

TABLE 1
BERIG 17-35 & UP42-35 1
GROUNDWATER SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Napthalene (µg/L)	1,2,4- trimethylbenzene (µg/L)	1,3,5- trimethylbenzene (µg/L)	Total Dissolved Solids (ug/L)	Chloride Ion (ug/L)	Sulfate Ion (ug/L)	Depth to Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
ECMC Allowable Levels		5	560	700	1400	140	67	67	1,575,000	250,000	660,000		
GW01	7/29/2021	1,480	3,070	238	4,560	20.1	358	308	901,000	185,000	193,000	2.00	NA
GW02	7/29/2021	<1.00	<1.00	11.1	<1.00	<4.00	<1.00	<1.00	660,000	114,000	161,000	2.00	NA
GW03	7/29/2021	177	<4.00	49.5	305	<16.0	97.0	68.1	826,000	219,000	125,000	2.00	NA
GW04	7/29/2021	3.32	<1.00	11.1	<1.00	4.04	<1.00	<1.00	678,000	138,000	92,300	2.00	NA
GW-BG01	7/29/2021	NA	NA	NA	NA	NA	NA	NA	1,200,000	192,000	356,000	2.00	NA
MW01	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,040,000	169,000	250,000	1.92	98.38
MW01	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	995,000	187,000	201,000	1.30	99.00
MW02	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	706,000	140,000	168,000	2.71	99.13
MW02	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	764,000	160,000	205,000	1.57	100.27
MW03	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,150,000	187,000	316,000	2.43	98.77
MW03	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,260,000	83,000	528,000	1.51	99.69
MW04	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,410,000	270,000	363,000	2.19	97.45
MW04	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,340,000	242,000	341,000	1.23	98.41
MW05	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,400,000	265,000	335,000	1.99	96.37
MW05	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,550,000	238,000	438,000	1.22	97.14
MW06	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,210,000	203,000	243,000	1.82	97.61
MW06	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	985,000	176,000	161,000	1.03	98.40
MW07	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,290,000	302,000	233,000	2.10	97.59
MW07	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	954,000	158,000	178,000	1.43	98.26
MW08	6/26/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	1,450,000	164,000	349,000	2.42	98.41
MW08	9/5/2023	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	962,000	163,000	151,000	1.70	99.13

Notes: ECMC - Colorado Energy and Carbon Management Commission
ft bgs - feet below ground surface
NA - not analyzed/not available
NM - not measured
Corrected Relative GW Elev. is used when LNAPL is present.
Inorganic parameters TDS and Sulfate based on site-specific background sample (MW03 - 9/5/2023) concentration x 1.25.
BOLD = Analytical result is in exceedance of ECMC Table 915-1 groundwater standards.

µg/L - micrograms per liter
< - less than laboratory reporting limit
Excavation groundwater depth is approximate

TABLE 2
SURFACE WATER ANALYTICAL RESULTS
BERIG 17-35 & UP42-35 1 O SA FACILITY
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE, LP

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- trimethylbenzene (µg/L)	1,3,5- trimethylbenzene (µg/L)
COGCC Allowable Levels		5	560	700	1400	140	67	67
Ditch-01	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
Ditch-02	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
Ditch-03	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
Ditch-04	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
Ditch-05	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
Ditch-06	8/12/2021	<1.00	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
SW-01	8/12/2021	<1.00	2.57	<1.00	<1.00	<4.00	<1.00	<1.00

Notes: COGCC - Colorado Oil and Gas Conservation Commission

ft bgs - feet below ground surface

NA - not analyzed/not available

BOLD = Analytical result is in exceedance of COGCC Table 915-1 groundwater standards.

µg/L - micrograms per liter

< - less than laboratory reporting limit

Excavation groundwater depth is approximate

September 13, 2023

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - Berig 17-35 & UP 42-35 1
OSA Facility****Project Number - 09A1662045**

Attached are your analytical results for KMG - Berig 17-35 & UP 42-35 1 OSA Facility received by Origins Laboratory, Inc. September 05, 2023. This project is associated with Origins project number Y309054-01.

