

FREMONT ENVIRONMENTAL INC.

August 16, 2017

Mr. Jacob Evans
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Ground Water Data Submittal**
 Libsack R G27-15
 SWSE Sec 27, T4N, R65W
 API # 05-123-13256
 Weld County, Colorado
 Fremont Project No. C013-009
 Facility ID# 323601, Remediation #7871

Dear Mr. Jacobs:

Enclosed please find a copy of the above referenced Ground Water Data Submittal for the Libsack R G27-15 site in Weld County, Colorado. The enclosed report describes monitoring and sampling efforts to assess ground water quality at the site.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Enclosure

TABLE 1
SUMMARY OF GROUND WATER ELEVATION DATA AND CHEMISTRY DATA
NOBLE ENERGY INC.
LIBSACK R G27-15, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C013-009

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	06/14/13	<1.0	<1.0	<1.0	<1.0	99.89	2.93	96.96	NP
	06/24/13	NS	NS	NS	NS		2.66	97.23	NP
	07/09/13	NS	NS	NS	NS		2.53	97.36	NP
	07/19/13	NS	NS	NS	NS		Inundated	Inundated	Inundated
	10/18/13	<1	<1	<1	<1		1.66	98.23	NP
	01/13/14	<1	<1	<1	<1		2.25	97.64	NP
	04/02/14	<1	<1	<1	<1		2.74	97.15	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.52	97.37	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.86	98.03	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.87	98.02	NP
04/20/15	<1.0	<1.0	<1.0	<1.0	2.11	97.78	NP		
MW-2	06/14/13	<1.0	<1.0	<1.0	<1.0	100.00	3.01	96.99	NP
	06/24/13	NS	NS	NS	NS		2.75	97.25	NP
	07/09/13	NS	NS	NS	NS		2.62	97.38	NP
	07/19/13	NS	NS	NS	NS		1.95	98.05	NP
	10/18/13	<1	<1	<1	<1		1.75	98.25	NP
	01/13/14	<1	<1	<1	<1		2.36	97.64	NP
	04/02/14	<1	<1	<1	<1		2.82	97.18	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.61	97.39	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.97	98.03	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.97	98.03	NP
04/20/15	<1.0	<1.0	<1.0	<1.0	2.20	97.80	NP		
MW-3	06/14/13	<1.0	<1.0	<1.0	<1.0	99.92	3.05	96.87	NP
	06/24/13	NS	NS	NS	NS		2.78	97.14	NP
	07/09/13	NS	NS	NS	NS		2.65	97.27	NP
	07/19/13	NS	NS	NS	NS		2.02	97.90	NP
	10/18/13	1.3	<1	<1	<1		1.88	98.04	NP
	01/13/14	<1	<1	<1	<1		2.40	97.52	NP
	04/02/14	<1	<1	<1	<1		2.84	97.08	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.66	97.26	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		2.02	97.90	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		2.04	97.88	NP
04/20/15	<1.0	<1.0	<1.0	<1.0	2.27	97.65	NP		
MW-4	06/14/13	4,523	<1.0	<1.0	168	99.47	2.69	96.78	NP
	06/24/13	NS	NS	NS	NS		2.42	97.05	NP
	07/09/13	868	<1.0	<1.0	<1.0		2.28	97.19	NP
	07/19/13	NS	NS	NS	NS		1.61	97.86	NP
	10/18/13	<1	<1	<1	<1		1.46	98.01	NP
	01/13/14	<1	<1	<1	<1		2.07	97.40	NP
	04/02/14	33.1	<1	<1	<1		2.55	96.92	NP
	07/15/14	6.4	<1.0	<1.0	<1.0		2.31	97.16	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.68	97.79	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.71	97.76	NP
04/20/15	1.6	<1.0	<1.0	<1.0	1.94	97.53	NP		
MW-5	06/14/13	494	<1.0	1.8	15.7	99.29	2.68	96.61	NP
	06/24/13	NS	NS	NS	NS		2.39	96.90	NP
	07/09/13	535	<1.0	<1.0	<1.0		2.26	97.03	NP
	07/19/13	NS	NS	NS	NS		Inundated	Inundated	Inundated
	10/18/13	<1	<1	<1	<1		1.31	97.98	NP
	01/13/14	<1	<1	<1	<1		2.01	97.28	NP
	04/02/14	<1	<1	<1	<1		2.49	96.80	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.26	97.03	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.65	97.64	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.66	97.63	NP
04/20/15	<1.0	<1.0	<1.0	<1.0	1.89	97.40	NP		

