

**TABLE 1**  
**SOIL SAMPLE FIELD DATA SUMMARY TABLE**  
**KIRKMIDD 9-15A WELLHEAD**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL AND GAS ONSHORE, LP**

Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
<b>WELLHEAD EXCAVATION SAMPLES</b>								
N Wall	7/17/2024	3	0.5	NS	NO	40.136607	-104.869464	N
E Wall	7/17/2024	3	0.3	NS	NO	40.136579	-104.869424	N
S Wall	7/17/2024	3	0.8	NS	NO	40.136552	-104.869459	N
W Wall	7/17/2024	3	0.3	NS	NO	40.136572	-104.869475	N
WH01-RISER@3'	7/17/2024	3	1.3	NS	NO	40.136555	-104.869453	Y
WH01-RISER@3'-V	7/17/2024	3	1.3	NS	NO	40.136555	-104.869453	Y
B01@6'	7/17/2024	6	1.6	NS	NO	40.136579	-104.869454	Y
B01@6'-V	7/17/2024	6	1.6	NS	NO	40.136579	-104.869454	Y
FS01	7/17/2024	0.5	1.0	NS	NO	40.136611	-104.86945	N
FS02	7/17/2024	0.5	0.1	NS	NO	40.136569	-104.869401	N
FS03	7/17/2024	0.5	0.3	NS	NO	40.136554	-104.869429	N
FS04	7/17/2024	0.5	0.1	NS	NO	40.136567	-104.869494	N
<b>FLOWLINE POTHOLE SAMPLES</b>								
PH01	7/24/2024	4	1.6	NS	NO	40.133612	-104.872819	N
PH02	7/24/2024	4	1.5	NS	NO	40.133817	-104.872598	N
PH03	7/24/2024	4	1.5	NS	NO	40.134019	-104.872366	N
PH04	7/24/2024	4	1.4	NS	NO	40.134214	-104.872131	N
PH05	7/24/2024	5	1.6	NS	NO	40.134435	-104.871862	N
PH06	7/24/2024	5	1.1	NS	NO	40.134702	-104.871554	N
PH07	7/24/2024	5	1.1	NS	NO	40.134998	-104.871214	N
PH08	7/25/2024	5	0.4	NS	NO	40.135246	-104.870938	N
PH09	7/25/2024	5	0.3	NS	NO	40.135422	-104.870727	N
PH10	7/25/2024	4	0.1	NS	NO	40.135604	-104.87052	N
PH11	7/25/2024	4	0.2	NS	NO	40.135785	-104.870327	N
PH12	7/25/2024	4	0.1	NS	NO	40.135989	-104.870094	N
PH13	7/25/2024	4	0.0	NS	NO	40.136222	-104.869816	N
PH14	7/25/2024	4	0.0	NS	NO	40.136369	-104.869646	N
<b>SEPARATOR RISER SAMPLES</b>								
SEP01-RISER@4'	7/19/2024	4	1.9	NS	NO	40.13335100	-104.8731	Y
<b>BACKGROUND SOIL SAMPLES</b>								
NATIVE-BG01@3'	7/19/2024	3	1.6	NS	NO	40.136669	-104.869424	Y
NATIVE-BG01@6'	7/19/2024	6	1.1	NS	NO	40.136669	-104.869424	Y
NATIVE-BG02@3'	7/19/2024	3	0.8	NS	NO	40.136501	-104.869432	Y
NATIVE-BG02@6'	7/19/2024	6	0.6	NS	NO	40.136501	-104.869432	Y
NATIVE-BG03@3'	7/19/2024	3	1.3	NS	NO	40.136595	-104.869592	Y
NATIVE-BG03@6'	7/19/2024	6	1.8	NS	NO	40.136595	-104.869592	Y

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**KIRKMIDD 9-15A WELLHEAD**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL AND GAS ONSHORE, LP**

Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
NATIVE-BG01@3' (Rem No. 35020)	7/18/2024	3	NA	NS	NO	40.132712	-104.869199	Y
NATIVE-BG01@6' (Rem No. 35020)	7/18/2024	6	NA	NS	NO	40.132712	-104.869199	Y
NATIVE-BG02@3' (Rem No. 35020)	7/18/2024	3	NA	NS	NO	40.132572	-104.869168	Y
NATIVE-BG02@6' (Rem No. 35020)	7/18/2024	6	NA	NS	NO	40.132572	-104.869168	Y
NATIVE-BG03@3' (Rem No. 35020)	7/18/2024	3	NA	NS	NO	40.23883	-104.876423	Y
NATIVE-BG03@6' (Rem No. 35020)	7/18/2024	6	NA	NS	NO	40.23883	-104.876423	Y
NATIVE-BG04@3' (Rem No. 35020)	7/18/2024	3	NA	NS	NO	40.238884	-104.876414	Y
NATIVE-BG04@6' (Rem No. 35020)	7/18/2024	6	NA	NS	NO	40.238884	-104.876414	Y
NATIVE-BG05@3' (Rem No. 35020)	7/18/2024	3	NA	NS	NO	40.238924	-104.876514	Y
NATIVE-BG05@6' (Rem No. 35020)	7/18/2024	6	NA	NS	NO	40.238924	-104.876514	Y

**Notes:**

ft. - feet	NS - No Staining
bgs - below ground surface	NO - No Odor
PID - Photoionization detector	NA - Not Analyzed/Not Applicable
ppm - parts per million	

TABLE 2-1  
SOIL SAMPLE ANALYTICAL RESULTS  
VOLATILE ORGANIC COMPOUNDS AND TOTAL PETROLEUM HYDROCARBONS  
KIRKMIDD 9-15A WELLHEAD  
WELD COUNTY, COLORADO  
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	TPH-GRO <sup>+</sup> (mg/kg)	TPH-DRO <sup>+</sup> (mg/kg)	TPH-RRO <sup>+</sup> (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4- Trimethyl benzene (mg/kg)	1,3,5- Trimethyl benzene (mg/kg)	Naphthalene (mg/kg)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
WELLHEAD EXCAVATION SAMPLES												
B01@6'	7/17/2024	6	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
B01@6'-V	7/17/2024	6	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
WH01-RISER@3'	7/17/2024	3	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
WH01-RISER@3'-V	7/17/2024	3	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
SEPARATOR RISER SAMPLES												
SEP01-RISER@4'	7/19/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002

**Notes:**

ECMC - Energy and Carbon Management Commission

PGSSLs - Protection of Groundwater Soil Screening Level Concentrations

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

RRO - residual range organics

\*Allowable level for TPH is 500 mg/kg for combined GRO, DRO, ORO

ft - feet

bgs - below ground surface

mg/kg - milligrams per kilogram

< - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

**Bold** - exceeds ECMC Table 915-1 allowable level and background

TABLE 2-2  
SOIL SAMPLE ANALYTICAL RESULTS  
POLYCYCLIC AROMATIC HYDROCARBONS  
KIRKMIDD 9-15A WELLHEAD  
WELD COUNTY, COLORADO  
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) anthracene (mg/kg)	Benzo (b) fluoranthene (mg/kg)	Benzo (k) fluoranthene (mg/kg)	Benzo (a) pyrene (mg/kg)	Chrysene (mg/kg)	Dibenz (a,h) anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) pyrene (mg/kg)	1-Methyl naphthalene (mg/kg)	2-Methyl naphthalene (mg/kg)	Pyrene (mg/kg)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	8.9	0.54	0.98	0.006	0.019	1.3
WELLHEAD EXCAVATION SAMPLES																
B01@6'	7/17/2024	6	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
B01@6'-V	7/17/2024	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WH01-RISER@3'	7/17/2024	3	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
WH01-RISER@3'-V	7/17/2024	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEPARATOR RISER SAMPLES																
SEP01-RISER@4'	7/19/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020

Notes:  
ECMC - Energy and Carbon Management Commission  
PGSSLs - Protection of Groundwater Soil Screening Level Concentrations  
ft - feet  
bgs - below ground surface  
mg/kg - milligrams per kilogram  
< - less than laboratory reporting limit  
NA - Not Analyzed/Not Applicable  
**Bold** - exceeds ECMC Table 915-1 allowable level and background