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: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y309054-01	Water	September 5, 2023 13:00	09/05/2023 14:52
MW02	Y309054-02	Water	September 5, 2023 12:47	09/05/2023 14:52
MW03	Y309054-03	Water	September 5, 2023 12:37	09/05/2023 14:52
MW04	Y309054-04	Water	September 5, 2023 12:25	09/05/2023 14:52
MW05	Y309054-05	Water	September 5, 2023 12:15	09/05/2023 14:52
MW06	Y309054-06	Water	September 5, 2023 12:05	09/05/2023 14:52
MW07	Y309054-07	Water	September 5, 2023 11:55	09/05/2023 14:52
MW08	Y309054-08	Water	September 5, 2023 13:15	09/05/2023 14:52

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

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43090584

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ORIGINS
LABORATORY, INC

Client: Ensolum
Address: 11049 W 44th Ave Ste 103 Wheat Ridge, CO 80033
Telephone Number: (970) 590-2134
Email Address: kmk@ensolum.com

Project Manager: Jeremy Espinoza
Project Name: Berig 17-35 & UP 42-35 1 OSA Facility
Project Number: 09A1662045
Samples Collected By: Jennifer Corleas

Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other		
MW01	9/5/23	1300	4	X				X					1
MW02		1247											2
MW03		1737											3
MW04		1225											4
MW05		1215											5
MW06		1705											6
MW07		1155											7
MW08		1315											8
													9
													10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Jennifer Corleas	9/5/2023	1400	kmk	9/5/23	1400	Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/>
kmk	9/5/23	1452	kmk	9/5/23	1452	48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>

Date Results Needed

Temp Received- 0.2

Origins Laboratory, Inc.

J. Bynon

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y2090584

Client: Ensolum

Client Project ID: Berig 17-35 & UP 42-35

Checklist Completed by: EHS

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/5/23

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐ (Describe)

Cooler Number/Temperature: 1 10.2 °C 1 °C 1 °C 1 °C

Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – Is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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)

Date/Time Reviewed 9/7/23

Origins Laboratory, Inc.

J. Bynon

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW01

9/5/2023 1:00:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-01 (Water)

Anions by IC 300.0

Chloride	187	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	201	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

119 %

70-130

"

"

"

Surrogate: Toluene-d8

98.1 %

70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

96.4 %

70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	995	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW02

9/5/2023 12:47:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-02 (Water)

Anions by IC 300.0

Chloride	160	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	205	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

118 % 70-130

"

"

"

Surrogate: Toluene-d8

100 % 70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

93.1 % 70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	764	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW03

9/5/2023 12:37:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-03 (Water)

Anions by IC 300.0

Chloride	83.0	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	528	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

117 % 70-130

"

"

"

Surrogate: Toluene-d8

99.8 % 70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

91.8 % 70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	1260	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW04

9/5/2023 12:25:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-04 (Water)

Anions by IC 300.0

Chloride	242	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	341	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

119 % 70-130

"

"

"

Surrogate: Toluene-d8

101 % 70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

92.7 % 70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	1340	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW05

9/5/2023 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-05 (Water)

Anions by IC 300.0

Chloride	238	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	438	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

119 %

70-130

"

"

"

Surrogate: Toluene-d8

98.4 %

70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

94.1 %

70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	1550	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW06

9/5/2023 12:05:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-06 (Water)

Anions by IC 300.0

Chloride	176	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	161	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

123 % 70-130

"

"

"

Surrogate: Toluene-d8

101 % 70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

92.8 % 70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	985	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW07

9/5/2023 11:55:00AM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309054-07 (Water)

Anions by IC 300.0

Chloride	158	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	178	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4

120 % 70-130

"

"

"

Surrogate: Toluene-d8

102 % 70-130

"

"

"

Surrogate: 4-Bromofluorobenzene

93.3 % 70-130

"

"

"

Total Dissolved Solids by 2540C

Total Dissolved Solids	954	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

MW08

9/5/2023 1:15:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309054-08 (Water)

Anions by IC 300.0

Chloride	163	31.2	mg/L	125	B310805	ACC	09/08/2023	09/08/2023	
Sulfate	151	31.2	"	"	"	ACC	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B310624	JSM	09/06/2023	09/06/2023	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	JSM	"	"	U
Benzene	ND	1.00	"	"	"	JSM	"	"	U
Ethylbenzene	ND	1.00	"	"	"	JSM	"	"	U
Naphthalene	ND	2.00	"	"	"	JSM	"	"	U
Toluene	ND	1.00	"	"	"	JSM	"	"	U
Xylenes, total	ND	1.00	"	"	"	JSM	"	"	U

Surrogate: 1,2-Dichloroethane-d4	119 %	70-130			"	"	"	
Surrogate: Toluene-d8	98.2 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	90.8 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	962	5.00	mg/L	1	B310820	tsh	09/08/2023	09/12/2023	
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

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 B3I0624 - EPA 5030B (Water)

Blank (B3I0624-BLK1)

Prepared: 09/06/2023 Analyzed: 09/06/2023

1,2,4-Trimethylbenzene	ND	2.00	ug/L							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	2.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	77		"	62.5		123	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

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 B3I0624 - EPA 5030B (Water)

LCS (B3I0624-BS1)