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)	
MW-6	06/14/13	<1.0	<1.0	<1.0	<1.0	99.66	3.01	96.65	NP	
	06/24/13	NS	NS	NS	NS		2.74	96.92	NP	
	07/09/13	NS	NS	NS	NS		2.61	97.05	NP	
	07/19/13	NS	NS	NS	NS		2.01	97.65	NP	
	10/18/13	<1	<1	<1	<1		1.79	97.87	NP	
	01/13/14	2.9	<1	<1	<1		1.33	98.33	NP	
	04/02/14	258	<1	<1	<1		2.82	96.84	NP	
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.61	97.05	NP	
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.98	97.68	NP	
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.99	97.67	NP	
	04/20/15	<1.0	<1.0	<1.0	<1.0		2.23	97.43	NP	
	07/20/15	<1.0	<1.0	<1.0	<1.0		2.38	97.28	NP	
	10/28/15	<1.0	<1.0	<1.0	<1.0		1.86	97.80	NP	
	01/29/16	<1.0	<1.0	<1.0	<1.0		3.07	96.59	NP	
	04/28/16	<1.0	<1.0	<1.0	<1.0		1.81	97.85	NP	
	07/26/16	<1.0	<1.0	<1.0	<1.0		2.74	96.92	NP	
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.93	97.73	NP	
01/06/17	<1.0	<1.0	<1.0	<1.0	3.01	96.65	NP			
04/05/17	<1.0	<1.0	<1.0	<1.0	3.39	96.27	NP			
07/25/17	<1.0	<1.0	<1.0	2.0	3.25	96.41	NP			
MW-7	06/14/13	1,063	27.8	<1.0	104	99.38	2.72	96.66	NP	
	06/24/13	NS	NS	NS	NS		2.43	96.95	NP	
	07/09/13	2,226	100	58.9	164		2.3	97.08	NP	
	07/19/13	NS	NS	NS	NS		1.76	97.62	NP	
	10/18/13	108	<1	3.9	1.9		1.44	97.94	NP	
	01/13/14	<1	<1	<1	<1		2.02	97.36	NP	
	04/02/14	<1	<1	<1	<1		2.47	96.91	NP	
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.28	97.10	NP	
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.63	97.75	NP	
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.64	97.74	NP	
	04/20/15	NF	NF	NF	NF		NF	NF	NF	NF
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.19	98.19	NP	
	10/28/15	<1.0	<1.0	<1.0	<1.0		0.67	98.71	NP	
	01/29/16	Damaged	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged	Damaged
	03/17/16	<1.0	<1.0	<1.0	<1.0		NM	NM	NP	
	04/28/16	<1.0	<1.0	<1.0	<1.0		too shallow	too shallow	NP	
	07/26/16	<1.0	<1.0	<1.0	<1.0		1.80	97.58	NP	
10/18/16	<1.0	<1.0	<1.0	<1.0	0.98	98.40	NP			
01/06/17	<1.0	<1.0	<1.0	<1.0	2.07	97.31	NP			
04/05/17	<1.0	<1.0	<1.0	<1.0	2.46	96.92	NP			
07/25/17	<1.0	<1.0	<1.0	<1.0	2.34	97.04	NP			
MW-8	06/14/13	<1.0	<1.0	<1.0	<1.0	99.46	2.69	96.77	NP	
	06/24/13	NS	NS	NS	NS		2.39	97.07	NP	
	07/09/13	NS	NS	NS	NS		2.27	97.19	NP	
	07/19/13	NS	NS	NS	NS		Inundated	Inundated	Inundated	
	10/18/13	<1	<1	<1	<1		1.79	97.67	NP	
	01/13/14	<1	<1	<1	<1		2.08	97.38	NP	
	04/02/14	<1	<1	<1	<1		2.46	97.00	NP	
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.25	97.21	NP	
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.69	97.77	NP	
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.71	97.75	NP	
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.93	97.53	NP	
MW-9	06/14/13	<1.0	<1.0	<1.0	<1.0	99.51	3.05	96.46	NP	
	06/24/13	NS	NS	NS	NS	99.03	2.25	96.78	NP	
	07/09/13	NS	NS	NS	NS	2.14	96.89	NP		
	07/19/13	NS	NS	NS	NS	1.18	97.85	NP		
	10/18/13	<1	<1	<1	<1	1.28	97.75	NP		
	01/13/14	<1	<1	<1	<1	1.82	97.69	NP		
	04/02/14	<1	<1	<1	<1	2.31	96.72	NP		
	07/15/14	<1.0	<1.0	<1.0	<1.0	2.11	97.40	NP		
	10/07/14	<1.0	<1.0	<1.0	<1.0	1.44	98.07	NP		
	01/20/15	<1.0	<1.0	<1.0	<1.0	1.46	97.57	NP		

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-9	04/20/15	<1.0	<1.0	<1.0	<1.0		1.69	97.34	NP
MW-10	06/14/13	<1.0	<1.0	<1.0	<1.0	100.01	3.61	96.40	NP
	06/24/13	NS	NS	NS	NS	99.44	2.7	96.74	NP
	07/09/13	NS	NS	NS	NS		2.59	96.85	NP
	07/19/13	NS	NS	NS	NS		1.89	97.55	NP
	10/18/13	<1	<1	<1	<1		1.73	97.71	NP
	01/13/14	<1	<1	<1	<1		2.29	97.72	NP
	04/02/14	<1	<1	<1	<1		2.76	96.68	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.54	97.47	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.91	98.10	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.92	97.52	NP
04/20/15	<1.0	<1.0	<1.0	<1.0		2.16	97.28	NP	
MW-11	06/14/13	<1.0	<1.0	<1.0	<1.0	100.50	4.1	96.40	NP
	06/24/13	NS	NS	NS	NS	99.98	3.23	96.75	NP
	07/09/13	NS	NS	NS	NS		3.12	96.86	NP
	07/19/13	NS	NS	NS	NS		2.48	97.50	NP
	10/18/13	<1	<1	<1	<1		2.24	97.74	NP
	01/13/14	<1	<1	<1	<1		2.82	97.68	NP
	04/02/14	<1	<1	<1	<1		3.31	96.67	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		3.42	97.08	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		2.43	98.07	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		2.44	97.54	NP
04/20/15	<1.0	<1.0	<1.0	<1.0		2.67	97.31	NP	
MW-12	07/09/13	<1.0	<1.0	<1.0	<1.0	99.68	2.62	97.06	NP
	07/19/13	NS	NS	NS	NS		2.14	97.54	NP
	10/18/13	<1	<1	<1	<1		1.74	97.94	NP
	01/13/14	<1	<1	<1	<1		2.32	97.36	NP
	04/02/14	<1	<1	<1	<1		2.81	96.87	NP
	07/15/14	WD	WD	WD	WD		WD	WD	WD
	01/20/15	<1.0	<1.0	<1.0	<1.0		WD	WD	NP
04/20/15	NF	NF	NF	NF		NF	NF	NF	
MW-13	07/09/13	71.1		160	2,606	99.76	2.78	96.98	NP
	07/19/13	NS	NS	NS	NS		2.28	97.48	NP
	10/18/13	131	<1	9.4	200		1.93	97.83	NP
	01/13/14	112	<1	91.7	4.3		2.51	97.25	NP
	04/02/14	75.5	1.7	47.9	125		3.07	96.69	NP
	07/15/14	71.2	<1.0	31.4	168		2.84	96.92	NP
	10/07/14	96.9	<1.0	56.6	2.1		1.19	98.57	NP
	01/20/15	100	<1.0	129	13.5		1.20	98.56	NP
	04/20/15	130	<1.0	92	<1.0		1.44	98.32	NP
	07/20/15	70	<1.0	7.2	<1.0		2.58	97.18	NP
	10/28/15	30	<1.0	2.4	<1.0		2.06	97.70	NP
	01/29/16	63	<1.0	22	<1.0		3.28	96.48	NP
	04/28/16	34	<1.0	7.2	<1.0		2.02	97.74	NP
	07/26/16	13	<1.0	<1.0	<1.0		2.95	96.81	NP
	10/18/16	18	<1.0	1.5	<1.0		2.14	97.62	NP
01/06/17	46	<1.0	9.1	<1.0		3.22	96.54	NP	
04/05/17	25	<1.0	1.0	<1.0		3.62	96.14	NP	
07/25/17	<1.0	<1.0	<1.0	<1.0		3.51	96.25	NP	
MW-14	07/09/13	9.2		1.6	16.8	99.42	2.5	96.92	NP
	07/19/13	NS	NS	NS	NS		1.96	97.46	NP
	10/18/13	10.6	<1	<1	<1		1.63	97.79	NP
	01/13/14	1.2	<1	<1	<1		2.28	97.14	NP
	04/02/14	2	<1	<1	4		2.78	96.64	NP
	07/15/14	1.6	<1.0	<1.0	1.5		2.58	96.84	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.92	97.50	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.94	97.48	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		2.17	97.25	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		2.41	97.01	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		1.89	97.53	NP
01/29/16	<1.0	<1.0	<1.0	<1.0		3.11	96.31	NP	

