

**TABLE 1**  
**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
GW01	2/4/2010	3400	32	1200	7600	4.5	NA
MW01	6/8/2010	4.2	<1.0	4.4	22	4.02	95.98
	9/3/2010	<1.0	<1.0	<1.0	<1.0	4.32	95.68
	12/6/2010	<1.0	<1.0	<1.0	<1.0	4.50	95.50
	3/1/2011	<1.0	<1.0	<1.0	<1.0	5.71	94.29
	6/21/2011	<1.0	<1.0	5.6	13	3.29	96.71
	9/13/2011	<1.0	<1.0	<1.0	<1.0	2.78	97.22
	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.01	96.99
	3/13/2012	<1.0	<1.0	<1.0	<1.0	4.58	95.42
	6/13/2012	<1.0	<1.0	<1.0	<1.0	4.52	95.48
	9/21/2012	<1.0	<1.0	<1.0	<1.0	3.24	96.76
	12/17/2012	<1.0	<1.0	<1.0	<1.0	3.40	96.60
	3/13/2013	<1.0	<1.0	<1.0	<1.0	3.97	96.03
	6/25/2013	<1.0	<1.0	<1.0	<1.0	3.33	96.67
	9/18/2013	<1.0	<1.0	<1.0	<1.0	0.75	99.25
	11/13/2013	Surveyed - Not Sampled				1.94	97.44
	12/23/2013	<4.0	<4.0	<4.0	<4.0	3.56	96.44
	3/6/2014	<1.0	<1.0	<1.0	<1.0	4.31	95.41
	6/3/2014	<1.0	<1.0	<1.0	<1.0	3.73	96.58
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.18	96.13
	12/2/2014	<1.0	<1.0	<1.0	<3.0	4.66	95.65
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.46	94.85
	6/5/2015	<1.0	<1.0	<1.0	<1.0	1.53	98.78
	9/3/2015	<1.0	<1.0	<1.0	<1.0	2.62	97.69
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.48	96.83
	3/9/2016	Surveyed - Not Sampled				3.73	96.28
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.52	96.49
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.20	96.81
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.06	95.95
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.32	95.99
	3/17/2017	<1.00	<1.00	<1.00	<1.00	5.67	94.64
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.45	96.86
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.67	96.64
	12/20/2017	<1.00	<1.00	<1.00	<1.00	3.82	96.49
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.44	94.87



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**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
MW02	6/8/2010	<1.0	<1.0	<1.0	<1.0	4.69	94.78
	9/3/2010	<1.0	<1.0	<1.0	<1.0	4.93	94.54
	12/6/2010	<1.0	<1.0	<1.0	<1.0	5.13	94.34
	3/1/2011	<1.0	<1.0	<1.0	<1.0	6.41	93.06
	6/21/2011	<1.0	<1.0	<1.0	<1.0	3.78	95.69
	9/13/2011	<1.0	<1.0	<1.0	<1.0	3.43	96.04
	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.60	95.87
	3/13/2012	<1.0	<1.0	<1.0	<1.0	5.02	94.45
	6/13/2012	<1.0	<1.0	<1.0	<1.0	4.49	94.98
	9/21/2012	<1.0	<1.0	<1.0	<1.0	3.99	95.48
	12/17/2012	<1.0	<1.0	<1.0	<1.0	4.14	95.33
	3/13/2013	<1.0	<1.0	<1.0	<1.0	4.79	94.68
	6/25/2013	<1.0	<1.0	<1.0	<1.0	4.24	95.23
	9/18/2013	<1.0	<1.0	<1.0	<1.0	1.34	98.13
	11/13/2013	Surveyed - Not Sampled				3.16	96.36
	12/23/2013	<4.0	<4.0	<4.0	<4.0	4.19	95.28
	3/6/2014	<1.0	<1.0	<1.0	<1.0	5.16	94.31
	6/3/2014	<1.0	<1.0	<1.0	<1.0	4.09	95.43
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.51	95.01
	12/2/2014	<1.0	<1.0	<1.0	<3.0	5.02	94.50
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.91	93.61
	6/5/2015	<1.0	<1.0	<1.0	<1.0	1.63	97.89
	9/3/2015	<1.0	<1.0	<1.0	<1.0	4.84	94.82
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.76	95.90
	3/9/2016	Surveyed - Not Sampled				4.37	95.21
	3/30/2016	<1.0	<1.0	<1.0	<1.0	4.08	95.50
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.68	95.90
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.38	95.20
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.45	95.21
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.05	93.61
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.55	96.11
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.68	95.98
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.14	95.52
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.80	93.86
MW03	6/8/2010	1.7	<1.0	<1.0	<1.0	4.83	94.42



