

NOTES / COMMENTS:

DISCLAIMER: This representation and the Geographic Information System (GIS) used to create it are designed as a source of reference and not intended to replace official records and/or legal surveys. HCSL assumes no responsibility for any risks, dangers, or liabilities that may result from its use and makes no guarantees as to the quality or accuracy of the underlying data.



JUNE 2015 POTENTIOMETRIC MAP

TR 31-5-697

39.56074 -108.24137
Section 5, Township 6 South, Range 97 West

Monitoring Well	TRANSPORTATION
Potentiometric Lines	Highways
Intermittent Stream	County Roads
Perennial Stream	Local Roads
	Access Roads



HRL COMPLIANCE SOLUTIONS, INC.
Environmental Consultants

Author: Spinelli
Revision: 0
Date: 7/14/2015

Table 1

TR 31-5-697 Groundwater Analytical Results



Sample ID:		COGCC Table 910-1 Standards	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 1	MW 2	MW 2	MW 2	MW 2
Date Sampled:			10/19/2011	4/9/2012	7/12/2012	9/18/2012	12/5/2012	3/27/2013	5/15/2013	7/26/2013	11/8/2013	5/29/2014	10/8/2014	6/1/2015	10/19/2011	4/9/2012	7/12/2012	9/18/2012
Depth to Water (ft.)			22.51	22.07	NT	24.09	24.26	23.65	23.637	24.42	26.2	24.76	25.84	21.65	26.41	25.87	NT	28.35
GC/MS Volatiles (SW846 8260B)																		
DRO	mg/L		0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	1.6	ND	3.4
GRO	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	4.8	2.5	10
Benzene	ug/l	5 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	120	70	98	63
Ethylbenzene	ug/l	700 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	92	58	56	84
Toluene	ug/l	560 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	2.6	ND
Xylene (total)	ug/l	1400 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,600	1,200	470	1400
GC/MS Semi-volatiles (SW846 8270C)																		
1-Methylnaphthalene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	7.5	ND	ND	ND
2-Chloronaphthalene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND
2-Methylnaphthalene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	13	ND	ND	ND
Acenaphthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND
Anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	7	ND	5.6
Phenanthrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND
Pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals Analysis																		
Calcium	mg/l		87	64	78	71	68	73	84	76	78	84	NT	90	7.7	54	71	46
Iron	mg/l		0.12	ND	1.1	0.55	0.12	1.3	ND	ND	ND	0.12	NT	ND	ND	0.13	0.44	0.098
Magnesium	mg/l		43	32	37	34	33	37	42	38	39	42	NT	45	39	28	34	29
Manganese	mg/l		ND	ND	0.036	0.024	0.023	1	0.29	0.042	ND	ND	NT	ND	0.95	0.47	0.53	0.092
Potassium	mg/l		1.1	0.64	0.9	0.98	0.74	14	1.1	0.73	0.82	0.8	NT	1.1	1.2	0.79	1.6	0.66
Sodium	mg/l		68	49	56	74	51	57	59	56	59	60	NT	65	85	59	83	150
General Chemistry																		
Bromide	mg/l		0.34	0.28	0.3	0.33	0.26	0.34	0.41	0.33	0.34	0.44	ND	0.32	0.41	0.34	0.45	0.47
Chloride	mg/l	1.25 x bkgd	42	52	45	47	41	44	57	48	48	34	61	58	53	45	53	61
Nitrogen, Nitrate	mg/l		1.1	1.5	1.1	0.7	0.64	1.2	1.2	0.94	NT	NT	NT	2.4	0.047	0.18	ND	ND
Nitrogen, Nitrite	mg/l		ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND	ND	ND	ND	ND
Nitrogen, Nitrate-Nitrite			1.1	1.5	1.1	0.7	0.64	1.2	1.2	0.94	NT	1.9	1.3	2.4	0.047	0.1	ND	ND
Sulfate	mg/l	1.25 x bkgd	130	110	120	130	120	110	120	120	110	NT	110	130	67	74	26	35
Fluoride	mg/l		0.19	0.17	0.24	0.18	0.16	0.19	0.16	0.13	0.17	75	0.1	0.15	0.19	0.18	0.27	0.21
TDS	mg/l	1.25 x bkgd	652	624	NT	601	575	563	586	602	660	NT		621	618	627	NT	640