TABLE 2-3  
SOIL SAMPLE ANALYTICAL RESULTS  
SOIL SUITABILITY FOR RECLAMATION  
KIRKMIDD 9-15A WELLHEAD  
WELD COUNTY, COLORADO  
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	EC (mmhos/cm)	SAR	pH	Boron (mg/L)
ECMC Table 915-1 Cleanup Concentrations			4	6	6-8.3	2
Site-Specific Background Limits			0.584	1.33	8.66	0.423
<b>WELLHEAD EXCAVATION SAMPLES</b>						
<b>B01@6'</b>	7/17/2024	6	0.212	0.349	8.44*	<0.100
<b>B01@6'-V</b>	7/17/2024	6	NA	NA	8.31*	NA
<b>WH01-RISER@3'</b>	7/17/2024	3	0.0861	0.32	7.98	<0.100
<b>WH01-RISER@3'-V</b>	7/17/2024	3	NA	NA	7.87	NA
<b>SEPARATOR RISER SAMPLES</b>						
<b>SEP01-RISER@4'</b>	7/19/2024	4	0.334	0.439	8.44*	0.205
<b>BACKGROUND SAMPLES</b>						
<b>Native-BG01@3'</b>	7/19/2024	3	0.198	0.743	8.33	<0.100
<b>Native-BG01@6'</b>	7/19/2024	6	0.241	1.33	8.46	<0.100
<b>Native-BG02@3'</b>	7/19/2024	3	0.0532	0.139	7.83	<0.100
<b>Native-BG02@6'</b>	7/19/2024	6	0.0559	0.232	7.8	<0.100
<b>Native-BG03@3'</b>	7/19/2024	3	0.163	0.253	8.15	<0.100
<b>Native-BG03@6'</b>	7/19/2024	6	0.584	1.23	8.3	<0.100
<b>NATIVE-BG01@3' (Rem No. 35020)</b>	7/18/2024	3	0.107	0.108	8.66	0.423
<b>NATIVE-BG01@6' (Rem No. 35020)</b>	7/18/2024	6	0.205	0.46	8.53	0.41
<b>NATIVE-BG02@3' (Rem No. 35020)</b>	7/18/2024	3	0.328	0.255	8.21	0.335
<b>NATIVE-BG02@6' (Rem No. 35020)</b>	7/18/2024	6	0.328	0.269	8.39	0.226
<b>NATIVE-BG03@3' (Rem No. 35020)</b>	7/18/2024	3	0.243	0.271	8.48	0.305
<b>NATIVE-BG03@6' (Rem No. 35020)</b>	7/18/2024	6	0.354	0.703	8.47	0.415
<b>NATIVE-BG04@3' (Rem No. 35020)</b>	7/18/2024	3	0.221	0.184	8.48	0.269
<b>NATIVE-BG04@6' (Rem No. 35020)</b>	7/18/2024	6	0.214	0.318	8.53	0.284
<b>NATIVE-BG05@3' (Rem No. 35020)</b>	7/18/2024	3	0.283	0.181	8.1	0.242
<b>NATIVE-BG05@6' (Rem No. 35020)</b>	7/18/2024	6	0.244	0.194	8.48	0.344

**Notes:**

ECMC - Energy and Carbon Management Commission

EC - electrical conductivity

SAR - sodium adsorption ratio

< - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

**Bold** - exceeds ECMC Table 915-1 allowable level and background

\*Exceeds Table 915-1 allowable level but within background

If site-specific backgrounds are less than cleanup concentrations, then cleanup concentration values will be applied.

ft - feet

bgs - below ground surface

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 2-4  
SOIL SAMPLE ANALYTICAL RESULTS  
METALS  
KIRKMIDD 9-15A WELLHEAD  
WELD COUNTY, COLORADO  
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Cleanup Concentrations (PGSSLs)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Site-Specific Background Limits			5.67	179	0.304	0.34	11.3	12.1	14.2	0.264	0	48.7
<b>WELLHEAD EXCAVATION SAMPLES</b>												
<b>B01@6'</b>	7/17/2024	6	2.18*	61.8	<0.0926	0.292*	<9.26	4.44	7.37	<0.25	<0.0926	<34.3
<b>B01@6'-V</b>	7/17/2024	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>WH01-RISER@3'</b>	7/17/2024	3	1.97*	55.3	<0.0871	0.135*	<8.71	13.1	7.31	<0.226	<0.0871	<32.2
<b>WH01-RISER@3'-V</b>	7/17/2024	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>SEPARATOR RISER SAMPLES</b>												
<b>SEP01-RISER@4'</b>	7/19/2024	4	3.96*	121*	0.142	<0.165	<8.99	7.88	10.6	<0.234	<0.0899	35.2
<b>BACKGROUND SAMPLES</b>												
<b>Native-BG01@3'</b>	7/19/2024	3	1.83	47.2	<0.0882	<0.325	<8.82	4.51	6.25	<0.25	<0.0882	<32.6
<b>Native-BG01@6'</b>	7/19/2024	6	2.06	56.2	<0.0962	<0.356	<9.62	5.17	7.21	<0.25	<0.0962	<35.6
<b>Native-BG02@3'</b>	7/19/2024	3	1.53	44.6	<0.0923	0.2	<9.23	3.83	5.82	<0.25	<0.0923	<34.1
<b>Native-BG02@6'</b>	7/19/2024	6	1.65	52.6	<0.0857	0.176	<8.57	4.26	6.38	<0.25	<0.0857	<31.7
<b>Native-BG03@3'</b>	7/19/2024	3	1.72	53.5	<0.0866	<0.364	<8.66	5.27	7.65	<0.25	<0.0866	<32.1
<b>Native-BG03@6'</b>	7/19/2024	6	2.18	64.8	<0.0877	<0.452	<8.77	4.96	7.9	<0.25	<0.0877	<32.5
<b>NATIVE-BG01@3' (Rem No. 35020)</b>	7/18/2024	3	5.67	150	0.156	<0.268	<9.84	6.27	10.3	<0.25	<0.0984	<36.4
<b>NATIVE-BG01@6' (Rem No. 35020)</b>	7/18/2024	6	3.67	179	0.133	<0.347	<9.57	4.49	7.05	<0.25	<0.0957	<35.4
<b>NATIVE-BG02@3' (Rem No. 35020)</b>	7/18/2024	3	4.42	138	0.136	0.198	<9.20	7.43	11.7	<0.25	<0.0920	<34.0
<b>NATIVE-BG02@6' (Rem No. 35020)</b>	7/18/2024	6	3.61	138	0.129	0.34	<9.75	7.48	10.3	<0.25	<0.0975	<36.1
<b>NATIVE-BG03@3' (Rem No. 35020)</b>	7/18/2024	3	4.08	123	0.145	0.138	<9.63	7.33	9.77	<0.25	<0.0963	<35.6
<b>NATIVE-BG03@6' (Rem No. 35020)</b>	7/18/2024	6	4.27	149	0.174	0.155	9.46	12.1	11	0.264	<0.0925	48.7
<b>NATIVE-BG04@3' (Rem No. 35020)</b>	7/18/2024	3	3.99	126	0.145	0.169	<9.57	7.84	10.6	<0.25	<0.0957	35.5
<b>NATIVE-BG04@6' (Rem No. 35020)</b>	7/18/2024	6	3.74	123	0.136	<0.353	<8.69	8.83	10.1	<0.25	<0.0869	33.3
<b>NATIVE-BG05@3' (Rem No. 35020)</b>	7/18/2024	3	4.99	111	0.124	<0.364	11.3	9.53	14.2	<0.250	<0.0961	48.3
<b>NATIVE-BG05@6' (Rem No. 35020)</b>	7/18/2024	6	3.54	125	0.304	0.174	<8.98	6.3	9.89	<0.25	<0.0898	<33.2

**Notes:**

ECMC - Energy and Carbon Management Commission

PGSSLs - Protection of Groundwater Soil Screening Level Concentrations

ft - feet

bgs - below ground surface

mg/kg - milligrams per kilogram

< - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

**Bold** - exceeds ECMC Table 915-1 allowable level and background

\*Exceeds Table 915-1 allowable level but within background

If site-specific backgrounds are less than cleanup concentrations, then cleanup concentration values will be applied.

August 16, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

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**Project Name - KMG - Kirkmidd 9-15A Wellhead      Project Number - 09A1417743**

Attached are your analytical results for KMG - Kirkmidd 9-15A Wellhead received by Origins Laboratory, Inc. July 17, 2024. This project is associated with Origins project number Y407426-01.

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: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@6'	Y407426-01	Soil	July 17, 2024 11:30	07/17/2024 15:43
WH01-RISER@3	Y407426-02	Soil	July 17, 2024 11:35	07/17/2024 15:43
B01@6'-V	Y407426-03	Soil	July 17, 2024 11:40	07/17/2024 15:43
WH01-RISER@3'-V	Y407426-04	Soil	July 17, 2024 11:45	07/17/2024 15:43

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

ORIGINS  
LABORATORY, INC

ORIGINAL WORK ORDER # **4409426**

Page 1 of 1

Client: Ensolum

Address: \_\_\_\_\_

Project Manager: J. Espinoza

Key: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Project Name: Kirkmidd 9-15A Wellhead

Project Number: 09A1417743

W=Water

GW=Groundwater

SW=Surface Water

WV=Waste Water

W=Liquid

Email Address: KME@ens.com

Invoice/Billing Info: 1/1/24

Collected By: HK

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis										Comments				
						1	2	3	4	5	6	7	8	9	10					
1	BOLE61	7/17/24	1130	3	5 LMP															
2	WHOL-RISE-61		1135																	
3	BOLE61-V		11240																	
4	W+O-RISE-61-V		1145																	
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: [Signature] Date: 7/17/24 Time: 1543

Received By: [Signature] Date: 7/17/24 Time: 1543

Temp Received - 0 Received On Ice? ☒ Yes ☐ No

Standard ☐ 48 Hr ☐ 72 Hr

Turnaround Time ☒ SAME DAY ☐ 24 Hr

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

Origins Laboratory, Inc.

*Byron*

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmid 9-15A Wellhead

Origins Laboratory

## Sample Receipt Checklist

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

Origins Work Order: 4407426

Client: Ensolum

Client Project ID: Kirkmid 9-15A

Checklist Completed by: EKO

Shipped Via: KD

Date/time completed: 7/19/12

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: N/A

Matrix(s) Received: (Check all that apply): 0 Soil/Solid 0 Water 0 Other: 0

Cooler Number/Temperature: 1 / 10.1 °C 0 / 0 °C 0 / 0 °C (Describe)

Thermometer ID: 1005

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> ?		<input checked="" type="checkbox"/>		<u>SO</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" 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 checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
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 HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
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) EKO

Date/Time Reviewed 7/19/12

Origins Laboratory, Inc.