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**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	9/3/2010	<1.0	<1.0	<1.0	<1.0	5.08	94.17
	12/6/2010	<1.0	<1.0	<1.0	<1.0	5.34	93.91
	3/1/2011	1.3	<1.0	<1.0	<1.0	6.55	92.70
	6/21/2011	<1.0	<1.0	<1.0	<1.0	4.19	95.06
	9/13/2011	<1.0	<1.0	<1.0	<1.0	3.68	95.57
	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.94	95.31
	3/13/2012	<1.0	<1.0	<1.0	<1.0	5.27	93.98
	6/13/2012	<1.0	<1.0	<1.0	<1.0	5.15	94.10
	9/21/2012	<1.0	<1.0	<1.0	<1.0	4.25	95.00
	12/17/2012	<1.0	<1.0	<1.0	<1.0	4.36	94.89
	3/13/2013	<1.0	<1.0	<1.0	<1.0	4.96	94.26
	6/25/2013	<1.0	<1.0	<1.0	<1.0	4.34	94.91
	9/18/2013	<1.0	<1.0	<1.0	<1.0	1.66	97.59
	11/13/2013	Surveyed - Not Sampled				3.34	95.96
	12/23/2013	<4.0	<4.0	<4.0	<4.0	4.31	94.94
	3/6/2014	<1.0	<1.0	<1.0	<1.0	5.40	93.85
	6/3/2014	<b>102</b>	<1.0	2.0	14.4	4.29	95.01
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.62	94.68
	12/2/2014	<1.0	<1.0	<1.0	<3.0	5.09	94.21
	3/3/2015	2.9	<1.0	<1.0	<1.0	6.06	93.24
	6/5/2015	<1.0	<1.0	<1.0	<1.0	2.03	97.27
	9/3/2015	<1.0	<1.0	<1.0	<1.0	5.24	94.20
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.97	95.47
	3/9/2016	Surveyed - Not Sampled				4.53	94.92
	3/30/2016	<1.0	<1.0	<1.0	<1.0	4.32	95.13
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.92	95.53
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.67	94.78
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.68	94.76
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.26	93.18
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.88	95.56
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.04	95.40
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.29	95.15
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.91	93.53
MW04	6/8/2010	<b>840</b>	<1.0	260	<b>2900</b>	4.38	95.24
	9/3/2010	<b>200</b>	<1.0	71	200	4.51	95.11



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Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/6/2010	86	<1.0	3.5	85	4.74	94.88
	3/1/2011	11	<1.0	<1.0	19	5.98	93.64
	6/21/2011	1400	<1.0	400	4300	3.73	95.89
	9/13/2011	2300	<1.0	280	6000	3.20	96.42
	12/20/2011	2100	<1.0	330	5100	3.33	96.29
	3/13/2012	160	<1.0	230	1600	4.70	94.92
	6/13/2012	3100	<1.0	260	4500	4.58	95.04
	9/21/2012	480	<1.0	100	180	3.70	95.92
	12/17/2012	2000	<1.0	120	230	4.36	95.72
	3/13/2013	690	<1.0	66	210	4.28	95.34
	6/25/2013	21	<1.0	1.8	6.6	3.62	96.00
	9/18/2013	720	<1.0	140	210	1.25	98.37
	11/13/2013	Surveyed - Not Sampled				2.86	96.89
	12/23/2013	171	<4.0	18.8	34.9	4.16	95.46
	3/6/2014	39.4	<1.0	1.1	<1.0	4.76	94.86
	6/3/2014	227	<1.0	32.7	93.6	3.77	95.98
	9/18/2014	135	<4.0	<4.0	<4.0	4.08	95.67
	12/2/2014	90.9	<1.0	<1.0	<1.0	4.51	95.24
	3/3/2015	11.3	<1.0	<1.0	<1.0	5.50	94.25
	6/5/2015	1600	<1.0	186	299	PVC Blocked	NA
	9/3/2015	796	<20.0	59.0	<20.0	PVC Blocked	NA
	12/9/2015	Dry - Not Sampled				Dry	NA
	3/9/2016	Surveyed - Not Sampled				PVC Blocked	NA
	3/30/2016	Not Sampled				PVC Blocked	NA
	4/19/2016	15.8	<4.0	6.1	5.8	NM	NA
	6/27/2016	4.28	<1.00	<1.00	<1.00	3.79	96.15
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.54	95.40
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.74	95.34
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.30	93.78
	6/19/2017	1.90	<1.00	<1.00	<1.00	4.03	96.05
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.18	95.90
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.23	95.85
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.91	94.17
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MW05	4/26/2011	36	<1.0	3.5	41	5.27	95.05
	6/21/2011	1500	<1.0	200	1800	3.39	97.03



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	9/13/2011	2900	<1.0	180	3200	3.29	97.13
	12/20/2011	2100	<1.0	120	2500	3.58	96.84
	3/13/2012	610	<1.0	170	690	4.75	95.67
	6/13/2012	3900	<1.0	250	3500	4.68	95.74
	9/21/2012	1900	<1.0	150	500	3.77	96.65
	12/17/2012	1500	<1.0	130	1100	3.82	96.60
	3/13/2013	1400	<1.0	56	480	4.44	95.98
	6/25/2013	16	<1.0	1.1	5.6	3.80	96.62
	9/18/2013	1800	<1.0	32	1300	1.30	99.02
	11/13/2013	Surveyed - Not Sampled				2.87	97.57
	12/23/2013	167	<4.0	17.1	93.6	3.86	96.56
	3/6/2014	5.5	<1.0	1.5	11.9	4.86	95.56
	6/3/2014	187	<1.0	12.6	117	3.74	96.70
	9/18/2014	62.0	<4.0	<4.0	8.8	4.04	96.40
	12/2/2014	57.7	<1.0	6.8	22.3	4.47	95.97
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.48	94.96
	6/5/2015	758	<1.0	16.8	32.9	1.74	98.70
	9/3/2015	685	<4.0	17.6	81.4	2.68	97.76
	12/9/2015	15.3	<4.0	<4.0	19.7	3.44	97.00
	3/9/2016	Surveyed - Not Sampled				4.03	96.46
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.66	96.83
	6/27/2016	48.9	<1.00	2.89	23.3	3.56	96.93
	9/29/2016	2.30	<1.00	2.21	<1.00	4.21	96.28
	12/21/2016	4.75	<1.00	3.58	2.99	4.24	96.20
	3/17/2017	<1.00	<1.00	<1.00	<1.00	5.72	94.72
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.53	96.91
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.65	96.79
	12/20/2017	<1.00	<1.00	<1.00	<1.00	3.73	96.71
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.37	95.07
MW06	4/26/2011	<1.0	<1.0	<1.0	<1.0	6.16	93.52
	6/21/2011	<1.0	<1.0	<1.0	<1.0	4.18	95.34
	9/13/2011	<1.0	<1.0	<1.0	<1.0	3.60	95.92
	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.84	95.68
	3/13/2012	<1.0	<1.0	<1.0	<1.0	5.12	94.40
	6/13/2012	<1.0	<1.0	<1.0	<1.0	5.05	94.47