Prepared: 09/06/2023 Analyzed: 09/06/2023

1,2,4-Trimethylbenzene	51.0	2.00	ug/L	50.0		102	70-130			
1,3,5-Trimethylbenzene	51.2	2.00	"	50.0		102	70-130			
Benzene	50.8	1.00	"	50.0		102	70-130			
Ethylbenzene	53.5	1.00	"	50.0		107	70-130			
m,p-Xylene	107	2.00	"	100		107	70-130			
Naphthalene	51.1	2.00	"	50.0		102	70-130			
o-Xylene	53.3	1.00	"	50.0		107	70-130			
Toluene	49.4	1.00	"	50.0		98.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	73		"	62.5		117	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

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Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

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 B3I0624 - EPA 5030B (Water)

Matrix Spike (B3I0624-MS1)		Source: Y309054-01			Prepared: 09/06/2023 Analyzed: 09/06/2023					
1,2,4-Trimethylbenzene	56.0	2.00	ug/L	50.0	ND	112	70-130			
1,3,5-Trimethylbenzene	57.8	2.00	"	50.0	ND	116	70-130			
Benzene	49.5	1.00	"	50.0	ND	99.0	70-130			
Ethylbenzene	55.9	1.00	"	50.0	0.190	111	70-130			
m,p-Xylene	112	2.00	"	100	ND	112	70-130			
Naphthalene	52.7	2.00	"	50.0	ND	105	70-130			
o-Xylene	55.9	1.00	"	50.0	ND	112	70-130			
Toluene	51.0	1.00	"	50.0	0.150	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	75		"	62.5		120	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

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 B3I0624 - EPA 5030B (Water)

Matrix Spike Dup (B3I0624-MSD1)		Source: Y309054-01			Prepared: 09/06/2023 Analyzed: 09/06/2023					
1,2,4-Trimethylbenzene	50.7	2.00	ug/L	50.0	ND	101	70-130	9.78	20	
1,3,5-Trimethylbenzene	52.2	2.00	"	50.0	ND	104	70-130	10.2	20	
Benzene	44.3	1.00	"	50.0	ND	88.6	70-130	11.1	20	
Ethylbenzene	52.6	1.00	"	50.0	0.190	105	70-130	6.14	20	
m,p-Xylene	105	2.00	"	100	ND	105	70-130	6.95	20	
Naphthalene	47.6	2.00	"	50.0	ND	95.1	70-130	10.2	20	
o-Xylene	52.1	1.00	"	50.0	ND	104	70-130	6.96	20	
Toluene	47.0	1.00	"	50.0	0.150	93.8	70-130	8.04	20	
Surrogate: 1,2-Dichloroethane-d4	74		"	62.5		118	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		110	70-130			

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

Jeremy Espinoza
Project Number: 09A1662045
Project: KMG - Berig 17-35 & UP 42-35 1 OSA Facility

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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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 B3I0805 - Filter .45um non acidified

Blank (B3I0805-BLK1)

Prepared: 09/08/2023 Analyzed: 09/08/2023

Chloride	ND	0.250	mg/L							U
Sulfate	ND	0.250	"							U

LCS (B3I0805-BS1)

Prepared: 09/08/2023 Analyzed: 09/08/2023

Chloride	4.02	0.250	mg/L	4.00		101	90-110			
Sulfate	3.95	0.250	"	4.00		98.8	90-110			

Matrix Spike (B3I0805-MS1)

Source: Y309054-03

Prepared: 09/08/2023 Analyzed: 09/08/2023

Chloride	610		mg/L	500	83.0	105	90-110			
Sulfate	1060		"	500	528	106	90-110			

Matrix Spike Dup (B3I0805-MSD1)

Source: Y309054-03

Prepared: 09/08/2023 Analyzed: 09/08/2023

Chloride	587		mg/L	500	83.0	101	90-110	3.83	5	
Sulfate	1030		"	500	528	101	90-110	2.58	5	

Batch B3I0820 - NO PREP

Blank (B3I0820-BLK1)

Prepared: 09/08/2023 Analyzed: 09/12/2023

Total Dissolved Solids	ND	5.00	mg/L							
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LCS (B3I0820-BS1)

Prepared: 09/08/2023 Analyzed: 09/12/2023

Total Dissolved Solids	1010	5.00	mg/L	1000		101	90-110			
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Duplicate (B3I0820-DUP1)

Source: Y309054-01

Prepared: 09/08/2023 Analyzed: 09/12/2023

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

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 B3I0820 - NO PREP

Total Dissolved Solids	966	5.00	mg/L		995			2.96	10	
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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1662045

Project: KMG - Berig 17-35 & UP 42-35 1 OSA
Facility

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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