*J. Bynon*

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

B01@6'

7/17/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407426-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B4G1805	07/18/2024	07/19/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4G1735	07/17/2024	07/17/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	88.0 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4G1748	07/17/2024	07/17/2024	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	108 %	70-130			"	"	"	
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

B01@6'

7/17/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y407426-01 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %	70-130	B4G1748	07/17/2024	07/17/2024
Surrogate: 4-Bromofluorobenzene	106 %	70-130	"	"	"

**Metals by Saturated Paste by EPA 6010**

Calcium	1.23	0.499	meq/L	10	[CALC]	07/18/2024	07/19/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4G1744	07/17/2024	07/17/2024	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

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

B01@6'

7/17/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y407426-01 (Soil)

## PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B4G1744	07/17/2024	07/17/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	95.3 %	60-130	"	"	"
Surrogate: Anthracene-d10	78.9 %	60-130	"	"	"
Surrogate: Pyrene-d10	88.5 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	100 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.44	pH Units	1	B4G1815	07/18/2024	07/18/2024
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## SAR by 20B Saturated Paste

SAR	0.349	0.0100	SAR	1	B4G1810	07/18/2024	07/19/2024
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## Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.212	0.00500	mmhos/cm	1	B4G1815	07/18/2024	07/18/2024
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## Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

B01@6'

7/17/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y407426-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.18	0.269	mg/kg	10	B4G1754	07/17/2024	07/18/2024
Barium	61.8	9.26	"	"	"	"	"
Cadmium	ND	0.0926	"	"	"	"	"
Copper	ND	9.26	"	"	"	"	"
Lead	4.44	0.926	"	"	"	"	"
Nickel	7.37	0.926	"	"	"	"	"
Selenium	ND	0.241	"	"	"	"	"
Silver	ND	0.0926	"	"	"	"	"
Zinc	ND	34.3	"	"	"	"	"

## Total Metals 7196A

Hexavalent Chromium	0.292	0.165	0.412	mg/kg dry	1	2653039	08/15/2024	08/15/2024	J
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## WH01-RISER@3

7/17/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407426-02 (Soil)

### Boron (DTPA Sorbitol)

Boron	ND	0.100	mg/L	1	B4G1805	07/18/2024	07/19/2024	
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### DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4G1735	07/17/2024	07/17/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	88.2 %	50-150			"	"	"	
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### GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4G1748	07/17/2024	07/17/2024	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	106 %	70-130			"	"	"	
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## WH01-RISER@3

7/17/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407426-02 (Soil)

### GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	107 %	70-130	B4G1748	07/17/2024	07/17/2024
Surrogate: 4-Bromofluorobenzene	104 %	70-130	"	"	"

### Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	07/18/2024	07/19/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

### PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4G1744	07/17/2024	07/17/2024	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

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## WH01-RISER@3

7/17/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407426-02 (Soil)

### PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B4G1744	07/17/2024	07/17/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	99.7 %	60-130	"	"	"
Surrogate: Anthracene-d10	87.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	89.8 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	99.6 %	60-130	"	"	"

### pH in Soil by 9045D

pH	7.98	pH Units	1	B4G1815	07/18/2024	07/18/2024
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### SAR by 20B Saturated Paste

SAR	0.319	0.0100	SAR	1	B4G1810	07/18/2024	07/19/2024
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### Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.0861	0.00500	mmhos/cm	1	B4G1815	07/18/2024	07/18/2024
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### Table 915 metals by EPA 6020B

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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## WH01-RISER@3

7/17/2024 11:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407426-02 (Soil)

### Table 915 metals by EPA 6020B

Arsenic	1.97	0.253	mg/kg	10	B4G1754	07/17/2024	07/18/2024
Barium	55.3	8.71	"	"	"	"	"
Cadmium	ND	0.0871	"	"	"	"	"
Copper	ND	8.71	"	"	"	"	"
Lead	13.1	0.871	"	"	"	"	"
Nickel	7.31	0.871	"	"	"	"	"
Selenium	ND	0.226	"	"	"	"	"
Silver	ND	0.0871	"	"	"	"	"
Zinc	ND	32.2	"	"	"	"	"

### Total Metals 7196A

Hexavalent Chromium	0.135	0.110	0.276	mg/kg dry	1	2653039	08/15/2024	08/15/2024	J
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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: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

B01@6'-V

7/17/2024 11:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407426-03 (Soil)

**pH in Soil by 9045D**

pH	8.31		pH Units	1	B4G2223	07/22/2024	07/22/2024
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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: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

**WH01-RISER@3'-V**

**7/17/2024 11:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**

**Y407426-04 (Soil)**

**pH in Soil by 9045D**

pH	7.87		pH Units	1	B4G2223	07/22/2024	07/22/2024
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Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## 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 B4G1735 - EPA 3550B										
Blank (B4G1735-BLK1)					Prepared: 07/17/2024 Analyzed: 07/17/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	22		"	24.9		89.0	50-150			

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## 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 B4G1735 - EPA 3550B

### LCS (B4G1735-BS1)

Prepared: 07/17/2024 Analyzed: 07/17/2024

Diesel (C10-C28)	992	50.0	mg/kg	1000		99.2	70-130			
Residual Range Organics (C28-C40)	1110	200	"	1000		111	70-130			
Surrogate: o-Terphenyl	61		"	49.8		123	50-150			

Origins Laboratory, Inc.



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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 B4G1735 - EPA 3550B

Matrix Spike (B4G1735-MS1)		Source: Y407426-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
Diesel (C10-C28)	1010	50.0	mg/kg	1000	ND	101	70-130			
Residual Range Organics (C28-C40)	1100	200	"	1000	ND	110	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.1	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 B4G1735 - EPA 3550B

Matrix Spike Dup (B4G1735-MSD1)		Source: Y407426-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
Diesel (C10-C28)	985	50.0	mg/kg	1000	ND	98.5	70-130	2.13	35	
Residual Range Organics (C28-C40)	1080	200	"	1000	ND	108	70-130	2.53	35	
Surrogate: o-Terphenyl	54		"	49.8		108	50-150			

Origins Laboratory, Inc.



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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 B4G1748 - EPA 5030 (soil)										
Blank (B4G1748-BLK1)					Prepared: 07/17/2024 Analyzed: 07/17/2024					
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	103		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	103		70-130			

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**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 B4G1748 - EPA 5030 (soil)**

**LCS (B4G1748-BS1)**

Prepared: 07/17/2024 Analyzed: 07/17/2024

1,2,4-Trimethylbenzene	0.102	0.00200	mg/kg	0.100		102	70-130
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100		101	70-130
Benzene	0.0984	0.00200	"	0.100		98.4	70-130
Ethylbenzene	0.113	0.00200	"	0.100		113	70-130
Naphthalene	0.102	0.00380	"	0.100		102	70-130
Toluene	0.0955	0.00200	"	0.100		95.5	70-130
o-Xylene	0.0968	0.00200	"	0.100		96.8	70-130
m,p-Xylene	0.194	0.00400	"	0.200		97.2	70-130
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.8	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 B4G1748 - EPA 5030 (soil)

Matrix Spike (B4G1748-MS1)		Source: Y407426-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
1,2,4-Trimethylbenzene	0.0975	0.00200	mg/kg	0.100	ND	97.5	70-130			
1,3,5-Trimethylbenzene	0.0959	0.00200	"	0.100	ND	95.9	70-130			
Benzene	0.0959	0.00200	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.107	0.00200	"	0.100	ND	107	70-130			
Naphthalene	0.107	0.00380	"	0.100	ND	107	70-130			
Toluene	0.0915	0.00200	"	0.100	ND	91.5	70-130			
o-Xylene	0.0915	0.00200	"	0.100	ND	91.5	70-130			
m,p-Xylene	0.184	0.00400	"	0.200	ND	92.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.0	70-130			

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Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**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
<b>Batch B4G1748 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4G1748-MSD1)</b>		<b>Source: Y407426-01</b>			Prepared: 07/17/2024 Analyzed: 07/17/2024					
1,2,4-Trimethylbenzene	0.0919	0.00200	mg/kg	0.100	ND	91.9	70-130	5.98	20	
1,3,5-Trimethylbenzene	0.0922	0.00200	"	0.100	ND	92.2	70-130	3.98	20	
Benzene	0.0880	0.00200	"	0.100	ND	88.0	70-130	8.57	20	
Ethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130	3.17	20	
Naphthalene	0.0988	0.00380	"	0.100	ND	98.8	70-130	7.56	20	
Toluene	0.0868	0.00200	"	0.100	ND	86.8	70-130	5.27	20	
o-Xylene	0.0874	0.00200	"	0.100	ND	87.4	70-130	4.54	20	
m,p-Xylene	0.177	0.00400	"	0.200	ND	88.3	70-130	4.37	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	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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## 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 B4G1754 - EPA 3050B

#### Blank (B4G1754-BLK1)

Prepared: 07/17/2024 Analyzed: 07/18/2024

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 (B4G1754-BS1)

Prepared: 07/17/2024 Analyzed: 07/18/2024

Arsenic	5.90	0.290	mg/kg	5.00	118	80-120
Barium	543	10.0	"	500	109	80-120
Cadmium	5.55	0.100	"	5.00	111	80-120
Copper	56.9	10.0	"	50.0	114	80-120
Lead	5.40	1.00	"	5.00	108	80-120
Nickel	5.93	1.00	"	5.00	119	80-120
Selenium	5.61	0.260	"	5.00	112	80-120
Silver	5.65	0.100	"	5.00	113	80-120
Zinc	59.2	37.0	"	50.0	118	80-120