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	9/21/2012	<1.0	<1.0	<1.0	<1.0	4.15	95.37
	12/17/2012	<1.0	<1.0	<1.0	<1.0	4.30	95.22
	3/13/2013	<1.0	<1.0	<1.0	<1.0	4.75	94.77
	6/25/2013	<1.0	<1.0	<1.0	<1.0	4.18	95.34
	9/18/2013	<1.0	<1.0	<1.0	<1.0	1.80	97.82
	11/13/2013	Surveyed - Not Sampled				3.41	96.43
	12/23/2013	<4.0	<4.0	<4.0	<4.0	4.10	95.42
	3/6/2014	<1.0	<1.0	<1.0	<1.0	5.18	94.34
	6/3/2014	<1.0	<1.0	<1.0	<1.0	4.35	95.49
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.61	95.23
	12/2/2014	<1.0	<1.0	<1.0	<1.0	5.09	94.75
	3/3/2015	<1.0	<1.0	<1.0	<1.0	6.10	93.74
	6/5/2015	<1.0	<1.0	<1.0	<1.0	2.37	97.47
	9/3/2015	<1.0	<1.0	<1.0	<1.0	3.37	96.57
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.98	95.96
	3/9/2016	Surveyed - Not Sampled				4.00	95.49
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.83	95.66
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.49	96.00
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.23	95.26
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.78	95.15
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.31	93.62
	6/19/2017	<1.00	<1.00	<1.00	<1.00	4.07	95.86
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.20	95.73
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.28	95.65
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.93	94.00
MW07	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.43	97.63
	3/13/2012	<1.0	<1.0	<1.0	<1.0	4.78	96.27
	6/13/2012	<1.0	<1.0	<1.0	<1.0	4.74	96.31
	9/21/2012	<1.0	<1.0	<1.0	<1.0	3.78	97.27
	12/17/2012	<1.0	<1.0	<1.0	<1.0	3.89	97.16
	3/13/2013	<1.0	<1.0	<1.0	<1.0	4.43	96.62
	6/25/2013	<1.0	<1.0	<1.0	<1.0	3.84	97.21
	9/18/2013	<1.0	<1.0	<1.0	<1.0	1.43	99.62
	11/13/2013	Surveyed - Not Sampled				3.02	98.12
	12/23/2013	<4.0	<4.0	<4.0	<4.0	3.94	97.11



**TABLE 1**  
**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	3/6/2014	<1.0	<1.0	<1.0	<1.0	4.91	96.14
	6/3/2014	<1.0	<1.0	<1.0	<1.0	3.84	97.30
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.20	96.94
	12/2/2014	<1.0	<1.0	<1.0	<1.0	4.57	96.57
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.52	95.62
	6/5/2015	<1.0	<1.0	<1.0	<1.0	1.87	99.27
	9/3/2015	<1.0	<1.0	<1.0	<1.0	2.93	98.21
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.53	97.61
	3/9/2016	Surveyed - Not Sampled				2.51	97.09
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.74	97.36
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.54	97.56
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.33	96.77
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.37	96.77
	3/17/2017	<1.00	<1.00	<1.00	<1.00	5.85	95.29
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.64	97.50
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.78	97.36
	12/20/2017	<1.00	<1.00	<1.00	<1.00	3.80	97.34
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.41	95.73
MW08	12/20/2011	<1.0	<1.0	<1.0	<1.0	3.94	96.71
	3/13/2012	<1.0	<1.0	<1.0	<1.0	5.29	95.36
	6/13/2012	<1.0	<1.0	<1.0	<1.0	5.21	95.44
	9/21/2012	<1.0	<1.0	<1.0	<1.0	4.29	96.36
	12/17/2012	<1.0	<1.0	<1.0	<1.0	4.38	96.27
	3/13/2013	<1.0	<1.0	<1.0	<1.0	4.98	95.67
	6/25/2013	<1.0	<1.0	<1.0	<1.0	4.36	96.29
	9/18/2013	<1.0	<1.0	<1.0	<1.0	2.01	98.69
	11/13/2013	Surveyed - Not Sampled				3.37	97.29
	12/23/2013	<4.0	<4.0	<4.0	<4.0	3.37	97.28
	3/6/2014	<1.0	<1.0	<1.0	<1.0	5.37	95.28
	6/3/2014	<1.0	<1.0	<1.0	<1.0	4.28	96.38
	9/18/2014	<1.0	<1.0	<1.0	<1.0	4.57	96.09
	12/2/2014	<1.0	<1.0	<1.0	<1.0	4.96	95.70
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.96	94.70
	6/5/2015	<1.0	<1.0	<1.0	<1.0	2.24	98.42
	9/3/2015	<1.0	<1.0	<1.0	<1.0	3.30	97.34



