

March 10, 2022

EWS 13

Groundwater Monitoring Report

Q1 2022

Prepared for:



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 - Site Location Map
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- Table 1 – Groundwater Elevation and Analytical Data
- Attachment A – Laboratory Report and Chain of Custody

1.0 Introduction

This report documents monitoring activities performed by CGRS, Inc. (CGRS) at the Expedition Water Solutions (EWS) EWS 13 Class II disposal facility. The facility is located at 23360 County Road 54, Greeley, Weld County, Colorado, as depicted in the Site Location Map.

1.1 Facility Overview

The facility was constructed in 2009 and provides services for the oil and gas industry. Operations include the collection, storage, treatment, and injection of produced water into an injection well for disposal. The facility design consists of an office, pump house, concrete unloading pad, concrete vault, one Class II injection well, and a concrete secondary containment that houses 9 aboveground storage tanks (ASTs) for the treatment of produced water and storage of recovered oil.

1.2 Scope of Work

Quarterly groundwater monitoring was performed on January 27, 2022. Monitoring activities consisted of collecting groundwater level measurements, measuring in-situ water quality parameters, and collecting water quality samples for laboratory analysis.

2.0 Groundwater Monitoring

2.1 Activities

On January 27, 2022, CGRS conducted groundwater monitoring at the EWS 13 facility. Depth to water was measured in monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7. Depth to water measurements were used to calculate groundwater elevation and well-specific purge volumes. Water quality samples were obtained from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7, and in-situ field parameters consisting of temperature, specific conductance, dissolved oxygen, pH, and oxidation-reduction potential (ORP) were measured and documented after sampling each monitoring well.

Samples were submitted to Origins Laboratory in Denver, Colorado under chain-of-custody protocol for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total dissolved solids (TDS), chloride, and sulfate. Laboratory analytical results and chain-of-custody documentation are included in Attachment A, summarized with historical data in Table 1, and depicted in the Groundwater Sample Location Map.

2.2 Results

Depth to groundwater varied between 5.57 feet below top of casing (TOC) in monitoring well MW-7 to 9.62 feet below TOC in monitoring well MW-3. To determine relative groundwater elevation, depth to groundwater was subtracted from surveyed reference elevations, as shown in Table 1. The inferred groundwater flow direction is to the north-northeast at a calculated hydraulic gradient of 0.002 ft/ft, as measured between monitoring wells MW-7 and MW-2. Inferred water table elevation contours are illustrated in the Groundwater Elevation Map.

A review of groundwater analytical data indicates that all BTEX analytes from the groundwater quality samples submitted for analysis were reported to be below the laboratory reporting limit and Colorado Oil and Gas

Conservation Commission (COGCC) maximum contaminant level (MCL). Inorganic analyte concentrations reported for each monitoring well represent normal background water quality conditions historically observed at this facility.

3.0 Conclusion

CGRS will continue the quarterly monitoring program, which will consist of obtaining groundwater level measurements and in-situ field parameters and collecting water quality samples from groundwater monitoring wells. The next quarterly monitoring event is scheduled for April 2022. If you have any questions regarding this report or the project itself, please contact Ms. Drezden Kinnaird at dkinnaird@cgrs.com.

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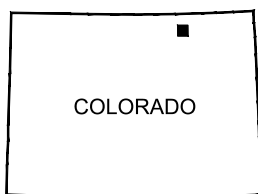
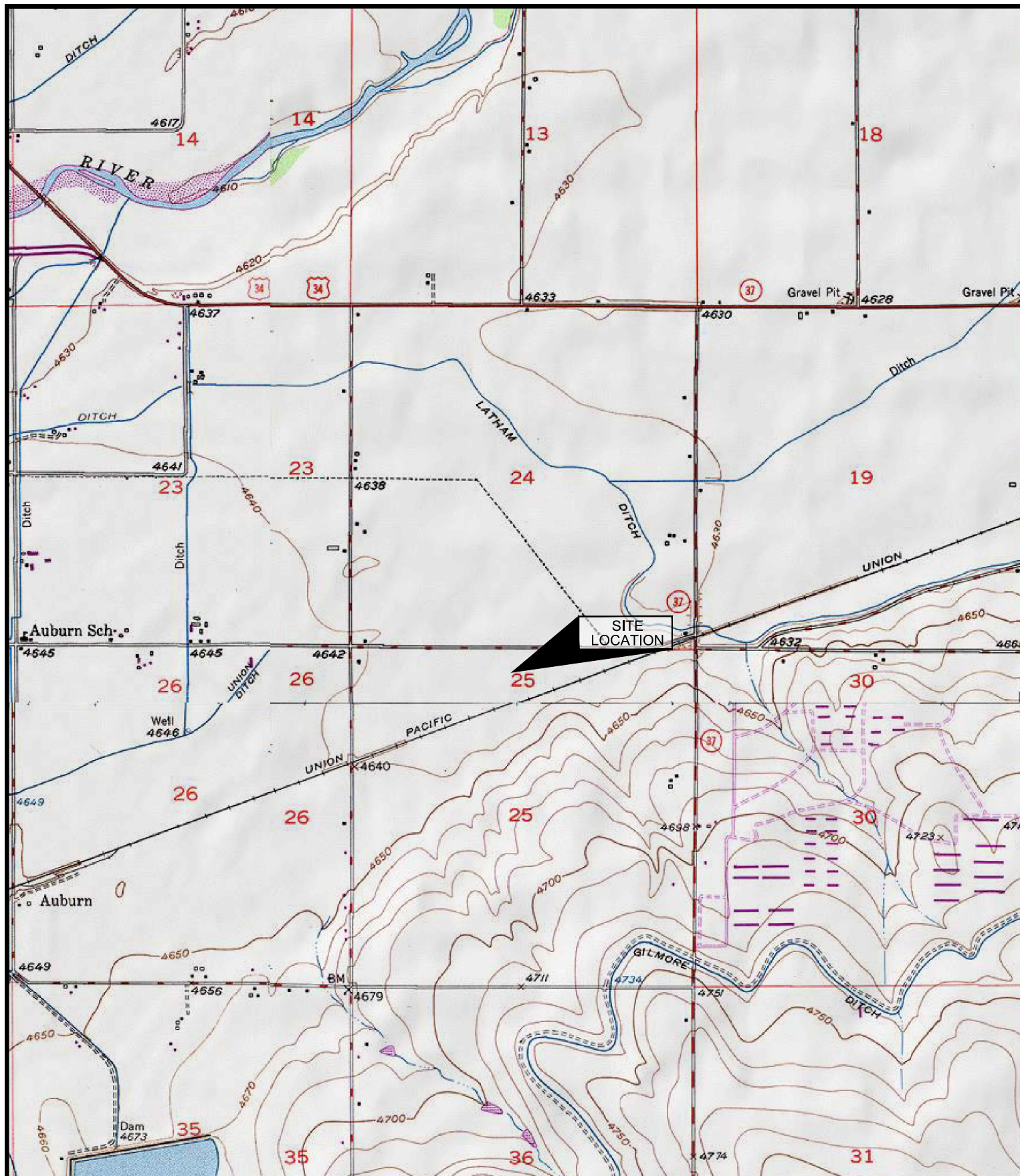
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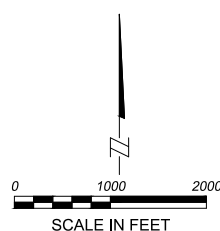
Figures