Table 1

TR 31-5-697 Groundwater Analytical Results



Sample ID:		COGCC Table 910-1 Standards	MW 2	MW 2	MW 2	MW 2	MW 2	MW 2	MW 2	MW 2	MW 3	MW 3	MW 3	MW 3	MW 3	MW 3	MW 3	MW 3
Date Sampled:			12/5/2012	3/27/2013	5/15/2013	7/11/2013	11/8/2013	5/29/2014	10/8/2014	6/1/2015	10/19/2011	4/9/2012	7/12/2012	9/18/2012	12/5/2012	3/27/2013	5/15/2013	7/11/2013
Depth to Water (ft.)			30.75	28.21	26.64	29.48	30.48	25.97	28.43	24.59	33.38	33.02	NT	33.04	34.3	32.74	30.31	32.64
GC/MS Volatiles (SW846 8260B)																		
DRO	mg/L		120	39	46	22	210	88	24	84	40	1.1	ND	1.5	2	69	7.6	5.4
GRO	mg/L		28	21	62	9.5	8.6	6.4	6.4	4.3	4.8	3	1.4	1.8	1.7	1.9	1.4	1.6
Benzene	ug/l	5 ug/l	110	150	60	37	54	60	21	44	55	25	8.1	4.4	ND	4.1	1.3	ND
Ethylbenzene	ug/l	700 ug/l	590	190	120	61	40	68	50	29	97	95	28	12	7.1	12	8.6	3.9
Toluene	ug/l	560 ug/l	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ug/l	1400 ug/l	17,000	2,800	2,900	1,000	2,400	900	560	260	600	520	140	100	84	100	29	22
GC/MS Semi-volatiles (SW846 8270C)																		
1-Methylnaphthalene	ug/l		230	22	42	29	NT	NT	NT	NT	ND	ND	ND	ND	5.7	17	ND	ND
2-Chloronaphthalene	ug/l		ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/l		600	52	110	77	NT	NT	NT	NT	ND	ND	ND	ND	11	10	5.7	ND
Acenaphthene	ug/l		ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7	ND	ND
Acenaphthylene	ug/l		ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/l		ND	ND	ND	ND	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/l		ND	ND	ND	ND	ND	5.9	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/l		230	23	60	19	ND	14	7.5	12	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/l		ND	ND	ND	ND	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals Analysis																		
Calcium	mg/l		59	78	99	79	86	82	NT	110	79	99	87	75	69	870	110	83
Iron	mg/l		0.2	0.12	0.29	0.37	0.71	0.28	NT	4.7	0.12	1.1	0.53	0.64	0.18	4	0.22	ND
Magnesium	mg/l		30	39	50	41	46	43	NT	55	37	42	36	35	33	410	50	40
Manganese	mg/l		0.45	0.59	0.7	0.46	0.62	0.5	NT	0.71	1.7	3.2	1.9	0.61	2.5	6.1	1.4	0.68
Potassium	mg/l		0.98	1.2	1.5	1.3	1.2	1	NT	2.7	1.1	1.6	1.7	1	0.74	9.7	1.2	0.88
Sodium	mg/l		73	90	82	83	89	87	NT	95	89	130	81	59	52	73	88	61
General Chemistry																		
Bromide	mg/l		0.47	0.42	0.36	0.45	0.38	0.45	0.37	0.47	0.55	2.5	0.68	0.36	0.31	0.52	1	0.37
Chloride	mg/l	1.25 x bkgd	54	51	53	58	50	64	53	73	72	300	95	45	38	61	130	51
Nitrogen, Nitrate	mg/l		ND	0.14	0.044	ND	NT	NT	NT	1.5	ND	ND	ND	ND	ND	0.051	0.023	ND
Nitrogen, Nitrite	mg/l		ND	ND	ND	0.038	NT	NT	NT	1	ND	ND	ND	ND	ND	ND	ND	0.032
Nitrogen, Nitrate-Nitrite			ND	0.14	0.044	0.038	NT	0.24	0.023	2.5	ND	ND	ND	ND	ND	0.051	0.023	0.032
Sulfate	mg/l	1.25 x bkgd	28	24	41	50	37	NT	18	50	61	7.1	39	110	110	73	85	93
Fluoride	mg/l		0.2	0.18	0.16	0.14	0.16	NT	0.11	0.14	0.22	0.15	0.23	0.17	0.16	0.18	0.14	0.11
TDS	mg/l	1.25 x bkgd	607	605	601	721	820	NT		760	640	1,190	NT	603	581	621	620	699

Table 1

TR 31-5-697 Groundwater Analytical Results



Sample ID:		COGCC Table 910-1 Standards	MW 3	MW 3	MW 3	MW 3	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4	MW 4
Date Sampled:			11/8/2013	5/29/2014	10/8/2014	6/1/2015	10/19/2011	4/9/2012	7/12/2012	9/18/2012	12/5/2012	3/27/2013	5/15/2013	7/11/2013	11/8/2013	5/29/2014	10/8/2014	6/1/2015
Depth to Water (ft.)			33.98	30.11	34.9	28.94	28.83	27.56	NT	32.74	33.02	32.36	31.01	32.48	32.72	28.94	31.66	23.47
GC/MS Volatiles (SW846 8260B)																		
DRO	mg/L		13	2.4	7.9	36	3.1	0.9	7.3	0.87	1.3	1.4	1.3	0.65	ND	1.4	3.3	1.5
GRO	mg/L		1.2	1.6	1.4	3	4.7	2.3	1.6	1.1	0.34	0.9	0.72	0.92	0.27	1.3	0.33	0.99
Benzene	ug/l	5 ug/l	5.4	5.1	23	38	67	17	27	16	9	2	13	14	ND	9.9	4.9	2.3
Ethylbenzene	ug/l	700 ug/l	ND	21	5.4	47	96	72	44	13	2.4	ND	14	15	ND	36	ND	6
Toluene	ug/l	560 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene (total)	ug/l	1400 ug/l	3.6	80	3.2	590	470	160	130	44	7.8	3.2	56	69	ND	99	ND	120
GC/MS Semi-volatiles (SW846 8270C)																		
1-Methylnaphthalene	ug/l		NT	NT	NT	NT	6.6	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT
2-Chloronaphthalene	ug/l		NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT
2-Methylnaphthalene	ug/l		NT	NT	NT	NT	8.4	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT
Acenaphthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/l		NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT
Anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/l		NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND
Benzo(k)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/l		ND	ND	ND	5.2	5.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/l		NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	ND
Pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals Analysis																		
Calcium	mg/l		87	160	NT	220	78	74	79	80	68	910	99	88	83	90	NT	100
Iron	mg/l		ND	1.1	NT	5.5	ND	ND	0.17	ND	0.091	1.1	0.17	ND	ND	0.35	NT	0.2
Magnesium	mg/l		42	66	NT	87	37	34	35	34	31	430	47	41	40	44	NT	48
Manganese	mg/l		0.68	3.4	NT	4.5	1.7	1.6	1.8	0.92	1.3	17	0.19	1.8	1.5	1.6	NT	0.9
Potassium	mg/l		0.89	1.3	NT	3.1	1.1	0.84	0.98	0.79	0.77	9.1	1.2	0.91	0.84	0.81	NT	1.2
Sodium	mg/l		72	170	NT	450	100	87	82	100	71	900	92	83	82	85	NT	110
General Chemistry																		
Bromide	mg/l		0.56	4	0.85	7.6	0.47	0.84	0.38	0.48	0.45	0.55	0.59	0.5	0.47	0.62	0.47	0.26
Chloride	mg/l	1.25 x bkgd	68	500	99	950	63	75	64	61	52	62	84	68	58	87	74	60
Nitrogen, Nitrate	mg/l		NT	NT	NT	0.082	ND	ND	ND	ND	ND	0.05	ND	ND	NT	NT	NT	2.8
Nitrogen, Nitrite	mg/l		NT	NT	NT	0.14	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	0.053
Nitrogen, Nitrate-Nitrite			NT	ND	ND	0.222	ND	ND	ND	ND	ND	0.05	ND	ND	NT	ND	ND	2.853
Sulfate	mg/l	1.25 x bkgd	61	66	35	47	2.7	10	12	49	49	74	21	9.7	24	23	43	58
Fluoride	mg/l		0.14	ND	ND	ND	0.2	0.18	0.23	0.16	0.16	0.18	0.14	0.11	0.15	ND	ND	ND
TDS	mg/l	1.25 x bkgd	925	NT		2418	623	689	NT	634	601	605	610	715	730	NT		763