**TABLE 1**  
**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.90	96.74
	3/9/2016	Surveyed - Not Sampled				4.61	96.09
	3/30/2016	<1.0	<1.0	<1.0	<1.0	4.22	96.48
	6/27/2016	<1.00	<1.00	<1.00	<1.00	4.00	96.70
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.79	95.91
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.72	95.92
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.24	94.40
	6/19/2017	<1.00	<1.00	<1.00	<1.00	4.07	96.57
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.18	96.46
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.19	96.45
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.93	94.71
MW09	12/20/2011	44	<1.0	<1.0	<1.0	4.04	95.27
	3/13/2012	280	<1.0	9.8	73	5.37	93.94
	6/13/2012	81	<1.0	<1.0	<1.0	5.31	94.00
	9/21/2012	1.3	<1.0	<1.0	<1.0	4.37	94.94
	12/17/2012	200	<1.0	3.0	<1.0	4.48	94.83
	3/13/2013	56	<1.0	2.8	11	4.95	94.36
	6/25/2013	150	<1.0	<1.0	<1.0	4.31	95.00
	9/18/2013	<1.0	<1.0	<1.0	<1.0	1.99	97.30
	11/13/2013	Surveyed - Not Sampled				3.47	95.93
	12/23/2013	<4.0	<4.0	<4.0	<4.0	4.40	94.91
	3/6/2014	33.6	<1.0	<1.0	<1.0	5.48	93.83
	6/3/2014	<1.0	<1.0	<1.0	<1.0	4.45	94.95
	9/18/2014	Inaccessible - Not Sampled				NM	NA
	12/2/2014	1.7	<1.0	<1.0	<1.0	5.13	94.27
	3/3/2015	3.1	<1.0	<1.0	<1.0	6.18	93.22
	6/5/2015	2.9	<1.0	<1.0	<1.0	2.31	97.09
	9/3/2015	Inaccessible - Not Sampled				Inaccessible	NA
	12/9/2015	3.9	<1.0	<1.0	<1.0	4.06	95.35
	3/9/2016	Surveyed - Not Sampled				4.64	94.85
	3/30/2016	<1.0	<1.0	<1.0	<1.0	4.47	95.02
	6/27/2016	<1.00	<1.00	<1.00	<1.00	4.10	95.39
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.85	94.64
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.88	94.53
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.43	92.98





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**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	6/19/2017	<1.00	<1.00	<1.00	<1.00	4.17	95.24
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.33	95.08
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.40	95.01
	3/29/2018	<1.00	<1.00	<1.00	<1.00	6.09	93.32
MW10	4/26/2012	190	15	240	7900	3.20	98.17
	6/13/2012	12	<1.0	59	2500	4.50	96.87
	9/21/2012	48	1.4	120	750	3.91	97.46
	12/17/2012	25	<1.0	62	730	3.90	97.47
	3/13/2013	54	1.4	89	1100	4.25	97.12
	6/25/2013	9.6	<1.0	53	600	3.70	97.67
	9/18/2013	31	<1.0	67	870	0.45	100.92
	11/13/2013	Surveyed - Not Sampled				2.39	98.22
	12/23/2013	5.9	<4.0	7.4	85.8	4.10	97.27
	3/6/2014	1.7	<1.0	5.4	88.1	4.77	96.29
	6/3/2014	7.9	<1.0	16.8	284	4.39	97.36
	9/18/2014	20.2	<1.0	35.1	241	4.78	96.97
	12/2/2014	14.7	<1.0	3.7	21.6	5.19	96.56
	3/3/2015	9.4	<1.0	6.2	100	6.02	95.73
	6/5/2015	7.6	<1.0	3.0	14.2	2.44	99.31
	9/3/2015	9.3	<1.0	<1.0	278	3.29	98.49
	12/9/2015	6.4	<1.0	7.2	75.2	4.20	97.58
	3/9/2016	Surveyed - Not Sampled				5.02	96.79
	3/30/2016	65.4	<1.0	<1.0	175	4.56	97.25
	6/27/2016	7.24	<1.00	61.8	1,230	4.37	97.44
	9/29/2016	<1.00	<1.00	3.10	58.2	5.11	96.70
	12/21/2016	<1.00	<1.00	5.82	65.6	4.93	96.85
	3/17/2017	1.33	<1.00	<1.00	7.47	6.27	95.51
	6/19/2017	3.06	<1.00	1.14	<1.00	4.20	97.58
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.34	97.44
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.34	97.44
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.83	95.95
MW11	4/26/2012	<1.0	<1.0	<1.0	3.1	5.85	93.94
	6/13/2012	<1.0	<1.0	<1.0	<1.0	5.52	94.19
	9/21/2012	<1.0	<1.0	<1.0	<1.0	5.32	94.39



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**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/17/2012	<1.0	<1.0	<1.0	<1.0	5.42	94.29
	3/13/2013	<1.0	<1.0	<1.0	<1.0	5.25	94.46
	6/25/2013	<1.0	<1.0	<1.0	<1.0	4.62	95.09
	9/18/2013	<1.0	<1.0	<1.0	<1.0	2.97	96.74
	11/13/2013	Surveyed - Not Sampled				4.23	95.45
	12/23/2013	<4.0	<4.0	<4.0	<4.0	5.23	94.48
	3/6/2014	<1.0	<1.0	<1.0	<1.0	6.40	93.31
	6/3/2014	<1.0	<1.0	<1.0	<1.0	5.22	94.46
	9/18/2014	<1.0	<1.0	<1.0	<1.0	5.40	94.28
	12/2/2014	<1.0	<1.0	<1.0	<1.0	5.88	93.80
	3/3/2015	<1.0	<1.0	<1.0	<1.0	6.98	92.70
	6/5/2015	<1.0	<1.0	<1.0	<1.0	3.24	96.44
	9/3/2015	<1.0	<1.0	<1.0	<1.0	6.32	93.54
	12/9/2015	<1.0	<1.0	<1.0	<1.0	4.80	95.06
	3/9/2016	Surveyed - Not Sampled				5.32	94.54
	3/30/2016	<1.0	<1.0	<1.0	<1.0	5.21	94.65
	6/27/2016	<1.00	<1.00	<1.00	<1.00	4.76	95.10
	9/29/2016	<1.00	<1.00	<1.00	<1.00	5.50	94.36
	12/21/2016	<1.00	<1.00	<1.00	<1.00	5.65	94.21
	3/17/2017	<1.00	<1.00	<1.00	<1.00	7.16	92.70
	6/19/2017	<1.00	<1.00	<1.00	<1.00	4.96	94.90
	9/26/2017	<1.00	<1.00	<1.00	<1.00	5.04	94.82
	12/20/2017	<1.00	<1.00	<1.00	<1.00	5.21	94.65
	3/29/2018	<1.00	<1.00	<1.00	<1.00	6.86	93.00
MW12	4/26/2012	13	<1.0	<1.0	<1.0	5.44	NA
	6/13/2012	3.2	<1.0	<1.0	<1.0	5.15	NA
	9/21/2012	<1.0	<1.0	<1.0	<1.0	5.03	NA
	12/17/2012	<1.0	<1.0	<1.0	<1.0	5.10	NA
	3/13/2013	<1.0	<1.0	<1.0	<1.0	5.75	NA
	6/25/2013	2.7	<1.0	<1.0	<1.0	5.20	NA
	9/18/2013	Damaged - Not Sampled				NM	NA
	MW12 destroyed as of 9/18/2013						
MW12R	12/23/2013	<4.0	<4.0	<4.0	<4.0	4.99	NA
	3/6/2014	9.2	<1.0	<1.0	<1.0	6.10	NA



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**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	6/3/2014	2.9	<1.0	<1.0	<1.0	7.63	NA
	9/18/2014	<1.0	<1.0	<1.0	<1.0	5.33	NA
	12/2/2014	<1.0	<1.0	<1.0	<1.0	5.73	NA
	3/3/2015	<1.0	<1.0	<1.0	<1.0	6.79	NA
	6/5/2015	<1.0	<1.0	<1.0	<1.0	2.92	NA
	9/3/2015	<1.0	<1.0	<1.0	<1.0	8.76	92.96
	12/9/2015	<1.0	<1.0	<1.0	<1.0	7.38	94.34
	3/9/2016	Surveyed - Not Sampled				5.46	93.69
	3/30/2016	<1.0	<1.0	<1.0	<1.0	5.11	94.04
	6/27/2016	9.21	<1.00	<1.00	<1.00	4.68	94.47
	7/25/2016	<1.00	<1.00	<1.00	<1.00	NM	NA
	9/29/2016	<1.00	<1.00	<1.00	<1.00	5.34	93.81
	12/21/2016	<1.00	<1.00	<1.00	<1.00	5.37	93.70
	3/17/2017	<1.00	<1.00	<1.00	<1.00	6.98	92.09
	6/19/2017	<1.00	<1.00	<1.00	<1.00	4.71	94.36
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.79	94.28
	12/20/2017	<1.00	<1.00	<1.00	<1.00	4.99	94.08
	3/29/2018	<1.00	<1.00	<1.00	<1.00	6.71	92.36
MW13	3/13/2013	820	<1.0	150	3000	4.08	97.59
	6/25/2013	350	1.5	38	440	3.77	97.90
	9/18/2013	4500	2.2	<1.0	7000	0.30	101.37
	11/13/2013	Surveyed - Not Sampled				1.49	98.88
	12/23/2013	94.7	<4.0	33.8	384	3.75	97.92
	3/6/2014	70.8	<1.0	28.6	300	4.09	96.94
	6/3/2014	542	<1.0	44.5	441	4.24	98.08
	9/18/2014	578	<4.0	60.6	724	4.65	97.67
	12/2/2014	133	<1.0	30.8	110	5.01	97.31
	3/3/2015	28.4	<1.0	1.3	27.4	5.90	96.42
	6/5/2015	2270	<10.0	139	1920	2.35	99.97
	9/3/2015	427	<20.0	<20.0	108	3.24	99.10
	12/9/2015	773	<4.0	88.8	118	4.01	98.33
	3/9/2016	Surveyed - Not Sampled				3.47	98.26
	3/30/2016	92.1	<4.0	<4.0	10.5	3.70	98.03
	6/27/2016	158	<1.00	85.6	206	3.55	98.18
	9/29/2016	22.7	<1.00	7.13	<1.00	4.32	97.41



