

July 29, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Boyle St 8-16 Wellhead

Project Number - 09A1417746

Attached are your analytical results for KMG - Boyle St 8-16 Wellhead received by Origins Laboratory, Inc. July 08, 2024. This project is associated with Origins project number Y407192-01.

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



Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417746
Project: KMG - Boyle St 8-16 Wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-RISER@4'	Y407192-01	Soil	July 8, 2024 12:10	07/08/2024 17:04

Origins Laboratory, Inc.



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 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4407192 Client: Ensolum
 Client Project ID: Boyle St 8-16
 Checklist Completed by: EHO Shipped Via: HD
 Date/time completed: 7/18/12 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: L10 °C _____ °C _____ °C (Describe) _____ °C
 Thermometer ID: 7005

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		/		SD
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			/	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			/	
Were all samples received intact ⁽¹⁾ ?	//			
Was adequate sample volume provided ⁽¹⁾ ?	//			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (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)			/	
Additional Comments (if any):				

⁽¹⁾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) EHO Date/Time Reviewed 7/18/12

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Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

SEP01-RISER@4'
7/8/2024 12:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y407192-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B4G0915	07/09/2024	07/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4G0831	07/08/2024	07/09/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: *o*-Terphenyl 98.2 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4G0832	07/08/2024	07/09/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4 90.1 % 70-130 " " "

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7/8/2024 12:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y407192-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	102 %		70-130			B4G08 32	07/08/2024	07/09/2024	
Surrogate: 4-Bromofluorobenzene	106 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.852	0.499	meq/L	10	[CALC]		07/09/2024	07/10/2024	
Magnesium	ND	0.823	"	"	"	"	"	"	
Sodium	ND	0.435	"	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4G0819		07/08/2024	07/08/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	"	Ua

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Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y407192-01 (Soil)

PAH by EPA 8270E

Fluorene	ND		0.020	mg/kg	1	B4G0819	07/08/2024	07/08/2024	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	93.6 %		60-130			"	"	"	
Surrogate: Pyrene-d10	98.1 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	102 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.26			pH Units	1	B4G0920	07/09/2024	07/10/2024	
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SAR by 20B Saturated Paste

SAR	0.0329		0.0100	SAR	1	B4G0908	07/09/2024	07/10/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.153		0.00500	mmhos/cm	1	B4G0920	07/09/2024	07/10/2024	
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Table 915 metals by EPA 6020B

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7/8/2024 12:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y407192-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.55		0.273	mg/kg	10	B4G0830	07/08/2024	07/09/2024	
Barium	53.9		9.42	"	"	"	"	"	
Cadmium	0.195		0.0942	"	"	"	"	"	
Copper	ND		9.42	"	"	"	"	"	
Lead	6.76		0.942	"	"	"	"	"	
Nickel	5.64		0.942	"	"	"	"	"	
Selenium	ND		0.245	"	"	"	"	"	
Silver	ND		0.0942	"	"	"	"	"	
Zinc	ND		34.9	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	0.188	0.132	0.331	mg/kg dry	1	2643597	07/19/2024	07/26/2024	J
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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4G0831 - EPA 3550B										
Blank (B4G0831-BLK1)										
					Prepared: 07/08/2024 Analyzed: 07/08/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	25		"	24.9		99.6	50-150			

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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 B4G0831 - EPA 3550B

LCS (B4G0831-BS1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

Diesel (C10-C28)	936	50.0	mg/kg	1000		93.6	70-130			
Residual Range Organics (C28-C40)	959	200	"	1000		95.9	70-130			
Surrogate: o-Terphenyl	48		"	49.8		96.2	50-150			

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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 B4G0831 - EPA 3550B

Matrix Spike (B4G0831-MS1)	Source: Y407188-01			Prepared: 07/08/2024 Analyzed: 07/08/2024						
Diesel (C10-C28)	902	50.0	mg/kg	1000	ND	90.2	70-130			
Residual Range Organics (C28-C40)	983	200	"	1000	ND	98.3	70-130			
<i>Surrogate: o-Terphenyl</i>	49		"	49.8		98.5	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B4G0831 - EPA 3550B

