

**CASE NARRATIVE:**

The samples were received 0.8 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.**

**MADEP EPH 5/2004 R**

**Laboratory Control Samples:**

1206265 BSD

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C19-C36 Aliphatic Hydrocarbons RPD 27% (25%) is outside individual acceptance criteria, but within overall method allowances.

1206265-BSD1

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The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

C19-C36 Aliphatic Hydrocarbons

**Samples:**

SB45605-11                      P-9/S-2

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The Reporting Limit has been raised to account for matrix interference.

**SW846 6010C**

**Spikes:**

1206268-MS1                      Source: SB45605-28

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The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Antimony

1206268-MSD1                      Source: SB45605-28

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The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Antimony

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**SW846 6010C**

**Spikes:**

1206268-MSD1      *Source: SB45605-28*

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The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Zinc

**Duplicates:**

1206263-DUP1      *Source: SB45605-20*

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Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Selenium

1206268-DUP1      *Source: SB45605-28*

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The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Copper  
Silver  
Zinc

**Samples:**

SB45605-10      *P-8/S-3*

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Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Lead  
Zinc

The Reporting Limit has been raised to account for matrix interference.

Antimony

SB45605-29      *P-8/S-2*

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Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Lead  
Zinc

**SW846 7471B**

**Duplicates:**

1206267-DUP1      *Source: SB45605-11*

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The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Mercury

**Samples:**

SB45605-04      *P-4/S-2*

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Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Mercury

Sample Identification

P-1/S-2  
SB45605-01

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 08:10

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	<b>18.8</b>		mg/kg dry	1.47	0.174	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	<b>86.4</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-2/S-2  
SB45605-02

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 08:20

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	6.30		mg/kg dry	1.53	0.181	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	89.1		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-4/S-2 Client Project # 1234.30 Matrix Soil Collection Date/Time 16-Mar-12 08:50 Received 19-Mar-12  
 SB45605-04

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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**Extractable Petroleum Hydrocarbons**

EPH Aliphatic/Aromatic Ranges

Prepared by method SW846 3545A

	C9-C18 Aliphatic Hydrocarbons	< 11.6		mg/kg dry	11.6	1.70	1	MADEP EPH 5/2004 R	20-Mar-12	25-Mar-12	MP	1206265	
	C19-C36 Aliphatic Hydrocarbons	< 11.6		mg/kg dry	11.6	5.67	1	"	"	"	"	"	"
	C11-C22 Aromatic Hydrocarbons	< 11.6		mg/kg dry	11.6	4.20	1	"	"	"	"	"	"
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 11.6		mg/kg dry	11.6	4.20	1	"	"	"	"	"	"
	Total Petroleum Hydrocarbons	< 11.6		mg/kg dry	11.6	11.6	1	"	"	"	"	"	"
	Unadjusted Total Petroleum Hydrocarbons	< 11.6		mg/kg dry	11.6	11.6	1	"	"	"	"	"	"

EPH Target PAH Analytes

Prepared by method SW846 3545A

91-20-3	Naphthalene	< 0.386		mg/kg dry	0.386	0.202	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	< 0.386		mg/kg dry	0.386	0.202	1	"	"	"	"	"	"
208-96-8	Acenaphthylene	< 0.386		mg/kg dry	0.386	0.226	1	"	"	"	"	"	"
83-32-9	Acenaphthene	< 0.386		mg/kg dry	0.386	0.226	1	"	"	"	"	"	"
86-73-7	Fluorene	< 0.386		mg/kg dry	0.386	0.228	1	"	"	"	"	"	"
85-01-8	Phenanthrene	< 0.386		mg/kg dry	0.386	0.283	1	"	"	"	"	"	"
120-12-7	Anthracene	< 0.386		mg/kg dry	0.386	0.286	1	"	"	"	"	"	"
206-44-0	Fluoranthene	< 0.386		mg/kg dry	0.386	0.259	1	"	"	"	"	"	"
129-00-0	Pyrene	< 0.386		mg/kg dry	0.386	0.278	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	< 0.386		mg/kg dry	0.386	0.280	1	"	"	"	"	"	"
218-01-9	Chrysene	< 0.386		mg/kg dry	0.386	0.300	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	< 0.386		mg/kg dry	0.386	0.344	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	< 0.386		mg/kg dry	0.386	0.322	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	< 0.386		mg/kg dry	0.386	0.260	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.386		mg/kg dry	0.386	0.343	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	< 0.386		mg/kg dry	0.386	0.280	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	< 0.386		mg/kg dry	0.386	0.289	1	"	"	"	"	"	"