Site Location Map
Groundwater Elevation Map
Groundwater Sample Location Map



COLORADO

■ QUADRANGLE LOCATION



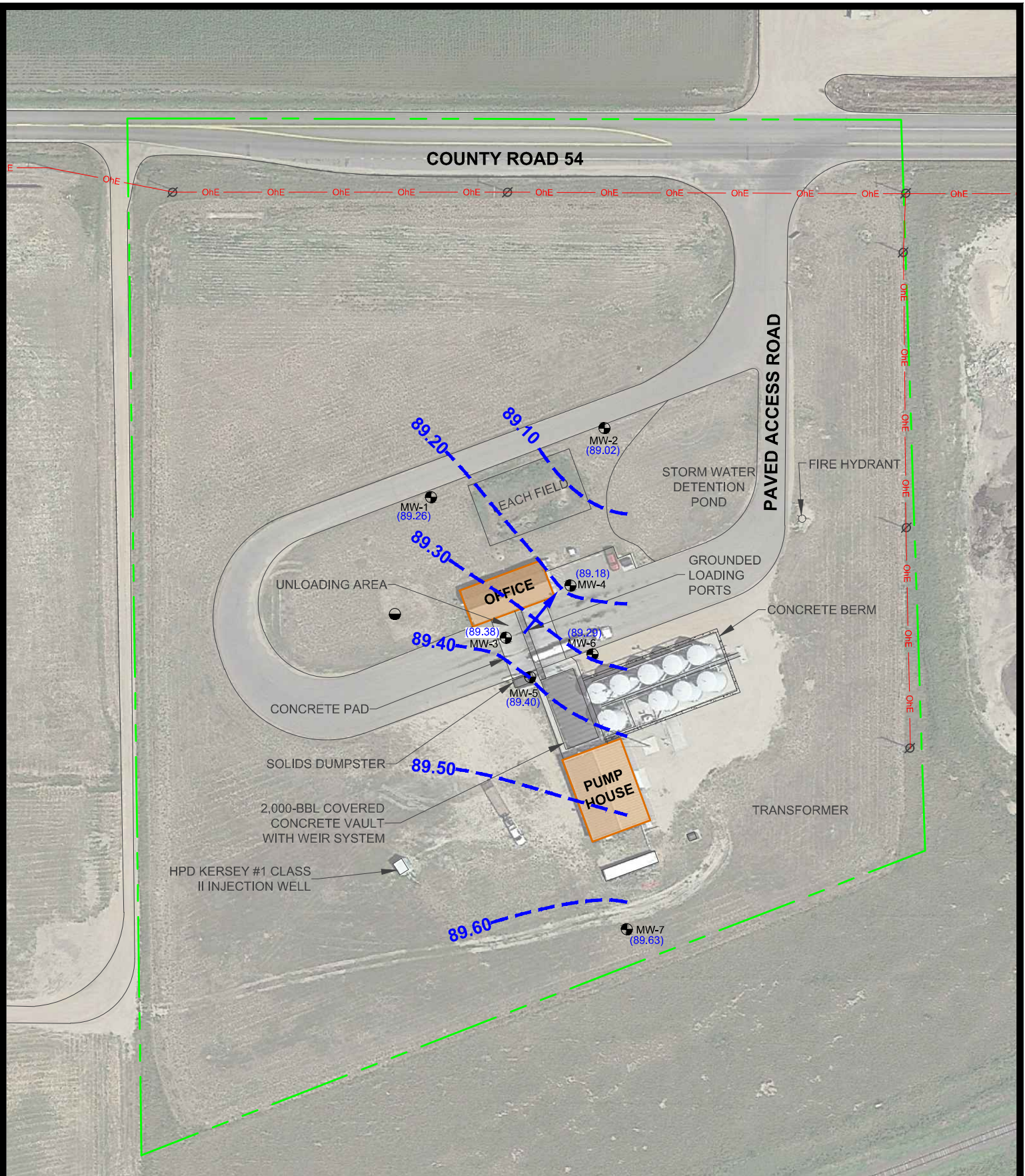
SITE LOCATION MAP

EXPEDITION WATER SOLUTIONS
EWS #13
23360 COUNTY ROAD 54
GREELEY, COLORADO 80631

PROJECT:
1-12456-18304aa
DATE:
01/28/2020

DRAFT:
CLB
REVIEW:
JAA

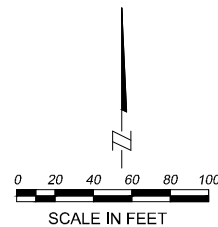




LEGEND

- MW-1 MONITORING WELL
- DOMESTIC WATER WELL
- (91.10) GROUNDWATER ELEVATION (FEET)
- OHE OVERHEAD ELECTRIC
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER ELEVATION CONTOUR

- INFERRED FLOW DIRECTION
- UTILITY POLE



GROUNDWATER ELEVATION MAP
JANUARY 27, 2022
 EXPEDITION WATER SOLUTIONS
 EWS #13
 23360 COUNTY ROAD 54
 GREELEY, COLORADO 80631

