/eea/agencies/massdep/cleanup</a>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <a href="http://public.dep.state.ma.us/SearchableSites2/Search.aspx">http://public.dep.state.ma.us/SearchableSites2/Search.aspx</a> to view site-specific files on-line or <a href="http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html">http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html</a> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Revised: 5/30/2014 Page 2 of 2

Report Date: 13-Aug-15 16:57



V	Final Report
	Re-Issued Report

#### □ Revised Report

#### Laboratory Report

CMG Environmental, Inc.

67 Hall Road

Sturbridge, MA 01566

Attn: Ben Gould

Project: WTC MP-Wayland, MA

Project #: 2014-055

<b>Laboratory ID</b>	Client Sample ID	<u>Matrix</u>	Date Sampled	<b>Date Received</b>
SC10984-01	OS-1	Soil	06-Aug-15 15:02	07-Aug-15 16:10
SC10984-02	OS-2	Soil	06-Aug-15 15:14	07-Aug-15 16:10
SC10984-03	OS-3	Soil	06-Aug-15 15:21	07-Aug-15 16:10
SC10984-04	OS-4	Soil	06-Aug-15 15:29	07-Aug-15 16:10
SC10984-05	H6-1	Soil	06-Aug-15 16:26	07-Aug-15 16:10
SC10984-06	H6-2	Soil	06-Aug-15 16:35	07-Aug-15 16:10
SC10984-07	H6-3	Soil	06-Aug-15 16:41	07-Aug-15 16:10
SC10984-08	H6-4	Soil	06-Aug-15 16:54	07-Aug-15 16:10

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87936 Maine # MA138 New Hampshire # 2538 New Jersey # MA011 New York # 11393 Pennsylvania # 68-04426/68-02924 Rhode Island # LAO00098

USDA # S-51435



Authorized by:

Nicole Leja Laboratory Director

Ticolo Leja

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 16 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our Quality'web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

# **MassDEP Analytical Protocol Certification Form**

Labo	ratory Name: Spo	ectrum Analytical, Inc.		<b>Project #:</b> 2014-0	155					
Proje	Project Location: WTC MP-Wayland, MA RTN:									
This	This form provides certifications for the following data set: SC10984-01 through SC10984-08									
Matr	ices: Soil									
CAM	Protocol									
	260 VOC AM II A	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A							
	270 SVOC AM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B				
	010 Metals AM III A	6020 Metals CAM III D	✓ 8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	:			
		Affirmative respons	ses to questions A through	F are required for Presu	mptive Certainty'status					
A	•		a consistent with those described or laboratory, and pr			✓ Yes 1	No			
В	Were the analytic protocol(s) follow		sociated QC requirements	specified in the selected (	CAM	✓ Yes 1	No			
С	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?						No			
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?						No			
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?						No No			
F			and performance standard and adding all "No" responses to			✓ Yes 1	No			
		Responses to qu	estions G, H and I below (	are required for <b>P</b> resump	tive Certainty'status					
G	Were the reporting	ng limits at or below all	CAM reporting limits spe	cified in the selected CAI	M protocol(s)?	✓ Yes	No			
		at achieve Presumptive Co a 310 CMR 40. 1056 (2)(k	ertainty'status may not neces. and WSC-07-350.	sarily meet the data usabilit	y and representativeness	<b>-</b>				
Н	Were all QC per	formance standards spe	cified in the CAM protoco	l(s) achieved?		Yes ✓ 1	No			
I	Were results repo	orted for the complete a	nalyte list specified in the	selected CAM protocol(s	)?	✓ Yes	No			
All ne	gative responses ar	e addressed in a case nar	rative on the cover page of th	nis report.						
	•	• •	ulties of perjury that, based u cal report is, to the best of m			ing the				
	Nicole Leja Laboratory Director Date: 8/13/2015									

#### **CASE NARRATIVE:**

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 4.9 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

#### SW846 8082A

#### Samples:

SC10984-05 H6-1

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

4,4-DB-Octafluorobiphenyl (Sr) [2C]

# **Sample Acceptance Check Form**

CMG Environmental, Inc.