#### Matrix Spike (B4G1754-MS1)

Source: Y407426-01

Prepared: 07/17/2024 Analyzed: 07/18/2024

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Project: KMG - Kirkmidd 9-15A 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 B4G1754 - EPA 3050B

Matrix Spike (B4G1754-MS1)		Source: Y407426-01			Prepared: 07/17/2024 Analyzed: 07/18/2024					
Arsenic	7.31	0.280	mg/kg	4.83	2.18	106	75-125			
Barium	594	9.67	"	483	61.8	110	75-125			
Cadmium	5.36	0.0967	"	4.83	0.0528	110	75-125			
Copper	56.7	9.67	"	48.3	5.68	106	75-125			
Lead	9.91	0.967	"	4.83	4.44	113	75-125			
Nickel	12.9	0.967	"	4.83	7.37	115	75-125			
Selenium	4.82	0.251	"	4.83	0.0435	98.7	75-125			
Silver	5.32	0.0967	"	4.83	0.0111	110	75-125			
Zinc	72.4	35.8	"	48.3	24.1	100	75-125			
Matrix Spike Dup (B4G1754-MSD1)		Source: Y407426-01			Prepared: 07/17/2024 Analyzed: 07/18/2024					
Arsenic	7.22	0.269	mg/kg	4.63	2.18	109	75-125	1.22	20	
Barium	579	9.26	"	463	61.8	112	75-125	2.46	20	
Cadmium	5.19	0.0926	"	4.63	0.0528	111	75-125	3.29	20	
Copper	54.4	9.26	"	46.3	5.68	105	75-125	4.12	20	
Lead	9.71	0.926	"	4.63	4.44	114	75-125	2.05	20	
Nickel	12.4	0.926	"	4.63	7.37	108	75-125	4.50	20	
Selenium	5.08	0.241	"	4.63	0.0435	109	75-125	5.23	20	
Silver	5.21	0.0926	"	4.63	0.0111	112	75-125	2.27	20	
Zinc	71.4	34.3	"	46.3	24.1	102	75-125	1.42	20	

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Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 B4G1744 - EPA 3580**

**Blank (B4G1744-BLK1)**

Prepared: 07/17/2024 Analyzed: 07/17/2024

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		103	60-130
Surrogate: Anthracene-d10	180		"	200		91.9	60-130
Surrogate: Pyrene-d10	230		"	200		113	60-130
Surrogate: Benzo (a) pyrene-d12	220		"	200		109	60-130

**LCS (B4G1744-BS1)**

Prepared: 07/17/2024 Analyzed: 07/17/2024

1-Methylnaphthalene	0.193	0.002	mg/kg	0.200		96.7	70-130
2-Methylnaphthalene	0.183	0.002	"	0.200		91.3	70-130
Acenaphthene	0.201	0.020	"	0.200		101	70-130
Anthracene	0.176	0.020	"	0.200		87.8	70-130

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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 B4G1744 - EPA 3580**

**LCS (B4G1744-BS1)**

Prepared: 07/17/2024 Analyzed: 07/17/2024

Benzo (a) anthracene	0.182	0.005	mg/kg	0.200		90.9	70-130
Benzo (a) pyrene	0.192	0.020	"	0.200		96.1	70-130
Benzo (b) fluoranthene	0.220	0.020	"	0.200		110	70-130
Benzo (g,h,i) perylene	0.235	0.020	"	0.200		117	70-130
Benzo (k) fluoranthene	0.211	0.020	"	0.200		105	70-130
Chrysene	0.203	0.020	"	0.200		101	70-130
Dibenz (a,h) anthracene	0.233	0.020	"	0.200		116	70-130
Fluoranthene	0.194	0.020	"	0.200		97.1	70-130
Fluorene	0.208	0.020	"	0.200		104	70-130
Indeno (1,2,3-cd) pyrene	0.219	0.020	"	0.200		109	70-130
Naphthalene	0.205	0.002	"	0.200		102	70-130
Phenanthrene	0.209	0.020	"	0.200		105	70-130
Pyrene	0.211	0.020	"	0.200		105	70-130
Surrogate: Fluorene-d10	190		ug/kg	200		94.0	60-130
Surrogate: Anthracene-d10	170		"	200		87.1	60-130
Surrogate: Pyrene-d10	210		"	200		107	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130

**Matrix Spike (B4G1744-MS1)**

Source: Y407138-01

Prepared: 07/17/2024 Analyzed: 07/17/2024

1-Methylnaphthalene	0.194	0.002	mg/kg	0.200	0.009	92.6	70-130
2-Methylnaphthalene	0.183	0.002	"	0.200	0.002	90.4	70-130
Acenaphthene	0.199	0.020	"	0.200	0.002	98.8	70-130
Anthracene	0.178	0.020	"	0.200	ND	89.2	70-130
Benzo (a) anthracene	0.161	0.005	"	0.200	0.004	78.6	70-130
Benzo (a) pyrene	0.179	0.020	"	0.200	ND	89.7	70-130
Benzo (b) fluoranthene	0.231	0.020	"	0.200	ND	115	70-130
Benzo (g,h,i) perylene	0.202	0.020	"	0.200	0.0008	101	70-130

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**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 B4G1744 - EPA 3580**

Matrix Spike (B4G1744-MS1)		Source: Y407138-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
Benzo (k) fluoranthene	0.201	0.020	mg/kg	0.200	ND	100	70-130			
Chrysene	0.191	0.020	"	0.200	0.0006	95.0	70-130			
Dibenz (a,h) anthracene	0.233	0.020	"	0.200	ND	117	70-130			
Fluoranthene	0.151	0.020	"	0.200	ND	75.3	70-130			
Fluorene	0.208	0.020	"	0.200	0.004	102	70-130			
Indeno (1,2,3-cd) pyrene	0.253	0.020	"	0.200	ND	126	70-130			
Naphthalene	0.186	0.002	"	0.200	ND	93.0	70-130			
Phenanthrene	0.209	0.020	"	0.200	0.004	102	70-130			
Pyrene	0.165	0.020	"	0.200	0.0008	81.9	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	180		"	200		90.0	60-130			
Surrogate: Pyrene-d10	170		"	200		87.1	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130			

Matrix Spike Dup (B4G1744-MSD1)		Source: Y407138-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
1-Methylnaphthalene	0.211	0.002	mg/kg	0.200	0.009	101	70-130	8.26	20	
2-Methylnaphthalene	0.195	0.002	"	0.200	0.002	96.8	70-130	6.69	20	
Acenaphthene	0.217	0.020	"	0.200	0.002	107	70-130	8.30	20	
Anthracene	0.185	0.020	"	0.200	ND	92.6	70-130	3.71	20	
Benzo (a) anthracene	0.203	0.005	"	0.200	0.004	99.5	70-130	23.0	20	QR-02
Benzo (a) pyrene	0.196	0.020	"	0.200	ND	98.0	70-130	8.85	20	
Benzo (b) fluoranthene	0.230	0.020	"	0.200	ND	115	70-130	0.367	20	
Benzo (g,h,i) perylene	0.178	0.020	"	0.200	0.0008	88.8	70-130	12.6	20	
Benzo (k) fluoranthene	0.201	0.020	"	0.200	ND	101	70-130	0.422	20	
Chrysene	0.189	0.020	"	0.200	0.0006	93.9	70-130	1.12	20	
Dibenz (a,h) anthracene	0.217	0.020	"	0.200	ND	108	70-130	7.28	20	
Fluoranthene	0.167	0.020	"	0.200	ND	83.4	70-130	10.2	20	

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**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 B4G1744 - EPA 3580**

Matrix Spike Dup (B4G1744-MSD1)		Source: Y407138-01			Prepared: 07/17/2024 Analyzed: 07/17/2024					
Fluorene	0.213	0.020	mg/kg	0.200	0.004	105	70-130	2.24	20	
Indeno (1,2,3-cd) pyrene	0.229	0.020	"	0.200	ND	115	70-130	9.78	20	
Naphthalene	0.204	0.002	"	0.200	ND	102	70-130	9.07	20	
Phenanthrene	0.229	0.020	"	0.200	0.004	112	70-130	9.25	20	
Pyrene	0.200	0.020	"	0.200	0.0008	99.7	70-130	19.5	20	
Surrogate: Fluorene-d10	190		ug/kg	200		97.3	60-130			
Surrogate: Anthracene-d10	180		"	200		88.9	60-130			
Surrogate: Pyrene-d10	200		"	200		97.7	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

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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 B4G1805 - DTPA Sorbitol Preparation

#### Blank (B4G1805-BLK1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

Boron ND 0.100 mg/L

#### Duplicate (B4G1805-DUP1)

Source: Y407426-01

Prepared: 07/18/2024 Analyzed: 07/19/2024

Boron 0.0603 0.0988 mg/L 0.0460 26.9 50

### Batch B4G1810 - Saturated Paste Metals

#### Blank (B4G1810-BLK1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

Calcium PPM ND 10.0 mg/L

SAR ND 0.0100 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

#### Duplicate (B4G1810-DUP1)

Source: Y407408-01

Prepared: 07/18/2024 Analyzed: 07/19/2024

SAR ND 0.0100 SAR 5.89 200

Calcium PPM 71.2 10.0 mg/L 67.1 5.97 50

Magnesium PPM 80.7 10.0 " 75.9 6.14 50

Sodium PPM 309 10.0 " 297 3.88 50

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Project: KMG - Kirkmidd 9-15A 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 B4G1815 - Saturated Paste pH/EC