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	57				40-140 %		"	"	"	"	"	"
84-15-1	Ortho-Terphenyl	62				40-140 %		"	"	"	"	"	"
321-60-8	2-Fluorobiphenyl	61				40-140 %		"	"	"	"	"	"

**Total Metals by EPA 6000/7000 Series Methods**

7440-22-4	Silver	< 1.76		mg/kg dry	1.76	0.271	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-38-2	Arsenic	<b>5.75</b>		mg/kg dry	1.76	0.283	1	"	"	"	"	"	"
7440-41-7	Beryllium	< 0.586		mg/kg dry	0.586	0.188	1	"	"	"	"	"	"
7440-43-9	Cadmium	<b>1.06</b>		mg/kg dry	0.586	0.0647	1	"	"	"	"	"	"
7440-47-3	Chromium	<b>15.9</b>		mg/kg dry	1.17	0.427	1	"	"	"	"	"	"
7440-50-8	Copper	<b>59.0</b>		mg/kg dry	1.17	0.132	1	"	"	"	"	"	"
7439-97-6	Mercury	<b>2.09</b>	GS1	mg/kg dry	0.161	0.0329	5	SW846 7471B	"	21-Mar-12	EDT	1206267	
7440-02-0	Nickel	<b>20.2</b>		mg/kg dry	1.17	0.0808	1	SW846 6010C	"	22-Mar-12	ARF/A	1206263	
7439-92-1	Lead	<b>958</b>		mg/kg dry	1.76	0.209	1	"	"	22-Mar-12	"	"	"
7440-36-0	Antimony	< 5.86		mg/kg dry	5.86	0.258	1	"	"	"	"	"	"
7782-49-2	Selenium	< 1.76		mg/kg dry	1.76	0.260	1	"	"	"	"	"	"

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Sample Identification

P-4/S-2  
SB45605-04

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 08:50

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7440-28-0	Thallium	< 3.52		mg/kg dry	3.52	0.289	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-66-6	Zinc	503		mg/kg dry	1.17	0.255	1	.	.	.	"	.	
<b>General Chemistry Parameters</b>													
	% Solids	82.4		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-5/S-2  
SB45605-06

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 09:05

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	<b>12.4</b>		mg/kg dry	1.67	0.198	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	<b>79.7</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-6/S-2  
SB45605-07

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 09:30

Received  
19-Mar-12

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Extractable Petroleum Hydrocarbons

EPH Aliphatic/Aromatic Ranges

Prepared by method SW846 3545A

	C9-C18 Aliphatic Hydrocarbons	< 11.4		mg/kg dry	11.4	1.67	1	MADEP EPH 5/2004 R	20-Mar-12	25-Mar-12	MP	1206265	
	C19-C36 Aliphatic Hydrocarbons	45.4		mg/kg dry	11.4	5.56	1	"	"	"	"	"	"
	C11-C22 Aromatic Hydrocarbons	28.2		mg/kg dry	11.4	4.11	1	"	"	"	"	"	"
	Unadjusted C11-C22 Aromatic Hydrocarbons	37.9		mg/kg dry	11.4	4.11	1	"	"	"	"	"	"
	Total Petroleum Hydrocarbons	78.4		mg/kg dry	11.4	11.3	1	"	"	"	"	"	"
	Unadjusted Total Petroleum Hydrocarbons	88.0		mg/kg dry	11.4	11.3	1	"	"	"	"	"	"