Client:

Project:	WTC MP-Wayland, MA / 2014-055			
Work Order:	SC10984			
Sample(s) received on:	8/7/2015			
The following outlines th	ne condition of samples for the attached Chain of Custody upon receipt.			
		<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody se	als present?		$\checkmark$	
Were custody se	als intact?			$\checkmark$
Were samples re	ceived at a temperature of $\leq 6^{\circ}$ C?	<b>✓</b>		
Were samples re	frigerated upon transfer to laboratory representative?	<b>✓</b>		
Were sample cor	ntainers received intact?	$\checkmark$		
	operly labeled (labels affixed to sample containers and include sample ID, site project number and the collection date)?	<b>V</b>		
Were samples ac	companied by a Chain of Custody document?	<b>✓</b>		
include sample I	ustody document include proper, full, and complete documentation, which shall D, site location, and/or project number, date and time of collection, collector's name, e, sample matrix and any special remarks concerning the sample?			
Did sample cont	ainer labels agree with Chain of Custody document?	$\checkmark$		
Were samples re	ceived within method-specific holding times?	✓		

## **Summary of Hits**

Lab ID: SC10984-01 Client ID: OS-1

Lub ID.	5610701 01			enene ib.			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	220		21.3	μg/kg	SW846 8082A	
Lab ID:	SC10984-02			Client ID: OS-2			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	25.5		21.3	μg/kg	SW846 8082A	
Lab ID:	SC10984-03			Client ID: OS-3			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	33.5		20.2	μg/kg	SW846 8082A	
Lab ID:	SC10984-04			Client ID: OS-4			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	26.3		20.2	μg/kg	SW846 8082A	
Lab ID:	SC10984-05			Client ID: H6-1			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	110		19.7	μg/kg	SW846 8082A	
Lab ID:	SC10984-06			Client ID: H6-2			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	153		23.2	μg/kg	SW846 8082A	
Lab ID:	SC10984-07			Client ID: H6-3			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	36.4	_	20.2	μg/kg	SW846 8082A	
Lab ID:	SC10984-08			Client ID: H6-4			
Parameter		Result	Flag	Reporting Limit	Units	Analytical Method	
Aroclor-126	60 [2C]	217		24.0	μg/kg	SW846 8082A	

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

OS-1	Sample Identification  OS-1  SC10984-01			<u>Client Pr</u> 2014			<u>Matrix</u> Soil		ection Date -Aug-15 15			eceived Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by (	GC											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 21.3		μg/kg dry	21.3	19.2	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	
11104-28-2	Aroclor-1221	< 21.3		μg/kg dry	21.3	16.3	1	"	"	"	"	"	
11141-16-5	Aroclor-1232	< 21.3		μg/kg dry	21.3	19.1	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 21.3		μg/kg dry	21.3	13.2	1	"	"	"		"	
12672-29-6	Aroclor-1248	< 21.3		μg/kg dry	21.3	13.4	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 21.3		μg/kg dry	21.3	14.7	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	220		μg/kg dry	21.3	13.3	1	"	"	"		"	
37324-23-5	Aroclor-1262	< 21.3		μg/kg dry	21.3	19.1	1	"	"	"		"	
11100-14-4	Aroclor-1268	< 21.3		μg/kg dry	21.3	20.9	1	"	"	"		"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	85			30-15	50 %		n .	u	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	95			30-15	50 %		"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	85			30-15	50 %		"	"	"		"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	115			30-15	50 %		"	"	"	"	"	
General C	hemistry Parameters												
	% Solids	92.5		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515382	

OS-2	SC10984-02			Client Pro 2014-			<u>Matrix</u> Soil		ection Date -Aug-15 15			ceived Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	lle Organic Compounds by C	GC											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 21.3		μg/kg dry	21.3	19.2	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	!
11104-28-2	Aroclor-1221	< 21.3		μg/kg dry	21.3	16.3	1		"	"		"	
11141-16-5	Aroclor-1232	< 21.3		μg/kg dry	21.3	19.1	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 21.3		μg/kg dry	21.3	13.2	1	"	"	"		"	
12672-29-6	Aroclor-1248	< 21.3		μg/kg dry	21.3	13.3	1	"	"	"		"	
11097-69-1	Aroclor-1254	< 21.3		μg/kg dry	21.3	14.7	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	25.5		μg/kg dry	21.3	13.3	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 21.3		μg/kg dry	21.3	19.1	1		"	"	"	"	
11100-14-4	Aroclor-1268	< 21.3		μg/kg dry	21.3	20.9	1	"	n	"	"	"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	80			30-15	50 %		"	II	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	90			30-15	50 %		"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	85	30-150 %				"	"	"	"	"		
2051-24-3	Decachlorobiphenyl (Sr) [2C]	110			30-15	50 %		"	"	"	"	ıı	
General C	hemistry Parameters												
	% Solids	91.5		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515382	!