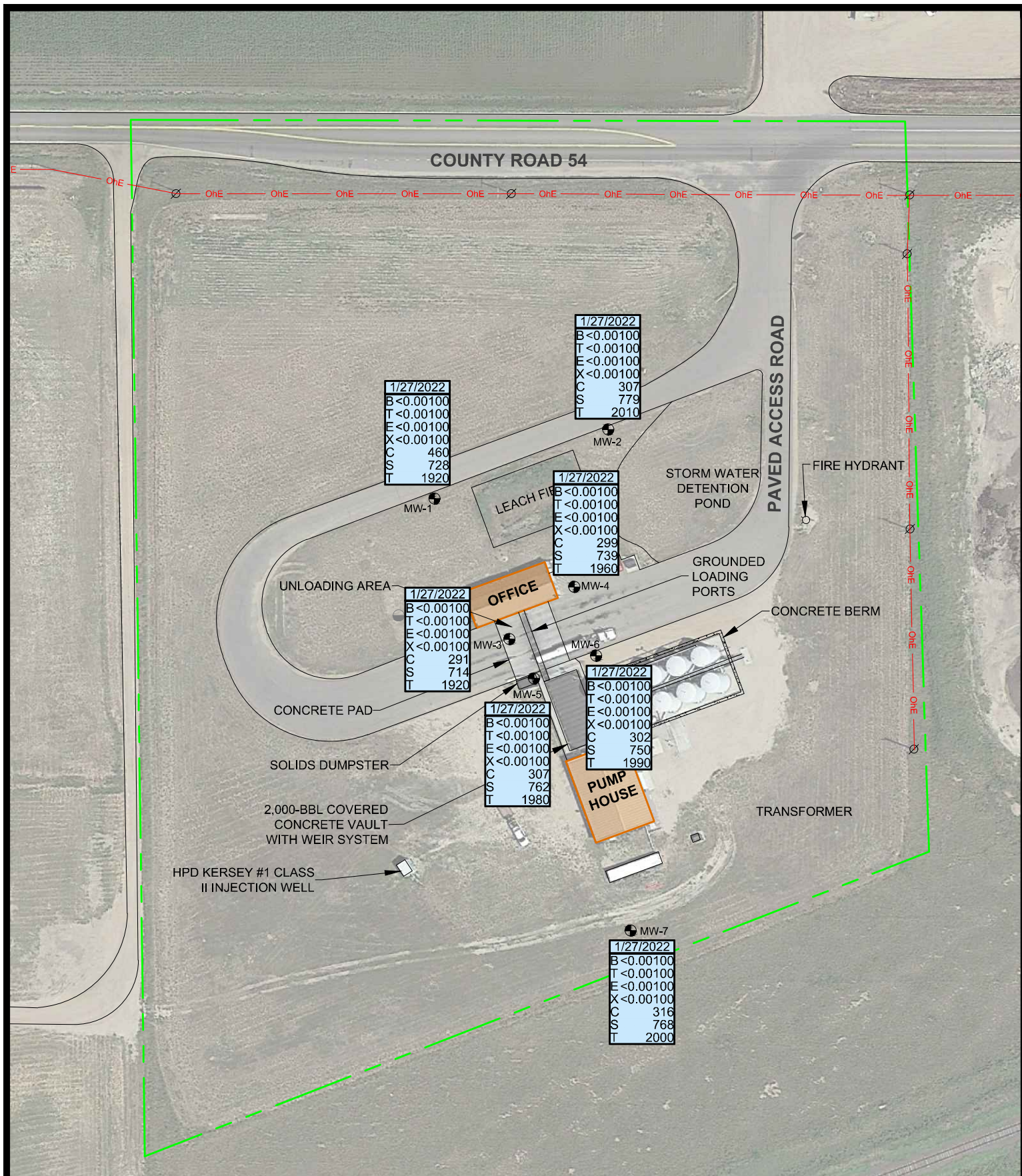
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1-12456-18304aa

DATE:
3/1/2022

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REVIEW:



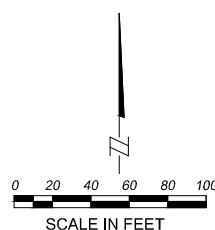


LEGEND

- MW-1 MONITORING WELL
- DOMESTIC WATER WELL
- UTILITY POLE
- OVERHEAD ELECTRIC
- APPROXIMATE PROPERTY BOUNDARY

SAMPLE DATE

B	BENZENE (mg/L)
T	TOLUENE (mg/L)
E	ETHYLBENZENE (mg/L)
X	TOTAL XYLENES (mg/L)
C	CHLORIDE (mg/L)
S	SULFATES (mg/L)
TDS	TOTAL DISSOLVED SOLIDS (mg/L)



GROUNDWATER SAMPLE LOCATION MAP

January 27, 2022
EXPEDITION WATER SOLUTIONS
EWS #13
23360 COUNTY ROAD 54
GREELEY, COLORADO 80631

PROJECT:
1-12456-18304aa

DRAFT:
TJQ

DATE:
3/1/2022

REVIEW:





Table 1

Groundwater Elevation and Analytical Data

Groundwater Elevation and Analytical Data
Groundwater Monitoring Report
Expedition Water Solutions - EWS #13
23360 County Road 54, Greeley, CO 80631