EPH Target PAH Analytes

Prepared by method SW846 3545A

91-20-3	Naphthalene	< 0.378		mg/kg dry	0.378	0.198	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	< 0.378		mg/kg dry	0.378	0.198	1	"	"	"	"	"	"
208-96-8	Acenaphthylene	< 0.378		mg/kg dry	0.378	0.222	1	"	"	"	"	"	"
83-32-9	Acenaphthene	< 0.378		mg/kg dry	0.378	0.221	1	"	"	"	"	"	"
86-73-7	Fluorene	< 0.378		mg/kg dry	0.378	0.224	1	"	"	"	"	"	"
85-01-8	Phenanthrene	0.973		mg/kg dry	0.378	0.258	1	"	"	"	"	"	"
120-12-7	Anthracene	< 0.378		mg/kg dry	0.378	0.280	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1.88		mg/kg dry	0.378	0.254	1	"	"	"	"	"	"
129-00-0	Pyrene	1.60		mg/kg dry	0.378	0.273	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	0.667		mg/kg dry	0.378	0.274	1	"	"	"	"	"	"
218-01-9	Chrysene	0.954		mg/kg dry	0.378	0.294	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	0.670		mg/kg dry	0.378	0.337	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	0.768		mg/kg dry	0.378	0.315	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	0.662		mg/kg dry	0.378	0.254	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.378		mg/kg dry	0.378	0.336	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	< 0.378		mg/kg dry	0.378	0.274	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	0.417		mg/kg dry	0.378	0.283	1	"	"	"	"	"	"

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	76			40-140 %			"	"	"	"	"	"
84-15-1	Ortho-Terphenyl	75			40-140 %			"	"	"	"	"	"
321-60-8	2-Fluorobiphenyl	76			40-140 %			"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 1.61		mg/kg dry	1.61	0.247	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-38-2	Arsenic	7.26		mg/kg dry	1.61	0.258	1	"	"	"	"	"	"
7440-41-7	Beryllium	< 0.536		mg/kg dry	0.536	0.172	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.969		mg/kg dry	0.536	0.0591	1	"	"	"	"	"	"
7440-47-3	Chromium	16.0		mg/kg dry	1.07	0.390	1	"	"	"	"	"	"
7440-50-8	Copper	30.3		mg/kg dry	1.07	0.120	1	"	"	"	"	"	"
7439-97-6	Mercury	0.153		mg/kg dry	0.0347	0.0071	1	SW846 7471B	"	21-Mar-12	EDT	1206267	
7440-02-0	Nickel	9.06		mg/kg dry	1.07	0.0738	1	SW846 6010C	"	22-Mar-12	ARF/A	1206263	
7439-92-1	Lead	517		mg/kg dry	1.61	0.191	1	"	"	22-Mar-12	"	"	"
7440-38-0	Antimony	< 5.36		mg/kg dry	5.36	0.236	1	"	"	"	"	"	"
7782-49-2	Selenium	< 1.61		mg/kg dry	1.61	0.237	1	"	"	"	"	"	"

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Sample Identification

P-6/S-2  
SB45605-07

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 09:30

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7440-28-0	Thallium	< 3.21		mg/kg dry	3.21	0.264	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-66-6	Zinc	<b>338</b>		mg/kg dry	1.07	0.233	1	.	.	.	"	.	
<b>General Chemistry Parameters</b>													
	% Solids	<b>86.6</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

**P-6/S-3**  
SB45605-08

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 09:35

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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**Total Metals by EPA 6000/7000 Series Methods**

7439-92-1	Lead	<b>276</b>		mg/kg dry	1.81	0.215	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
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**General Chemistry Parameters**

	% Solids	<b>69.7</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	
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Sample Identification

**P-7/S-2**  
SB45605-09

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 09:45

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	<b>753</b>		mg/kg dry	1.77	0.210	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	<b>71.7</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-8/S-3  
SB45605-10

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 10:05

Received  
19-Mar-12

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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**Extractable Petroleum Hydrocarbons**

EPH Aliphatic/Aromatic Ranges

Prepared by method SW846 3545A

	C9-C18 Aliphatic Hydrocarbons	< 11.6		mg/kg dry	11.6	1.71	1	MADEP EPH 5/2004 R	20-Mar-12	23-Mar-12	MP	1206265	
	C19-C36 Aliphatic Hydrocarbons	< 11.6		mg/kg dry	11.6	5.69	1	*	*	*	"	*	
	C11-C22 Aromatic Hydrocarbons	< 11.6		mg/kg dry	11.6	4.21	1	*	*	*	"	*	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 11.6		mg/kg dry	11.6	4.21	1	*	*	*	"	*	
	Total Petroleum Hydrocarbons	< 11.6		mg/kg dry	11.6	11.6	1	*	*	*	"	*	
	Unadjusted Total Petroleum Hydrocarbons	< 11.6		mg/kg dry	11.6	11.6	1	*	*	*	"	*	

EPH Target PAH Analytes

Prepared by method SW846 3545A

91-20-3	Naphthalene	< 0.387		mg/kg dry	0.387	0.203	1	*	*	*	"	*	
91-57-6	2-Methylnaphthalene	< 0.387		mg/kg dry	0.387	0.202	1	*	*	*	"	*	
208-96-8	Acenaphthylene	< 0.387		mg/kg dry	0.387	0.227	1	*	*	*	"	*	
83-32-9	Acenaphthene	< 0.387		mg/kg dry	0.387	0.226	1	*	*	*	"	*	
86-73-7	Fluorene	< 0.387		mg/kg dry	0.387	0.229	1	*	*	*	"	*	
85-01-8	Phenanthrene	< 0.387		mg/kg dry	0.387	0.264	1	*	*	*	"	*	
120-12-7	Anthracene	< 0.387		mg/kg dry	0.387	0.287	1	*	*	*	"	*	
206-44-0	Fluoranthene	< 0.387		mg/kg dry	0.387	0.260	1	*	*	*	"	*	
129-00-0	Pyrene	< 0.387		mg/kg dry	0.387	0.279	1	*	*	*	"	*	
56-55-3	Benzo (a) anthracene	< 0.387		mg/kg dry	0.387	0.281	1	*	*	*	"	*	
218-01-9	Chrysene	< 0.387		mg/kg dry	0.387	0.301	1	*	*	*	"	*	
205-99-2	Benzo (b) fluoranthene	< 0.387		mg/kg dry	0.387	0.345	1	*	*	*	"	*	
207-08-9	Benzo (k) fluoranthene	< 0.387		mg/kg dry	0.387	0.323	1	*	*	*	"	*	
50-32-8	Benzo (a) pyrene	< 0.387		mg/kg dry	0.387	0.261	1	*	*	*	"	*	
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.387		mg/kg dry	0.387	0.344	1	*	*	*	"	*	
53-70-3	Dibenzo (a,h) anthracene	< 0.387		mg/kg dry	0.387	0.281	1	*	*	*	"	*	
191-24-2	Benzo (g,h,i) perylene	< 0.387		mg/kg dry	0.387	0.290	1	*	*	*	"	*	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	80			40-140 %			*	*	*	"	*	
84-15-1	Ortho-Terphenyl	74			40-140 %			*	*	*	"	*	
321-80-8	2-Fluorobiphenyl	73			40-140 %			*	*	*	"	*	

**Total Metals by EPA 6000/7000 Series Methods**

7440-22-4	Silver	< 1.65		mg/kg dry	1.65	0.254	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-38-2	Arsenic	<b>29.0</b>		mg/kg dry	1.65	0.265	1	*	*	*	"	*	
7440-41-7	Beryllium	< 0.550		mg/kg dry	0.550	0.176	1	*	*	*	"	*	
7440-43-9	Cadmium	<b>4.22</b>		mg/kg dry	0.550	0.0608	1	*	*	*	"	*	
7440-47-3	Chromium	<b>40.1</b>		mg/kg dry	1.10	0.401	1	*	*	*	"	*	
7440-50-8	Copper	<b>376</b>		mg/kg dry	1.10	0.124	1	*	*	*	"	*	
7439-97-6	Mercury	< 0.0364		mg/kg dry	0.0364	0.0074	1	SW846 7471B	"	21-Mar-12	EDT	1206267	
7440-02-0	Nickel	<b>31.2</b>		mg/kg dry	1.10	0.0758	1	SW846 6010C	"	22-Mar-12	ARF/A	1206263	
7439-92-1	Lead	<b>15,200</b>	GS1	mg/kg dry	16.5	1.96	10	*	*	22-Mar-12	"	*	
7440-36-0	Antimony	< 55.0	R01	mg/kg dry	55.0	2.42	10	*	*	"	"	*	
7782-49-2	Selenium	< 1.65		mg/kg dry	1.65	0.244	1	*	*	22-Mar-12	"	*	