OS-3	C10984-03			Client Pro 2014-	-		<u>Matrix</u> Soil	· · · · · · · · · · · · · · · · · · ·	ection Date -Aug-15 15			<u>ceived</u> Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	lle Organic Compounds by C	GC											
	nated Biphenyls by method SW846 3540C												
12674-11-2	Aroclor-1016	< 20.2		μg/kg dry	20.2	18.2	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	
11104-28-2	Aroclor-1221	< 20.2		μg/kg dry	20.2	15.5	1		u u	"	"	"	
11141-16-5	Aroclor-1232	< 20.2		μg/kg dry	20.2	18.1	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 20.2		μg/kg dry	20.2	12.5	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 20.2		μg/kg dry	20.2	12.7	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 20.2		μg/kg dry	20.2	13.9	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	33.5		μg/kg dry	20.2	12.6	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 20.2		μg/kg dry	20.2	18.1	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 20.2		μg/kg dry	20.2	19.8	1	"	"	"	"	"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	90			30-15	50 %		"	"	п	u	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	90		30-150 %				"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	95		30-150 %				"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	110			30-15	50 %		"	"	"	"	"	
General C	hemistry Parameters												
	% Solids	97.1		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515382	

OS-4	C10984-04			Client Programme 2014			<u>Matrix</u> Soil		ection Date -Aug-15 15			ceived Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by C	GC .											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 20.2		μg/kg dry	20.2	18.2	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	
11104-28-2	Aroclor-1221	< 20.2		μg/kg dry	20.2	15.5	1		u u	"	"	"	
11141-16-5	Aroclor-1232	< 20.2		μg/kg dry	20.2	18.2	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 20.2		μg/kg dry	20.2	12.5	1	"	"	"		"	
12672-29-6	Aroclor-1248	< 20.2		μg/kg dry	20.2	12.7	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 20.2		μg/kg dry	20.2	13.9	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	26.3		μg/kg dry	20.2	12.6	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 20.2		μg/kg dry	20.2	18.1	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 20.2		μg/kg dry	20.2	19.9	1	u u	"	"	"	"	
Surrogate	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	85			30-15	50 %		"	"	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	90			30-15	50 %		"	n .	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	95			30-15	50 %		"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	100			30-15	50 %		"	n .	"	"	"	
General C	hemistry Parameters												
	% Solids	96.5		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515382	<u>,</u>

H6-1	imple Identification 6-1 C10984-05			Client Pr 2014	-		<u>Matrix</u> Soil		ection Date -Aug-15 16			ceived Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by C	GC GC											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 19.7		μg/kg dry	19.7	17.7	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	:
11104-28-2	Aroclor-1221	< 19.7		μg/kg dry	19.7	15.1	1	"	u u	"	"	"	
11141-16-5	Aroclor-1232	< 19.7		μg/kg dry	19.7	17.7	1	"	u u	"	"	"	
53469-21-9	Aroclor-1242	< 19.7		μg/kg dry	19.7	12.2	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 19.7		μg/kg dry	19.7	12.3	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 19.7		μg/kg dry	19.7	13.5	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	110		μg/kg dry	19.7	12.3	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 19.7		μg/kg dry	19.7	17.6	1	"	"	"	"		
11100-14-4	Aroclor-1268	< 19.7		μg/kg dry	19.7	19.3	1	u u	n	"	"	"	
Surrogate	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	45			30-15	50 %		"	"	"	"	ıı	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	180	S02		30-15	50 %		"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	90		30-150 %				"	"	u	"	"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	105			30-15	50 %		"	"	"	"	"	
General C	hemistry Parameters												
	% Solids	96.3		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515382	

H6-2	C10984-06			<u>Client Program 2014</u>			<u>Matrix</u> Soil		ection Date -Aug-15 16			<u>ceived</u> Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by C	GC .											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 23.2		μg/kg dry	23.2	20.9	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	
11104-28-2	Aroclor-1221	< 23.2		μg/kg dry	23.2	17.8	1	"	"	"	"	"	
11141-16-5	Aroclor-1232	< 23.2		μg/kg dry	23.2	20.9	1		u u	"		"	
53469-21-9	Aroclor-1242	< 23.2		μg/kg dry	23.2	14.4	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 23.2		μg/kg dry	23.2	14.5	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 23.2		μg/kg dry	23.2	16.0	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	153		μg/kg dry	23.2	14.5	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 23.2		μg/kg dry	23.2	20.8	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 23.2		μg/kg dry	23.2	22.8	1	u u	"	"	"	"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	75			30-15	50 %		"	"	"	"	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	145			30-15	50 %		"	n .	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	100			30-15	50 %		"	"	"		"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	95			30-15	50 %		"	n .	"	"	"	
General C	hemistry Parameters												
	% Solids	82.9		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515383	