##### Blank (B4G1815-BLK1)

Prepared: 07/18/2024 Analyzed: 07/18/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

##### Duplicate (B4G1815-DUP1)

Source: Y407408-01

Prepared: 07/18/2024 Analyzed: 07/18/2024

pH	7.82		pH Units	7.97		1.90	25
Specific Conductance (EC)	2.16	0.00500	mmhos/cm	2.09		3.12	25

#### Batch B4G2223 - Saturated Paste pH/EC

##### Duplicate (B4G2223-DUP1)

Source: Y407241-01

Prepared: 07/22/2024 Analyzed: 07/22/2024

pH	8.24		pH Units	8.33		1.09	25
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 2653039 - SW846 3060A										
BLANK (1205814744-BLK)					Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	ND	0.302	mg/kg				-			U
LCS (1205814745-BKS)					Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	2.57	0.260	mg/kg	2.60		99.1	80-120			
DUP (1205814746 D)					Source: 676336001 Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	ND	0.464	mg/kg dry		<0.186		0-50	N/A	50	U
MS (1205814747 S)					Source: 676336001 Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	1.65	0.464	mg/kg dry	4.64	<0.186	32.9	75-125			
DUP (1205814748 D)					Source: 676336002 Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	ND	0.471	mg/kg dry		<0.188		0-50	N/A	50	U
MS (1205814749 S)					Source: 676336002 Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	4.41	0.471	mg/kg dry	4.71	<0.188	93.1	75-125			
ILCS (1205814750-ILCS)					Prepared: 08/15/2024 Analyzed: 08/15/2024					
Hexavalent Chromium	4.39	0.217	mg/kg	4.48		98	80-120			

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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

### Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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.

Origins Laboratory, Inc.



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August 22, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

---

**Project Name - KMG - Kirkmidd 9-15A Wellhead      Project Number - 09A1417743**

Attached are your analytical results for KMG - Kirkmidd 9-15A Wellhead received by Origins Laboratory, Inc. July 19, 2024. This project is associated with Origins project number Y407528-01.

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: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NATIVE-BG01@3'	Y407528-01	Soil	July 19, 2024 14:45	07/19/2024 16:53
NATIVE-BG01@6'	Y407528-02	Soil	July 19, 2024 14:48	07/19/2024 16:53
NATIVE-BG02@3'	Y407528-03	Soil	July 19, 2024 14:51	07/19/2024 16:53
NATIVE-BG02@6'	Y407528-04	Soil	July 19, 2024 14:54	07/19/2024 16:53
NATIVE-BG03@3'	Y407528-05	Soil	July 19, 2024 14:57	07/19/2024 16:53
NATIVE-BG03@6'	Y407528-06	Soil	July 19, 2024 15:00	07/19/2024 16:53

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmid 9-15A Wellhead

ORIGINS

LABORATORY INC

ORIGINAL WORK ORDER #

4407528

Page 1 of 1

Client: Ensolum

Project Manager: Jeremy Espinoza

Key:

Address: 11049 W 44th Ave, Ste. 100

Project Name: Kirkmid 9-15A Wellhead

W=Water

Telephone Number: Wheat Ridge, CO 80033

Project Number: 09A1417743

GW=Groundwater

Email Address: KMG-724pm

Collected By: JLC

SW=Surface Water

Invoice Billing Info: Initial 1049

Initial 1049

WW=Waste Water

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

L=Liquid

#	Sample ID	Date	Time	Sampled	# of Containers	Matrix	Preservative	Analysis										Comments
1	NATIVE-B501E31	7/19/24	1445		2	S	UNP											
2	NATIVE-B501E61	7/19/24	1448															
3	NATIVE-B502E31		1451															
4	NATIVE-B502E61		1454															
5	NATIVE-B505E31		1457															
6	NATIVE-B505E61		1506															
7																		
8																		
9																		
10																		

Relinquished By:	Date: 7/19/24	Time: 1403	Received By:	Date: 7/19/24	Time: 1403
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

Temp Received - 4

Received On Ice? ☒ Yes ☐ No

For Lab Sample Receiving Only:

Standard

48 Hr ☐ 72 Hr ☐

Turnaround Time ☒ SAME DAY ☐ 24 Hr

Origins Laboratory, Inc.

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmid 9-15A Wellhead

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 1407528

Client: Ensolum

Client Project ID: Kirkmid 9-15A

Checklist Completed by: TONI ETN

Shipped Via: TUP

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7/19/12

Airbill #: N/A

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

Cooler Number/Temperature: 1.4 °C 1 °C 1 °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 <sup>(1)</sup> ?	<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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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)

7/19/12  
Date/Time Reviewed

Origins Laboratory, Inc.

*J. Bynon*

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG01@3'**  
**7/19/2024 2:45:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.0991	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.794	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	0.588	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.33		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	0.743	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.198	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	1.83	0.256	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	47.2	8.82	"	"	"	"	"
Cadmium	ND	0.0882	"	"	"	"	"

Origins Laboratory, Inc.



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Ensolum  
11049 W 44th Avenue, Suite 103  
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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG01@3'**  
**7/19/2024 2:45:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-01 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	ND	8.82	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Lead	<b>4.51</b>	0.882	"	"	"	"	"
Nickel	<b>6.25</b>	0.882	"	"	"	"	"
Selenium	ND	0.229	"	"	"	"	"
Silver	ND	0.0882	"	"	"	"	"
Zinc	ND	32.6	"	"	"	"	"

**Total Metals 7196A**

Hexavalent Chromium	ND	0.130	0.325	mg/kg dry	1	2658115	08/16/2024	08/21/2024	U
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG01@6'**  
**7/19/2024 2:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.763	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.09	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.46		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	1.33	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.241	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.06	0.279	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	56.2	9.62	"	"	"	"	"
Cadmium	ND	0.0962	"	"	"	"	"

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG01@6'**  
**7/19/2024 2:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-02 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	ND	9.62	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Lead	5.17	0.962	"	"	"	"	"
Nickel	7.21	0.962	"	"	"	"	"
Selenium	ND	0.250	"	"	"	"	"
Silver	ND	0.0962	"	"	"	"	"
Zinc	ND	35.6	"	"	"	"	"

**Total Metals 7196 A**

Hexavalent Chromium	ND	0.142	0.356	mg/kg dry	1	2658122	08/16/2024	08/21/2024	U
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Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG02@3'**  
**7/19/2024 2:51:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.0999	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	7.83		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	0.139	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.0532	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	1.53	0.268	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	44.6	9.23	"	"	"	"	"
Cadmium	ND	0.0923	"	"	"	"	"

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG02@3'**  
**7/19/2024 2:51:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-03 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	ND	9.23	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Lead	<b>3.83</b>	0.923	"	"	"	"	"
Nickel	<b>5.82</b>	0.923	"	"	"	"	"
Selenium	ND	0.240	"	"	"	"	"
Silver	ND	0.0923	"	"	"	"	"
Zinc	ND	34.1	"	"	"	"	"

**Total Metals 7196 A**

Hexavalent Chromium	<b>0.200</b>	<b>0.136</b>	0.340	mg/kg dry	1	2658122	08/16/2024	08/21/2024	J
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG02@6'**  
**7/19/2024 2:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	7.80		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	0.232	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.0559	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	1.65	0.249	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	52.6	8.57	"	"	"	"	"
Cadmium	ND	0.0857	"	"	"	"	"

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG02@6'**  
**7/19/2024 2:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-04 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	ND	8.57	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Lead	4.26	0.857	"	"	"	"	"
Nickel	6.38	0.857	"	"	"	"	"
Selenium	ND	0.223	"	"	"	"	"
Silver	ND	0.0857	"	"	"	"	"
Zinc	ND	31.7	"	"	"	"	"

**Total Metals 7196A**

Hexavalent Chromium	0.176	0.147	0.368	mg/kg dry	1	2658115	08/16/2024	08/21/2024	J
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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: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG03@3'**  
**7/19/2024 2:57:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.0989	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.891	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.15		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	0.253	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.163	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	1.72	0.251	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	53.5	8.66	"	"	"	"	"
Cadmium	ND	0.0866	"	"	"	"	"

Origins Laboratory, Inc.



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Jeremy Espinoza  
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**NATIVE-BG03@3'**  
**7/19/2024 2:57:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-05 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	ND	8.66	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Lead	<b>5.27</b>	0.866	"	"	"	"	"
Nickel	<b>7.65</b>	0.866	"	"	"	"	"
Selenium	ND	0.225	"	"	"	"	"
Silver	ND	0.0866	"	"	"	"	"
Zinc	ND	32.1	"	"	"	"	"

**Total Metals 7196A**

Hexavalent Chromium	ND	0.145	0.364	mg/kg dry	1	2658115	08/16/2024	08/21/2024	U
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Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG03@6'**  
**7/19/2024 3:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-06 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.0990	mg/L	1	B4G2206	07/22/2024	07/23/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	2.82	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	1.20	0.823	"	"	"	"	"
Sodium	1.74	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.30		pH Units	1	B4G2219	07/22/2024	07/23/2024
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**SAR by 20B Saturated Paste**

SAR	1.23	0.0100	SAR	1	B4G2213	07/22/2024	07/24/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.584	0.00500	mmhos/cm	1	B4G2219	07/22/2024	07/23/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.18	0.254	mg/kg	10	B4G1955	07/19/2024	07/20/2024
Barium	64.8	8.77	"	"	"	"	"
Cadmium	ND	0.0877	"	"	"	"	"
Copper	ND	8.77	"	"	"	"	"

Origins Laboratory, Inc.