Matrix Spike Dup (B4G0831-MSD1)	Source: Y407188-01			Prepared: 07/08/2024 Analyzed: 07/08/2024						
Diesel (C10-C28)	940	50.0	mg/kg	1000	ND	94.0	70-130	4.15	35	
Residual Range Organics (C28-C40)	976	200	"	1000	ND	97.6	70-130	0.714	35	
Surrogate: o-Terphenyl	48		"	49.8		97.5	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - 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 B4G0832 - EPA 5030 (soil)

Blank (B4G0832-BLK1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	107		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	92.0		70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - 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 B4G0832 - EPA 5030 (soil)

LCS (B4G0832-BS1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.100	0.00200	"	0.100		100	70-130			
Benzene	0.0930	0.00200	"	0.100		93.0	70-130			
Ethylbenzene	0.104	0.00200	"	0.100		104	70-130			
Naphthalene	0.0916	0.00380	"	0.100		91.6	70-130			
Toluene	0.0905	0.00200	"	0.100		90.5	70-130			
o-Xylene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.209	0.00400	"	0.200		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.4	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 B4G0832 - EPA 5030 (soil)

Matrix Spike (B4G0832-MS1)	Source: Y407191-01			Prepared: 07/08/2024 Analyzed: 07/08/2024						
1,2,4-Trimethylbenzene	0.0998	0.00200	mg/kg	0.100	ND	99.8	70-130			
1,3,5-Trimethylbenzene	0.0989	0.00200	"	0.100	ND	98.9	70-130			
Benzene	0.0887	0.00200	"	0.100	ND	88.7	70-130			
Ethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Naphthalene	0.0873	0.00380	"	0.100	ND	87.3	70-130			
Toluene	0.0889	0.00200	"	0.100	ND	88.9	70-130			
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130			
m,p-Xylene	0.205	0.00400	"	0.200	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		87.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 B4G0832 - EPA 5030 (soil)

Matrix Spike Dup (B4G0832-MSD1)	Source: Y407191-01			Prepared: 07/08/2024 Analyzed: 07/08/2024						
1,2,4-Trimethylbenzene	0.0964	0.00200	mg/kg	0.100	ND	96.4	70-130	3.55	20	
1,3,5-Trimethylbenzene	0.0979	0.00200	"	0.100	ND	97.9	70-130	0.935	20	
Benzene	0.0870	0.00200	"	0.100	ND	87.0	70-130	1.94	20	
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130	1.60	20	
Naphthalene	0.0914	0.00380	"	0.100	ND	91.4	70-130	4.63	20	
Toluene	0.0896	0.00200	"	0.100	ND	89.6	70-130	0.762	20	
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130	0.193	20	
m,p-Xylene	0.202	0.00400	"	0.200	ND	101	70-130	1.45	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.6	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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Metals by EPA 6000/7000 Series Methods - 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 B4G0830 - EPA 3050B

Blank (B4G0830-BLK1)

Prepared: 07/08/2024 Analyzed: 07/09/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

LCS (B4G0830-BS1)

Prepared: 07/08/2024 Analyzed: 07/09/2024

Arsenic	5.22	0.290	mg/kg	5.00		104	80-120			
Barium	508	10.0	"	500		102	80-120			
Cadmium	5.54	0.100	"	5.00		111	80-120			
Copper	57.4	10.0	"	50.0		115	80-120			
Lead	5.32	1.00	"	5.00		106	80-120			
Nickel	5.63	1.00	"	5.00		113	80-120			
Selenium	5.24	0.260	"	5.00		105	80-120			
Silver	5.58	0.100	"	5.00		112	80-120			
Zinc	54.0	37.0	"	50.0		108	80-120			

Matrix Spike (B4G0830-MS1)

Source: Y407190-09

Prepared: 07/08/2024 Analyzed: 07/09/2024

Origins Laboratory, Inc.



