

TABLE 1
SOIL SAMPLE FIELD DATA SUMMARY TABLE
GUNZNER 19-13 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL 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	1/10/2022	NA	2.4	NS	NO	40.22120964	-104.8440682	N
E Wall	1/10/2022	NA	1.7	NS	NO	40.22117226	-104.8440214	N
S Wall	1/10/2022	NA	1.5	NS	NO	40.22114876	-104.8440707	N
W Wall	1/10/2022	NA	3.4	NS	NO	40.22117302	-104.84411	N
B01@5'	1/10/2022	5	2.0	NS	NO	40.22117879	-104.8440837	Y
RE-ENTRY WELLHEAD EXCAVATION SAMPLES								
B01@5'-WP	9/9/2022	5	0.0	NS	NO	40.22117879	-104.8440837	Y
N Wall	9/9/2022	2.5	0.0	NS	NO	40.2211866	-104.8440787	N
E Wall	9/9/2022	2.5	0.0	NS	NO	40.22117262	-104.8440632	N
S Wall	9/9/2022	2.5	0.0	NS	NO	40.22115892	-104.8440782	N
W Wall	9/9/2022	2.5	0.0	NS	NO	40.22117267	-104.8440948	N
N01@1'	9/29/2022	1	1.0	NS	NO	40.22121382	-104.8440682	Y
E01@1'	9/29/2022	1	0.3	NS	NO	40.22117583	-104.8440207	Y
S01@1'	9/29/2022	1	1.1	NS	NO	40.22114468	-104.8440787	Y
W01@1'	9/29/2022	1	25.4	NS	NO	40.22117977	-104.8441161	Y
B02@7'	9/29/2022	7	0.2	NS	NO	40.22117564	-104.8440704	Y
N02@4'	10/27/2022	4	1.3	NS	NO	40.22121659	-104.8440632	Y
E02@4'	10/27/2022	4	0.7	NS	NO	40.22116207	-104.8440221	Y
S02@4'	10/27/2022	4	1.0	NS	NO	40.22112992	-104.8440704	Y
W02@4'	10/27/2022	4	2.6	NS	NO	40.22117599	-104.8441244	Y
B03@7.5'	10/27/2022	7.5	0.9	NS	NO	40.22114726	-104.8440588	Y
W03@4'	11/17/2022	4	1.0	NS	NO	40.22117245	-104.8441307	Y
FLOWLINE POTHOLE SAMPLES								
PH02	1/10/2022	4	2.1	NS	NO	40.22145334	-104.8438747	N
SEPARATOR RISER SAMPLES								
Sep01-Inlet@4'	1/10/2022	4	0.7	NS	NO	40.22150612	-104.8438702	Y
UNLINED SOIL STOCKPILE SAMPLES								
CS01	9/29/2022	0	7.8	NS	NO	NA	NA	Y
CS01@0.5'	11/17/2022	0.5	0.0	NS	NO	40.22118025	-104.843978	Y
CS01@1'	11/30/2022	1	0.8	NS	NO	40.22118086	-104.8439705	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)
BACKGROUND SOIL SAMPLES								
Native-BG01@3'	1/10/2022	3	0.8	NS	NO	40.22123703	-104.8440877	Y
Native-BG01@5'	1/10/2022	5	1.4	NS	NO	40.22123703	-104.8440877	Y
Native-BG02@3'	1/10/2022	3	1.5	NS	NO	40.22109727	-104.844093	Y
Native-BG02@5'	1/10/2022	5	1.9	NS	NO	40.22109727	-104.844093	Y
Native-BG03@3'	1/10/2022	3	2.1	NS	NO	40.22117172	-104.8441485	Y
Native-BG03@5'	1/10/2022	5	2.5	NS	NO	40.22117172	-104.8441485	Y
Sep-BG01@0.5'	1/10/2022	0.5	1.9	NS	NO	40.22147786	-104.8437963	Y
Native-BG04@1'	10/27/2022	1	0.8	NS	NO	40.22126903	-104.8440705	Y
Native-BG05@1'	10/27/2022	1	0.5	NS	NO	40.22115577	-104.843937	Y
Native-BG06@1'	10/27/2022	1	0.7	NS	NO	40.22108242	-104.8440926	Y
Native-BG07@1'	10/27/2022	1	0.7	NS	NO	40.22117713	-104.8442099	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
GUNZNER 19-13 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	TPH-GRO+ (mg/kg)	TPH-DRO+ (mg/kg)	TPH-RRO+ (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)
Groundwater Protection Values (GPV)			500	500	500	0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
SEPARATOR SAMPLES												
SEP01-Inlet@4'	01/10/2022	4	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.00380
WELLHEAD EXCAVATION SAMPLES												
B01@5'	01/10/2022	5	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	NA	NA	<0.00380
RE-ENTRY WELLHEAD EXCAVATION SAMPLES												
B01@5'-WP	09/09/2022	5	<0.200	205	371	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380
B02@7'	09/29/2022	7	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
N01@1'	09/29/2022	1	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
E01@1'	09/29/2022	1	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
S01@1'	09/29/2022	1	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
W01@1'	09/29/2022	1	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
N02@4'	10/27/2022	4	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
E02@4'	10/27/2022	4	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
S02@4'	10/27/2022	4	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
W02@4'	10/27/2022	4	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
B03@7.5'	10/27/2022	7.5	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
W03@4'	11/17/2022	4	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
UNLINED SOIL STOCKPILE SAMPLES												
CS01	09/29/2022	0	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
CS01@0.5'	11/17/2022	0.5	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA
CS01@1'	11/30/2022	1	<0.200	<25.0	<100	NA	NA	NA	NA	NA	NA	NA

TABLE 2-2
POLYCYCLIC AROMATIC HYDROCARBONS
GUNZNER 19-13 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)
Groundwater Protection Values (GPV)			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
SEPARATOR SAMPLES																
SEP01-Inlet@4'	01/10/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WELLHEAD EXCAVATION SAMPLES																
B01@5'	01/10/2022	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RE-ENTRY WELLHEAD EXCAVATION SAMPLES																
B01@5'-WP	09/09/2022	5	<0.00335	<0.00335	0.00886	0.00999	0.00493	0.0152	0.0124	<0.00335	0.00895	<0.00335	0.00889	<0.00335	<0.00335	0.0139
B02@7'	09/29/2022	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N01@1'	09/29/2022	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E01@1'	09/29/2022	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S01@1'	09/29/2022	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W01@1'	09/29/2022	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N02@4'	10/27/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E02@4'	10/27/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S02@4'	10/27/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W02@4'	10/27/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B03@7.5'	10/27/2022	7.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W03@4'	11/17/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UNLINED SOIL STOCKPILE SAMPLES																
CS01	09/29/2022	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CS01@0.5'	11/17/2022	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CS01@1'	11/17/2022	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2-3
SOIL SAMPLE ANALYTICAL RESULTS
SOIL SUITABILITY FOR RECLAMATION
GUNZNER 19-13 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)
Groundwater Protection Values (GPV)			4	6	6-8.3	2
SEPARATOR SAMPLES						
SEP01-Inlet@4'	01/12/2022	4	0.355	0.74	7.98	<0.200
WELLHEAD EXCAVATION SAMPLES						
B01@5'	01/12/2022	5	0.886	3.86	7.77	0.471
RE-ENTRY WELLHEAD EXCAVATION SAMPLES						
B01@5'-WP	09/09/2022	5	1.57	5.96	8.26	0.901
B02@7'	09/29/2022	7	NA	NA	NA	NA
N01@1'	09/29/2022	1	NA	NA	NA	NA
E01@1'	09/29/2022	1	NA	NA	NA	NA
S01@1'	09/29/2022	1	NA	NA	NA	NA
W01@1'	09/29/2022	1	NA	NA	NA	NA
N02@4'	10/27/2022	4	NA	NA	NA	NA
E02@4'	10/27/2022	4	NA	NA	NA	NA
S02@4'	10/27/2022	4	NA	NA	NA	NA
W02@4'	10/27/2022	4	NA	NA	NA	NA
B03@7.5'	10/27/2022	7.5	NA	NA	NA	NA
W03@4'	11/17/2022	4	NA	NA	NA	NA
UNLINED SOIL STOCKPILE SAMPLES						
CS01	09/29/2022	0	NA	NA	NA	NA
CS01@0.5'	11/17/2022	0.5	NA	NA	NA	NA
CS01@1'	11/17/2022	0.5	NA	NA	NA	NA
BACKGROUND SAMPLES						
Native-BG01@3'	01/12/2022	3	0.878	3.54	7.94	0.198
Native-BG01@5'	01/12/2022	5	0.627	3.4	8	0.199
Native-BG02@3'	01/12/2022	3	0.522	3.49	8.04	0.196
Native-BG02@5'	01/12/2022	5	0.246	2.45	7.67	<0.200
Native-BG03@3'	01/12/2022	3	0.732	4.07	7.84	0.197
Native-BG03@5'	01/12/2022	5	1.25	8.5	8.12	0.199
SEP-BG01@0.5	01/12/2022	0.5	0.237	0.329	8.12	0.196
NATIVE-BG04@1'	10/27/2022	1	NA	NA	NA	NA
NATIVE-BG05@1'	10/27/2022	1	NA	NA	NA	NA
NATIVE-BG06@1'	10/27/2022	1	NA	NA	NA	NA
NATIVE-BG07@1'	10/27/2022	1	NA	NA	NA	NA

TABLE 2-4
SOIL SAMPLE ANALYTICAL RESULTS
METALS
GUNZNER 19-13 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)
Groundwater Protection Values (GPV)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SEPARATOR SAMPLES												
SEP01-Inlet@4'	01/10/2022	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WELLHEAD EXCAVATION SAMPLES												
B01@5'	01/10/2022	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RE-ENTRY WELLHEAD EXCAVATION SAMPLES												
B01@5'-WP	09/09/2022	5	11.8	114	1.25	<0.5	81.6	99.4	<9.41	0.240	1.34	182
B02@7'	09/29/2022	7	4.06	44.9	0.362	NA	32.1	36.2	NA	NA	0.411	NA
N01@1'	09/29/2022	1	5.68	73.6	0.551	NA	44.7	48.9	NA	NA	0.521	NA
E01@1'	09/29/2022	1	2.25*	42.0	0.205	NA	18.3	22.3	NA	NA	0.185	NA
S01@1'	09/29/2022	1	7.76	1130	0.673	NA	50.6	61.4	NA	NA	0.635	NA
W01@1'	09/29/2022	1	13.8	130	1.22	NA	97.0	133	NA	NA	1.30	NA
N02@4'	10/27/2022	4	2.08*	31.0	0.214	NA	24.4	19.8*	NA	NA	0.159	NA
E02@4'	10/27/2022	4	0.532*	10.7	<0.0924	NA	<9.24	<9.24	NA	NA	<0.0924	NA
S02@4'	10/27/2022	4	1.97*	16.8	<0.0962	NA	11.3	14.1*	NA	NA	<0.0962	NA
W02@4'	10/27/2022	4	11.4	132	1.29	NA	96.1	111	NA	NA	1.53	NA
B03@7.5'	10/27/2022	7.5	0.487*	10.5	<0.0937	NA	<9.37	<9.37	NA	NA	<0.0937	NA
W03@4'	11/17/2022	4	0.584*	13.1	<0.0960	NA	<9.60	<9.60	NA	NA	<0.0960	NA
UNLINED SOIL STOCKPILE SAMPLES												
CS01	09/29/2022	0	3.99	114	0.433	NA	27.9	30.5*	NA	NA	0.318	NA
CS01@0.5'	11/17/2022	0.5	9.24	123	1.20	NA	64.1	97.8	NA	NA	0.997	NA
CS01@1'	11/17/2022	0.5	3.23*	29.1	0.211	NA	29.1	29.0*	NA	NA	0.201	NA
BACKGROUND SAMPLES												
Native-BG01@3'	01/19/2022	3	0.413	9.45	0.0395	0.5	17.3	8.67	0.754	0.25	0.0485	27.3
Native-BG01@5'	01/19/2022	5	2.7	17	0.196	5	22.5	19.2	1.32	0.134	0.161	35.6
Native-BG02@3'	01/19/2022	3	2.18	27.7	0.217	0.513	18.1	24.1	1.78	0.298	0.298	51.8
Native-BG02@5'	01/19/2022	5	0.223	7.42	0.095	0.51	12	2.99	0.795	0.116	0.0947	29.9
Native-BG03@3'	01/19/2022	3	0.807	14.4	0.1	0.5	17.3	12.8	1.6	0.25	0.0624	37.7
Native-BG03@5'	01/19/2022	5	0.626	12.8	0.111	0.511	23.4	8.78	1.36	0.24	0.0708	29.2
SEP-BG01@0.5	01/19/2022	0.5	1.04	35.7	0.0855	0.513	7.05	6.11	4.44	0.141	0.0586	22.2
NATIVE-BG04@1'	10/27/2022	1	1.61	15.1	<0.0950	NA	24.4	25.0	NA	NA	0.142	NA
NATIVE-BG05@1'	10/27/2022	1	3.27	36.3	0.277	NA	33.5	31.9	NA	NA	0.283	NA
NATIVE-BG06@1'	10/27/2022	1	1.56	17.3	0.188	NA	29.5	24.3	NA	NA	0.104	NA
NATIVE-BG07@1'	10/27/2022	1	1.39	12.2	0.130	NA	13.6	11.3	NA	NA	<0.0991	NA

TABLE 2-5
SOIL SAMPLE ANALYTICAL RESULTS
NOTES
GUNZNER 19-13 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Notes:

GPV - Groundwater Protection Values (mg/kg)

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

* Exceeds Table 915-1 allowable level but below analytical variability of background

EC - Electrical Conductivity

SAR - Sodium Adsorption Ratio

mmhos/cm - millimhos per centimeter

<0.00200 - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

Bold - exceeds Table 915-1 allowable level and background

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
GUNZNER 19-13 WELLHEAD
WELD COUNTY, COLORADO
KERR-MCGEE OIL & GAS ONSHORE, LP

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- trimethylbenzene (µg/L)	1,3,5- trimethylbenzene (µg/L)	Total Dissolved Solids (ug/L)	Chloride Ion (ug/L)	Sulfate Ion (ug/L)	Depth to Water/ (Product Thickness) (ft bgs)
COGCC Allowable Levels		5	560	700	1400	140	67	67	NA	250,000	250,000	
GW01	1/10/2022	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	NA	NA	NA	3.0

Notes: COGCC - Colorado Oil and Gas Conservation Commission

ft bgs - feet below ground surface

NA - not analyzed/not available

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

µg/L - micrograms per liter

< - less than laboratory reporting limit

Excavation groundwater depth is approximate



January 20, 2022

WSP USA

Brian Sulzberger

4600 W. 60th Ave.

Arvada

CO

80003

Project Name - KMG - Gunzer 19-13 WH

Project Number - 314031077.000.199.05

Attached are your analytical results for KMG - Gunzer 19-13 WH received by Origins Laboratory, Inc. January 10, 2022. This project is associated with Origins project number Y201134-01.