Sample ID	Sample Date	Reference Elevation (ft)	Depth To Water (ft)	Groundwater Elevation (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
COGCC MCL	-	-	-	-	0.005	1	0.7	10	1.25 x BG	1.25 x BG	1.25 x BG	-	-	-	-	-
MW-1	1/26/2016	96.10	5.66	90.44	<0.001	<0.001	<0.001	<0.001	298	733	2,280	10.13	2,690		7.18	
MW-1	7/26/2016	96.10	4.24	91.86	<0.001	<0.001	<0.001	<0.001	308	845	2,530	17.01	3,322		7.15	
MW-1	1/30/2017	96.10	6.75	89.35	<0.001	<0.001	<0.001	<0.001	340	1,050	1,830	11.74	3,039		7.06	
MW-1	7/24/2017	96.10	4.24	91.86	<0.001	<0.001	<0.001	<0.002	225	617	1,740	16.88	3,289		7.10	
MW-1	1/29/2018	96.10	6.30	89.80	<0.001	<0.001	<0.001	<0.002	382	993	2,320	9.62	3,033		8.50	
MW-1	7/24/2018	96.10	4.95	91.15	<0.001	<0.001	<0.001	<0.002	373	900	1,660	17.95	2,636		7.81	
MW-1	1/30/2019	96.10	6.73	89.37	<0.001	<0.001	<0.001	<0.002	1,280	3,410	1,480	9.40	3,023		7.45	
MW-1	7/29/2019	96.10	5.01	91.09	<0.001	<0.001	<0.001	<0.002	274	670	1,440	16.00	2,938		5.27	
MW-1	1/8/2020	96.10	5.97	90.13	<0.001	<0.001	<0.001	<0.001	321	802	2,250	10.46	3,194	0.38	7.09	151.1
MW-1	4/28/2020	96.10	9.24	86.86	<0.001	<0.001	<0.001	<0.001	342	821	2,140	9.24	3,388	0.31	7.05	128.5
MW-1	7/15/2020	96.10	7.43	88.67	<0.001	<0.001	<0.001	<0.001	369	923	2,310	16.51	2,637	3.85	7.33	145.9
MW-1	10/13/2020	96.10	4.38	91.72	<0.001	<0.001	<0.001	<0.001	223	548	1,580	15.30	2,599	4.15	7.17	114.2
MW-1	1/13/2021	96.10	6.97	89.13	<0.001	<0.001	<0.001	<0.001	296	715	1,980	10.75	2,753	2.47	7.26	121.6
MW-1	4/15/2021	96.10	9.36	86.74	<0.001	<0.001	<0.001	<0.001	309	753	1,980	7.76	2,671	2.65	7.01	197.3
MW-1	7/8/2021	96.10	7.33	88.77	<0.001	<0.001	<0.001	<0.001	338	927	2,210	15.44	2,967	4.86	7.25	115.2
MW-1	11/30/2021	96.10	5.00	91.10	<0.00100	<0.00100	<0.00100	<0.00100	295	685	1,910	12.68	2,821.6	5.20	7.21	94.7
MW-1	1/27/2022	96.10	6.84	89.26	<0.00100	<0.00100	<0.00100	<0.00100	460	728	1,920	11.05	2,359.5	6.07	8.26	-60.4
MW-2	1/26/2016	96.40	6.18	90.22	<0.001	<0.001	<0.001	<0.001	330	801	2,250	10.21	2,780		7.03	
MW-2	7/26/2016	96.40	4.60	91.80	<0.001	<0.001	<0.001	<0.001	292	743	2,330	14.80	3,020		7.14	
MW-2	1/30/2017	96.40	7.31	89.09	<0.001	<0.001	<0.001	<0.001	379	1,200	1,890	11.44	3,152		7.01	
MW-2	7/24/2017	96.40	4.49	91.91	<0.001	<0.001	<0.001	<0.002	228	593	1,780	18.37	1,618		7.13	
MW-2	1/29/2018	96.40	6.86	89.54	<0.001	<0.001	<0.001	<0.002	402	1,090	2,560	10.86	3,322		8.77	
MW-2	7/24/2018	96.40	5.24	91.16	<0.001	<0.001	<0.001	<0.002	406	967	1,720	17.18	2,692		7.74	
MW-2	1/30/2019	96.40	4.27	92.13	<0.001	<0.001	<0.001	<0.002	1,220	3,230	1,500	10.57	3,114		7.43	
MW-2	7/29/2019	96.40	5.40	91.00	<0.001	<0.001	<0.001	<0.002	299	692	1,450	15.32	3,028		5.45	
MW-2	1/8/2020	96.40	6.51	89.89	<0.001	<0.001	<0.001	<0.001	322	851	2,410	11.06	3,302	1.95	7.06	132.0
MW-2	4/28/2020	96.40	9.15	87.25	<0.001	<0.001	<0.001	<0.001	355	831	2,120	9.84	3,475	3.06	6.90	137.5
MW-2	7/15/2020	96.40	7.83	88.57	<0.001	<0.001	<0.001	<0.001	380	953	2,320	16.73	2,766	5.64	7.44	151.0
MW-2	10/13/2020	96.40	4.83	91.57	<0.001	<0.001	<0.001	<0.001	156	411	1,220	15.71	1,922	4.76	7.21	114.5
MW-2	1/13/2021	96.40	7.52	88.88	<0.001	<0.001	<0.001	<0.001	306	749	2,080	11.40	2,986	5.28	7.19	115.8
MW-2	4/15/2021	96.40	9.89	86.51	<0.001	<0.001	<0.001	<0.001	314	767	2,070	8.43	3,125	3.27	7.01	197.4
MW-2	7/8/2021	96.40	INA													
MW-2	11/30/2021	96.40	5.53	90.87	<0.00100	<0.00100	<0.00100	<0.00100	279	685	1,930	13.37	2,539.7	5.98	7.16	94.4
MW-2	1/27/2022	96.40	7.38	89.02	<0.00100	<0.00100	<0.00100	<0.00100	307	779	2,010	11.47	3,086.7	6.92	8.40	-61.9
MW-3	1/26/2016	99.00	8.41	90.59	<0.001	<0.001	<0.001	<0.001	335	734	2,310	10.90	2,775		7.28	
MW-3	7/26/2016	99.00	7.14	91.86	<0.001	<0.001	<0.001	<0.001	298	758	2,410	14.39	3,157		7.10	
MW-3	1/30/2017	99.00	9.54	89.46	<0.001	<0.001	<0.001	<0.001	286	1,090	1,800	11.32	2,963		7.06	
MW-3	7/24/2017	99.00	7.20	91.80	<0.001	<0.001	<0.001	<0.002	235	592	1,800	14.20	3,147		7.07	
MW-3	1/29/2018	99.00	9.10	89.90	<0.001	<0.001	<0.001	<0.002	435	1,210	2,270	10.30	3,060		8.76	
MW-3	7/24/2018	99.00	7.78	91.22	<0.001	<0.001	<0.001	<0.002	382	902	1,690	15.15	2,479		7.67	
MW-3	1/30/2019	99.00	9.51	89.49	<0.001	<0.001	<0.001	<0.002	1,230	3,180	1,570	10.28	3,173		7.29	
MW-3	7/29/2019	99.00	7.99	91.01	<0.001	<0.001	<0.001	<0.002	248	620	1,140	13.62	2,938		7.32	
MW-3	1/8/2020	99.00	8.75	90.25	<0.001	<0.001	<0.001	<0.001	340	853	2,320	10.31	3,296	0.50	7.11	168.8
MW-3	4/28/2020	99.00	11.40	87.60	<0.001	<0.001	<0.001	<0.001	357	803	2,120	9.48	3,451	0.21	7.05	117.0
MW-3	7/15/2020	99.00	9.50	89.50	<0.001	<0.001	<0.001	<0.001	375	938	2,300	14.99	2,532	2.50	7.37	150.8
MW-3	10/13/2020	99.00	7.25	91.75	<0.001	<0.001	<0.001	<0.001	248	613	1,770	16.79	3,034	2.95	7.31	120.1
MW-3	1/13/2021	99.00	9.77	89.23	<0.001	<0.001	<0.001	<0.001	302	741	2,070	11.55	2,885	2.70	6.95	91.2
MW-3	4/15/2021	99.00	12.13	86.87	<0.001	<0.001	<0.001	<0.001	318	762	2,000	8.84	3,113	2.09	7.07	178.0
MW-3	7/8/2021	99.00	10.30	88.70	<0.001	<0.001	<0.001	<0.001	325	821	2,070	14.52	2,878	4.18	7.29	112.1
MW-3	11/30/2021	99.00	7.90	91.10	<0.00100	0.00101	<0.00100	<0.00100	293	702	1,980	14.15	2,716.3	4.26	6.99	42.2
MW-3	1/27/2022	99.00	9.62	89.38	<0.00100	0.00101	<0.00100	<0.00100	291	714	1,920	12.55	1,863.5	7.30	8.21	-74.8

Groundwater Elevation and Analytical Data
Groundwater Monitoring Report
Expedition Water Solutions - EWS #13
23360 County Road 54, Greeley, CO 80631

