

**TABLE 1**  
**SOIL SAMPLE FIELD DATA SUMMARY TABLE**  
**McCRUMB FED 10-17A 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)
WELLHEAD EXCAVATION SAMPLES								
N Wall	3/5/2024	3	0.4	NS	NO	40.136765	-104.799314	N
E Wall	3/5/2024	3	1.9	NS	NO	40.136748	-104.799291	N
S Wall	3/5/2024	3	0.9	NS	NO	40.136736	-104.799314	N
W Wall	3/5/2024	3	0.4	NS	NO	40.136757	-104.799337	N
B01@6'	3/5/2024	6	1.4	NS	NO	40.136742	-104.799313	Y
B01@6'-V	3/5/2024	6	1.4	NS	NO	40.136742	-104.799313	Y
WH01-RISER@3'	3/5/2024	3	2.3	NS	NO	40.136738	-104.799328	Y
WH01-RISER@3'-V	3/5/2024	3	2.3	NS	NO	40.136738	-104.799328	Y
FS01	3/5/2024	0.5	0.0	NS	NO	40.136834	-104.799314	N
FS02	3/5/2024	0.5	0.3	NS	NO	40.136777	-104.799218	N
FS03	3/5/2024	0.5	0.0	NS	NO	40.136673	-104.799317	N
FS04	3/5/2024	0.5	0.0	NS	NO	40.136737	-104.799434	N
N01@3'	5/7/2024	3	0.0	NS	NO	40.136771	-104.799318	Y
	5/16/2024		0.0	NS	NO	40.136771	-104.799318	Y
E01@3'	5/7/2024	3	0.0	NS	NO	40.136761	-104.799283	Y
	5/16/2024		0.4	NS	NO	40.136761	-104.799283	Y
S01@3'	5/7/2024	3	0.0	NS	NO	40.136731	-104.79933	Y
	5/16/2024		0.2	NS	NO	40.136731	-104.79933	Y
W01@3'	5/7/2024	3	0.0	NS	NO	40.136749	-104.799357	Y
	5/16/2024		1.1	NS	NO	40.136749	-104.799357	Y
FLOWLINE POTHOLE SAMPLES								
PH01	3/5/2024	3	0.0	NS	NO	40.136749	-104.801027	N
PH02	3/5/2024	3	0.6	NS	NO	40.136739	-104.8007	N
PH03	3/5/2024	3	0.2	NS	NO	40.136743	-104.800503	N
PH04	3/7/2024	3	0.0	NS	NO	40.136731	-104.800314	N
PH05	3/7/2024	3	0.1	NS	NO	40.136736	-104.800078	N
PH06	3/7/2024	3	0.0	NS	NO	40.136725	-104.799827	N
PH07	3/7/2024	3	0.0	NS	NO	40.136731	-104.801429	N
PH08	3/7/2024	3	0.1	NS	NO	40.136732	-104.801683	N
PH09	3/7/2024	3	0.1	NS	NO	40.136743	-104.801952	N
PH10	3/7/2024	3	0.0	NS	NO	40.136744	-104.80229	N
PH11	3/7/2024	3	0.1	NS	NO	40.136738	-104.802685	N
FL01@4'	3/7/2024	4	0.4	NS	NO	40.136726	-104.802987	Y
PH13	3/8/2024	4	1.7	NS	NO	40.136252	-104.803069	N
PH14	3/8/2024	3	2.7	NS	NO	40.135687	-104.80308	N

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Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
<b>FLOWLINE POTHOLE SAMPLES</b>								
PH15	3/8/2024	3	2.7	NS	NO	40.13512	-104.803095	N
PH16	3/8/2024	4	1.2	NS	NO	40.134585	-104.803113	N
FL02@4'	3/8/2024	4	0.3	NS	NO	40.134028	-104.803069	Y
FL02@4'-V	3/8/2024	4	0.3	NS	NO	40.134028	-104.803069	Y
FL03@5'	3/8/2024	5	0.5	NS	NO	40.133737	-104.803436	Y
FL03@5'-V	3/8/2024	5	0.5	NS	NO	40.133737	-104.803436	Y
<b>SEPARATOR RISER SAMPLES</b>								
SEP01-RISER@5'	3/8/2024	5	17.0	Stain	Odor	40.13321600	-104.803414	Y
SEP01-RISER@5'-V	3/8/2024	5	17.0	Stain	Odor	40.13321600	-104.803414	Y
SEP01-N01@4'	5/8/2024	4	91.4	Stain	Odor	40.133254	-104.803405	Y
SEP01-E01@4'	5/8/2024	4	52.3	Stain	Odor	40.133219	-104.803392	Y
SEP01-S01@4'	5/8/2024	4	4.9	NS	NO	40.133199	-104.803409	Y
SEP01-W01@4'	5/8/2024	4	86.4	Stain	Odor	40.133223	-104.803425	Y
SEP01-B01@6'	5/8/2024	6	14.7	Stain	Odor	40.133221	-104.803407	Y
	5/16/2024		27.7	NS	NO	40.133221	-104.803407	Y
SEP01-E02@4'	5/16/2024	4	75.5	NS	NO	40.133229	-104.803388	Y
SEP01-W02@4'	5/16/2024	4	48.7	NS	NO	40.133232	-104.80343	Y
SEP01-N02@4'	5/16/2024	4	44.9	NS	NO	40.133263	-104.803408	Y
SEP01-N03@7'	6/7/2024	7	56.9	Stain	NO	40.133277	-104.803412	Y
SEP01-N03@7'-V	6/7/2024	7	56.9	Stain	NO	40.133277	-104.803412	Y
<b>BACKGROUND SOIL SAMPLES</b>								
NATIVE-BG01@3'	3/5/2024	3	0.4	NS	NO	40.136915	-104.799384	Y
NATIVE-BG01@6'	3/5/2024	6	0.0	NS	NO	40.136915	-104.799384	Y
NATIVE-BG02@3'	3/5/2024	3	0.0	NS	NO	40.136932	-104.799191	Y
NATIVE-BG02@6'	3/5/2024	6	0.0	NS	NO	40.136932	-104.799191	Y
NATIVE-BG03@3'	3/5/2024	3	0.8	NS	NO	40.136728	-104.799065	Y
NATIVE-BG03@6'	3/5/2024	6	0.0	NS	NO	40.136728	-104.799065	Y
NATIVE-BG04@3'	3/5/2024	3	0.3	NS	NO	40.13657	-104.799134	Y
NATIVE-BG04@6'	3/5/2024	6	0.4	NS	NO	40.13657	-104.799134	Y
NATIVE-BG05@3'	3/5/2024	3	0.0	NS	NO	40.136563	-104.799317	Y
NATIVE-BG05@6'	3/5/2024	6	0.1	NS	NO	40.136563	-104.799317	Y
NATIVE-BG06@3'	3/5/2024	3	0.0	NS	NO	40.136601	-104.799535	Y
NATIVE-BG06@6'	3/5/2024	6	0.1	NS	NO	40.136601	-104.799535	Y
NATIVE-BG07@3'	3/5/2024	3	0.1	NS	NO	40.136857	-104.799543	Y
NATIVE-BG07@6'	3/5/2024	6	0.4	NS	NO	40.136857	-104.799543	Y

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Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
<b>BACKGROUND SOIL SAMPLES</b>								
FL-BG01 @3' (Rem No. 29000)	1/31/2024	3	3.0	NS	NO	40.1421317	-104.7991458	Y
FL-BG01 @6' (Rem No. 29000)	1/31/2024	6	1.6	NS	NO	40.1421317	-104.7991458	Y
FL-BG02 @3' (Rem No. 29000)	1/31/2024	3	2.8	NS	NO	40.1420549	-104.7991388	Y
FL-BG02 @6' (Rem No. 29000)	1/31/2024	6	2.4	NS	NO	40.1420549	-104.7991388	Y
FL-BG03 @3' (Rem No. 29000)	1/31/2024	3	3.1	NS	NO	40.1418724	-104.7991339	Y
FL-BG03 @6' (Rem No. 29000)	1/31/2024	6	3.2	NS	NO	40.1418724	-104.7991339	Y
FL-BG04 @3' (Rem No. 29000)	1/31/2024	3	1.9	NS	NO	40.1418279	-104.7992109	Y
FL-BG04 @6' (Rem No. 29000)	1/31/2024	6	1.5	NS	NO	40.1418279	-104.7992109	Y
FL-BG05 @3' (Rem No. 29000)	2/1/2024	3	0.1	NS	NO	40.1397908	-104.7986133	Y
FL-BG05 @6' (Rem No. 29000)	2/1/2024	6	0.0	NS	NO	40.1397908	-104.7986133	Y
FL-BG06 @3' (Rem No. 29000)	2/1/2024	3	0.3	NS	NO	40.1397243	-104.7984778	Y
FL-BG06 @6' (Rem No. 29000)	2/1/2024	6	0.4	NS	NO	40.1397243	-104.7984778	Y
FL-BG07 @3' (Rem No. 29000)	2/1/2024	3	0.0	NS	NO	40.1397735	-104.7984415	Y
FL-BG07 @6' (Rem No. 29000)	2/1/2024	6	0.1	NS	NO	40.1397735	-104.7984415	Y
FL-BG08 @3' (Rem No. 29000)	2/1/2024	3	0.3	NS	NO	40.13988523	-104.7984934	Y
FL-BG08 @6' (Rem No. 29000)	2/1/2024	6	0.2	NS	NO	40.13988523	-104.7984934	Y

**Notes:**

ft. - feet  
bgs - below ground surface  
PID - Photoionization detector  
ppm - parts per million

NS - No Staining  
NO - No Odor  
NA - Not Analyzed/Not Applicable

**TABLE 2-1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**VOLATILE ORGANIC COMPOUNDS AND TOTAL PETROLEUM HYDROCARBONS**  
**McCRUMB FED 10-17A 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 (PGSSL)			500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
WELLHEAD EXCAVATION SAMPLES												
WH01-RISER @3'	3/5/2024	3	2.62	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	0.174
WH01-RISER @3'-V	3/5/2024	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B01 @6'	3/5/2024	6	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
B01 @6'-V	3/5/2024	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N01 @3'	5/7/2024	3	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	<0.002
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E01 @3'	5/7/2024	3	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	<0.002
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S01 @3'	5/7/2024	3	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	<0.002
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W01 @3'	5/7/2024	3	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	<0.002
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLOWLINE POTHOLE SAMPLES												
FL01 @4'	3/7/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
FL02 @4'	3/8/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
FL02 @4'-V	3/8/2024	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FL03 @5'	3/8/2024	5	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
FL03 @5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEPARATOR RISER SAMPLES												
SEP01-RISER @5'	3/8/2024	5	4.44	<25.0	<100	0.0730	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
SEP01-RISER @5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP01-N01 @4'	5/8/2024	4	0.264	<25.0	<100	<0.00200	0.00438	<0.00200	<0.00200	NA	NA	<0.002
SEP01-E01 @4'	5/8/2024	4	0.331	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-S01 @4'	5/8/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-W01 @4'	5/8/2024	4	1.25	<25.0	<100	0.00790	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-B01 @6'	5/8/2024	6	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP01-E02 @4'	5/16/2024	4	0.713	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-W02 @4'	5/16/2024	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-N02 @4'	5/16/2024	4	0.665	<25.0	<100	0.0133	<0.00200	0.00256	0.00424	NA	NA	<0.002
SEP01-N03 @4'	6/7/2024	7	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.002
SEP01-N03 @4'-V	6/7/2024	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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VOLATILE ORGANIC COMPOUNDS AND TOTAL PETROLEUM HYDROCARBONS  
McCRUMB FED 10-17A WELLHEAD  
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KERR-MCGEE OIL AND GAS ONSHORE, LP

**Notes:**

ECMC - Energy and Carbon Management Commission  
PGSSL - 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**  
**McCRUMB FED 10-17A 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 (PGSSL)			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																
WH01-RISER@3'	3/5/2024	3	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.010	0.023	<0.020
WH01-RISER@3'-V	3/5/2024	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B01@6'	3/5/2024	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	3/5/2024	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N01@3'	5/7/2024	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
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E01@3'	5/7/2024	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
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S01@3'	5/7/2024	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
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W01@3'	5/7/2024	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
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLOWLINE POTHOLE SAMPLES																
FL01@4'	3/7/2024	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
FL02@4'	3/8/2024	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
FL02@4'-V	3/8/2024	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FL03@5'	3/8/2024	5	<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
FL03@5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEPARATOR RISER SAMPLES																
SEP01-RISER@5'	3/8/2024	5	<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
SEP01-RISER@5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP01-N01@4'	5/8/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.023	0.035	<0.020
SEP01-E01@4'	5/8/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.015	0.018	<0.020
SEP01-S01@4'	5/8/2024	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
SEP01-W01@4'	5/8/2024	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
SEP01-B01@6'	5/8/2024	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
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP01-E02@4'	5/16/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.004	0.005	<0.020
SEP01-W02@4'	5/16/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.007	0.013	<0.020
SEP01-N02@4'	5/16/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.004	0.007	<0.020
SEP01-N03@4'	6/7/2024	7	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.003	0.003	<0.020
SEP01-N03@4'-V	6/7/2024	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2-2  
SOIL SAMPLE ANALYTICAL RESULTS  
POLYCYCLIC AROMATIC HYDROCARBONS  
McCRUMB FED 10-17A WELLHEAD  
WELD COUNTY, COLORADO  
KERR-MCGEE OIL AND GAS ONSHORE, LP

**Notes:**  
ECMC - Energy and Carbon Management Commission  
PGSSL - 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  
McCRUMB FED 10-17A 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 (3'-6')			10.6	21.1	8.55	4.14
WELLHEAD EXCAVATION SAMPLES						
WH01-RISER @3'	3/5/2024	3	0.467	1.45	8.40*	0.384
WH01-RISER @3'-V	3/5/2024	3	NA	NA	8.05	NA
B01 @6'	3/5/2024	6	0.678	6.26*	8.45*	0.499
B01 @6'-V	3/5/2024	6	NA	5.55	8.30	NA
N01 @3'	5/7/2024	3	NA	NA	NA	NA
	5/16/2024		NA	2.11	8.33*	0.500
E01 @3'	5/7/2024	3	NA	NA	NA	NA
	5/16/2024		NA	1.81	8.39*	0.422
S01 @3'	5/7/2024	3	NA	NA	NA	NA
	5/16/2024		NA	2.53	8.40*	0.563
W01 @3'	5/7/2024	3	NA	NA	NA	NA
	5/16/2024		NA	1.36	8.10	0.278
FLOWLINE POTHOLE SAMPLES						
FL01 @4'	3/7/2024	4	0.570	2.20	8.30	0.251
FL02 @4'	3/8/2024	4	0.818	2.34	8.30	0.514
FL02 @4'-V	3/8/2024	4	NA	NA	7.83	NA
FL03 @5'	3/8/2024	5	3.19	1.53	7.92	0.455
FL03 @5'-V	3/8/2024	5	NA	NA	7.43	NA
SEPARATOR RISER SAMPLES						
SEP01-RISER @5'	3/8/2024	5	0.616	1.87	8.48*	0.143
SEP01-RISER @5'-V	3/8/2024	5	NA	NA	7.81	NA
SEP01-N01 @4'	5/8/2024	4	NA	NA	8.49*	0.220
SEP01-E01 @4'	5/8/2024	4	NA	NA	8.43*	0.264
SEP01-S01 @4'	5/8/2024	4	NA	NA	8.37*	0.413
SEP01-W01 @4'	5/8/2024	4	NA	NA	8.48*	0.281
SEP01-B01 @6'	5/8/2024	6	NA	NA	9.27	<0.100
	5/16/2024		NA	NA	8.52*	NA
SEP01-E02 @4'	5/16/2024	4	NA	NA	8.49*	0.195
SEP01-W02 @4'	5/16/2024	4	NA	NA	8.42*	0.287
SEP01-N02 @4'	5/16/2024	4	NA	NA	8.17	0.191
SEP01-N03 @4'	6/7/2024	7	NA	NA	8.58	<0.0992
SEP01-N03 @4'-V	6/7/2024	7	NA	NA	8.46*	NA
BACKGROUND SAMPLES						
NATIVE-BG01 @3'	3/5/2024	3	0.533	3.19	8.41	0.603
NATIVE-BG01 @6'	3/5/2024	6	0.431	3.26	8.28	0.537
NATIVE-BG02 @3'	3/5/2024	3	0.460	1.82	8.35	0.583
NATIVE-BG02 @6'	3/5/2024	6	0.333	2.07	8.30	0.304



TABLE 2-3  
SOIL SAMPLE ANALYTICAL RESULTS  
SOIL SUITABILITY FOR RECLAMATION  
McCRUMB FED 10-17A 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 (3'-6')			10.6	21.1	8.55	4.14
<b>BACKGROUND SAMPLES</b>						
NATIVE-BG03@3'	3/5/2024	3	0.623	3.23	8.32	0.379
NATIVE-BG03@6'	3/5/2024	6	0.809	4.65	8.26	0.357
NATIVE-BG04@3'	3/5/2024	3	0.590	2.72	8.35	0.546
NATIVE-BG04@6'	3/5/2024	6	0.628	2.71	8.32	0.402
NATIVE-BG05@3'	3/5/2024	3	0.658	3.09	8.44	1.05
NATIVE-BG05@6'	3/5/2024	6	0.708	3.64	8.33	0.681
NATIVE-BG06@3'	3/5/2024	3	0.360	1.40	8.38	0.349
NATIVE-BG06@6'	3/5/2024	6	0.406	1.67	8.30	0.316
NATIVE-BG07@3'	3/5/2024	3	0.660	2.33	8.40	0.909
NATIVE-BG07@6'	3/5/2024	6	0.535	2.91	8.37	0.630
FL-BG01@3' (Rem No. 29000)	1/31/2024	3	3.06	11.3	8.41	1.17
FL-BG01@6' (Rem No. 29000)	1/31/2024	6	2.95	16.1	8.55	1.61
FL-BG02@3' (Rem No. 29000)	1/31/2024	3	8.21	14.8	8.17	1.32
FL-BG02@6' (Rem No. 29000)	1/31/2024	6	4.93	14.0	8.27	0.766
FL-BG03@3' (Rem No. 29000)	1/31/2024	3	7.44	10.6	8.23	3.12
FL-BG03@6' (Rem No. 29000)	1/31/2024	6	7.61	10.9	8.26	3.47
FL-BG04@3' (Rem No. 29000)	1/31/2024	3	7.80	13.4	8.28	1.40
FL-BG04@6' (Rem No. 29000)	1/31/2024	6	7.86	13.5	8.24	1.46
FL-BG05@3' (Rem No. 29000)	2/1/2024	3	9.37	17.7	8.26	1.88
FL-BG05@6' (Rem No. 29000)	2/1/2024	6	3.36	14.1	8.23	0.833
FL-BG06@3' (Rem No. 29000)	2/1/2024	3	10.6	21.1	8.28	4.14
FL-BG06@6' (Rem No. 29000)	2/1/2024	6	5.89	10.7	8.17	2.38
FL-BG07@3' (Rem No. 29000)	2/1/2024	3	8.29	15.7	8.26	2.28
FL-BG07@6' (Rem No. 29000)	2/1/2024	6	3.35	16.7	8.45	0.985
FL-BG08@3' (Rem No. 29000)	2/1/2024	3	9.09	9.49	8.03	2.04
FL-BG08@6' (Rem No. 29000)	2/1/2024	6	4.78	9.07	8.23	1.130

**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**  
**McCRUMB FED 10-17A 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 (PGSSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Site-Specific Background Limits (3'-6')			17.5	506	0.702	NA	26.2	22.1	22.7	0.709	0.096	75.3
WELLHEAD EXCAVATION SAMPLES												
WH01-RISER @3'	3/5/2024	3	4.87*	113*	0.272	<0.5	<8.43	38.7	11.3	0.303*	<0.0843	43.6
WH01-RISER @3'-V	3/5/2024	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B01 @6'	3/5/2024	6	4.51*	62.8	0.413*	<0.5	19.2	19.7*	23.0	0.413*	<0.0968	124
B01 @6'-V	3/5/2024	6	NA	NA	0.284	NA	NA	17.0*	NA	0.396*	NA	NA
N01 @3'	5/7/2024	3	2.18*	63.7	<0.0960	NA	<9.60	7.66	5.69	<0.250	NA	<35.5
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	
E01 @3'	5/7/2024	3	1.73*	66.5	<0.0907	NA	<9.70	6.26	5.02	<0.236	NA	<33.6
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	
S01 @3'	5/7/2024	3	2.55*	70.2	0.0956	NA	<8.69	8.27	6.67	<0.226	NA	<32.1
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	
W01 @3'	5/7/2024	3	4.65*	114	0.225	NA	<9.42	10.6	10.5	0.265*	NA	39.0
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	
FLOWLINE POTHOLE SAMPLES												
FL01 @4'	3/7/2024	4	2.14*	62.3	0.181	<0.504	<9.37	7.84	6.82	<0.244	<0.0937	<34.7
FL02 @4'	3/8/2024	4	2.95*	80.2	0.270	<0.515	<9.47	10.9	8.18	<0.246	<0.0947	42.3
FL02 @4'-V	3/8/2024	4	NA	NA	0.571*	NA	NA	37.5	NA	NA	NA	NA
FL03 @5'	3/8/2024	5	4.04*	128*	0.489*	<0.519	16.4	21.1*	11.5	0.232	0.187	71.9
FL03 @5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEPARATOR RISER SAMPLES												
SEP01-RISER @5'	3/8/2024	5	6.13*	91.1*	0.122	<0.515	<8.98	12.3	12.9	0.452*	<0.0898	98.8
SEP01-RISER @5'-V	3/8/2024	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEP01-N01 @4'	5/8/2024	4	2.57*	77.6	0.131	NA	NA	7.85	4.44	<0.234	NA	<33.3
SEP01-E01 @4'	5/8/2024	4	2.54*	106*	0.155	NA	NA	8.33	6.85	<0.220	NA	33.9
SEP01-S01 @4'	5/8/2024	4	4.07*	83.2*	0.247	NA	NA	12.1	12.1	0.426*	NA	44.2
SEP01-W01 @4'	5/8/2024	4	2.95*	86.3*	0.196	NA	NA	10.0	9.14	<0.247	NA	36.9
SEP01-B01 @6'	5/8/2024	6	0.722*	17.8	<0.0920	NA	NA	3.10	2.18	<0.239	NA	<34.0
	5/16/2024		NA	NA	NA	NA	NA	NA	NA	NA	NA	
SEP01-E02 @4'	5/16/2024	4	3.98*	165*	0.364	NA	NA	20.4*	8.52	<0.243	NA	56.2
SEP01-W02 @4'	5/16/2024	4	2.93*	144*	0.188	NA	NA	6.33	6.62	<0.244	NA	<34.8
SEP01-N02 @4'	5/16/2024	4	2.78*	109*	0.179	NA	NA	8.86	6.50	<0.236	NA	34.6
SEP01-N03 @4'	6/7/2024	7	0.654*	13.4	<0.0886	NA	NA	2.17	1.48	<0.230	NA	<32.8
SEP01-N03 @4'-V	6/7/2024	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BACKGROUND SAMPLES												
NATIVE-BG01 @3'	3/5/2024	3	3.34	83.5	0.204	<0.5	<8.89	9.44	9.47	<0.231	<0.0889	34.1
NATIVE-BG01 @6'	3/5/2024	6	3.04	88.3	0.202	<0.5	<9.15	9.37	9.76	<0.238	<0.0915	<33.9
NATIVE-BG02 @3'	3/5/2024	3	4.25	506	0.251	<0.5	<9.56	10.7	11.8	<0.249	<0.0956	36.8

**TABLE 2-4**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**METALS**  
**McCRUMB FED 10-17A 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 (PGSSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Site-Specific Background Limits (3'-6')			17.5	506	0.702	NA	26.2	22.1	22.7	0.709	0.096	75.3
<b>BACKGROUND SAMPLES</b>												
NATIVE-BG02@6'	3/5/2024	6	2.01	72.3	<0.0934	<0.5	<9.34	6.15	6.44	<0.243	<0.0934	<34.6
NATIVE-BG03@3'	3/5/2024	3	2.20	106	0.131	<0.5	<8.78	7.13	6.83	<0.228	<0.0878	<32.5
NATIVE-BG03@6'	3/5/2024	6	3.25	147	0.157	<0.5	<9.60	9.92	13.9	<0.250	<0.0960	37.4
NATIVE-BG04@3'	3/5/2024	3	3.04	123	0.151	<0.5	<9.65	8.57	9.510	<0.251	<0.0965	<35.7
NATIVE-BG04@6'	3/5/2024	6	3.30	69.3	0.200	<0.5	<9.50	9.12	14.3	<0.247	<0.0950	39.3
NATIVE-BG05@3'	3/5/2024	3	5.39	122	0.324	<0.5	12.5	14.9	17.2	0.399	<0.0904	64.2
NATIVE-BG05@6'	3/5/2024	6	3.97	96.1	0.189	<0.5	<9.20	9.67	10.7	<0.239	<0.0920	35.6
NATIVE-BG06@3'	3/5/2024	3	3.93	101	0.248	<0.5	<8.99	12.1	11.0	0.236	<0.0899	42.9
NATIVE-BG06@6'	3/5/2024	6	2.61	93.0	0.151	<0.5	<9.73	8.31	8.11	<2.53	<0.0973	<36.0
NATIVE-BG07@3'	3/5/2024	3	6.55	114	0.343	<0.5	11.8	15.9	18.0	0.396	<0.0960	67.6
NATIVE-BG07@6'	3/5/2024	6	6.20	132	0.355	<0.5	12.7	15.8	20.0	0.359	<0.0972	70.4
FL-BG01@3' (Rem No. 29000)	1/31/2024	3	2.42	185	0.155	<0.5	12.1	13.1	7.12	<0.0836	<0.0836	26.8
FL-BG01@6' (Rem No. 29000)	1/31/2024	6	2.07	94.4	0.179	<0.5	11.2	13.7	6.60	<0.0846	<0.0846	27.9
FL-BG02@3' (Rem No. 29000)	1/31/2024	3	3.97	97.3	0.175	<0.5	16.0	14.9	8.02	0.249	<0.0978	51.9
FL-BG02@6' (Rem No. 29000)	1/31/2024	6	3.72	66.5	0.316	<0.5	18.9	13.2	11.8	0.245	<0.0909	40.4
FL-BG03@3' (Rem No. 29000)	1/31/2024	3	4.46	116	0.319	<0.5	26.2	22.1	14.8	0.195	<0.0922	68.5
FL-BG03@6' (Rem No. 29000)	1/31/2024	6	3.55	90.5	0.702	<0.5	21.2	19.2	14.7	0.255	<0.0889	65.5
FL-BG04@3' (Rem No. 29000)	1/31/2024	3	2.57	59.2	0.214	<0.5	14.0	15.5	7.27	0.278	0.0964	32.4
FL-BG04@6' (Rem No. 29000)	1/31/2024	6	2.02	27.4	0.210	<0.5	13.3	14.8	6.89	0.184	<0.0941	25.2
FL-BG05@3' (Rem No. 29000)	2/1/2024	3	4.62	22.2	<0.0844	<0.5	<8.44	6.20	5.540	0.085	<0.0844	27.200
FL-BG05@6' (Rem No. 29000)	2/1/2024	6	9.61	51.6	0.229	<0.5	14.8	12.2	18.1	0.216	<0.0911	54.9
FL-BG06@3' (Rem No. 29000)	2/1/2024	3	12.3	42.6	0.280	<0.5	16.2	13.8	13.4	0.709	<0.0902	54.7
FL-BG06@6' (Rem No. 29000)	2/1/2024	6	11.5	179	0.219	<0.501	15.4	13.2	13.3	0.454	<0.0964	49.5
FL-BG07@3' (Rem No. 29000)	2/1/2024	3	12.1	99.8	0.183	<0.506	12.7	13.1	13.0	0.547	<0.0984	71.4
FL-BG07@6' (Rem No. 29000)	2/1/2024	6	17.5	132.0	0.327	<0.5	13.0	14.2	22.7	0.221	<0.0976	75.3
FL-BG08@3' (Rem No. 29000)	2/1/2024	3	7.19	93.7	0.219	<0.5	<9.81	7.15	9.6	0.224	<0.0981	32.7
FL-BG08@6' (Rem No. 29000)	2/1/2024	6	9.44	93.6	0.236	<0.5	9.78	9.86	9.6	0.140	<0.0922	47.5

TABLE 2-4  
SOIL SAMPLE ANALYTICAL RESULTS  
METALS  
McCRUMB FED 10-17A 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 (PGSSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
Site-Specific Background Limits (3'-6')			17.5	506	0.702	NA	26.2	22.1	22.7	0.709	0.096	75.3

**Notes:**  
ECMC - Energy and Carbon Management Commission  
PGSSL - 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.