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Ensolum
 11049 W 44th Avenue, Suite 103
 Wheat Ridge CO 80033

Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

Metals by EPA 6000/7000 Series Methods - 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 B4G0830 - EPA 3050B

Matrix Spike (B4G0830-MS1)		Source: Y407190-09			Prepared: 07/08/2024 Analyzed: 07/09/2024					
Arsenic	9.06	0.280	mg/kg	4.83	3.62	113	75-125			
Barium	737	9.66	"	483	189	113	75-125			
Cadmium	6.01	0.0966	"	4.83	0.221	120	75-125			
Copper	75.8	9.66	"	48.3	19.3	117	75-125			
Lead	20.6	0.966	"	4.83	14.8	121	75-125			
Nickel	20.6	0.966	"	4.83	14.0	137	75-125			QM-07
Selenium	5.81	0.251	"	4.83	0.414	112	75-125			
Silver	5.89	0.0966	"	4.83	0.0988	120	75-125			
Zinc	187	35.7	"	48.3	126	125	75-125			

Matrix Spike Dup (B4G0830-MSD1)		Source: Y407190-09			Prepared: 07/08/2024 Analyzed: 07/09/2024					
Arsenic	9.31	0.257	mg/kg	4.43	3.62	128	75-125	2.74	20	QM-07
Barium	744	8.87	"	443	189	125	75-125	0.971	20	
Cadmium	5.86	0.0887	"	4.43	0.221	127	75-125	2.50	20	QM-07
Copper	74.6	8.87	"	44.3	19.3	125	75-125	1.56	20	
Lead	21.5	0.887	"	4.43	14.8	151	75-125	4.07	20	QM-07
Nickel	21.0	0.887	"	4.43	14.0	159	75-125	1.95	20	QM-07
Selenium	5.47	0.231	"	4.43	0.414	114	75-125	6.01	20	
Silver	5.67	0.0887	"	4.43	0.0988	126	75-125	3.77	20	QM-07
Zinc	189	32.8	"	44.3	126	142	75-125	1.21	20	QM-07

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 Wheat Ridge CO 80033

Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4G0819 - EPA 3580

Blank (B4G0819-BLK1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua
Surrogate: Fluorene-d10	210		ug/kg	200		106	60-130			
Surrogate: Anthracene-d10	170		"	200		87.2	60-130			
Surrogate: Pyrene-d10	200		"	200		98.9	60-130			
Surrogate: Benzo (a) pyrene-d12	220		"	200		112	60-130			

LCS (B4G0819-BS1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

1-Methylnaphthalene	0.206	0.002	mg/kg	0.200		103	70-130			
2-Methylnaphthalene	0.204	0.002	"	0.200		102	70-130			
Acenaphthene	0.218	0.020	"	0.200		109	70-130			
Anthracene	0.187	0.020	"	0.200		93.4	70-130			

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Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4G0819 - EPA 3580

LCS (B4G0819-BS1)

Prepared: 07/08/2024 Analyzed: 07/08/2024

Benzo (a) anthracene	0.193	0.005	mg/kg	0.200		96.6	70-130			
Benzo (a) pyrene	0.195	0.020	"	0.200		97.6	70-130			
Benzo (b) fluoranthene	0.205	0.020	"	0.200		102	70-130			
Benzo (g,h,i) perylene	0.218	0.020	"	0.200		109	70-130			
Benzo (k) fluoranthene	0.200	0.020	"	0.200		99.8	70-130			
Chrysene	0.203	0.020	"	0.200		101	70-130			
Dibenz (a,h) anthracene	0.217	0.020	"	0.200		109	70-130			
Fluoranthene	0.199	0.020	"	0.200		99.3	70-130			
Fluorene	0.227	0.020	"	0.200		113	70-130			
Indeno (1,2,3-cd) pyrene	0.212	0.020	"	0.200		106	70-130			
Naphthalene	0.219	0.002	"	0.200		109	70-130			
Phenanthrene	0.197	0.020	"	0.200		98.7	70-130			
Pyrene	0.193	0.020	"	0.200		96.6	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	180		"	200		89.2	60-130			
Surrogate: Pyrene-d10	190		"	200		96.5	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		97.0	60-130			