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.

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Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@5'	Y201134-01	Soil	January 10, 2022 9:50	01/10/2022 17:28
Native-BG01@3'	Y201134-02	Soil	January 10, 2022 11:15	01/10/2022 17:28
Native-BG01@5'	Y201134-03	Soil	January 10, 2022 11:16	01/10/2022 17:28
Native-BG02@3'	Y201134-04	Soil	January 10, 2022 11:20	01/10/2022 17:28
Native-BG02@5'	Y201134-05	Soil	January 10, 2022 11:21	01/10/2022 17:28
Native-BG03@3'	Y201134-06	Soil	January 10, 2022 11:25	01/10/2022 17:28
Native-BG03@5'	Y201134-07	Soil	January 10, 2022 11:28	01/10/2022 17:28
SEP01-Inlet@4'	Y201134-08	Soil	January 10, 2022 12:07	01/10/2022 17:28
SEP-BG01@0.5	Y201134-09	Soil	January 10, 2022 12:13	01/10/2022 17:28
GW-BG01	Y201134-10	Water	January 10, 2022 10:05	01/10/2022 17:28
GW01	Y201134-11	Water	January 10, 2022 10:11	01/10/2022 17:28

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA

4600 W. 60th Ave.

Arvada

CO

80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

www.originslaboratory.com

Y20134

ORIGINS
LABORATORY, INC

page 1 of 1

Client: WSP USA
Project Manager: Brian Sulzberger
Address: 4600 W 60th Ave
Project Name: Gunzer 19-13 Wellhead
Arvada, CO 80003
Project Number: 314031077.000.199.05
Telephone Number: 303 649 7943
Samples Collected By: Kyle Pellegrini
Email Address: KMG 6102P

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative	Matrix	Analysis	Sample Instructions
B0105	1/10/22	0950	2	Unpreserved	Soil	TD5 Chloride Full 1/10/22 Boron 915 1/10/22 L-1575 in PHEC, SAR TDP (B-2)	Ground water protection
Native - B60103		1115	1	Other	Groundwater	X	
Native - B60105		1116	1	Other	Groundwater	X	
Native - B60203		1120	1	Other	Groundwater	X	
Native - B60205		1121	1	Other	Groundwater	X	
Native - B60303		1125	1	Other	Groundwater	X	
Native - B60305		1128	1	Other	Groundwater	X	
Sepal-Ente04		1207	1	Other	Groundwater	X	
Sep-B60100.5		1213	1	Other	Groundwater	X	
BW-B601		1005	1	Other	Groundwater	X	
		1011	4	Other	Groundwater	X	
Relinquished By:	Date: 1/10/27	Time: 1728		Received By:	Date: 1/10/22	Time: 1728	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By:	Date:	Time:		Received By:	Date:	Time:	

Date Results Needed

Temp Received: 5.7

Origins Laboratory, Inc.

Jefe Pellegrini

Jen Pellegrini, Project Manager

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WSP USA

4600 W. 60th Ave.

Arvada

CO

80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

Origins Laboratory

Sample Receipt Checklist

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

Origins Work Order: 4201134

Client: WSP

Client Project ID: Gunzer 19-13 WH

Checklist Completed by: AKH

Shipped Via: HD

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

Date/time completed: 1/10/12

Airbill #: 1112

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

Cooler Number/Temperature: 115.7 °C / 1 °C / 1 °C / 1 °C (Describe)

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	clear vial
Additional Comments (if any):				

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

Reviewed by (Project Manager): [Signature]

Date/Time Reviewed: 1/10/12

Origins Laboratory, Inc.

Jefe 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.

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

B01@5'

1/10/2022 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.471	0.196	mg/L	1	B2A1109	01/11/2022	01/12/2022	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2A1030	01/10/2022	01/10/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	73.3 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

Naphthalene	ND	0.00380	mg/kg	1	B2A1029	01/10/2022	01/10/2022	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	108 %	70-130	"	"	"
Surrogate: Toluene-d8	93.2 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	99.4 %	70-130	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

B01@5'

1/10/2022 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-01 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	2.43	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	1.21	0.823	"	"	"	"	"
Sodium	5.21	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.77		pH Units	1	B2A1115	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	3.86		SAR	1	B2A1106	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.886	0.00500	mmhos/cm	1	B2A1112	01/11/2022	01/12/2022
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG01@3'

1/10/2022 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-02 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.198	mg/L	1	B2A1109	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	2.57	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	1.14	0.823	"	"	"	"	"
Sodium	4.83	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.94	pH Units	1	B2A1115	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	3.54	SAR	1	B2A1106	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.878	0.00500	mmhos/cm	1	B2A1112	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	0.413	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	9.45	0.042	0.25	"	"	"	"	"
Cadmium	0.0395	0.0259	0.25	"	"	"	"	"
Copper	17.3	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG01@3'

1/10/2022 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-02 (Soil)

Total Metals by 6020B

Lead	8.67	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	0.754	0.0633	0.25	"	"	"	"	"	
Selenium	ND	0.103	0.25	"	"	"	"	"	
Silver	0.0485	0.0067	0.25	"	"	"	"	"	J
Zinc	27.3	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L595090	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG01@5'

1/10/2022 11:16:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-03 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.199	mg/L	1	B2A1109	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	1.62	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	ND	0.823	"	"	"	"	"
Sodium	3.68	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.00	pH Units	1	B2A1115	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	3.40	SAR	1	B2A1106	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.627	0.00500	mmhos/cm	1	B2A1112	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	2.7	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	17	0.042	0.25	"	"	"	"	"
Cadmium	0.196	0.0259	0.25	"	"	"	"	"
Copper	22.5	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA

4600 W. 60th Ave.

Arvada CO 80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

Native-BG01@5'**1/10/2022 11:16:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.**Y201134-03 (Soil)****Total Metals by 6020B**

Lead	19.2	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	1.32	0.0633	0.25	"	"	"	"	"	
Selenium	0.134	0.103	0.25	"	"	"	"	"	J
Silver	0.161	0.0067	0.25	"	"	"	"	"	J
Zinc	35.6	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	2.44	5	mg/Kg	10	L595090	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG02@3'

1/10/2022 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.196	mg/L	1	B2A1109	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	1.17	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	ND	0.823	"	"	"	"	"
Sodium	3.18	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.04	pH Units	1	B2A1115	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	3.49	SAR	1	B2A1106	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.522	0.00500	mmhos/cm	1	B2A1112	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	2.18	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	27.7	0.042	0.25	"	"	"	"	"
Cadmium	0.217	0.0259	0.25	"	"	"	"	"
Copper	18.1	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG02@3'

1/10/2022 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-04 (Soil)

Total Metals by 6020B

Lead	24.1	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Nickel	1.78	0.0633	0.25	"	"	"	"	"
Selenium	0.298	0.103	0.25	"	"	"	"	"
Silver	0.298	0.0067	0.25	"	"	"	"	"
Zinc	51.8	0.534	2.5	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.25	0.513	mg/Kg	1	L595090	01/10/2022	01/19/2022
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG02@5'

1/10/2022 11:21:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-05 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.200	mg/L	1	B2A1110	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.44	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.67	pH Units	1	B2A1116	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	2.45	SAR	1	B2A1106	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.246	0.00500	mmhos/cm	1	B2A1112	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	0.223	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	J
Barium	7.42	0.042	0.25	"	"	"	"	"	
Cadmium	0.095	0.0259	0.25	"	"	"	"	"	J
Copper	12	0.0806	0.25	"	"	"	"	"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG02@5'

1/10/2022 11:21:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-05 (Soil)

Total Metals by 6020B

Lead	2.99	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	0.795	0.0633	0.25	"	"	"	"	"	
Selenium	0.116	0.103	0.25	"	"	"	"	"	J
Silver	0.0947	0.0067	0.25	"	"	"	"	"	J
Zinc	29.9	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.248	0.51	mg/Kg	1	L595090	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG03@3'

1/10/2022 11:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-06 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.197	mg/L	1	B2A1110	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	1.88	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	0.823	0.823	"	"	"	"	"
Sodium	4.73	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.84	pH Units	1	B2A1116	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	4.07	SAR	1	B2A1107	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.732	0.00500	mmhos/cm	1	B2A1113	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	0.807	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	14.4	0.042	0.25	"	"	"	"	"
Cadmium	0.1	0.0259	0.25	"	"	"	"	"
Copper	17.3	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG03@3'

1/10/2022 11:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-06 (Soil)

Total Metals by 6020B

Lead	12.8	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	1.6	0.0633	0.25	"	"	"	"	"	
Selenium	ND	0.103	0.25	"	"	"	"	"	
Silver	0.0624	0.0067	0.25	"	"	"	"	"	J
Zinc	37.7	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L595090	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG03@5'

1/10/2022 11:28:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-07 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.199	mg/L	1	B2A1110	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	1.66	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	0.963	0.823	"	"	"	"	"
Sodium	9.73	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.12	pH Units	1	B2A1116	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	8.50	SAR	1	B2A1107	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.25	0.00500	mmhos/cm	1	B2A1113	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	0.626	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	12.8	0.042	0.25	"	"	"	"	"
Cadmium	0.111	0.0259	0.25	"	"	"	"	"
Copper	23.4	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Native-BG03@5'

1/10/2022 11:28:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-07 (Soil)

Total Metals by 6020B

Lead	8.78	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	1.36	0.0633	0.25	"	"	"	"	"	
Selenium	0.24	0.103	0.25	"	"	"	"	"	J
Silver	0.0708	0.0067	0.25	"	"	"	"	"	J
Zinc	29.2	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.249	0.511	mg/Kg	1	L595090	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

SEP01-Inlet@4'

1/10/2022 12:07:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-08 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.200	mg/L	1	B2A1110	01/11/2022	01/12/2022	U
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2A1030	01/10/2022	01/10/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	72.4 %	50-150	"	"	"	"	"
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GBTEX+TMBs by 8260D

Naphthalene	ND	0.00380	mg/kg	1	B2A1029	01/10/2022	01/10/2022	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	108 %	70-130	"	"	"	"
Surrogate: Toluene-d8	93.1 %	70-130	"	"	"	"
Surrogate: 4-Bromofluorobenzene	98.4 %	70-130	"	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

SEP01-Inlet@4'

1/10/2022 12:07:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-08 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	1.59	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	0.963	0.823	"	"	"	"	"
Sodium	0.835	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.98	pH Units	1	B2A1116	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	0.740	SAR	1	B2A1107	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.355	0.00500	mmhos/cm	1	B2A1113	01/11/2022	01/12/2022
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

SEP-BG01@0.5

1/10/2022 12:13:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y201134-09 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.196	mg/L	1	B2A1110	01/11/2022	01/12/2022	U
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Metals by Saturated Paste by EPA 6010

Calcium	1.22	0.499	meq/L	10	[CALC]	01/11/2022	01/12/2022
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.12	pH Units	1	B2A1116	01/11/2022	01/12/2022
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SAR by 20B Saturated Paste

SAR	0.329	SAR	1	B2A1107	01/11/2022	01/12/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.237	0.00500	mmhos/cm	1	B2A1113	01/11/2022	01/12/2022
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Total Metals by 6020B

Arsenic	1.04	0.0855	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022
Barium	35.7	0.042	0.25	"	"	"	"	"
Cadmium	0.0855	0.0259	0.25	"	"	"	"	J
Copper	7.05	0.0806	0.25	"	"	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

SEP-BG01@0.5

1/10/2022 12:13:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y201134-09 (Soil)

Total Metals by 6020B

Lead	6.11	0.031	0.25	mg/Kg	5	L594237	01/12/2022	01/14/2022	
Nickel	4.44	0.0633	0.25	"	"	"	"	"	
Selenium	0.141	0.103	0.25	"	"	"	"	"	J
Silver	0.0586	0.0067	0.25	"	"	"	"	"	J
Zinc	22.2	0.534	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.25	0.513	mg/Kg	1	L595091	01/10/2022	01/19/2022	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

WSP USA

4600 W. 60th Ave.

Arvada CO 80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

GW-BG01**1/10/2022 10:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.**Y201134-10 (Water)****Anions by IC 300.0**

Chloride	193		31.2	mg/L	125	B2A1024	01/10/2022	01/11/2022	
Sulfate	220		31.2	"	"	"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	932		5.00	"	1	B2A1035	01/10/2022	01/11/2022	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

GW01

1/10/2022 10:11:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y201134-11 (Water)

Anions by IC 300.0

Chloride	224		31.2	mg/L	125	B2A1024	01/10/2022	01/11/2022	
Sulfate	263		31.2	"	"	"	"	"	

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	3.01		1.00	ug/L	1	B2A1031	01/10/2022	01/10/2022	
1,3,5-Trimethylbenzene	1.60		1.00	"	"	"	"	"	
Benzene	1.24		1.00	"	"	"	"	"	
Ethylbenzene	1.10		1.00	"	"	"	"	"	
Naphthalene	ND		4.00	"	"	"	"	"	U
Toluene	3.68		1.00	"	"	"	"	"	
Xylenes, total	8.16		1.00	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	91.1 %		70-130			"	"	"	
Surrogate: Toluene-d8	107 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	86.9 %		70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1130		5.00	mg/L	1	B2A1035	01/10/2022	01/11/2022	
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1029 - EPA 5030 (soil)										
Blank (B2A1029-BLK1)					Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
Naphthalene	ND	0.00380	"							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	0.13		"	0.125	103		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	94.2		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.0		70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1029 - EPA 5030 (soil)