April 09, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead****Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 05, 2024. This project is associated with Origins project number Y403108-01.

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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@6'-V	Y403108-01	Soil	March 5, 2024 13:30	03/05/2024 16:41
WH01-RISER@3'-V	Y403108-02	Soil	March 5, 2024 13:32	03/05/2024 16:41

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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

**ORIGINS**  
LABORATORY, INC

www.originslaboratory.com

440302

page | of |

FOX: 303.265.9645

Client: Ensolum  
Address: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: KMG-Team

Project Manager: J Espinoza  
Project Name: McCrumb Fed 10-17A Wellhead  
Project Number: 09A1417654  
Samples Collected By: HK

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	As Summed Constituent	Other	Time	
130161	3/5/04	1330	2	X				X				X	inorganics on hold
WHC-RIBER31	↓	1332	2	X				X				X	
<p>Say, Cd, Pb, Se added to bottle per Jeremy's email on 4/2/05</p>													
													1
													2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: <u>[Signature]</u>	Date: <u>3/5/04</u>	Time: <u>1647</u>	Time: <u>1647</u>	Received By: <u>[Signature]</u>	Date: <u>3/5/04</u>	Time: <u>1647</u>	Turnaround Time: <u>24 Hr</u>	Standard: <u>48 Hr</u>	Standard: <u>72 Hr</u>				

Temp Received: 7 Date Results Needed: \_\_\_\_\_

Origins Laboratory, Inc.

*J Bynon*

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 7403108 Client: Ensolum

Checklist Completed by: EHSHAN Client Project ID: McCrumb Fed 10-17A

Date/time completed: 3/15/12 Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Cooler Number/Temperature: 118 °C 1 °C 1 °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7004

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"/>		SD
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 Na <sub>2</sub> SO <sub>3</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) Jeremy Espinoza Date/Time Reviewed 3/15/12

Origins Laboratory, Inc.

*J. Bynon*

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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

B01@6'-V

3/5/2024 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y403108-01 (Soil)

**Metals by Saturated Paste by EPA 6010**

Calcium	0.862	0.499	meq/L	10	[CALC]	ACC	04/03/2024	04/04/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	4.57	0.435	"	"	"	ACC	"	"

**pH in Soil by 9045D**

pH	8.30		pH Units	1	B4C0628	EAL	03/06/2024	03/08/2024
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**SAR by 20B Saturated Paste**

SAR	5.55	0.0100	SAR	1	B4D0301	ACC	04/03/2024	04/04/2024
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**Table 915 metals by EPA 6020B**

Cadmium	0.284	0.0973	mg/kg	10	B4D0228	KMC	04/02/2024	04/04/2024
Lead	17.0	0.973	"	"	"	KMC	"	"
Selenium	0.396	0.253	"	"	"	KMC	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

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

**3/5/2024 1:32:00PM**

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

**Origins Laboratory, Inc.**

**Y403108-02 (Soil)**

**pH in Soil by 9045D**

pH	8.05	pH Units	1	B4C0628	EAL	03/06/2024	03/08/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4D0228 - EPA 3050B</b>										
<b>Blank (B4D0228-BLK1)</b>					Prepared: 04/02/2024 Analyzed: 04/04/2024					
Cadmium	ND	0.100	mg/kg							
Lead	ND	1.00	"							
Selenium	ND	0.260	"							
<b>LCS (B4D0228-BS1)</b>					Prepared: 04/02/2024 Analyzed: 04/04/2024					
Cadmium	5.89	0.100	mg/kg	5.00		118	80-120			
Lead	5.37	1.00	"	5.00		107	80-120			
Selenium	10.8	0.260	"	9.50		114	80-120			
<b>Matrix Spike (B4D0228-MS1)</b>					<b>Source: Y403867-03</b>		Prepared: 04/02/2024 Analyzed: 04/04/2024			
Cadmium	6.07	0.0978	mg/kg	4.89	0.280	118	75-125			
Lead	19.8	0.978	"	4.89	28.8	NR	75-125			QM-07
Selenium	11.0	0.254	"	9.29	0.907	109	75-125			
<b>Matrix Spike Dup (B4D0228-MSD1)</b>					<b>Source: Y403867-03</b>		Prepared: 04/02/2024 Analyzed: 04/04/2024			
Cadmium	5.57	0.0930	mg/kg	4.65	0.280	114	75-125	8.61	20	
Lead	20.0	0.930	"	4.65	28.8	NR	75-125	0.770	20	QM-07
Selenium	9.75	0.242	"	8.84	0.907	100	75-125	12.4	20	

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch B4D0301 - Saturated Paste Metals

##### Blank (B4D0301-BLK1)

Prepared: 04/03/2024 Analyzed: 04/04/2024

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 (B4D0301-DUP1)

Source: Y404029-01

Prepared: 04/03/2024 Analyzed: 04/04/2024

SAR	ND	0.0100	SAR	3.47			200
Calcium PPM	49.8	10.0	mg/L	49.4		0.947	50
Magnesium PPM	33.1	10.0	"	33.5		1.17	50
Sodium PPM	126	10.0	"	129		2.20	50

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4C0628 - Saturated Paste pH/EC**

**Duplicate (B4C0628-DUP1)**

**Source: Y403052-01**

Prepared: 03/06/2024 Analyzed: 03/08/2024

pH	8.07		pH Units	8.11		0.494	25
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Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

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 at a wet weight basis.

Origins Laboratory, Inc.



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March 29, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 05, 2024. This project is associated with Origins project number Y403109-01.

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.

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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@6'	Y403109-01	Soil	March 5, 2024 13:30	03/05/2024 16:41
WH01-RISER@3'	Y403109-02	Soil	March 5, 2024 13:32	03/05/2024 16:41
NATIVE-BG01@3'	Y403109-03	Soil	March 5, 2024 13:34	03/05/2024 16:41
NATIVE-BG01@6'	Y403109-04	Soil	March 5, 2024 13:36	03/05/2024 16:41
NATIVE-BG02@3'	Y403109-05	Soil	March 5, 2024 13:38	03/05/2024 16:41
NATIVE-BG02@6'	Y403109-06	Soil	March 5, 2024 13:40	03/05/2024 16:41
NATIVE-BG03@3'	Y403109-07	Soil	March 5, 2024 13:42	03/05/2024 16:41
NATIVE-BG03@6'	Y403109-08	Soil	March 5, 2024 13:44	03/05/2024 16:41
NATIVE-BG04@3'	Y403109-09	Soil	March 5, 2024 13:46	03/05/2024 16:41
NATIVE-BG04@6'	Y403109-10	Soil	March 5, 2024 13:48	03/05/2024 16:41
NATIVE-BG05@3'	Y403109-11	Soil	March 5, 2024 13:50	03/05/2024 16:41
NATIVE-BG05@6'	Y403109-12	Soil	March 5, 2024 13:52	03/05/2024 16:41
NATIVE-BG06@3'	Y403109-13	Soil	March 5, 2024 13:54	03/05/2024 16:41
NATIVE-BG06@6'	Y403109-14	Soil	March 5, 2024 13:56	03/05/2024 16:41

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NATIVE-BG07@3'	Y403109-15	Soil	March 5, 2024 13:58	03/05/2024 16:41
NATIVE-BG07@6'	Y403109-16	Soil	March 5, 2024 14:00	03/05/2024 16:41

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

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

**ORIGINS**  
LABORATORY, INC

Client: Ensolum  
Address: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: KMG Team

Project Manager: J. Espinoza  
Project Name: McCrumb Fed 10-17A Wellhead  
Project Number: 09A1417654  
Samples Collected By: HK

Initiation  
www.originslaboratory.com  
page 1 of 2

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix		Analysis		Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	
BOL-61	3/5/24	1330	3	X						X		
WHOLE-RISERS-31		1332	3					X		X		
NATIVE-BG01E31		1334	2							X		
NATIVE-BG01E31		1336										
NATIVE-BG02E31		1338										
NATIVE-BG02E31		1340										
NATIVE-BG03E31		1342										
NATIVE-BG03E31		1344										
NATIVE-BG04E31		1346										
NATIVE-BG04E31		1348										
Relinquished By: <u>[Signature]</u>	Date: <u>3/5/24</u>	Time: <u>11:41</u>	Received By: <u>[Signature]</u>	Date: <u>3/5/24</u>	Time: <u>10:41</u>	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>						

Temp Received: 2 Date Results Needed: \_\_\_\_\_

Origins Laboratory, Inc.

*Jefe Pellegrini*

Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

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

**ORIGINS**  
LABORATORY, INC

Initial www.originslaboratory.com

page 2 of 2

Client: Ensolum  
Address: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: KMEteam

Project Manager: J. Espinoza  
Project Name: McCrumb Fed 10-17A Wellhead  
Project Number: 09A1417654  
Samples Collected By: HK

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil		
NATIVE-B60503	3/5/24	1350	2	X					X		
NATIVE-B60601		1352									
NATIVE-B60603		1354									
NATIVE-B60606		1356									
NATIVE-B60703		1358									
NATIVE-B60706		1400									

Relinquished By: [Signature] Date: 3/5/24 Time: 1641  
Received By: [Signature] Date: 3/5/24 Time: 1641

Temp Received: 8 Date Results Needed: \_\_\_\_\_

Turnaround Time:  
☒ Same Day  
☐ 48 Hr  
☐ 72 Hr  
☐ Standard

Origins Laboratory, Inc.

*Jen Pellegrini*

Jen Pellegrini, Project Manager

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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: 403109

Client: Ensolum

Client Project ID: McCrumb Fed 10-17A

Checklist Completed by: EHS / JEPAN

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

Date/time completed: 3/5/12

Airbill #: N/A

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

Cooler Number/Temperature: 1/8 °C 1 °C 1 °C (Describe) \_\_\_\_\_ °C

Thermometer ID: TOO 4

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.

Jeremy Espinoza  
Reviewed by (Project Manager)

3/5/12  
Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

B01@6'

3/5/2024 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

**Origins Laboratory, Inc.**  
**Y403109-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.499	0.100	mg/L	1	B4C0618	03/06/2024	03/07/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0532	03/05/2024	03/06/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	81.1 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0531	03/05/2024	03/06/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	96.2 %	70-130			"	"	"	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

B01@6'

3/5/2024 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %	70-130				B4C05 31	03/05/2024	03/06/2024	
Surrogate: 4-Bromofluorobenzene	85.6 %	70-130				"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	0.828	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	5.03	0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4C0533	03/05/2024	03/06/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

B01@6'

3/5/2024 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-01 (Soil)**

**PAH by EPA 8270E**

Fluorene	ND	0.020	mg/kg	1	B4C0533	03/05/2024	03/06/2024	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %	60-130	"	"	"
Surrogate: Anthracene-d10	92.9 %	60-130	"	"	"
Surrogate: Pyrene-d10	120 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	108 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.45	pH Units	1	B4C0625	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	6.26	0.0100	SAR	1	B4C0609	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.678	0.00500	mmhos/cm	1	B4C0625	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

B01@6'

3/5/2024 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403109-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	4.51	0.281	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Barium	62.8	9.68	"	"	"	"	"	
Cadmium	0.413	0.0968	"	"	"	"	"	
Copper	19.2	9.68	"	"	"	"	"	
Lead	19.7	0.968	"	"	"	"	"	
Nickel	23.0	0.968	"	"	"	"	"	
Selenium	0.413	0.252	"	"	"	"	"	
Silver	ND	0.0968	"	"	"	"	"	U
Zinc	124	35.8	"	"	"	"	"	

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740645	03/05/2024	03/26/2024
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## WH01-RISER@3'

3/5/2024 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y403109-02 (Soil)

### Boron (DTPA Sorbitol)

Boron	0.384	0.0997	mg/L	1	B4C0618	03/06/2024	03/07/2024	
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### DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0532	03/05/2024	03/06/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	96.0 %	50-150	"	"	"
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### GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0531	03/05/2024	03/06/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	2.62	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	95.2 %	70-130	"	"	"
Surrogate: Toluene-d8	99.8 %	70-130	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## WH01-RISER@3'

3/5/2024 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y403109-02 (Soil)

### GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	86.4 %	70-130	B4C05 31	03/05/2024	03/06/2024
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### Metals by Saturated Paste by EPA 6010

Calcium	1.78	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.63	0.435	"	"	"	"	"

### PAH by EPA 8270E

1-Methylnaphthalene	0.010	0.002	mg/kg	1	B4C0533	03/05/2024	03/06/2024	
2-Methylnaphthalene	0.023	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## WH01-RISER@3'

3/5/2024 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y403109-02 (Soil)

### PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND	0.020	mg/kg	1	B4C0533	03/05/2024	03/06/2024	U
Naphthalene	0.174	0.002	"	"	"	"	"	
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %	60-130	"	"	"
Surrogate: Anthracene-d10	93.9 %	60-130	"	"	"
Surrogate: Pyrene-d10	107 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"

### pH in Soil by 9045D

pH	8.40	pH Units	1	B4C0625	03/06/2024	03/07/2024
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### SAR by 20B Saturated Paste

SAR	1.45	0.0100	SAR	1	B4C0609	03/06/2024	03/07/2024
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### Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.467	0.00500	mmhos/cm	1	B4C0625	03/06/2024	03/07/2024
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### Table 915 metals by EPA 6020B

Arsenic	4.87	0.244	mg/kg	10	B4C0545	03/05/2024	03/21/2024
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## WH01-RISER@3'

3/5/2024 1:32:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y403109-02 (Soil)

### Table 915 metals by EPA 6020B

Barium	113	8.43	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Cadmium	0.272	0.0843	"	"	"	"	"	
Copper	ND	8.43	"	"	"	"	"	U
Lead	38.7	0.843	"	"	"	"	"	
Nickel	11.3	0.843	"	"	"	"	"	
Selenium	0.303	0.219	"	"	"	"	"	
Silver	ND	0.0843	"	"	"	"	"	U
Zinc	43.6	31.2	"	"	"	"	"	

### Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740645	03/05/2024	03/26/2024
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG01@3'**  
**3/5/2024 1:34:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.603	0.101	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.10	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.91	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.41	pH Units	1	B4C0625	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	3.19	0.0100	SAR	1	B4C0609	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.533	0.00500	mmhos/cm	1	B4C0625	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.34	0.258	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	83.5	8.89	"	"	"	"	"
Cadmium	0.204	0.0889	"	"	"	"	"
Copper	ND	8.89	"	"	"	"	"

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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG01@3'**  
**3/5/2024 1:34:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-03 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	9.44	0.889	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	9.47	0.889	"	"	"	"	"	
Selenium	ND	0.231	"	"	"	"	"	U
Silver	ND	0.0889	"	"	"	"	"	U
Zinc	34.1	32.9	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Jen Pellegrini, Project Manager

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Ensolum  
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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG01@6'**  
**3/5/2024 1:36:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.537	0.0993	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.857	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.66	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.28	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	3.26	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.431	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.04	0.265	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	88.3	9.15	"	"	"	"	"
Cadmium	0.202	0.0915	"	"	"	"	"
Copper	ND	9.15	"	"	"	"	" U

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Jen Pellegrini, Project Manager

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG01@6'**  
**3/5/2024 1:36:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-04 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	9.37		0.915	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	9.76		0.915	"	"	"	"	"	
Selenium	ND		0.238	"	"	"	"	"	U
Silver	ND		0.0915	"	"	"	"	"	U
Zinc	ND		33.9	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024	
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Jen Pellegrini, Project Manager



Ensolum  
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG02@3'**  
**3/5/2024 1:38:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.583	0.101	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.64	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.98	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.35	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	1.82	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.460	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	4.25	0.277	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	506	9.56	"	"	"	"	"
Cadmium	0.251	0.0956	"	"	"	"	"
Copper	ND	9.56	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG02@3'**  
**3/5/2024 1:38:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-05 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	10.7	0.956	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	11.8	0.956	"	"	"	"	"	
Selenium	ND	0.249	"	"	"	"	"	U
Silver	ND	0.0956	"	"	"	"	"	U
Zinc	36.8	35.4	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG02@6'**  
**3/5/2024 1:40:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-06 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.304	0.0997	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.895	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.68	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.30	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	2.07	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.333	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.01	0.271	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	72.3	9.34	"	"	"	"	"
Cadmium	ND	0.0934	"	"	"	"	" U
Copper	ND	9.34	"	"	"	"	" U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG02@6'**  
**3/5/2024 1:40:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-06 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	6.15		0.934	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	6.44		0.934	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	U
Silver	ND		0.0934	"	"	"	"	"	U
Zinc	ND		34.6	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG03@3'**  
**3/5/2024 1:42:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-07 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.379	0.0993	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.44	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	3.25	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.32	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	3.23	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.623	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.20	0.255	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	106	8.78	"	"	"	"	"
Cadmium	0.131	0.0878	"	"	"	"	"
Copper	ND	8.78	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG03@3'**  
**3/5/2024 1:42:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-07 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	7.13	0.878	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	6.83	0.878	"	"	"	"	"	
Selenium	ND	0.228	"	"	"	"	"	U
Silver	ND	0.0878	"	"	"	"	"	U
Zinc	ND	32.5	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG03@6'**  
**3/5/2024 1:44:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-08 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.357	0.0987	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.36	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	4.77	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.26	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	4.65	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.809	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.25	0.279	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	147	9.60	"	"	"	"	"
Cadmium	0.157	0.0960	"	"	"	"	"
Copper	ND	9.60	"	"	"	"	"

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Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG03@6'**  
**3/5/2024 1:44:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-08 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	9.92	0.960	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	13.9	0.960	"	"	"	"	"	
Selenium	ND	0.250	"	"	"	"	"	U
Silver	ND	0.0960	"	"	"	"	"	U
Zinc	37.4	35.5	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG04@3'**  
**3/5/2024 1:46:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-09 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.546	0.101	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.44	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.84	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.35	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	2.72	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.590	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.04	0.280	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	123	9.65	"	"	"	"	"
Cadmium	0.151	0.0965	"	"	"	"	"
Copper	ND	9.65	"	"	"	"	" U

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG04@3'**  
**3/5/2024 1:46:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-09 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	8.57		0.965	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	9.51		0.965	"	"	"	"	"	
Selenium	ND		0.251	"	"	"	"	"	U
Silver	ND		0.0965	"	"	"	"	"	U
Zinc	ND		35.7	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024	
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Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG04@6'**  
**3/5/2024 1:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-10 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.402	0.100	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.75	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.95	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.32	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	2.71	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.628	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.30	0.276	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	69.3	9.50	"	"	"	"	"
Cadmium	0.200	0.0950	"	"	"	"	"
Copper	ND	9.50	"	"	"	"	" U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG04@6'**  
**3/5/2024 1:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-10 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	9.12	0.950	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	14.3	0.950	"	"	"	"	"	
Selenium	ND	0.247	"	"	"	"	"	U
Silver	ND	0.0950	"	"	"	"	"	U
Zinc	39.3	35.2	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG05@3'**  
**3/5/2024 1:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-11 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.05	0.100	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.70	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	3.44	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.44	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	3.09	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.658	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	5.39	0.262	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	122	9.04	"	"	"	"	"
Cadmium	0.324	0.0904	"	"	"	"	"
Copper	12.5	9.04	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG05@3'**  
**3/5/2024 1:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-11 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	14.9	0.904	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	17.2	0.904	"	"	"	"	"	
Selenium	0.399	0.235	"	"	"	"	"	
Silver	ND	0.0904	"	"	"	"	"	U
Zinc	64.2	33.4	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Jen Pellegrini, Project Manager

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Ensolum  
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG05@6'**  
**3/5/2024 1:52:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-12 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.681	0.0988	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.56	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	3.88	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.33	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	3.64	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.708	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.97	0.267	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	96.1	9.20	"	"	"	"	"
Cadmium	0.189	0.0920	"	"	"	"	"
Copper	ND	9.20	"	"	"	"	" U

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Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG05@6'**  
**3/5/2024 1:52:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-12 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	9.67	0.920	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	10.7	0.920	"	"	"	"	"	
Selenium	ND	0.239	"	"	"	"	"	U
Silver	ND	0.0920	"	"	"	"	"	U
Zinc	35.6	34.0	"	"	"	"	"	

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740646	03/05/2024	03/26/2024
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Jen Pellegrini, Project Manager



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG06@3'**  
**3/5/2024 1:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-13 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.349	0.100	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.50	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.39	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.38	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	1.40	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.360	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.93	0.261	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	101	8.99	"	"	"	"	"
Cadmium	0.248	0.0899	"	"	"	"	"
Copper	ND	8.99	"	"	"	"	"

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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG06@3'**  
**3/5/2024 1:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-13 (Soil)**

### Table 915 metals by EPA 6020B

Lead	12.1	0.899	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	11.0	0.899	"	"	"	"	"	
Selenium	0.236	0.234	"	"	"	"	"	
Silver	ND	0.0899	"	"	"	"	"	U
Zinc	42.9	33.3	"	"	"	"	"	

### Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740647	03/05/2024	03/26/2024
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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG06@6'**  
**3/5/2024 1:56:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-14 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.316	0.0997	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.29	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.61	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.30	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	1.67	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.406	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.61	0.282	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	93.0	9.73	"	"	"	"	"
Cadmium	0.151	0.0973	"	"	"	"	"
Copper	ND	9.73	"	"	"	"	" U

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Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG06@6'**  
**3/5/2024 1:56:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-14 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	8.31	0.973	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	8.11	0.973	"	"	"	"	"	
Selenium	ND	0.253	"	"	"	"	"	U
Silver	ND	0.0973	"	"	"	"	"	U
Zinc	ND	36.0	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740647	03/05/2024	03/26/2024
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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG07@3'**  
**3/5/2024 1:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-15 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.909	0.0987	mg/L	1	B4C0618	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.94	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	0.929	0.823	"	"	"	"	"
Sodium	2.80	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.40		pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	2.33	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.660	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	6.55	0.278	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	114	9.60	"	"	"	"	"
Cadmium	0.343	0.0960	"	"	"	"	"
Copper	11.8	9.60	"	"	"	"	"

