



Galen Williams
EarthFax Engineering
7324 So. Union Park Ave., # 100
Midvale, UT 84047
TEL: (801) 561-1555

RE: MP 44.9

Dear Galen Williams:

Lab Set ID: 1303424

463 West 3600 South
Salt Lake City, UT 84115

American West Analytical Laboratories received 4 sample(s) on 3/19/2013 for the analyses presented in the following report.

Phone: (801) 263-8686
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e-mail: awal@awal-labs.com
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by: _____
Laboratory Director or designee

Partial Report



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: MP 44.9
Lab Sample ID: 1303424-001B
Client Sample ID: 100 Yds. From Boom
Collection Date: 3/19/2013 1330h
Received Date: 3/19/2013 1700h

Contact: Galen Williams

Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

Analyzed: 3/21/2013 456h **Extracted:** 3/19/2013 2030h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	

Partial Report



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: MP 44.9
Lab Sample ID: 1303424-002B
Client Sample ID: South Marina - Background
Collection Date: 3/19/2013 1400h
Received Date: 3/19/2013 1700h

Contact: Galen Williams

Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

Analyzed: 3/21/2013 523h **Extracted:** 3/19/2013 2030h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	

Partial Report



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: MP 44.9
Lab Sample ID: 1303424-003B
Client Sample ID: South Marina
Collection Date: 3/19/2013 1500h
Received Date: 3/19/2013 1700h

Contact: Galen Williams

Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

Analyzed: 3/21/2013 642h **Extracted:** 3/19/2013 2030h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	0.220	
Benzo(b)fluoranthene	205-99-2	0.100	0.200	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	0.110	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	0.120	

Partial Report



ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering
Project: MP 44.9
Lab Sample ID: 1303424-004B
Client Sample ID: 105' S. of Main Boom
Collection Date: 3/19/2013 1530h
Received Date: 3/19/2013 1700h

Contact: Galen Williams

Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

Analyzed: 3/21/2013 709h **Extracted:** 3/19/2013 2030h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	0.200	
2-Methylnaphthalene	91-57-6	0.100	0.140	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	0.140	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	

Partial Report

American West Analytical Laboratories

REVISED

3-20-13

Project name changed @ clients request

RUSH

D

WORK ORDER Summary

Work Order: **1303424** Page 1 of 2

Client: EarthFax Engineering

Due Date: 3/20/2013

Client ID: EAR100

Contact: Galen Williams

Project: MP 44.9

QC Level: II+

WO Type: Standard

Comments: Next Day Rush / QC2+ / partial reports as results become available, and bill accordingly.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage			
1303424-001A	100 Yds. From Boom	3/19/2013 1330h	3/19/2013 1700h	8260-W	Aqueous	<input checked="" type="checkbox"/>	vOC	3		
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>						
1303424-001B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>						
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>						
1303424-001C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)			
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>						
1303424-001D				3510-ORO-PR		<input type="checkbox"/>	Walkin-oro			
				8015-W-ORO(1L)		<input type="checkbox"/>	Walkin-oro			
1303424-001E				COD-HACH8000		<input type="checkbox"/>	ww - cod	1		
1303424-002A	South Marina - Background	3/19/2013 1400h	3/19/2013 1700h	8260-W	Aqueous	<input checked="" type="checkbox"/>	vOC	3		
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>						
1303424-002B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>						
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>						
1303424-002C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)			
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>						
1303424-002D				3510-ORO-PR		<input type="checkbox"/>	Walkin-oro			
				8015-W-ORO(1L)		<input type="checkbox"/>	Walkin-oro			
1303424-002E				COD-HACH8000		<input type="checkbox"/>	ww - cod	1		
1303424-003A	South Marina	3/19/2013 1500h	3/19/2013 1700h	8260-W	Aqueous	<input checked="" type="checkbox"/>	vOC	3		
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>						
1303424-003B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>						
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>						
1303424-003C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			

WORK ORDER Summary

Work Order: **1303424** Page 2 of 2

Client: EarthFax Engineering

Due Date: 3/20/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1303424-003C	South Marina	3/19/2013 1500h	3/19/2013 1700h	8015-W-TPH(1L)	Aqueous	<input checked="" type="checkbox"/>	Walkin-TPH (Liters)	2
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>				
1303424-003D				3510-ORO-PR		<input type="checkbox"/>	Walkin-oro	
				8015-W-ORO(1L)		<input type="checkbox"/>	Walkin-oro	
1303424-003E				COD-HACH8000		<input type="checkbox"/>	ww - cod	1
1303424-004A	105' S. of Main Boom	3/19/2013 1530h	3/19/2013 1700h	8260-W	Aqueous	<input checked="" type="checkbox"/>	vOC	3
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>				
1303424-004B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi	
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>				
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi	
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>				
1303424-004C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)	
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>				
1303424-004D				3510-ORO-PR		<input type="checkbox"/>	Walkin-oro	1
				8015-W-ORO(1L)		<input type="checkbox"/>	Walkin-oro	

Sample Set: 1303424

Preservation Check Sheet

Sample Set Extension and pH

Bottle Type	Preservative	All OK	Except /	Except 2	Except 3	Except											
Ammonia	pH <2 H ₂ SO ₄																
COD	pH <2 H ₂ SO ₄		yes	yes	yes												
Cyanide	pH >12 NaOH																
Metals	pH <2 HNO ₃																
NO ₂ & NO ₃	pH <2 H ₂ SO ₄																
Nutrients	pH <2 H ₂ SO ₄																
O & G	pH <2 HCL																
Phenols	pH <2 H ₂ SO ₄																
Sulfide	pH > 9NaOH, Zn Acetate																
TKN	pH <2 H ₂ SO ₄																
TOC	pH <2 H ₃ PO ₄																
TOX	pH <2 H ₂ SO ₄																
T PO ₄	pH <2 H ₂ SO ₄																
TPH	pH <2 HCL																

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from Lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation