

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
LORENZ UPRR 42-27 1, 41-27 3 TANK BATTERY
COGCC REMEDIATION #8952
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

Monitoring Well	Date	Depth to Water (feet btoc)	Groundwater Elevation (AMSL)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW01	8/22/2014	6.22	4,732.91	17,800	2,920	745	11,500
	11/20/2014	9.79	4,729.34	32,900	751	673	10,500
	1/9/2015	7.87	4,731.26	30,000	190	1,300	20,000
	4/10/2015	8.72	4,730.41	25,000	220	640	13,000
	7/16/2015	6.16	4,732.97	22,000	1,800	690	11,000
	10/6/2015	7.02	4,732.11	33,000	150	830	13,000
	1/15/2016	7.56	4,731.57	1,600	1.8	<1.0	2,000
	4/29/2016	7.50	4,731.63	<1.0	<1.0	<1.0	<1.0
	7/15/2016	7.60	4,731.53	<1.0	<1.0	<1.0	<1.0
	10/26/2016	7.65	4,731.48	2,000	<1.0	<1.0	27
	1/19/2017	8.70	4,730.43	1,400	<1.0	64	460
	4/20/2017	9.83	4,729.12	3,100	<1.0	220	2,500
	8/9/2017	7.05	4,731.90	2,100	1.3	210	2,400
	10/3/2017	7.77	4,731.18	1,900	1.1	230	35,000
	1/2/2018	7.07	4,731.88	1,520	<4.00	193	1,390
	4/4/2018	8.12	4,730.83	360	<1.0	27	320
	7/5/2018	7.52	4,731.43	220	<1.0	<1.0	160
	10/4/2018	7.89	4,731.06	<1.0	<1.0	<1.0	<2.0
	1/7/2019	8.76	4,730.19	<1.0	<1.0	<1.0	<2.0
MW02	8/22/2014	8.83	4,733.58	0.33	<1.0	<1.0	3.5
	11/20/2014	9.51	4,732.90	<0.50	<1.0	<1.0	<1.0
	1/9/2015	10.25	4,732.16	<1.0	<1.0	<1.0	<1.0
	4/10/2015	11.26	4,731.15	<1.0	<1.0	<1.0	<1.0
	7/16/2015	8.71	4,733.70	<1.0	<1.0	<1.0	<1.0
	10/6/2015	9.30	4,733.11	<1.0	<1.0	<1.0	<1.0
	1/15/2016	10.42	4,731.99	<1.0	<1.0	<1.0	<1.0
	4/29/2016	9.80	4,732.61	<1.0	<1.0	<1.0	<1.0
	7/15/2016	10.15	4,732.26	<1.0	<1.0	<1.0	<1.0
	10/26/2016	10.30	4,732.11	<1.0	<1.0	<1.0	<1.0
	1/19/2017	10.25	4,732.16	<1.0	<1.0	<1.0	<1.0
	4/20/2017	12.71	4,729.70	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM - REMOVED FROM MONITORING					
MW03	8/22/2014	12.74	4,729.52	<1.0	<1.0	0.68	1.4
	11/20/2014	9.29	4,732.97	<0.50	<1.0	<1.0	<1.0
	1/9/2015	10.08	4,732.18	<1.0	<1.0	<1.0	<1.0
	4/10/2015	11.50	4,730.76	1.1	<1.0	<1.0	<1.0
	7/24/2015	8.04	4,734.22	<1.0	<1.0	<1.0	<1.0