Sample ID	Sample Date	Reference Elevation (ft)	Depth To Water (ft)	Groundwater Elevation (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
COGCC MCL	-	-	-	-	0.005	1	0.7	10	1.25 x BG	1.25 x BG	1.25 x BG	-	-	-	-	-
MW-4	1/26/2016	98.70	8.33	90.37	<0.001	<0.001	<0.001	<0.001	322	751	2,250	11.70	2,718		7.29	
MW-4	7/26/2016	98.70	6.97	91.73	<0.001	<0.001	<0.001	<0.001	302	722	2,190	13.80	2,901		7.31	
MW-4	1/30/2017	98.70	9.44	89.26	<0.001	<0.001	<0.001	<0.001	352	1,100	1,770	12.07	2,872		7.12	
MW-4	7/24/2017	98.70	6.98	91.72	<0.001	<0.001	<0.001	<0.002	248	620	1,770	13.50	2,909		7.27	
MW-4	1/29/2018	98.70	8.98	89.72	<0.001	<0.001	<0.001	<0.002	428	1,180	2,400	11.20	3,138		8.40	
MW-4	7/24/2018	98.70	8.10	90.60	0.0017	0.0015	<0.001	<0.002	439	1,020	1,730	15.42	2,484		7.62	
MW-4	1/30/2019	98.70	9.41	89.29	<0.001	<0.001	<0.001	<0.002	1,300	3,340	1,580	10.78	3,220		7.31	
MW-4	7/29/2019	98.70	7.82	90.88	<0.001	<0.001	<0.001	<0.002	276	670	1,450	12.64	3,013		6.98	
MW-4	1/8/2020	98.70	8.65	90.05	<0.001	<0.001	<0.001	<0.001	330	818	2,280	11.94	3,182	0.16	7.04	174.8
MW-4	4/28/2020	98.70	11.29	87.41	<0.001	<0.001	<0.001	<0.001	308	232	2,180	9.61	3,522	0.09	6.97	114.8
MW-4	7/15/2020	98.70	9.28	89.42	<0.001	<0.001	<0.001	<0.001	373	949	2,310	15.09	2,515	2.36	7.26	152.1
MW-4	10/13/2020	98.70	7.11	91.59	<0.001	<0.001	<0.001	<0.001	237	590	1,630	16.46	2,821	2.52	7.24	115.9
MW-4	1/13/2021	98.70	9.68	89.02	<0.001	<0.001	<0.001	<0.001	318	770	2,110	11.64	3,053	3.86	7.07	103.2
MW-4	4/15/2021	98.70	12.03	86.67	<0.001	<0.001	<0.001	<0.001	322	766	2,010	8.74	2,833	2.37	7.05	183.1
MW-4	7/8/2021	98.70	10.16	88.54	<0.001	<0.001	<0.001	<0.001	316	786	2,000	14.03	2,682	3.55	7.29	110.5
MW-4	11/30/2021	98.70	7.75	90.95	<0.00100	<0.00100	<0.00100	<0.00100	295	710	1,980	14.52	2,882.9	4.60	7.08	62.5
MW-4	1/27/2022	98.70	9.52	89.18	<0.00100	<0.00100	<0.00100	<0.00100	299	739	1,960	11.77	2,946.5	4.03	8.16	-66.1
MW-5	1/26/2016	99.00	8.41	90.59	<0.001	<0.001	<0.001	<0.001	313	722	2,110	9.31	2,658		7.20	
MW-5	4/26/2016	99.00	10.07	88.93	<0.001	<0.001	<0.001	<0.001	371	725	2,290	8.33	2,991		6.68	
MW-5	7/26/2016	99.00	7.16	91.84	<0.001	<0.001	<0.001	<0.001	270	650	2,250	15.29	2,939		7.21	
MW-5	10/31/2016	99.00	6.87	92.13	<0.001	<0.001	<0.001	<0.001	382	1,050	1,800	16.20	3,364		7.39	
MW-5	1/30/2017	99.00	9.50	89.50	<0.001	<0.001	<0.001	<0.001	362	1,070	1,760	11.29	2,960		7.09	
MW-5	4/27/2017	99.00	11.21	87.79	<0.001	<0.001	<0.001	<0.002	423	933	2,410	8.95	3,146		7.26	
MW-5	7/24/2017	99.00	7.22	91.78	<0.001	<0.001	<0.001	<0.002	207	498	1,780	14.65	2,950		7.17	
MW-5	10/27/2017	99.00	5.48	93.52	<0.001	<0.001	<0.001	<0.002	283	830	2,510	14.81	3,317		7.68	
MW-5	1/29/2018	99.00	9.09	89.91	<0.001	<0.001	<0.001	<0.002	454	1,270	2,460	9.78	3,243		8.30	
MW-5	4/12/2018	99.00	11.00	88.00	<0.001	<0.001	<0.001	<0.002	362	1,100	2,570	8.41	3,337		7.34	
MW-5	7/24/2018	99.00	8.00	91.00	0.0012	<0.001	<0.001	<0.002	505	1,160	1,780	15.96	2,648		7.64	
MW-5	10/29/2018	99.00	6.10	92.90	<0.001	<0.001	<0.001	<0.002	316	683	1,720	16.21	3,061		7.26	
MW-5	1/30/2019	99.00	9.46	89.54	0.0019	0.0021	<0.001	<0.002	1,130	2,910	1,580	10.27	3,190		7.70	
MW-5	4/29/2019	99.00	11.30	87.70	<0.001	<0.001	<0.001	<0.002	227	488	1,580	7.41	3,240		7.19	
MW-5	7/29/2019	99.00	8.03	90.97	<0.001	<0.001	<0.001	<0.002	< 6.00	319	1,400	13.55	2,935		7.33	
MW-5	1/8/2020	99.00	8.71	90.29	<0.001	<0.001	<0.001	<0.001	336	836	2,310	10.66	3,301	0.71	7.08	172.5
MW-5	4/28/2020	99.00	11.35	87.65	<0.001	<0.001	<0.001	<0.001	367	829	2,200	8.88	3,538	1.66	6.99	123.0
MW-5	7/15/2020	99.00	9.60	89.40	<0.001	<0.001	<0.001	<0.001	346	831	2,220	15.94	2,506	1.24	7.01	146.8
MW-5	10/13/2020	99.00	7.25	91.75	0.0016	0.0016	<0.001	<0.001	284	693	1,880	15.39	3,203	3.79	7.13	116.6
MW-5	1/13/2021	99.00	9.74	89.26	<0.001	<0.001	<0.001	<0.001	306	755	2,040	11.41	2,946	3.76	6.96	69.3
MW-5	4/15/2021	99.00	12.08	86.92	<0.001	<0.001	<0.001	<0.001	331	790	2,100	7.78	3,239	3.33	7.06	168.5
MW-5	7/8/2021	99.00	10.36	88.64	<0.001	<0.001	<0.001	<0.001	305	720	2,000	14.64	2,715	3.08	7.25	104.1
MW-5	11/30/2021	99.00	7.85	91.15	<0.00100	0.00112	<0.00100	<0.00100	298	725	2,050	14.14	3,355.1	4.80	7.07	80.5
MW-5	1/27/2022	99.00	9.60	89.40	<0.00100	<0.00100	<0.00100	<0.00100	307	762	1,980	11.51	1,963.8	5.85	8.18	-56.7
MW-6	1/26/2016	98.80	8.28	90.52	0.0039	0.0022	<0.001	<0.001	312	718	2,250	11.78	2,692		7.24	
MW-6	4/26/2016	98.80	9.98	88.82	<0.001	<0.001	<0.001	<0.001	371	751	2,200	9.80	3,059		7.45	
MW-6	7/26/2016	98.80	7.00	91.80	<0.001	<0.001	<0.001	<0.001	264	550	2,340	13.40	3,068		7.16	
MW-6	10/31/2016	98.80	6.72	92.08	<0.001	<0.001	<0.001	<0.001	60	204	1,700	15.38	3,283		7.38	
MW-6	1/30/2017	98.80	9.42	89.38	0.0018	0.0018	<0.001	<0.001	387	1,110	1,780	12.26	2,957		7.17	
MW-6	4/27/2017	98.80	11.12	87.68	<0.001	<0.001	<0.001	<0.002	358	812	2,350	10.69	3,030		7.35	
MW-6	7/24/2017	98.80	7.03	91.77	<0.001	<0.001	<0.001	<0.002	236	564	1,800	13.18	3,014		7.09	
MW-6	10/27/2017	98.80	5.38	93.42	0.0019	0.0012	<0.001	<0.002	69	167	2,510	16.91	3,338		7.73	
MW-6	1/29/2018	98.80	9.00	89.80	<0.001	<0.001	<0.001	<0.002	526	1,470	2,510	13.65	3,294		8.45	

