



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 21, 2009

Ron Hicks
Riverside Associates
1123 Pomona Road
Yakima, WA 98901

Re: Analytical Data for Project 809
Laboratory Reference No. 0907-166

Dear Ron:

Enclosed are the analytical results and associated quality control data for samples submitted on July 23, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', followed by a horizontal line.

David Baumeister
Project Manager

Enclosures

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

Case Narrative

Samples were collected on July 21 and 22, 2009, and received by the laboratory on July 23, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

NWTPH-Dx

Date Extracted: 7-24-09
Date Analyzed: 7-27-09

Matrix: Water
Units: mg/L (ppm)

Client ID: 809010
Lab ID: 07-166-10

Diesel Range: **ND**
PQL: 0.24
Identification: ---

Lube Oil Range: **ND**
PQL: 0.39
Identification: ---

Surrogate Recovery
o-Terphenyl: 93%

Flags: Y

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 7-24-09
Date Analyzed: 7-24-09

Matrix: Water
Units: mg/L (ppm)

Lab ID: MB0724W1

Diesel Range: **ND**
PQL: 0.25
Identification: ---

Lube Oil Range: **ND**
PQL: 0.40
Identification: ---

Surrogate Recovery
o-Terphenyl: 122%

Flags: Y

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted: 7-24-09
Date Analyzed: 7-24-09

Matrix: Water
Units: mg/L (ppm)

Spike Level: 1.00 ppm

Lab ID: SB0724W1 SB0724W1 DUP

Diesel Range: 1.12 1.07

PQL: 0.25 0.25

Percent Recovery: 112 107

RPD: 5

Surrogate Recovery

o-Terphenyl: 115% 109%

Flags: Y Y

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Lab Traveler: 0907-166
Project: 809

**BTEX
EPA 8021B**

Date Extracted: 7-27-09
Date Analyzed: 7-27-09

Matrix: Water
Units: ug/L (ppb)

Client ID: **809010**
Lab ID: 07-166-10

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		2.0
o-Xylene	ND		1.0
Surrogate Recovery: Fluorobenzene	88%		

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Lab Traveler: 0907-166
Project: 809

**BTEX
EPA 8021B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-24-09
Date Analyzed: 7-24-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0724W2

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		2.0
o-Xylene	ND		1.0
Surrogate Recovery: Fluorobenzene	98%		

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Lab Traveler: 0907-166
Project: 809

**BTEX
EPA 8021B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-27-09
Date Analyzed: 7-27-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0727W1

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		2.0
o-Xylene	ND		1.0
Surrogate Recovery: Fluorobenzene	93%		

Date of Report: August 21, 2009
 Samples Submitted: July 23, 2009
 Lab Traveler: 0907-166
 Project: 809

**BTEX
 EPA 8021B
 DUPLICATE QUALITY CONTROL**

Date Extracted: 7-24-09
 Date Analyzed: 7-24-09

Matrix: Water
 Units: ug/L (ppb)

Lab ID:	07-164-05 Original	07-164-05 Duplicate	RPD	Flags
Benzene	1.46	1.49	2	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
Surrogate Recovery: Fluorobenzene	97%	99%		

Date of Report: August 21, 2009
 Samples Submitted: July 23, 2009
 Lab Traveler: 0907-166
 Project: 809

**BTEX
 EPA 8021B
 MS/MSD QUALITY CONTROL**

Date Extracted: 7-24-09
 Date Analyzed: 7-24-09

Matrix: Water
 Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	07-164-05 MS	Percent Recovery	07-164-05 MSD	Percent Recovery	RPD	Flags
Benzene	47.3	92	48.1	93	2	
Toluene	46.2	92	46.7	93	1	
Ethyl Benzene	47.1	94	47.6	95	1	
m,p-Xylene	47.0	94	47.6	95	1	
o-Xylene	46.9	94	47.3	95	1	

Surrogate Recovery:		
Fluorobenzene	93%	95%

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

TOTAL ARSENIC
EPA 200.8

Date Extracted: 7-27-09
Date Analyzed: 7-27-09

Matrix: Water
Units: ug/L (ppb)

Client ID	Lab ID	Result	PQL
809010	07-166-10	ND	3.3

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

**TOTAL ARSENIC
EPA 200.8
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-27-09
Date Analyzed: 7-27-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0727W1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.3

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

**TOTAL ARSENIC
EPA 200.8
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-27-09

Date Analyzed: 7-27-09

Matrix: Water

Units: ug/L (ppb)

Lab ID: 07-132-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.3	

Date of Report: August 21, 2009
Samples Submitted: July 23, 2009
Laboratory Reference: 0907-166
Project: 809

TOTAL ARSENIC
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 7-27-09

Date Analyzed: 7-27-09

Matrix: Water

Units: ug/L (ppb)