LCS (B2A1029-BS1)

Prepared: 01/10/2022 Analyzed: 01/10/2022

1,2,4-Trimethylbenzene	0.121	0.00200	mg/kg	0.100		121	70-130			
Naphthalene	0.130	0.0100	"	0.100		130	70-130			
1,3,5-Trimethylbenzene	0.120	0.00200	"	0.100		120	70-130			
Benzene	0.111	0.00200	"	0.100		111	70-130			
Ethylbenzene	0.115	0.00200	"	0.100		115	70-130			
m,p-Xylene	0.237	0.00400	"	0.200		119	70-130			
o-Xylene	0.115	0.00200	"	0.100		115	70-130			
Toluene	0.119	0.00200	"	0.100		119	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	97.2		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	95.9		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.2		70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1029 - EPA 5030 (soil)

Matrix Spike (B2A1029-MS1)		Source: Y201132-01			Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	0.112	0.00200	mg/kg	0.100	0.00614	105	70-130			
Naphthalene	0.129	0.0100	"	0.100	0.00956	119	70-130			
1,3,5-Trimethylbenzene	0.110	0.00200	"	0.100	0.00114	109	70-130			
Benzene	0.112	0.00200	"	0.100	ND	112	70-130			
Ethylbenzene	0.107	0.00200	"	0.100	ND	107	70-130			
m,p-Xylene	0.221	0.00400	"	0.200	0.00214	110	70-130			
o-Xylene	0.108	0.00200	"	0.100	0.00106	107	70-130			
Toluene	0.114	0.00200	"	0.100	ND	114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.7	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1029 - EPA 5030 (soil)										
Matrix Spike Dup (B2A1029-MSD1)		Source: Y201132-01			Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100	0.00614	109	70-130	3.49	20	
Naphthalene	0.135	0.0100	"	0.100	0.00956	125	70-130	4.47	20	
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100	0.00114	113	70-130	3.90	20	
Benzene	0.116	0.00200	"	0.100	ND	116	70-130	3.82	20	
Ethylbenzene	0.111	0.00200	"	0.100	ND	111	70-130	3.54	20	
m,p-Xylene	0.229	0.00400	"	0.200	0.00214	114	70-130	3.58	20	
o-Xylene	0.112	0.00200	"	0.100	0.00106	111	70-130	3.43	20	
Toluene	0.118	0.00200	"	0.100	ND	118	70-130	3.47	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.9	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA

4600 W. 60th Ave.

Arvada CO 80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

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 B2A1030 - EPA 3550B

Blank (B2A1030-BLK1)

Prepared: 01/10/2022 Analyzed: 01/10/2022

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		91.3	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1030 - EPA 3550B										
LCS (B2A1030-BS1)					Prepared: 01/10/2022 Analyzed: 01/10/2022					
Diesel (C10-C28)	699	50.0	mg/kg	1000		69.9	70-130			QM-07
Residual Range Organics (C28-C40)	867	200	"	1000		86.7	70-130			
Surrogate: o-Terphenyl	39		"	49.8		79.4	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1030 - EPA 3550B

Matrix Spike (B2A1030-MS1)		Source: Y201132-01			Prepared: 01/10/2022 Analyzed: 01/10/2022					
Diesel (C10-C28)	878	50.0	mg/kg	1000	ND	87.8	70-130			
Residual Range Organics (C28-C40)	1090	200	"	1000	ND	109	70-130			
Surrogate: o-Terphenyl	44		"	49.8		88.5	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1030 - EPA 3550B

Matrix Spike Dup (B2A1030-MSD1)		Source: Y201132-01			Prepared: 01/10/2022 Analyzed: 01/10/2022					
Diesel (C10-C28)	729	50.0	mg/kg	1000	ND	72.9	70-130	18.5	35	
Residual Range Organics (C28-C40)	863	200	"	1000	ND	86.3	70-130	23.0	35	
Surrogate: o-Terphenyl	37		"	49.8		73.7	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1031 - EPA 5030B (Water)										
Blank (B2A1031-BLK1)					Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	ND	1.00	ug/L							U
1,3,5-Trimethylbenzene	ND	1.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	4.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	71		"	62.5		114	70-130			
Surrogate: Toluene-d8	83		"	62.5		132	70-130			S-GC
Surrogate: 4-Bromofluorobenzene	47		"	62.5		75.2	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1031 - EPA 5030B (Water)										
LCS (B2A1031-BS1)					Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	40.5	1.00	ug/L	50.0		80.9	70-130			
1,3,5-Trimethylbenzene	41.6	1.00	"	50.0		83.2	70-130			
Benzene	44.5	1.00	"	50.0		89.0	70-130			
Ethylbenzene	44.4	1.00	"	50.0		88.7	70-130			
m,p-Xylene	87.5	2.00	"	100		87.5	70-130			
Naphthalene	58.8	4.00	"	50.0		118	70-130			
o-Xylene	47.1	1.00	"	50.0		94.2	70-130			
Toluene	47.6	1.00	"	50.0		95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	70		"	62.5		112	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.2	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1031 - EPA 5030B (Water)

Matrix Spike (B2A1031-MS1)		Source: Y201134-11			Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	58.5	1.00	ug/L	50.0	3.01	111	70-130			
1,3,5-Trimethylbenzene	65.0	1.00	"	50.0	1.60	127	70-130			
Benzene	53.6	1.00	"	50.0	1.24	105	70-130			
Ethylbenzene	61.2	1.00	"	50.0	1.10	120	70-130			
m,p-Xylene	127	2.00	"	100	6.33	121	70-130			
Naphthalene	60.0	4.00	"	50.0	1.15	118	70-130			
o-Xylene	57.6	1.00	"	50.0	1.83	112	70-130			
Toluene	66.4	1.00	"	50.0	3.68	125	70-130			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.1	70-130			
Surrogate: Toluene-d8	68		"	62.5		108	70-130			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.8	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1031 - EPA 5030B (Water)										
Matrix Spike Dup (B2A1031-MSD1)			Source: Y201134-11		Prepared: 01/10/2022 Analyzed: 01/10/2022					
1,2,4-Trimethylbenzene	54.0	1.00	ug/L	50.0	3.01	102	70-130	8.11	20	
1,3,5-Trimethylbenzene	59.0	1.00	"	50.0	1.60	115	70-130	9.68	20	
Benzene	52.5	1.00	"	50.0	1.24	102	70-130	2.07	20	
Ethylbenzene	57.5	1.00	"	50.0	1.10	113	70-130	6.20	20	
m,p-Xylene	122	2.00	"	100	6.33	116	70-130	3.71	20	
Naphthalene	56.8	4.00	"	50.0	1.15	111	70-130	5.48	20	
o-Xylene	55.6	1.00	"	50.0	1.83	108	70-130	3.62	20	
Toluene	62.5	1.00	"	50.0	3.68	118	70-130	6.03	20	
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.7	70-130			
Surrogate: Toluene-d8	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		90.3	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Classical Chemistry Parameters - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2A1024 - Filter .45um non acidified

Blank (B2A1024-BLK1)

Prepared: 01/10/2022 Analyzed: 01/11/2022

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

LCS (B2A1024-BS1)

Prepared: 01/10/2022 Analyzed: 01/11/2022

Chloride	4.01	0.250	mg/L	4.00		100	90-110			
Sulfate	3.99	0.250	"	4.00		99.7	90-110			

Matrix Spike (B2A1024-MS1)

Source: Y201097-15

Prepared: 01/10/2022 Analyzed: 01/11/2022

Chloride	1600		mg/L	500	1080	102	80-120			
Sulfate	5920		"	500	5400	104	80-120			

Matrix Spike Dup (B2A1024-MSD1)

Source: Y201097-15

Prepared: 01/10/2022 Analyzed: 01/11/2022

Chloride	1590		mg/L	500	1080	101	80-120	0.569	20	
Sulfate	5860		"	500	5400	92.2	80-120	0.974	20	

Batch B2A1035 - NO PREP

Blank (B2A1035-BLK1)

Prepared: 01/10/2022 Analyzed: 01/11/2022

Total Dissolved Solids	ND	5.00	mg/L							U
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LCS (B2A1035-BS1)

Prepared: 01/10/2022 Analyzed: 01/11/2022

Total Dissolved Solids	991	5.00	mg/L	1000		99.1	90-110			
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Duplicate (B2A1035-DUP1)

Source: Y201097-21

Prepared: 01/10/2022 Analyzed: 01/11/2022

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 B2A1035 - NO PREP										
Total Dissolved Solids	9130	5.00	mg/L		9100			0.329	10	
Batch B2A1109 - Default Prep Metals										
Blank (B2A1109-BLK1)					Prepared: 01/11/2022 Analyzed: 01/12/2022					
Boron	ND	0.200	mg/L							U
Duplicate (B2A1109-DUP1)					Source: Y201128-18 Prepared: 01/11/2022 Analyzed: 01/12/2022					
Boron	3.30	0.200	mg/L		3.77			13.3	50	
Batch B2A1110 - Default Prep Metals										
Blank (B2A1110-BLK1)					Prepared: 01/11/2022 Analyzed: 01/12/2022					
Boron	ND	0.200	mg/L							U
Duplicate (B2A1110-DUP1)					Source: Y201134-05 Prepared: 01/11/2022 Analyzed: 01/12/2022					
Boron	0.0200	0.200	mg/L		0.0200			0.100	50	U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Saturated Paste - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1112 - NO PREP										
Blank (B2A1112-BLK1)					Prepared: 01/11/2022 Analyzed: 01/12/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B2A1112-DUP1)					Source: Y201128-19 Prepared: 01/11/2022 Analyzed: 01/12/2022					
Specific Conductance (EC)	0.660	0.00500	mmhos/cm		0.520			23.7	25	
Batch B2A1113 - NO PREP										
Blank (B2A1113-BLK1)					Prepared: 01/11/2022 Analyzed: 01/12/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B2A1113-DUP1)					Source: Y201134-06 Prepared: 01/11/2022 Analyzed: 01/12/2022					
Specific Conductance (EC)	0.848	0.00500	mmhos/cm		0.732			14.6	25	
Batch B2A1115 - NO PREP										
Duplicate (B2A1115-DUP1)					Source: Y201128-19 Prepared: 01/11/2022 Analyzed: 01/12/2022					
pH	7.49		pH Units		7.31			2.43	25	
Batch B2A1116 - NO PREP										
Duplicate (B2A1116-DUP1)					Source: Y201134-06 Prepared: 01/11/2022 Analyzed: 01/12/2022					
pH	7.90		pH Units		7.84			0.762	25	

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Total Metals by 6020B - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L594237 - 3050B

MSD (L 90078-MSD-L594237)		Source: 90078			Prepared: 01/12/2022 Analyzed: 01/14/2022					
Barium	45.6	0.042	mg/Kg	4.87	39.5	125	75-125	0.8	80	
Arsenic	4.96	0.0855	"	2.43	3.46	62	75-125	1.4	80	*
Cadmium	0.442	0.0259	"	0.487	0.0489	91	75-125	4.6	80	
Copper	4.83	0.0806	"	2.43	2.94	78	75-125	3.1	80	
Lead	5.7	0.031	"	2.43	4.02	69	75-125	0.8	80	*
Nickel	5.23	0.0633	"	2.43	3.35	77	75-125	0.7	80	
Selenium	3.66	0.103	"	4.87	<0.103	75	75-125	3	80	
Silver	0.413	0.0067	"	0.487	<0.0067	85	75-125	0.2	80	
Zinc	35.5	0.534	"	24.3	15.3	83	75-125	2.8	80	

MS (L 90078-MS-L594237)		Source: 90078			Prepared: 01/12/2022 Analyzed: 01/14/2022					
Barium	46	0.042	mg/Kg	4.78	39.5	136	75-125			*
Cadmium	0.422	0.0259	"	0.478	0.0489	88	75-125			
Silver	0.414	0.0067	"	0.478	<0.0067	87	75-125			
Arsenic	5.03	0.0855	"	2.39	3.46	66	75-125			*
Copper	4.68	0.0806	"	2.39	2.94	73	75-125			*
Selenium	3.55	0.103	"	4.78	<0.103	74	75-125			*
Nickel	5.27	0.0633	"	2.39	3.35	80	75-125			
Zinc	34.5	0.534	"	23.9	15.3	80	75-125			
Lead	5.75	0.031	"	2.39	4.02	72	75-125			*

LCS (LCS-L594237)		Prepared: 01/12/2022 Analyzed: 01/14/2022								
Cadmium	0.505	0.0259	mg/Kg	0.5		101	80-120			
Zinc	23.6	0.534	"	25		94	80-120			
Silver	1	0.0067	"	1		100	80-120			
Selenium	5.01	0.103	"	5		100	80-120			
Nickel	2.39	0.0633	"	2.5		96	80-120			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

Total Metals by 6020B - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L594237 - 3050B

LCS (LCS-L594237)

Prepared: 01/12/2022 Analyzed: 01/14/2022

Copper	2.31	0.0806	mg/Kg	2.5		92	80-120			
Barium	4.88	0.042	"	5		98	80-120			
Arsenic	2.47	0.0855	"	2.5		99	80-120			
Lead	2.37	0.031	"	2.5		95	80-120			

LRB (LRB-L594237)

Prepared: 01/12/2022 Analyzed: 01/14/2022

Arsenic	ND	0.25	mg/Kg				-			
Zinc	ND	2.5	"				-			
Silver	ND	0.25	"				-			
Selenium	ND	0.25	"				-			
Nickel	ND	0.25	"				-			
Lead	ND	0.25	"				-			
Copper	ND	0.25	"				-			
Cadmium	ND	0.25	"				-			
Barium	ND	0.25	"				-			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA
4600 W. 60th Ave.
Arvada CO 80003

Brian Sulzberger
Project Number: 314031077.000.199.05
Project: KMG - Gunzer 19-13 WH

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 L595090 -										
DUP (L 90002-DUP)		Source: 90002			Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	ND	0.497	mg/Kg		<1.02	-		0	20	
MS (L 90002-MS)		Source: 90002			Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	3.54	0.502	mg/Kg	8.26	<0.502	43	75-125			*
Batch L595091 -										
DUP (L 90060-DUP)		Source: Y201134-09			Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	ND	0.244	mg/Kg		<0.500	-		0	20	
MS (L 90060-MS)		Source: Y201134-09			Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	5.98	0.244	mg/Kg	7.99	<0.244	75	75-125			
LCS (LCS)					Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	6.84	0.244	mg/Kg	8		86	75-125			
LRB (LRB)					Prepared: Analyzed: 01/19/2022					
Chromium, Hexavalent	ND	0.5	mg/Kg							

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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WSP USA

4600 W. 60th Ave.

Arvada CO 80003

Brian Sulzberger

Project Number: 314031077.000.199.05

Project: KMG - Gunzer 19-13 WH

Notes and Definitions

U Sample is Non-Detect.