Groundwater Elevation and Analytical Data
Groundwater Monitoring Report
Expedition Water Solutions - EWS #13
23360 County Road 54, Greeley, CO 80631

Sample ID	Sample Date	Reference Elevation (ft)	Depth To Water (ft)	Groundwater Elevation (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
COGCC MCL	-	-	-	-	0.005	1	0.7	10	1.25 x BG	1.25 x BG	1.25 x BG	-	-	-	-	-
MW-6	4/12/2018	98.80	10.97	87.83	<0.001	<0.001	<0.001	<0.002	390	1,130	2,540	11.86	3,347		7.27	
MW-6	7/24/2018	98.80	7.92	90.88	0.015	0.014	<0.001	0.0028	451	1,070	1,840	16.80	2,790		7.73	
MW-6	10/29/2018	98.80	6.00	92.80	<0.001	<0.001	<0.001	<0.002	269	602	1,720	19.39	3,026		7.26	
MW-6	1/30/2019	98.80	9.38	89.42	0.001	<0.001	<0.001	<0.002	989	2,520	1,560	13.82	3,219		7.30	
MW-6	4/29/2019	98.80	11.24	87.56	<0.001	<0.001	<0.001	<0.002	233	570	1,570	9.66	3,211		7.16	
MW-6	7/29/2019	98.80	7.88	90.92	<0.001	<0.001	<0.001	<0.002	258	647	1,540	14.99	2,999		7.38	
MW-6	1/8/2020	98.80	8.64	90.16	<0.001	<0.001	<0.001	<0.001	331	821	2,340	12.38	3,299	0.65	7.04	173.2
MW-6	4/28/2020	98.80	11.28	87.52	<0.001	<0.001	<0.001	<0.001	358	804	2,170	10.42	3,482	1.24	6.93	113.5
MW-6	7/15/2020	98.80	9.40	89.40	Unable to Perform Groundwater Monitoring Due to Obstruction in Well											
MW-6	10/13/2020	98.80	7.13	91.67	<0.001	<0.001	<0.001	<0.001	263	673	1,910	14.85	3,355	3.14	7.28	121.0
MW-6	1/13/2021	98.80	9.64	89.16	<0.001	<0.001	<0.001	<0.001	313	771	2,100	11.80	2,909	2.19	7.11	111.3
MW-6	4/15/2021	98.80	12.02	86.78	<0.001	<0.001	<0.001	<0.001	335	791	2,080	8.66	2,936	2.54	7.01	191.1
MW-6	7/8/2021	98.80	10.23	88.57	<0.001	<0.001	<0.001	<0.001	344	821	2,110	14.58	2,677	3.66	7.22	109.3
MW-6	11/30/2021	98.80	7.76	91.04	0.0368	<0.00100	<0.00100	<0.00100	303	744	2,050	15.34	3,001.7	5.88	7.00	77.4
MW-6	1/27/2022	98.80	9.51	89.29	<0.00100	<0.00100	<0.00100	<0.00100	302	750	1,990	13.53	2,021.7	4.55	8.12	-61.9
MW-7	7/26/2016	95.20	3.45	91.75	<0.001	<0.001	<0.001	<0.001	306	674	2,630	13.50	3,424		6.60	
MW-7	1/30/2017	95.20	5.43	89.77	<0.001	<0.001	<0.001	<0.001	318	988	1,730	8.60	2,912		6.85	
MW-7	7/24/2017	95.20	3.68	91.52	<0.001	<0.001	<0.001	<0.002	267	573	1,800	13.92	3,475		6.60	
MW-7	1/29/2018	95.20	5.02	90.18	<0.001	<0.001	<0.001	<0.002	576	1,440	2,610	8.34	3,403		8.91	
MW-7	7/24/2018	95.20	4.75	90.45	<0.001	<0.001	<0.001	<0.002	400	851	1,850	13.95	2,630		8.12	
MW-7	1/30/2019	95.20	5.39	89.81	<0.001	<0.001	<0.001	<0.002	835	1,900	1,640	7.92	3,361		7.36	
MW-7	7/29/2019	95.20	4.39	90.81	<0.001	<0.001	<0.001	<0.002	210	541	1,590	13.12	3,216		7.44	
MW-7	1/8/2020	95.20	4.65	90.55	<0.001	<0.001	<0.001	<0.001	358	808	2,200	9.42	3,238	0.16	7.04	96.1
MW-7	4/28/2020	95.20	7.28	87.92	<0.001	<0.001	<0.001	<0.001	398	870	2,310	10.70	3,597	0.00	6.22	158.1
MW-7	7/15/2020	95.20	6.22	88.98	<0.001	<0.001	<0.001	<0.001	450	986	2,320	16.50	2,625	0.41	6.76	170.1
MW-7	10/13/2020	95.20	3.41	91.79	<0.001	<0.001	<0.001	<0.001	343	795	2,200	14.17	3,627	1.06	7.39	125.5
MW-7	1/13/2021	95.20	5.67	89.53	<0.001	<0.001	<0.001	<0.001	336	809	2,180	11.53	3,007	2.95	7.08	7.8
MW-7	4/15/2021	95.20	8.01	87.19	<0.001	<0.001	<0.001	<0.001	397	866	2,310	8.72	3,392	0.73	7.04	140.9
MW-7	7/8/2021	95.20	6.79	88.41	<0.001	<0.001	<0.001	<0.001	357	1,010	2,010	14.15	2,416	2.69	7.34	102.8
MW-7	11/30/2021	95.20	3.87	91.33	<0.00100	<0.00100	<0.00100	<0.00100	316	748	2,100	12.86	2,804.4	5.53	7.17	94.5
MW-7	1/27/2022	95.20	5.57	89.63	<0.00100	<0.00100	<0.00100	<0.00100	316	768	2,000	9.83	2,602.1	6.09	8.36	-49.9