Table 1

TR 31-5-697 Groundwater Analytical Results



Sample ID:		COGCC Table 910-1 Standards	MW 5 7/11/2013	MW 5 11/8/2013	MW 5 5/29/2014	MW 5 10/8/2014	MW 5 6/1/2015	MW 6 7/11/2013	MW 6 11/8/2013	MW 6 5/29/2014	MW 6 10/8/2014	MW 6 6/1/2015	MW 7 7/11/2013	MW 7 11/8/2013	MW 7 5/29/2014	MW 7 10/8/2014	MW 7 6/1/2015	MW 8 11/8/2013
Date Sampled:																		
Depth to Water (ft.)			29.47	30.46	25.98	29.12	25.15	25.35	25.62	21.42	25.32	19.62	28.42	28.62	25.04	28.46	23.27	22.09
GC/MS Volatiles (SW846 8260B)																		
DRO	mg/L		ND	ND	ND	3.0	ND	ND	ND	ND	1.7	ND	ND	ND	ND	1.5	ND	1.5
GRO	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4
Benzene	ug/l	5 ug/l	ND	ND	ND	ND	ND	1.5	ND	1.8	ND	ND	ND	ND	ND	ND	ND	90
Ethylbenzene	ug/l	700 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16
Toluene	ug/l	560 ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26
Xylene (total)	ug/l	1400 ug/l	ND	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	150
GC/MS Semi-volatiles (SW846 8270C)																		
1-Methylnaphthalene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
2-Chloronaphthalene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
2-Methylnaphthalene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
Acenaphthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
Anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/l		ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT
Pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals Analysis																		
Calcium	mg/l		63	61	61	65	71	76	73	74	76	68	63	71	79	70	86	87
Iron	mg/l		ND	ND	ND	0.9	0.16	0.12	ND	ND	1.5	0.11	ND	ND	ND	0.19	ND	ND
Magnesium	mg/l		31	30	30	32	35	36	35	35	35	31	31	36	39	34	42	45
Manganese	mg/l		31	0.064	0.052	0.036	0.055	0.77	0.77	0.091	0.7	0.012	0.032	0.51	0.39	0.5	0.47	1
Potassium	mg/l		0.032	1.1	0.66	1.2	0.98	1	0.88	0.68	1.4	0.82	1.2	0.79	0.91	0.86	1.1	1.3
Sodium	mg/l		69	80	71	80	81	76	83	65	70	64	69	82	85	78	89	82
General Chemistry																		
Bromide	mg/l		ND	0.18	0.22	0.27	ND	0.31	0.34	0.32	0.34	ND	ND	0.2	0.44	0.35	0.39	0.44
Chloride	mg/l	1.25 x bkgd	17	19	20	29	19	48	43	39	47	32	17	37	55	44	56	51
Nitrogen, Nitrate	mg/l		ND	NT	NT	NT	ND	ND	NT	NT	NT	3.1	ND	NT	NT	NT	0.15	NT
Nitrogen, Nitrite	mg/l		ND	NT	NT	NT	ND	ND	NT	NT	NT	ND	ND	NT	NT	NT	ND	NT
Nitrogen, Nitrate-Nitrite			ND	NT	ND	0.028	ND	ND	NT	0.24	ND	3.1	ND	NT	0.025	ND	0.15	NT
Sulfate	mg/l	1.25 x bkgd	110	110	110	100	110	53	53	63	71	56	110	47	41	44	40	63
Fluoride	mg/l		0.15	0.17	0.12	ND	0.15	0.11	0.15	0.11	ND	0.15	0.15	0.14	ND	ND	0.12	0.17
TDS	mg/l	1.25 x bkgd	589	584	NT		535	625	680	NT		493	635	658	NT		648	746

Table 1

TR 31-5-697 Groundwater Analytical Results



Sample ID:		COGCC	MW 8	MW 8	MW 8	MW 9	MW 9	MW 9	MW 9
Date Sampled:		Table 910-1 Standards	5/29/2014	10/8/2014	6/1/2015	11/8/2013	5/29/2014	10/8/2014	6/1/2015
Depth to Water (ft.)			18.38	21.07	16.39	24.42	20.51	23.57	18.18
GC/MS Volatiles (SW846 8260B)									
DRO	mg/L		ND	1.4	0.93	3.3	1.1	3.5	1.0
GRO	mg/L		0.44	0.24	1.7	11	0.55	3.8	0.21
Benzene	ug/l	5 ug/l	9.8	9.2	40	ND	ND	62	2.7
Ethylbenzene	ug/l	700 ug/l	6.2	2.0	24.0	ND	ND	51	1.5
Toluene	ug/l	560 ug/l	ND	ND	ND	16	ND	ND	ND
Xylene (total)	ug/l	1400 ug/l	83	25	500	1,800	8	700	26
GC/MS Semi-volatiles (SW846 8270C)									
1-Methylnaphthalene	ug/l		NT	NT	NT	NT	NT	NT	NT
2-Chloronaphthalene	ug/l		NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	ug/l		NT	NT	NT	NT	NT	NT	NT
Acenaphthene	ug/l		ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/l		NT	NT	NT	NT	NT	NT	NT
Anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/l		NT	NT	NT	NT	NT	NT	NT
Benzo(k)fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/l		ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ug/l		ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/l		ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/l		ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/l		ND	ND	ND	30	30	6.1	ND
Phenanthrene	ug/l		NT	NT	NT	NT	NT	NT	NT
Pyrene	ug/l		ND	ND	ND	ND	ND	ND	ND
Metals Analysis									
Calcium	mg/l		72	76	84	69	68	68	79
Iron	mg/l		0.11	3.5	2	ND	ND	1.1	1.3
Magnesium	mg/l		37	38	43	36	35	35	41
Manganese	mg/l		0.032	0.23	0.33	0.42	0.056	0.44	0.13
Potassium	mg/l		0.86	2	1.8	2	0.8	1.5	1.4
Sodium	mg/l		59	65	75	100	59	130	66
General Chemistry									
Bromide	mg/l		0.31	0.41	0.31	0.58	0.27	1.1	0.24
Chloride	mg/l	1.25 x bkgd	46	56	56	70	37	140	45
Nitrogen, Nitrate	mg/l		NT	NT	1.3	NT	NT	NT	1.7
Nitrogen, Nitrite	mg/l		NT	NT	0.034	NT	NT	NT	0.046
Nitrogen, Nitrate-Nitrite			1.2	1.0	1.334	NT	ND	0.033	1.746
Sulfate	mg/l	1.25 x bkgd	110	78	93	70	100	29	110
Fluoride	mg/l		0.13	ND	0.15	0.27	0.13	0.11	0.15
TDS	mg/l	1.25 x bkgd	NT		618	748	NT		567