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Monitoring Well	Date	Depth to Water (feet btoc)	Groundwater Elevation (AMSL)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW03	10/6/2015	8.44	4,733.82	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.46	4,732.80	<1.0	<1.0	<1.0	<1.0
	4/29/2016	8.83	4,733.43	<1.0	<1.0	<1.0	<1.0
	7/15/2016	9.29	4,732.97	<1.0	<1.0	<1.0	<1.0
	10/26/2016	9.40	4,732.86	<1.0	<1.0	<1.0	<1.0
	1/19/2017	9.20	4,733.06	<1.0	<1.0	<1.0	<1.0
	4/20/2017	11.68	4,730.58	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					
MW04	8/22/2014	9.20	4,733.02	<1.0	<1.0	<1.0	<2.0
	11/20/2014	9.89	4,732.33	<0.50	<1.0	<1.0	<1.0
	1/9/2015	10.45	4,731.77	<1.0	<1.0	<1.0	<1.0
	4/10/2015	11.50	4,730.72	<1.0	<1.0	<1.0	<1.0
	7/16/2015	8.83	4,733.39	<1.0	<1.0	<1.0	<1.0
	10/6/2015	9.46	4,732.76	<1.0	<1.0	<1.0	<1.0
	1/15/2016	10.60	4,731.62	<1.0	<1.0	<1.0	<1.0
	4/29/2016	10.06	4,732.16	<1.0	<1.0	<1.0	<1.0
	7/15/2016	10.29	4,731.93	<1.0	<1.0	<1.0	<1.0
	10/26/2016	10.48	4,731.74	<1.0	<1.0	<1.0	<1.0
	1/19/2017	10.40	4,731.82	<1.0	<1.0	<1.0	<1.0
	4/20/2017	12.87	4,729.35	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					
MW05	8/22/2014	9.19	4,733.25	869	<1.0	3.7	5.0
	11/20/2014	9.81	4,732.63	7.2	<1.0	<1.0	<1.0
	1/9/2015	10.35	4,732.09	2.6	<1.0	<1.0	<1.0
	4/10/2015	11.05	4,731.39	<1.0	<1.0	<1.0	<1.0
	7/16/2015	9.72	4,732.72	220	<1.0	<1.0	<1.0
	10/6/2015	8.23	4,734.21	<1.0	<1.0	<1.0	<1.0
	1/15/2016	NM	NM	Not sampled - monitoring well frozen/blocked			
	4/29/2016	10.48	4,731.96	<1.0	<1.0	<1.0	<1.0
	7/15/2016	10.13	4,732.31	<1.0	<1.0	<1.0	<1.0
	10/26/2016	8.92	4,733.52	<1.0	<1.0	<1.0	<1.0

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MW05	1/19/2017	8.70	4,733.74	<1.0	<1.0	<1.0	<1.0
	4/20/2017	10.82	4,730.23	<1.0	<1.0	<1.0	<2.0
	8/9/2017	7.81	4,733.24	<1.0	<1.0	<1.0	<2.0
	10/3/2017	8.00	4,733.05	<1.0	<1.0	<1.0	<2.0
	1/2/2018	8.25	4,732.80	<1.00	<1.00	<1.00	<1.00
	4/4/2018	9.33	4,731.72	<1.0	<1.0	<1.0	<2.0
	7/5/2018	8.59	4,732.46	<1.0	<1.0	<1.0	<2.0
	10/4/2018	8.96	4,732.09	<1.0	<1.0	<1.0	<2.0
	1/7/2019	9.80	4,731.25	<1.0	<1.0	<1.0	<2.0
MW06	9/25/2014	6.82	4,732.38	<1.0	<1.0	<1.0	<1.0
	11/20/2014	7.10	4,732.10	<0.50	<1.0	<1.0	<1.0
	1/9/2015	7.87	4,731.33	<1.0	<1.0	<1.0	<1.0
	4/10/2015	9.00	4,730.20	<1.0	<1.0	<1.0	<1.0
	7/16/2015	6.41	4,732.79	<1.0	<1.0	<1.0	<1.0
	10/6/2015	6.92	4,732.28	<1.0	<1.0	<1.0	<1.0
	1/15/2016	8.10	4,731.10	<1.0	<1.0	<1.0	<1.0
	4/29/2016	7.57	4,731.63	<1.0	<1.0	<1.0	<1.0
	7/15/2016	7.97	4,731.23	<1.0	<1.0	<1.0	<1.0
	10/26/2016	7.90	4,731.30	<1.0	<1.0	<1.0	<1.0
	1/19/2017	7.98	4,731.22	<1.0	<1.0	<1.0	<1.0
	4/20/2017	10.46	4,728.74	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					
MW07	9/25/2014	7.05	4,732.48	<1.0	<1.0	<1.0	<1.0
	11/20/2014	7.41	4,732.12	<0.50	<1.0	<1.0	<1.0
	1/9/2015	8.14	4,731.39	<1.0	<1.0	<1.0	<1.0
	4/10/2015	9.31	4,730.22	<1.0	<1.0	<1.0	<1.0
	7/16/2015	6.70	4,732.83	<1.0	<1.0	<1.0	<1.0
	10/6/2015	7.20	4,732.33	<1.0	<1.0	<1.0	<1.0
	1/15/2016	8.32	4,731.21	<1.0	<1.0	<1.0	<1.0
	4/29/2016	7.80	4,731.73	<1.0	<1.0	<1.0	<1.0
	7/15/2016	8.18	4,731.35	<1.0	<1.0	<1.0	<1.0
	10/26/2016	8.20	4,731.33	<1.0	<1.0	<1.0	<1.0
	1/19/2017	8.20	4,731.33	<1.0	<1.0	<1.0	<1.0
	4/20/2017	10.62	4,728.91	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					

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MW08	9/25/2014	8.10	4,732.92	117	12.6	238	4,860
	11/20/2014	8.67	4,732.35	<0.50	<1.0	<1.0	298
	1/9/2015	9.50	4,731.52	87	39	60	2,200
	4/10/2015	10.58	4,730.44	89	45	<1.0	3,300
	7/16/2015	7.33	4,733.69	<1.0	<1.0	<1.0	<1.0
	10/6/2015	8.07	4,732.66	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.63	4,731.10	<1.0	<1.0	<1.0	<1.0
	4/29/2016	9.10	4,731.63	<1.0	<1.0	<1.0	<1.0
	7/15/2016	8.88	4,731.85	<1.0	<1.0	<1.0	<1.0
	10/26/2016	9.51	4,731.22	<1.0	<1.0	<1.0	<1.0
	1/19/2017	9.47	4,731.26	<1.0	<1.0	<1.0	<1.0
	4/20/2017	11.91	4,728.82	<1.0	<1.0	<1.0	<2.0
	8/9/2017	7.72	4,733.01	<1.0	<1.0	<1.0	<2.0
	10/3/2017	8.43	4,732.30	<1.0	<1.0	<1.0	<2.0
	1/2/2018	8.90	4,731.83	3.70	<1.00	12.1	66.1
	4/4/2018	10.20	4,730.53	4.0	1.5	5.1	23
	7/5/2018	9.40	4,731.33	3.3	<1.0	26	410
	10/4/2018	9.81	4,730.92	<1.0	<1.0	<1.0	<2.0
	1/7/2019	10.64	4,730.09	<1.0	<1.0	320	1,700
MW09	9/25/2014	9.42	4,732.81	207	6,740	299	5,160
	11/20/2014	9.60	4,732.63	38.4	70.6	<1.0	782
	1/9/2015	7.90	4,731.67	34	2.7	120	5,000
	4/10/2015	11.60	4,727.97	<1.0	<1.0	<1.0	<1.0
	7/16/2015	9.32	4,730.25	14	48	<1.0	100
	10/6/2015	9.51	4,732.57	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.63	4,732.45	<1.0	<1.0	<1.0	<1.0
	4/29/2016	10.15	4,731.93	<1.0	<1.0	<1.0	9.6
	7/15/2016	10.44	4,731.64	<1.0	<1.0	<1.0	<1.0
	10/26/2016	10.55	4,731.53	170	1.8	23	900
	1/19/2017	10.50	4,731.58	<1.0	<1.0	<1.0	<1.0
	4/20/2017	12.73	4,729.35	<1.0	<1.0	<1.0	<2.0
	8/9/2017	9.52	4,732.56	<1.0	<1.0	<1.0	<2.0
	10/3/2017	9.71	4,732.37	<1.0	<1.0	<1.0	<2.0
	1/2/2018	9.91	4,732.17	<1.00	<1.00	1.26	17.0
	4/4/2018	11.13	4,730.95	<1.0	<1.0	<1.0	6.6
	7/5/2018	10.36	4,731.72	9.8	90	34	470
	10/4/2018	10.42	4,731.66	<1.0	<1.0	<1.0	<2.0
	1/7/2019	11.10	4,730.98	<1.0	<1.0	<1.0	<2.0

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Monitoring Well	Date	Depth to Water (feet btoc)	Groundwater Elevation (AMSL)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW10	1/9/2015	9.17	4,731.94	<1.0	<1.0	<1.0	<1.0
	4/10/2015	10.19	4,730.92	<1.0	<1.0	<1.0	<1.0
	7/16/2015	7.65	4,733.46	<1.0	<1.0	<1.0	<1.0
	10/6/2015	8.21	4,732.90	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.38	4,731.73	<1.0	<1.0	<1.0	<1.0
	4/29/2016	8.79	4,732.32	<1.0	<1.0	<1.0	<1.0
	7/15/2016	9.08	4,732.03	<1.0	<1.0	<1.0	<1.0
	10/26/2016	9.70	4,731.41	<1.0	<1.0	<1.0	<1.0
	1/19/2017	9.70	4,731.41	<1.0	<1.0	<1.0	<1.0
	4/20/2017	11.78	4,729.57	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					
MW11	1/9/2015	9.05	4,732.03	<1.0	<1.0	<1.0	2.1
	4/10/2015	10.03	4,731.05	<1.0	<1.0	<1.0	<1.0
	7/16/2015	7.80	4,733.28	<1.0	<1.0	<1.0	<1.0
	10/6/2015	8.10	4,732.98	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.34	4,731.74	<1.0	<1.0	<1.0	<1.0
	4/29/2016	9.60	4,731.48	<1.0	<1.0	<1.0	<1.0
	7/15/2016	8.93	4,732.15	<1.0	<1.0	<1.0	<1.0
	10/26/2016	9.10	4,731.98	<1.0	<1.0	<1.0	<1.0
	1/19/2017	9.10	4,731.98	<1.0	<1.0	<1.0	<1.0
	4/20/2017	11.52	4,729.56	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					
MW12	1/9/2015	9.15	4,731.32	<1.0	<1.0	<1.0	<1.0
	4/10/2015	10.25	4,730.22	<1.0	<1.0	<1.0	<1.0
	7/16/2015	7.35	4,733.12	<1.0	<1.0	<1.0	<1.0
	10/6/2015	7.98	4,732.49	<1.0	<1.0	<1.0	<1.0
	1/15/2016	9.29	4,731.18	<1.0	<1.0	<1.0	<1.0
	4/29/2016	8.75	4,731.72	<1.0	<1.0	<1.0	<1.0
	7/15/2016	8.83	4,731.64	<1.0	<1.0	<1.0	<1.0
	10/26/2016	9.10	4,731.37	<1.0	<1.0	<1.0	<1.0
	1/19/2017	9.02	4,731.45	<1.0	<1.0	<1.0	<1.0
	4/20/2017	11.41	4,729.06	<1.0	<1.0	<1.0	<2.0
	8/9/2017	NM -REMOVED FROM MONITORING					

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MW13	1/9/2015	9.80	4,731.35	990	220	130	3,900
	4/10/2015	10.85	4,730.30	1,100	25	<1.0	2,400
	7/16/2015	8.21	4,732.94	620	1,200	150	4,600
	10/6/2015	8.56	4,732.50	290	2,600	460	6,300
	1/15/2016	9.90	4,731.16	210	240	<1.0	3,700
	4/29/2016	9.40	4,731.66	71	59	<1.0	2,200
	7/15/2016	9.54	4,731.52	17	40	<1.0	3,100
	10/26/2016	9.75	4,731.31	3.8	2.5	7.6	3,300
	1/19/2017	9.66	4,731.40	21	1.8	<1.0	4,500
	4/20/2017	11.92	4,729.14	16	<1.0	<1.0	7,300
	8/9/2017	8.68	4,732.38	14	1.2	140	3,100
	10/3/2017	8.85	4,732.21	4.5	<1.0	<1.0	970
	1/2/2018	9.22	4,731.84	<4.00	<4.00	86.1	895
	4/4/2018	10.35	4,730.71	2.4	<1.0	74	340
	7/5/2018	9.67	4,731.39	2.9	<1.0	9.7	670
	10/4/2018	10.02	4,731.04	<1.0	<1.0	4.1	43
	1/7/2019	10.85	4,730.21	<1.0	<1.0	<1.0	<2.0
CDPHE WQCC Reg 41				5.0	560	700	1,400

NOTES:

AMSL - above mean sea level

btoc - below top of casing

µg/L - micrograms per liter

< - indicates result is less than the stated laboratory reporting limit

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B

Bold indicates result exceeds the applicable standard

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environment-Water Quality Control Commission
Regulation 41- The Basic Standards for Ground Water