Matrix Spike (B4G0819-MS1)

Source: Y407182-01

Prepared: 07/08/2024 Analyzed: 07/08/2024

1-Methylnaphthalene	0.205	0.002	mg/kg	0.200	0.001	102	70-130			
2-Methylnaphthalene	0.206	0.002	"	0.200	0.002	102	70-130			
Acenaphthene	0.207	0.020	"	0.200	ND	104	70-130			
Anthracene	0.184	0.020	"	0.200	0.002	90.9	70-130			
Benzo (a) anthracene	0.192	0.005	"	0.200	ND	96.2	70-130			
Benzo (a) pyrene	0.198	0.020	"	0.200	ND	98.9	70-130			
Benzo (b) fluoranthene	0.202	0.020	"	0.200	0.0003	101	70-130			
Benzo (g,h,i) perylene	0.212	0.020	"	0.200	ND	106	70-130			

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Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4G0819 - EPA 3580

Matrix Spike (B4G0819-MS1)		Source: Y407182-01			Prepared: 07/08/2024 Analyzed: 07/08/2024					
Benzo (k) fluoranthene	0.203	0.020	mg/kg	0.200	ND	102	70-130			
Chrysene	0.200	0.020	"	0.200	ND	100	70-130			
Dibenz (a,h) anthracene	0.214	0.020	"	0.200	ND	107	70-130			
Fluoranthene	0.192	0.020	"	0.200	ND	96.0	70-130			
Fluorene	0.213	0.020	"	0.200	ND	106	70-130			
Indeno (1,2,3-cd) pyrene	0.208	0.020	"	0.200	ND	104	70-130			
Naphthalene	0.209	0.002	"	0.200	ND	105	70-130			
Phenanthrene	0.187	0.020	"	0.200	ND	93.5	70-130			
Pyrene	0.186	0.020	"	0.200	ND	93.1	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	180		"	200		90.6	60-130			
Surrogate: Pyrene-d10	190		"	200		96.0	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

Matrix Spike Dup (B4G0819-MSD1)		Source: Y407182-01			Prepared: 07/08/2024 Analyzed: 07/08/2024					
1-Methylnaphthalene	0.210	0.002	mg/kg	0.200	0.001	104	70-130	2.24	20	
2-Methylnaphthalene	0.212	0.002	"	0.200	0.002	105	70-130	2.60	20	
Acenaphthene	0.215	0.020	"	0.200	ND	107	70-130	3.62	20	
Anthracene	0.188	0.020	"	0.200	0.002	93.3	70-130	2.54	20	
Benzo (a) anthracene	0.195	0.005	"	0.200	ND	97.3	70-130	1.13	20	
Benzo (a) pyrene	0.200	0.020	"	0.200	ND	100	70-130	1.38	20	
Benzo (b) fluoranthene	0.205	0.020	"	0.200	0.0003	102	70-130	1.24	20	
Benzo (g,h,i) perylene	0.223	0.020	"	0.200	ND	111	70-130	4.94	20	
Benzo (k) fluoranthene	0.206	0.020	"	0.200	ND	103	70-130	1.61	20	
Chrysene	0.203	0.020	"	0.200	ND	101	70-130	1.34	20	
Dibenz (a,h) anthracene	0.224	0.020	"	0.200	ND	112	70-130	4.30	20	
Fluoranthene	0.200	0.020	"	0.200	ND	100	70-130	4.15	20	

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Jeremy Espinoza
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 Project: KMG - Boyle St 8-16 Wellhead