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

J Estimated Value. Analyte below reported quantitation limit.

* QC Failure

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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September 22, 2022

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Gunzner 19-13 wellhead

Project Number - 09A1417161

Attached are your analytical results for KMG - Gunzner 19-13 wellhead received by Origins Laboratory, Inc. September 09, 2022. This project is associated with Origins project number Y209185-01.

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: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@5'-WP	Y209185-01	Soil	September 9, 2022 14:35	09/09/2022 15:59
GW01	Y209185-02	Water	September 9, 2022 14:45	09/09/2022 15:59

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

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page 1 of 1

Y209185

Project Manager: Jeremy Espinoza

Project Name: Gunzner 19-13 Wellhead

Project Number: 09A1417161

Samples Collected By: Glen Thompson

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Canister #	Other	TPH	GC/MS		PH
Bolcs-WP	9-9-22	1435	2	X					X				X	X	X	1
GW01	↓	1445	4	X					X				X			2
B4-GW01	↓	1455	4	X					X							3
																4
																5
																6
																7
																8
																9
																10

Handwritten notes:
 PARTS and Table 915
 metals added to
 BOLCS-WP per Jeremy's
 email on 9/15/22

Client: Ensolum

Address: _____

Telephone Number: _____

Email Address: Ensolum Oxy Team

Retrieved By: [Signature]

Retrieved By: _____

Date: 9-9-22

Date: _____

Time: 1510

Time: _____

Received By: DE

Received By: _____

Date: 09/09/2022

Date: _____

Time: 1510

Time: _____

Turnaround Time: ☒ 24 Hr ☐ 48 Hr ☐ Standard

Temp Received: 3.8

Date Results Needed: _____

Origins Laboratory, Inc.

[Signature]

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4209185

Client: ENSOLUM

Client Project ID: Gunzner 19-13 wellhead

Checklist Completed by: DE

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

Date/time completed: 09/09/2022

Airbill #: NA

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

Cooler Number/Temperature: 1 / 2.8 °C _____ / _____ °C _____ / _____ °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 ⁽¹⁾ ?	<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>			
Additional Comments (if any):				

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

Reviewed by (Project Manager) U87

Date/Time Reviewed 9/9/22

Origins Laboratory, Inc.

J. Bynon

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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

B01@5'-WP

9/9/2022 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y209185-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.901	0.100	mg/L	1	B2I1209	09/12/2022	09/13/2022
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	205	25.0	mg/kg	1	B2I0931	09/09/2022	09/12/2022
Residual Range Organics (C28-C40)	371	100	"	"	"	"	"

Surrogate: o-Terphenyl	104 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B2I0932	09/09/2022	09/10/2022	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

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

B01@5'-WP

9/9/2022 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209185-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			B21093 2	09/09/2022	09/10/2022	
Surrogate: Toluene-d8	94.4 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.7 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	3.89		0.499	meq/L	10	[CALC]	09/12/2022	09/13/2022	
Magnesium	1.95		0.823	"	"	"	"	"	
Sodium	10.2		0.435	"	"	"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00182	0.00335	mg/Kg	5	L638482	09/20/2022	09/21/2022	
2-Methylnaphthalene	ND	0.00323	0.00335	"	"	"	"	"	
Acenaphthene	ND	0.00152	0.00335	"	"	"	"	"	
Anthracene	ND	0.00167	0.00335	"	"	"	"	"	
Benzo(a)anthracene	0.00886	0.00247	0.00335	"	"	"	"	"	
Benzo(a)pyrene	0.0152	0.00234	0.00335	"	"	"	"	"	
Benzo(b)fluoranthene	0.00999	0.00293	0.00335	"	"	"	"	"	
Benzo(k)fluoranthene	0.00493	0.00219	0.00335	"	"	"	"	"	
Chrysene	0.0124	0.00312	0.00335	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"	
Fluoranthene	0.00895	0.00197	0.00335	"	"	"	"	"	

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

B01@5'-WP

9/9/2022 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y209185-01 (Soil)

PAH by 8270D SIM

Fluorene	ND	0.00143	0.00335	mg/Kg	5	L638482	09/20/2022	09/21/2022
Indeno(1,2,3-cd)pyrene	0.00889	0.00314	0.00335	"	"	"	"	"
Pyrene	0.0139	0.00322	0.00335	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	69.7 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	75.2 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	57.3 %	29-110	"	"	"

pH in Soil by 9045D

pH	8.26	pH Units	1	B211212	09/12/2022	09/13/2022
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SAR by 20B Saturated Paste

SAR	5.96	SAR	1	B211206	09/12/2022	09/13/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.57	0.00500	mmhos/cm	1	B211212	09/12/2022	09/13/2022
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Table 915 metals by EPA 6020B

Arsenic	11.8	0.0941	mg/kg	10	B211621	09/16/2022	09/20/2022
Barium	114	9.41	"	"	"	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

B01@5'-WP

9/9/2022 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209185-01 (Soil)

Table 915 metals by EPA 6020B

Cadmium	1.25	0.0941	mg/kg	10	B211621	09/16/2022	09/20/2022	
Copper	81.6	9.41	"	"	"	"	"	
Lead	99.4	9.41	"	"	"	"	"	
Nickel	ND	9.41	"	"	"	"	"	U
Selenium	0.240	0.0941	"	"	"	"	"	
Silver	1.34	0.0941	"	"	"	"	"	
Zinc	182	94.1	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L638911	09/09/2022	09/21/2022
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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: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

GW01

9/9/2022 2:45:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y209185-02 (Water)

BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B210626	09/09/2022	09/09/2022	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	2.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130	"	"	"
Surrogate: Toluene-d8	102 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	96.9 %	70-130	"	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0626 - EPA 5030B (Water)										
Blank (B2I0626-BLK1)					Prepared: 09/06/2022 Analyzed: 09/09/2022					
1,2,4-Trimethylbenzene	ND	2.00	ug/L							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	2.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.1	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0626 - EPA 5030B (Water)

Matrix Spike (B2I0626-MS1)		Source: Y209059-01			Prepared: 09/06/2022 Analyzed: 09/10/2022					
1,2,4-Trimethylbenzene	44.4	2.00	ug/L	50.0	ND	88.7	70-130			
1,3,5-Trimethylbenzene	45.0	2.00	"	50.0	0.180	89.7	70-130			
Benzene	65.7	1.00	"	50.0	21.9	87.6	70-130			
Ethylbenzene	46.9	1.00	"	50.0	0.170	93.4	70-130			
m,p-Xylene	97.3	2.00	"	100	0.280	97.0	70-130			
Naphthalene	50.2	2.00	"	50.0	4.15	92.1	70-130			
o-Xylene	51.9	1.00	"	50.0	ND	104	70-130			
Toluene	46.3	1.00	"	50.0	ND	92.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0626 - EPA 5030B (Water)										
Matrix Spike Dup (B2I0626-MSD1)	Source: Y209059-01				Prepared: 09/06/2022 Analyzed: 09/10/2022					
1,2,4-Trimethylbenzene	44.2	2.00	ug/L	50.0	ND	88.3	70-130	0.474	20	
1,3,5-Trimethylbenzene	44.5	2.00	"	50.0	0.180	88.7	70-130	1.18	20	
Benzene	65.4	1.00	"	50.0	21.9	87.0	70-130	0.488	20	
Ethylbenzene	45.2	1.00	"	50.0	0.170	90.1	70-130	3.61	20	
m,p-Xylene	95.3	2.00	"	100	0.280	95.0	70-130	2.05	20	
Naphthalene	50.1	2.00	"	50.0	4.15	91.8	70-130	0.259	20	
o-Xylene	51.3	1.00	"	50.0	ND	103	70-130	1.22	20	
Toluene	45.5	1.00	"	50.0	ND	91.0	70-130	1.70	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

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Ensolum
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0931 - EPA 3580										
Blank (B2I0931-BLK1)					Prepared: 09/09/2022 Analyzed: 09/12/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	22		"	24.9		87.0	50-150			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0931 - EPA 3580

LCS (B2I0931-BS1)

Prepared: 09/09/2022 Analyzed: 09/12/2022

Diesel (C10-C28)	1100	50.0	mg/kg	1000		110	70-130			
Residual Range Organics (C28-C40)	1160	200	"	1000		116	70-130			
Surrogate: o-Terphenyl	68		"	49.8		136	50-150			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0931 - EPA 3580

Matrix Spike (B2I0931-MS1)		Source: Y209170-01			Prepared: 09/09/2022 Analyzed: 09/12/2022					
Diesel (C10-C28)	1260	50.0	mg/kg	1000	ND	126	70-130			
Residual Range Organics (C28-C40)	1700	200	"	1000	253	144	70-130			QM-07
Surrogate: o-Terphenyl	70		"	49.8		141	50-150			

Origins Laboratory, Inc.



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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0931 - EPA 3580

Matrix Spike Dup (B2I0931-MSD1)		Source: Y209170-01			Prepared: 09/09/2022 Analyzed: 09/12/2022					
Diesel (C10-C28)	1140	50.0	mg/kg	1000	ND	114	70-130	9.61	35	
Residual Range Organics (C28-C40)	1460	200	"	1000	253	120	70-130	15.3	35	
Surrogate: o-Terphenyl	64		"	49.8		129	50-150			

Origins Laboratory, Inc.



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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0932 - EPA 5030 (soil)										
Blank (B2I0932-BLK1)					Prepared: 09/09/2022 Analyzed: 09/09/2022					
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	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		87.9	70-130			

Origins Laboratory, Inc.



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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0932 - EPA 5030 (soil)										
LCS (B2I0932-BS1)					Prepared: 09/09/2022 Analyzed: 09/09/2022					
1,2,4-Trimethylbenzene	0.0974	0.00200	mg/kg	0.100		97.4	70-130			
1,3,5-Trimethylbenzene	0.0975	0.00200	"	0.100		97.5	70-130			
Benzene	0.102	0.00200	"	0.100		102	70-130			
Ethylbenzene	0.0992	0.00200	"	0.100		99.2	70-130			
Naphthalene	0.0850	0.00380	"	0.100		85.0	70-130			
Toluene	0.0951	0.00200	"	0.100		95.1	70-130			
o-Xylene	0.0971	0.00200	"	0.100		97.1	70-130			
m,p-Xylene	0.201	0.00400	"	0.200		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		92.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



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Ensolum
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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0932 - EPA 5030 (soil)										
Matrix Spike (B2I0932-MS1)		Source: Y209165-01			Prepared: 09/09/2022 Analyzed: 09/09/2022					
1,2,4-Trimethylbenzene	0.0625	0.00200	mg/kg	0.100	ND	62.5	70-130			QM-07
1,3,5-Trimethylbenzene	0.0616	0.00200	"	0.100	ND	61.6	70-130			QM-07
Benzene	0.0823	0.00200	"	0.100	ND	82.3	70-130			
Ethylbenzene	0.0703	0.00200	"	0.100	ND	70.3	70-130			
Naphthalene	0.0536	0.00380	"	0.100	0.000580	53.0	70-130			QM-07
Toluene	0.0749	0.00200	"	0.100	ND	74.9	70-130			
o-Xylene	0.0711	0.00200	"	0.100	ND	71.1	70-130			
m,p-Xylene	0.142	0.00400	"	0.200	ND	71.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		92.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.8	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I0932 - EPA 5030 (soil)										
Matrix Spike Dup (B2I0932-MSD1)	Source: Y209165-01				Prepared: 09/09/2022 Analyzed: 09/09/2022					
1,2,4-Trimethylbenzene	0.0649	0.00200	mg/kg	0.100	ND	64.9	70-130	3.77	20	QM-07
1,3,5-Trimethylbenzene	0.0658	0.00200	"	0.100	ND	65.8	70-130	6.60	20	QM-07
Benzene	0.0837	0.00200	"	0.100	ND	83.7	70-130	1.69	20	
Ethylbenzene	0.0753	0.00200	"	0.100	ND	75.3	70-130	6.76	20	
Naphthalene	0.0566	0.00380	"	0.100	0.000580	56.0	70-130	5.37	20	QM-07
Toluene	0.0754	0.00200	"	0.100	ND	75.4	70-130	0.612	20	
o-Xylene	0.0759	0.00200	"	0.100	ND	75.9	70-130	6.59	20	
m,p-Xylene	0.151	0.00400	"	0.200	ND	75.6	70-130	6.22	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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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***** DEFAULT GENERAL METHOD *** - 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 B2I1621 - Default Prep Metals

Blank (B2I1621-BLK1)

Prepared: 09/16/2022 Analyzed: 09/20/2022

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.0100	"							U
Nickel	ND	0.0100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

LCS (B2I1621-BS1)

Prepared: 09/16/2022 Analyzed: 09/20/2022

Arsenic	0.0494	0.000100	mg/kg	0.0500		98.8	80-120
Barium	4.97	0.0100	"	5.00		99.3	80-120
Cadmium	0.0522	0.000100	"	0.0500		104	80-120
Copper	0.523	0.0100	"	0.500		105	80-120
Lead	0.0504	0.0100	"	0.0500		101	80-120
Nickel	0.0513	0.0100	"	0.0500		103	80-120
Selenium	0.0477	0.000100	"	0.0500		95.4	80-120
Silver	0.0479	0.000100	"	0.0500		95.9	80-120
Zinc	0.491	0.100	"	0.500		98.2	80-120

Matrix Spike (B2I1621-MS1)

Source: Y209270-01

Prepared: 09/16/2022 Analyzed: 09/20/2022

Origins Laboratory, Inc.