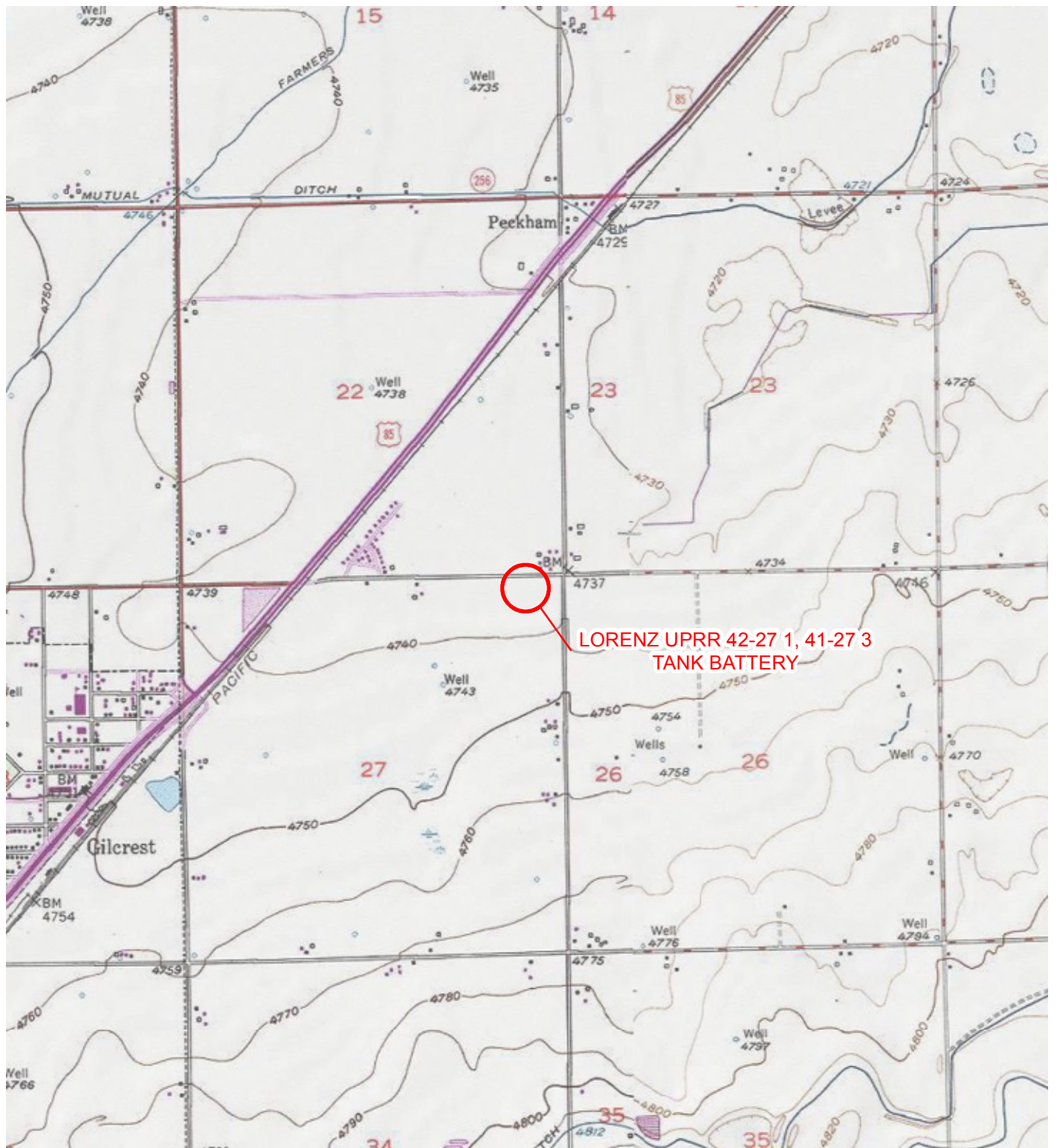


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

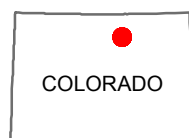
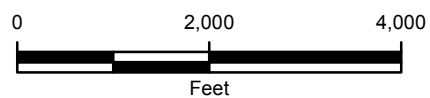