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**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/21/2016	25.0	<1.00	15.0	8.48	4.86	97.48
	3/17/2017	1.06	<1.00	<1.00	52.9	6.23	96.11
	6/19/2017	69.2	<1.00	1.61	<1.00	4.15	98.19
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.26	98.08
	12/20/2017	5.42	<1.00	<1.00	<1.00	4.33	98.01
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.75	96.59
MW14	12/23/2013	<4.0	<4.0	<4.0	<4.0	3.65	NA
	3/6/2014	<1.0	<1.0	<1.0	<1.0	4.58	NA
	6/3/2014	<1.0	<1.0	<1.0	<1.0	3.46	NA
	9/18/2014	<1.0	<1.0	<1.0	<1.0	3.79	NA
	12/2/2014	<1.0	<1.0	<1.0	<1.0	4.13	NA
	3/3/2015	<1.0	<1.0	<1.0	<1.0	5.07	NA
	6/5/2015	<1.0	<1.0	<1.0	<1.0	1.60	NA
	9/3/2015	<1.0	<1.0	<1.0	<1.0	5.56	99.40
	12/9/2015	<1.0	<1.0	<1.0	<1.0	6.28	98.68
	3/9/2016	Surveyed - Not Sampled				3.85	98.03
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.28	98.60
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.38	98.50
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.02	97.86
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.05	97.86
	3/17/2017	<1.00	<1.00	<1.00	<1.00	5.55	96.36
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.33	98.58
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.44	98.47
	12/20/2017	<1.00	<1.00	<1.00	<1.00	3.41	98.50
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.01	96.90
MW15	12/2/2014	98.9	<1.0	83.6	112	4.33	97.90
	3/3/2015	23.7	<1.0	23.0	249	5.21	97.02
	6/5/2015	215	<4.0	59.6	980	1.62	100.61
	9/3/2015	183	<4.0	5.4	63.4	2.60	99.63
	12/9/2015	87.3	<4.0	10.0	34.6	3.28	98.95
	3/9/2016	Surveyed - Not Sampled				3.83	98.41
	3/30/2016	4.1	<1.0	<1.0	<1.0	3.41	98.83
	6/27/2016	98.0	<1.00	6.72	21.4	3.47	98.77
	9/29/2016	106	<1.00	17.5	13.8	4.21	98.03



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**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/21/2016	80.0	<1.00	19.6	<1.00	4.58	98.05
	3/17/2017	73.7	<1.00	14.6	56.4	5.93	96.70
	6/19/2017	6.31	<1.00	2.84	5.43	3.82	98.81
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.95	98.68
	12/20/2017	8.25	<1.00	<1.00	<1.00	3.93	98.70
	3/29/2018	13.6	<1.00	2.64	130	5.47	97.16
<hr/>							
MW16	12/2/2014	<1.0	<1.0	<1.0	<1.0	6.41	97.08
	3/3/2015	<1.0	<1.0	<1.0	<1.0	7.30	96.19
	6/5/2015	<1.0	<1.0	<1.0	<1.0	3.79	99.70
	9/3/2015	<1.0	<1.0	<1.0	<1.0	2.48	101.01
	12/9/2015	<1.0	<1.0	<1.0	<1.0	3.46	100.03
	3/9/2016	Surveyed - Not Sampled				3.98	99.55
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.51	100.02
	6/27/2016	<1.00	<1.00	<1.00	<1.00	3.76	99.77
	9/29/2016	<1.00	<1.00	<1.00	<1.00	4.47	99.06
	12/21/2016	<1.00	<1.00	<1.00	<1.00	4.56	99.17
	3/17/2017	<1.00	<1.00	<1.00	<1.00	5.95	97.78
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.90	99.83
	9/26/2017	<1.00	<1.00	<1.00	<1.00	4.06	99.67
	12/20/2017	<1.00	<1.00	<1.00	<1.00	3.86	99.87
	3/29/2018	<1.00	<1.00	<1.00	<1.00	5.35	98.38
<hr/>							
MW17	12/2/2014	<1.0	<1.0	<1.0	<1.0	6.57	96.15
	3/3/2015	<1.0	<1.0	<1.0	<1.0	7.45	95.27
	6/5/2015	1.4	<1.0	1.5	4.3	3.85	98.87
	9/3/2015	<1.0	<1.0	<1.0	<1.0	2.68	100.04
	12/9/2015	3.4	<1.0	<1.0	<1.0	3.38	99.34
	3/9/2016	Surveyed - Not Sampled				3.94	98.81
	3/30/2016	<1.0	<1.0	<1.0	<1.0	3.52	99.23
	6/27/2016	5.41	<1.00	2.82	<1.00	3.64	99.11
	9/29/2016	3.19	<1.00	2.80	2.66	4.38	98.37
	12/21/2016	<1.00	<1.00	1.64	<1.00	4.38	98.51
	3/17/2017	2.45	<1.00	<1.00	<1.00	5.92	96.97
	6/19/2017	<1.00	<1.00	<1.00	<1.00	3.75	99.14
	9/26/2017	<1.00	<1.00	<1.00	<1.00	3.90	98.99



**TABLE 1**  
**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**HSR-CHAKNOVA 14-5, HSR-MOORHEAD 13-5, HSR-BELL 12-5, HSR-CREASON 11-5**  
**WELD COUNTY, COLORADO**  
**KERR-MCGEE OIL & GAS ONSHORE LP**