Groundwater Elevation and Analytical Data
Groundwater Monitoring Report
Expedition Water Solutions - EWS #13
23360 County Road 54, Greeley, CO 80631

Sample ID	Sample Date	Reference Elevation (ft)	Depth To Water (ft)	Groundwater Elevation (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl- Benzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
COGCC MCL	-	-	-	-	0.005	1	0.7	10	1.25 x BG	1.25 x BG	1.25 x BG	-	-	-	-	-

Notes

A blank data box indicates that the analysis or measurement was not completed during the specified monitoring event.

COGCC MCL references groundwater quality standards from COGCC Table 915-1 (*January 15, 2021*).

COGCC MCL of inorganic compounds is defined as a concentration below 250 mg/L (chloride, sulfate) or less than 1.25 x local background (chloride, sulfate, TDS).

Bold values indicate concentration at or in excess of COGCC MCL.

BG = background concentration

COGCC = Colorado Oil and Gas Conservation Commission

MCL = maximum contaminant level

INA = monitoring well inaccessible

ORP = oxidation reduction potential

TDS = total dissolved solids



Attachment A

Laboratory Report and Chain of Custody



February 07, 2022

CGRS, Inc

Drezden Kinnaird

1301 Academy Court

Fort Collins CO 80524

Project Name - EWS #13

Project Number - 18304/20673

Attached are your analytical results for EWS #13 received by Origins Laboratory, Inc. January 28, 2022. This project is associated with Origins project number Y201509-01.

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

CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	Y201509-01	Water	January 27, 2022 12:45	01/28/2022 12:40
MW-2	Y201509-02	Water	January 27, 2022 12:30	01/28/2022 12:40
MW-3	Y201509-03	Water	January 27, 2022 11:15	01/28/2022 12:40
MW-4	Y201509-04	Water	January 27, 2022 11:45	01/28/2022 12:40
MW-5	Y201509-05	Water	January 27, 2022 13:00	01/28/2022 12:40
MW-6	Y201509-06	Water	January 27, 2022 12:15	01/28/2022 12:40
MW-7	Y201509-07	Water	January 27, 2022 13:15	01/28/2022 12:40

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.

CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

4261509

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9445

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LABORATORY, INC

www.originslaboratory.co

page 1 of 1

Client: CGRS
Address: 1301 Academy Ct.
Telephone Number: 970-493-7780
Email Address: dkinnaird@cgrs.com, ewilson@cgrs.com

Project Manager: Drezden Kinnaird
Project Name: EWS #13 (18304)
Project Number: 20673
Samples Collected By: Matt Rusch

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Sampling Container #		
MW-1	02/04/2022	1245	4		X			X			BTEX, TDS, Chloride, Sulfate	1
MW-2	02/04/2022	1230	4		X			X			BTEX, TDS, Chloride, Sulfate	2
MW-3	02/04/2022	1115	4		X			X			BTEX, TDS, Chloride, Sulfate	3
MW-4	02/04/2022	1145	4		X			X			BTEX, TDS, Chloride, Sulfate	4
MW-5	02/04/2022	1300	4		X			X			BTEX, TDS, Chloride, Sulfate	5
MW-6	02/04/2022	1215	4		X			X			BTEX, TDS, Chloride, Sulfate	6
MW-7	02/04/2022	1315	4		X			X			BTEX, TDS, Chloride, Sulfate	7
												8
												9
												10

sample dates confirmed per Matt's email on 1/28

Relinquished By: MATT RUSCH Date: 1/28/22 Time: 7:30 AM Received By: Jmen Date: 12-28-21 Time: 1240
Relinquished By: Date: Time: Received By: Date: Time: Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☒

1.2

Date Results Needed

Origins Laboratory, Inc.

Jmen

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.

CGRS, Inc

1301 Academy Court

Fort Collins CO 80524

Drezden Kinnaird

Project Number: 18304/20673

Project: EWS #13

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y201509

Client: CGRS

Client Project ID: EWS #13

Checklist Completed by: jm

Shipped Via: HD

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

Date/time completed: 1-28-22

Airbill #: N/A

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

Cooler Number/Temperature: 1, 1.2 °C / 1 °C / 1 °C (Describe) 1 °C

Thermometer ID: TB03

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	not checked
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) jm

Date/Time Reviewed 1/31/22

Origins Laboratory, Inc.

Jordan A. Merrill

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.

CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-1

1/27/2022 12:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-01 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	460	31.2	mg/L	125	B2A2807	AHK	01/28/2022	01/29/2022	
Sulfate	728	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1920	5.00	mg/L	1	B2A3111	AHK	01/31/2022	01/31/2022	
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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.

CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-2

1/27/2022 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-02 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	307	31.2	mg/L	125	B2A2807	AHK	01/28/2022	01/29/2022	
Sulfate	779	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.9 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	2010	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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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.

CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-3

1/27/2022 11:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-03 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	291	31.2	mg/L	125	B2A2807	AHK	01/28/2022	01/29/2022	
Sulfate	714	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1920	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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Origins Laboratory, Inc.



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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-4

1/27/2022 11:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-04 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	299	31.2	mg/L	125	B2A2901	AHK	01/29/2022	01/30/2022	
Sulfate	739	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.6 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1960	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-5

1/27/2022 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-05 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	307	31.2	mg/L	125	B2A2901	AHK	01/29/2022	01/30/2022	
Sulfate	762	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	100 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.1 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1980	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-6

1/27/2022 12:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-06 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	302	31.2	mg/L	125	B2A2901	AHK	01/29/2022	01/30/2022	
Sulfate	750	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.3 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	1990	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

MW-7

1/27/2022 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Y201509-07 (Water) Origins Laboratory, Inc.