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Project: KMG - McCrumb Fed 10-17A Wellhead

**NATIVE-BG07@3'**  
**3/5/2024 1:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-15 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	15.9	0.960	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	18.0	0.960	"	"	"	"	"	
Selenium	0.396	0.250	"	"	"	"	"	
Silver	ND	0.0960	"	"	"	"	"	U
Zinc	67.6	35.5	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740647	03/05/2024	03/26/2024
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**NATIVE-BG07@6'**  
**3/5/2024 2:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-16 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.630	0.102	mg/L	1	B4C0619	03/06/2024	03/07/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.19	0.499	meq/L	10	[CALC]	03/06/2024	03/07/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.78	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.37	pH Units	1	B4C0626	03/06/2024	03/07/2024
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**SAR by 20B Saturated Paste**

SAR	2.91	0.0100	SAR	1	B4C0610	03/06/2024	03/07/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.535	0.00500	mmhos/cm	1	B4C0626	03/06/2024	03/07/2024
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**Table 915 metals by EPA 6020B**

Arsenic	6.20	0.282	mg/kg	10	B4C0545	03/05/2024	03/21/2024
Barium	132	9.72	"	"	"	"	"
Cadmium	0.355	0.0972	"	"	"	"	"
Copper	12.7	9.72	"	"	"	"	"

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**NATIVE-BG07@6'**  
**3/5/2024 2:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403109-16 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	15.8	0.972	mg/kg	10	B4C0545	03/05/2024	03/21/2024	
Nickel	20.0	0.972	"	"	"	"	"	
Selenium	0.359	0.253	"	"	"	"	"	
Silver	ND	0.0972	"	"	"	"	"	U
Zinc	70.4	36.0	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L740647	03/05/2024	03/26/2024
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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 B4C0531 - EPA 5030 (soil)</b>										
<b>Blank (B4C0531-BLK1)</b>					Prepared: 03/05/2024 Analyzed: 03/05/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		86.9	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 B4C0531 - EPA 5030 (soil)**

**LCS (B4C0531-BS1)**

Prepared: 03/05/2024 Analyzed: 03/05/2024

1,2,4-Trimethylbenzene	0.0946	0.00200	mg/kg	0.100		94.6	70-130			
1,3,5-Trimethylbenzene	0.0995	0.00200	"	0.100		99.5	70-130			
Benzene	0.0982	0.00200	"	0.100		98.2	70-130			
Ethylbenzene	0.0857	0.00200	"	0.100		85.7	70-130			
Naphthalene	0.0954	0.00380	"	0.100		95.4	70-130			
Toluene	0.0980	0.00200	"	0.100		98.0	70-130			
o-Xylene	0.0851	0.00200	"	0.100		85.1	70-130			
m,p-Xylene	0.181	0.00400	"	0.200		90.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		84.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.094		"	0.125		75.1	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 B4C0531 - EPA 5030 (soil)**

Matrix Spike (B4C0531-MS1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/05/2024					
1,2,4-Trimethylbenzene	0.0900	0.00200	mg/kg	0.100	ND	90.0	70-130			
1,3,5-Trimethylbenzene	0.0946	0.00200	"	0.100	ND	94.6	70-130			
Benzene	0.0989	0.00200	"	0.100	ND	98.9	70-130			
Ethylbenzene	0.0844	0.00200	"	0.100	ND	84.4	70-130			
Naphthalene	0.0938	0.00380	"	0.100	ND	93.8	70-130			
Toluene	0.0964	0.00200	"	0.100	ND	96.4	70-130			
o-Xylene	0.0827	0.00200	"	0.100	ND	82.7	70-130			
m,p-Xylene	0.178	0.00400	"	0.200	ND	88.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.095		"	0.125		76.0	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4C0531 - EPA 5030 (soil)**

Matrix Spike Dup (B4C0531-MSD1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/05/2024					
1,2,4-Trimethylbenzene	0.0879	0.00200	mg/kg	0.100	ND	87.9	70-130	2.38	20	
1,3,5-Trimethylbenzene	0.0920	0.00200	"	0.100	ND	92.0	70-130	2.81	20	
Benzene	0.0981	0.00200	"	0.100	ND	98.1	70-130	0.833	20	
Ethylbenzene	0.0827	0.00200	"	0.100	ND	82.7	70-130	2.06	20	
Naphthalene	0.0970	0.00380	"	0.100	ND	97.0	70-130	3.27	20	
Toluene	0.0954	0.00200	"	0.100	ND	95.4	70-130	1.06	20	
o-Xylene	0.0817	0.00200	"	0.100	ND	81.7	70-130	1.24	20	
m,p-Xylene	0.174	0.00400	"	0.200	ND	87.1	70-130	1.94	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.094		"	0.125		75.5	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
Batch B4C0532 - EPA 3550B										
Blank (B4C0532-BLK1)					Prepared: 03/05/2024 Analyzed: 03/06/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		93.5	50-150			

Origins Laboratory, Inc.



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Project: KMG - McCrumb Fed 10-17A 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 B4C0532 - EPA 3550B

#### LCS (B4C0532-BS1)

Prepared: 03/05/2024 Analyzed: 03/06/2024

Diesel (C10-C28)	816	50.0	mg/kg	1000		81.6	70-130			
Residual Range Organics (C28-C40)	921	200	"	1000		92.1	70-130			
Surrogate: o-Terphenyl	47		"	49.8		95.0	50-150			

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0532 - EPA 3550B

Matrix Spike (B4C0532-MS1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/06/2024					
Diesel (C10-C28)	858	50.0	mg/kg	1000	ND	85.8	70-130			
Residual Range Organics (C28-C40)	983	200	"	1000	ND	98.3	70-130			
Surrogate: o-Terphenyl	48		"	49.8		96.1	50-150			

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Project: KMG - McCrumb Fed 10-17A 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 B4C0532 - EPA 3550B

Matrix Spike Dup (B4C0532-MSD1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/06/2024					
Diesel (C10-C28)	840	50.0	mg/kg	1000	ND	84.0	70-130	2.09	35	
Residual Range Organics (C28-C40)	977	200	"	1000	ND	97.7	70-130	0.600	35	
Surrogate: o-Terphenyl	48		"	49.8		95.8	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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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## 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 B4C0545 - EPA 3050B

#### Blank (B4C0545-BLK1)

Prepared: 03/05/2024 Analyzed: 03/21/2024

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

#### LCS (B4C0545-BS1)

Prepared: 03/05/2024 Analyzed: 03/21/2024

Arsenic	5.54	0.290	mg/kg	5.00		111	80-120
Barium	525	10.0	"	500		105	80-120
Cadmium	5.53	0.100	"	5.00		111	80-120
Copper	54.9	10.0	"	50.0		110	80-120
Lead	5.34	1.00	"	5.00		107	80-120
Nickel	5.56	1.00	"	5.00		111	80-120
Selenium	11.0	0.260	"	9.50		115	80-120
Silver	4.31	0.100	"	5.00		86.2	80-120
Zinc	48.4	37.0	"	50.0		96.9	80-120

#### Matrix Spike (B4C0545-MS1)

Source: Y403109-06

Prepared: 03/05/2024 Analyzed: 03/21/2024

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Project: KMG - McCrumb Fed 10-17A 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 B4C0545 - EPA 3050B**

Matrix Spike (B4C0545-MS1)		Source: Y403109-06			Prepared: 03/05/2024 Analyzed: 03/21/2024					
Arsenic	6.68	0.244	mg/kg	4.21	2.01	111	75-125			
Barium	532	8.43	"	421	72.3	109	75-125			
Cadmium	4.75	0.0843	"	4.21	0.0887	111	75-125			
Copper	51.9	8.43	"	42.1	ND	123	75-125			
Lead	10.6	0.843	"	4.21	6.15	105	75-125			
Nickel	11.5	0.843	"	4.21	6.44	121	75-125			
Selenium	8.84	0.219	"	8.00	0.144	109	75-125			
Silver	3.71	0.0843	"	4.21	ND	88.0	75-125			
Zinc	70.7	31.2	"	42.1	18.4	124	75-125			
Matrix Spike Dup (B4C0545-MSD1)		Source: Y403109-06			Prepared: 03/05/2024 Analyzed: 03/21/2024					
Arsenic	7.35	0.275	mg/kg	4.74	2.01	113	75-125	9.65	20	
Barium	579	9.47	"	474	72.3	107	75-125	8.52	20	
Cadmium	5.32	0.0947	"	4.74	0.0887	110	75-125	11.2	20	
Copper	60.3	9.47	"	47.4	ND	127	75-125	15.0	20	QM-07
Lead	11.1	0.947	"	4.74	6.15	105	75-125	5.25	20	
Nickel	11.8	0.947	"	4.74	6.44	113	75-125	2.19	20	
Selenium	9.93	0.246	"	9.00	0.144	109	75-125	11.6	20	
Silver	4.24	0.0947	"	4.74	ND	89.4	75-125	13.3	20	
Zinc	76.6	35.0	"	47.4	18.4	123	75-125	7.98	20	

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0533 - EPA 3580**

**Blank (B4C0533-BLK1)**

Prepared: 03/05/2024 Analyzed: 03/05/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	180		"	200		92.2	60-130			
Surrogate: Pyrene-d10	200		"	200		100	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

**LCS (B4C0533-BS1)**

Prepared: 03/05/2024 Analyzed: 03/05/2024

1-Methylnaphthalene	0.175	0.002	mg/kg	0.200		87.3	70-130
2-Methylnaphthalene	0.173	0.002	"	0.200		86.6	70-130
Acenaphthene	0.176	0.020	"	0.200		88.2	70-130
Anthracene	0.166	0.020	"	0.200		83.1	70-130

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Project: KMG - McCrumb Fed 10-17A 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 B4C0533 - EPA 3580**

**LCS (B4C0533-BS1)**

Prepared: 03/05/2024 Analyzed: 03/05/2024

Benzo (a) anthracene	0.178	0.005	mg/kg	0.200		89.2	70-130
Benzo (a) pyrene	0.184	0.020	"	0.200		91.9	70-130
Benzo (b) fluoranthene	0.185	0.020	"	0.200		92.3	70-130
Benzo (g,h,i) perylene	0.178	0.020	"	0.200		88.9	70-130
Benzo (k) fluoranthene	0.184	0.020	"	0.200		91.8	70-130
Chrysene	0.180	0.020	"	0.200		90.1	70-130
Dibenz (a,h) anthracene	0.181	0.020	"	0.200		90.6	70-130
Fluoranthene	0.164	0.020	"	0.200		82.0	70-130
Fluorene	0.177	0.020	"	0.200		88.5	70-130
Indeno (1,2,3-cd) pyrene	0.185	0.020	"	0.200		92.7	70-130
Naphthalene	0.180	0.002	"	0.200		89.9	70-130
Phenanthrene	0.163	0.020	"	0.200		81.3	70-130
Pyrene	0.171	0.020	"	0.200		85.4	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130
Surrogate: Anthracene-d10	190		"	200		93.3	60-130
Surrogate: Pyrene-d10	200		"	200		98.7	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130

**Matrix Spike (B4C0533-MS1)**

**Source: Y403097-01**

Prepared: 03/05/2024 Analyzed: 03/05/2024

1-Methylnaphthalene	0.173	0.002	mg/kg	0.200	ND	86.7	70-130
2-Methylnaphthalene	0.172	0.002	"	0.200	ND	86.0	70-130
Acenaphthene	0.174	0.020	"	0.200	ND	87.2	70-130
Anthracene	0.168	0.020	"	0.200	ND	83.8	70-130
Benzo (a) anthracene	0.180	0.005	"	0.200	ND	89.8	70-130
Benzo (a) pyrene	0.189	0.020	"	0.200	ND	94.5	70-130
Benzo (b) fluoranthene	0.184	0.020	"	0.200	ND	91.8	70-130
Benzo (g,h,i) perylene	0.183	0.020	"	0.200	0.0005	91.1	70-130

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Project: KMG - McCrumb Fed 10-17A 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 B4C0533 - EPA 3580**

Matrix Spike (B4C0533-MS1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/05/2024					
Benzo (k) fluoranthene	0.196	0.020	mg/kg	0.200	0.0005	97.6	70-130			
Chrysene	0.179	0.020	"	0.200	ND	89.3	70-130			
Dibenz (a,h) anthracene	0.181	0.020	"	0.200	ND	90.3	70-130			
Fluoranthene	0.163	0.020	"	0.200	ND	81.6	70-130			
Fluorene	0.174	0.020	"	0.200	ND	86.9	70-130			
Indeno (1,2,3-cd) pyrene	0.181	0.020	"	0.200	ND	90.7	70-130			
Naphthalene	0.179	0.002	"	0.200	ND	89.6	70-130			
Phenanthrene	0.158	0.020	"	0.200	ND	79.0	70-130			
Pyrene	0.170	0.020	"	0.200	ND	85.1	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		94.0	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	220		"	200		108	60-130			

Matrix Spike Dup (B4C0533-MSD1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/05/2024					
1-Methylnaphthalene	0.188	0.002	mg/kg	0.200	ND	94.0	70-130	8.12	20	
2-Methylnaphthalene	0.186	0.002	"	0.200	ND	92.8	70-130	7.66	20	
Acenaphthene	0.188	0.020	"	0.200	ND	94.0	70-130	7.45	20	
Anthracene	0.177	0.020	"	0.200	ND	88.6	70-130	5.57	20	
Benzo (a) anthracene	0.201	0.005	"	0.200	ND	100	70-130	11.2	20	
Benzo (a) pyrene	0.202	0.020	"	0.200	ND	101	70-130	6.60	20	
Benzo (b) fluoranthene	0.191	0.020	"	0.200	ND	95.7	70-130	4.12	20	
Benzo (g,h,i) perylene	0.191	0.020	"	0.200	0.0005	95.4	70-130	4.59	20	
Benzo (k) fluoranthene	0.182	0.020	"	0.200	0.0005	90.8	70-130	7.21	20	
Chrysene	0.193	0.020	"	0.200	ND	96.6	70-130	7.88	20	
Dibenz (a,h) anthracene	0.191	0.020	"	0.200	ND	95.4	70-130	5.49	20	
Fluoranthene	0.175	0.020	"	0.200	ND	87.7	70-130	7.17	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 B4C0533 - EPA 3580

Matrix Spike Dup (B4C0533-MSD1)		Source: Y403097-01			Prepared: 03/05/2024 Analyzed: 03/05/2024					
Fluorene	0.191	0.020	mg/kg	0.200	ND	95.7	70-130	9.62	20	
Indeno (1,2,3-cd) pyrene	0.193	0.020	"	0.200	ND	96.3	70-130	5.91	20	
Naphthalene	0.195	0.002	"	0.200	ND	97.4	70-130	8.36	20	
Phenanthrene	0.173	0.020	"	0.200	ND	86.4	70-130	9.01	20	
Pyrene	0.185	0.020	"	0.200	ND	92.7	70-130	8.53	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		94.2	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		105	60-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4C0609 - Saturated Paste Metals

##### Blank (B4C0609-BLK1)

Prepared: 03/06/2024 Analyzed: 03/07/2024

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

##### Duplicate (B4C0609-DUP1)

Source: Y403103-07

Prepared: 03/06/2024 Analyzed: 03/07/2024

Calcium PPM	5.76	10.0	mg/L		4.88			16.5	50	U
SAR	ND	0.0100	SAR		4.27				200	U
Magnesium PPM	1.58	10.0	mg/L		1.30			19.4	50	U
Sodium PPM	39.2	10.0	"		41.1			4.66	50	

#### Batch B4C0610 - Saturated Paste Metals

##### Blank (B4C0610-BLK1)

Prepared: 03/06/2024 Analyzed: 03/07/2024

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

##### Duplicate (B4C0610-DUP1)

Source: Y403109-04

Prepared: 03/06/2024 Analyzed: 03/07/2024

SAR	ND	0.0100	SAR		3.26				200	U
Calcium PPM	18.7	10.0	mg/L		17.2			8.42	50	
Magnesium PPM	5.92	10.0	"		5.67			4.31	50	U
Sodium PPM	63.5	10.0	"		61.0			3.97	50	

#### Batch B4C0618 - DTPA Sorbitol Preparation

##### Blank (B4C0618-BLK1)

Prepared: 03/06/2024 Analyzed: 03/07/2024

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4C0618 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4C0618-BLK1)</b>					Prepared: 03/06/2024 Analyzed: 03/07/2024					
Boron	ND	0.100	mg/L							U
<b>Duplicate (B4C0618-DUP1)</b>					<b>Source: Y403097-03</b> Prepared: 03/06/2024 Analyzed: 03/07/2024					
Boron	0.0498	0.0999	mg/L		0.0549			9.80	50	U
<b>Batch B4C0619 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4C0619-BLK1)</b>					Prepared: 03/06/2024 Analyzed: 03/07/2024					
Boron	ND	0.100	mg/L							U
<b>Duplicate (B4C0619-DUP1)</b>					<b>Source: Y403109-16</b> Prepared: 03/06/2024 Analyzed: 03/07/2024					
Boron	0.800	0.0998	mg/L		0.630			23.7	50	

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## 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 B4C0625 - Saturated Paste pH/EC

##### Blank (B4C0625-BLK1)

Prepared: 03/06/2024 Analyzed: 03/07/2024

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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##### Duplicate (B4C0625-DUP1)

Source: Y403103-07

Prepared: 03/06/2024 Analyzed: 03/07/2024

Specific Conductance (EC)	0.238	0.00500	mmhos/cm	0.227			4.77	25		
pH	8.62		pH Units	8.75			1.50	25		

#### Batch B4C0626 - Saturated Paste pH/EC

##### Blank (B4C0626-BLK1)

Prepared: 03/06/2024 Analyzed: 03/07/2024

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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##### Duplicate (B4C0626-DUP1)

Source: Y403109-04

Prepared: 03/06/2024 Analyzed: 03/07/2024

pH	8.42		pH Units	8.28			1.68	25		
Specific Conductance (EC)	0.460	0.00500	mmhos/cm	0.431			6.46	25		

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Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L740647 -</b>										
<b>DUP (L 87248-DUP)</b>		<b>Source: 87248</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 87248-MS)</b>		<b>Source: 87248</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	34.8	2.5	mg/Kg	39.1	< 0.244	89	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	6.85	0.5	mg/Kg	8		86	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196 A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L740646 -</b>										
<b>DUP (L 87239-DUP)</b>		<b>Source: Y403109-08</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 87239-MS)</b>		<b>Source: Y403109-08</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	32.5	2.5	mg/Kg	39.2	< 0.244	83	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	6.68	0.5	mg/Kg	8		84	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L740645 -</b>										
<b>DUP (L 87229-DUP)</b>		<b>Source: 87229</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 87229-MS)</b>		<b>Source: 87229</b>			Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	33.5	2.5	mg/Kg	39.7	< 0.244	84	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	6.8	0.5	mg/Kg	8		85	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 03/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

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.

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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April 12, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 07, 2024. This project is associated with Origins project number Y403211-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01@4'	Y403211-01	Soil	March 7, 2024 13:00	03/07/2024 16:03

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 41-103211

Client: Ensolum

Client Project ID: McCrumb Fed 10-17A

Checklist Completed by: JAN/HU

Shipped Via: 410

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

Date/time completed: 3/7/24

Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid

Water

Other:

Cooler Number/Temperature: 17.5 °C / °C / °C (Describe)

Thermometer ID: 1004

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> ?		/		SD
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			X	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			X	
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
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)			X	
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) Ula

3/7/24  
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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL01@4'

3/7/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403211-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.251	0.0987	mg/L	1	B4C0821	03/08/2024	03/14/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0757	03/07/2024	03/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	98.5 %	50-150	"	"	"
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0758	03/07/2024	03/07/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL01@4'

3/7/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403211-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	95.8 %	70-130				B4C07 58	03/07/2024	03/07/2024	
Surrogate: 4-Bromofluorobenzene	98.6 %	70-130				"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.95	0.499	meq/L	10	[CALC]	03/09/2024	03/11/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	2.56	0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4C0739	03/07/2024	03/07/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL01@4'

3/7/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403211-01 (Soil)**

**PAH by EPA 8270E**

Fluorene	ND	0.020	mg/kg	1	B4C0739	03/07/2024	03/07/2024	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	98.4 %	60-130	"	"	"
Surrogate: Anthracene-d10	96.8 %	60-130	"	"	"
Surrogate: Pyrene-d10	110 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	96.7 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.30	pH Units	1	B4C0916	03/09/2024	03/11/2024
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**SAR by 20B Saturated Paste**

SAR	2.20	0.0100	SAR	1	B4C0906	03/09/2024	03/11/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.570	0.00500	mmhos/cm	1	B4C0916	03/09/2024	03/11/2024
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**Table 915 metals by EPA 6020B**

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL01@4'

3/7/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403211-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.14	0.272	mg/kg	10	B4C0830	03/08/2024	03/22/2024
Barium	62.3	9.37	"	"	"	"	"
Cadmium	0.181	0.0937	"	"	"	"	"
Copper	ND	9.37	"	"	"	"	"
Lead	7.84	0.937	"	"	"	"	"
Nickel	6.82	0.937	"	"	"	"	"
Selenium	ND	0.244	"	"	"	"	"
Silver	ND	0.0937	"	"	"	"	"
Zinc	ND	34.7	"	"	"	"	"

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.245	0.504	mg/Kg	1	L742557	03/07/2024	04/05/2024
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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0757 - EPA 3550B										
Blank (B4C0757-BLK1)					Prepared: 03/07/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	28		"	24.9		113	50-150			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0757 - EPA 3550B

#### LCS (B4C0757-BS1)

Prepared: 03/07/2024 Analyzed: 03/08/2024

Diesel (C10-C28)	828	50.0	mg/kg	1000		82.8	70-130			
Residual Range Organics (C28-C40)	909	200	"	1000		90.9	70-130			
Surrogate: o-Terphenyl	50		"	49.8		101	50-150			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0757 - EPA 3550B

Matrix Spike (B4C0757-MS1)		Source: Y403206-01			Prepared: 03/07/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	837	50.0	mg/kg	1000	ND	83.7	70-130			
Residual Range Organics (C28-C40)	933	200	"	1000	ND	93.3	70-130			
Surrogate: o-Terphenyl	48		"	49.8		96.3	50-150			

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0757 - EPA 3550B

Matrix Spike Dup (B4C0757-MSD1)		Source: Y403206-01			Prepared: 03/07/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	824	50.0	mg/kg	1000	ND	82.4	70-130	1.59	35	
Residual Range Organics (C28-C40)	917	200	"	1000	ND	91.7	70-130	1.75	35	
Surrogate: o-Terphenyl	49		"	49.8		97.5	50-150			

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0758 - EPA 5030 (soil)										
Blank (B4C0758-BLK1)					Prepared: 03/07/2024 Analyzed: 03/07/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.2	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0758 - EPA 5030 (soil)**

**LCS (B4C0758-BS1)**

Prepared: 03/07/2024 Analyzed: 03/07/2024

1,2,4-Trimethylbenzene	0.0958	0.00200	mg/kg	0.100		95.8	70-130			
1,3,5-Trimethylbenzene	0.0960	0.00200	"	0.100		96.0	70-130			
Benzene	0.0916	0.00200	"	0.100		91.6	70-130			
Ethylbenzene	0.0935	0.00200	"	0.100		93.5	70-130			
Naphthalene	0.100	0.00380	"	0.100		100	70-130			
Toluene	0.0894	0.00200	"	0.100		89.4	70-130			
o-Xylene	0.0966	0.00200	"	0.100		96.6	70-130			
m,p-Xylene	0.189	0.00400	"	0.200		94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.5	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0758 - EPA 5030 (soil)**

Matrix Spike (B4C0758-MS1)		Source: Y403206-01			Prepared: 03/07/2024 Analyzed: 03/07/2024					
1,2,4-Trimethylbenzene	0.0828	0.00200	mg/kg	0.100	ND	82.8	70-130			
1,3,5-Trimethylbenzene	0.0829	0.00200	"	0.100	ND	82.9	70-130			
Benzene	0.0857	0.00200	"	0.100	ND	85.7	70-130			
Ethylbenzene	0.0856	0.00200	"	0.100	ND	85.6	70-130			
Naphthalene	0.0766	0.00380	"	0.100	0.000840	75.8	70-130			
Toluene	0.0825	0.00200	"	0.100	ND	82.5	70-130			
o-Xylene	0.0815	0.00200	"	0.100	ND	81.5	70-130			
m,p-Xylene	0.166	0.00400	"	0.200	ND	83.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0758 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4C0758-MSD1)</b>	<b>Source: Y403206-01</b>				Prepared: 03/07/2024 Analyzed: 03/07/2024					
1,2,4-Trimethylbenzene	0.0785	0.00200	mg/kg	0.100	ND	78.5	70-130	5.33	20	
1,3,5-Trimethylbenzene	0.0781	0.00200	"	0.100	ND	78.1	70-130	5.99	20	
Benzene	0.0834	0.00200	"	0.100	ND	83.4	70-130	2.77	20	
Ethylbenzene	0.0822	0.00200	"	0.100	ND	82.2	70-130	4.03	20	
Naphthalene	0.0744	0.00380	"	0.100	0.000840	73.6	70-130	2.86	20	
Toluene	0.0781	0.00200	"	0.100	ND	78.1	70-130	5.48	20	
o-Xylene	0.0780	0.00200	"	0.100	ND	78.0	70-130	4.37	20	
m,p-Xylene	0.160	0.00400	"	0.200	ND	80.0	70-130	3.64	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.1	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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0830 - EPA 3050B