Table 2

Field Data

YSI 556 Field Parameters →→			Temperature	Conductivity	Conductivity	Resistivity	TDS	Salinity	Dissolved Oxygen (DO)	Dissolved Oxygen (DO)	pH	pH	ORP	Water Levels
Sample Location	Media	Sampling Date	°C	mS/cm²	mS/cm	Ω/cm	g/L		%	mg/L		mV		TOC (ft)
MW-1	Groundwater	10/19/2011	8.88	0.914	0.633	1579.00	0.652	0.450	97.30	11.23	7.91	-64.30	60.3	22.51
MW-1	Groundwater	4/9/2012	8.26	0.965	0.655	1527.50	0.624	0.47	140.20	16.19	7.80	-84.1	-30.30	22.07
MW-1	Groundwater	7/12/2012												
MW-1	Groundwater	9/18/2012	9.84	0.925	0.657	1521.00	0.601	0.46	65.10	7.35	7.67	-37.3	234.00	24.09
MW-1	Groundwater	12/5/2012	7.14	0.885	0.582	1714.90	0.575	0.44	62.00	7.48	7.48	-53.7	138.40	24.26
MW-1	Groundwater	3/27/2013	6.28	0.962	0.624	1659.40	0.563	0.46	67.20	7.95	7.51	-53.8	135.30	23.65
MW-1	Groundwater	5/15/2013	5.36	0.962	0.617	1697.70	0.586	0.49	67.10	7.00	7.69	-53.7	134.90	23.67
MW-1	Groundwater	7/26/2013	9.14	0.926	0.646	1548.30	0.602	0.46	94.70	10.87	7.42	-54.2	120.50	25.85
MW-1	Groundwater	11/8/2013	7.20	1.017	0.671	1489.00	0.660	0.50	NT	12.52	7.18	NT	313.90	26.20
MW-1	Groundwater	5/29/2014	7.89	1.082	0.725	1385.10	0.693	0.53	82.30	9.61	7.95	-63.2	207.70	24.76
MW-1	Groundwater	10/8/2014	8.55	1.087	0.745	1341.80	0.706	0.54	85.90	10.00	7.63	-57.3	222.80	25.84
MW-1	Groundwater	6/1/2015	9.59	0.958	0.645	1483.80	0.621	0.47	126.20	14.35	7.19	-22.6	89.60	21.65
MW-2	Groundwater	10/19/2011	9.35	0.951	0.667	1499.20	0.618	0.47	17.90	2.02	10.39	-188.0	-251.80	26.41
MW-2	Groundwater	4/9/2012	10.73	0.964	0.701	1426.90	0.627	0.48	38.30	4.20	7.24	-54.9	127.80	25.87
MW-2	Groundwater	7/12/2012												
MW-2	Groundwater	9/18/2012	12.77	0.985	0.755	1324.50	0.640	0.49	2.80	0.29	7.72	-40.7	-198.60	28.35
MW-2	Groundwater	12/5/2012	7.13	0.933	0.579	1726.10	0.607	0.46	31.70	4.03	7.80	-69.6	17.50	30.75
MW-2	Groundwater	3/27/2013	6.36	0.932	0.548	1721.30	0.605	0.48	31.85	4.69	7.79	-68.4	-130.50	28.21
MW-2	Groundwater	5/15/2013	5.20	0.913	0.564	1643.40	0.601	0.49	29.30	3.10	7.81	-68.6	-125.00	26.64
MW-2	Groundwater	7/11/2013	10.10	1.111	0.795	1257.60	0.721	0.55	52.70	5.70	7.79	NS	-85.20	29.48
MW-2	Groundwater	11/8/2013	8.78	1.268	0.872	1147.50	0.820	0.63	NT	NT	6.98	NT	-129.40	30.48
MW-2	Groundwater	5/29/2014	10.42	1.178	0.849	1177.80	0.765	0.59	25.70	2.84	7.16	-21.7	-142.40	25.97
MW-2	Groundwater	10/8/2014	8.71	1.104	0.76	1315.10	0.717	0.55	17.50	2.03	8.84	-62.9	-127.90	28.43
MW-2	Groundwater	6/1/2015	9.81	1.169	0.83	1205.40	0.760	0.58	41.20	4.65	7.42	-39.8	-43.60	24.59
MW-3	Groundwater	10/19/2011	8.46	0.985	0.674	1484.40	0.640	0.49	16.20	1.88	9.90	-163.5	-221.50	33.28
MW-3	Groundwater	4/9/2012	10.65	1.834	1.333	750.25	1.190	0.93	29.20	3.15	7.45	-66.0	-143.80	33.02
MW-3	Groundwater	7/12/2012												
MW-3	Groundwater	9/18/2012	13.57	0.928	0.725	1378.90	0.603	0.46	4.50	0.47	7.67	-38.1	-148.80	33.04
MW-3	Groundwater	12/5/2012	7.65	0.894	0.513	1949.12	0.581	0.44	57.00	7.72	7.56	-57.3	32.40	34.30