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-14	04/28/16	<1.0	<1.0	<1.0	<1.0		1.85	97.57	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		2.78	96.64	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.97	97.45	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		3.05	96.37	NP
	04/05/17	<1.0	<1.0	<1.0	<1.0		3.43	95.99	NP
	07/25/17	<1.0	<1.0	<1.0	<1.0		3.24	96.18	NP
MW-15	07/09/13	<1.0	<1.0	<1.0	<1.0	99.59	2.68	96.91	NP
	07/19/13	NS	NS	NS	NS		2.12	97.47	NP
	10/18/13	<1	<1	<1	<1		1.82	97.77	NP
	01/13/14	<1	<1	<1	<1		2.39	97.20	NP
	04/02/14	<1	<1	<1	<1		2.88	96.71	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.65	96.94	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		2.01	97.58	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		2.03	97.56	NP
04/20/15	<1.0	<1.0	<1.0	<1.0		2.26	97.33	NP	
MW-16	07/09/13	177		394	5,089	99.18	2.3	96.88	NP
	07/19/13	NS	NS	NS	NS		1.74	97.44	NP
	10/18/13	166	<1	104	405		1.41	97.77	NP
	01/13/14	249	<1	268	1733		2.02	97.16	NP
	04/02/14	149	3.1	127	852		2.49	96.69	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.29	96.89	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.61	97.57	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.62	97.56	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.85	97.33	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		2.06	97.12	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		1.53	97.65	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		2.75	96.43	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		1.50	97.68	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		2.43	96.75	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.63	97.55	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		2.72	96.46	NP
04/05/17	<1.0	<1.0	<1.0	<1.0		3.10	96.08	NP	
07/25/17	<1.0	<1.0	<1.0	<1.0		2.99	96.19	NP	
MW-17	07/09/13	851		390	9,256	99.45	2.5	96.95	NP
	07/19/13	NS	NS	NS	NS		2.02	97.43	NP
	10/18/13	961	<1	82.2	8473		1.43	98.02	NP
	01/13/14	455	<1	101	4781		2.19	97.26	NP
	04/02/14	435	4.4	69.1	5184		2.69	96.76	NP
	07/15/14	1081	<1.0	106	5741		2.46	96.99	NP
	10/07/14	461	<1.0	247	2008		1.85	97.60	NP
	01/20/15	212	2.3	181	1844		1.86	97.59	NP
	04/20/15	26	<1.0	4.4	140		2.19	97.26	NP
	07/20/15	280	<1.0	21	130		2.27	97.18	NP
	10/28/15	77	<1.0	29	54		1.75	97.70	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		2.97	96.48	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		1.70	97.75	NP
	07/26/16	16	<1.0	1.8	18		2.64	96.81	NP
	10/18/16	71	<1.0	2.9	17		1.83	97.62	NP
	01/06/17	91	<1.0	7.2	5.5		2.91	96.54	NP
04/05/17	50	<1.0	4.1	<1.0		3.28	96.17	NP	
07/25/17	3.1	<1.0	<1.0	<1.0		3.16	96.29	NP	
MW-18	07/09/13	<1.0	<1.0	<1.0	<1.0	98.28	1.54	96.74	NP
	07/19/13	NS	NS	NS	NS		1.02	97.26	NP
	10/18/13	<1	<1	<1	<1		0.66	97.62	NP
	01/13/14	<1	<1	<1	<1		1.15	97.13	NP
	04/02/14	<1	<1	<1	<1		1.68	96.60	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		1.49	96.79	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		0.81	97.47	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		0.83	97.45	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.06	97.22	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.29	96.99	NP
10/28/15	<1.0	<1.0	<1.0	<1.0		0.76	97.52	NP	