Lab ID: 07-132-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	110	112	102	111	101	1	



Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference



Pacific Agricultural Laboratory

12505 N.W. Cornell Rd. • Portland, OR 97229-5651 • Ph 503.626.7943 • Fx 503.641.0644

OnSite Environmental, Inc.
14648 NE 95th Street
Redmond, WA 98052

Report Number: P090502
Report Date: August 06, 2009
Client Project ID: 809

Analytical Report

Client Sample ID: 809010
Matrix: water

PAL Sample ID: P090502-01
Sample Date: 7/21/09

Extraction Date	Analysis Date	Analyte	Amount Detected	Method Reporting Limit	Notes
Method: Modified EPA 8141B (GC-FPD)					
7/27/09	7/31/09	Dimethoate	Not Detected	0.30 ug/L	
Surrogate Recovery: 93 %					
Surrogate Recovery Range: 69-127					
(TPP used as Surrogate)					
Method: Modified EPA 8321B (HPLC-MS)					
7/27/09	8/3/09	Carbaryl	Not Detected	0.045 ug/L	

Steve Thun, Laboratory Director



Pacific Agricultural Laboratory

12505 N.W. Cornell Rd. • Portland, OR 97229-5651 • Ph 503.626.7943 • Fx 503.641.0644

OnSite Environmental, Inc.

14648 NE 95th Street

Redmond, WA 98052

Report Number: P090502

Report Date: August 06, 2009

Client Project ID: 809

Quality Assurance

Method Blank Data Matrix: water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
7/27/09	8/3/09	9072501-BLK1	Carbaryl	Not Detected	< 0.045 ug/L	
7/27/09	7/31/09	9072501-BLK1	Dimethoate	Not Detected	< 0.30 ug/L	

Blank Spike Data Matrix: water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
7/27/09	8/3/09	9072501-BS1	Carbaryl	73	46-126	
7/27/09	8/3/09	9072501-BSD1	Carbaryl	89	46-126	
7/27/09	7/31/09	9072501-BS1	Dimethoate	103	40-120	
7/27/09	7/31/09	9072501-BSD1	Dimethoate	95	40-120	

Steve Thun, Laboratory Director

OnSite Environmental, Inc.
14648 NE 95th Street
Redmond, WA 98052

Report Number: P090502
Report Date: August 12, 2009
Client Project ID: 809

Analytical Report

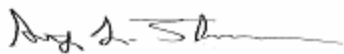
Client Sample ID: 809010

Matrix: water

PAL Sample ID: P090502-01

Sample Date: 7/21/09

Extraction Date	Analysis Date	Analyte	Amount Detected	Method Reporting Limit	Notes
Method: EPA 547 (HPLC-FLD)					
8/07/09	8/8/09	AMPA	Not Detected	10 ug/L	
8/07/09	8/8/09	Glyphosate	Not Detected	10 ug/L	



Steve Thun, Laboratory Director

OnSite Environmental, Inc.
14648 NE 95th Street
Redmond, WA 98052

Report Number: P090502
Report Date: August 12, 2009
Client Project ID: 809

Quality Assurance

Method Blank Data Matrix: water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
8/7/09	8/7/09	9080703-BLK1	AMPA	Not Detected	< 10 ug/L	
8/7/09	8/7/09	9080703-BLK1	Glyphosate	Not Detected	< 10 ug/L	

Blank Spike Data Matrix: water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
8/7/09	8/7/09	9080703-BS1	AMPA	101	40-120	
8/7/09	8/7/09	9080703-BS1	Glyphosate	91	87-112	

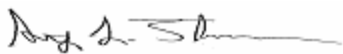
Matrix Spike Data Matrix: water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
8/7/09	8/8/09	9080703-MS1	AMPA	99	40-120	
8/7/09	8/8/09	9080703-MS1	Glyphosate	80	66-127	

Analyte Information

Method: EPA 547 (HPLC-FLD)

AMPA is the primary metabolite of Glyphosate. Glyphosate is quantitated as the free acid.



Steve Thun, Laboratory Director



(FOR SUBCONTRACT LABORATORY)

Lab Reference Number:

07-166

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Project Manager: David Baumeister

Pacific Agricultural Lab

Project Number: 809

503 626-7943

Project Name: Double H

090502

[illegible]



**MVA Onsite
Environmental Inc.**

Phone: (425) 893-3881 • Fax: (425) 985-4503

Chain of Custody

Page 1 of 2

Unattended Request
(in working days)

Laboratory Number:

07-166

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

(TPH analysis 5 working days)

Sampled by:

CESI

(other)

Requested Analysis

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Lab ID

Sample Identification

Date

Sample

Time

Sampled

Matrix

Volume

For

Analysis

Notes

Comments

Signature

Date

Time

Signature

Date

Time

Signature

Date