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Ensolum
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

*** DEFAULT GENERAL METHOD *** - 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 B2I1621 - Default Prep Metals

Matrix Spike (B2I1621-MS1)		Source: Y209270-01			Prepared: 09/16/2022 Analyzed: 09/20/2022					
Arsenic	8.53	0.0989	mg/kg	4.95	3.98	91.9	75-125			
Barium	819	9.89	"	495	336	97.7	75-125			
Cadmium	5.42	0.0989	"	4.95	0.241	105	75-125			
Copper	54.9	9.89	"	49.5	6.49	97.8	75-125			
Lead	14.8	9.89	"	4.95	13.5	26.2	75-125			QM-07
Nickel	13.2	9.89	"	4.95	8.20	102	75-125			
Selenium	4.94	0.0989	"	4.95	0.159	96.6	75-125			
Silver	4.75	0.0989	"	4.95	0.00978	95.8	75-125			
Zinc	100	98.9	"	49.5	52.1	97.4	75-125			
Matrix Spike Dup (B2I1621-MSD1)		Source: Y209270-01			Prepared: 09/16/2022 Analyzed: 09/20/2022					
Arsenic	8.50	0.0987	mg/kg	4.93	3.98	91.6	75-125	0.318	20	
Barium	804	9.87	"	493	336	94.8	75-125	1.90	20	
Cadmium	5.37	0.0987	"	4.93	0.241	104	75-125	1.01	20	
Copper	55.8	9.87	"	49.3	6.49	100	75-125	1.73	20	
Lead	13.8	9.87	"	4.93	13.5	5.25	75-125	7.26	20	QM-07
Nickel	13.0	9.87	"	4.93	8.20	98.1	75-125	1.47	20	
Selenium	4.90	0.0987	"	4.93	0.159	96.1	75-125	0.779	20	
Silver	4.65	0.0987	"	4.93	0.00978	94.1	75-125	2.05	20	
Zinc	104	98.7	"	49.3	52.1	104	75-125	3.22	20	

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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I1206 - Default Prep Metals

Blank (B2I1206-BLK1)

Prepared: 09/12/2022 Analyzed: 09/13/2022

SAR	0.00		SAR
Calcium PPM	ND	10.0	mg/L
Magnesium PPM	ND	10.0	"
Sodium PPM	ND	10.0	"

Duplicate (B2I1206-DUP1)

Source: Y209177-07

Prepared: 09/12/2022 Analyzed: 09/13/2022

Calcium PPM	530	10.0	mg/L	529	0.0674	50
SAR	0.00		SAR	7.47	200	200
Magnesium PPM	29.1	10.0	mg/L	28.9	0.452	50
Sodium PPM	582	10.0	"	652	11.3	50

Batch B2I1209 - Default Prep Metals

Blank (B2I1209-BLK1)

Prepared: 09/12/2022 Analyzed: 09/13/2022

Boron	ND	0.100	mg/L
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Duplicate (B2I1209-DUP1)

Source: Y209177-07

Prepared: 09/12/2022 Analyzed: 09/13/2022

Boron	1.32	0.101	mg/L	1.54	15.3	50
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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2I1212 - NO PREP										
Blank (B2I1212-BLK1)					Prepared: 09/12/2022 Analyzed: 09/13/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
pH	0.00		pH Units							
Duplicate (B2I1212-DUP1)					Source: Y209177-07 Prepared: 09/12/2022 Analyzed: 09/13/2022					
Specific Conductance (EC)	5.56	0.00500	mmhos/cm		6.12			9.70	25	
pH	7.79		pH Units		7.77			0.257	25	

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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L638482 - 3550B

MSD (L 85069-MSD-L638482)		Source: 85069			Prepared: 09/20/2022 Analyzed: 09/21/2022					
Benzo(b)fluoranthene	0.0911	0.00067	mg/Kg	0.164	<0.000585	55.5	30-130	3.3	30	
Indeno(1,2,3-cd)pyrene	0.115	0.00067	"	0.164	<0.000627	70.1	30-130	11.4	30	
Fluorene	0.115	0.00067	"	0.164	<0.000286	70.1	30-130	7.5	30	
Fluoranthene	0.119	0.00067	"	0.164	<0.000394	72.5	30-130	5.7	30	
Dibenz(a,h)anthracene	0.125	0.00067	"	0.164	<0.000614	76.2	30-130	10.6	30	
Chrysene	0.125	0.00067	"	0.164	<0.000624	76.2	30-130	1.5	30	
Benzo(k)fluoranthene	0.116	0.00067	"	0.164	<0.000437	70.7	30-130	6.6	30	
1-Methylnaphthalene	0.106	0.00067	"	0.164	<0.000364	64.6	30-130	7.2	30	
Pyrene	0.117	0.00067	"	0.164	<0.000643	71.3	30-130	3.3	30	
2-Methylnaphthalene	0.103	0.00067	"	0.164	<0.000645	62.8	30-130	9.2	30	
Acenaphthene	0.106	0.00067	"	0.164	<0.000304	64.6	30-130	8.1	30	
Anthracene	0.12	0.00067	"	0.164	<0.000334	73.1	30-130	7.2	30	
Benzo(a)anthracene	0.124	0.00067	"	0.164	<0.000493	75.6	30-130	3.1	30	
Benzo(a)pyrene	0.147	0.00067	"	0.164	<0.000468	89.6	30-130	1.3	30	
Surrogate: Nitrobenzene-d5	58.2		"	0.328	184	58.2	29-110			
Surrogate: 2-Fluorobiphenyl	59.4		"	0.328	190	59.4	33-115			
Surrogate: 4-Terphenyl-d14	68.9		"	0.328	214	68.9	33-122			

MS (L 85069-MS-L638482)		Source: 85069			Prepared: 09/20/2022 Analyzed: 09/21/2022					
Benzo(b)fluoranthene	0.0942	0.00067	mg/Kg	0.167	<0.000585	56.4	30-130			
Benzo(k)fluoranthene	0.124	0.00067	"	0.167	<0.000437	74.2	30-130			
Pyrene	0.121	0.00067	"	0.167	<0.000643	72.4	30-130			
Indeno(1,2,3-cd)pyrene	0.129	0.00067	"	0.167	<0.000627	77.2	30-130			
Fluorene	0.124	0.00067	"	0.167	<0.000286	74.2	30-130			
Fluoranthene	0.126	0.00067	"	0.167	<0.000394	75.4	30-130			
Dibenz(a,h)anthracene	0.139	0.00067	"	0.167	<0.000614	83.2	30-130			
Benzo(a)pyrene	0.149	0.00067	"	0.167	<0.000468	89.2	30-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L638482 - 3550B

MS (L 85069-MS-L638482)		Source: 85069			Prepared: 09/20/2022 Analyzed: 09/21/2022					
Benzo(a)anthracene	0.128	0.00067	mg/Kg	0.167	<0.000493	76.6	30-130			
Anthracene	0.129	0.00067	"	0.167	<0.000334	77.2	30-130			
Acenaphthene	0.115	0.00067	"	0.167	<0.000304	68.8	30-130			
2-Methylnaphthalene	0.113	0.00067	"	0.167	<0.000645	67.6	30-130			
Chrysene	0.127	0.00067	"	0.167	<0.000624	76	30-130			
1-Methylnaphthalene	0.114	0.00067	"	0.167	<0.000364	68.2	30-130			
Surrogate: Nitrobenzene-d5	57.9		"	0.333	184	57.9	29-110			
Surrogate: 4-Terphenyl-d14	69.3		"	0.333	214	69.3	33-122			
Surrogate: 2-Fluorobiphenyl	59.7		"	0.333	190	59.7	33-115			

LCS (LCS-L638482)		Prepared: 09/20/2022 Analyzed: 09/21/2022								
Benzo(b)fluoranthene	0.105	0.00067	mg/Kg	0.167		62.8	30-130			
Benzo(k)fluoranthene	0.107	0.00067	"	0.167		64	30-130			
Pyrene	0.118	0.00067	"	0.167		70.6	30-130			
Chrysene	0.129	0.00067	"	0.167		77.2	30-130			
Dibenz(a,h)anthracene	0.14	0.00067	"	0.167		83.8	30-130			
Fluoranthene	0.123	0.00067	"	0.167		73.6	30-130			
Indeno(1,2,3-cd)pyrene	0.123	0.00067	"	0.167		73.6	30-130			
Benzo(a)pyrene	0.149	0.00067	"	0.167		89.2	30-130			
Fluorene	0.119	0.00067	"	0.167		71.2	30-130			
Anthracene	0.123	0.00067	"	0.167		73.6	30-130			
Acenaphthene	0.111	0.00067	"	0.167		66.4	30-130			
2-Methylnaphthalene	0.109	0.00067	"	0.167		65.2	30-130			
1-Methylnaphthalene	0.111	0.00067	"	0.167		66.4	30-130			
Benzo(a)anthracene	0.131	0.00067	"	0.167		78.4	30-130			
Surrogate: Nitrobenzene-d5	66.9		"	0.333		66.9	29-110			
Surrogate: 2-Fluorobiphenyl	68.7		"	0.333		68.7	33-115			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

PAH by 8270D SIM - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L638482 - 3550B										
LCS (LCS-L638482)					Prepared: 09/20/2022 Analyzed: 09/21/2022					
Surrogate: 4-Terphenyl-d14	75		mg/Kg	0.333		75	33-122			
LRB (LRB-L638482)					Prepared: 09/20/2022 Analyzed: 09/21/2022					
Fluorene	ND	0.00067	mg/Kg				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	64.8		"	0.333		64.8	29-110			
Surrogate: 4-Terphenyl-d14	71.4		"	0.333		71.4	33-122			
Surrogate: 2-Fluorobiphenyl	66.9		"	0.333		66.9	33-115			

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 L638911 -										
DUP (L 85096-DUP)		Source: 85096			Prepared: Analyzed: 09/21/2022					
Chromium, Hexavalent	ND	0.52	mg/Kg		<0.520	-		0	20	
MS (L 85096-MS)		Source: 85096			Prepared: Analyzed: 09/21/2022					
Chromium, Hexavalent	32.1	2.5	mg/Kg	38.9	< 0.244	83	75-125			
MSD (L 85096-MSD)		Source: 85096			Prepared: Analyzed: 09/21/2022					
Chromium, Hexavalent	625	50	mg/Kg	602	<24.4	104	75-125			
LCS (LCS)					Prepared: Analyzed: 09/21/2022					
Chromium, Hexavalent	7.63	0.5	mg/Kg	8		95	75-125			
LRB (LRB)					Prepared: Analyzed: 09/21/2022					
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: 09A1417161

Project: KMG - Gunzner 19-13 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.



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September 30, 2022

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Gunzner 19-13 wellhead**Project Number - 09A1417161**

Attached are your analytical results for KMG - Gunzner 19-13 wellhead received by Origins Laboratory, Inc. September 29, 2022. This project is associated with Origins project number Y209713-01.

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
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B02@7'	Y209713-01	Soil	September 29, 2022 11:08	09/29/2022 14:14
N01@1'	Y209713-02	Soil	September 29, 2022 11:13	09/29/2022 14:14
E01@1'	Y209713-03	Soil	September 29, 2022 11:20	09/29/2022 14:14
S01@1'	Y209713-04	Soil	September 29, 2022 11:29	09/29/2022 14:14
W01@1'	Y209713-05	Soil	September 29, 2022 11:36	09/29/2022 14:14
CS01	Y209713-06	Soil	September 29, 2022 11:08	09/29/2022 14:14

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: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 6297713

Client: Ensolum

Client Project ID: Gunzner 19-13W4

Checklist Completed by: TSH/DE

Shipped Via: HD

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

Date/time completed: 9/29/22

Airbill #: 119

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

Cooler Number/Temperature: 1 5.1 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: TSH

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

09/29/2022
Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

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Jen Pellegrini, Project Manager

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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

B02@7'

9/29/2022 11:08:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209713-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 85.5 % 50-150 " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " "

Surrogate: Toluene-d8 93.7 % 70-130 " "

Surrogate: 4-Bromofluorobenzene 92.1 % 70-130 " "

Table 915 metals by EPA 6020B

Arsenic	4.06	0.0929	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	44.9	9.29	"	"	"	CNG	"	"
Cadmium	0.362	0.0929	"	"	"	CNG	"	"
Copper	32.1	9.29	"	"	"	CNG	"	"
Lead	36.2	9.29	"	"	"	CNG	"	"
Silver	0.411	0.0929	"	"	"	CNG	"	"

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

N01@1'

9/29/2022 11:13:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209713-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 86.9 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 112 % 70-130 " " "

Surrogate: Toluene-d8 89.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 91.9 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	5.68	0.0888	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	73.6	8.88	"	"	"	CNG	"	"
Cadmium	0.551	0.0888	"	"	"	CNG	"	"
Copper	44.7	8.88	"	"	"	CNG	"	"
Lead	48.9	8.88	"	"	"	CNG	"	"
Silver	0.521	0.0888	"	"	"	CNG	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

E01@1'

9/29/2022 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y209713-03 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 81.2 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " "

Surrogate: Toluene-d8 91.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 92.9 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	2.25	0.0957	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	42.0	9.57	"	"	"	CNG	"	"
Cadmium	0.205	0.0957	"	"	"	CNG	"	"
Copper	18.3	9.57	"	"	"	CNG	"	"
Lead	22.3	9.57	"	"	"	CNG	"	"
Silver	0.185	0.0957	"	"	"	CNG	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

S01@1'

9/29/2022 11:29:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y209713-04 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 87.6 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 113 % 70-130 " " "