#### Blank (B4C0830-BLK1)

Prepared: 03/08/2024 Analyzed: 03/22/2024

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 (B4C0830-BS1)

Prepared: 03/08/2024 Analyzed: 03/22/2024

Arsenic	5.06	0.290	mg/kg	5.00	101	80-120
Barium	516	10.0	"	500	103	80-120
Cadmium	4.81	0.100	"	5.00	96.3	80-120
Copper	50.9	10.0	"	50.0	102	80-120
Lead	4.81	1.00	"	5.00	96.3	80-120
Nickel	5.06	1.00	"	5.00	101	80-120
Selenium	9.44	0.260	"	9.50	99.4	80-120
Silver	4.84	0.100	"	5.00	96.7	80-120
Zinc	49.8	37.0	"	50.0	99.6	80-120

#### Matrix Spike (B4C0830-MS1)

Source: Y403208-01

Prepared: 03/08/2024 Analyzed: 03/22/2024

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0830 - EPA 3050B

Matrix Spike (B4C0830-MS1)		Source: Y403208-01			Prepared: 03/08/2024 Analyzed: 03/22/2024					
Arsenic	7.41	0.284	mg/kg	4.90	2.46	101	75-125			
Barium	541	9.80	"	490	50.3	100	75-125			
Cadmium	4.81	0.0980	"	4.90	0.0492	97.2	75-125			
Copper	57.7	9.80	"	49.0	7.39	103	75-125			
Lead	10.4	0.980	"	4.90	5.44	101	75-125			
Nickel	12.9	0.980	"	4.90	8.38	92.2	75-125			
Selenium	9.14	0.255	"	9.31	0.0703	97.5	75-125			
Silver	4.84	0.0980	"	4.90	ND	98.7	75-125			
Zinc	71.1	36.3	"	49.0	23.7	96.8	75-125			
Matrix Spike Dup (B4C0830-MSD1)		Source: Y403208-01			Prepared: 03/08/2024 Analyzed: 03/22/2024					
Arsenic	6.93	0.262	mg/kg	4.52	2.46	99.0	75-125	6.65	20	
Barium	510	9.03	"	452	50.3	102	75-125	5.90	20	
Cadmium	4.42	0.0903	"	4.52	0.0492	96.8	75-125	8.45	20	
Copper	51.9	9.03	"	45.2	7.39	98.5	75-125	10.6	20	
Lead	9.77	0.903	"	4.52	5.44	95.9	75-125	6.32	20	
Nickel	12.3	0.903	"	4.52	8.38	86.8	75-125	4.75	20	
Selenium	8.36	0.235	"	8.58	0.0703	96.5	75-125	9.01	20	
Silver	4.43	0.0903	"	4.52	0.0105	97.9	75-125	8.71	20	
Zinc	65.3	33.4	"	45.2	23.7	92.0	75-125	8.57	20	

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0739 - EPA 3580**

**Blank (B4C0739-BLK1)**

Prepared: 03/07/2024 Analyzed: 03/07/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		97.7	60-130			
Surrogate: Anthracene-d10	200		"	200		99.6	60-130			
Surrogate: Pyrene-d10	200		"	200		98.6	60-130			
Surrogate: Benzo (a) pyrene-d12	180		"	200		92.4	60-130			

**LCS (B4C0739-BS1)**

Prepared: 03/07/2024 Analyzed: 03/07/2024

1-Methylnaphthalene	0.167	0.002	mg/kg	0.200		83.5	70-130
2-Methylnaphthalene	0.162	0.002	"	0.200		81.0	70-130
Acenaphthene	0.183	0.020	"	0.200		91.7	70-130
Anthracene	0.190	0.020	"	0.200		94.9	70-130

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0739 - EPA 3580**

**LCS (B4C0739-BS1)**

Prepared: 03/07/2024 Analyzed: 03/07/2024

Benzo (a) anthracene	0.171	0.005	mg/kg	0.200		85.6	70-130
Benzo (a) pyrene	0.189	0.020	"	0.200		94.6	70-130
Benzo (b) fluoranthene	0.158	0.020	"	0.200		78.9	70-130
Benzo (g,h,i) perylene	0.163	0.020	"	0.200		81.7	70-130
Benzo (k) fluoranthene	0.161	0.020	"	0.200		80.7	70-130
Chrysene	0.203	0.020	"	0.200		102	70-130
Dibenz (a,h) anthracene	0.189	0.020	"	0.200		94.5	70-130
Fluoranthene	0.196	0.020	"	0.200		97.9	70-130
Fluorene	0.166	0.020	"	0.200		83.1	70-130
Indeno (1,2,3-cd) pyrene	0.161	0.020	"	0.200		80.6	70-130
Naphthalene	0.173	0.002	"	0.200		86.6	70-130
Phenanthrene	0.173	0.020	"	0.200		86.4	70-130
Pyrene	0.193	0.020	"	0.200		96.3	70-130
Surrogate: Fluorene-d10	190		ug/kg	200		92.5	60-130
Surrogate: Anthracene-d10	190		"	200		96.8	60-130
Surrogate: Pyrene-d10	210		"	200		107	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130

**Matrix Spike (B4C0739-MS1)**

**Source: Y403201-01**

Prepared: 03/07/2024 Analyzed: 03/07/2024

1-Methylnaphthalene	0.167	0.002	mg/kg	0.200	ND	83.4	70-130
2-Methylnaphthalene	0.171	0.002	"	0.200	ND	85.5	70-130
Acenaphthene	0.179	0.020	"	0.200	0.0005	89.0	70-130
Anthracene	0.194	0.020	"	0.200	ND	97.0	70-130
Benzo (a) anthracene	0.163	0.005	"	0.200	0.004	79.6	70-130
Benzo (a) pyrene	0.199	0.020	"	0.200	0.006	96.6	70-130
Benzo (b) fluoranthene	0.187	0.020	"	0.200	0.002	92.4	70-130
Benzo (g,h,i) perylene	0.162	0.020	"	0.200	0.004	78.9	70-130

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0739 - EPA 3580**

Matrix Spike (B4C0739-MS1)		Source: Y403201-01			Prepared: 03/07/2024 Analyzed: 03/07/2024					
Benzo (k) fluoranthene	0.156	0.020	mg/kg	0.200	0.002	77.1	70-130			
Chrysene	0.182	0.020	"	0.200	0.004	89.1	70-130			
Dibenz (a,h) anthracene	0.192	0.020	"	0.200	ND	96.1	70-130			
Fluoranthene	0.171	0.020	"	0.200	0.003	84.0	70-130			
Fluorene	0.179	0.020	"	0.200	0.0005	89.4	70-130			
Indeno (1,2,3-cd) pyrene	0.188	0.020	"	0.200	0.002	93.0	70-130			
Naphthalene	0.181	0.002	"	0.200	ND	90.6	70-130			
Phenanthrene	0.187	0.020	"	0.200	0.0008	92.9	70-130			
Pyrene	0.195	0.020	"	0.200	0.005	95.1	70-130			
Surrogate: Fluorene-d10	190		ug/kg	200		95.0	60-130			
Surrogate: Anthracene-d10	200		"	200		98.5	60-130			
Surrogate: Pyrene-d10	170		"	200		85.4	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.8	60-130			

Matrix Spike Dup (B4C0739-MSD1)		Source: Y403201-01			Prepared: 03/07/2024 Analyzed: 03/07/2024					
1-Methylnaphthalene	0.170	0.002	mg/kg	0.200	ND	84.9	70-130	1.73	20	
2-Methylnaphthalene	0.167	0.002	"	0.200	ND	83.6	70-130	2.19	20	
Acenaphthene	0.179	0.020	"	0.200	0.0005	89.4	70-130	0.414	20	
Anthracene	0.176	0.020	"	0.200	ND	88.1	70-130	9.60	20	
Benzo (a) anthracene	0.179	0.005	"	0.200	0.004	87.5	70-130	9.25	20	
Benzo (a) pyrene	0.190	0.020	"	0.200	0.006	92.3	70-130	4.42	20	
Benzo (b) fluoranthene	0.176	0.020	"	0.200	0.002	86.9	70-130	6.11	20	
Benzo (g,h,i) perylene	0.170	0.020	"	0.200	0.004	82.9	70-130	4.79	20	
Benzo (k) fluoranthene	0.166	0.020	"	0.200	0.002	82.1	70-130	6.21	20	
Chrysene	0.174	0.020	"	0.200	0.004	84.9	70-130	4.65	20	
Dibenz (a,h) anthracene	0.217	0.020	"	0.200	ND	108	70-130	11.9	20	
Fluoranthene	0.167	0.020	"	0.200	0.003	81.9	70-130	2.47	20	

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Project: KMG - McCrumb Fed 10-17A 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 B4C0739 - EPA 3580**

Matrix Spike Dup (B4C0739-MSD1)		Source: Y403201-01			Prepared: 03/07/2024 Analyzed: 03/07/2024					
Fluorene	0.174	0.020	mg/kg	0.200	0.0005	86.8	70-130	2.96	20	
Indeno (1,2,3-cd) pyrene	0.173	0.020	"	0.200	0.002	85.2	70-130	8.62	20	
Naphthalene	0.179	0.002	"	0.200	ND	89.6	70-130	1.13	20	
Phenanthrene	0.184	0.020	"	0.200	0.0008	91.7	70-130	1.28	20	
Pyrene	0.168	0.020	"	0.200	0.005	81.4	70-130	15.1	20	
Surrogate: Fluorene-d10	190		ug/kg	200		95.6	60-130			
Surrogate: Anthracene-d10	190		"	200		96.5	60-130			
Surrogate: Pyrene-d10	170		"	200		83.1	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130			

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0821 - DTPA Sorbitol Preparation

##### Blank (B4C0821-BLK1)

Prepared: 03/08/2024 Analyzed: 03/14/2024

Boron ND 0.100 mg/L

##### Duplicate (B4C0821-DUP1)

Source: Y403060-01

Prepared: 03/08/2024 Analyzed: 03/14/2024

Boron 0.213 0.101 mg/L 0.215 0.880 50

#### Batch B4C0906 - Saturated Paste Metals

##### Blank (B4C0906-BLK1)

Prepared: 03/09/2024 Analyzed: 03/11/2024

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

##### Duplicate (B4C0906-DUP1)

Source: Y403206-01

Prepared: 03/09/2024 Analyzed: 03/11/2024

Calcium PPM 31.9 10.0 mg/L 29.5 7.79 50

SAR ND 0.0100 SAR 1.04 200

Magnesium PPM 7.45 10.0 mg/L 6.94 7.09 50

Sodium PPM 24.4 10.0 " 24.1 0.990 50

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Project: KMG - McCrumb Fed 10-17A 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 B4C0916 - Saturated Paste pH/EC										
Blank (B4C0916-BLK1)					Prepared: 03/09/2024 Analyzed: 03/11/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4C0916-DUP1)					Source: Y403206-01 Prepared: 03/09/2024 Analyzed: 03/11/2024					
Specific Conductance (EC)	0.372	0.00500	mmhos/cm		0.365			1.93	25	
pH	7.86		pH Units		7.99			1.64	25	

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L742557 -										
<b>DUP (L 89518-DUP)</b>		<b>Source: 89518</b>			Prepared: Analyzed: 04/05/2024					
Chromium, Hexavalent	ND	0.504	mg/Kg		<0.504	-		0.7	20	
<b>MS (L 89518-MS)</b>		<b>Source: 89518</b>			Prepared: Analyzed: 04/05/2024					
Chromium, Hexavalent	35.9	2.54	mg/Kg	40.6	< 0.244	88	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 04/05/2024					
Chromium, Hexavalent	7.1	0.5	mg/Kg	8		89	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 04/05/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported 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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March 19, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 07, 2024. This project is associated with Origins project number Y403212-01.

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.  
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Ensolum

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01@4'-V	Y403212-01	Soil	March 7, 2024 13:02	03/07/2024 16:03

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

Origins Work Order: 440312 Sample Receipt Checklist

Client: Ensolum

Client Project ID: McCrumb Fed 10-17

Checklist Completed by: TON/ETV

Date/time completed: 3/7/12

Shipped Via: 40  
(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, 75 °C 1 °C 1 °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7004

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"/>		no
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): CO

Date/Time Reviewed: 3/7/12

Origins Laboratory, Inc.

*J. Bynon*

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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

FL01@4'-V

3/7/2024 1:02:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y403212-01 (Soil)

**pH in Soil by 9045D**

pH	8.18	pH Units	1	B4C1328	EAL	03/13/2024	03/15/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4C1328 - Saturated Paste pH/EC**

<b>Duplicate (B4C1328-DUP1)</b>		<b>Source: Y403196-01</b>			Prepared: 03/13/2024 Analyzed: 03/15/2024					
pH	8.13		pH Units		8.36			2.79	25	

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



*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.*

April 08, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 08, 2024. This project is associated with Origins project number Y403233-01.

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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL02@4'	Y403233-01	Soil	March 8, 2024 12:45	03/08/2024 16:07
FL03@5'	Y403233-02	Soil	March 8, 2024 13:00	03/08/2024 16:07
SEP01-RISER@5'	Y403233-03	Soil	March 8, 2024 13:05	03/08/2024 16:07

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4403223

Client: Ensolum

Client Project ID: McCrumb Fed

Checklist Completed by: JOH/M

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

Date/time completed: 3/8/14

Airbill #: N/A

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

Cooler Number/Temperature: 1, 4 °C \_\_\_\_\_ °C \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7004

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? <b>If yes, contact client and note in narrative.</b>			<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) JOH Date/Time Reviewed 3/8/14

Origins Laboratory, Inc.

*Bynon*

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL02@4'  
3/8/2024 12:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-01 (Soil)

## Boron (DTPA Sorbitol)

Boron	0.514	0.0993	mg/L	1	B4C1107	03/11/2024	03/12/2024	
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## DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0822	03/08/2024	03/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	109 %	50-150	"	"	"
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## GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0840	03/08/2024	03/08/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	96.8 %	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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL02@4'  
3/8/2024 12:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-01 (Soil)

## GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	102 %	70-130				B4C08 40	03/08/2024	03/08/2024	
Surrogate: 4-Bromofluorobenzene	110 %	70-130				"	"	"	

## Metals by Saturated Paste by EPA 6010

Calcium	2.67	0.499	meq/L	10	[CALC]	03/09/2024	03/11/2024	
Magnesium	0.933	0.823	"	"	"	"	"	
Sodium	3.14	0.435	"	"	"	"	"	

## PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	0.006	0.005	"	"	"	"	"	
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (g,h,i) perylene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## FL02@4'

3/8/2024 12:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y403233-01 (Soil)

### PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Phenanthrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %	60-130	"	"	"
Surrogate: Anthracene-d10	94.8 %	60-130	"	"	"
Surrogate: Pyrene-d10	96.7 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	100 %	60-130	"	"	"

### pH in Soil by 9045D

pH	8.30	pH Units	1	B4C0915	03/09/2024	03/10/2024
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### SAR by 20B Saturated Paste

SAR	2.34	0.0100	SAR	1	B4C0905	03/09/2024	03/11/2024
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### Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.818	0.00500	mmhos/cm	1	B4C0915	03/09/2024	03/10/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL02@4'

3/8/2024 12:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.95	0.275	mg/kg	10	B4C1123	03/11/2024	03/21/2024
Barium	80.2	9.47	"	"	"	"	"
Cadmium	0.270	0.0947	"	"	"	"	"
Copper	ND	9.47	"	"	"	"	"
Lead	10.9	0.947	"	"	"	"	"
Nickel	8.18	0.947	"	"	"	"	"
Selenium	ND	0.246	"	"	"	"	"
Silver	ND	0.0947	"	"	"	"	"
Zinc	42.3	35.0	"	"	"	"	"

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.515	mg/Kg	1	L742378	03/08/2024	04/03/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL03@5'

3/8/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403233-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.455	0.101	mg/L	1	B4C1107	03/11/2024	03/12/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0822	03/08/2024	03/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	96.6 %	50-150	"	"	"	"	"
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0840	03/08/2024	03/08/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.4 %	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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL03@5'

3/8/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-02 (Soil)

## GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	102 %	70-130				B4C08 40	03/08/2024	03/08/2024	
Surrogate: 4-Bromofluorobenzene	111 %	70-130				"	"	"	

## Metals by Saturated Paste by EPA 6010

Calcium	21.3	0.499	meq/L	10	[CALC]	03/09/2024	03/11/2024	
Magnesium	7.90	0.823	"	"	"	"	"	
Sodium	5.85	0.435	"	"	"	"	"	

## PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (g,h,i) perylene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL03@5'

3/8/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y403233-02 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND	0.020	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Phenanthrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	104 %	60-130	"	"	"
Surrogate: Anthracene-d10	101 %	60-130	"	"	"
Surrogate: Pyrene-d10	104 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	105 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	7.92	pH Units	1	B4C0915	03/09/2024	03/10/2024
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**SAR by 20B Saturated Paste**

SAR	1.53	0.0100	SAR	1	B4C0905	03/09/2024	03/11/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	3.19	0.00500	mmhos/cm	1	B4C0915	03/09/2024	03/10/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

FL03@5'

3/8/2024 1:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-02 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	4.04	0.258	mg/kg	10	B4C1123	03/11/2024	03/21/2024
Barium	128	8.90	"	"	"	"	"
Cadmium	0.489	0.0890	"	"	"	"	"
Copper	16.4	8.90	"	"	"	"	"
Lead	21.1	0.890	"	"	"	"	"
Nickel	11.5	0.890	"	"	"	"	"
Selenium	0.232	0.231	"	"	"	"	"
Silver	0.187	0.0890	"	"	"	"	"
Zinc	71.9	32.9	"	"	"	"	"

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.253	0.519	mg/Kg	1	L742380	03/08/2024	04/03/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-RISER@5'  
3/8/2024 1:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-03 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.143	0.100	mg/L	1	B4C1108	03/11/2024	03/12/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4C0822	03/08/2024	03/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	87.1 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4C0840	03/08/2024	03/08/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	0.0730	0.00200	"	"	"	"	"	
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	4.44	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	93.9 %	70-130			"	"	"	
Surrogate: Toluene-d8	123 %	70-130			"	"	"	

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Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-RISER@5'  
3/8/2024 1:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-03 (Soil)

## GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	111 %	70-130	B4C08 40	03/08/2024	03/08/2024
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## Metals by Saturated Paste by EPA 6010

Calcium	2.03	0.499	meq/L	10	[CALC]	03/09/2024	03/11/2024
Magnesium	1.41	0.823	"	"	"	"	"
Sodium	2.45	0.435	"	"	"	"	"

## PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (g,h,i) perylene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

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SEP01-RISER@5'  
3/8/2024 1:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-03 (Soil)

## PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B4C0828	03/08/2024	03/08/2024	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	0.007	0.002	"	"	"	"	"	
Phenanthrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	105 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	101 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.48	pH Units	1	B4C0915	03/09/2024	03/10/2024
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## SAR by 20B Saturated Paste

SAR	1.87	0.0100	SAR	1	B4C0905	03/09/2024	03/11/2024
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## Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.616	0.00500	mmhos/cm	1	B4C0915	03/09/2024	03/10/2024
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SEP01-RISER@5'  
3/8/2024 1:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403233-03 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	6.13	0.260	mg/kg	10	B4C1123	03/11/2024	03/21/2024
Barium	91.1	8.98	"	"	"	"	"
Cadmium	0.122	0.0898	"	"	"	"	"
Copper	ND	8.98	"	"	"	"	"
Lead	12.3	0.898	"	"	"	"	"
Nickel	12.9	0.898	"	"	"	"	"
Selenium	0.452	0.233	"	"	"	"	"
Silver	ND	0.0898	"	"	"	"	"
Zinc	98.8	33.2	"	"	"	"	"

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.515	mg/Kg	1	L742380	03/08/2024	04/03/2024
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Project: KMG - McCrumb Fed 10-17A 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 B4C0822 - EPA 3550B										
Blank (B4C0822-BLK1)					Prepared: 03/08/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	26		"	24.9		104	50-150			

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Project: KMG - McCrumb Fed 10-17A 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 B4C0822 - EPA 3550B

#### LCS (B4C0822-BS1)

Prepared: 03/08/2024 Analyzed: 03/08/2024

Diesel (C10-C28)	994	50.0	mg/kg	1000		99.4	70-130			
Residual Range Organics (C28-C40)	1090	200	"	1000		109	70-130			
Surrogate: o-Terphenyl	51		"	49.8		102	50-150			

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Project: KMG - McCrumb Fed 10-17A 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 B4C0822 - EPA 3550B

Matrix Spike (B4C0822-MS1)		Source: Y403233-01			Prepared: 03/08/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	1000	50.0	mg/kg	1000	ND	100	70-130			
Residual Range Organics (C28-C40)	1190	200	"	1000	ND	119	70-130			
Surrogate: o-Terphenyl	50		"	49.8		99.9	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 B4C0822 - EPA 3550B

Matrix Spike Dup (B4C0822-MSD1)		Source: Y403233-01			Prepared: 03/08/2024 Analyzed: 03/08/2024					
Diesel (C10-C28)	1060	50.0	mg/kg	1000	ND	106	70-130	5.52	35	
Residual Range Organics (C28-C40)	1260	200	"	1000	ND	126	70-130	5.57	35	
Surrogate: o-Terphenyl	62		"	49.8		125	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 B4C0840 - EPA 5030 (soil)										
Blank (B4C0840-BLK1)					Prepared: 03/08/2024 Analyzed: 03/08/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		112	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4C0840 - EPA 5030 (soil)</b>										
<b>LCS (B4C0840-BS1)</b>					Prepared: 03/08/2024 Analyzed: 03/08/2024					
1,2,4-Trimethylbenzene	0.113	0.00200	mg/kg	0.100		113	70-130			
1,3,5-Trimethylbenzene	0.115	0.00200	"	0.100		115	70-130			
Benzene	0.104	0.00200	"	0.100		104	70-130			
Ethylbenzene	0.113	0.00200	"	0.100		113	70-130			
Naphthalene	0.0869	0.00380	"	0.100		86.9	70-130			
Toluene	0.116	0.00200	"	0.100		116	70-130			
o-Xylene	0.117	0.00200	"	0.100		117	70-130			
m,p-Xylene	0.229	0.00400	"	0.200		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	70-130			

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0840 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B4C0840-MS1)</b>		<b>Source: Y403233-01</b>			Prepared: 03/08/2024 Analyzed: 03/08/2024					
1,2,4-Trimethylbenzene	0.0847	0.00200	mg/kg	0.100	ND	84.7	70-130			
1,3,5-Trimethylbenzene	0.0852	0.00200	"	0.100	ND	85.2	70-130			
Benzene	0.0870	0.00200	"	0.100	ND	87.0	70-130			
Ethylbenzene	0.0889	0.00200	"	0.100	ND	88.9	70-130			
Naphthalene	0.0648	0.00380	"	0.100	ND	64.8	70-130			QM-07
Toluene	0.0944	0.00200	"	0.100	ND	94.4	70-130			
o-Xylene	0.0843	0.00200	"	0.100	ND	84.3	70-130			
m,p-Xylene	0.174	0.00400	"	0.200	ND	86.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.9	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 B4C0840 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4C0840-MSD1)</b>		<b>Source: Y403233-01</b>			Prepared: 03/08/2024 Analyzed: 03/08/2024					
1,2,4-Trimethylbenzene	0.0819	0.00200	mg/kg	0.100	ND	81.9	70-130	3.41	20	
1,3,5-Trimethylbenzene	0.0824	0.00200	"	0.100	ND	82.4	70-130	3.34	20	
Benzene	0.0858	0.00200	"	0.100	ND	85.8	70-130	1.34	20	
Ethylbenzene	0.0839	0.00200	"	0.100	ND	83.9	70-130	5.86	20	
Naphthalene	0.0661	0.00380	"	0.100	ND	66.1	70-130	2.08	20	QM-07
Toluene	0.0915	0.00200	"	0.100	ND	91.5	70-130	3.14	20	
o-Xylene	0.0819	0.00200	"	0.100	ND	81.9	70-130	2.84	20	
m,p-Xylene	0.166	0.00400	"	0.200	ND	83.2	70-130	4.21	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.4	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.0	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4C1123 - EPA 3050B

#### Blank (B4C1123-BLK1)

Prepared: 03/11/2024 Analyzed: 03/21/2024

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 (B4C1123-BS1)

Prepared: 03/11/2024 Analyzed: 03/21/2024

Arsenic	5.53	0.290	mg/kg	5.00	111	80-120
Barium	529	10.0	"	500	106	80-120
Cadmium	5.48	0.100	"	5.00	110	80-120
Copper	54.6	10.0	"	50.0	109	80-120
Lead	5.44	1.00	"	5.00	109	80-120
Nickel	5.61	1.00	"	5.00	112	80-120
Selenium	10.1	0.260	"	9.50	106	80-120
Silver	5.59	0.100	"	5.00	112	80-120
Zinc	50.5	37.0	"	50.0	101	80-120

#### Matrix Spike (B4C1123-MS1)

Source: Y402685-01

Prepared: 03/11/2024 Analyzed: 03/21/2024

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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 B4C1123 - EPA 3050B