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Sample Identification

P-8/S-3  
SB45605-10

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 10:05

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7440-28-0	Thallium	< 3.30		mg/kg dry	3.30	0.271	1	SW846 6010C	20-Mar-12	22-Mar-12	ARF/A	1206263	
7440-66-6	Zinc	<b>1,120</b>	GS1	mg/kg dry	11.0	2.39	10	"	"	22-Mar-12	"	"	"
<b>General Chemistry Parameters</b>													
	% Solids	<b>81.9</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-9/S-2 Client Project # 1234.30 Matrix Soil Collection Date/Time 16-Mar-12 10:10 Received 19-Mar-12  
 SB45605-11

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Extractable Petroleum Hydrocarbons

EPH Aliphatic/Aromatic Ranges

R01

Prepared by method SW846 3545A

	C9-C18 Aliphatic Hydrocarbons	< 101		mg/kg dry	101	14.9	10	MADEP EPH 5/2004 R	20-Mar-12	23-Mar-12	MP	1206265	
	C19-C36 Aliphatic Hydrocarbons	216		mg/kg dry	101	49.6	10	*	*	*	"	*	
	C11-C22 Aromatic Hydrocarbons	108		mg/kg dry	50.7	18.3	5	*	*	*	"	*	
	Unadjusted C11-C22 Aromatic Hydrocarbons	108		mg/kg dry	50.7	18.3	5	*	*	*	"	*	
	Total Petroleum Hydrocarbons	324		mg/kg dry	10.1	10.1	1	*	*	*	"	*	
	Unadjusted Total Petroleum Hydrocarbons	324		mg/kg dry	10.1	10.1	1	*	*	*	"	*	

EPH Target PAH Analytes

R01

Prepared by method SW846 3545A

91-20-3	Naphthalene	< 1.69		mg/kg dry	1.69	0.883	5	*	*	*	"	*	
91-57-6	2-Methylnaphthalene	< 1.69		mg/kg dry	1.69	0.882	5	*	*	*	"	*	
208-96-8	Acenaphthylene	< 1.69		mg/kg dry	1.69	0.988	5	*	*	*	"	*	
83-32-9	Acenaphthene	< 1.69		mg/kg dry	1.69	0.986	5	*	*	*	"	*	
86-73-7	Fluorene	< 1.69		mg/kg dry	1.69	0.997	5	*	*	*	"	*	
85-01-8	Phenanthrene	< 1.69		mg/kg dry	1.69	1.15	5	*	*	*	"	*	
120-12-7	Anthracene	< 1.69		mg/kg dry	1.69	1.25	5	*	*	*	"	*	
206-44-0	Fluoranthene	< 1.69		mg/kg dry	1.69	1.13	5	*	*	*	"	*	
129-00-0	Pyrene	< 1.69		mg/kg dry	1.69	1.22	5	*	*	*	"	*	
56-55-3	Benzo (a) anthracene	< 1.69		mg/kg dry	1.69	1.22	5	*	*	*	"	*	
218-01-9	Chrysene	< 1.69		mg/kg dry	1.69	1.31	5	*	*	*	"	*	
205-99-2	Benzo (b) fluoranthene	< 1.69		mg/kg dry	1.69	1.50	5	*	*	*	"	*	
207-08-9	Benzo (k) fluoranthene	< 1.69		mg/kg dry	1.69	1.41	5	*	*	*	"	*	
50-32-8	Benzo (a) pyrene	< 1.69		mg/kg dry	1.69	1.13	5	*	*	*	"	*	
193-39-5	Indeno (1,2,3-cd) pyrene	< 1.69		mg/kg dry	1.69	1.50	5	*	*	*	"	*	
53-70-3	Dibenzo (a,h) anthracene	< 1.69		mg/kg dry	1.69	1.22	5	*	*	*	"	*	
191-24-2	Benzo (g,h,i) perylene	< 1.69		mg/kg dry	1.69	1.26	5	*	*	*	"	*	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	49			40-140 %			*	*	*	"	*	
84-15-1	Ortho-Terphenyl	56			40-140 %			*	*	*	"	*	
321-80-8	2-Fluorobiphenyl	47			40-140 %			*	*	*	"	*	