Surrogate: Toluene-d8 92.2 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 90.6 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	7.76	0.0964	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	1130	9.64	"	"	"	CNG	"	"
Cadmium	0.673	0.0964	"	"	"	CNG	"	"
Copper	50.6	9.64	"	"	"	CNG	"	"
Lead	61.4	9.64	"	"	"	CNG	"	"
Silver	0.635	0.0964	"	"	"	CNG	"	"

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: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

W01@1'

9/29/2022 11:36:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209713-05 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 76.0 % 50-150 " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 113 % 70-130 " "

Surrogate: Toluene-d8 94.4 % 70-130 " "

Surrogate: 4-Bromofluorobenzene 89.3 % 70-130 " "

Table 915 metals by EPA 6020B

Arsenic	13.8	0.0965	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	130	9.65	"	"	"	CNG	"	"
Cadmium	1.22	0.0965	"	"	"	CNG	"	"
Copper	97.0	9.65	"	"	"	CNG	"	"
Lead	133	9.65	"	"	"	CNG	"	"
Silver	1.30	0.0965	"	"	"	CNG	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

CS01

9/29/2022 11:08:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y209713-06 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B212926	ADM	09/29/2022	09/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 81.6 % 50-150 " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B212931	JMA	09/29/2022	09/29/2022	U
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Surrogate: 1,2-Dichloroethane-d4 114 % 70-130 " "

Surrogate: Toluene-d8 91.3 % 70-130 " "

Surrogate: 4-Bromofluorobenzene 91.1 % 70-130 " "

Table 915 metals by EPA 6020B

Arsenic	3.99	0.0854	mg/kg	10	B212927	CNG	09/29/2022	09/29/2022
Barium	114	8.54	"	"	"	CNG	"	"
Cadmium	0.433	0.0854	"	"	"	CNG	"	"
Copper	27.9	8.54	"	"	"	CNG	"	"
Lead	30.5	8.54	"	"	"	CNG	"	"
Silver	0.318	0.0854	"	"	"	CNG	"	"

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2926 - EPA 3580										
Blank (B2I2926-BLK1)					Prepared: 09/29/2022 Analyzed: 09/29/2022					
Diesel (C10-C28)	ND	12.5	mg/kg							U
Residual Range Organics (C28-C40)	ND	50.0	"							U
Surrogate: o-Terphenyl	22		"	24.9		87.2	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2926 - EPA 3580

LCS (B2I2926-BS1)

Prepared: 09/29/2022 Analyzed: 09/29/2022

Diesel (C10-C28)	955	25.0	mg/kg	1000		95.5	70-130			
Residual Range Organics (C28-C40)	847	100	"	1000		84.7	70-130			
Surrogate: o-Terphenyl	47		"	49.8		94.5	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2926 - EPA 3580

Matrix Spike (B2I2926-MS1)		Source: Y209712-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
Diesel (C10-C28)	893	25.0	mg/kg	1000	26.4	86.6	70-130			
Residual Range Organics (C28-C40)	864	100	"	1000	ND	86.4	70-130			
Surrogate: o-Terphenyl	41		"	49.8		82.8	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2926 - EPA 3580

Matrix Spike Dup (B2I2926-MSD1)		Source: Y209712-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
Diesel (C10-C28)	977	25.0	mg/kg	1000	26.4	95.1	70-130	9.03	35	
Residual Range Organics (C28-C40)	938	100	"	1000	ND	93.8	70-130	8.24	35	
Surrogate: o-Terphenyl	55		"	49.8		110	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2931 - EPA 5030 (soil)										
Blank (B2I2931-BLK1)					Prepared: 09/29/2022 Analyzed: 09/29/2022					
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		93.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		90.4	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2931 - EPA 5030 (soil)

LCS (B2I2931-BS1)

Prepared: 09/29/2022 Analyzed: 09/29/2022

1,2,4-Trimethylbenzene	0.0879	0.00200	mg/kg	0.100		87.9	70-130			
1,3,5-Trimethylbenzene	0.0902	0.00200	"	0.100		90.2	70-130			
Benzene	0.0948	0.00200	"	0.100		94.8	70-130			
Ethylbenzene	0.0906	0.00200	"	0.100		90.6	70-130			
Naphthalene	0.0910	0.00380	"	0.100		91.0	70-130			
Toluene	0.0913	0.00200	"	0.100		91.3	70-130			
o-Xylene	0.0877	0.00200	"	0.100		87.7	70-130			
m,p-Xylene	0.196	0.00400	"	0.200		97.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.5	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2931 - EPA 5030 (soil)

Matrix Spike (B2I2931-MS1)		Source: Y209712-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
1,2,4-Trimethylbenzene	0.0799	0.00200	mg/kg	0.100	ND	79.9	70-130			
1,3,5-Trimethylbenzene	0.0807	0.00200	"	0.100	ND	80.7	70-130			
Benzene	0.0894	0.00200	"	0.100	ND	89.4	70-130			
Ethylbenzene	0.0820	0.00200	"	0.100	ND	82.0	70-130			
Naphthalene	0.0790	0.00380	"	0.100	ND	79.0	70-130			
Toluene	0.0832	0.00200	"	0.100	ND	83.2	70-130			
o-Xylene	0.0814	0.00200	"	0.100	ND	81.4	70-130			
m,p-Xylene	0.178	0.00400	"	0.200	ND	88.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.9	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2I2931 - EPA 5030 (soil)

Matrix Spike Dup (B2I2931-MSD1)		Source: Y209712-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
1,2,4-Trimethylbenzene	0.0765	0.00200	mg/kg	0.100	ND	76.5	70-130	4.32	20	
1,3,5-Trimethylbenzene	0.0776	0.00200	"	0.100	ND	77.6	70-130	3.89	20	
Benzene	0.0871	0.00200	"	0.100	ND	87.1	70-130	2.52	20	
Ethylbenzene	0.0800	0.00200	"	0.100	ND	80.0	70-130	2.44	20	
Naphthalene	0.0791	0.00380	"	0.100	ND	79.1	70-130	0.101	20	
Toluene	0.0804	0.00200	"	0.100	ND	80.4	70-130	3.45	20	
o-Xylene	0.0791	0.00200	"	0.100	ND	79.1	70-130	2.94	20	
m,p-Xylene	0.173	0.00400	"	0.200	ND	86.3	70-130	2.89	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.5	70-130			

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.

Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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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***** DEFAULT GENERAL METHOD *** - 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 B2I2927 - Default Prep Metals

Blank (B2I2927-BLK1)

Prepared: 09/29/2022 Analyzed: 09/29/2022

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.0100	"							U
Nickel	ND	0.0100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

LCS (B2I2927-BS1)

Prepared: 09/29/2022 Analyzed: 09/29/2022

Arsenic	0.0481	0.000100	mg/kg	0.0500		96.3	80-120
Barium	5.06	0.0100	"	5.00		101	80-120
Cadmium	0.0501	0.000100	"	0.0500		100	80-120
Copper	0.515	0.0100	"	0.500		103	80-120
Lead	0.0499	0.0100	"	0.0500		99.8	80-120
Nickel	0.0480	0.0100	"	0.0500		96.0	80-120
Selenium	0.0475	0.000100	"	0.0500		95.0	80-120
Silver	0.0504	0.000100	"	0.0500		101	80-120
Zinc	0.495	0.100	"	0.500		98.9	80-120

Matrix Spike (B2I2927-MS1)

Source: Y209713-01

Prepared: 09/29/2022 Analyzed: 09/29/2022

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

*** DEFAULT GENERAL METHOD *** - 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 B2I2927 - Default Prep Metals

Matrix Spike (B2I2927-MS1)		Source: Y209713-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
Arsenic	7.85	0.0991	mg/kg	4.95	4.06	76.5	75-125			
Barium	491	9.91	"	495	44.9	90.1	75-125			
Cadmium	4.81	0.0991	"	4.95	0.362	89.8	75-125			
Copper	78.8	9.91	"	49.5	32.1	94.2	75-125			
Lead	38.9	9.91	"	4.95	36.2	55.9	75-125			QM-07
Nickel	6.71	9.91	"	4.95	2.52	84.6	75-125			U
Selenium	4.74	0.0991	"	4.95	0.0948	93.8	75-125			
Silver	5.00	0.0991	"	4.95	0.411	92.6	75-125			
Zinc	101	99.1	"	49.5	62.8	76.2	75-125			
Matrix Spike Dup (B2I2927-MSD1)		Source: Y209713-01			Prepared: 09/29/2022 Analyzed: 09/29/2022					
Arsenic	8.07	0.0954	mg/kg	4.77	4.06	84.0	75-125	2.72	20	
Barium	507	9.54	"	477	44.9	96.9	75-125	3.16	20	
Cadmium	5.00	0.0954	"	4.77	0.362	97.2	75-125	3.76	20	
Copper	76.6	9.54	"	47.7	32.1	93.3	75-125	2.76	20	
Lead	37.7	9.54	"	4.77	36.2	31.4	75-125	3.33	20	QM-07
Nickel	6.80	9.54	"	4.77	2.52	89.8	75-125	1.33	20	U
Selenium	4.70	0.0954	"	4.77	0.0948	96.5	75-125	0.949	20	
Silver	5.14	0.0954	"	4.77	0.411	99.1	75-125	2.77	20	
Zinc	100	95.4	"	47.7	62.8	78.1	75-125	0.467	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.

Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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.



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.

Jen Pellegrini, Project Manager

November 02, 2022

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - Gunzner 19-13 WH
(Re-entry)****Project Number - 09A1417031**

Attached are your analytical results for KMG - Gunzner 19-13 WH (Re-entry) received by Origins Laboratory, Inc. October 27, 2022. This project is associated with Origins project number Y210700-01.

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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N02@4'	Y210700-01	Soil	October 27, 2022 11:55	10/27/2022 17:30
E02@4'	Y210700-02	Soil	October 27, 2022 12:01	10/27/2022 17:30
S02@4'	Y210700-03	Soil	October 27, 2022 12:09	10/27/2022 17:30
W02@4'	Y210700-04	Soil	October 27, 2022 12:17	10/27/2022 17:30
B03@7.5'	Y210700-05	Soil	October 27, 2022 12:28	10/27/2022 17:30
NATIVE-BG04@1'	Y210700-06	Soil	October 27, 2022 12:35	10/27/2022 17:30
NATIVE-BG05@1'	Y210700-07	Soil	October 27, 2022 12:39	10/27/2022 17:30
NATIVE-BG06@1'	Y210700-08	Soil	October 27, 2022 12:44	10/27/2022 17:30
NATIVE-BG07@1'	Y210700-09	Soil	October 27, 2022 12:48	10/27/2022 17:30

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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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

ORIGINS

LABORATORY, INC

INITIAL ☐ IMPACTED ☒

www.originslaboratory.com

Client: Ensolum LLC

Address: _____

Telephone Number: _____

Email Address: KMG Team

Project Manager: Jeremy Espinoza

Project Name: Gunzner 19-13 WH (Re-entry)

Project Number: 09A1417031

Samples Collected By: JH

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Full Table 915-1	BTEXN	1,2,4/1,3,5-TMB	PH (40-100000)	EXPRESS/AR/BOOK (SP)	Arsenic	Barium	Cadmium	Lead	Copper	Silver	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other												
N0204	10-27-12	1155	3	X									X	X	X	X	X		6W Protection
E0204		1201																	
S0204		1209																	
W0204		1217																	
B03075		1228																	
NATIVE-B040401		1235																	
NATIVE-B040501		1239																	
NATIVE-B040601		1244																	
NATIVE-B040701		1248																	
Relinquished By: [Signature]	Date: 10-27-12	Time: 1130	Received By: [Signature]	Date: 10/27/12	Time: 1730	Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard													

37 Date Results Needed

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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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

Sample Receipt Checklist

Origins Work Order: 9250700 Client: Ensolum
Client Project ID: Gunzner 19-13 WH (re-entry)

Checklist Completed by: CHS/DE Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 10/27/12 Airbill #: NA

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

Cooler Number/Temperature: 1137 °C 1 °C 1 °C 1 °C

Thermometer ID: PB04

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaHSO ₂ -NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 10/27/2012

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: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

N02@4'

10/27/2022 11:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y210700-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2734	ADM	10/27/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 87.4 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2J2735	JSM	10/27/2022	10/28/2022	U
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Surrogate: 1,2-Dichloroethane-d4 84.4 % 70-130 " " "

Surrogate: Toluene-d8 99.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	2.08	0.0979	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	31.0	9.79	"	"	"	CIH	"	"
Cadmium	0.214	0.0979	"	"	"	CIH	"	"
Copper	24.4	9.79	"	"	"	CIH	"	"
Lead	19.8	9.79	"	"	"	CIH	"	"
Silver	0.159	0.0979	"	"	"	CIH	"	"

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: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

E02@4'

10/27/2022 12:01:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y210700-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2734	ADM	10/27/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 95.3 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2J2735	JSM	10/27/2022	10/28/2022	U
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Surrogate: 1,2-Dichloroethane-d4 84.4 % 70-130 " " "

Surrogate: Toluene-d8 101 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 99.2 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	0.532	0.0924	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	10.7	9.24	"	"	"	CIH	"	"
Cadmium	ND	0.0924	"	"	"	CIH	"	"
Copper	ND	9.24	"	"	"	CIH	"	"
Lead	ND	9.24	"	"	"	CIH	"	"
Silver	ND	0.0924	"	"	"	CIH	"	"

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: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

S02@4'

10/27/2022 12:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y210700-03 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2734	ADM	10/27/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 88.4 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2J2735	JSM	10/27/2022	10/28/2022	U
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Surrogate: 1,2-Dichloroethane-d4 83.4 % 70-130 " " "

Surrogate: Toluene-d8 100 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 99.8 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	1.97	0.0962	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	16.8	9.62	"	"	"	CIH	"	"
Cadmium	ND	0.0962	"	"	"	CIH	"	"
Copper	11.3	9.62	"	"	"	CIH	"	"
Lead	14.1	9.62	"	"	"	CIH	"	"
Silver	ND	0.0962	"	"	"	CIH	"	"

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: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

W02@4'