Matrix Spike (B4C1123-MS1)		Source: Y402685-01			Prepared: 03/11/2024 Analyzed: 03/21/2024					
Arsenic	9.85	0.262	mg/kg	4.52	4.09	127	75-125			QM-07
Barium	626	9.05	"	452	454	38.0	75-125			QM-07
Cadmium	5.29	0.0905	"	4.52	0.229	112	75-125			
Copper	67.3	9.05	"	45.2	13.6	119	75-125			
Lead	16.1	0.905	"	4.52	10.1	133	75-125			QM-07
Nickel	17.5	0.905	"	4.52	11.4	134	75-125			QM-07
Selenium	9.57	0.235	"	8.60	0.214	109	75-125			
Silver	4.81	0.0905	"	4.52	ND	106	75-125			
Zinc	107	33.5	"	45.2	45.5	136	75-125			QM-07
Matrix Spike Dup (B4C1123-MSD1)		Source: Y402685-01			Prepared: 03/11/2024 Analyzed: 03/21/2024					
Arsenic	11.9	0.252	mg/kg	4.35	4.09	180	75-125	19.0	20	QM-07
Barium	799	8.70	"	435	454	79.4	75-125	24.3	20	QR-DUP
Cadmium	5.04	0.0870	"	4.35	0.229	111	75-125	4.74	20	
Lead	15.5	0.870	"	4.35	10.1	123	75-125	4.15	20	
Nickel	17.1	0.870	"	4.35	11.4	131	75-125	2.16	20	QM-07
Selenium	9.12	0.226	"	8.27	0.214	108	75-125	4.87	20	
Silver	4.73	0.0870	"	4.35	ND	109	75-125	1.56	20	
Zinc	101	32.2	"	43.5	45.5	128	75-125	5.42	20	QM-07

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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 B4C0828 - EPA 3580**

**Blank (B4C0828-BLK1)**

Prepared: 03/08/2024 Analyzed: 03/08/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	190		ug/kg	200		95.9	60-130			
Surrogate: Anthracene-d10	180		"	200		91.5	60-130			
Surrogate: Pyrene-d10	210		"	200		104	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

**LCS (B4C0828-BS1)**

Prepared: 03/08/2024 Analyzed: 03/08/2024

1-Methylnaphthalene	0.167	0.002	mg/kg	0.200		83.3	70-130			
2-Methylnaphthalene	0.162	0.002	"	0.200		81.1	70-130			
Acenaphthene	0.188	0.020	"	0.200		94.0	70-130			
Anthracene	0.173	0.020	"	0.200		86.7	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0828 - EPA 3580**

**LCS (B4C0828-BS1)**

Prepared: 03/08/2024 Analyzed: 03/08/2024

Benzo (a) anthracene	0.173	0.005	mg/kg	0.200		86.5	70-130
Benzo (a) pyrene	0.183	0.020	"	0.200		91.3	70-130
Benzo (b) fluoranthene	0.172	0.020	"	0.200		86.2	70-130
Benzo (g,h,i) perylene	0.172	0.020	"	0.200		85.9	70-130
Benzo (k) fluoranthene	0.172	0.020	"	0.200		86.1	70-130
Chrysene	0.194	0.020	"	0.200		96.8	70-130
Dibenz (a,h) anthracene	0.198	0.020	"	0.200		98.8	70-130
Fluoranthene	0.210	0.020	"	0.200		105	70-130
Fluorene	0.177	0.020	"	0.200		88.5	70-130
Indeno (1,2,3-cd) pyrene	0.179	0.020	"	0.200		89.6	70-130
Naphthalene	0.184	0.002	"	0.200		92.0	70-130
Phenanthrene	0.170	0.020	"	0.200		85.2	70-130
Pyrene	0.200	0.020	"	0.200		99.9	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130
Surrogate: Anthracene-d10	180		"	200		91.7	60-130
Surrogate: Pyrene-d10	220		"	200		110	60-130
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.4	60-130

**Matrix Spike (B4C0828-MS1)**

**Source: Y403233-01**

Prepared: 03/08/2024 Analyzed: 03/08/2024

1-Methylnaphthalene	0.161	0.002	mg/kg	0.200	ND	80.7	70-130
2-Methylnaphthalene	0.171	0.002	"	0.200	ND	85.3	70-130
Acenaphthene	0.194	0.020	"	0.200	0.0007	96.7	70-130
Anthracene	0.200	0.020	"	0.200	0.0005	99.7	70-130
Benzo (a) anthracene	0.197	0.005	"	0.200	0.006	95.6	70-130
Benzo (a) pyrene	0.209	0.020	"	0.200	0.005	102	70-130
Benzo (b) fluoranthene	0.183	0.020	"	0.200	0.005	89.4	70-130
Benzo (g,h,i) perylene	0.184	0.020	"	0.200	0.004	89.8	70-130

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0828 - EPA 3580**

Matrix Spike (B4C0828-MS1)		Source: Y403233-01			Prepared: 03/08/2024 Analyzed: 03/08/2024					
Benzo (k) fluoranthene	0.176	0.020	mg/kg	0.200	0.002	87.1	70-130			
Chrysene	0.207	0.020	"	0.200	0.006	101	70-130			
Dibenz (a,h) anthracene	0.232	0.020	"	0.200	ND	116	70-130			
Fluoranthene	0.221	0.020	"	0.200	0.007	107	70-130			
Fluorene	0.188	0.020	"	0.200	0.0008	93.4	70-130			
Indeno (1,2,3-cd) pyrene	0.208	0.020	"	0.200	0.003	103	70-130			
Naphthalene	0.195	0.002	"	0.200	ND	97.6	70-130			
Phenanthrene	0.200	0.020	"	0.200	0.004	98.1	70-130			
Pyrene	0.222	0.020	"	0.200	0.007	107	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		98.0	60-130			
Surrogate: Anthracene-d10	200		"	200		99.5	60-130			
Surrogate: Pyrene-d10	210		"	200		107	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

Matrix Spike Dup (B4C0828-MSD1)		Source: Y403233-01			Prepared: 03/08/2024 Analyzed: 03/11/2024					
1-Methylnaphthalene	0.194	0.002	mg/kg	0.200	ND	97.2	70-130	18.5	20	
2-Methylnaphthalene	0.193	0.002	"	0.200	ND	96.4	70-130	12.2	20	
Acenaphthene	0.189	0.020	"	0.200	0.0007	94.3	70-130	2.50	20	
Anthracene	0.193	0.020	"	0.200	0.0005	96.3	70-130	3.53	20	
Benzo (a) anthracene	0.202	0.005	"	0.200	0.006	98.4	70-130	2.78	20	
Benzo (a) pyrene	0.188	0.020	"	0.200	0.005	91.5	70-130	10.5	20	
Benzo (b) fluoranthene	0.183	0.020	"	0.200	0.005	89.2	70-130	0.290	20	
Benzo (g,h,i) perylene	0.187	0.020	"	0.200	0.004	91.7	70-130	2.04	20	
Benzo (k) fluoranthene	0.165	0.020	"	0.200	0.002	81.5	70-130	6.54	20	
Chrysene	0.192	0.020	"	0.200	0.006	93.0	70-130	7.73	20	
Dibenz (a,h) anthracene	0.193	0.020	"	0.200	ND	96.4	70-130	18.5	20	
Fluoranthene	0.208	0.020	"	0.200	0.007	100	70-130	6.28	20	

Origins Laboratory, Inc.



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Ensolum  
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0828 - EPA 3580**

Matrix Spike Dup (B4C0828-MSD1)		Source: Y403233-01			Prepared: 03/08/2024 Analyzed: 03/11/2024					
Fluorene	0.191	0.020	mg/kg	0.200	0.0008	95.2	70-130	1.88	20	
Indeno (1,2,3-cd) pyrene	0.191	0.020	"	0.200	0.003	93.9	70-130	8.72	20	
Naphthalene	0.194	0.002	"	0.200	ND	97.0	70-130	0.559	20	
Phenanthrene	0.197	0.020	"	0.200	0.004	96.8	70-130	1.30	20	
Pyrene	0.217	0.020	"	0.200	0.007	105	70-130	2.35	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	200		"	200		99.7	60-130			
Surrogate: Pyrene-d10	230		"	200		114	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0905 - Saturated Paste Metals

##### Blank (B4C0905-BLK1)

Prepared: 03/09/2024 Analyzed: 03/11/2024

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 (B4C0905-DUP1)

Source: Y403207-01

Prepared: 03/09/2024 Analyzed: 03/11/2024

Calcium PPM	25.2	10.0	mg/L	23.5	6.87	50
SAR	ND	0.0100	SAR	5.81		200
Magnesium PPM	15.3	10.0	mg/L	15.2	0.657	50
Sodium PPM	145	10.0	"	147	1.58	50

#### Batch B4C1107 - DTPA Sorbitol Preparation

##### Blank (B4C1107-BLK1)

Prepared: 03/11/2024 Analyzed: 03/12/2024

Boron	ND	0.100	mg/L
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##### Duplicate (B4C1107-DUP1)

Source: Y403208-01

Prepared: 03/11/2024 Analyzed: 03/12/2024

Boron	0.171	0.0992	mg/L	0.164	4.19	50
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#### Batch B4C1108 - DTPA Sorbitol Preparation

##### Blank (B4C1108-BLK1)

Prepared: 03/11/2024 Analyzed: 03/12/2024

Boron	ND	0.100	mg/L
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##### Duplicate (B4C1108-DUP1)

Source: Y403233-03

Prepared: 03/11/2024 Analyzed: 03/12/2024

Boron	0.173	0.0987	mg/L	0.143	19.3	50
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4C0915 - Saturated Paste pH/EC										
Blank (B4C0915-BLK1)					Prepared: 03/09/2024 Analyzed: 03/10/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4C0915-DUP1)					Source: Y403207-01 Prepared: 03/09/2024 Analyzed: 03/10/2024					
Specific Conductance (EC)	1.04	0.00500	mmhos/cm		1.02			2.62	25	
pH	8.62		pH Units		8.36			3.06	25	

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L742380 -										
<b>DUP (L 91072-DUP)</b>	<b>Source: 91072</b>				Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 91072-MS)</b>	<b>Source: 91072</b>				Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	37.1	2.5	mg/Kg	39.5	< 0.244	94	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	6.72	0.5	mg/Kg	8		84	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

## Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L742378 -										
<b>DUP (L 91044-DUP)</b>	<b>Source: 91044</b>				Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 91044-MS)</b>	<b>Source: 91044</b>				Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	36.2	2.5	mg/Kg	38.9	< 0.244	93	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	6.41	0.5	mg/Kg	8		80	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 04/03/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.

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.

Origins Laboratory, Inc.



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April 16, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. March 08, 2024. This project is associated with Origins project number Y403234-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL02@4'-V	Y403234-01	Soil	March 8, 2024 12:45	03/08/2024 16:07
FL03@5'-V	Y403234-02	Soil	March 8, 2024 13:00	03/08/2024 16:07
SEP01-RISER@5'-V	Y403234-03	Soil	March 8, 2024 13:05	03/08/2024 16:07

Origins Laboratory, Inc.



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Jordan A. Bynon For Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 1403234

Client: Ensolum

Client Project ID: McCrumb Fed 10-17

Checklist Completed by: JS/1/11

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

Date/time completed: 3/8/24

Airbill #: N/A

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

Cooler Number/Temperature: 1, 4 °C \_\_\_\_\_ °C \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7004

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 be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager): JS

Date/Time Reviewed: 3/8/24

Origins Laboratory, Inc.

*J. Bynon*

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

FL02@4'-V

3/8/2024 12:45:00PM

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

Y403234-01 (Soil)

## pH in Soil by 9045D

pH	7.83	pH Units	1	B4C1419	EAL	03/14/2024	03/18/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

FL03@5'-V

3/8/2024 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y403234-02 (Soil)

## pH in Soil by 9045D

pH	7.43	pH Units	1	B4C1419	EAL	03/14/2024	03/18/2024
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## Table 915 metals by EPA 6020B

Cadmium	0.571	0.0923	mg/kg	10	B4D1128	HJD	04/11/2024	04/12/2024
Lead	37.5	0.923	"	"	"	HJD	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-RISER@5'-V

3/8/2024 1:05:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y403234-03 (Soil)

**pH in Soil by 9045D**

pH	7.81	pH Units	1	B4C1419	EAL	03/14/2024	03/18/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4D1128 - EPA 3050B</b>										
<b>Blank (B4D1128-BLK1)</b>					Prepared: 04/11/2024 Analyzed: 04/12/2024					
Cadmium	ND	0.100	mg/kg							
Lead	ND	1.00	"							
<b>LCS (B4D1128-BS1)</b>					Prepared: 04/11/2024 Analyzed: 04/12/2024					
Cadmium	5.94	0.100	mg/kg	5.00		119	80-120			
Lead	5.54	1.00	"	5.00		111	80-120			
<b>Matrix Spike (B4D1128-MS1)</b>					<b>Source: Y404330-02</b>		Prepared: 04/11/2024 Analyzed: 04/12/2024			
Cadmium	5.35	0.0855	mg/kg	4.28	0.161	121	75-125			
Lead	12.3	0.855	"	4.28	8.40	90.4	75-125			
<b>Matrix Spike Dup (B4D1128-MSD1)</b>					<b>Source: Y404330-02</b>		Prepared: 04/11/2024 Analyzed: 04/12/2024			
Cadmium	5.20	0.0901	mg/kg	4.50	0.161	112	75-125	2.72	20	
Lead	11.7	0.901	"	4.50	8.40	73.5	75-125	4.65	20	

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4C1419 - Saturated Paste pH/EC

Duplicate (B4C1419-DUP1)			Source: Y403075-01		Prepared: 03/14/2024 Analyzed: 03/18/2024					
pH	8.15		pH Units		8.15			0.00	25	

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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May 15, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. May 07, 2024. This project is associated with Origins project number Y405207-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@3'	Y405207-01	Soil	May 7, 2024 8:35	05/07/2024 15:21
E01@3'	Y405207-02	Soil	May 7, 2024 8:40	05/07/2024 15:21
S01@3'	Y405207-03	Soil	May 7, 2024 8:45	05/07/2024 15:21
W01@3'	Y405207-04	Soil	May 7, 2024 8:50	05/07/2024 15:21

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4405207

Client: Ensolum

Client Project ID: McCrumb Fed

Checklist Completed by: BTI

Shipped Via: 410

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

Date/time completed: 5/7/12

Airbill #: N/A

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

Cooler Number/Temperature: 1, 3 °C / \_\_\_\_\_ °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"/>	<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 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) [Signature]

Date/Time Reviewed 5/7/12

Origins Laboratory, Inc.

[Signature]

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

N01@3'

5/7/2024 8:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0705	ADM	05/07/2024	05/07/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 98.8 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4E0750	ZZZ	05/07/2024	05/07/2024	U
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Surrogate: 1,2-Dichloroethane-d4 98.0 % 70-130 " " "

Surrogate: Toluene-d8 98.9 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 112 % 70-130 " " "

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	agile	"	"	U
Acenaphthene	ND	0.020	"	"	"	agile	"	"	U
Anthracene	ND	0.020	"	"	"	agile	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	agile	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	agile	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	agile	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

N01@3'

5/7/2024 8:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405207-01 (Soil)

PAH by EPA 8270E

Chrysene	ND	0.020	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	agile	"	"	U
Fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Fluorene	ND	0.020	"	"	"	agile	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	agile	"	"	U
Naphthalene	ND	0.002	"	"	"	agile	"	"	U
Pyrene	ND	0.020	"	"	"	agile	"	"	U

Surrogate: Fluorene-d10	104 %	60-130	"	"	"
Surrogate: Anthracene-d10	105 %	60-130	"	"	"
Surrogate: Pyrene-d10	93.2 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	107 %	60-130	"	"	"

Table 915 metals by EPA 6020B

Arsenic	2.18	0.279	mg/kg	10	B4E0746	HJD	05/07/2024	05/08/2024
Barium	63.7	9.60	"	"	"	HJD	"	"
Cadmium	ND	0.0960	"	"	"	HJD	"	"
Copper	ND	9.60	"	"	"	HJD	"	"
Lead	7.66	0.960	"	"	"	HJD	"	"
Nickel	5.69	0.960	"	"	"	HJD	"	"
Selenium	ND	0.250	"	"	"	HJD	"	"
Zinc	ND	35.5	"	"	"	HJD	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

E01@3'

5/7/2024 8:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0705	ADM	05/07/2024	05/07/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 92.4 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4E0750	ZZZ	05/07/2024	05/07/2024	U
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Surrogate: 1,2-Dichloroethane-d4 98.3 % 70-130 " " "

Surrogate: Toluene-d8 97.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 113 % 70-130 " " "

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	agile	"	"	U
Acenaphthene	ND	0.020	"	"	"	agile	"	"	U
Anthracene	ND	0.020	"	"	"	agile	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	agile	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	agile	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	agile	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

E01@3'

5/7/2024 8:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-02 (Soil)**

**PAH by EPA 8270E**

Chrysene	ND	0.020	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	agile	"	"	U
Fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Fluorene	ND	0.020	"	"	"	agile	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	agile	"	"	U
Naphthalene	ND	0.002	"	"	"	agile	"	"	U
Pyrene	ND	0.020	"	"	"	agile	"	"	U

Surrogate: Fluorene-d10	96.2 %	60-130	"	"	"
Surrogate: Anthracene-d10	103 %	60-130	"	"	"
Surrogate: Pyrene-d10	103 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	110 %	60-130	"	"	"

**Table 915 metals by EPA 6020B**

Arsenic	1.73	0.263	mg/kg	10	B4E0746	HJD	05/07/2024	05/08/2024
Barium	66.5	9.07	"	"	"	HJD	"	"
Cadmium	ND	0.0907	"	"	"	HJD	"	"
Copper	ND	9.07	"	"	"	HJD	"	"
Lead	6.26	0.907	"	"	"	HJD	"	"
Nickel	5.02	0.907	"	"	"	HJD	"	"
Selenium	ND	0.236	"	"	"	HJD	"	"
Zinc	ND	33.6	"	"	"	HJD	"	"

Origins Laboratory, Inc.



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Ensolum  
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

S01@3'

5/7/2024 8:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0705	ADM	05/07/2024	05/07/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 104 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4E0750	ZZZ	05/07/2024	05/07/2024	U
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Surrogate: 1,2-Dichloroethane-d4 99.5 % 70-130 " " "

Surrogate: Toluene-d8 97.6 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 114 % 70-130 " " "

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	agile	"	"	U
Acenaphthene	ND	0.020	"	"	"	agile	"	"	U
Anthracene	ND	0.020	"	"	"	agile	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	agile	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	agile	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	agile	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

S01@3'

5/7/2024 8:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405207-03 (Soil)

PAH by EPA 8270E

Chrysene	ND	0.020	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	agile	"	"	U
Fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Fluorene	ND	0.020	"	"	"	agile	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	agile	"	"	U
Naphthalene	ND	0.002	"	"	"	agile	"	"	U
Pyrene	ND	0.020	"	"	"	agile	"	"	U

Surrogate: Fluorene-d10	94.5 %	60-130			"	"	"
Surrogate: Anthracene-d10	106 %	60-130			"	"	"
Surrogate: Pyrene-d10	100 %	60-130			"	"	"
Surrogate: Benzo (a) pyrene-d12	109 %	60-130			"	"	"

Table 915 metals by EPA 6020B

Arsenic	2.55	0.252	mg/kg	10	B4E0746	HJD	05/07/2024	05/08/2024
Barium	70.2	8.69	"	"	"	HJD	"	"
Cadmium	0.0956	0.0869	"	"	"	HJD	"	"
Copper	ND	8.69	"	"	"	HJD	"	"
Lead	8.27	0.869	"	"	"	HJD	"	"
Nickel	6.67	0.869	"	"	"	HJD	"	"
Selenium	ND	0.226	"	"	"	HJD	"	"
Zinc	ND	32.1	"	"	"	HJD	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

W01@3'

5/7/2024 8:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0705	ADM	05/07/2024	05/07/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 93.9 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4E0750	ZZZ	05/07/2024	05/07/2024	U
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Surrogate: 1,2-Dichloroethane-d4 99.7 % 70-130 " " "

Surrogate: Toluene-d8 98.0 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 113 % 70-130 " " "

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	agile	"	"	U
Acenaphthene	ND	0.020	"	"	"	agile	"	"	U
Anthracene	ND	0.020	"	"	"	agile	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	agile	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	agile	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	agile	"	"	U

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

W01@3'

5/7/2024 8:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405207-04 (Soil)**

**PAH by EPA 8270E**

Chrysene	ND	0.020	mg/kg	1	B4E0744	agile	05/07/2024	05/07/2024	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	agile	"	"	U
Fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Fluorene	ND	0.020	"	"	"	agile	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	agile	"	"	U
Naphthalene	ND	0.002	"	"	"	agile	"	"	U
Pyrene	ND	0.020	"	"	"	agile	"	"	U

Surrogate: Fluorene-d10	94.9 %	60-130	"	"	"
Surrogate: Anthracene-d10	103 %	60-130	"	"	"
Surrogate: Pyrene-d10	91.1 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	115 %	60-130	"	"	"

**Table 915 metals by EPA 6020B**

Arsenic	4.65	0.273	mg/kg	10	B4E0746	HJD	05/07/2024	05/08/2024
Barium	114	9.42	"	"	"	HJD	"	"
Cadmium	0.225	0.0942	"	"	"	HJD	"	"
Copper	ND	9.42	"	"	"	HJD	"	"
Lead	10.6	0.942	"	"	"	HJD	"	"
Nickel	10.5	0.942	"	"	"	HJD	"	"
Selenium	0.265	0.245	"	"	"	HJD	"	"
Zinc	39.0	34.9	"	"	"	HJD	"	"

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E0705 - EPA 3550B										
Blank (B4E0705-BLK1)					Prepared: 05/07/2024 Analyzed: 05/07/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	17		"	24.9		70.2	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 B4E0705 - EPA 3550B

#### LCS (B4E0705-BS1)

Prepared: 05/07/2024 Analyzed: 05/07/2024

Diesel (C10-C28)	729	50.0	mg/kg	1000		72.9	70-130			
Residual Range Organics (C28-C40)	740	200	"	1000		74.0	70-130			
Surrogate: o-Terphenyl	45		"	49.8		91.4	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 B4E0705 - EPA 3550B

Matrix Spike (B4E0705-MS1)		Source: Y405178-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
Diesel (C10-C28)	1500	50.0	mg/kg	1000	780	71.6	70-130			
Residual Range Organics (C28-C40)	987	200	"	1000	113	87.4	70-130			
Surrogate: o-Terphenyl	79		"	49.8		159	50-150			QM-07

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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 B4E0705 - EPA 3550B

Matrix Spike Dup (B4E0705-MSD1)		Source: Y405178-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
Diesel (C10-C28)	1370	50.0	mg/kg	1000	780	58.7	70-130	9.06	35	QM-07
Residual Range Organics (C28-C40)	1020	200	"	1000	113	91.2	70-130	3.79	35	
Surrogate: o-Terphenyl	48		"	49.8		95.6	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 B4E0750 - EPA 5030 (soil)										
Blank (B4E0750-BLK1)					Prepared: 05/07/2024 Analyzed: 05/07/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		112	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4E0750 - EPA 5030 (soil)**

**LCS (B4E0750-BS1)**

Prepared: 05/07/2024 Analyzed: 05/07/2024

1,2,4-Trimethylbenzene	0.0889	0.00200	mg/kg	0.100		88.9	70-130			
1,3,5-Trimethylbenzene	0.0920	0.00200	"	0.100		92.0	70-130			
Benzene	0.0828	0.00200	"	0.100		82.8	70-130			
Ethylbenzene	0.0850	0.00200	"	0.100		85.0	70-130			
Naphthalene	0.0851	0.00380	"	0.100		85.1	70-130			
Toluene	0.0841	0.00200	"	0.100		84.1	70-130			
o-Xylene	0.0844	0.00200	"	0.100		84.4	70-130			
m,p-Xylene	0.173	0.00400	"	0.200		86.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.4	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4E0750 - EPA 5030 (soil)

Matrix Spike (B4E0750-MS1)		Source: Y405207-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
1,2,4-Trimethylbenzene	0.0909	0.00200	mg/kg	0.100	ND	90.9	70-130			
1,3,5-Trimethylbenzene	0.0922	0.00200	"	0.100	ND	92.2	70-130			
Benzene	0.0826	0.00200	"	0.100	ND	82.6	70-130			
Ethylbenzene	0.0853	0.00200	"	0.100	ND	85.3	70-130			
Naphthalene	0.0922	0.00380	"	0.100	ND	92.2	70-130			
Toluene	0.0828	0.00200	"	0.100	ND	82.8	70-130			
o-Xylene	0.0851	0.00200	"	0.100	ND	85.1	70-130			
m,p-Xylene	0.172	0.00400	"	0.200	ND	86.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4E0750 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4E0750-MSD1)</b>		<b>Source: Y405207-01</b>			Prepared: 05/07/2024 Analyzed: 05/07/2024					
1,2,4-Trimethylbenzene	0.0892	0.00200	mg/kg	0.100	ND	89.2	70-130	1.89	20	
1,3,5-Trimethylbenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130	1.86	20	
Benzene	0.0818	0.00200	"	0.100	ND	81.8	70-130	0.973	20	
Ethylbenzene	0.0847	0.00200	"	0.100	ND	84.7	70-130	0.776	20	
Naphthalene	0.0731	0.00380	"	0.100	ND	73.1	70-130	23.1	20	QR-02
Toluene	0.0824	0.00200	"	0.100	ND	82.4	70-130	0.412	20	
o-Xylene	0.0848	0.00200	"	0.100	ND	84.8	70-130	0.400	20	
m,p-Xylene	0.171	0.00400	"	0.200	ND	85.7	70-130	0.535	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.4	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 B4E0746 - EPA 3050B

#### Blank (B4E0746-BLK1)

Prepared: 05/07/2024 Analyzed: 05/08/2024

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	"
Zinc	ND	37.0	"

#### LCS (B4E0746-BS1)

Prepared: 05/07/2024 Analyzed: 05/08/2024

Arsenic	4.39	0.290	mg/kg	5.00	87.8	80-120
Barium	441	10.0	"	500	88.2	80-120
Cadmium	4.34	0.100	"	5.00	86.8	80-120
Copper	48.6	10.0	"	50.0	97.3	80-120
Lead	4.33	1.00	"	5.00	86.6	80-120
Nickel	5.13	1.00	"	5.00	103	80-120
Selenium	8.43	0.260	"	9.50	88.8	80-120
Zinc	42.0	37.0	"	50.0	84.0	80-120

#### Matrix Spike (B4E0746-MS1)

Source: Y405194-10

Prepared: 05/07/2024 Analyzed: 05/08/2024

Arsenic	6.58	0.283	mg/kg	4.87	1.98	94.3	75-125
Barium	571	9.75	"	487	73.5	102	75-125

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Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0746 - EPA 3050B

Matrix Spike (B4E0746-MS1)		Source: Y405194-10			Prepared: 05/07/2024 Analyzed: 05/08/2024					
Cadmium	4.76	0.0975	mg/kg	4.87	0.103	95.5	75-125			
Copper	49.4	9.75	"	48.7	6.63	87.8	75-125			
Lead	11.2	0.975	"	4.87	6.26	102	75-125			
Nickel	11.6	0.975	"	4.87	6.78	99.5	75-125			
Selenium	8.29	0.253	"	9.26	ND	89.5	75-125			
Zinc	82.5	36.1	"	48.7	36.6	94.4	75-125			
Matrix Spike Dup (B4E0746-MSD1)		Source: Y405194-10			Prepared: 05/07/2024 Analyzed: 05/08/2024					
Arsenic	6.03	0.258	mg/kg	4.45	1.98	90.8	75-125	8.74	20	
Barium	520	8.91	"	445	73.5	100	75-125	9.34	20	
Cadmium	4.45	0.0891	"	4.45	0.103	97.7	75-125	6.61	20	
Copper	42.4	8.91	"	44.5	6.63	80.3	75-125	15.3	20	
Lead	10.4	0.891	"	4.45	6.26	92.7	75-125	7.93	20	
Nickel	10.0	0.891	"	4.45	6.78	72.5	75-125	15.0	20	QM-07
Selenium	7.86	0.232	"	8.46	ND	92.9	75-125	5.25	20	
Zinc	76.2	33.0	"	44.5	36.6	88.9	75-125	8.03	20	

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Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0744 - EPA 3580**

**Blank (B4E0744-BLK1)**

Prepared: 05/07/2024 Analyzed: 05/07/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		99.6	60-130			
Surrogate: Anthracene-d10	200		"	200		100	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	230		"	200		117	60-130			

**LCS (B4E0744-BS1)**

Prepared: 05/07/2024 Analyzed: 05/07/2024

1-Methylnaphthalene	0.164	0.002	mg/kg	0.200		81.8	70-130			
2-Methylnaphthalene	0.165	0.002	"	0.200		82.3	70-130			
Acenaphthene	0.165	0.020	"	0.200		82.7	70-130			
Anthracene	0.178	0.020	"	0.200		89.1	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4E0744 - EPA 3580**

**LCS (B4E0744-BS1)**

Prepared: 05/07/2024 Analyzed: 05/07/2024

Benzo (a) anthracene	0.162	0.005	mg/kg	0.200		81.1	70-130
Benzo (a) pyrene	0.193	0.020	"	0.200		96.6	70-130
Benzo (b) fluoranthene	0.163	0.020	"	0.200		81.3	70-130
Benzo (g,h,i) perylene	0.183	0.020	"	0.200		91.3	70-130
Benzo (k) fluoranthene	0.158	0.020	"	0.200		79.1	70-130
Chrysene	0.155	0.020	"	0.200		77.7	70-130
Dibenz (a,h) anthracene	0.200	0.020	"	0.200		100	70-130
Fluoranthene	0.157	0.020	"	0.200		78.5	70-130
Fluorene	0.154	0.020	"	0.200		77.2	70-130
Indeno (1,2,3-cd) pyrene	0.183	0.020	"	0.200		91.7	70-130
Naphthalene	0.164	0.002	"	0.200		81.9	70-130
Phenanthrene	0.178	0.020	"	0.200		89.1	70-130
Pyrene	0.170	0.020	"	0.200		85.2	70-130
Surrogate: Fluorene-d10	190		ug/kg	200		95.8	60-130
Surrogate: Anthracene-d10	200		"	200		102	60-130
Surrogate: Pyrene-d10	200		"	200		98.2	60-130
Surrogate: Benzo (a) pyrene-d12	220		"	200		111	60-130

**Matrix Spike (B4E0744-MS1)**

**Source: Y405202-01**

Prepared: 05/07/2024 Analyzed: 05/07/2024

1-Methylnaphthalene	0.167	0.002	mg/kg	0.200	ND	83.5	70-130
2-Methylnaphthalene	0.164	0.002	"	0.200	ND	82.0	70-130
Acenaphthene	0.169	0.020	"	0.200	ND	84.6	70-130
Anthracene	0.188	0.020	"	0.200	ND	94.2	70-130
Benzo (a) anthracene	0.169	0.005	"	0.200	0.0008	84.0	70-130
Benzo (a) pyrene	0.187	0.020	"	0.200	ND	93.5	70-130
Benzo (b) fluoranthene	0.177	0.020	"	0.200	0.0009	88.0	70-130
Benzo (g,h,i) perylene	0.197	0.020	"	0.200	0.0009	98.2	70-130

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Project: KMG - McCrumb Fed 10-17A 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 B4E0744 - EPA 3580**

Matrix Spike (B4E0744-MS1)		Source: Y405202-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
Benzo (k) fluoranthene	0.176	0.020	mg/kg	0.200	0.001	87.4	70-130			
Chrysene	0.166	0.020	"	0.200	0.0005	82.8	70-130			
Dibenz (a,h) anthracene	0.212	0.020	"	0.200	0.001	105	70-130			
Fluoranthene	0.162	0.020	"	0.200	0.0008	80.6	70-130			
Fluorene	0.154	0.020	"	0.200	0.0006	76.9	70-130			
Indeno (1,2,3-cd) pyrene	0.197	0.020	"	0.200	0.002	97.6	70-130			
Naphthalene	0.162	0.002	"	0.200	ND	80.8	70-130			
Phenanthrene	0.180	0.020	"	0.200	ND	89.9	70-130			
Pyrene	0.163	0.020	"	0.200	ND	81.5	70-130			
Surrogate: Fluorene-d10	190		ug/kg	200		94.8	60-130			
Surrogate: Anthracene-d10	200		"	200		102	60-130			
Surrogate: Pyrene-d10	180		"	200		91.3	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		107	60-130			

Matrix Spike Dup (B4E0744-MSD1)		Source: Y405202-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
1-Methylnaphthalene	0.169	0.002	mg/kg	0.200	ND	84.5	70-130	1.17	20	
2-Methylnaphthalene	0.163	0.002	"	0.200	ND	81.5	70-130	0.559	20	
Acenaphthene	0.170	0.020	"	0.200	ND	85.2	70-130	0.696	20	
Anthracene	0.175	0.020	"	0.200	ND	87.7	70-130	7.16	20	
Benzo (a) anthracene	0.169	0.005	"	0.200	0.0008	83.9	70-130	0.108	20	
Benzo (a) pyrene	0.190	0.020	"	0.200	ND	95.0	70-130	1.59	20	
Benzo (b) fluoranthene	0.185	0.020	"	0.200	0.0009	91.8	70-130	4.22	20	
Benzo (g,h,i) perylene	0.199	0.020	"	0.200	0.0009	99.3	70-130	1.11	20	
Benzo (k) fluoranthene	0.201	0.020	"	0.200	0.001	100	70-130	13.3	20	
Chrysene	0.169	0.020	"	0.200	0.0005	84.0	70-130	1.36	20	
Dibenz (a,h) anthracene	0.209	0.020	"	0.200	0.001	104	70-130	1.54	20	
Fluoranthene	0.145	0.020	"	0.200	0.0008	71.9	70-130	11.4	20	

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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0744 - EPA 3580**

Matrix Spike Dup (B4E0744-MSD1)		Source: Y405202-01			Prepared: 05/07/2024 Analyzed: 05/07/2024					
Fluorene	0.177	0.020	mg/kg	0.200	0.0006	88.1	70-130	13.6	20	
Indeno (1,2,3-cd) pyrene	0.185	0.020	"	0.200	0.002	91.5	70-130	6.39	20	
Naphthalene	0.164	0.002	"	0.200	ND	81.8	70-130	1.23	20	
Phenanthrene	0.188	0.020	"	0.200	ND	94.2	70-130	4.70	20	
Pyrene	0.159	0.020	"	0.200	ND	79.7	70-130	2.21	20	
Surrogate: Fluorene-d10	220		ug/kg	200		110	60-130			
Surrogate: Anthracene-d10	220		"	200		110	60-130			
Surrogate: Pyrene-d10	180		"	200		90.5	60-130			
Surrogate: Benzo (a) pyrene-d12	240		"	200		120	60-130			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

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.

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 at a wet weight basis.

Origins Laboratory, Inc.



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May 16, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. May 08, 2024. This project is associated with Origins project number Y405253-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-N01@4'	Y405253-01	Soil	May 8, 2024 14:10	05/08/2024 16:51
SEP01-E01@4'	Y405253-02	Soil	May 8, 2024 14:12	05/08/2024 16:51
SEP01-S01@4'	Y405253-03	Soil	May 8, 2024 14:14	05/08/2024 16:51
SEP01-W01@4'	Y405253-04	Soil	May 8, 2024 14:16	05/08/2024 16:51
SEP01-B01@6'	Y405253-05	Soil	May 8, 2024 14:18	05/08/2024 16:51

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

ORIGINS LABORATORY LLC  
Client: Ensolum  
Address: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: KMG Team

ORIGINS WORK ORDER # 4405253  
Page 1 of 1

Project Manager: J. Espinoza  
Key: W= Water  
GW=Groundwater  
SW=Surface Water  
WW=Waste Water  
L=Liquid

Project Name: McCrumb Fed 10-17A Wellhead  
Project Number: 09A1417654  
Collected By: HIC  
Invoice/Billing Info: \_\_\_\_\_

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
							GrF X	TPH	Bora	PAHs	PH	As	Cr	Ni	
1	SEP01-NOIC41	5/8/24	1410	3	S	unp	X	X	X	X	X	X	X	Co cancelled	
2	SEP01-EOIC41		1412											3 sample IDs	
3	SEP01-EOIC41		1414											revised per	
4	SEP01-WOIC41		1416											Hannay's email	
5	SEP01-BOIC61		1418											on 5/13/24	
6															
7														No added to all	
8														samples per Hannay's email	
9														on 5/15/24	
10															

Relinquished By: *[Signature]* Date: 5/8/24 Time: 1651  
Received By: *[Signature]* Date: 5/8/24 Time: 1651

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

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

☐ Standard ☐ Received On Ice? ☒ Yes ☐ No

For Lab Sample Receiving Only:  
1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com | Temp Received - *[Signature]*

Origins Laboratory, Inc.

*[Signature]*

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 1405253

Client: Ensolum

Client Project ID: McCrumb Fed

Checklist Completed by: EH

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

Date/time completed: 5/8/12

Airbill #: N/A

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

Cooler Number/Temperature: 115 °C 1 °C 1 °C (Describe) \_\_\_\_\_ °C

Thermometer ID: TODS

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 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) EH

Date/Time Reviewed 5/8/12

Origins Laboratory, Inc.

*J. Bynon*

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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N01@4'

5/8/2024 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405253-01 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.220	0.0996	mg/L	1	B4E0911	ACC	05/09/2024	05/10/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0834	ZZZ	05/08/2024	05/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	89.1 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E0830	HKS	05/08/2024	05/08/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HKS	"	"	U
Toluene	0.00438	0.00200	"	"	"	HKS	"	"	
Xylenes, total	ND	0.00200	"	"	"	HKS	"	"	U
Gasoline Range Hydrocarbons	0.264	0.200	"	"	"	HKS	"	"	

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.6 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.023	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024
2-Methylnaphthalene	0.035	0.002	"	"	"	Windo	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N01@4'

5/8/2024 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-01 (Soil)**

**PAH by EPA 8270E**

Acenaphthene	ND	0.020	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.5 %	60-130	"	"	"
Surrogate: Pyrene-d10	86.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	97.5 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.49	pH Units	1	B4E1322	EAL	05/13/2024	05/13/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N01@4'

5/8/2024 2:10:00PM

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

Y405253-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.57	0.261	mg/kg	10	B4E0836	JAH	05/08/2024	05/09/2024
Barium	77.6	9.00	"	"	"	JAH	"	"
Cadmium	0.131	0.0900	"	"	"	JAH	"	"
Lead	7.85	0.900	"	"	"	JAH	"	"
Nickel	4.44	0.900	"	"	"	JAH	"	"
Selenium	ND	0.234	"	"	"	JAH	"	"
Zinc	ND	33.3	"	"	"	JAH	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E01@4'

5/8/2024 2:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405253-02 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.264	0.0999	mg/L	1	B4E0911	ACC	05/09/2024	05/10/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0834	ZZZ	05/08/2024	05/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	91.0 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E0830	HKS	05/08/2024	05/08/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HKS	"	"	U
Toluene	ND	0.00200	"	"	"	HKS	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HKS	"	"	U
Gasoline Range Hydrocarbons	0.331	0.200	"	"	"	HKS	"	"	

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.015	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024
2-Methylnaphthalene	0.018	0.002	"	"	"	Windo	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E01@4'

5/8/2024 2:12:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-02 (Soil)**

**PAH by EPA 8270E**

Acenaphthene	ND	0.020	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	100 %	60-130	"	"	"
Surrogate: Anthracene-d10	98.0 %	60-130	"	"	"
Surrogate: Pyrene-d10	85.1 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	99.5 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.43	pH Units	1	B4E1322	EAL	05/13/2024	05/13/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E01@4'

5/8/2024 2:12:00PM

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

Y405253-02 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.54	0.245	mg/kg	10	B4E0836	JAH	05/08/2024	05/09/2024
Barium	106	8.45	"	"	"	JAH	"	"
Cadmium	0.155	0.0845	"	"	"	JAH	"	"
Lead	8.33	0.845	"	"	"	JAH	"	"
Nickel	6.85	0.845	"	"	"	JAH	"	"
Selenium	ND	0.220	"	"	"	JAH	"	"
Zinc	33.9	31.3	"	"	"	JAH	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-S01@4'  
5/8/2024 2:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405253-03 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.413	0.0983	mg/L	1	B4E0912	ACC	05/09/2024	05/10/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0834	ZZZ	05/08/2024	05/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	86.1 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E0830	HKS	05/08/2024	05/08/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HKS	"	"	U
Toluene	ND	0.00200	"	"	"	HKS	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HKS	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	Windo	"	"	U

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-S01@4'

5/8/2024 2:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-03 (Soil)**

**PAH by EPA 8270E**

Acenaphthene	ND	0.020	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	95.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	84.3 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	99.5 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.37	pH Units	1	B4E1322	EAL	05/13/2024	05/13/2024
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-S01@4'

5/8/2024 2:14:00PM

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

Y405253-03 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	4.07	0.266	mg/kg	10	B4E0836	JAH	05/08/2024	05/09/2024
Barium	83.2	9.16	"	"	"	JAH	"	"
Cadmium	0.247	0.0916	"	"	"	JAH	"	"
Lead	12.1	0.916	"	"	"	JAH	"	"
Nickel	12.1	0.916	"	"	"	JAH	"	"
Selenium	0.426	0.238	"	"	"	JAH	"	"
Zinc	44.2	33.9	"	"	"	JAH	"	"

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11049 W 44th Avenue, Suite 103  
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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W01@4'

5/8/2024 2:16:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.281	0.100	mg/L	1	B4E0912	ACC	05/09/2024	05/10/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0834	ZZZ	05/08/2024	05/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	90.4 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	0.00790	0.00200	mg/kg	1	B4E0830	HKS	05/08/2024	05/08/2024	
Ethylbenzene	ND	0.00200	"	"	"	HKS	"	"	U
Toluene	ND	0.00200	"	"	"	HKS	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HKS	"	"	U
Gasoline Range Hydrocarbons	1.25	0.200	"	"	"	HKS	"	"	

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	
Surrogate: Toluene-d8	106 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	Windo	"	"	U

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W01@4'

5/8/2024 2:16:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-04 (Soil)**

**PAH by EPA 8270E**

Acenaphthene	ND	0.020	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	100 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	87.8 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	97.8 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	8.48	pH Units	1	B4E1322	EAL	05/13/2024	05/13/2024
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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W01@4'

5/8/2024 2:16:00PM

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

Y405253-04 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.95	0.275	mg/kg	10	B4E0836	JAH	05/08/2024	05/09/2024
Barium	86.3	9.49	"	"	"	JAH	"	"
Cadmium	0.196	0.0949	"	"	"	JAH	"	"
Lead	10.0	0.949	"	"	"	JAH	"	"
Nickel	9.14	0.949	"	"	"	JAH	"	"
Selenium	ND	0.247	"	"	"	JAH	"	"
Zinc	36.9	35.1	"	"	"	JAH	"	"

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-B01@6'

5/8/2024 2:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B4E0912	ACC	05/09/2024	05/10/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E0834	ZZZ	05/08/2024	05/08/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	95.2 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E0830	HKS	05/08/2024	05/09/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HKS	"	"	U
Toluene	ND	0.00200	"	"	"	HKS	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HKS	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	HKS	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"	
Surrogate: Toluene-d8	98.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-B01@6'

5/8/2024 2:18:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc.

Y405253-05 (Soil)

### PAH by EPA 8270E

2-Methylnaphthalene	ND	0.002	mg/kg	1	B4E0837	Windo	05/08/2024	05/08/2024	U
Acenaphthene	ND	0.020	"	"	"	Windo	"	"	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	87.6 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	97.3 %	60-130	"	"	"

### pH in Soil by 9045D

Origins Laboratory, Inc.



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SEP01-B01@6'

5/8/2024 2:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y405253-05 (Soil)**

**pH in Soil by 9045D**

pH	9.27	pH Units	1	B4E1322	EAL	05/13/2024	05/13/2024
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**Table 915 metals by EPA 6020B**

Arsenic	0.722	0.267	mg/kg	10	B4E0836	JAH	05/08/2024	05/09/2024
Barium	17.8	9.20	"	"	"	JAH	"	"
Cadmium	ND	0.0920	"	"	"	JAH	"	"
Lead	3.10	0.920	"	"	"	JAH	"	"
Nickel	2.18	0.920	"	"	"	JAH	"	"
Selenium	ND	0.239	"	"	"	JAH	"	"
Zinc	ND	34.0	"	"	"	JAH	"	"

Origins Laboratory, Inc.



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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0830 - EPA 5030 (soil)</b>										
<b>Blank (B4E0830-BLK1)</b>					Prepared: 05/08/2024 Analyzed: 05/08/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

Origins Laboratory, Inc.



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Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0830 - EPA 5030 (soil)</b>										
<b>LCS (B4E0830-BS1)</b>					Prepared: 05/08/2024 Analyzed: 05/08/2024					
1,2,4-Trimethylbenzene	0.0920	0.00200	mg/kg	0.100		92.0	70-130			
1,3,5-Trimethylbenzene	0.0910	0.00200	"	0.100		91.0	70-130			
Benzene	0.0867	0.00200	"	0.100		86.7	70-130			
Ethylbenzene	0.0903	0.00200	"	0.100		90.3	70-130			
Naphthalene	0.0946	0.00380	"	0.100		94.6	70-130			
Toluene	0.0868	0.00200	"	0.100		86.8	70-130			
o-Xylene	0.0891	0.00200	"	0.100		89.1	70-130			
m,p-Xylene	0.178	0.00400	"	0.200		89.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E0830 - EPA 5030 (soil)

Matrix Spike (B4E0830-MS1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
1,2,4-Trimethylbenzene	0.119	0.00200	mg/kg	0.100	ND	119	70-130			
1,3,5-Trimethylbenzene	0.118	0.00200	"	0.100	ND	118	70-130			
Benzene	0.114	0.00200	"	0.100	ND	114	70-130			
Ethylbenzene	0.117	0.00200	"	0.100	ND	117	70-130			
Naphthalene	0.129	0.00380	"	0.100	ND	129	70-130			
Toluene	0.114	0.00200	"	0.100	ND	114	70-130			
o-Xylene	0.116	0.00200	"	0.100	ND	116	70-130			
m,p-Xylene	0.231	0.00400	"	0.200	ND	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0830 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4E0830-MSD1)</b>	<b>Source: Y405249-01</b>				Prepared: 05/08/2024 Analyzed: 05/08/2024					
1,2,4-Trimethylbenzene	0.0937	0.00200	mg/kg	0.100	ND	93.7	70-130	23.6	20	QR-02
1,3,5-Trimethylbenzene	0.0933	0.00200	"	0.100	ND	93.3	70-130	23.2	20	QR-02
Benzene	0.0893	0.00200	"	0.100	ND	89.3	70-130	24.5	20	QR-02
Ethylbenzene	0.0926	0.00200	"	0.100	ND	92.6	70-130	23.3	20	QR-02
Naphthalene	0.0990	0.00380	"	0.100	ND	99.0	70-130	26.2	20	QR-02
Toluene	0.0879	0.00200	"	0.100	ND	87.9	70-130	25.9	20	QR-02
o-Xylene	0.0918	0.00200	"	0.100	ND	91.8	70-130	23.5	20	QR-02
m,p-Xylene	0.182	0.00400	"	0.200	ND	90.9	70-130	23.6	20	QR-02
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: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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
Batch B4E0834 - EPA 3550B										
Blank (B4E0834-BLK1)					Prepared: 05/08/2024 Analyzed: 05/08/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	25		"	24.9		98.8	50-150			

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E0834 - EPA 3550B

#### LCS (B4E0834-BS1)

Prepared: 05/08/2024 Analyzed: 05/08/2024

Diesel (C10-C28)	855	50.0	mg/kg	1000		85.5	70-130			
Residual Range Organics (C28-C40)	948	200	"	1000		94.8	70-130			
Surrogate: o-Terphenyl	58		"	49.8		117	50-150			

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E0834 - EPA 3550B

Matrix Spike (B4E0834-MS1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
Diesel (C10-C28)	916	50.0	mg/kg	1000	ND	91.6	70-130			
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130			
Surrogate: o-Terphenyl	48		"	49.8		96.0	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 B4E0834 - EPA 3550B

Matrix Spike Dup (B4E0834-MSD1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
Diesel (C10-C28)	963	50.0	mg/kg	1000	ND	96.3	70-130	4.98	35	
Residual Range Organics (C28-C40)	1040	200	"	1000	ND	104	70-130	2.50	35	
Surrogate: o-Terphenyl	48		"	49.8		96.0	50-150			

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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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## 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 B4E0836 - EPA 3050B

#### Blank (B4E0836-BLK1)

Prepared: 05/08/2024 Analyzed: 05/09/2024

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

#### LCS (B4E0836-BS1)

Prepared: 05/08/2024 Analyzed: 05/09/2024

Arsenic	5.22	0.290	mg/kg	5.00	104	80-120
Barium	506	10.0	"	500	101	80-120
Cadmium	5.07	0.100	"	5.00	101	80-120
Copper	48.6	10.0	"	50.0	97.3	80-120
Lead	5.27	1.00	"	5.00	105	80-120
Nickel	5.05	1.00	"	5.00	101	80-120
Selenium	9.63	0.260	"	9.50	101	80-120
Zinc	52.9	37.0	"	50.0	106	80-120

#### Matrix Spike (B4E0836-MS1)

Source: Y405253-01

Prepared: 05/08/2024 Analyzed: 05/09/2024

Arsenic	8.00	0.256	mg/kg	4.42	2.57	123	75-125
Barium	619	8.84	"	442	77.6	122	75-125

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4E0836 - EPA 3050B</b>										
<b>Matrix Spike (B4E0836-MS1)</b>			<b>Source: Y405253-01</b>		Prepared: 05/08/2024 Analyzed: 05/09/2024					
Cadmium	4.98	0.0884	mg/kg	4.42	0.131	110	75-125			
Copper	54.8	8.84	"	44.2	3.32	116	75-125			
Lead	14.9	0.884	"	4.42	7.85	159	75-125			QM-07
Nickel	11.9	0.884	"	4.42	4.44	169	75-125			QM-07
Selenium	8.87	0.230	"	8.40	0.193	103	75-125			
Zinc	81.6	32.7	"	44.2	23.8	131	75-125			QM-07
<b>Matrix Spike Dup (B4E0836-MSD1)</b>			<b>Source: Y405253-01</b>		Prepared: 05/08/2024 Analyzed: 05/09/2024					
Arsenic	8.46	0.276	mg/kg	4.77	2.57	124	75-125	5.65	20	
Barium	651	9.53	"	477	77.6	120	75-125	5.05	20	
Cadmium	5.33	0.0953	"	4.77	0.131	109	75-125	6.86	20	
Copper	59.1	9.53	"	47.7	3.32	117	75-125	7.51	20	
Lead	16.0	0.953	"	4.77	7.85	170	75-125	6.90	20	QM-07
Nickel	13.0	0.953	"	4.77	4.44	179	75-125	8.69	20	QM-07
Selenium	9.46	0.248	"	9.06	0.193	102	75-125	6.47	20	
Zinc	89.7	35.3	"	47.7	23.8	138	75-125	9.43	20	QM-07

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0837 - EPA 3580**

**Blank (B4E0837-BLK1)**

Prepared: 05/08/2024 Analyzed: 05/08/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	200		"	200		97.6	60-130			
Surrogate: Pyrene-d10	170		"	200		85.0	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.1	60-130			

**LCS (B4E0837-BS1)**

Prepared: 05/08/2024 Analyzed: 05/08/2024

1-Methylnaphthalene	0.177	0.002	mg/kg	0.200		88.3	70-130
2-Methylnaphthalene	0.175	0.002	"	0.200		87.7	70-130
Acenaphthene	0.179	0.020	"	0.200		89.4	70-130
Anthracene	0.177	0.020	"	0.200		88.5	70-130

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Jeremy Espinoza  
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Project: KMG - McCrumb Fed 10-17A 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 B4E0837 - EPA 3580**

**LCS (B4E0837-BS1)**

Prepared: 05/08/2024 Analyzed: 05/08/2024

Benzo (a) anthracene	0.172	0.005	mg/kg	0.200		86.0	70-130
Benzo (a) pyrene	0.181	0.020	"	0.200		90.5	70-130
Benzo (b) fluoranthene	0.176	0.020	"	0.200		88.2	70-130
Benzo (g,h,i) perylene	0.186	0.020	"	0.200		92.9	70-130
Benzo (k) fluoranthene	0.178	0.020	"	0.200		89.1	70-130
Chrysene	0.173	0.020	"	0.200		86.6	70-130
Dibenz (a,h) anthracene	0.205	0.020	"	0.200		102	70-130
Fluoranthene	0.189	0.020	"	0.200		94.6	70-130
Fluorene	0.179	0.020	"	0.200		89.4	70-130
Indeno (1,2,3-cd) pyrene	0.182	0.020	"	0.200		91.1	70-130
Naphthalene	0.176	0.002	"	0.200		88.1	70-130
Phenanthrene	0.175	0.020	"	0.200		87.5	70-130
Pyrene	0.159	0.020	"	0.200		79.3	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130
Surrogate: Anthracene-d10	200		"	200		98.2	60-130
Surrogate: Pyrene-d10	170		"	200		86.4	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130

**Matrix Spike (B4E0837-MS1)**

**Source: Y405249-01**

Prepared: 05/08/2024 Analyzed: 05/08/2024

1-Methylnaphthalene	0.183	0.002	mg/kg	0.200	0.0005	91.2	70-130
2-Methylnaphthalene	0.182	0.002	"	0.200	ND	91.2	70-130
Acenaphthene	0.186	0.020	"	0.200	ND	93.0	70-130
Anthracene	0.183	0.020	"	0.200	ND	91.3	70-130
Benzo (a) anthracene	0.177	0.005	"	0.200	ND	88.6	70-130
Benzo (a) pyrene	0.192	0.020	"	0.200	ND	96.1	70-130
Benzo (b) fluoranthene	0.189	0.020	"	0.200	ND	94.5	70-130
Benzo (g,h,i) perylene	0.195	0.020	"	0.200	ND	97.5	70-130

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E0837 - EPA 3580**

Matrix Spike (B4E0837-MS1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
Benzo (k) fluoranthene	0.176	0.020	mg/kg	0.200	ND	88.1	70-130			
Chrysene	0.178	0.020	"	0.200	ND	88.9	70-130			
Dibenz (a,h) anthracene	0.216	0.020	"	0.200	ND	108	70-130			
Fluoranthene	0.194	0.020	"	0.200	ND	97.0	70-130			
Fluorene	0.188	0.020	"	0.200	ND	94.1	70-130			
Indeno (1,2,3-cd) pyrene	0.189	0.020	"	0.200	ND	94.6	70-130			
Naphthalene	0.183	0.002	"	0.200	ND	91.5	70-130			
Phenanthrene	0.183	0.020	"	0.200	ND	91.5	70-130			
Pyrene	0.160	0.020	"	0.200	ND	79.8	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	190		"	200		97.5	60-130			
Surrogate: Pyrene-d10	160		"	200		82.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.6	60-130			

Matrix Spike Dup (B4E0837-MSD1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
1-Methylnaphthalene	0.185	0.002	mg/kg	0.200	0.0005	92.4	70-130	1.30	20	
2-Methylnaphthalene	0.185	0.002	"	0.200	ND	92.3	70-130	1.26	20	
Acenaphthene	0.187	0.020	"	0.200	ND	93.6	70-130	0.611	20	
Anthracene	0.189	0.020	"	0.200	ND	94.5	70-130	3.36	20	
Benzo (a) anthracene	0.192	0.005	"	0.200	ND	96.0	70-130	8.03	20	
Benzo (a) pyrene	0.189	0.020	"	0.200	ND	94.7	70-130	1.39	20	
Benzo (b) fluoranthene	0.185	0.020	"	0.200	ND	92.4	70-130	2.28	20	
Benzo (g,h,i) perylene	0.195	0.020	"	0.200	ND	97.4	70-130	0.155	20	
Benzo (k) fluoranthene	0.187	0.020	"	0.200	ND	93.7	70-130	6.06	20	
Chrysene	0.183	0.020	"	0.200	ND	91.6	70-130	3.06	20	
Dibenz (a,h) anthracene	0.218	0.020	"	0.200	ND	109	70-130	0.759	20	
Fluoranthene	0.193	0.020	"	0.200	ND	96.5	70-130	0.486	20	

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Jeremy Espinoza  
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Project: KMG - McCrumb Fed 10-17A 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 B4E0837 - EPA 3580**

Matrix Spike Dup (B4E0837-MSD1)		Source: Y405249-01			Prepared: 05/08/2024 Analyzed: 05/08/2024					
Fluorene	0.188	0.020	mg/kg	0.200	ND	93.9	70-130	0.164	20	
Indeno (1,2,3-cd) pyrene	0.190	0.020	"	0.200	ND	95.0	70-130	0.425	20	
Naphthalene	0.186	0.002	"	0.200	ND	92.8	70-130	1.47	20	
Phenanthrene	0.185	0.020	"	0.200	ND	92.4	70-130	1.02	20	
Pyrene	0.167	0.020	"	0.200	ND	83.6	70-130	4.58	20	
Surrogate: Fluorene-d10	200		ug/kg	200		99.8	60-130			
Surrogate: Anthracene-d10	200		"	200		98.4	60-130			
Surrogate: Pyrene-d10	170		"	200		86.4	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130			

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4E0911 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4E0911-BLK1)</b>					Prepared: 05/09/2024 Analyzed: 05/10/2024					
Boron	ND	0.100	mg/L							
<b>Duplicate (B4E0911-DUP1)</b>					<b>Source: Y405249-01</b> Prepared: 05/09/2024 Analyzed: 05/10/2024					
Boron	1.26	0.101	mg/L		0.999			23.3	50	
<b>Batch B4E0912 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4E0912-BLK1)</b>					Prepared: 05/09/2024 Analyzed: 05/10/2024					
Boron	ND	0.100	mg/L							
<b>Duplicate (B4E0912-DUP1)</b>					<b>Source: Y405253-03</b> Prepared: 05/09/2024 Analyzed: 05/10/2024					
Boron	0.417	0.101	mg/L		0.413			0.898	50	

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1322 - Saturated Paste pH/EC**

**Duplicate (B4E1322-DUP1)**

**Source: Y405196-03**

Prepared: 05/13/2024 Analyzed: 05/13/2024

pH	7.24	pH Units	7.15	1.25	25
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

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.

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 at a wet weight basis.

Origins Laboratory, Inc.



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May 29, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. May 16, 2024. This project is associated with Origins project number Y405525-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@3'	Y405525-01	Soil	May 16, 2024 10:52	05/16/2024 16:03
S01@3'	Y405525-02	Soil	May 16, 2024 10:47	05/16/2024 16:03
E01@3'	Y405525-03	Soil	May 16, 2024 10:42	05/16/2024 16:03
W01@3'	Y405525-04	Soil	May 16, 2024 10:36	05/16/2024 16:03
SEP01-B01@6'	Y405525-05	Soil	May 16, 2024 13:23	05/16/2024 16:03
SEP01-N02@4'	Y405525-06	Soil	May 16, 2024 13:25	05/16/2024 16:03
SEP01-W02@4'	Y405525-07	Soil	May 16, 2024 13:24	05/16/2024 16:03
SEP01-E02@4'	Y405525-08	Soil	May 16, 2024 13:22	05/16/2024 16:03

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

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

**ORIGINS**  
LABORATORY, INC

44055245

www.originslaboratory.com

page 1 of 1

Client: Ensolum

Address: 11049 W 44th Ave. Ste 100

Wheat Ridge, CO 80033

Telephone Number: 720-363-6416

Email Address: Kmg Team

Project Manager: Jeremy Espinoza

Project Name: McCrumb Fed 10-17A Wellhead

Project Number: 09A1417654

Samples Collected By: Max Buff

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix		Analysis		Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	
Aug 03'	5/16/24	10:52	2	X					X			
Aug 03'		10:47	2						X			
Aug 03'		10:42	2						X			
Aug 03'		10:36	2						X			
Sept 01 - Aug 06'		13:23	3						X			
Sept 01 - Aug 06'		13:25	3						X			
Sept 01 - Aug 06'		13:24	3						X			
Sept 01 - Aug 06'		13:22	3						X			
Relinquished By: M. Buff	Date: 5/16/24	Time: 16:03										
Relinquished By:	Date:	Time:										
Received By:	Date:	Time:										
Turnaround Time:												
Same Day <input checked="" type="checkbox"/>	24 Hr <input type="checkbox"/>	48 Hr <input type="checkbox"/>	72 Hr <input type="checkbox"/>									
Standard <input type="checkbox"/>												

Temp Received-

5.5

Date Results Needed

Origins Laboratory, Inc.

*J. Bynon*

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4405525

Client: Ensolum

Client Project ID: McCrumb Fed

Checklist Completed by: JM

Shipped Via: HLV

Date/time completed: 5/10/24

(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 / 5.5 °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)

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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

N01@3'

5/16/2024 10:52:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-01 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.500	0.101	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.26	0.499	meq/L	10	[CALC]	ACC	05/17/2024	05/21/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	2.00	0.435	"	"	"	ACC	"	"

**pH in Soil by 9045D**

pH	8.33		pH Units	1	B4E1722	EAL	05/17/2024	05/21/2024
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**SAR by 20B Saturated Paste**

SAR	2.11	0.0100	SAR	1	B4E1716	ACC	05/17/2024	05/21/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

S01@3'

5/16/2024 10:47:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y405525-02 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.422	0.100	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.16	0.499	meq/L	10	[CALC]	ACC	05/17/2024	05/21/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	1.60	0.435	"	"	"	ACC	"	"

**pH in Soil by 9045D**

pH	8.39		pH Units	1	B4E1722	EAL	05/17/2024	05/21/2024
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**SAR by 20B Saturated Paste**

SAR	1.81	0.0100	SAR	1	B4E1716	ACC	05/17/2024	05/21/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

E01@3'

5/16/2024 10:42:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-03 (Soil)

## Boron (DTPA Sorbitol)

Boron	0.563	0.100	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024
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## Metals by Saturated Paste by EPA 6010

Calcium	1.08	0.499	meq/L	10	[CALC]	ACC	05/17/2024	05/21/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	2.19	0.435	"	"	"	ACC	"	"

## pH in Soil by 9045D

pH	8.40		pH Units	1	B4E1722	EAL	05/17/2024	05/21/2024
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## SAR by 20B Saturated Paste

SAR	2.53	0.0100	SAR	1	B4E1716	ACC	05/17/2024	05/21/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

W01@3'

5/16/2024 10:36:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y405525-04 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.278	0.0998	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.72	0.499	meq/L	10	[CALC]	ACC	05/17/2024	05/21/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	1.47	0.435	"	"	"	ACC	"	"

**pH in Soil by 9045D**

pH	8.10		pH Units	1	B4E1722	EAL	05/17/2024	05/21/2024
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**SAR by 20B Saturated Paste**

SAR	1.36	0.0100	SAR	1	B4E1716	ACC	05/17/2024	05/21/2024
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Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-B01@6'

5/16/2024 1:23:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y405525-05 (Soil)

## pH in Soil by 9045D

pH	8.52	pH Units	1	B4E2019	EAL	05/20/2024	05/20/2024
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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: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N02@4'  
5/16/2024 1:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-06 (Soil)

### Boron (DTPA Sorbitol)

Boron	0.191	0.0998	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024	
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### DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E1645	ADM	05/16/2024	05/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl	100 %	50-150			"	"	"	
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### GBTEX+TMBs by 8260D

Benzene	0.0133	0.00200	mg/kg	1	B4E1651	HK	05/16/2024	05/17/2024	
Ethylbenzene	0.00256	0.00200	"	"	"	HK	"	"	
Toluene	ND	0.00200	"	"	"	HK	"	"	U
Xylenes, total	0.00424	0.00200	"	"	"	HK	"	"	
Gasoline Range Hydrocarbons	0.665	0.200	"	"	"	HK	"	"	

Surrogate: 1,2-Dichloroethane-d4	89.1 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	70-130			"	"	"	

### PAH by EPA 8270E

1-Methylnaphthalene	0.004	0.002	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024	
2-Methylnaphthalene	0.007	0.002	"	"	"	Windo	"	"	

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N02@4'  
5/16/2024 1:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-06 (Soil)

## PAH by EPA 8270E

Acenaphthene	ND	0.020	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	102 %	60-130	"	"	"
Surrogate: Anthracene-d10	101 %	60-130	"	"	"
Surrogate: Pyrene-d10	89.6 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.2 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.17	pH Units	1	B4E2019	EAL	05/20/2024	05/20/2024
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Origins Laboratory, Inc.



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N02@4'

5/16/2024 1:25:00PM

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

Y405525-06 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.78	0.263	mg/kg	10	B4E1648	ACN	05/16/2024	05/17/2024
Barium	109	9.07	"	"	"	ACN	"	"
Cadmium	0.179	0.0907	"	"	"	ACN	"	"
Lead	8.86	0.907	"	"	"	ACN	"	"
Nickel	6.50	0.907	"	"	"	ACN	"	"
Selenium	ND	0.236	"	"	"	ACN	"	"
Zinc	34.6	33.5	"	"	"	ACN	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W02@4'  
5/16/2024 1:24:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-07 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.287	0.101	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E1645	ADM	05/16/2024	05/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl	96.3 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E1651	HK	05/16/2024	05/17/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HK	"	"	U
Toluene	ND	0.00200	"	"	"	HK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	HK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	89.4 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.0 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.007	0.002	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024
2-Methylnaphthalene	0.013	0.002	"	"	"	Windo	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W02@4'

5/16/2024 1:24:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-07 (Soil)

PAH by EPA 8270E

Acenaphthene	ND	0.020	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	99.7 %	60-130	"	"	"
Surrogate: Pyrene-d10	94.3 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	99.0 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.42	pH Units	1	B4E2019	EAL	05/20/2024	05/20/2024
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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: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-W02@4'

5/16/2024 1:24:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-07 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	2.93	0.272	mg/kg	10	B4E1648	ACN	05/16/2024	05/17/2024
Barium	144	9.39	"	"	"	ACN	"	"
Cadmium	0.188	0.0939	"	"	"	ACN	"	"
Lead	6.33	0.939	"	"	"	ACN	"	"
Nickel	6.62	0.939	"	"	"	ACN	"	"
Selenium	ND	0.244	"	"	"	ACN	"	"
Zinc	ND	34.8	"	"	"	ACN	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E02@4'  
5/16/2024 1:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-08 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.195	0.101	mg/L	1	B4E1710	ACC	05/17/2024	05/22/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4E1645	ADM	05/16/2024	05/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl	98.7 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4E1651	HK	05/16/2024	05/17/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HK	"	"	U
Toluene	ND	0.00200	"	"	"	HK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HK	"	"	U
Gasoline Range Hydrocarbons	0.713	0.200	"	"	"	HK	"	"	

Surrogate: 1,2-Dichloroethane-d4	91.0 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.004	0.002	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024
2-Methylnaphthalene	0.005	0.002	"	"	"	Windo	"	"

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Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E02@4'  
5/16/2024 1:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y405525-08 (Soil)

## PAH by EPA 8270E

Acenaphthene	ND	0.020	mg/kg	1	B4E1647	Windo	05/16/2024	05/16/2024	U
Anthracene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	Windo	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Chrysene	ND	0.020	"	"	"	Windo	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	Windo	"	"	U
Fluoranthene	ND	0.020	"	"	"	Windo	"	"	U
Fluorene	ND	0.020	"	"	"	Windo	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	Windo	"	"	U
Naphthalene	ND	0.002	"	"	"	Windo	"	"	U
Pyrene	ND	0.020	"	"	"	Windo	"	"	U

Surrogate: Fluorene-d10	103 %	60-130	"	"	"
Surrogate: Anthracene-d10	99.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	86.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	96.8 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.49	pH Units	1	B4E2019	EAL	05/20/2024	05/20/2024
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Jeremy Espinoza

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Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-E02@4'

5/16/2024 1:22:00PM

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

Y405525-08 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	3.98	0.272	mg/kg	10	B4E1648	ACN	05/16/2024	05/17/2024
Barium	165	9.37	"	"	"	ACN	"	"
Cadmium	0.364	0.0937	"	"	"	ACN	"	"
Lead	20.4	0.937	"	"	"	ACN	"	"
Nickel	8.52	0.937	"	"	"	ACN	"	"
Selenium	ND	0.243	"	"	"	ACN	"	"
Zinc	56.2	34.7	"	"	"	ACN	"	"

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Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1645 - EPA 3550B										
Blank (B4E1645-BLK1)					Prepared: 05/16/2024 Analyzed: 05/16/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	26		"	24.9		105	50-150			

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Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1645 - EPA 3550B

### LCS (B4E1645-BS1)

Prepared: 05/16/2024 Analyzed: 05/16/2024

Diesel (C10-C28)	936	50.0	mg/kg	1000		93.6	70-130			
Residual Range Organics (C28-C40)	1050	200	"	1000		105	70-130			
Surrogate: o-Terphenyl	64		"	49.8		129	50-150			

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Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1645 - EPA 3550B

Matrix Spike (B4E1645-MS1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
Diesel (C10-C28)	878	50.0	mg/kg	1000	ND	87.8	70-130			
Residual Range Organics (C28-C40)	991	200	"	1000	ND	99.1	70-130			
Surrogate: o-Terphenyl	60		"	49.8		121	50-150			

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Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1645 - EPA 3550B

Matrix Spike Dup (B4E1645-MSD1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
Diesel (C10-C28)	895	50.0	mg/kg	1000	ND	89.5	70-130	1.95	35	
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130	2.10	35	
Surrogate: o-Terphenyl	62		"	49.8		124	50-150			

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Project: KMG - McCrumb Fed 10-17A 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 B4E1651 - EPA 5030 (soil)										
Blank (B4E1651-BLK1)					Prepared: 05/16/2024 Analyzed: 05/16/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		86.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.2	70-130			

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Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1651 - EPA 5030 (soil)**

**LCS (B4E1651-BS1)**

Prepared: 05/16/2024 Analyzed: 05/16/2024

1,2,4-Trimethylbenzene	0.103	0.00200	mg/kg	0.100		103	70-130			
1,3,5-Trimethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Benzene	0.0987	0.00200	"	0.100		98.7	70-130			
Ethylbenzene	0.102	0.00200	"	0.100		102	70-130			
Naphthalene	0.102	0.00380	"	0.100		102	70-130			
Toluene	0.0865	0.00200	"	0.100		86.5	70-130			
o-Xylene	0.103	0.00200	"	0.100		103	70-130			
m,p-Xylene	0.207	0.00400	"	0.200		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		84.3	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		86.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.3	70-130			

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1651 - EPA 5030 (soil)

Matrix Spike (B4E1651-MS1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
1,2,4-Trimethylbenzene	0.0936	0.00200	mg/kg	0.100	ND	93.6	70-130			
1,3,5-Trimethylbenzene	0.0904	0.00200	"	0.100	ND	90.4	70-130			
Benzene	0.0949	0.00200	"	0.100	ND	94.9	70-130			
Ethylbenzene	0.0915	0.00200	"	0.100	ND	91.5	70-130			
Naphthalene	0.0910	0.00380	"	0.100	0.00644	84.6	70-130			
Toluene	0.0969	0.00200	"	0.100	ND	96.9	70-130			
o-Xylene	0.0871	0.00200	"	0.100	ND	87.1	70-130			
m,p-Xylene	0.184	0.00400	"	0.200	ND	92.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.10		"	0.125		83.3	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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
Batch B4E1651 - EPA 5030 (soil)										
Matrix Spike Dup (B4E1651-MSD1)			Source: Y405523-01		Prepared: 05/16/2024 Analyzed: 05/16/2024					
1,2,4-Trimethylbenzene	0.0899	0.00200	mg/kg	0.100	ND	89.9	70-130	3.95	20	
1,3,5-Trimethylbenzene	0.0890	0.00200	"	0.100	ND	89.0	70-130	1.56	20	
Benzene	0.0962	0.00200	"	0.100	ND	96.2	70-130	1.34	20	
Ethylbenzene	0.0901	0.00200	"	0.100	ND	90.1	70-130	1.59	20	
Naphthalene	0.0946	0.00380	"	0.100	0.00644	88.2	70-130	3.86	20	
Toluene	0.0936	0.00200	"	0.100	ND	93.6	70-130	3.53	20	
o-Xylene	0.0847	0.00200	"	0.100	ND	84.7	70-130	2.70	20	
m,p-Xylene	0.178	0.00400	"	0.200	ND	89.0	70-130	3.24	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		85.8	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4E1648 - EPA 3050B

#### Blank (B4E1648-BLK1)

Prepared: 05/16/2024 Analyzed: 05/17/2024

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 (B4E1648-BS1)

Prepared: 05/16/2024 Analyzed: 05/17/2024

Arsenic	5.30	0.290	mg/kg	5.00	106	80-120
Barium	550	10.0	"	500	110	80-120
Cadmium	5.16	0.100	"	5.00	103	80-120
Copper	55.6	10.0	"	50.0	111	80-120
Lead	5.20	1.00	"	5.00	104	80-120
Nickel	5.47	1.00	"	5.00	109	80-120
Selenium	9.98	0.260	"	9.50	105	80-120
Silver	5.27	0.100	"	5.00	105	80-120
Zinc	53.2	37.0	"	50.0	106	80-120

#### Matrix Spike (B4E1648-MS1)

Source: Y405528-01

Prepared: 05/16/2024 Analyzed: 05/17/2024

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Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4E1648 - EPA 3050B</b>										
<b>Matrix Spike (B4E1648-MS1)</b>		<b>Source: Y405528-01</b>			Prepared: 05/16/2024 Analyzed: 05/17/2024					
Arsenic	10.5	0.259	mg/kg	4.46	15.0	NR	75-125			QM-07
Barium	583	8.92	"	446	114	105	75-125			
Cadmium	5.08	0.0892	"	4.46	1.30	84.9	75-125			
Copper	67.7	8.92	"	44.6	26.5	92.3	75-125			
Lead	29.0	0.892	"	4.46	30.1	NR	75-125			QM-07
Nickel	16.3	0.892	"	4.46	20.3	NR	75-125			QM-07
Selenium	8.98	0.232	"	8.47	1.32	90.5	75-125			
Silver	4.89	0.0892	"	4.46	0.271	104	75-125			
Zinc	118	33.0	"	44.6	119	NR	75-125			QM-07
<b>Matrix Spike Dup (B4E1648-MSD1)</b>		<b>Source: Y405528-01</b>			Prepared: 05/16/2024 Analyzed: 05/17/2024					
Arsenic	9.95	0.256	mg/kg	4.42	15.0	NR	75-125	4.92	20	QM-07
Barium	578	8.84	"	442	114	105	75-125	0.842	20	
Cadmium	5.07	0.0884	"	4.42	1.30	85.3	75-125	0.292	20	
Copper	66.4	8.84	"	44.2	26.5	90.2	75-125	1.84	20	
Lead	28.7	0.884	"	4.42	30.1	NR	75-125	1.09	20	QM-07
Nickel	16.0	0.884	"	4.42	20.3	NR	75-125	1.49	20	QM-07
Selenium	8.58	0.230	"	8.40	1.32	86.5	75-125	4.53	20	
Silver	4.92	0.0884	"	4.42	0.271	105	75-125	0.612	20	
Zinc	118	32.7	"	44.2	119	NR	75-125	0.219	20	QM-07

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1647 - EPA 3580**

**Blank (B4E1647-BLK1)**

Prepared: 05/16/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		99.1	60-130			
Surrogate: Pyrene-d10	170		"	200		85.2	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.0	60-130			