H6-3	C10984-07			<u>Client Pr</u> 2014			<u>Matrix</u> Soil		ection Date -Aug-15 16			<u>ceived</u> Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by C	GC GC											
Polychlori	nated Biphenyls												
Prepared	by method SW846 3540C												
12674-11-2	Aroclor-1016	< 20.2		μg/kg dry	20.2	18.3	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	
11104-28-2	Aroclor-1221	< 20.2		μg/kg dry	20.2	15.5	1	"	"	"		"	
11141-16-5	Aroclor-1232	< 20.2		μg/kg dry	20.2	18.2	1		u u	"		"	
53469-21-9	Aroclor-1242	< 20.2		μg/kg dry	20.2	12.6	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 20.2		μg/kg dry	20.2	12.7	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 20.2		μg/kg dry	20.2	13.9	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	36.4		μg/kg dry	20.2	12.7	1	"	"	"	"	"	
37324-23-5	Aroclor-1262	< 20.2		μg/kg dry	20.2	18.1	1	"	"	"	"	"	
11100-14-4	Aroclor-1268	< 20.2		μg/kg dry	20.2	19.9	1	u u	"	"	"	"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	85			30-15	50 %		"	"	"	ıı	u	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	95			30-15	50 %		"	n .	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	95			30-15	50 %		"	"	"		"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	120			30-15	50 %		"	n .	"	"	"	
General C	hemistry Parameters												
	% Solids	95.5		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515383	

H6-4	C10984-08			<u>Client Pr</u> 2014			<u>Matrix</u> Soil		ection Date -Aug-15 16			ceived Aug-15	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolati	ile Organic Compounds by C	GC											
	nated Biphenyls by method SW846 3540C												
12674-11-2	Aroclor-1016	< 24.0		μg/kg dry	24.0	21.6	1	SW846 8082A	12-Aug-15	13-Aug-15	IMR	1515492	!
11104-28-2	Aroclor-1221	< 24.0		μg/kg dry	24.0	18.3	1	"	"	"	"	"	
11141-16-5	Aroclor-1232	< 24.0		μg/kg dry	24.0	21.5	1	"	"	"	"	"	
53469-21-9	Aroclor-1242	< 24.0		μg/kg dry	24.0	14.9	1	"	"	"	"	"	
12672-29-6	Aroclor-1248	< 24.0		μg/kg dry	24.0	15.0	1	"	"	"	"	"	
11097-69-1	Aroclor-1254	< 24.0		μg/kg dry	24.0	16.5	1	"	"	"	"	"	
11096-82-5	Aroclor-1260 [2C]	217		μg/kg dry	24.0	15.0	1	"	u u	"	"	"	
37324-23-5	Aroclor-1262	< 24.0		μg/kg dry	24.0	21.4	1	"	u u	"	"	"	
11100-14-4	Aroclor-1268	< 24.0		μg/kg dry	24.0	23.5	1	"	"	"	"	"	
Surrogate i	recoveries:												
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	80			30-15	50 %		"	"	п	u	"	
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr) [2C]	125		30-150 %				"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	95		30-150 %				"	"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr) [2C]	110			30-15	50 %		"	"	"	"	"	
General C	hemistry Parameters												
	% Solids	78.8		%			1	SM2540 G Mod.	10-Aug-15	10-Aug-15	DT	1515383	i