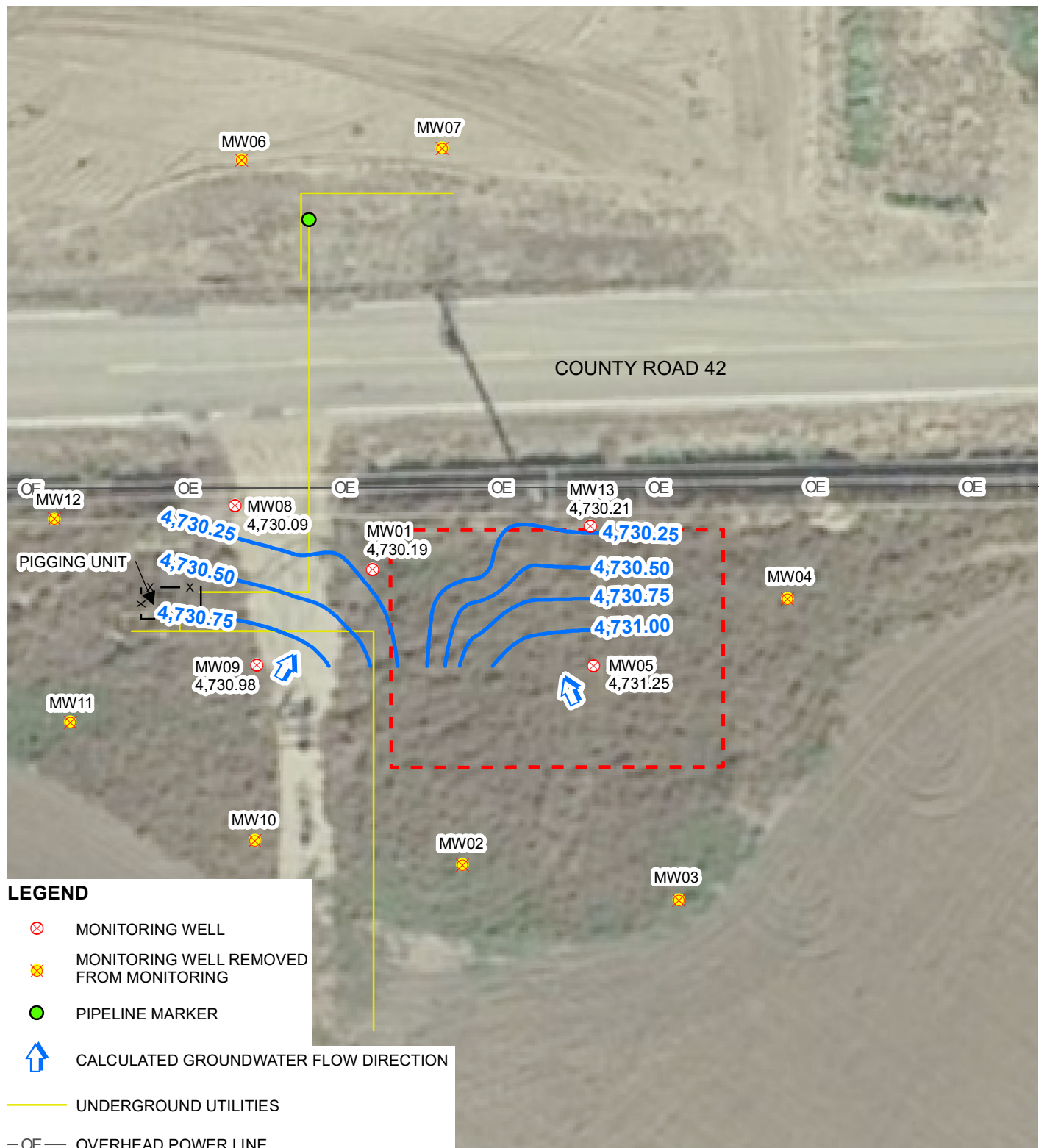


FIGURE 1
SITE LOCATION MAP
LORENZ UPRR 42-27 1, 41-27 3 TANK BATTERY
NENE SEC 27-T4N-R66W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.