**LCS (B4E1647-BS1)**

Prepared: 05/16/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	0.175	0.002	mg/kg	0.200		87.3	70-130			
2-Methylnaphthalene	0.174	0.002	"	0.200		87.1	70-130			
Acenaphthene	0.175	0.020	"	0.200		87.3	70-130			
Anthracene	0.169	0.020	"	0.200		84.3	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1647 - EPA 3580**

**LCS (B4E1647-BS1)**

Prepared: 05/16/2024 Analyzed: 05/16/2024

Benzo (a) anthracene	0.178	0.005	mg/kg	0.200		88.8	70-130
Benzo (a) pyrene	0.173	0.020	"	0.200		86.7	70-130
Benzo (b) fluoranthene	0.171	0.020	"	0.200		85.6	70-130
Benzo (g,h,i) perylene	0.163	0.020	"	0.200		81.3	70-130
Benzo (k) fluoranthene	0.164	0.020	"	0.200		82.1	70-130
Chrysene	0.188	0.020	"	0.200		93.8	70-130
Dibenz (a,h) anthracene	0.179	0.020	"	0.200		89.7	70-130
Fluoranthene	0.181	0.020	"	0.200		90.7	70-130
Fluorene	0.176	0.020	"	0.200		88.1	70-130
Indeno (1,2,3-cd) pyrene	0.158	0.020	"	0.200		79.2	70-130
Naphthalene	0.175	0.002	"	0.200		87.4	70-130
Phenanthrene	0.171	0.020	"	0.200		85.6	70-130
Pyrene	0.156	0.020	"	0.200		78.0	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130
Surrogate: Anthracene-d10	200		"	200		98.5	60-130
Surrogate: Pyrene-d10	180		"	200		89.0	60-130
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.8	60-130

**Matrix Spike (B4E1647-MS1)**

**Source: Y405523-01**

Prepared: 05/16/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	0.184	0.002	mg/kg	0.200	0.010	87.0	70-130
2-Methylnaphthalene	0.196	0.002	"	0.200	0.025	85.1	70-130
Acenaphthene	0.177	0.020	"	0.200	ND	88.5	70-130
Anthracene	0.173	0.020	"	0.200	ND	86.4	70-130
Benzo (a) anthracene	0.184	0.005	"	0.200	0.0005	91.6	70-130
Benzo (a) pyrene	0.174	0.020	"	0.200	ND	86.8	70-130
Benzo (b) fluoranthene	0.172	0.020	"	0.200	0.0005	85.7	70-130
Benzo (g,h,i) perylene	0.168	0.020	"	0.200	0.0006	83.5	70-130

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1647 - EPA 3580**

Matrix Spike (B4E1647-MS1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
Benzo (k) fluoranthene	0.160	0.020	mg/kg	0.200	0.0006	79.6	70-130			
Chrysene	0.187	0.020	"	0.200	0.0005	93.3	70-130			
Dibenz (a,h) anthracene	0.184	0.020	"	0.200	ND	92.0	70-130			
Fluoranthene	0.182	0.020	"	0.200	ND	91.1	70-130			
Fluorene	0.181	0.020	"	0.200	ND	90.4	70-130			
Indeno (1,2,3-cd) pyrene	0.160	0.020	"	0.200	ND	80.1	70-130			
Naphthalene	0.195	0.002	"	0.200	0.018	88.6	70-130			
Phenanthrene	0.175	0.020	"	0.200	ND	87.3	70-130			
Pyrene	0.166	0.020	"	0.200	ND	83.0	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		98.8	60-130			
Surrogate: Pyrene-d10	190		"	200		93.0	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.7	60-130			

Matrix Spike Dup (B4E1647-MSD1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
1-Methylnaphthalene	0.194	0.002	mg/kg	0.200	0.010	91.8	70-130	5.12	20	
2-Methylnaphthalene	0.209	0.002	"	0.200	0.025	91.5	70-130	6.42	20	
Acenaphthene	0.183	0.020	"	0.200	ND	91.7	70-130	3.56	20	
Anthracene	0.181	0.020	"	0.200	ND	90.6	70-130	4.68	20	
Benzo (a) anthracene	0.181	0.005	"	0.200	0.0005	90.5	70-130	1.29	20	
Benzo (a) pyrene	0.185	0.020	"	0.200	ND	92.6	70-130	6.52	20	
Benzo (b) fluoranthene	0.188	0.020	"	0.200	0.0005	93.5	70-130	8.73	20	
Benzo (g,h,i) perylene	0.177	0.020	"	0.200	0.0006	88.0	70-130	5.31	20	
Benzo (k) fluoranthene	0.175	0.020	"	0.200	0.0006	87.1	70-130	8.99	20	
Chrysene	0.188	0.020	"	0.200	0.0005	93.9	70-130	0.662	20	
Dibenz (a,h) anthracene	0.196	0.020	"	0.200	ND	98.0	70-130	6.27	20	
Fluoranthene	0.194	0.020	"	0.200	ND	96.8	70-130	6.11	20	

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Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1647 - EPA 3580**

Matrix Spike Dup (B4E1647-MSD1)		Source: Y405523-01			Prepared: 05/16/2024 Analyzed: 05/16/2024					
Fluorene	0.188	0.020	mg/kg	0.200	ND	93.8	70-130	3.70	20	
Indeno (1,2,3-cd) pyrene	0.172	0.020	"	0.200	ND	86.1	70-130	7.26	20	
Naphthalene	0.202	0.002	"	0.200	0.018	92.2	70-130	3.62	20	
Phenanthrene	0.182	0.020	"	0.200	ND	90.9	70-130	4.04	20	
Pyrene	0.161	0.020	"	0.200	ND	80.7	70-130	2.85	20	
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		99.3	60-130			
Surrogate: Pyrene-d10	180		"	200		88.2	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.3	60-130			

Origins Laboratory, Inc.



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Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1710 - DTPA Sorbitol Preparation

#### Blank (B4E1710-BLK1)

Prepared: 05/17/2024 Analyzed: 05/22/2024

Boron ND 0.100 mg/L

#### Duplicate (B4E1710-DUP1)

Source: Y405523-08

Prepared: 05/17/2024 Analyzed: 05/22/2024

Boron 0.584 0.0993 mg/L 0.503 15.0 50

### Batch B4E1716 - Saturated Paste Metals

#### Blank (B4E1716-BLK1)

Prepared: 05/17/2024 Analyzed: 05/21/2024

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

#### Duplicate (B4E1716-DUP1)

Source: Y405523-08

Prepared: 05/17/2024 Analyzed: 05/21/2024

Calcium PPM 44.8 10.0 mg/L 46.2 3.06 50  
SAR ND 0.0100 SAR 2.65 200  
Magnesium PPM 12.9 10.0 mg/L 13.3 3.06 50  
Sodium PPM 79.0 10.0 " 79.5 0.631 50

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4E1722 - Saturated Paste pH/EC</b>										
<b>Duplicate (B4E1722-DUP1)</b>		<b>Source: Y405523-08</b>			Prepared: 05/17/2024 Analyzed: 05/21/2024					
pH	8.25		pH Units		8.22			0.364	25	
<b>Batch B4E2019 - Saturated Paste pH/EC</b>										
<b>Duplicate (B4E2019-DUP1)</b>		<b>Source: Y405353-01</b>			Prepared: 05/20/2024 Analyzed: 05/20/2024					
pH	8.12		pH Units		8.20			0.980	25	

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### Notes and Definitions

U Sample is Non-Detect.

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 at a wet weight basis.

Origins Laboratory, Inc.



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July 15, 2024

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - McCrumb Fed 10-17A  
Wellhead**

**Project Number - 09A1417654**

Attached are your analytical results for KMG - McCrumb Fed 10-17A Wellhead received by Origins Laboratory, Inc. June 07, 2024. This project is associated with Origins project number Y406213-01.

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



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-N03@4'	Y406213-01	Soil	June 7, 2024 12:00	06/07/2024 16:10
SEP01-N03@4'-V	Y406213-02	Soil	June 7, 2024 12:05	06/07/2024 16:10

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

Origins Laboratory

Sample Receipt Checklist

Origins Work Order: 4406213

Client: Ensolum

Client Project ID: McCrumb Fed

Checklist Completed by: JW

Date/time completed: 10/7/12

Shipped Via: TUP

Airbill #: N/A

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

Cooler Number/Temperature: 1005 °C 1 °C 1 °C 1 °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>SD</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 (> 1/4 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 sub-contracted 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) JW

Date/Time Reviewed 10/7/12

Origins Laboratory, Inc.

*J. Bynon*

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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N03@4'  
6/7/2024 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y406213-01 (Soil)

**Boron (DTPA Sorbitol)**

Boron	ND	0.0992	mg/L	1	B4F1010	ACC	06/10/2024	06/11/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4F0732	ZZZ	06/07/2024	06/07/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	86.9 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B4F0741	HK	06/07/2024	06/07/2024	U
Ethylbenzene	ND	0.00200	"	"	"	HK	"	"	U
Toluene	ND	0.00200	"	"	"	HK	"	"	U
Xylenes, total	ND	0.00200	"	"	"	HK	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	HK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	93.4 %	70-130			"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.003	0.002	mg/kg	1	B4F0725	agile	06/07/2024	06/09/2024
2-Methylnaphthalene	0.003	0.002	"	"	"	agile	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N03@4'  
6/7/2024 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y406213-01 (Soil)

## PAH by EPA 8270E

Acenaphthene	ND	0.020	mg/kg	1	B4F0725	agile	06/07/2024	06/09/2024	U
Anthracene	ND	0.020	"	"	"	agile	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	agile	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	agile	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Chrysene	ND	0.020	"	"	"	agile	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	agile	"	"	U
Fluoranthene	ND	0.020	"	"	"	agile	"	"	U
Fluorene	ND	0.020	"	"	"	agile	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	agile	"	"	U
Naphthalene	ND	0.002	"	"	"	agile	"	"	U
Pyrene	ND	0.020	"	"	"	agile	"	"	U

Surrogate: Fluorene-d10	105 %	60-130	"	"	"
Surrogate: Anthracene-d10	92.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	103 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	100 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.58	pH Units	1	B4F1319	EAL	06/13/2024	06/14/2024
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N03@4'

6/7/2024 12:00:00PM

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

Y406213-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	0.654	0.257	mg/kg	10	B4F0739	HJD	06/07/2024	06/08/2024
Barium	13.4	8.86	"	"	"	HJD	"	"
Cadmium	ND	0.0886	"	"	"	HJD	"	"
Lead	2.17	0.886	"	"	"	HJD	"	"
Nickel	1.48	0.886	"	"	"	HJD	"	"
Selenium	ND	0.230	"	"	"	HJD	"	"
Zinc	ND	32.8	"	"	"	HJD	"	"

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A Wellhead

SEP01-N03@4'-V

6/7/2024 12:05:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y406213-02 (Soil)

**pH in Soil by 9045D**

pH	8.46	pH Units	1	B4F1319	EAL	06/13/2024	06/14/2024
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4F0732 - EPA 3550B										
Blank (B4F0732-BLK1)					Prepared: 06/07/2024 Analyzed: 06/07/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		92.5	50-150			

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417654

Project: KMG - McCrumb Fed 10-17A 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 B4F0732 - EPA 3550B

#### LCS (B4F0732-BS1)

Prepared: 06/07/2024 Analyzed: 06/07/2024

Diesel (C10-C28)	1030	50.0	mg/kg	1000		103	70-130			
Residual Range Organics (C28-C40)	1140	200	"	1000		114	70-130			
Surrogate: o-Terphenyl	58		"	49.8		117	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 B4F0732 - EPA 3550B

Matrix Spike (B4F0732-MS1)		Source: Y406213-01			Prepared: 06/07/2024 Analyzed: 06/07/2024					
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	70-130			
Residual Range Organics (C28-C40)	1160	200	"	1000	ND	116	70-130			
Surrogate: o-Terphenyl	55		"	49.8		110	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 B4F0732 - EPA 3550B

Matrix Spike Dup (B4F0732-MSD1)		Source: Y406213-01			Prepared: 06/07/2024 Analyzed: 06/07/2024					
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	70-130	0.0253	35	
Residual Range Organics (C28-C40)	1170	200	"	1000	ND	117	70-130	0.164	35	
Surrogate: o-Terphenyl	55		"	49.8		111	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 B4F0741 - EPA 5030 (soil)										
Blank (B4F0741-BLK1)					Prepared: 06/07/2024 Analyzed: 06/07/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	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 B4F0741 - EPA 5030 (soil)**

**LCS (B4F0741-BS1)**

Prepared: 06/07/2024 Analyzed: 06/07/2024

1,2,4-Trimethylbenzene	0.0994	0.00200	mg/kg	0.100		99.4	70-130			
1,3,5-Trimethylbenzene	0.0974	0.00200	"	0.100		97.4	70-130			
Benzene	0.0922	0.00200	"	0.100		92.2	70-130			
Ethylbenzene	0.0937	0.00200	"	0.100		93.7	70-130			
Naphthalene	0.103	0.00380	"	0.100		103	70-130			
Toluene	0.0923	0.00200	"	0.100		92.3	70-130			
o-Xylene	0.0969	0.00200	"	0.100		96.9	70-130			
m,p-Xylene	0.192	0.00400	"	0.200		95.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.3	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 B4F0741 - EPA 5030 (soil)**

Matrix Spike (B4F0741-MS1)		Source: Y406213-01			Prepared: 06/07/2024 Analyzed: 06/07/2024					
1,2,4-Trimethylbenzene	0.0935	0.00200	mg/kg	0.100	ND	93.5	70-130			
1,3,5-Trimethylbenzene	0.0933	0.00200	"	0.100	ND	93.3	70-130			
Benzene	0.0866	0.00200	"	0.100	ND	86.6	70-130			
Ethylbenzene	0.0902	0.00200	"	0.100	ND	90.2	70-130			
Naphthalene	0.0946	0.00380	"	0.100	0.00152	93.1	70-130			
Toluene	0.0874	0.00200	"	0.100	ND	87.4	70-130			
o-Xylene	0.0940	0.00200	"	0.100	ND	94.0	70-130			
m,p-Xylene	0.185	0.00400	"	0.200	ND	92.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.3	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.8	70-130			

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Project: KMG - McCrumb Fed 10-17A 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 B4F0741 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4F0741-MSD1)</b>	<b>Source: Y406213-01</b>				Prepared: 06/07/2024 Analyzed: 06/07/2024					
1,2,4-Trimethylbenzene	0.0933	0.00200	mg/kg	0.100	ND	93.3	70-130	0.257	20	
1,3,5-Trimethylbenzene	0.0921	0.00200	"	0.100	ND	92.1	70-130	1.27	20	
Benzene	0.0886	0.00200	"	0.100	ND	88.6	70-130	2.24	20	
Ethylbenzene	0.0892	0.00200	"	0.100	ND	89.2	70-130	1.18	20	
Naphthalene	0.0987	0.00380	"	0.100	0.00152	97.2	70-130	4.30	20	
Toluene	0.0875	0.00200	"	0.100	ND	87.5	70-130	0.160	20	
o-Xylene	0.0934	0.00200	"	0.100	ND	93.4	70-130	0.576	20	
m,p-Xylene	0.183	0.00400	"	0.200	ND	91.5	70-130	1.25	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	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 B4F0739 - EPA 3050B

#### Blank (B4F0739-BLK1)

Prepared: 06/07/2024 Analyzed: 06/08/2024

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 (B4F0739-BS1)

Prepared: 06/07/2024 Analyzed: 06/08/2024

Arsenic	5.67	0.290	mg/kg	5.00	113	80-120
Barium	533	10.0	"	500	107	80-120
Cadmium	5.64	0.100	"	5.00	113	80-120
Copper	57.4	10.0	"	50.0	115	80-120
Lead	5.38	1.00	"	5.00	108	80-120
Nickel	5.46	1.00	"	5.00	109	80-120
Selenium	10.5	0.260	"	9.50	111	80-120
Silver	5.45	0.100	"	5.00	109	80-120
Zinc	55.6	37.0	"	50.0	111	80-120

#### Matrix Spike (B4F0739-MS1)

Source: Y406214-01

Prepared: 06/07/2024 Analyzed: 06/08/2024

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Project: KMG - McCrumb Fed 10-17A 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
<b>Batch B4F0739 - EPA 3050B</b>										
<b>Matrix Spike (B4F0739-MS1)</b>		<b>Source: Y406214-01</b>			Prepared: 06/07/2024 Analyzed: 06/08/2024					
Arsenic	9.96	0.260	mg/kg	4.49	4.25	127	75-125			QM-07
Barium	712	8.98	"	449	168	121	75-125			
Cadmium	5.48	0.0898	"	4.49	0.206	118	75-125			
Copper	62.2	8.98	"	44.9	10.6	115	75-125			
Lead	13.6	0.898	"	4.49	7.88	127	75-125			QM-07
Nickel	15.9	0.898	"	4.49	10.7	118	75-125			
Selenium	9.72	0.233	"	8.53	0.154	112	75-125			
Silver	5.14	0.0898	"	4.49	0.0871	113	75-125			
Zinc	90.8	33.2	"	44.9	37.0	120	75-125			
<b>Matrix Spike Dup (B4F0739-MSD1)</b>		<b>Source: Y406214-01</b>			Prepared: 06/07/2024 Analyzed: 06/08/2024					
Arsenic	8.50	0.263	mg/kg	4.53	4.25	93.8	75-125	15.8	20	
Barium	653	9.06	"	453	168	107	75-125	8.67	20	
Cadmium	5.04	0.0906	"	4.53	0.206	107	75-125	8.42	20	
Copper	58.6	9.06	"	45.3	10.6	106	75-125	6.04	20	
Lead	12.4	0.906	"	4.53	7.88	99.4	75-125	9.29	20	
Nickel	14.1	0.906	"	4.53	10.7	76.4	75-125	12.1	20	
Selenium	8.74	0.236	"	8.61	0.154	99.8	75-125	10.6	20	
Silver	4.80	0.0906	"	4.53	0.0871	104	75-125	6.87	20	
Zinc	85.2	33.5	"	45.3	37.0	106	75-125	6.36	20	

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Project: KMG - McCrumb Fed 10-17A 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 B4F0725 - EPA 3580**

**Blank (B4F0725-BLK1)**

Prepared: 06/07/2024 Analyzed: 06/09/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	220		ug/kg	200		109	60-130			
Surrogate: Anthracene-d10	190		"	200		95.4	60-130			
Surrogate: Pyrene-d10	200		"	200		102	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

**LCS (B4F0725-BS1)**

Prepared: 06/07/2024 Analyzed: 06/09/2024

1-Methylnaphthalene	0.197	0.002	mg/kg	0.200		98.5	70-130			
2-Methylnaphthalene	0.194	0.002	"	0.200		96.9	70-130			
Acenaphthene	0.184	0.020	"	0.200		92.2	70-130			
Anthracene	0.190	0.020	"	0.200		94.9	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 B4F0725 - EPA 3580**

**LCS (B4F0725-BS1)**

Prepared: 06/07/2024 Analyzed: 06/09/2024

Benzo (a) anthracene	0.191	0.005	mg/kg	0.200		95.4	70-130
Benzo (a) pyrene	0.203	0.020	"	0.200		101	70-130
Benzo (b) fluoranthene	0.198	0.020	"	0.200		99.2	70-130
Benzo (g,h,i) perylene	0.200	0.020	"	0.200		100	70-130
Benzo (k) fluoranthene	0.164	0.020	"	0.200		81.9	70-130
Chrysene	0.191	0.020	"	0.200		95.4	70-130
Dibenz (a,h) anthracene	0.176	0.020	"	0.200		88.1	70-130
Fluoranthene	0.189	0.020	"	0.200		94.7	70-130
Fluorene	0.195	0.020	"	0.200		97.4	70-130
Indeno (1,2,3-cd) pyrene	0.190	0.020	"	0.200		95.0	70-130
Naphthalene	0.210	0.002	"	0.200		105	70-130
Phenanthrene	0.195	0.020	"	0.200		97.7	70-130
Pyrene	0.195	0.020	"	0.200		97.4	70-130
Surrogate: Fluorene-d10	220		ug/kg	200		111	60-130
Surrogate: Anthracene-d10	200		"	200		102	60-130
Surrogate: Pyrene-d10	190		"	200		96.5	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130

**Matrix Spike (B4F0725-MS1)**

**Source: Y406182-01**

Prepared: 06/07/2024 Analyzed: 06/09/2024

1-Methylnaphthalene	0.210	0.002	mg/kg	0.200	0.002	104	70-130
2-Methylnaphthalene	0.203	0.002	"	0.200	0.0009	101	70-130
Acenaphthene	0.201	0.020	"	0.200	0.002	99.9	70-130
Anthracene	0.194	0.020	"	0.200	0.004	95.4	70-130
Benzo (a) anthracene	0.216	0.005	"	0.200	0.004	106	70-130
Benzo (a) pyrene	0.212	0.020	"	0.200	0.006	103	70-130
Benzo (b) fluoranthene	0.209	0.020	"	0.200	0.005	102	70-130
Benzo (g,h,i) perylene	0.198	0.020	"	0.200	0.008	95.0	70-130

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Project: KMG - McCrumb Fed 10-17A 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 B4F0725 - EPA 3580**

Matrix Spike (B4F0725-MS1)		Source: Y406182-01			Prepared: 06/07/2024 Analyzed: 06/09/2024					
Benzo (k) fluoranthene	0.208	0.020	mg/kg	0.200	0.006	101	70-130			
Chrysene	0.227	0.020	"	0.200	0.005	111	70-130			
Dibenz (a,h) anthracene	0.189	0.020	"	0.200	0.013	87.9	70-130			
Fluoranthene	0.220	0.020	"	0.200	0.004	108	70-130			
Fluorene	0.207	0.020	"	0.200	0.004	102	70-130			
Indeno (1,2,3-cd) pyrene	0.190	0.020	"	0.200	0.010	89.9	70-130			
Naphthalene	0.202	0.002	"	0.200	0.002	100	70-130			
Phenanthrene	0.203	0.020	"	0.200	0.004	99.3	70-130			
Pyrene	0.206	0.020	"	0.200	0.003	101	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		105	60-130			
Surrogate: Anthracene-d10	200		"	200		102	60-130			
Surrogate: Pyrene-d10	210		"	200		104	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.7	60-130			

Matrix Spike Dup (B4F0725-MSD1)		Source: Y406182-01			Prepared: 06/07/2024 Analyzed: 06/09/2024					
1-Methylnaphthalene	0.207	0.002	mg/kg	0.200	0.002	103	70-130	1.34	20	
2-Methylnaphthalene	0.213	0.002	"	0.200	0.0009	106	70-130	4.81	20	
Acenaphthene	0.203	0.020	"	0.200	0.002	101	70-130	0.693	20	
Anthracene	0.183	0.020	"	0.200	0.004	89.7	70-130	5.99	20	
Benzo (a) anthracene	0.196	0.005	"	0.200	0.004	95.9	70-130	9.68	20	
Benzo (a) pyrene	0.207	0.020	"	0.200	0.006	101	70-130	2.03	20	
Benzo (b) fluoranthene	0.197	0.020	"	0.200	0.005	95.9	70-130	6.01	20	
Benzo (g,h,i) perylene	0.185	0.020	"	0.200	0.008	88.8	70-130	6.51	20	
Benzo (k) fluoranthene	0.172	0.020	"	0.200	0.006	83.0	70-130	18.8	20	
Chrysene	0.195	0.020	"	0.200	0.005	95.0	70-130	14.9	20	
Dibenz (a,h) anthracene	0.187	0.020	"	0.200	0.013	86.8	70-130	1.15	20	
Fluoranthene	0.209	0.020	"	0.200	0.004	102	70-130	5.16	20	

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Ensolum  
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417654  
Project: KMG - McCrumb Fed 10-17A 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 B4F0725 - EPA 3580**

Matrix Spike Dup (B4F0725-MSD1)		Source: Y406182-01			Prepared: 06/07/2024 Analyzed: 06/09/2024					
Fluorene	0.211	0.020	mg/kg	0.200	0.004	104	70-130	1.79	20	
Indeno (1,2,3-cd) pyrene	0.185	0.020	"	0.200	0.010	87.7	70-130	2.39	20	
Naphthalene	0.207	0.002	"	0.200	0.002	102	70-130	2.08	20	
Phenanthrene	0.202	0.020	"	0.200	0.004	98.8	70-130	0.479	20	
Pyrene	0.231	0.020	"	0.200	0.003	114	70-130	11.3	20	
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	190		"	200		97.2	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		93.5	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
<b>Batch B4F1010 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4F1010-BLK1)</b>					Prepared: 06/10/2024 Analyzed: 06/11/2024					
Boron	ND	0.100	mg/L							
<b>Duplicate (B4F1010-DUP1)</b>					Source: Y406213-01 Prepared: 06/10/2024 Analyzed: 06/11/2024					
Boron	0.0599	0.101	mg/L		0.0226			90.3	50	QR-DUP

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## 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 B4F1319 - Saturated Paste pH/EC

Duplicate (B4F1319-DUP1)			Source: Y406178-01		Prepared: 06/13/2024 Analyzed: 06/14/2024					
pH	8.38		pH Units		8.46			0.950	25	

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### Notes and Definitions

U Sample is Non-Detect.

QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.

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 at a wet weight basis.

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