# Semivolatile Organic Compounds by GC - Quality Control

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPE Limi
atch 1515492 - SW846 3540C										
Blank (1515492-BLK1)					Pre	epared: 12-	Aug-15 An	alyzed: 13-A	<u>ug-15</u>	
Aroclor-1016	< 19.5		μg/kg wet	19.5						
Aroclor-1016 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1221	< 19.5		μg/kg wet	19.5						
Aroclor-1221 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1232	< 19.5		μg/kg wet	19.5						
Aroclor-1232 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1242	< 19.5		μg/kg wet	19.5						
Aroclor-1242 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1248	< 19.5		μg/kg wet	19.5						
Aroclor-1248 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1254	< 19.5		μg/kg wet	19.5						
Aroclor-1254 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1260	< 19.5		μg/kg wet	19.5						
Aroclor-1260 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1262	< 19.5		μg/kg wet	19.5						
Aroclor-1262 [2C]	< 19.5		μg/kg wet	19.5						
Aroclor-1268	< 19.5		μg/kg wet	19.5						
Aroclor-1268 [2C]	< 19.5		μg/kg wet	19.5						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	18.6		μg/kg wet		19.5		95	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	19.5		μg/kg wet		19.5		100	30-150		
Surrogate: Decachlorobiphenyl (Sr)	24.4		μg/kg wet		19.5		125	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	25.4		μg/kg wet		19.5		130	30-150		
LCS (1515492-BS1)					Pre	epared: 12-	Aua-15 An	alyzed: 13-A	ua-15	
Aroclor-1016	245		μg/kg wet	19.2	240		102	40-140		
Aroclor-1016 [2C]	247		μg/kg wet	19.2	240		103	40-140		
Aroclor-1260	230		μg/kg wet	19.2	240		96	40-140		
Aroclor-1260 [2C]	233		μg/kg wet	19.2	240		97	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	19.2		μg/kg wet		19.2		100	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	18.2		μg/kg wet		19.2		95	30-150		
Surrogate: Decachlorobiphenyl (Sr)	25.0		μg/kg wet		19.2		130	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	24.0		μg/kg wet		19.2		125	30-150		
LCS Dup (1515492-BSD1)					Pre	epared: 12-	Aug-15 An	alyzed: 13-A	ug-15	
Aroclor-1016	247		μg/kg wet	19.3	241		103	40-140	0.8	30
Aroclor-1016 [2C]	249		μg/kg wet	19.3	241		104	40-140	8.0	30
Aroclor-1260	235		μg/kg wet	19.3	241		98	40-140	2	30
Aroclor-1260 [2C]	234		μg/kg wet	19.3	241		97	40-140	0	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	19.3		μg/kg wet		19.3		100	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	18.3		μg/kg wet		19.3		95	30-150		
Surrogate: Decachlorobiphenyl (Sr)	23.1		μg/kg wet		19.3		120	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	24.1		μg/kg wet		19.3		125	30-150		

## **General Chemistry Parameters - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1515383 - General Preparation										
<u>Duplicate (1515383-DUP1)</u>			Source: SC	10984-06	Pre	epared & Ar	nalyzed: 10-	Aug-15		
% Solids	82.3		%			82.9			0.7	5
<u>Duplicate (1515383-DUP2)</u>			Source: SC	10984-07	Pre	epared & Ar	nalyzed: 10-	Aug-15		
% Solids	95.9		%			95.5			0.4	5

#### **Notes and Definitions**

S02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic

compounds present in the sample extract.

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

<u>Laboratory Control Sample (LCS)</u>: A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

<u>Matrix Spike</u>: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

<u>Method Blank</u>: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

<u>Surrogate</u>: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

<u>Continuing Calibration Verification:</u> The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by: June O'Connor

# SPECTRUM ANALYTICAL, INC. Featuring

# CHAIN OF CUSTODY RECORD

Page \_\_\_\_ of \_\_\_

1 5C10984 ex	SP
Special Handling:	
Standard TAT - 7 to 10 business days	5des place

☐ Rush TAT - Date Needed:
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

	TECHNOLOGY								-					Samples	s disposed a	after 60 days unless otherwise instructed.	
Report To:			Invoice To	:			44.						Project No:	2014	-65	5	
<u> </u>	MG Environmen	te (	<	_		$\subset$	M	16					Site Name:	WIC	MP		
	7 Hall Road	56/		-	-									1.2.1	(42)	State: M	
	774-241-0901	0.00											Sampler(s):	B	26	State. 7	
Project Mgr:	Boald		P.O No.				Quote	e/RQN:					_				
	1=Na <sub>2</sub> S2O <sub>3</sub>	$_{2}SO_{4}$ 4=HNO <sub>3</sub> 5 $_{3}PO_{4}$ 11=		=Ascorb 12=		1					L	ist Pre	servative Code	below:		QA/QC Reporting Notes:	
										11						* additional charges may appply	
DW=Dinking Water	GW=Groundwater SW=	Surface Water WV	V=Waste Water	r.	Containers				-/	Analysis				MC LEGG	MA DEP MCP CAM Report? Yes No		
O=Oil SO=Soil	SL=Sludge A=Indoor/Ar	mbient Air SG=Soi	l Gas							289	+		10		ated	Standard No QC	
X1=	X2=	X3=				Vials	Glass	Glass		27.0	- yxa	5	C+17		lorim	□ DQA* □ ASP A* □ ASP B*	
G-	= Grab	C=Compsite		be	trix	of VOA	of Amber Glass	Clear (	of Plastic	RBs 37 808	WITH SOUTH	Cxtrehon	3540 ex		Check if chlorinated	NJ Reduced* NJ Full* ☐ Tier II* ☐ Tier IV*	
Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of \	√ Jo #	# of (	# of F	2	3	2	50		Chec	Other: MA RLS-1 State-specific reporting standards:	
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03	05-3		15:21				1			X							
04	05-4		15:29				1			X							
05	H6-1		16:26		1		1			X							
do	H6-2		16:35		1		1			X							
07	116-3		16:41		1		1		1	*							
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