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Project: KMG - Kirkmidd 9-15A Wellhead

**NATIVE-BG03@6'**  
**7/19/2024 3:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y407528-06 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	4.96		0.877	mg/kg	10	B4G1955	07/19/2024	07/20/2024	
Nickel	7.90		0.877	"	"	"	"	"	
Selenium	ND		0.228	"	"	"	"	"	
Silver	ND		0.0877	"	"	"	"	"	
Zinc	ND		32.5	"	"	"	"	"	

**Total Metals 7196 A**

Hexavalent Chromium	ND	0.181	0.452	mg/kg dry	1	2658122	08/16/2024	08/21/2024	U
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Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 B4G1955 - EPA 3050B

##### Blank (B4G1955-BLK1)

Prepared: 07/19/2024 Analyzed: 07/20/2024

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 (B4G1955-BS1)

Prepared: 07/19/2024 Analyzed: 07/20/2024

Arsenic	5.48	0.290	mg/kg	5.00	110	80-120
Barium	538	10.0	"	500	108	80-120
Cadmium	5.27	0.100	"	5.00	105	80-120
Copper	56.7	10.0	"	50.0	113	80-120
Lead	5.32	1.00	"	5.00	106	80-120
Nickel	5.62	1.00	"	5.00	112	80-120
Selenium	4.98	0.260	"	5.00	99.7	80-120
Silver	5.26	0.100	"	5.00	105	80-120
Zinc	57.5	37.0	"	50.0	115	80-120

##### Matrix Spike (B4G1955-MS1)

Source: Y407527-01

Prepared: 07/19/2024 Analyzed: 07/20/2024

Arsenic	8.10	0.257	mg/kg	4.44	3.45	105	75-125
Barium	552	8.87	"	444	122	97.0	75-125
Cadmium	4.76	0.0887	"	4.44	0.109	105	75-125
Copper	53.6	8.87	"	44.4	9.06	100	75-125
Lead	12.0	0.887	"	4.44	8.67	75.9	75-125

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 B4G1955 - EPA 3050B

Matrix Spike (B4G1955-MS1)		Source: Y407527-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Nickel	15.8	0.887	mg/kg	4.44	10.7	113	75-125			
Selenium	4.23	0.231	"	4.44	0.0404	94.4	75-125			
Silver	4.59	0.0887	"	4.44	0.0310	103	75-125			
Zinc	79.5	32.8	"	44.4	34.6	101	75-125			
Matrix Spike Dup (B4G1955-MSD1)		Source: Y407527-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Arsenic	8.52	0.258	mg/kg	4.45	3.45	114	75-125	5.05	20	
Barium	551	8.90	"	445	122	96.4	75-125	0.256	20	
Cadmium	4.91	0.0890	"	4.45	0.109	108	75-125	3.00	20	
Copper	54.2	8.90	"	44.5	9.06	102	75-125	1.17	20	
Lead	12.3	0.890	"	4.45	8.67	81.5	75-125	2.14	20	
Nickel	16.5	0.890	"	4.45	10.7	130	75-125	4.77	20	QM-07
Selenium	4.31	0.231	"	4.45	0.0404	95.9	75-125	1.83	20	
Silver	4.83	0.0890	"	4.45	0.0310	108	75-125	5.17	20	
Zinc	80.0	32.9	"	44.5	34.6	102	75-125	0.644	20	

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Project: KMG - Kirkmidd 9-15A 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 B4G2206 - DTPA Sorbitol Preparation

##### Blank (B4G2206-BLK1)

Prepared: 07/22/2024 Analyzed: 07/23/2024

Boron ND 0.100 mg/L

##### Duplicate (B4G2206-DUP1)

Source: Y407523-03

Prepared: 07/22/2024 Analyzed: 07/23/2024

Boron 1.40 0.998 mg/L 1.27 9.51 50

#### Batch B4G2213 - Saturated Paste Metals

##### Blank (B4G2213-BLK1)

Prepared: 07/22/2024 Analyzed: 07/24/2024

Calcium PPM ND 10.0 mg/L

SAR ND 0.0100 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

##### Duplicate (B4G2213-DUP1)

Source: Y407527-02

Prepared: 07/22/2024 Analyzed: 07/24/2024

Calcium PPM 35.0 10.0 mg/L 36.9 5.29 50

SAR ND 0.0100 SAR 0.891 200

Magnesium PPM 11.2 10.0 mg/L 13.6 19.1 50

Sodium PPM 17.6 10.0 " 24.9 34.6 50

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Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4G2219 - Saturated Paste pH/EC										
Blank (B4G2219-BLK1)					Prepared: 07/22/2024 Analyzed: 07/24/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4G2219-DUP1)					Source: Y407527-02 Prepared: 07/22/2024 Analyzed: 07/23/2024					
pH	8.44		pH Units		8.43			0.119	25	
Specific Conductance (EC)	0.356	0.00500	mmhos/cm		0.440			20.9	25	

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## Total Metals 7196 A - Quality Control GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2658122 - SW846 3060A										
BLANK (1205824684-BLK)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.349	mg/kg				-			U
LCS (1205824685-BKS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	3.69	0.375	mg/kg	3.75		98.4	80-120			
DUP (1205824686 D)					Source: 676942001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.445	mg/kg dry		<0.178		0-50	N/A	50	U
MS (1205824687 S)					Source: 676942001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	4.38	0.445	mg/kg dry	4.45	<0.178	96.9	75-125			
DUP (1205824688 D)					Source: 677083001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.489	mg/kg dry		<0.196		0-50	N/A	50	U
MS (1205824689 S)					Source: 677083001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	2.76	0.489	mg/kg dry	4.89	<0.196	54	75-125			
ILCS (1205824690-ILCS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	7.77	0.379	mg/kg	7.90		98.4	80-120			

Origins Laboratory, Inc.



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Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 2658115 - SW846 3060A										
BLANK (1205824660-BLK)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.358	mg/kg				-			U
LCS (1205824661-BKS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	3.26	0.332	mg/kg	3.32		98.4	80-120			
DUP (1205824662 D)					Source: 676969003 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.259	mg/kg dry		<0.103		0-50	N/A	50	U
MS (1205824663 S)					Source: 676969003 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	1.12	0.259	mg/kg dry	2.59	<0.103	42.9	75-125			
DUP (1205824664 D)					Source: 676974021 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.269	mg/kg dry		<0.108		0-50	N/A	50	U
MS (1205824665 S)					Source: 676974021 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	2.44	0.269	mg/kg dry	2.69	<0.108	88.1	75-125			
ILCS (1205824666-ILCS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	7.85	0.387	mg/kg	7.77		101	80-120			

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

### Notes and Definitions

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.

Origins Laboratory, Inc.



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August 28, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

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**Project Name - KMG - Kirkmidd 9-15A Wellhead      Project Number - 09A1417743**

Attached are your analytical results for KMG - Kirkmidd 9-15A Wellhead received by Origins Laboratory, Inc. July 19, 2024. This project is associated with Origins project number Y407534-01.

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: 09A1417743

Project: KMG - Kirkmidd 9-15A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-RISER@4'	Y407534-01	Soil	July 19, 2024 15:45	07/19/2024 16:54

Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417743

Project: KMG - Kirkmid 9-15A Wellhead

ORIGINS LABORATORY, INC

Client: Ensolum

Address: \_\_\_\_\_

Project Manager: J. Espinoza

Key: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Project Name: Pacheco-15A Wellhead

Project Number: 09A1417743

W=Water

GW=Groundwater

SW=Surface Water

WW=Waste Water

L=Liquid

Email Address: KMG Team

Collected By: HK

Invoice/Billing Info: Initial

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date	Time	Sampled	# of Containers	Matrix	Preservative	Analysis												Comments
								1	2	3	4	5	6	7	8	9	10	11	12	
1	SEP01-R15ERC-4	7/19/24	1545	3	5	unp.	X											Sample associated with projects #09A1417743 & #09A1417744 (Kirkmid-9-15A)		
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: [Signature] Date: 7/19/24 Time: 1654

Received By: [Signature] Date: 7/19/24 Time: 1654

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Turnaround Time: ☒ SAME DAY ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr

Temp Received: 4 Received On Ice? ☒ Yes ☐ No

Standard ☐

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

Origins Laboratory, Inc.

*Bynon*

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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: 4407534

Client: Ensolum  
Client Project ID: Parker 10-5A

Checklist Completed by: TON  
Date/time completed: 7/19/12

Shipped Via: TRP  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
Cooler Number/Temperature: 1,4 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)  
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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" 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 checked="" type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
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 HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
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) WCH

7/19/12  
Date/Time Reviewed

Origins Laboratory, Inc.