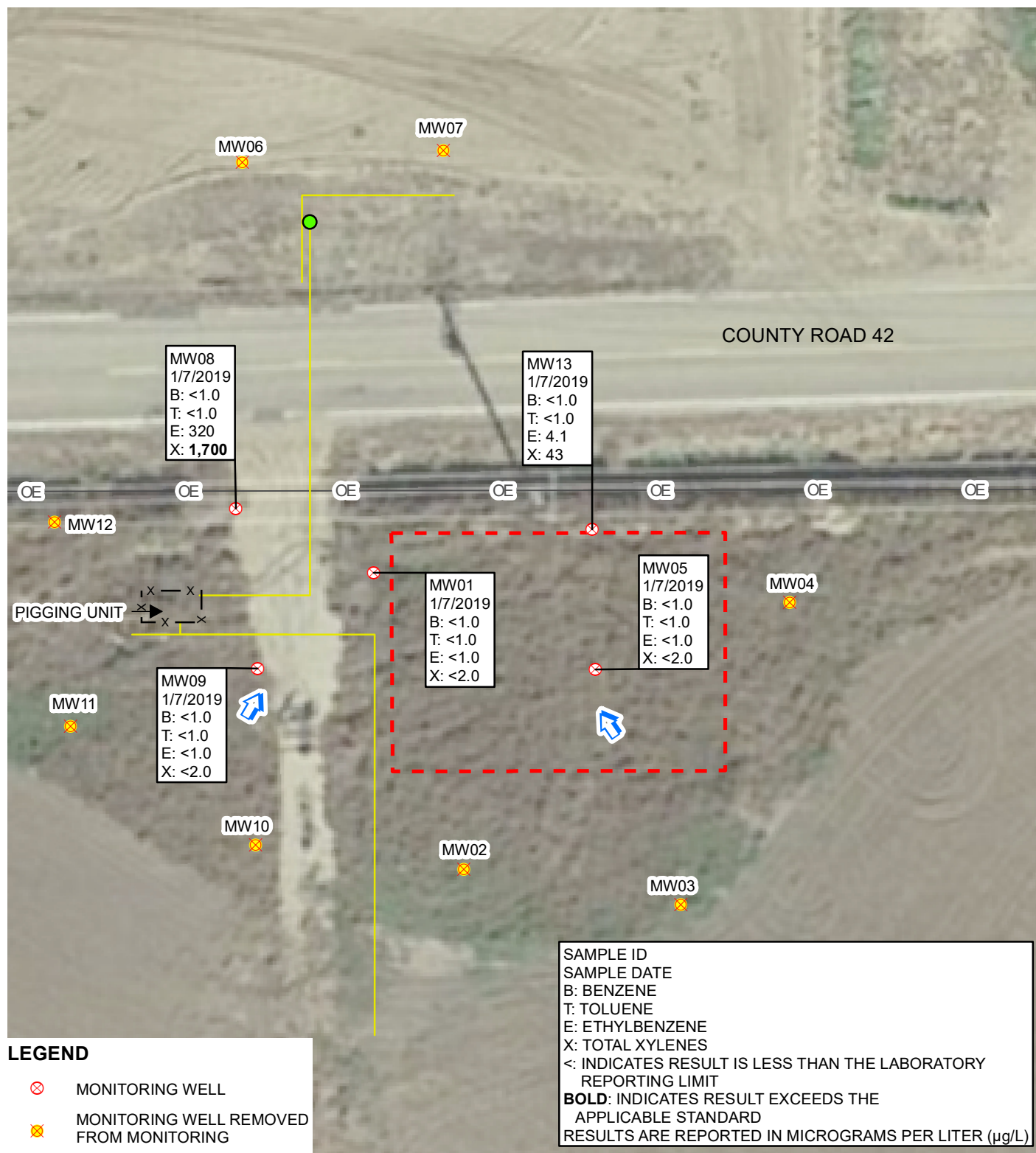


IMAGE COURTESY OF GOOGLE EARTH 2017

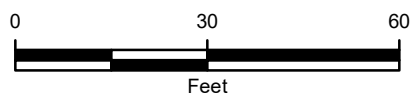


FIGURE 3
GROUNDWATER ANALYTICAL RESULTS
LORENZ UPRR 42-27 1, 41-27 3 TANK BATTERY
NENE SEC 27-T4N-R66W
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 14, 2019

Jeremy Pike

LT Environmental, Inc.

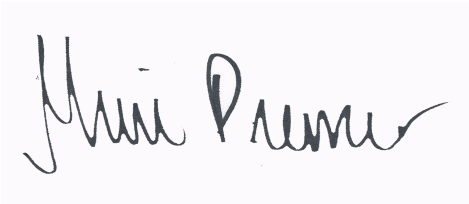
4600 West 60th Avenue

Arvada, CO 80003

RE: Noble - Lorenz UPRR 42-27 1, 41-27 3

Enclosed are the results of analyses for samples received by Summit Scientific on 01/07/19 16:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is cursive and reads "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023

Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW05	1901070-01	Water	01/07/19 12:43	01/07/19 16:22
MW08	1901070-02	Water	01/07/19 13:15	01/07/19 16:22
MW09	1901070-03	Water	01/07/19 13:55	01/07/19 16:22
MW13	1901070-04	Water	01/07/19 13:00	01/07/19 16:22
MW01	1901070-05	Water	01/07/19 13:45	01/07/19 16:22

Summit Scientific

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Summit Scientific

1901070

741 Corporate Circle Suite I ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: LT Environmental, Inc.
Address: 4600 West 60th Ave
City/State/Zip: Arvada, CO 80003
Phone: 303-433-9788 Fax: 303-433-1432
Sampler Name: Drew Bullyer