Well Name	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth Water/ (Product Thickness) (ft bgs)	Relative GW Elev. (ft)
	12/20/2017	<1.00	<1.00	1.29	<1.00	3.77	99.12
	3/29/2018	<b>21.9</b>	<1.00	<1.00	<1.00	5.44	97.45
<b>COGCC Allowable Levels</b>		<b>5</b>	<b>1000</b>	<b>700</b>	<b>1400</b>		

Notes: COGCC - Colorado Oil and Gas Conservation Commission

Elev. - elevation

ft bgs - feet below ground surface

GW - groundwater

NA - not analyzed/not available

NM - not measured

µg/L - micrograms per liter

< - less than laboratory reporting limit

Bold indicates result exceeds allowable level

Excavation groundwater depth is approximate

Results in red indicate data from samples collected after start up of air sparge/soil vapor extraction remediation system.





April 05, 2018

LT Environmental, Inc.

Brian Sulzberger

4600 West 60th Avenue

Arvada

CO 80003

**Project Name - KMG - HSR-Chaknova 14-5,  
Moorhead 13-5, Bell 12-5**

**Project Number - KMG10619/WO #880666**

Attached are your analytical results for KMG - HSR-Chaknova 14-5, Moorhead 13-5, Bell 12-5 received by Origins Laboratory, Inc. March 29, 2018. This project is associated with Origins project number Y803523-01.

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

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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**CROSS REFERENCE REPORT**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	Y803523-01	Water	March 29, 2018 10:00	03/29/2018 15:58
MW02	Y803523-02	Water	March 29, 2018 10:05	03/29/2018 15:58
MW03	Y803523-03	Water	March 29, 2018 10:10	03/29/2018 15:58
MW04	Y803523-04	Water	March 29, 2018 10:15	03/29/2018 15:58
MW05	Y803523-05	Water	March 29, 2018 10:20	03/29/2018 15:58
MW06	Y803523-06	Water	March 29, 2018 10:25	03/29/2018 15:58
MW07	Y803523-07	Water	March 29, 2018 10:30	03/29/2018 15:58
MW08	Y803523-08	Water	March 29, 2018 10:35	03/29/2018 15:58
MW09	Y803523-09	Water	March 29, 2018 10:40	03/29/2018 15:58
MW10	Y803523-10	Water	March 29, 2018 10:45	03/29/2018 15:58
MW11	Y803523-11	Water	March 29, 2018 10:50	03/29/2018 15:58
MW12R	Y803523-12	Water	March 29, 2018 10:55	03/29/2018 15:58
MW13	Y803523-13	Water	March 29, 2018 11:00	03/29/2018 15:58
MW14	Y803523-14	Water	March 29, 2018 11:05	03/29/2018 15:58

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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW15	Y803523-15	Water	March 29, 2018 11:10	03/29/2018 15:58
MW16	Y803523-16	Water	March 29, 2018 11:15	03/29/2018 15:58
MW17	Y803523-17	Water	March 29, 2018 11:20	03/29/2018 15:58

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/VO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

ORIGINS  
LABORATORY, INC

1403523

112


1725 Elk Place, Denver, CO 80211  
Laboratory # - 303.433.1322


Client: LT Environmental, Inc.	Project Manager: Brian Sulzberger
Project: KMG - HSR-Chaknova 14-5, Moorhead 13-5, Bell 12-5	Project Number: KMG10619/VO #88066082


Number	Sample Identification	Matrix	Sample Date	Sample Time	Sampled By	Container	Qty	Analyses
01-001	MM01	Water	3-29-19	1000	DT/SH	12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
02-001	MM02	Water		1005		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
03-001	MM03	Water		1010		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
04-001	MM04	Water		1015		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
05-001	MM05	Water		1020		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
06-001	MM06	Water		1025		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
07-001	MM07	Water		1030		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
08-001	MM08	Water		1035		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
09-001	MM09	Water		1040		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
10-001	MM10	Water		1045		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
11-001	MM11	Water		1050		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C


Temperature on Receipt: 11.9

Turn Around Time: ☐ 72-hr ☒ Standard ☐ 48-hr

Relinquished By:  Date / Time: 3/29/19 1558

Received By:  Date / Time: 3/29/19 1558

Relinquished By:  Date / Time: 3-29-19 1558

Received By:  Date / Time: 3-29-19 1558

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**ORIGINS**  
LABORATORY, INC

Y403523

12/2

1725 Elk Place, Denver, CO 80211  
Laboratory # - 303.433.1322

12-001	MW12R	Water	3-24-18	1055	DT/18	12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
13-001	MW13	Water		1160		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
14-001	MW14	Water		1105		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
15-001	MW15	Water		1110		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
16-001	MW16	Water		1115		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C
17-001	MW17	Water		1130		12_40mL Amber VOA Vial - HCL	3	BTEX by EPA 8260C

Temperature on Receipt: 113  
Turn Around Time: ☐ 24-hr ☐ 48-hr ☒ 72-hr ☐ Standard

Requisitioned By: [Signature] Date / Time: 3/29/18 1558  
Received By: [Signature] Date / Time: 3/29/18 1558

Requisitioned By: [Signature] Date / Time: 3/29/18 1558  
Received By: [Signature] Date / Time: 3/29/18 1558

Origins Laboratory, Inc.