10/27/2022 12:17:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y210700-04 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2734	ADM	10/27/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 86.1 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2J2735	JSM	10/27/2022	10/28/2022	U
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Surrogate: 1,2-Dichloroethane-d4 87.2 % 70-130 " " "

Surrogate: Toluene-d8 99.6 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 99.2 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	11.4	0.0957	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	132	9.57	"	"	"	CIH	"	"
Cadmium	1.29	0.0957	"	"	"	CIH	"	"
Copper	96.1	9.57	"	"	"	CIH	"	"
Lead	111	9.57	"	"	"	CIH	"	"
Silver	1.53	0.0957	"	"	"	CIH	"	"

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: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

B03@7.5'

10/27/2022 12:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y210700-05 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2734	ADM	10/27/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 91.6 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2J2735	JSM	10/27/2022	10/28/2022	U
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Surrogate: 1,2-Dichloroethane-d4 86.0 % 70-130 " " "

Surrogate: Toluene-d8 100 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 97.7 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	0.487	0.0937	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	10.5	9.37	"	"	"	CIH	"	"
Cadmium	ND	0.0937	"	"	"	CIH	"	"
Copper	ND	9.37	"	"	"	CIH	"	"
Lead	ND	9.37	"	"	"	CIH	"	"
Silver	ND	0.0937	"	"	"	CIH	"	"

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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

NATIVE-BG04@1'

10/27/2022 12:35:00PM

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

Y210700-06 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.61	0.0950	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	15.1	9.50	"	"	"	CIH	"	"
Cadmium	ND	0.0950	"	"	"	CIH	"	"
Copper	24.4	9.50	"	"	"	CIH	"	"
Lead	25.0	9.50	"	"	"	CIH	"	"
Silver	0.142	0.0950	"	"	"	CIH	"	"

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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

NATIVE-BG05@1'

10/27/2022 12:39:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit								

Origins Laboratory, Inc.
Y210700-07 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.27	0.0985	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	36.3	9.85	"	"	"	CIH	"	"
Cadmium	0.277	0.0985	"	"	"	CIH	"	"
Copper	33.5	9.85	"	"	"	CIH	"	"
Lead	31.9	9.85	"	"	"	CIH	"	"
Silver	0.283	0.0985	"	"	"	CIH	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

NATIVE-BG06@1'

10/27/2022 12:44:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit								

Origins Laboratory, Inc.
Y210700-08 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.56	0.0978	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	17.3	9.78	"	"	"	CIH	"	"
Cadmium	0.188	0.0978	"	"	"	CIH	"	"
Copper	29.5	9.78	"	"	"	CIH	"	"
Lead	24.3	9.78	"	"	"	CIH	"	"
Silver	0.104	0.0978	"	"	"	CIH	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

NATIVE-BG07@1'

10/27/2022 12:48:00PM

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

Y210700-09 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.39	0.0991	mg/kg	10	B2J2736	CIH	10/27/2022	10/31/2022
Barium	12.2	9.91	"	"	"	CIH	"	"
Cadmium	0.130	0.0991	"	"	"	CIH	"	"
Copper	13.6	9.91	"	"	"	CIH	"	"
Lead	11.3	9.91	"	"	"	CIH	"	"
Silver	ND	0.0991	"	"	"	CIH	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2734 - EPA 3550B										
Blank (B2J2734-BLK1)					Prepared: 10/27/2022 Analyzed: 10/27/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	25		"	24.9		98.9	50-150			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2734 - EPA 3550B

LCS (B2J2734-BS1)

Prepared: 10/27/2022 Analyzed: 10/27/2022

Diesel (C10-C28)	975	50.0	mg/kg	1000		97.5	70-130			
Residual Range Organics (C28-C40)	785	200	"	1000		78.5	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.9	50-150			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2734 - EPA 3550B

Matrix Spike (B2J2734-MS1)		Source: Y210673-01			Prepared: 10/27/2022 Analyzed: 10/27/2022					
Diesel (C10-C28)	1060	50.0	mg/kg	1000	ND	106	70-130			
Residual Range Organics (C28-C40)	836	200	"	1000	ND	83.6	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.2	50-150			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2734 - EPA 3550B

Matrix Spike Dup (B2J2734-MSD1)		Source: Y210673-01			Prepared: 10/27/2022 Analyzed: 10/27/2022					
Diesel (C10-C28)	984	50.0	mg/kg	1000	ND	98.4	70-130	7.31	35	
Residual Range Organics (C28-C40)	819	200	"	1000	ND	81.9	70-130	2.09	35	
Surrogate: o-Terphenyl	43		"	49.8		85.8	50-150			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2735 - EPA 5030 (soil)										
Blank (B2J2735-BLK1)					Prepared: 10/27/2022 Analyzed: 10/27/2022					
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		84.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.6	70-130			

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2735 - EPA 5030 (soil)

LCS (B2J2735-BS1)

Prepared: 10/27/2022 Analyzed: 10/27/2022

1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100		105	70-130			
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Benzene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.105	0.00200	"	0.100		105	70-130			
Naphthalene	0.0975	0.00380	"	0.100		97.5	70-130			
Toluene	0.106	0.00200	"	0.100		106	70-130			
o-Xylene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.210	0.00400	"	0.200		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.10		"	0.125		82.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.4	70-130			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2735 - EPA 5030 (soil)

Matrix Spike (B2J2735-MS1)		Source: Y210700-01			Prepared: 10/27/2022 Analyzed: 10/28/2022					
1,2,4-Trimethylbenzene	0.0849	0.00200	mg/kg	0.100	ND	84.9	70-130			
1,3,5-Trimethylbenzene	0.0861	0.00200	"	0.100	ND	86.1	70-130			
Benzene	0.0893	0.00200	"	0.100	ND	89.3	70-130			
Ethylbenzene	0.0897	0.00200	"	0.100	ND	89.7	70-130			
Naphthalene	0.0681	0.00380	"	0.100	ND	68.1	70-130			QM-07
Toluene	0.0897	0.00200	"	0.100	ND	89.7	70-130			
o-Xylene	0.0895	0.00200	"	0.100	ND	89.5	70-130			
m,p-Xylene	0.179	0.00400	"	0.200	ND	89.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.10		"	0.125		83.6	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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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 B2J2735 - EPA 5030 (soil)

Matrix Spike Dup (B2J2735-MSD1)		Source: Y210700-01			Prepared: 10/27/2022 Analyzed: 10/28/2022					
1,2,4-Trimethylbenzene	0.0770	0.00200	mg/kg	0.100	ND	77.0	70-130	9.79	20	
1,3,5-Trimethylbenzene	0.0772	0.00200	"	0.100	ND	77.2	70-130	10.8	20	
Benzene	0.0866	0.00200	"	0.100	ND	86.6	70-130	3.09	20	
Ethylbenzene	0.0842	0.00200	"	0.100	ND	84.2	70-130	6.37	20	
Naphthalene	0.0656	0.00380	"	0.100	ND	65.6	70-130	3.68	20	QM-07
Toluene	0.0861	0.00200	"	0.100	ND	86.1	70-130	4.07	20	
o-Xylene	0.0845	0.00200	"	0.100	ND	84.5	70-130	5.75	20	
m,p-Xylene	0.168	0.00400	"	0.200	ND	84.0	70-130	6.35	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		84.3	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: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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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***** DEFAULT GENERAL METHOD *** - 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 B2J2736 - Default Prep Metals

Blank (B2J2736-BLK1)

Prepared: 10/27/2022 Analyzed: 10/31/2022

Arsenic	ND	0.000100	mg/kg
Barium	ND	0.0100	"
Cadmium	ND	0.000100	"
Copper	ND	0.0100	"
Lead	ND	0.0100	"
Nickel	ND	0.0100	"
Selenium	ND	0.000100	"
Silver	ND	0.000100	"
Zinc	ND	0.100	"

LCS (B2J2736-BS1)

Prepared: 10/27/2022 Analyzed: 10/31/2022

Arsenic	0.0527	0.000100	mg/kg	0.0500	105	80-120
Barium	0.0515	0.0100	"	0.0500	103	80-120
Cadmium	0.0531	0.000100	"	0.0500	106	80-120
Copper	0.0555	0.0100	"	0.0500	111	80-120
Lead	0.0534	0.0100	"	0.0500	107	80-120
Nickel	0.0539	0.0100	"	0.0500	108	80-120
Selenium	0.0479	0.000100	"	0.0500	95.9	80-120
Silver	0.0553	0.000100	"	0.0500	111	80-120
Zinc	0.0521	0.100	"	0.0500	104	80-120

Matrix Spike (B2J2736-MS1)

Source: Y210670-01

Prepared: 10/27/2022 Analyzed: 10/31/2022

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417031
Project: KMG - Gunzner 19-13 WH (Re-entry)

*** DEFAULT GENERAL METHOD *** - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2J2736 - Default Prep Metals										
Matrix Spike (B2J2736-MS1)		Source: Y210670-01			Prepared: 10/27/2022 Analyzed: 10/31/2022					
Arsenic	7.55	0.0975	mg/kg	4.88	4.70	58.5	75-125			QM-07
Barium	79.4	9.75	"	4.88	111	NR	75-125			QM-07
Cadmium	5.22	0.0975	"	4.88	0.354	99.8	75-125			
Copper	16.8	9.75	"	4.88	15.6	25.3	75-125			QM-07
Lead	23.1	9.75	"	4.88	20.6	51.6	75-125			QM-07
Nickel	10.3	9.75	"	4.88	7.03	67.1	75-125			QM-07
Selenium	4.74	0.0975	"	4.88	0.420	88.7	75-125			
Silver	5.27	0.0975	"	4.88	0.227	103	75-125			
Zinc	69.9	97.5	"	4.88	76.4	NR	75-125			QM-07
Matrix Spike Dup (B2J2736-MSD1)		Source: Y210670-01			Prepared: 10/27/2022 Analyzed: 10/31/2022					
Arsenic	7.13	0.0989	mg/kg	4.94	4.70	49.3	75-125	5.67	20	QM-07
Barium	111	9.89	"	4.94	111	NR	75-125	32.8	20	QM-07, QR-DUP
Cadmium	5.28	0.0989	"	4.94	0.354	99.6	75-125	1.11	20	
Copper	18.5	9.89	"	4.94	15.6	59.8	75-125	9.74	20	QM-07
Lead	23.6	9.89	"	4.94	20.6	60.5	75-125	2.04	20	QM-07
Nickel	11.9	9.89	"	4.94	7.03	97.5	75-125	14.0	20	
Selenium	5.04	0.0989	"	4.94	0.420	93.5	75-125	6.13	20	
Silver	5.19	0.0989	"	4.94	0.227	100	75-125	1.50	20	
Zinc	74.3	98.9	"	4.94	76.4	NR	75-125	6.18	20	QM-07

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417031

Project: KMG - Gunzner 19-13 WH (Re-entry)

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.

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.

November 21, 2022

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Gunzner 19-13 wellhead**Project Number - 09A1417161**

Attached are your analytical results for KMG - Gunzner 19-13 wellhead received by Origins Laboratory, Inc. November 17, 2022. This project is associated with Origins project number Y211460-01.

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: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W03@4'	Y211460-01	Soil	November 17, 2022 12:10	11/17/2022 15:40
CS01@0.5'	Y211460-02	Soil	November 17, 2022 14:00	11/17/2022 15:40

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.

Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4211460

Client: Ensolum

Client Project ID: Gunzner 19-13WH

Checklist Completed by: JSH / DE

Shipped Via: H10
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11/19/22

Airbill #: W14

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

Cooler Number/Temperature: 1134 °C °C °C (Describe) °C

Thermometer ID: TS04

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) J. Pellegrini Date/Time Reviewed 11/17/2022

Origins Laboratory, Inc.

Jefe Pellegrini

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: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

W03@4'

11/17/2022 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y211460-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2K1732	ADM	11/17/2022	11/19/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 92.7 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2K1731	ZZZ	11/17/2022	11/18/2022	U
-----------------------------	----	-------	-------	---	---------	-----	------------	------------	---

Surrogate: 1,2-Dichloroethane-d4 94.4 % 70-130 " " "

Surrogate: Toluene-d8 98.1 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 92.8 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	0.584	0.0960	mg/kg	10	B2K1730	CIH	11/17/2022	11/18/2022	
Barium	13.1	9.60	"	"	"	CIH	"	"	
Cadmium	ND	0.0960	"	"	"	CIH	"	"	
Copper	ND	9.60	"	"	"	CIH	"	"	
Lead	ND	9.60	"	"	"	CIH	"	"	
Silver	ND	0.0960	"	"	"	CIH	"	"	

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

CS01@0.5'

11/17/2022 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y211460-02 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2K1732	ADM	11/17/2022	11/19/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 82.2 % 50-150 " " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2K1731	ZZZ	11/17/2022	11/18/2022	U
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Surrogate: 1,2-Dichloroethane-d4 98.6 % 70-130 " " "

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

Surrogate: 4-Bromofluorobenzene 92.7 % 70-130 " " "

Table 915 metals by EPA 6020B

Arsenic	9.24	0.0963	mg/kg	10	B2K1730	CIH	11/17/2022	11/18/2022
Barium	123	9.63	"	"	"	CIH	"	"
Cadmium	1.20	0.0963	"	"	"	CIH	"	"
Copper	64.1	9.63	"	"	"	CIH	"	"
Lead	97.8	9.63	"	"	"	CIH	"	"
Silver	0.997	0.0963	"	"	"	CIH	"	"

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1731 - EPA 5030 (soil)										
Blank (B2K1731-BLK1)					Prepared: 11/17/2022 Analyzed: 11/17/2022					
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		97.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		92.0	70-130			

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.

Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1731 - EPA 5030 (soil)

LCS (B2K1731-BS1)

Prepared: 11/17/2022 Analyzed: 11/17/2022

1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100		114	70-130			
Benzene	0.112	0.00200	"	0.100		112	70-130			
Ethylbenzene	0.111	0.00200	"	0.100		111	70-130			
Naphthalene	0.0975	0.00380	"	0.100		97.5	70-130			
Toluene	0.112	0.00200	"	0.100		112	70-130			
o-Xylene	0.107	0.00200	"	0.100		107	70-130			
m,p-Xylene	0.227	0.00400	"	0.200		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		88.3	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1731 - EPA 5030 (soil)

Matrix Spike (B2K1731-MS1)		Source: Y211456-01			Prepared: 11/17/2022 Analyzed: 11/17/2022					
1,2,4-Trimethylbenzene	0.111	0.00200	mg/kg	0.100	ND	111	70-130			
1,3,5-Trimethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130			
Benzene	0.108	0.00200	"	0.100	ND	108	70-130			
Ethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130			
Naphthalene	0.0994	0.00380	"	0.100	ND	99.4	70-130			
Toluene	0.108	0.00200	"	0.100	ND	108	70-130			
o-Xylene	0.103	0.00200	"	0.100	ND	103	70-130			
m,p-Xylene	0.215	0.00400	"	0.200	0.00172	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		88.7	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1731 - EPA 5030 (soil)

Matrix Spike Dup (B2K1731-MSD1)		Source: Y211456-01			Prepared: 11/17/2022 Analyzed: 11/17/2022					
1,2,4-Trimethylbenzene	0.110	0.00200	mg/kg	0.100	ND	110	70-130	0.560	20	
1,3,5-Trimethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130	0.900	20	
Benzene	0.109	0.00200	"	0.100	ND	109	70-130	0.406	20	
Ethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130	0.302	20	
Naphthalene	0.101	0.00380	"	0.100	ND	101	70-130	1.46	20	
Toluene	0.107	0.00200	"	0.100	ND	107	70-130	1.26	20	
o-Xylene	0.103	0.00200	"	0.100	ND	103	70-130	0.0583	20	
m,p-Xylene	0.214	0.00400	"	0.200	0.00172	106	70-130	0.280	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		88.6	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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1732 - EPA 3580

Blank (B2K1732-BLK1)

Prepared: 11/17/2022 Analyzed: 11/18/2022

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	27		"	24.9		110	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1732 - EPA 3580

LCS (B2K1732-BS1)

Prepared: 11/17/2022 Analyzed: 11/18/2022

Diesel (C10-C28)	881	50.0	mg/kg	1000		88.1	70-130			
Residual Range Organics (C28-C40)	886	200	"	1000		88.6	70-130			
Surrogate: o-Terphenyl	43		"	49.8		85.6	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1732 - EPA 3580

Matrix Spike (B2K1732-MS1)		Source: Y211456-01			Prepared: 11/17/2022 Analyzed: 11/18/2022					
Diesel (C10-C28)	859	50.0	mg/kg	1000	ND	85.9	70-130			
Residual Range Organics (C28-C40)	881	200	"	1000	ND	88.1	70-130			
Surrogate: o-Terphenyl	50		"	49.8		101	50-150			

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: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1732 - EPA 3580

Matrix Spike Dup (B2K1732-MSD1)		Source: Y211456-01			Prepared: 11/17/2022 Analyzed: 11/18/2022					
Diesel (C10-C28)	927	50.0	mg/kg	1000	ND	92.7	70-130	7.54	35	
Residual Range Organics (C28-C40)	894	200	"	1000	ND	89.4	70-130	1.46	35	
Surrogate: o-Terphenyl	40		"	49.8		81.2	50-150			

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Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K1730 - EPA 3050B

Blank (B2K1730-BLK1)

Prepared: 11/17/2022 Analyzed: 11/18/2022

Arsenic	ND	0.000100	mg/kg
Barium	ND	0.0100	"
Cadmium	ND	0.000100	"
Copper	ND	0.0100	"
Lead	ND	0.0100	"
Silver	ND	0.000100	"

LCS (B2K1730-BS1)

Prepared: 11/17/2022 Analyzed: 11/18/2022

Arsenic	0.0548	0.000100	mg/kg	0.0500	110	80-120
Barium	5.62	0.0100	"	5.00	112	80-120
Cadmium	0.0586	0.000100	"	0.0500	117	80-120
Copper	0.576	0.0100	"	0.500	115	80-120
Lead	0.0592	0.0100	"	0.0500	118	80-120
Silver	0.0583	0.000100	"	0.0500	117	80-120

Matrix Spike (B2K1730-MS1)

Source: Y211458-03

Prepared: 11/17/2022 Analyzed: 11/18/2022

Arsenic	7.19	0.0996	mg/kg	4.98	2.50	94.2	75-125
Barium	596	9.96	"	498	105	98.6	75-125
Cadmium	5.31	0.0996	"	4.98	0.150	104	75-125
Copper	50.8	9.96	"	49.8	4.36	93.3	75-125
Lead	12.2	9.96	"	4.98	6.22	119	75-125
Silver	5.04	0.0996	"	4.98	ND	101	75-125

Origins Laboratory, Inc.



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

Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2K1730 - EPA 3050B

Matrix Spike Dup (B2K1730-MSD1)		Source: Y211458-03			Prepared: 11/17/2022 Analyzed: 11/18/2022					
Arsenic	6.83	0.0946	mg/kg	4.73	2.50	91.7	75-125	5.03	20	
Barium	595	9.46	"	473	105	104	75-125	0.114	20	
Cadmium	5.33	0.0946	"	4.73	0.150	110	75-125	0.497	20	
Copper	50.4	9.46	"	47.3	4.36	97.3	75-125	0.733	20	
Lead	11.5	9.46	"	4.73	6.22	112	75-125	5.27	20	
Silver	5.06	0.0946	"	4.73	ND	107	75-125	0.294	20	

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: 09A1417161

Project: KMG - Gunzner 19-13 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 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.

Jen Pellegrini, Project Manager



December 05, 2022

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Gunzner 19-13 wellhead

Project Number - 09A1417161

Attached are your analytical results for KMG - Gunzner 19-13 wellhead received by Origins Laboratory, Inc. November 30, 2022. This project is associated with Origins project number Y211632-01.

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: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS01@1'	Y211632-01	Soil	November 30, 2022 13:40	11/30/2022 14:58

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: 09A1417161

Project: KMG - Gunzner 19-13 wellhead

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 4211637

Client: Ensolum

Client Project ID: Gunzner 19-13 WA

Checklist Completed by: EHS/DE

Shipped Via: HD

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

Date/time completed: 11/30/22

Airbill #: NA

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

Water: Other:

Cooler Number/Temperature: 1 M.O.C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<u>X</u>			
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<u>X</u>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<u>X</u>	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

11/30/2022
Date/Time Reviewed

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: 09A1417161
Project: KMG - Gunzner 19-13 wellhead

CS01@1'

11/30/2022 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y211632-01 (Soil)

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2K3016	ADM	11/30/2022	11/30/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: o-Terphenyl 95.7 % 50-150 " "

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B2K3019	HKS	11/30/2022	11/30/2022	U
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Surrogate: 1,2-Dichloroethane-d4 123 % 70-130 " "

Surrogate: Toluene-d8 93.6 % 70-130 " "

Surrogate: 4-Bromofluorobenzene 100 % 70-130 " "

Table 915 metals by EPA 6020B

Arsenic	3.23	0.0980	mg/kg	10	B2L0101	CNG	12/01/2022	12/01/2022
Barium	29.1	9.80	"	"	"	CNG	"	"
Cadmium	0.211	0.0980	"	"	"	CNG	"	"
Copper	29.1	9.80	"	"	"	CNG	"	"
Lead	29.0	9.80	"	"	"	CNG	"	"
Silver	0.201	0.0980	"	"	"	CNG	"	"

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Ensolum

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K3016 - EPA 3580

Blank (B2K3016-BLK1)

Prepared: 11/30/2022 Analyzed: 11/30/2022

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			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K3016 - EPA 3580

LCS (B2K3016-BS1)

Prepared: 11/30/2022 Analyzed: 11/30/2022

Diesel (C10-C28)	1090	50.0	mg/kg	1000		109	70-130			
Residual Range Organics (C28-C40)	984	200	"	1000		98.4	70-130			
Surrogate: o-Terphenyl	52		"	49.8		105	50-150			

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Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K3016 - EPA 3580

Matrix Spike (B2K3016-MS1)		Source: Y211595-01			Prepared: 11/30/2022 Analyzed: 11/30/2022					
Diesel (C10-C28)	1140	50.0	mg/kg	1000	ND	114	70-130			
Residual Range Organics (C28-C40)	1030	200	"	1000	ND	103	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 B2K3016 - EPA 3580

Matrix Spike Dup (B2K3016-MSD1)		Source: Y211595-01			Prepared: 11/30/2022 Analyzed: 11/30/2022					
Diesel (C10-C28)	987	50.0	mg/kg	1000	ND	98.7	70-130	14.3	35	
Residual Range Organics (C28-C40)	919	200	"	1000	ND	91.9	70-130	11.1	35	
Surrogate: o-Terphenyl	45		"	49.8		89.4	50-150			

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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2K3019 - EPA 5030 (soil)										
Blank (B2K3019-BLK1)					Prepared: 11/30/2022 Analyzed: 11/30/2022					
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	0.14		"	0.125		113	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K3019 - EPA 5030 (soil)

LCS (B2K3019-BS1)

Prepared: 11/30/2022 Analyzed: 11/30/2022

1,2,4-Trimethylbenzene	0.0836	0.00200	mg/kg	0.100		83.6	70-130			
1,3,5-Trimethylbenzene	0.0822	0.00200	"	0.100		82.2	70-130			
Benzene	0.0884	0.00200	"	0.100		88.4	70-130			
Ethylbenzene	0.0812	0.00200	"	0.100		81.2	70-130			
Naphthalene	0.0926	0.00380	"	0.100		92.6	70-130			
Toluene	0.0844	0.00200	"	0.100		84.4	70-130			
o-Xylene	0.0824	0.00200	"	0.100		82.4	70-130			
m,p-Xylene	0.161	0.00400	"	0.200		80.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		109	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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Jeremy Espinoza

Project Number: 09A1417161

Project: KMG - Gunzner 19-13 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 B2K3019 - EPA 5030 (soil)

Matrix Spike (B2K3019-MS1)		Source: Y211632-01			Prepared: 11/30/2022 Analyzed: 11/30/2022					
1,2,4-Trimethylbenzene	0.0732	0.00200	mg/kg	0.100	ND	73.2	70-130			
1,3,5-Trimethylbenzene	0.0723	0.00200	"	0.100	ND	72.3	70-130			
Benzene	0.0798	0.00200	"	0.100	ND	79.8	70-130			
Ethylbenzene	0.0711	0.00200	"	0.100	ND	71.1	70-130			
Naphthalene	0.0809	0.00380	"	0.100	ND	80.9	70-130			
Toluene	0.0754	0.00200	"	0.100	ND	75.4	70-130			
o-Xylene	0.0724	0.00200	"	0.100	ND	72.4	70-130			
m,p-Xylene	0.140	0.00400	"	0.200	ND	70.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		111	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

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Jeremy Espinoza
Project Number: 09A1417161
Project: KMG - Gunzner 19-13 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 B2K3019 - EPA 5030 (soil)										
Matrix Spike Dup (B2K3019-MSD1)		Source: Y211632-01			Prepared: 11/30/2022 Analyzed: 11/30/2022					
1,2,4-Trimethylbenzene	0.0803	0.00200	mg/kg	0.100	ND	80.3	70-130	9.30	20	
1,3,5-Trimethylbenzene	0.0792	0.00200	"	0.100	ND	79.2	70-130	9.11	20	
Benzene	0.0901	0.00200	"	0.100	ND	90.1	70-130	12.2	20	
Ethylbenzene	0.0807	0.00200	"	0.100	ND	80.7	70-130	12.6	20	
Naphthalene	0.0890	0.00380	"	0.100	ND	89.0	70-130	9.56	20	
Toluene	0.0844	0.00200	"	0.100	ND	84.4	70-130	11.4	20	
o-Xylene	0.0823	0.00200	"	0.100	ND	82.3	70-130	12.8	20	
m,p-Xylene	0.159	0.00400	"	0.200	ND	79.5	70-130	12.6	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	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 B2L0101 - EPA 3050B

Blank (B2L0101-BLK1)

Prepared: 12/01/2022 Analyzed: 12/01/2022

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.0100	"							U
Silver	ND	0.000100	"							U

LCS (B2L0101-BS1)

Prepared: 12/01/2022 Analyzed: 12/01/2022

Arsenic	0.0493	0.000100	mg/kg	0.0500		98.6	80-120			
Barium	4.90	0.0100	"	5.00		98.0	80-120			
Cadmium	0.0507	0.000100	"	0.0500		101	80-120			
Copper	0.525	0.0100	"	0.500		105	80-120			
Lead	0.0504	0.0100	"	0.0500		101	80-120			
Silver	0.0524	0.000100	"	0.0500		105	80-120			

Matrix Spike (B2L0101-MS1)

Source: Y211629-01

Prepared: 12/01/2022 Analyzed: 12/01/2022

Arsenic	8.59	0.0907	mg/kg	4.54	2.93	125	75-125			
Barium	582	9.07	"	454	52.4	117	75-125			
Cadmium	5.54	0.0907	"	4.54	0.193	118	75-125			
Copper	60.0	9.07	"	45.4	5.87	119	75-125			
Lead	12.9	9.07	"	4.54	7.07	130	75-125			QM-07
Silver	5.51	0.0907	"	4.54	0.0337	121	75-125			

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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 B2L0101 - EPA 3050B

Matrix Spike Dup (B2L0101-MSD1)		Source: Y211629-01			Prepared: 12/01/2022 Analyzed: 12/01/2022					
Arsenic	7.67	0.0954	mg/kg	4.77	2.93	99.4	75-125	11.3	20	
Barium	525	9.54	"	477	52.4	99.2	75-125	10.2	20	
Cadmium	4.98	0.0954	"	4.77	0.193	100	75-125	10.7	20	
Copper	54.0	9.54	"	47.7	5.87	101	75-125	10.5	20	
Lead	12.7	9.54	"	4.77	7.07	117	75-125	2.19	20	
Silver	5.03	0.0954	"	4.77	0.0337	105	75-125	9.13	20	

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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.

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