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4G0819 - EPA 3580

Matrix Spike Dup (B4G0819-MSD1)	Source: Y407182-01			Prepared: 07/08/2024 Analyzed: 07/08/2024						
Fluorene	0.223	0.020	mg/kg	0.200	ND	112	70-130	4.91	20	
Indeno (1,2,3-cd) pyrene	0.213	0.020	"	0.200	ND	107	70-130	2.40	20	
Naphthalene	0.217	0.002	"	0.200	ND	109	70-130	3.89	20	
Phenanthrene	0.196	0.020	"	0.200	ND	97.9	70-130	4.59	20	
Pyrene	0.190	0.020	"	0.200	ND	95.1	70-130	2.13	20	
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	180		"	200		91.2	60-130			
Surrogate: Pyrene-d10	190		"	200		95.6	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130			

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Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

Classical Chemistry Parameters - 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 B4G0908 - Saturated Paste Metals

Blank (B4G0908-BLK1)

Prepared: 07/09/2024 Analyzed: 07/10/2024

SAR	ND	0.0100	SAR							
Calcium PPM	ND	10.0	mg/L							
Magnesium PPM	ND	10.0	"							
Sodium PPM	ND	10.0	"							

Duplicate (B4G0908-DUP1)

Source: Y407190-16

Prepared: 07/09/2024 Analyzed: 07/10/2024

SAR	ND	0.0100	SAR		11.5				200	
Calcium PPM	518	10.0	mg/L		449			14.3	50	
Magnesium PPM	199	10.0	"		167			17.6	50	
Sodium PPM	1300	10.0	"		1130			14.2	50	

Batch B4G0915 - DTPA Sorbitol Preparation

Blank (B4G0915-BLK1)

Prepared: 07/09/2024 Analyzed: 07/10/2024

Boron	ND	0.100	mg/L							
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Duplicate (B4G0915-DUP1)

Source: Y407191-08

Prepared: 07/09/2024 Analyzed: 07/10/2024

Boron	0.444	0.102	mg/L		0.409			8.11	50	
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Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

Saturated Paste - 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 B4G0920 - Saturated Paste pH/EC

Blank (B4G0920-BLK1)

Prepared: 07/09/2024 Analyzed: 07/11/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4G0920-DUP1)

Source: Y407190-16

Prepared: 07/09/2024 Analyzed: 07/10/2024

Specific Conductance (EC)	7.89	0.00500	mmhos/cm	6.80	14.9	25
pH	7.90		pH Units	7.80	1.27	25

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Ensolum
 11049 W 44th Avenue, Suite 103
 Wheat Ridge CO 80033

Jeremy Espinoza
 Project Number: 09A1417746
 Project: KMG - Boyle St 8-16 Wellhead

Total Metals 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2643597 - SW846 3060A										
BLANK (1205795115-BLK)					Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	ND	0.285	mg/kg				-			U
LCS (1205795116-BKS)					Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	2.94	0.293	mg/kg	2.93		100	80-120			
DUP (1205795117 D)					Source: 674675001 Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	0.314	0.311	mg/kg dry		0.353		0-50	11.6	50	
MS (1205795118 S)					Source: 674675001 Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	2.31	0.246	mg/kg dry	2.46	0.353	79.5	75-125			
DUP (1205795119 D)					Source: 674675002 Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	0.293	0.371	mg/kg dry		0.349		0-50	17.6	50	J
MS (1205795120 S)					Source: 674675002 Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	4.23	0.473	mg/kg dry	4.73	0.349	82	75-125			
ILCS (1205795421-ILCS)					Prepared: 07/19/2024 Analyzed: 07/26/2024					
Hexavalent Chromium	5.31	0.255	mg/kg	5.16		103	80-120			

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Jeremy Espinoza
Project Number: 09A1417746
Project: KMG - Boyle St 8-16 Wellhead

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

J Greater than the detection limit but less than the reporting limit

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

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