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	< 1.49		mg/kg dry	1.49	0.230	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-38-2	Arsenic	4.83		mg/kg dry	1.49	0.240	1	*	*	*	"	*	
7440-41-7	Beryllium	< 0.498		mg/kg dry	0.498	0.160	1	*	*	*	"	*	
7440-43-9	Cadmium	< 0.498		mg/kg dry	0.498	0.0550	1	*	*	*	"	*	
7440-47-3	Chromium	20.3		mg/kg dry	0.996	0.363	1	*	*	*	"	*	
7440-50-8	Copper	10.6		mg/kg dry	0.996	0.112	1	*	*	*	"	*	
7439-97-6	Mercury	0.290		mg/kg dry	0.0305	0.0062	1	SW846 7471B	*	21-Mar-12	EDT	1206267	
7440-02-0	Nickel	13.7		mg/kg dry	0.996	0.0687	1	SW846 6010C	*	22-Mar-12	ARF/A	1206263	
7439-92-1	Lead	29.8		mg/kg dry	1.49	0.177	1	*	*	22-Mar-12	"	*	
7440-36-0	Antimony	< 4.98		mg/kg dry	4.98	0.219	1	*	*	*	"	*	
7782-49-2	Selenium	< 1.49		mg/kg dry	1.49	0.221	1	*	*	*	"	*	

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Sample Identification

P-9/S-2  
SB45605-11

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 10:10

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7440-28-0	Thallium	< 2.99		mg/kg dry	2.99	0.246	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
7440-66-6	Zinc	<b>33.8</b>		mg/kg dry	0.996	0.216	1	"	"	"	"	"	"
<b>General Chemistry Parameters</b>													
	% Solids	<b>93.8</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

<b>P-10/S-1</b> SB45605-12	<u>Client Project #</u> 1234.30	<u>Matrix</u> Soil	<u>Collection Date/Time</u> 16-Mar-12 10:25	<u>Received</u> 19-Mar-12
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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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**Total Metals by EPA 6000/7000 Series Methods**

7439-92-1	Lead	<b>4.91</b>		mg/kg dry	1.56	0.184	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
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**General Chemistry Parameters**

	% Solids	<b>94.2</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	
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Sample Identification

P-11/S-1  
SB45605-13

Client Project #

1234.30

Matrix

Soil

Collection Date/Time

16-Mar-12 10:45

Received

19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	10.0		mg/kg dry	1.48	0.176	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	93.0		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-12/S-2  
SB45605-14

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 10:50

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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**Total Metals by EPA 6000/7000 Series Methods**

7439-92-1	Lead	14.4		mg/kg dry	1.40	0.167	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
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**General Chemistry Parameters**

	% Solids	92.9		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	
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Sample Identification

P-13/S-1  
SB45605-15

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 11:00

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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**Total Metals by EPA 6000/7000 Series Methods**

7439-92-1	Lead	12.1		mg/kg dry	1.71	0.202	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
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**General Chemistry Parameters**

	% Solids	85.4		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	
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Sample Identification

**P-14/S-3**  
SB45605-16

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 11:15

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	<b>15.8</b>		mg/kg dry	1.49	0.177	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	<b>93.1</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

P-15/S-3  
SB45605-17

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 11:25

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	3.49		mg/kg dry	1.49	0.176	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	96.3		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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Sample Identification

**P-16/S-2**  
SB45605-18

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 11:45

Received  
19-Mar-12

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<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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**Total Metals by EPA 6000/7000 Series Methods**

7439-92-1	Lead	<b>38.4</b>		mg/kg dry	1.62	0.192	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
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**General Chemistry Parameters**

	% Solids	<b>92.7</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	
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Sample Identification

P-17/S-1  
SB45605-19

Client Project #  
1234.30

Matrix  
Soil

Collection Date/Time  
16-Mar-12 11:55

Received  
19-Mar-12

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
<b>Total Metals by EPA 6000/7000 Series Methods</b>													
7439-92-1	Lead	<b>13.4</b>		mg/kg dry	1.67	0.198	1	SW846 6010C	20-Mar-12	22-Mar-12	LR	1206263	
<b>General Chemistry Parameters</b>													
	% Solids	<b>88.0</b>		%			1	SM2540 G Mod.	20-Mar-12	20-Mar-12	DT	1206223	

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