Table 2

Field Data

YSI 556 Field Parameters →→			Temperature	Conductivity	Conductivity	Resistivity	TDS	Salinity	Dissolved Oxygen (DO)	Dissolved Oxygen (DO)	pH	pH	ORP	Water Levels
Sample Location	Media	Sampling Date	°C	mS/cm²	mS/cm	Ω/cm	g/L		%	mg/L		mV		TOC (ft)
MW-3	Groundwater	3/27/2013	6.36	0.897	0.525	1886.30	0.621	0.46	36.10	4.97	7.43	-61.7	-112.50	32.74
MW-3	Groundwater	5/15/2013	5.89	0.868	0.534	1786.45	0.620	0.47	31.23	2.95	7.49	-60.3	-107.30	30.31
MW-3	Groundwater	7/11/2013	10.10	1.073	0.768	1301.80	0.699	0.54	46.80	5.00	7.64	NT	-152.40	32.64
MW-3	Groundwater	11/8/2013	7.61	1.423	0.950	1052.60	0.925	0.72	NT	Nt	7.15	NT	-140.90	33.98
MW-3	Groundwater	5.29.2014	9.44	2.931	2.062	484.83	1.904	1.63	18.80	2.12	7.26	-26.7	-65.20	30.11
MW-3	Groundwater	10/8/2014	9.33	1.417	0.993	1006.90	0.921	0.71	26.60	3.04	7.54	-52.8	-162.20	34.90
MW-3	Groundwater	6/1/2015	9.69	3.721	2.633	379.88	2.418	1.97	9.40	1.06	7.19	-29.4	-40.10	28.94
MW-4	Groundwater	10/19/2011	7.80	0.958	0.644	1554.20	0.623	0.47	25.10	2.95	9.09	-122.5	-146.20	28.83
MW-4	Groundwater	4/9/2012	10.35	1.06	0.76	1315.70	0.689	0.53	58.60	6.50	7.25	-55.7	-103.90	27.56
MW-4	Groundwater	7/12/2012												
MW-4	Groundwater	9/18/2012	9.84	0.975	0.693	1442.90	0.634	0.48	8.30	0.94	7.75	-41.8	-143.60	32.74
MW-4	Groundwater	12/5/2012	7.80	9.925	0.554	1805.60	0.601	0.45	23.90	3.12	7.71	-65.1	4.90	33.02
MW-4	Groundwater	3/27/2013	6.45	1.003	0.561	1801.90	0.605	0.46	36.31	4.61	7.64	-65.7	-97.30	32.36
MW-4	Groundwater	5/15/2013	5.74	0.978	0.578	1807.70	0.610	0.50	30.14	3.19	7.51	-64.1	-97.20	31.01
MW-4	Groundwater	7/11/2013	8.96	1.1	0.763	1309.20	0.715	0.55	31.70	3.62	7.63	NT	-108.60	32.48
MW-4	Groundwater	11/8/2013	7.08	1.122	0.738	1355.80	0.730	0.56	NT	Nt	7.24	NT	-43.80	32.72
MW-4	Groundwater	5/29/2014	8.72	1.198	0.824	1212.70	0.729	0.60	20.10	2.28	7.51	-40.0	12.03	28.94
MW-4	Groundwater	10/8/2014	8.37	1.144	0.781	1280.60	0.744	0.57	31.20	3.65	7.52	-51.6	-41.40	31.66
MW-4	Groundwater	6/1/2015	8.75	1.173	0.809	1236.00	0.763	0.59	152.70	17.89	7.04	-19.0	16.80	23.47
MW-5	Groundwater	7.11.2013	10.35	0.91	0.697	1437.10	0.589	0.45	37.00	3.88	7.74	NT	107.50	29.47
MW-5	Groundwater	11/8/2013	7.58	0.897	0.6	1466.00	0.584	0.44	NT	NT	7.36	NT	143.10	30.46
MW-5	Groundwater	5/29/2014	9.38	0.949	0.666	1601.80	0.617	0.47	23.70	2.66	7.73	-32.1	190.30	25.98
MW-5	Groundwater	10/8/2014	8.87	0.945	0.654	1528.70	0.614	0.47	36.60	4.23	7.60	-55.6	-10.60	29.12
MW-5	Groundwater	6/1/2015	9.25	0.828	0.575	1738.40	0.535	0.41	45.50	5.21	7.09	-20.1	63.80	25.15
MW-6	Groundwater	7/11/2013	8.81	0.959	0.67	1495.10	0.625	0.48	28.90	3.33	7.87	NT	-61.80	25.35
MW-6	Groundwater	11/8/2013	6.40	1.054	0.68	1475.60	0.686	0.52	NT	NT	7.50	NT	36.20	25.62
MW-6	Groundwater	5.29/2014	7.32	0.959	0.635	1573.10	0.624	0.48	26.70	3.18	7.75	-52.8	240.60	21.42
MW-6	Groundwater	10/8/2014	7.55	1.03	0.687	1456.50	0.669	0.51	39.40	4.71	7.66	-58.7	-13.50	25.32