Anions by IC 300.0

Chloride	316	31.2	mg/L	125	B2A2901	AHK	01/29/2022	01/30/2022	
Sulfate	768	31.2	"	"	"	AHK	"	"	

BTEX by EPA 8260D

Benzene	ND	0.00100	mg/L	1	B2B0217	ZZZ	02/02/2022	02/03/2022	U
Toluene	ND	0.00100	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00100	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00100	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.8 %	70-130			"	"	"	

Total Dissolved Solids by 2540C

Total Dissolved Solids	2000	5.00	mg/L	1	B2A3113	AHK	01/31/2022	01/31/2022	
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Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2B0217 - EPA 5030B (Water)										
Blank (B2B0217-BLK1)					Prepared: 02/02/2022 Analyzed: 02/03/2022					
Benzene	ND	0.00100	mg/L							U
Toluene	ND	0.00100	"							U
Ethylbenzene	ND	0.00100	"							U
Xylenes, total	ND	0.00100	"							U
Surrogate: 1,2-Dichloroethane-d4	0.062		"	0.0625		98.7	70-130			
Surrogate: Toluene-d8	0.064		"	0.0625		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.060		"	0.0625		96.6	70-130			

Origins Laboratory, Inc.



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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2B0217 - EPA 5030B (Water)

LCS (B2B0217-BS1)

Prepared: 02/02/2022 Analyzed: 02/03/2022

Benzene	0.0531	0.00100	mg/L	0.0500		106	70-130			
Toluene	0.0536	0.00100	"	0.0500		107	70-130			
Ethylbenzene	0.0539	0.00100	"	0.0500		108	70-130			
m,p-Xylene	0.109	0.00200	"	0.100		109	70-130			
o-Xylene	0.0550	0.00100	"	0.0500		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.061		"	0.0625		97.4	70-130			
Surrogate: Toluene-d8	0.062		"	0.0625		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.063		"	0.0625		101	70-130			

Origins Laboratory, Inc.



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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2B0217 - EPA 5030B (Water)

Matrix Spike (B2B0217-MS1)		Source: Y201490-20			Prepared: 02/02/2022 Analyzed: 02/03/2022					
Benzene	0.0439	0.00100	mg/L	0.0500	ND	87.8	70-130			
Toluene	0.0444	0.00100	"	0.0500	ND	88.9	70-130			
Ethylbenzene	0.0444	0.00100	"	0.0500	ND	88.7	70-130			
m,p-Xylene	0.0907	0.00200	"	0.100	ND	90.7	70-130			
o-Xylene	0.0460	0.00100	"	0.0500	ND	92.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.063		"	0.0625		100	70-130			
Surrogate: Toluene-d8	0.061		"	0.0625		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.065		"	0.0625		105	70-130			

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Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2B0217 - EPA 5030B (Water)

Matrix Spike Dup (B2B0217-MSD1)		Source: Y201490-20			Prepared: 02/02/2022 Analyzed: 02/03/2022					
Benzene	0.0533	0.00100	mg/L	0.0500	ND	107	70-130	19.3	20	
Toluene	0.0557	0.00100	"	0.0500	ND	111	70-130	22.4	20	QM-07
Ethylbenzene	0.0560	0.00100	"	0.0500	ND	112	70-130	23.2	20	QM-07
m,p-Xylene	0.113	0.00200	"	0.100	ND	113	70-130	21.6	20	QM-07
o-Xylene	0.0552	0.00100	"	0.0500	ND	110	70-130	18.2	20	
Surrogate: 1,2-Dichloroethane-d4	0.061		"	0.0625		98.2	70-130			
Surrogate: Toluene-d8	0.062		"	0.0625		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.065		"	0.0625		103	70-130			

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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2A2807 - Filter .45um non acidified

Blank (B2A2807-BLK1)

Prepared: 01/28/2022 Analyzed: 01/29/2022

Chloride	ND	0.250	mg/L
Sulfate	ND	0.250	"

LCS (B2A2807-BS1)

Prepared: 01/28/2022 Analyzed: 01/29/2022

Chloride	3.84	0.250	mg/L	4.00	95.9	90-110
Sulfate	3.66	0.250	"	4.00	91.6	90-110

Matrix Spike (B2A2807-MS1)

Source: Y201490-19

Prepared: 01/28/2022 Analyzed: 01/29/2022

Chloride	903	mg/L	500	416	97.6	80-120	
Sulfate	11100	"	500	10300	152	80-120	QM-02

Matrix Spike Dup (B2A2807-MSD1)

Source: Y201490-19

Prepared: 01/28/2022 Analyzed: 01/29/2022

Chloride	902	mg/L	500	416	97.3	80-120	0.144	20	
Sulfate	11100	"	500	10300	162	80-120	0.477	20	QM-02

Batch B2A2901 - Filter .45um non acidified

Blank (B2A2901-BLK1)

Prepared: 01/29/2022 Analyzed: 01/29/2022

Chloride	ND	0.250	mg/L
Sulfate	ND	0.250	"

LCS (B2A2901-BS1)

Prepared: 01/29/2022 Analyzed: 01/29/2022

Chloride	3.94	0.250	mg/L	4.00	98.4	90-110
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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2A2901 - Filter .45um non acidified										
LCS (B2A2901-BS1)					Prepared: 01/29/2022 Analyzed: 01/29/2022					
Sulfate	3.76	0.250	mg/L	4.00		94.1	90-110			
Matrix Spike (B2A2901-MS1)					Source: Y201509-04 Prepared: 01/29/2022 Analyzed: 01/29/2022					
Chloride	784		mg/L	500	299	97.0	80-120			
Sulfate	1180		"	500	739	87.5	80-120			
Matrix Spike Dup (B2A2901-MSD1)					Source: Y201509-04 Prepared: 01/29/2022 Analyzed: 01/30/2022					
Chloride	781		mg/L	500	299	96.5	80-120	0.319	20	
Sulfate	1180		"	500	739	88.5	80-120	0.414	20	
Batch B2A3111 - NO PREP										
Blank (B2A3111-BLK1)					Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	ND	5.00	mg/L							
LCS (B2A3111-BS1)					Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	1000	5.00	mg/L	1000		100	90-110			
Duplicate (B2A3111-DUP1)					Source: Y201490-19 Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	14800	5.00	mg/L		15200			2.66	10	
Batch B2A3113 - NO PREP										
Blank (B2A3113-BLK1)					Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	ND	5.00	mg/L							

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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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 B2A3113 - NO PREP										
LCS (B2A3113-BS1)					Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	990	5.00	mg/L	1000		99.0	90-110			
Duplicate (B2A3113-DUP1)					Source: Y201509-02 Prepared: 01/31/2022 Analyzed: 01/31/2022					
Total Dissolved Solids	1980	5.00	mg/L		2010			1.51	10	

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CGRS, Inc
1301 Academy Court
Fort Collins CO 80524

Drezden Kinnaird
Project Number: 18304/20673
Project: EWS #13

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.

QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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