*J. Bynon*

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

SEP01-RISER@4'  
7/19/2024 3:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y407534-01 (Soil)

## Boron (DTPA Sorbitol)

Boron	0.205	0.0995	mg/L	1	B4G2207	07/22/2024	07/23/2024	
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## DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4G1957	07/19/2024	07/20/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	94.0 %	50-150	"	"	"	"	"	
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## GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4G1958	07/19/2024	07/20/2024	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	108 %	70-130	"	"	"	"	"	
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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## SEP01-RISER@4'

7/19/2024 3:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407534-01 (Soil)

### GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	96.2 %	70-130	B4G19 58	07/19/2024	07/20/2024
Surrogate: 4-Bromofluorobenzene	107 %	70-130	"	"	"

### Metals by Saturated Paste by EPA 6010

Calcium	1.52	0.499	meq/L	10	[CALC]	07/22/2024	07/24/2024
Magnesium	1.10	0.823	"	"	"	"	"
Sodium	0.502	0.435	"	"	"	"	"

### PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4G1952	07/19/2024	07/20/2024	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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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## SEP01-RISER@4'

7/19/2024 3:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407534-01 (Soil)

### PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B4G1952	07/19/2024	07/20/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	92.3 %	60-130	"	"	"
Surrogate: Anthracene-d10	87.7 %	60-130	"	"	"
Surrogate: Pyrene-d10	98.6 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	105 %	60-130	"	"	"

### pH in Soil by 9045D

pH	8.44	pH Units	1	B4G2220	07/22/2024	07/23/2024
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### SAR by 20B Saturated Paste

SAR	0.439	0.0100	SAR	1	B4G2214	07/22/2024	07/24/2024
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### Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.334	0.00500	mmhos/cm	1	B4G2220	07/22/2024	07/23/2024
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### Table 915 metals by EPA 6020B

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Project: KMG - Kirkmidd 9-15A Wellhead

## SEP01-RISER@4'

7/19/2024 3:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y407534-01 (Soil)

### Table 915 metals by EPA 6020B

Arsenic	3.96	0.261	mg/kg	10	B4G1956	07/19/2024	07/20/2024
Barium	121	8.99	"	"	"	"	"
Cadmium	0.142	0.0899	"	"	"	"	"
Copper	ND	8.99	"	"	"	"	"
Lead	7.88	0.899	"	"	"	"	"
Nickel	10.6	0.899	"	"	"	"	"
Selenium	ND	0.234	"	"	"	"	"
Silver	ND	0.0899	"	"	"	"	"
Zinc	35.2	33.3	"	"	"	"	"

### Total Metals 7196A

Hexavalent Chromium	ND	0.165	0.412	mg/kg dry	1	2658122	08/16/2024	08/21/2024	U
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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

## 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 B4G1957 - EPA 3550B										
Blank (B4G1957-BLK1)					Prepared: 07/19/2024 Analyzed: 07/20/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	24		"	24.9		95.2	50-150			

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Project: KMG - Kirkmidd 9-15A Wellhead

## 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 B4G1957 - EPA 3550B										
LCS (B4G1957-BS1)					Prepared: 07/19/2024 Analyzed: 07/20/2024					
Diesel (C10-C28)	931	50.0	mg/kg	1000		93.1	70-130			
Residual Range Organics (C28-C40)	997	200	"	1000		99.7	70-130			
Surrogate: o-Terphenyl	46		"	49.8		92.4	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 B4G1957 - EPA 3550B

Matrix Spike (B4G1957-MS1)		Source: Y407534-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Diesel (C10-C28)	893	50.0	mg/kg	1000	ND	89.3	70-130			
Residual Range Organics (C28-C40)	952	200	"	1000	ND	95.2	70-130			
Surrogate: o-Terphenyl	41		"	49.8		82.1	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 B4G1957 - EPA 3550B

Matrix Spike Dup (B4G1957-MSD1)		Source: Y407534-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Diesel (C10-C28)	900	50.0	mg/kg	1000	ND	90.0	70-130	0.827	35	
Residual Range Organics (C28-C40)	980	200	"	1000	ND	98.0	70-130	2.92	35	
Surrogate: o-Terphenyl	50		"	49.8		100	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
Batch B4G1958 - EPA 5030 (soil)										
Blank (B4G1958-BLK1)					Prepared: 07/19/2024 Analyzed: 07/19/2024					
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		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A Wellhead

**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 B4G1958 - EPA 5030 (soil)**

**LCS (B4G1958-BS1)**

Prepared: 07/19/2024 Analyzed: 07/19/2024

1,2,4-Trimethylbenzene	0.0999	0.00200	mg/kg	0.100		99.9	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100		101	70-130			
Benzene	0.0940	0.00200	"	0.100		94.0	70-130			
Ethylbenzene	0.0981	0.00200	"	0.100		98.1	70-130			
Naphthalene	0.0988	0.00380	"	0.100		98.8	70-130			
Toluene	0.0939	0.00200	"	0.100		93.9	70-130			
o-Xylene	0.0993	0.00200	"	0.100		99.3	70-130			
m,p-Xylene	0.193	0.00400	"	0.200		96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.0	70-130			

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Project: KMG - Kirkmidd 9-15A Wellhead

**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 B4G1958 - EPA 5030 (soil)**

Matrix Spike (B4G1958-MS1)		Source: Y407534-01			Prepared: 07/19/2024 Analyzed: 07/19/2024					
1,2,4-Trimethylbenzene	0.0796	0.00200	mg/kg	0.100	ND	79.6	70-130			
1,3,5-Trimethylbenzene	0.0801	0.00200	"	0.100	ND	80.1	70-130			
Benzene	0.0799	0.00200	"	0.100	ND	79.9	70-130			
Ethylbenzene	0.0780	0.00200	"	0.100	ND	78.0	70-130			
Naphthalene	0.0896	0.00380	"	0.100	ND	89.6	70-130			
Toluene	0.0777	0.00200	"	0.100	ND	77.7	70-130			
o-Xylene	0.0809	0.00200	"	0.100	ND	80.9	70-130			
m,p-Xylene	0.155	0.00400	"	0.200	ND	77.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.6	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
<b>Batch B4G1958 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4G1958-MSD1)</b>		<b>Source: Y407534-01</b>			Prepared: 07/19/2024 Analyzed: 07/19/2024					
1,2,4-Trimethylbenzene	0.0813	0.00200	mg/kg	0.100	ND	81.3	70-130	2.04	20	
1,3,5-Trimethylbenzene	0.0820	0.00200	"	0.100	ND	82.0	70-130	2.27	20	
Benzene	0.0832	0.00200	"	0.100	ND	83.2	70-130	4.07	20	
Ethylbenzene	0.0786	0.00200	"	0.100	ND	78.6	70-130	0.664	20	
Naphthalene	0.0928	0.00380	"	0.100	ND	92.8	70-130	3.55	20	
Toluene	0.0810	0.00200	"	0.100	ND	81.0	70-130	4.23	20	
o-Xylene	0.0817	0.00200	"	0.100	ND	81.7	70-130	0.984	20	
m,p-Xylene	0.155	0.00400	"	0.200	ND	77.7	70-130	0.516	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

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Project: KMG - Kirkmidd 9-15A Wellhead

## 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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## 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 B4G1956 - EPA 3050B

##### Blank (B4G1956-BLK1)

Prepared: 07/19/2024 Analyzed: 07/20/2024

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 (B4G1956-BS1)

Prepared: 07/19/2024 Analyzed: 07/20/2024

Arsenic	5.53	0.290	mg/kg	5.00	111	80-120
Barium	536	10.0	"	500	107	80-120
Cadmium	5.50	0.100	"	5.00	110	80-120
Copper	55.3	10.0	"	50.0	111	80-120
Lead	5.22	1.00	"	5.00	104	80-120
Nickel	5.63	1.00	"	5.00	113	80-120
Selenium	5.51	0.260	"	5.00	110	80-120
Silver	5.59	0.100	"	5.00	112	80-120
Zinc	56.9	37.0	"	50.0	114	80-120

##### Matrix Spike (B4G1956-MS1)

Source: Y407530-01

Prepared: 07/19/2024 Analyzed: 07/20/2024

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Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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
Batch B4G1956 - EPA 3050B										
<b>Matrix Spike (B4G1956-MS1)</b>		<b>Source: Y407530-01</b>			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Arsenic	6.71	0.275	mg/kg	4.75	2.22	94.6	75-125			
Barium	590	9.49	"	475	136	95.6	75-125			
Cadmium	4.63	0.0949	"	4.75	0.107	95.4	75-125			
Copper	49.8	9.49	"	47.5	4.75	94.9	75-125			
Lead	40.5	0.949	"	4.75	57.0	NR	75-125			QM-07
Nickel	9.96	0.949	"	4.75	5.22	99.9	75-125			
Selenium	4.40	0.247	"	4.75	0.0656	91.2	75-125			
Silver	4.66	0.0949	"	4.75	0.0270	97.7	75-125			
Zinc	72.1	35.1	"	47.5	25.8	97.6	75-125			
<b>Matrix Spike Dup (B4G1956-MSD1)</b>		<b>Source: Y407530-01</b>			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Arsenic	6.66	0.243	mg/kg	4.19	2.22	106	75-125	0.736	20	
Barium	581	8.39	"	419	136	106	75-125	1.41	20	
Cadmium	4.50	0.0839	"	4.19	0.107	105	75-125	2.83	20	
Copper	48.4	8.39	"	41.9	4.75	104	75-125	2.76	20	
Lead	34.1	0.839	"	4.19	57.0	NR	75-125	17.4	20	QM-4X
Nickel	9.91	0.839	"	4.19	5.22	112	75-125	0.412	20	
Selenium	4.31	0.218	"	4.19	0.0656	101	75-125	1.89	20	
Silver	4.39	0.0839	"	4.19	0.0270	104	75-125	6.12	20	
Zinc	70.3	31.0	"	41.9	25.8	106	75-125	2.48	20	