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-18	01/29/16	<1.0	<1.0	<1.0	<1.0		1.98	96.30	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		too shallow	too shallow	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		1.81	96.47	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.00	97.28	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		2.09	96.19	NP
	04/05/17	<1.0	<1.0	<1.0	<1.0		2.47	95.81	NP
	07/25/17	<1.0	<1.0	<1.0	<1.0		2.36	95.92	NP
MW-19	07/09/13	<1.0	<1.0	<1.0	<1.0	98.47	1.71	96.76	NP
	07/19/13	NS	NS	NS	NS		1.1	97.37	NP
	10/18/13	<1	<1	<1	<1		1.78	96.69	NP
	01/13/14	<1	<1	<1	<1		1.33	97.14	NP
	04/02/14	<1	<1	<1	<1		1.84	96.63	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		1.65	96.82	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		0.99	97.48	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.01	97.46	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.24	97.23	NP
MW-20	07/19/13	<1.0	<1.0	<1.0	<1.0	99.40	1.33	98.07	NP
	10/18/13	<1	<1	<1	<1		1.51	97.89	NP
	01/13/14	<1	<1	<1	<1		2.11	97.29	NP
	04/02/14	<1	<1	<1	<1		2.57	96.83	NP
	07/15/14	8.4	<1.0	<1.0	<1.0		2.32	97.08	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.70	97.70	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.71	97.69	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.95	97.45	NP
MW-21	07/19/13	<1.0	<1.0	<1.0	<1.0	99.31	1.67	97.64	NP
	10/18/13	<1	<1	<1	<1		1.51	97.80	NP
	01/13/14	<1	<1	<1	<1		2.10	97.21	NP
	04/02/14	<1	<1	<1	<1		2.56	96.75	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.33	96.98	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.71	97.60	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.73	97.58	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.96	97.35	NP
MW-22	07/19/13	<1.0	<1.0	<1.0	<1.0	99.12	2.01	97.11	NP
	10/18/13	<1	<1	<1	<1		1.73	97.39	NP
	01/13/14	<1	<1	<1	<1		2.01	97.11	NP
	04/02/14	<1	<1	<1	<1		2.49	96.63	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.30	96.82	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.85	97.27	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.86	97.26	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		2.09	97.03	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.10	98.02	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		0.59	98.53	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		1.79	97.33	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		too shallow	too shallow	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		1.80	97.32	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		0.99	98.13	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		2.07	97.05	NP
04/05/17	<1.0	<1.0	<1.0	<1.0		2.45	96.67	NP	
07/25/17	<1.0	<1.0	<1.0	<1.0		2.34	96.78	NP	
MW-23	07/19/13	<1.0	<1.0	<1.0	<1.0	98.77	1.41	97.36	NP
	10/18/13	<1	<1	<1	<1		0.98	97.79	NP
	01/13/14	<1	<1	<1	<1		1.52	97.25	NP
	04/02/14	<1	<1	<1	<1		2.01	96.76	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		1.82	96.95	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		1.16	97.61	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.18	97.59	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.42	97.35	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.62	97.15	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		1.10	97.67	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		2.32	96.45	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		1.06	97.71	NP