Project Manager: Jeremy Pike
E-Mail: Noble Remediation Team
Project Name: Lorenz UPRR 42-27 1, 41-27 3
Project Number: 008314023

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:												Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX														
MW05	1/7/19	12:43	3			X		X					X												Decant all samples	
MW08	1/7/19	13:15	3			X		X					X													
MW09	1/7/19	13:55	2			X		X					X													
MW13	1/7/19	13:06	3			X		X					X													
MW01	1/7/19	13:45	3			X		X					X													
Relinquished by: <u>Drew Bullyer</u>				Date/Time: <u>1/7/19 16:22</u>		Received by: <u>[Signature]</u>				Date/Time: <u>1-7-19 16:22</u>		Turn Around Time (Check)												Notes: Invoice Jacob		
Relinquished by:				Date/Time:		Received by:				Date/Time:		Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>														
Relinquished by:				Date/Time:		Received in Lab by:				Date/Time:		Sample Integrity: Temperature Upon Receipt: <u>1.4</u> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

Sample Receipt Checklist

S2 Work Order 1901070

Client: LTE Client Project ID: Lorenz UPRR 42-271, 41-273

Shipped Via H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>1.4</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input 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"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form 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 w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

DT
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

1-7-19 16:22
Date/Time



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

MW05
1901070-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 12:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1901073	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/19 12:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.7 %	21-167		"	"	"	"	

Summit Scientific

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.



LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

MW08
1901070-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 13:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1901073	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	320	1.0	"	"	"	"	"	"	
Xylenes (total)	1700	20	"	10	"	"	"	"	

Date Sampled: **01/07/19 13:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

MW09
1901070-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1901073	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/19 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.7 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

MW13
1901070-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1901073	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/19 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.0 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

MW01
1901070-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/07/19 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	1901073	01/08/19	01/10/19	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **01/07/19 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.0 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1901073 - EPA 5030 Water MS

Blank (1901073-BLK1)

Prepared: 01/08/19 Analyzed: 01/09/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.1		"	13.3		98.3	23-173			
Surrogate: Toluene-d8	18.3		"	13.3		138	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	21-167			

LCS (1901073-BS1)

Prepared: 01/08/19 Analyzed: 01/09/19

Benzene	33.1	1.0	ug/l	41.7		79.4	70-130			
Toluene	35.3	1.0	"	41.7		84.8	70-130			
Ethylbenzene	34.4	1.0	"	41.7		82.5	70-130			
m,p-Xylene	63.3	2.0	"	83.3		75.9	70-130			
o-Xylene	31.7	1.0	"	41.7		76.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	14.3		"	13.3		107	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.4	20-170			
Surrogate: 4-Bromofluorobenzene	8.49		"	13.3		63.7	21-167			

Matrix Spike (1901073-MS1)

Source: 1901070-01

Prepared: 01/08/19 Analyzed: 01/10/19

Benzene	36.9	1.0	ug/l	41.7	ND	88.6	70-130			
Toluene	39.9	1.0	"	41.7	ND	95.7	70-130			
Ethylbenzene	42.0	1.0	"	41.7	ND	101	70-130			
m,p-Xylene	83.1	2.0	"	83.3	ND	99.8	70-130			
o-Xylene	39.7	1.0	"	41.7	ND	95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.7	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1901073 - EPA 5030 Water MS

Matrix Spike Dup (1901073-MSD1)		Source: 1901070-01			Prepared: 01/08/19 Analyzed: 01/10/19					
Benzene	38.7	1.0	ug/l	41.7	ND	93.0	70-130	4.79	30	
Toluene	41.3	1.0	"	41.7	ND	99.1	70-130	3.52	30	
Ethylbenzene	43.4	1.0	"	41.7	ND	104	70-130	3.44	30	
m,p-Xylene	85.6	2.0	"	83.3	ND	103	70-130	2.96	30	
o-Xylene	40.5	1.0	"	41.7	ND	97.1	70-130	2.00	30	
Surrogate: 1,2-Dichloroethane-d4	15.0		"	13.3		113	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.5	21-167			

Summit Scientific

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO, 80003

Project: Noble - Lorenz UPRR 42-27 1, 41-27 3

Project Number: 0083-14023
Project Manager: Jeremy Pike

Reported:
01/14/19 10:02

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference