

June 06, 2014

A.G. Wassenaar

Joe Pieterick

2180 South Ivanhoe Street - Suite 5

Denver CO 80222

Project Name - E14266.E2

Project Number - E14266.E2

Attached are your analytical results for E14266.E2 received by Origins Laboratory, Inc. June 05, 2014. This project is associated with Origins project number X406056-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



A.G. Wassenaar  
2180 South Ivanhoe Street - Suite 5  
Denver CO 80222

Joe Pieterick  
Project Number: E14266.E2  
Project: E14266.E2

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
266-18	X406056-01	Soil	June 5, 2014 8:30	06/05/2014 11:59
266-20	X406056-02	Soil	June 5, 2014 8:55	06/05/2014 11:59
266-21	X406056-03	Soil	June 5, 2014 9:22	06/05/2014 11:59
266-23	X406056-04	Soil	June 5, 2014 9:39	06/05/2014 11:59
266-24	X406056-05	Soil	June 5, 2014 10:08	06/05/2014 11:59

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Ross S Hutto For Noelle Doyle Mathis, President

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**ORIGINS**  
 LABORATORY, INC

X406056

www.originslaboratory.com

page 1 of 1

Client: A.G. WASSenaar, INC/Project Manager/Send Report To: JOE PIETERICK/ANNE PETERSEN  
 Address: 2180 S. IVANHOE ST. #5  
DENVER, CO 80222  
 Telephone Number: 303-981-2107  
 Email Address: pieterick@agwassenaar.com  
pietersen@agwassenaar.com  
 Project Name/Number: E14266.E2  
 Samples Collected By: JOE PIETERICK

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air/Summa #			Other	
266-18	6-5-14	8:30	1	<input checked="" type="checkbox"/>					X			BTEX	1	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input checked="" type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
266-20	6-5-14	8:55	1	<input checked="" type="checkbox"/>					X			DR0 + G-R0	2	
266-21	6-5-14	9:22	1	<input checked="" type="checkbox"/>					X			DR0 + G-R0	3	
266-23	6-5-14	9:39	1	<input checked="" type="checkbox"/>					X			DR0 + G-R0	4	
266-24	6-5-14	10:08	1	<input checked="" type="checkbox"/>					X			DR0 + G-R0	5	
													6	
													7	
													8	
													9	
													10	
Relinquished By: <i>Joe Pieterick</i>	Date: 6-5-14	Time: 11:59	Received By: <i>[Signature]</i>	Date: 6-5-14	Time: 11:59	Relinquished By: <i>[Signature]</i>	Date: 6-5-14	Time: 11:59	Standard					

Comments:

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Joe Pieterick  
 Project Number: E14266.E2  
 Project: E14266.E2

Origins Laboratory F-012207-01-R1  
Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: X406056 Client: A.G. Wassenaar  
 Client Project ID: E14266.E2

Checklist Completed by: Jeff Smith Shipped Via: HTD  
 Date/time completed: 6/5/14 1202 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: NA

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_

Cooler Number/Temperature: \_\_\_\_\_ / 17.9 °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C (Describe)

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)?</sup>		X		Sampled Same Day
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)?</sup>	X			
Was adequate sample volume provided <sup>(1)?</sup>	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)?</sup>		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)?</sup>	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)?</sup>	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)?</sup>	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)?</sup>	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	Soil
Are samples preserved that require preservation and was it checked <sup>(1)?</sup> (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	Soil
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 6/6/14 7:21

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 Project Number: E14266.E2  
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266-18

6/5/2014 8:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X406056-01 (Soil)**

**BTEX by EPA 8260C**

Benzene	ND	0.1	mg/kg	50	4F05006	06/05/2014	06/05/2014	
Toluene	ND	0.1	"	"	"	"	"	
Ethylbenzene	21.3	1.0	"	500	"	"	06/06/2014	
Xylenes, total	336	1.0	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	
Surrogate: Toluene-d8	113 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.5 %	70-130			"	"	"	

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 Project Number: E14266.E2  
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266-20

6/5/2014 8:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X406056-02 (Soil)**

**GRO (TVPH)/DRO (TEPH)by EPA 8015C**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	4F05011	06/05/2014	06/05/2014	
Diesel (C10-C28)	ND	50.0	"	"	"	"	"	
Surrogate: o-Terphenyl	103%	59-131			"	"	"	

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 Project Number: E14266.E2  
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266-21

6/5/2014 9:22:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X406056-03 (Soil)**

**GRO (TVPH)/DRO (TEPH)by EPA 8015C**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	4F05011	06/05/2014	06/05/2014	
Diesel (C10-C28)	<b>205</b>	50.0	"	"	"	"	"	
Surrogate: o-Terphenyl	106 %	59-131			"	"	"	

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 Project Number: E14266.E2  
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266-23

6/5/2014 9:39:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X406056-04 (Soil)**

**GRO (TVPH)/DRO (TEPH)by EPA 8015C**

Gasoline (C6-C10)	60.3	50.0	mg/kg	1	4F05011	06/05/2014	06/05/2014	
Diesel (C10-C28)	532	50.0	"	"	"	"	"	
Surrogate: o-Terphenyl	95.9 %	59-131			"	"	"	

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266-24

6/5/2014 10:08:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X406056-05 (Soil)**

**GRO (TVPH)/DRO (TEPH)by EPA 8015C**

Gasoline (C6-C10)	ND	50.0	mg/kg	1	4F05011	06/05/2014	06/05/2014	
Diesel (C10-C28)	ND	50.0	"	"	"	"	"	
Surrogate: o-Terphenyl	99.8 %	59-131			"	"	"	

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4F05006 - EPA 5030 (soil)**

**Blank (4F05006-BLK1)**

Prepared: 06/05/2014 Analyzed: 06/05/2014

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		98.0	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4F05006 - EPA 5030 (soil)

**LCS (4F05006-BS1)**

Prepared: 06/05/2014 Analyzed: 06/05/2014

Benzene	0.1	0.002	mg/kg	0.100		97.0	77.1-124			
Toluene	0.1	0.002	"	0.100		95.3	74.5-128			
Ethylbenzene	0.09	0.002	"	0.100		93.2	66.4-127			
m,p-Xylene	0.2	0.004	"	0.200		92.8	76.6-124			
o-Xylene	0.09	0.002	"	0.100		92.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.8	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4F05006 - EPA 5030 (soil)

Matrix Spike (4F05006-MS1)	Source: X406044-01			Prepared: 06/05/2014 Analyzed: 06/05/2014						
Benzene	0.08	0.002	mg/kg	0.100	ND	78.4	71.8-126			
Toluene	0.07	0.002	"	0.100	ND	73.8	65.1-130			
Ethylbenzene	0.06	0.002	"	0.100	ND	64.0	62.2-130			
m,p-Xylene	0.1	0.004	"	0.200	ND	63.6	46.5-137			
o-Xylene	0.06	0.002	"	0.100	ND	64.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		98.6	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4F05006 - EPA 5030 (soil)

Matrix Spike Dup (4F05006-MSD1)	Source: X406044-01			Prepared: 06/05/2014 Analyzed: 06/05/2014						
Benzene	0.07	0.002	mg/kg	0.100	ND	74.0	71.8-126	5.77	11.3	
Toluene	0.07	0.002	"	0.100	ND	66.9	65.1-130	9.84	15.4	
Ethylbenzene	0.06	0.002	"	0.100	ND	55.5	62.2-130	14.2	19.6	J-02
m,p-Xylene	0.1	0.004	"	0.200	ND	54.8	46.5-137	14.8	19.2	
o-Xylene	0.06	0.002	"	0.100	ND	56.1	54.2-134	14.4	17.9	
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.1	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Extractable Petroleum Hydrocarbons by 8015M - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4F05011 - EPA 3580**

**Blank (4F05011-BLK1)**

Prepared: 06/05/2014 Analyzed: 06/05/2014

Gasoline (C6-C10)	ND	50.0	mg/kg							
Diesel (C10-C28)	ND	50.0	"							
Surrogate: o-Terphenyl	43		g	50.0		85.7	59-131			

**LCS (4F05011-BS1)**

Prepared: 06/05/2014 Analyzed: 06/05/2014

Gasoline (C6-C10)	1040	50.0	mg/kg	1000		104	59-133			
Diesel (C10-C28)	1120	50.0	"	1000		112	64-121			
Surrogate: o-Terphenyl	55		g	50.0		109	59-131			

**LCS Dup (4F05011-BSD1)**

Prepared: 06/05/2014 Analyzed: 06/05/2014

Gasoline (C6-C10)	1070	50.0	mg/kg	1000		107	59-133	2.67	20	
Diesel (C10-C28)	1090	50.0	"	1000		109	64-121	2.65	20	
Surrogate: o-Terphenyl	54		g	50.0		107	59-131			

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**Notes and Definitions**

J-02 Reported value failed to meet established quality control criteria for the precision accuracy.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.



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