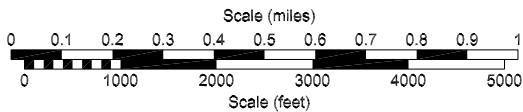
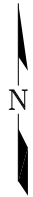
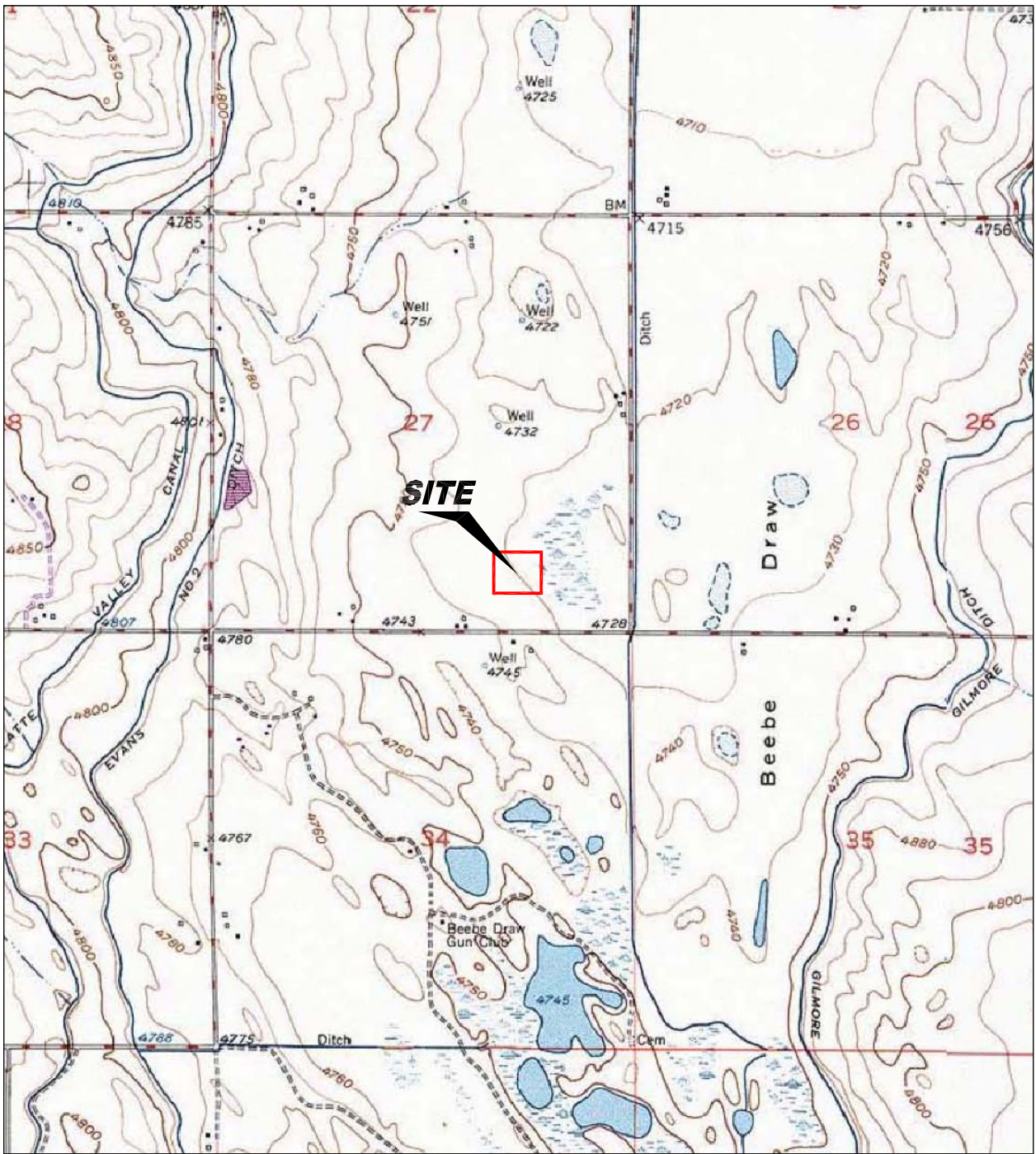
SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-23	07/26/16	<1.0	<1.0	<1.0	<1.0		1.99	96.78	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.19	97.58	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		2.27	96.50	NP
	04/05/17	<1.0	<1.0	<1.0	<1.0		2.63	96.14	NP
	07/25/17	<1.0	<1.0	<1.0	<1.0		2.53	96.24	NP
MW-24	07/19/13	2.4	<1.0	36.6	1,364	99.08	1.57	97.51	NP
	10/18/13	<1	<1	<1	<1		1.2	97.88	NP
	01/13/14	3.3	<1	23.7	64.4		1.74	97.34	NP
	04/02/14	1.9	<1	10.3	35.7		2.23	96.85	NP
	07/15/14	<1.0	<1.0	4.0	1.4		2.01	97.07	NP
	10/07/14	<1.0	<1.0	<1.0	1.5		1.40	97.68	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.39	97.69	NP
	04/20/15	<1.0	<1.0	<1.0	4.6		1.62	97.46	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.82	97.26	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		1.30	97.78	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		2.51	96.57	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		1.25	97.83	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		2.18	96.90	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.36	97.72	NP
	01/06/17	2.3	<1.0	<1.0	6.4		2.49	96.59	NP
04/05/17	2.3	<1.0	3.6	30		2.84	96.24	NP	
07/25/17	<1.0	<1.0	<1.0	<1.0		2.75	96.33	NP	
MW-25	07/19/13	803	<1.0	473	10,322	99.36	1.96	97.40	NP
	10/18/13	435	<1	119	1572		1.49	97.87	NP
	01/13/14	47.8	<1	6.3	159		2.03	97.33	NP
	04/02/14	44.1	<1	24.3	200		2.58	96.78	NP
	07/15/14	115	<1.0	39.2	120		2.35	97.01	NP
	10/07/14	57.1	<1.0	9.3	12.1		1.69	97.67	NP
	01/20/15	36.2	<1.0	5.1	44.6		1.71	97.65	NP
	04/20/15	16	<1.0	1.2	5.0		1.94	97.42	NP
	07/20/15	5.8	<1.0	<1.0	<1.0		2.15	97.21	NP
	10/28/15	13	<1.0	<1.0	<1.0		1.63	97.73	NP
	01/29/16	Damaged	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged
	03/17/16	83	<1.0	2.1	24		NM	NM	NP
	04/28/16	7.3	<1.0	<1.0	4.0		too shallow	too shallow	NP
	07/26/16	2.7	<1.0	<1.0	<1.0		1.80	97.56	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		0.98	98.38	NP
01/06/17	<1.0	<1.0	<1.0	<1.0		2.07	97.29	NP	
04/05/17	51	<1.0	2.1	18		2.46	96.90	NP	
07/25/17	1.4	<1.0	<1.0	<1.0		2.34	97.02	NP	
MW-26	07/19/13	198	<1.0	344	2,547	99.30	1.88	97.42	NP
	10/18/13	109	<1	83.9	894		1.49	97.81	NP
	01/13/14	<1	<1	<1	<1		2.01	97.29	NP
	04/02/14	<1	<1	<1	<1		2.54	96.76	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		2.29	97.01	NP
	10/07/14	2.7	<1.0	<1.0	1.2		1.64	97.66	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		1.65	97.65	NP
	04/20/15	13	<1.0	2.0	8.0		1.88	97.42	NP
	07/20/15	3.1	<1.0	<1.0	<1.0		2.11	97.19	NP
	10/28/15	20	<1.0	13	49		1.60	97.70	NP
	01/29/16	Damaged	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged
	03/17/16	23	<1.0	2.2	59		NM	NM	NP
	04/28/16	60	<1.0	20	110		too shallow	too shallow	NP
	07/26/16	40	<1.0	6.3	17		1.79	97.51	NP
	10/18/16	2.8	<1.0	10	190		0.98	98.32	NP
01/06/17	29	<1.0	5.2	57		2.06	97.24	NP	
04/05/17	38	<1.0	6.5	75		2.44	96.86	NP	
07/25/17	<1.0	<1.0	<1.0	<1.0		2.21	97.09	NP	
MW-27	07/19/13	<1.0	<1.0	<1.0	<1.0	98.40	0.91	97.49	NP
	10/18/13	<1	<1	<1	<1		0.7	97.70	NP
	01/13/14	<1	<1	<1	<1		1.23	97.17	NP
	04/02/14	<1	<1	<1	<1		1.73	96.67	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-27	07/15/14	<1.0	<1.0	<1.0	<1.0		3.41	94.99	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		0.87	97.53	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		0.89	97.51	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.12	97.28	NP
MW-28	07/19/13	<1.0	<1.0	<1.0	<1.0	98.64	1.14	97.50	NP
	10/18/13	<1	<1	<1	<1		0.79	97.85	NP
	01/13/14	<1	<1	<1	<1		1.28	97.36	NP
	04/02/14	<1	<1	<1	<1		1.79	96.85	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		1.59	97.05	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		0.95	97.69	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		0.96	97.68	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		1.19	97.45	NP
	07/20/15	<1.0	<1.0	<1.0	<1.0		1.38	97.26	NP
	10/28/15	<1.0	<1.0	<1.0	<1.0		0.87	97.77	NP
	01/29/16	<1.0	<1.0	<1.0	<1.0		2.07	96.57	NP
	04/28/16	<1.0	<1.0	<1.0	<1.0		too shallow	too shallow	NP
	07/26/16	<1.0	<1.0	<1.0	<1.0		1.82	96.82	NP
	10/18/16	<1.0	<1.0	<1.0	<1.0		1.81	96.83	NP
	01/06/17	<1.0	<1.0	<1.0	<1.0		2.88	95.76	NP
	04/05/17	<1.0	<1.0	<1.0	<1.0		2.49	96.15	NP
07/25/17	<1.0	<1.0	<1.0	<1.0		2.27	96.37	NP	
MW-29	07/19/13	<1.0	<1.0	<1.0	<1.0	101.04	3.45	97.59	NP
	10/18/13	<1	<1	<1	<1		3.03	98.01	NP
	01/13/14	<1	<1	<1	<1		3.58	97.46	NP
	04/02/14	<1	<1	<1	<1		4.13	96.91	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		3.96	97.08	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		3.32	97.72	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		NF	NF	NP
	04/20/15	NF	NF	NF	NF		NF	NF	NF
MW-30	07/19/13	<1.0	<1.0	<1.0	<1.0	100.22	2.73	97.49	NP
	10/18/13	<1	<1	<1	<1		2.3	97.92	NP
	01/13/14	<1	<1	<1	<1		2.82	97.40	NP
	04/02/14	<1	<1	<1	<1		3.35	96.87	NP
	07/15/14	<1.0	<1.0	<1.0	<1.0		3.22	97.00	NP
	10/07/14	<1.0	<1.0	<1.0	<1.0		2.59	97.63	NP
	01/20/15	<1.0	<1.0	<1.0	<1.0		2.61	97.61	NP
	04/20/15	<1.0	<1.0	<1.0	<1.0		2.94	97.28	NP
Table 910-1 Limits		5	560	700	1,400				