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

Jeremy Espinoza  
Project Number: 09A1417743  
Project: KMG - Kirkmidd 9-15A 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 B4G1952 - EPA 3580**

**Blank (B4G1952-BLK1)**

Prepared: 07/19/2024 Analyzed: 07/19/2024

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	104	60-130
Surrogate: Anthracene-d10	180		"	200	90.3	60-130
Surrogate: Pyrene-d10	190		"	200	92.8	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200	101	60-130

**LCS (B4G1952-BS1)**

Prepared: 07/19/2024 Analyzed: 07/19/2024

1-Methylnaphthalene	0.169	0.002	mg/kg	0.200	84.5	70-130
2-Methylnaphthalene	0.175	0.002	"	0.200	87.3	70-130
Acenaphthene	0.190	0.020	"	0.200	95.0	70-130
Anthracene	0.173	0.020	"	0.200	86.4	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 B4G1952 - EPA 3580**

**LCS (B4G1952-BS1)**

Prepared: 07/19/2024 Analyzed: 07/19/2024

Benzo (a) anthracene	0.165	0.005	mg/kg	0.200		82.6	70-130
Benzo (a) pyrene	0.173	0.020	"	0.200		86.3	70-130
Benzo (b) fluoranthene	0.210	0.020	"	0.200		105	70-130
Benzo (g,h,i) perylene	0.203	0.020	"	0.200		101	70-130
Benzo (k) fluoranthene	0.195	0.020	"	0.200		97.6	70-130
Chrysene	0.174	0.020	"	0.200		87.0	70-130
Dibenz (a,h) anthracene	0.232	0.020	"	0.200		116	70-130
Fluoranthene	0.173	0.020	"	0.200		86.6	70-130
Fluorene	0.187	0.020	"	0.200		93.4	70-130
Indeno (1,2,3-cd) pyrene	0.216	0.020	"	0.200		108	70-130
Naphthalene	0.188	0.002	"	0.200		94.1	70-130
Phenanthrene	0.207	0.020	"	0.200		104	70-130
Pyrene	0.175	0.020	"	0.200		87.7	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		97.6	60-130
Surrogate: Anthracene-d10	180		"	200		89.8	60-130
Surrogate: Pyrene-d10	190		"	200		94.8	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130

**Matrix Spike (B4G1952-MS1)**

**Source: Y407529-01**

Prepared: 07/19/2024 Analyzed: 07/20/2024

1-Methylnaphthalene	0.194	0.002	mg/kg	0.200	ND	96.8	70-130
2-Methylnaphthalene	0.190	0.002	"	0.200	ND	95.2	70-130
Acenaphthene	0.203	0.020	"	0.200	ND	102	70-130
Anthracene	0.182	0.020	"	0.200	ND	91.2	70-130
Benzo (a) anthracene	0.173	0.005	"	0.200	0.002	85.9	70-130
Benzo (a) pyrene	0.198	0.020	"	0.200	ND	98.9	70-130
Benzo (b) fluoranthene	0.234	0.020	"	0.200	ND	117	70-130
Benzo (g,h,i) perylene	0.232	0.020	"	0.200	0.0009	116	70-130

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**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 B4G1952 - EPA 3580**

Matrix Spike (B4G1952-MS1)		Source: Y407529-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Benzo (k) fluoranthene	0.220	0.020	mg/kg	0.200	ND	110	70-130			
Chrysene	0.206	0.020	"	0.200	0.0006	103	70-130			
Dibenz (a,h) anthracene	0.251	0.020	"	0.200	0.002	125	70-130			
Fluoranthene	0.192	0.020	"	0.200	ND	96.0	70-130			
Fluorene	0.204	0.020	"	0.200	0.0005	102	70-130			
Indeno (1,2,3-cd) pyrene	0.219	0.020	"	0.200	0.002	108	70-130			
Naphthalene	0.205	0.002	"	0.200	ND	102	70-130			
Phenanthrene	0.219	0.020	"	0.200	ND	109	70-130			
Pyrene	0.204	0.020	"	0.200	ND	102	70-130			
Surrogate: Fluorene-d10	190		ug/kg	200		96.5	60-130			
Surrogate: Anthracene-d10	170		"	200		83.2	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

Matrix Spike Dup (B4G1952-MSD1)		Source: Y407529-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
1-Methylnaphthalene	0.198	0.002	mg/kg	0.200	ND	99.1	70-130	2.32	20	
2-Methylnaphthalene	0.202	0.002	"	0.200	ND	101	70-130	6.09	20	
Acenaphthene	0.204	0.020	"	0.200	ND	102	70-130	0.308	20	
Anthracene	0.180	0.020	"	0.200	ND	90.2	70-130	1.17	20	
Benzo (a) anthracene	0.170	0.005	"	0.200	0.002	84.1	70-130	2.05	20	
Benzo (a) pyrene	0.204	0.020	"	0.200	ND	102	70-130	3.19	20	
Benzo (b) fluoranthene	0.255	0.020	"	0.200	ND	128	70-130	8.98	20	
Benzo (g,h,i) perylene	0.237	0.020	"	0.200	0.0009	118	70-130	1.85	20	
Benzo (k) fluoranthene	0.237	0.020	"	0.200	ND	119	70-130	7.37	20	
Chrysene	0.196	0.020	"	0.200	0.0006	97.9	70-130	4.84	20	
Dibenz (a,h) anthracene	0.247	0.020	"	0.200	0.002	123	70-130	1.83	20	
Fluoranthene	0.186	0.020	"	0.200	ND	93.0	70-130	3.22	20	

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**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 B4G1952 - EPA 3580**

Matrix Spike Dup (B4G1952-MSD1)		Source: Y407529-01			Prepared: 07/19/2024 Analyzed: 07/20/2024					
Fluorene	0.200	0.020	mg/kg	0.200	0.0005	99.5	70-130	2.33	20	
Indeno (1,2,3-cd) pyrene	0.223	0.020	"	0.200	0.002	110	70-130	1.86	20	
Naphthalene	0.204	0.002	"	0.200	ND	102	70-130	0.300	20	
Phenanthrene	0.224	0.020	"	0.200	ND	112	70-130	2.62	20	
Pyrene	0.185	0.020	"	0.200	ND	92.7	70-130	9.78	20	
Surrogate: Fluorene-d10	190		ug/kg	200		92.9	60-130			
Surrogate: Anthracene-d10	180		"	200		90.3	60-130			
Surrogate: Pyrene-d10	190		"	200		93.8	60-130			
Surrogate: Benzo (a) pyrene-d12	220		"	200		108	60-130			

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Project: KMG - Kirkmidd 9-15A 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 B4G2207 - DTPA Sorbitol Preparation

##### Blank (B4G2207-BLK1)

Prepared: 07/22/2024 Analyzed: 07/23/2024

Boron ND 0.100 mg/L

##### Duplicate (B4G2207-DUP1)

Source: Y407478-01

Prepared: 07/22/2024 Analyzed: 07/23/2024

Boron 0.258 0.0997 mg/L 0.233 10.3 50

#### Batch B4G2214 - Saturated Paste Metals

##### Blank (B4G2214-BLK1)

Prepared: 07/22/2024 Analyzed: 07/24/2024

Calcium PPM ND 10.0 mg/L

SAR ND 0.0100 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

##### Duplicate (B4G2214-DUP1)

Source: Y407459-01

Prepared: 07/22/2024 Analyzed: 07/24/2024

Calcium PPM 26.9 10.0 mg/L 25.6 5.07 50

SAR ND 0.0100 SAR 2.35 200

Magnesium PPM 5.86 10.0 mg/L 6.17 5.15 50

Sodium PPM 49.8 10.0 " 51.0 2.22 50

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Project: KMG - Kirkmidd 9-15A Wellhead

## Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4G2220 - Saturated Paste pH/EC</b>										
<b>Blank (B4G2220-BLK1)</b>					Prepared: 07/22/2024 Analyzed: 07/23/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B4G2220-DUP1)</b>					<b>Source: Y407459-01</b> Prepared: 07/22/2024 Analyzed: 07/23/2024					
Specific Conductance (EC)	0.620	0.00500	mmhos/cm		0.612			1.19	25	
pH	8.37		pH Units		8.45			0.951	25	

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Project: KMG - Kirkmidd 9-15A 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 2658122 - SW846 3060A										
BLANK (1205824684-BLK)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.349	mg/kg				-			U
LCS (1205824685-BKS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	3.69	0.375	mg/kg	3.75		98.4	80-120			
DUP (1205824686 D)					Source: 676942001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.445	mg/kg dry		<0.178		0-50	N/A	50	U
MS (1205824687 S)					Source: 676942001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	4.38	0.445	mg/kg dry	4.45	<0.178	96.9	75-125			
DUP (1205824688 D)					Source: 677083001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	ND	0.489	mg/kg dry		<0.196		0-50	N/A	50	U
MS (1205824689 S)					Source: 677083001 Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	2.76	0.489	mg/kg dry	4.89	<0.196	54	75-125			
ILCS (1205824690-ILCS)					Prepared: 08/16/2024 Analyzed: 08/21/2024					
Hexavalent Chromium	7.77	0.379	mg/kg	7.90		98.4	80-120			

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### Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

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

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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