*Jefe Pellegrini*

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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 1403523

Client: LTE

Client Project ID: KMG-HSR-Chaknova 14-5, Moorhead 13-5, Bell 12-5

Checklist Completed by: JA

Shipped Via: HD

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

Date/time completed: 3/30/12

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 11.3 °C 1 / 1 °C 1 / 1 °C (Describe)

Thermometer ID: T603

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

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

Reviewed by (Project Manager) JA

Date/Time Reviewed 4/2/12

Origins Laboratory, Inc.

*Jefe Pellegrini*

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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW01

3/29/2018 10:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-01 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/04/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121	"	"	"
Surrogate: Toluene-d8	101 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	94.4 %	84-114	"	"	"

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW02

3/29/2018 10:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-02 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/04/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %	84-121			"	"	"	
Surrogate: Toluene-d8	100 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW03

3/29/2018 10:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-03 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/04/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.1 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW04

3/29/2018 10:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-04 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/04/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

101 % 84-121  
101 % 85-115  
96.8 % 84-114

" " "  
" " "  
" " "

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW05

3/29/2018 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-05 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/04/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW06

3/29/2018 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-06 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW07

3/29/2018 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-07 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.6 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW08

3/29/2018 10:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-08 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW09

3/29/2018 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-09 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

102 % 84-121  
102 % 85-115  
93.8 % 84-114

" " "  
" " "  
" " "

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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW10

3/29/2018 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-10 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121	"	"	"
Surrogate: Toluene-d8	102 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	94.1 %	84-114	"	"	"

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Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW11

3/29/2018 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-11 (Water)

## BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.6 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
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13-5, Bell 12-5

## MW12R

3/29/2018 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-12 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	84-121			"	"	"	
Surrogate: Toluene-d8	101 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.6 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Arvada CO 80003

Brian Sulzberger  
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Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW13

3/29/2018 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-13 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	106 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	93.4 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**MW14**

**3/29/2018 11:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y803523-14 (Water)**

**BTEX by EPA 8260C**

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	84-121	"	"	"
Surrogate: Toluene-d8	102 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	95.6 %	84-114	"	"	"

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4600 West 60th Avenue  
Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW15

3/29/2018 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-15 (Water)

## BTEX by EPA 8260C

Benzene	13.6	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	2.64	1.00	"	"	"	"	"	
Xylenes, total	130	1.00	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	102 %	84-121			"	"	"	
Surrogate: Toluene-d8	104 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.8 %	84-114			"	"	"	

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4600 West 60th Avenue  
Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

## MW16

3/29/2018 11:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y803523-16 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

103 % 84-121  
101 % 85-115  
96.4 % 84-114

" " "  
" " "  
" " "

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

MW17

3/29/2018 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y803523-17 (Water)

## BTEX by EPA 8260C

Benzene	21.9	1.00	ug/L	1	B8D0406	04/04/2018	04/05/2018	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"	
Surrogate: Toluene-d8	103 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	94.7 %	84-114			"	"	"	

Origins Laboratory, Inc.



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

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8D0406 - EPA 5030B (Water)**

**Blank (B8D0406-BLK1)**

Prepared: 04/04/2018 Analyzed: 04/04/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.8	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.2	84-114			

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Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8D0406 - EPA 5030B (Water)

**LCS (B8D0406-BS1)**

Prepared: 04/04/2018 Analyzed: 04/04/2018

Benzene	45.3	1.00	ug/L	50.0		90.7	73.3-129			
Toluene	46.6	1.00	"	50.0		93.3	76.2-123			
Ethylbenzene	47.5	1.00	"	50.0		95.0	73.6-130			
m,p-Xylene	93.7	2.00	"	100		93.7	76.1-126			
o-Xylene	47.3	1.00	"	50.0		94.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.3	84-114			

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4600 West 60th Avenue  
Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8D0406 - EPA 5030B (Water)**

Matrix Spike (B8D0406-MS1)		Source: Y803523-02			Prepared: 04/04/2018 Analyzed: 04/04/2018					
Benzene	56.0	1.00	ug/L	50.0	ND	112	74-130			
Toluene	57.8	1.00	"	50.0	ND	116	73-131			
Ethylbenzene	58.8	1.00	"	50.0	ND	118	76-132			
m,p-Xylene	116	2.00	"	100	0.170	116	69-139			
o-Xylene	57.7	1.00	"	50.0	ND	115	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		93.8	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		93.8	84-114			

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Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

**Volatile Organic Compounds by GC/MS SW846 8260C - 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 B8D0406 - EPA 5030B (Water)**

Matrix Spike Dup (B8D0406-MSD1)		Source: Y803523-02			Prepared: 04/04/2018 Analyzed: 04/04/2018					
Benzene	54.3	1.00	ug/L	50.0	ND	109	74-130	3.14	20	
Toluene	55.3	1.00	"	50.0	ND	111	73-131	4.28	20	
Ethylbenzene	57.1	1.00	"	50.0	ND	114	76-132	2.98	20	
m,p-Xylene	113	2.00	"	100	0.170	112	69-139	3.30	20	
o-Xylene	55.3	1.00	"	50.0	ND	111	74-131	4.25	20	
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		93.6	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		93.7	84-114			

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Arvada CO 80003

Brian Sulzberger  
Project Number: KMG10619/WO #88066082  
Project: KMG - HSR-Chaknova 14-5, Moorhead  
13-5, Bell 12-5

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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