Bold face values exceed the COGCC limits

NP - No Free Product

NS- Not Sampled



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Lipsack R G27-15
SW SE Section 27, T4N, R65W
Weld County, Colorado

Project No. C013-009	Prepared by	Drawn by JMA
Date 5/21/13	Reviewed by	Filename 13009T





LEGEND






-  MONITORING WELL
-  PIPELINE
-  FENCE LINE
-  ABOVE GROUND STORAGE TANK
-  SOIL SAMPLE LOCATION

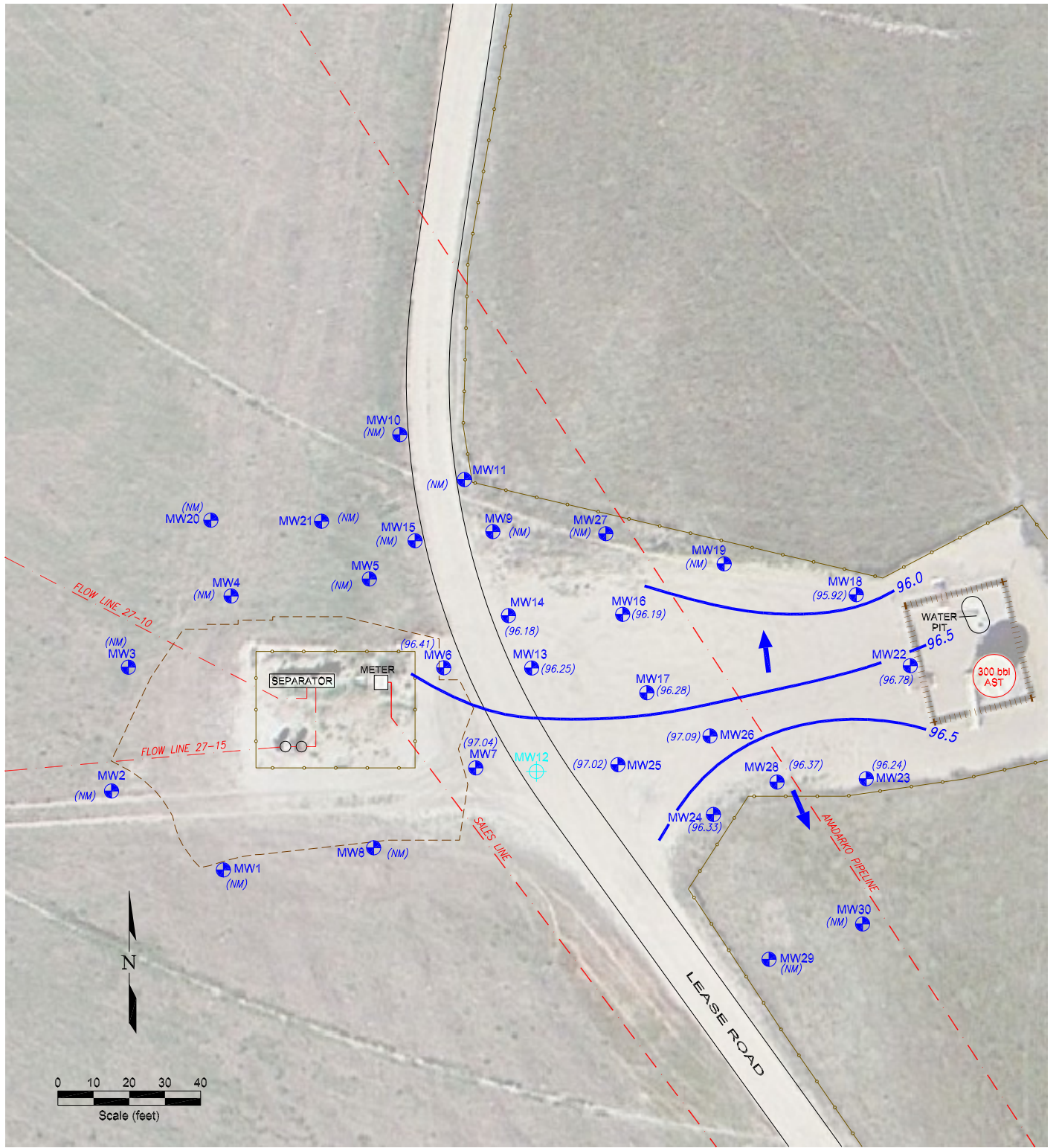
Figure 2

SITE MAP

Noble Libsack R G27-15
 SW SE Section 27, T4N, R65W
 Weld County, Colorado

Project No. C013-009	Prepared by	Drawn by JMA
Date 6/18/13	Reviewed by	Filename 13009Q





LEGEND












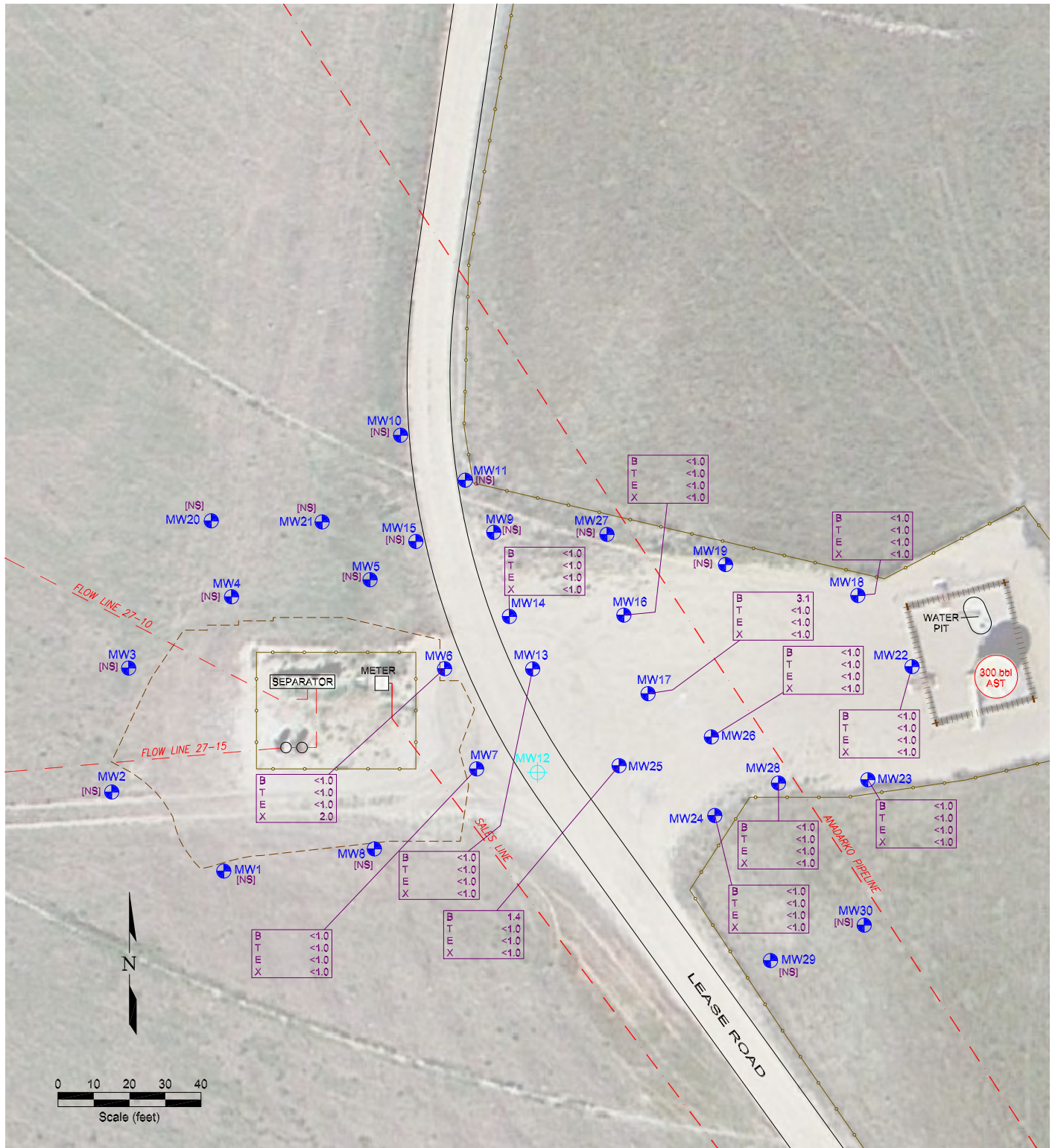
-  MONITORING WELL
-  DESTROYED MONITORING WELL
-  FENCE LINE
-  PIPELINE
-  CONTAINMENT BERM
-  ABOVE GROUND STORAGE TANK
-  GROUND WATER ELEVATION (ft above arbitrary datum)
-  TOO SHALLOW
-  NOT MEASURED
-  WATER TABLE CONTOUR
-  GROUND WATER FLOW DIRECTION

Figure 3
INFERRED GROUNDWATER CONTOUR
JULY 25, 2017

Noble Libsack R G27-15
 SW SE Section 27, T4N, R65W
 Weld County, Colorado

Project No. C013-009	Prepared by	Drawn by JMA
Date 8/15/17	Reviewed by	Filename 13009R





LEGEND

- MONITORING WELL
 - DESTROYED MONITORING WELL
 - FENCE LINE
 - PIPELINE
 - CONTAINMENT BERM
 - ABOVE GROUND STORAGE TANK
- | | | |
|---|------|----------------------|
| B | <1.0 | BENZENE (ug/L) |
| T | <1.0 | TOLUENE (ug/L) |
| E | <1.0 | ETHYLBENZENE (ug/L) |
| X | <1.0 | TOTAL XYLENES (ug/L) |
- D
NS
WELL DAMAGED
NOT SAMPLED

Figure 4
GROUND WATER CHEMISTRY MAP
JULY 25, 2017

Noble Libsack R G27-15
SW SE Section 27, T4N, R65W
Weld County, Colorado

Project No. C013-009	Prepared by	Drawn by JMA
Date 8/14/17	Reviewed by	Filename 13009R



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 06, 2017

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020
RE: Noble - Libsack RG27-15

Enclosed are the results of analyses for samples received by Summit Scientific on 07/28/17 14:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW6	1707236-01	Water	07/25/17 00:00	07/28/17 14:30
MW7	1707236-02	Water	07/25/17 00:00	07/28/17 14:30
MW13	1707236-03	Water	07/25/17 00:00	07/28/17 14:30
MW14	1707236-04	Water	07/25/17 00:00	07/28/17 14:30
MW16	1707236-05	Water	07/25/17 00:00	07/28/17 14:30
MW17	1707236-06	Water	07/25/17 00:00	07/28/17 14:30
MW18	1707236-07	Water	07/25/17 00:00	07/28/17 14:30
MW22	1707236-08	Water	07/25/17 00:00	07/28/17 14:30
MW23	1707236-09	Water	07/25/17 00:00	07/28/17 14:30
MW24	1707236-10	Water	07/25/17 00:00	07/28/17 14:30
MW25	1707236-11	Water	07/25/17 00:00	07/28/17 14:30
MW26	1707236-12	Water	07/25/17 00:00	07/28/17 14:30
MW28	1707236-13	Water	07/25/17 00:00	07/28/17 14:30

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.



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

Summit Scientific

S₂

1707236.1

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

Page 1 of 2

Client: Fremont Environmental (inable) Project Manager: Paul Henehan
Address: P.O. Box 1289 E-Mail: paulh@fremontenv.com
City/State/Zip: PO Box 1829 Wellington, CO 80549
Phone: 303-956-8714 Fax: Project Name: Noble - Libsack RG27-15
Sampler Name: MT Project Number: C013-009

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO/DRO	Naphthalene	SAR	EC	Ph	
1	MW	6	7/25/17	2															
2		7																	
3		13																	
4		14																	
5		16																	
6		17																	
7		18																	
8		22																	
9		23																	
10		24																	

Relinquished by: [Signature]	Date/Time: 7/28/17 14:30	Received by: [Signature]	Date/Time: 7-28-17 14:30	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 6.7 Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

Summit Scientific

S₂

1707236.2

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

Page 2 of 2

Client: Fremont Environmental (note) Project Manager: Paul Henehan
Address: P.O. Box 1289 E-Mail: paulh@fremontenv.com
City/State/Zip: PO Box 1829 Wellington, CO 80549
Phone: 303-956-8714 Fax: Project Name: Noble-Libsack R G27-15
Sampler Name: WFT Project Number: C013-009

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRO/DRO	Napthalene	SAR	EC		Ph
1	MW	25	7/25/17	2			✓	✓					✓						
2		26		2			✓	✓					✓						
3		28		2			✓	✓					✓						
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by:	Date/Time: 7/28/17 14:30	Received by:	Date/Time: 7-28-17 14:30	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours Standard <input type="checkbox"/> 48 hours Sample Integrity: Temperature Upon Receipt: 67 Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

Sample Receipt Checklist

S2 Work Order: 1707236
Client: Fremont Client Project ID: NOBLE- Libsack R G27-15
Shipped Via: H.D. on ice (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____
Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Cooler ID					
Temp (°C)	<u>6.7</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form 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 w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Murip
Custodian Printed Name

MP 7-28-17
Signature or Initials of Custodian

14:45
Date/Time



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW6
1707236-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	2.0	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		115 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		99.7 %	45-146		"	"	"	"	

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.



Fremont Environmental
1759 Redwing Lane
Broomfeld CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW7
1707236-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	45-146		"	"	"	"	

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.



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW13
1707236-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW14
1707236-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfeld CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW16
1707236-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW17
1707236-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	3.1	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		120 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.7 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW18
1707236-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/03/17	08/03/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	45-146		"	"	"	"	

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Fremont Environmental
1759 Redwing Lane
Broomfeld CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW22
1707236-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		<i>116 %</i>	<i>37-154</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: Toluene-d8</i>		<i>95.7 %</i>	<i>45-149</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>101 %</i>	<i>45-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW23
1707236-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW24
1707236-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	45-146		"	"	"	"	

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.



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW25
1707236-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.4	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW26
1707236-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfeld CO, 80020

Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

MW28
1707236-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1708021	08/04/17	08/04/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **07/25/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	45-146		"	"	"	"	

Summit Scientific

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Project: Noble - Libsack RG27-15

Project Number: C013-009
Project Manager: Paul Henehan

Reported:
08/06/17 14:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1708021 - EPA 5030 Water MS

Blank (1708021-BLK1)

Prepared & Analyzed: 08/03/17

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	15.4		"	13.3		116	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.3	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	45-146			

LCS (1708021-BS1)

Prepared & Analyzed: 08/03/17

Benzene	32.8	1.0	ug/l	33.3		98.3	51-132			
Toluene	36.0	1.0	"	33.3		108	51-138			
Ethylbenzene	42.2	1.0	"	33.1		128	58-146			
m,p-Xylene	78.6	2.0	"	66.5		118	57-144			
o-Xylene	39.3	1.0	"	32.7		120	53-146			
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.3		120	37-154			
Surrogate: Toluene-d8	12.9		"	13.3		97.1	45-149			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.3	45-146			

Matrix Spike (1708021-MS1)

Source: 1707236-01

Prepared & Analyzed: 08/03/17

Benzene	33.9	1.0	ug/l	33.3	ND	102	34-141			
Toluene	37.6	1.0	"	33.3	ND	113	27-151			
Ethylbenzene	43.5	1.0	"	33.1	ND	132	29-160			
m,p-Xylene	80.9	2.0	"	66.5	2.03	119	20-166			
o-Xylene	41.0	1.0	"	32.7	ND	126	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.1		"	13.3		121	37-154			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	45-149			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.7	45-146			

Summit Scientific

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1759 Redwing Lane
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Project: Noble - Libsack RG27-15

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Reported:
08/06/17 14:41

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

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

Batch 1708021 - EPA 5030 Water MS

Matrix Spike Dup (1708021-MSD1)	Source: 1707236-01			Prepared & Analyzed: 08/03/17						
Benzene	34.1	1.0	ug/l	33.3	ND	102	34-141	0.677	32	
Toluene	37.6	1.0	"	33.3	ND	113	27-151	0.160	25	
Ethylbenzene	44.2	1.0	"	33.1	ND	134	29-160	1.60	50	
m,p-Xylene	82.8	2.0	"	66.5	2.03	121	20-166	2.36	36	
o-Xylene	41.1	1.0	"	32.7	ND	126	33-159	0.195	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>16.3</i>		<i>"</i>	<i>13.3</i>		<i>122</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.5</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>98.9</i>	<i>45-146</i>			

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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