Table 2

Field Data

YSI 556 Field Parameters →→			Temperature	Conductivity	Conductivity	Resistivity	TDS	Salinity	Dissolved Oxygen (DO)	Dissolved Oxygen (DO)	pH	pH	ORP	Water Levels
Sample Location	Media	Sampling Date	°C	mS/cm²	mS/cm	Ω/cm	g/L		%	mg/L		mV		TOC (ft)
MW-6	Groundwater	6/1/2015	8.09	0.759	0.514	1946.40	0.493	0.37	110.90	13.08	7.18	-22.3	89.20	19.62
MW-7	Groundwater	7/11/2013	8.40	0.976	0.666	1500.40	0.635	0.48	30.70	3.58	7.86	NT	7.10	28.42
MW-7	Groundwater	11/8/2013	6.63	1.013	0.658	1520.70	0.658	0.50	NT	NT	7.66	NT	195.30	28.62
MW-7	Groundwater	5/29/2014	7.73	1.091	0.73	1370.60	0.708	0.54	26.40	3.11	7.76	-53.2	223.70	25.04
MW-7	Groundwater	10/8/2014	7.77	1.044	0.7	1427.70	0.679	0.52	25.30	3.00	7.64	-57.6	-33.90	28.46
MW-7	Groundwater	6/1/2015	8.72	0.997	0.687	1455.40	0.648	0.50	26.60	3.08	6.97	-17.4	88.30	23.27
MW-8	Groundwater	11/8/2013	9.28	1.136	0.796	1256.80	0.746	0.57	NT	NT	7.42	NT	-36.10	22.09
MW-8	Groundwater	5/29/2014	9.19	0.951	0.664	1506.10	0.618	0.47	31.70	3.60	7.62	-46.0	164.10	18.38
MW-8	Groundwater	10/8/2014	8.73	1.018	0.702	1424.90	0.662	0.51	37.90	4.40	7.45	-47.7	21.70	21.07
MW-8	Groundwater	6/1/2015	9.79	0.951	0.675	1482.40	0.618	0.47	32.30	3.65	6.69	-6.4	108.00	16.39
MW-9	Groundwater	11/8/2013	8.25	1.151	0.783	1276.20	0.748	0.57	NT	NT	7.58	NT	16.50	24.42
MW-9	Groundwater	5/29/2014	8.86	0.902	0.624	1601.4	0.587	0.45	19.2	2.2	7.79	-55.2	-137.7	20.51
MW-9	Groundwater	10/8/2014	8.29	1.335	0.909	1100.1	0.868	0.67	33.8	3.96	7.74	-63	-158.4	23.57
MW-9	Groundwater	6/1/2015	8.61	0.872	0.599	1668.4	0.567	0.43	56	6.52	7.07	-19.8	79	18.18



10-Jun-2015

Mark Mumby
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **WPX TR 31-5-697 Qtr. MW Sampling**

Work Order: **1506164**

Dear Mark,

ALS Environmental received 9 samples on 03-Jun-2015 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 40.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Les Arnold".

Electronically approved by: Les Arnold

Les Arnold
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Work Order: 1506164

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1506164-01	MW 1	Water		6/1/2015 13:25	6/3/2015 09:30	<input type="checkbox"/>
1506164-02	MW 2	Water		6/1/2015 14:48	6/3/2015 09:30	<input type="checkbox"/>
1506164-03	MW 3	Water		6/1/2015 14:38	6/3/2015 09:30	<input type="checkbox"/>
1506164-04	MW 4	Water		6/1/2015 13:50	6/3/2015 09:30	<input type="checkbox"/>
1506164-05	MW 5	Water		6/1/2015 14:02	6/3/2015 09:30	<input type="checkbox"/>
1506164-06	MW 6	Water		6/1/2015 13:36	6/3/2015 09:30	<input type="checkbox"/>
1506164-07	MW 7	Water		6/1/2015 13:42	6/3/2015 09:30	<input type="checkbox"/>
1506164-08	MW 8	Water		6/1/2015 14:30	6/3/2015 09:30	<input type="checkbox"/>
1506164-09	MW 9	Water		6/1/2015 14:10	6/3/2015 09:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
WorkOrder: 1506164

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and PQL, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Work Order: 1506164

Case Narrative

Above noted Work Order were received on 06/03/2015. The attached ""Sample Receipt Checklist"" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the ""Work Order Acknowledgement"". Methodologies are also documented in the ""Analytical Result"" section for each sample. Quality control results are listed in the ""QC Report"" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The ""Qualifiers"" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Sample Receiving:

No deviations or anomalies were noted.

Volatile Organics:

Batch R164937B, Method VOC_8260_W, Sample 1506164-03A: Sample diluted due to high concentrations of target and non-target compounds.

Batch R164937B, Method VOC_8260_W, Sample 1506164-03A: MS and MSD samples diluted due to high concentrations of target and non-target compounds.

No other deviations or anomalies were noted.

Extractable Organics:

Batch 71862, Method PNLVI_8270_W, Sample 1506164-02B: Surrogate high due to matrix interference.

Batch 71862, Method PNLVI_8270_W, Sample 1506164-03B: Surrogate high due to matrix interference.

No other deviations or anomalies were noted.

Metals:

No other deviations or anomalies were noted.

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Work Order: 1506164

Case Narrative

Wet Chemistry:

Batch R165129, Method IC_9056_W, Sample 1506164-03C: The reporting limit is elevated due to dilution for high concentrations of non-target analytes.

Batch R164807, Method NO2_4500B_W, Sample 1506164-01 through 9C: All samples were run out of hold time. Test added after hold time expiration.

Batch R164927, Method NO3_353.2_W, Sample 1506164-01 through 9C: All Samples were preserved in the lab on 6/5/2015.

No other deviations or anomalies were noted.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 1
Collection Date: 6/1/2015 01:25 PM

Work Order: 1506164
Lab ID: 1506164-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	ND		0.10	mg/L	1	6/4/2015 08:41 PM
Surr: 4-Terphenyl-d14	111		31-176	%REC	1	6/4/2015 08:41 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	ND		0.20	mg/L	1	6/4/2015 10:25 PM
Surr: Toluene-d8	107		70-130	%REC	1	6/4/2015 10:25 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	90		0.50	mg/L	1	6/4/2015 06:09 PM
Iron	ND		0.080	mg/L	1	6/4/2015 06:09 PM
Magnesium	45		0.20	mg/L	1	6/4/2015 06:09 PM
Manganese	ND		0.0050	mg/L	1	6/4/2015 06:09 PM
Potassium	1.1		0.20	mg/L	1	6/4/2015 06:09 PM
Sodium	65		0.20	mg/L	1	6/4/2015 06:09 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 04:49 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 04:49 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 04:49 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 04:49 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 04:49 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 04:49 PM
Naphthalene	ND		5.0	µg/L	1	6/8/2015 04:49 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 04:49 PM
Surr: 2-Fluorobiphenyl	96.8		20-140	%REC	1	6/8/2015 04:49 PM
Surr: 4-Terphenyl-d14	105		22-172	%REC	1	6/8/2015 04:49 PM
Surr: Nitrobenzene-d5	99.6		8-140	%REC	1	6/8/2015 04:49 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	ND		1.0	µg/L	1	6/7/2015 05:25 PM
Ethylbenzene	ND		1.0	µg/L	1	6/7/2015 05:25 PM
m,p-Xylene	ND		2.0	µg/L	1	6/7/2015 05:25 PM
o-Xylene	ND		1.0	µg/L	1	6/7/2015 05:25 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 05:25 PM
Xylenes, Total	ND		3.0	µg/L	1	6/7/2015 05:25 PM
Surr: 1,2-Dichloroethane-d4	93.1		75-120	%REC	1	6/7/2015 05:25 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 1
Collection Date: 6/1/2015 01:25 PM

Work Order: 1506164
Lab ID: 1506164-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	95.4		80-110	%REC	1	6/7/2015 05:25 PM
Surr: Dibromofluoromethane	102		85-115	%REC	1	6/7/2015 05:25 PM
Surr: Toluene-d8	93.4		85-110	%REC	1	6/7/2015 05:25 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.32		0.20	mg/L	1	6/9/2015 08:21 PM
Chloride	58		20	mg/L	20	6/9/2015 11:55 AM
Fluoride	0.15		0.10	mg/L	1	6/9/2015 08:21 PM
Sulfate	130		20	mg/L	20	6/9/2015 11:55 AM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	2.4		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 2
Collection Date: 6/1/2015 02:48 PM

Work Order: 1506164
Lab ID: 1506164-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	84		0.15	mg/L	1	6/4/2015 09:11 PM
Surr: 4-Terphenyl-d14	91.1		31-176	%REC	1	6/4/2015 09:11 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	4.3		0.20	mg/L	1	6/4/2015 10:50 PM
Surr: Toluene-d8	95.8		70-130	%REC	1	6/4/2015 10:50 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	110		0.50	mg/L	1	6/4/2015 06:15 PM
Iron	4.7		0.080	mg/L	1	6/4/2015 06:15 PM
Magnesium	55		0.20	mg/L	1	6/4/2015 06:15 PM
Manganese	0.71		0.0050	mg/L	1	6/4/2015 06:15 PM
Potassium	2.7		0.20	mg/L	1	6/4/2015 06:15 PM
Sodium	95		0.20	mg/L	1	6/4/2015 06:15 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		7.5	µg/L	1	6/8/2015 05:44 PM
Anthracene	ND		7.5	µg/L	1	6/8/2015 05:44 PM
Benzo(a)anthracene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Benzo(a)pyrene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Benzo(b)fluoranthene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Benzo(k)fluoranthene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Chrysene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Dibenzo(a,h)anthracene	ND		3.0	µg/L	1	6/8/2015 05:44 PM
Fluoranthene	ND		1.5	µg/L	1	6/8/2015 05:44 PM
Fluorene	ND		7.5	µg/L	1	6/8/2015 05:44 PM
Indeno(1,2,3-cd)pyrene	ND		3.0	µg/L	1	6/8/2015 05:44 PM
Naphthalene	12		7.5	µg/L	1	6/8/2015 05:44 PM
Pyrene	ND		7.5	µg/L	1	6/8/2015 05:44 PM
Surr: 2-Fluorobiphenyl	180	S	20-140	%REC	1	6/8/2015 05:44 PM
Surr: 4-Terphenyl-d14	84.7		22-172	%REC	1	6/8/2015 05:44 PM
Surr: Nitrobenzene-d5	237	S	8-140	%REC	1	6/8/2015 05:44 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	44		1.0	µg/L	1	6/7/2015 05:50 PM
Ethylbenzene	29		1.0	µg/L	1	6/7/2015 05:50 PM
m,p-Xylene	260		10	µg/L	5	6/8/2015 11:24 PM
o-Xylene	6.2		1.0	µg/L	1	6/7/2015 05:50 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 05:50 PM
Xylenes, Total	260		15	µg/L	5	6/8/2015 11:24 PM
Surr: 1,2-Dichloroethane-d4	100		75-120	%REC	5	6/8/2015 11:24 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 2
Collection Date: 6/1/2015 02:48 PM

Work Order: 1506164
Lab ID: 1506164-02
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	85.6		75-120	%REC	1	6/7/2015 05:50 PM
Surr: 4-Bromofluorobenzene	103		80-110	%REC	5	6/8/2015 11:24 PM
Surr: 4-Bromofluorobenzene	93.1		80-110	%REC	1	6/7/2015 05:50 PM
Surr: Dibromofluoromethane	94.0		85-115	%REC	5	6/8/2015 11:24 PM
Surr: Dibromofluoromethane	92.7		85-115	%REC	1	6/7/2015 05:50 PM
Surr: Toluene-d8	101		85-110	%REC	5	6/8/2015 11:24 PM
Surr: Toluene-d8	131	S	85-110	%REC	1	6/7/2015 05:50 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.47		0.20	mg/L	1	6/9/2015 08:41 PM
Chloride	73		10	mg/L	10	6/9/2015 12:15 PM
Fluoride	0.14		0.10	mg/L	1	6/9/2015 08:41 PM
Sulfate	50		10	mg/L	10	6/9/2015 12:15 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	1.0	H	0.10	mg/L	5	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	1.5		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 3
Collection Date: 6/1/2015 02:38 PM

Work Order: 1506164
Lab ID: 1506164-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	36		0.10	mg/L	1	6/5/2015 09:55 PM
Surr: 4-Terphenyl-d14	123		31-176	%REC	1	6/5/2015 09:55 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	3.0		0.20	mg/L	1	6/4/2015 11:14 PM
Surr: Toluene-d8	97.3		70-130	%REC	1	6/4/2015 11:14 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	220		0.50	mg/L	1	6/4/2015 06:20 PM
Iron	5.5		0.080	mg/L	1	6/4/2015 06:20 PM
Magnesium	87		0.20	mg/L	1	6/4/2015 06:20 PM
Manganese	4.5		0.0050	mg/L	1	6/4/2015 06:20 PM
Potassium	3.1		0.20	mg/L	1	6/4/2015 06:20 PM
Sodium	450		2.0	mg/L	10	6/5/2015 10:47 AM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 06:38 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 06:38 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 06:38 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 06:38 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 06:38 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 06:38 PM
Naphthalene	5.2		5.0	µg/L	1	6/8/2015 06:38 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 06:38 PM
Surr: 2-Fluorobiphenyl	101		20-140	%REC	1	6/8/2015 06:38 PM
Surr: 4-Terphenyl-d14	101		22-172	%REC	1	6/8/2015 06:38 PM
Surr: Nitrobenzene-d5	261	S	8-140	%REC	1	6/8/2015 06:38 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: RS
Benzene	38		5.0	µg/L	5	6/8/2015 11:50 PM
Ethylbenzene	47		5.0	µg/L	5	6/8/2015 11:50 PM
m,p-Xylene	580		10	µg/L	5	6/8/2015 11:50 PM
o-Xylene	6.0		5.0	µg/L	5	6/8/2015 11:50 PM
Toluene	ND		5.0	µg/L	5	6/8/2015 11:50 PM
Xylenes, Total	590		15	µg/L	5	6/8/2015 11:50 PM
Surr: 1,2-Dichloroethane-d4	101		75-120	%REC	5	6/8/2015 11:50 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 3
Collection Date: 6/1/2015 02:38 PM

Work Order: 1506164
Lab ID: 1506164-03
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	98.0		80-110	%REC	5	6/8/2015 11:50 PM
Surr: Dibromofluoromethane	99.2		85-115	%REC	5	6/8/2015 11:50 PM
Surr: Toluene-d8	100		85-110	%REC	5	6/8/2015 11:50 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	7.6		0.40	mg/L	2	6/9/2015 09:01 PM
Chloride	950		100	mg/L	100	6/9/2015 12:56 PM
Fluoride	ND		0.20	mg/L	2	6/9/2015 09:01 PM
Sulfate	47		5.0	mg/L	5	6/9/2015 12:35 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	0.14	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	0.082		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 4
Collection Date: 6/1/2015 01:50 PM

Work Order: 1506164
Lab ID: 1506164-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	1.5		0.10	mg/L	1	6/5/2015 10:25 PM
Surr: 4-Terphenyl-d14	108		31-176	%REC	1	6/5/2015 10:25 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	0.99		0.20	mg/L	1	6/4/2015 11:39 PM
Surr: Toluene-d8	114		70-130	%REC	1	6/4/2015 11:39 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	100		0.50	mg/L	1	6/4/2015 06:26 PM
Iron	0.20		0.080	mg/L	1	6/4/2015 06:26 PM
Magnesium	48		0.20	mg/L	1	6/4/2015 06:26 PM
Manganese	0.90		0.0050	mg/L	1	6/4/2015 06:26 PM
Potassium	1.2		0.20	mg/L	1	6/4/2015 06:26 PM
Sodium	110		0.20	mg/L	1	6/4/2015 06:26 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 07:06 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 07:06 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 07:06 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:06 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 07:06 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 07:06 PM
Naphthalene	ND		5.0	µg/L	1	6/8/2015 07:06 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 07:06 PM
Surr: 2-Fluorobiphenyl	94.2		20-140	%REC	1	6/8/2015 07:06 PM
Surr: 4-Terphenyl-d14	104		22-172	%REC	1	6/8/2015 07:06 PM
Surr: Nitrobenzene-d5	95.1		8-140	%REC	1	6/8/2015 07:06 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	2.3		1.0	µg/L	1	6/7/2015 06:14 PM
Ethylbenzene	6.0		1.0	µg/L	1	6/7/2015 06:14 PM
m,p-Xylene	120		2.0	µg/L	1	6/7/2015 06:14 PM
o-Xylene	2.8		1.0	µg/L	1	6/7/2015 06:14 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 06:14 PM
Xylenes, Total	120		3.0	µg/L	1	6/7/2015 06:14 PM
Surr: 1,2-Dichloroethane-d4	90.7		75-120	%REC	1	6/7/2015 06:14 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 4
Collection Date: 6/1/2015 01:50 PM

Work Order: 1506164
Lab ID: 1506164-04
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	99.8		80-110	%REC	1	6/7/2015 06:14 PM
Surr: Dibromofluoromethane	98.5		85-115	%REC	1	6/7/2015 06:14 PM
Surr: Toluene-d8	99.7		85-110	%REC	1	6/7/2015 06:14 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.26		0.20	mg/L	1	6/9/2015 09:21 PM
Chloride	60		5.0	mg/L	5	6/9/2015 01:16 PM
Fluoride	ND		0.10	mg/L	1	6/9/2015 09:21 PM
Sulfate	58		5.0	mg/L	5	6/9/2015 01:16 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	0.053	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	2.8		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 5
Collection Date: 6/1/2015 02:02 PM

Work Order: 1506164
Lab ID: 1506164-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	ND		0.10	mg/L	1	6/5/2015 10:55 PM
Surr: 4-Terphenyl-d14	101		31-176	%REC	1	6/5/2015 10:55 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	ND		0.20	mg/L	1	6/5/2015 12:04 PM
Surr: Toluene-d8	108		70-130	%REC	1	6/5/2015 12:04 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	71		0.50	mg/L	1	6/4/2015 03:54 PM
Iron	0.16		0.080	mg/L	1	6/4/2015 03:54 PM
Magnesium	35		0.20	mg/L	1	6/4/2015 03:54 PM
Manganese	0.055		0.0050	mg/L	1	6/4/2015 03:54 PM
Potassium	0.98		0.20	mg/L	1	6/4/2015 03:54 PM
Sodium	81		0.20	mg/L	1	6/4/2015 03:54 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 07:33 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 07:33 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 07:33 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 07:33 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 07:33 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 07:33 PM
Naphthalene	ND		5.0	µg/L	1	6/8/2015 07:33 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 07:33 PM
Surr: 2-Fluorobiphenyl	99.0		20-140	%REC	1	6/8/2015 07:33 PM
Surr: 4-Terphenyl-d14	104		22-172	%REC	1	6/8/2015 07:33 PM
Surr: Nitrobenzene-d5	98.2		8-140	%REC	1	6/8/2015 07:33 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	ND		1.0	µg/L	1	6/7/2015 06:39 PM
Ethylbenzene	ND		1.0	µg/L	1	6/7/2015 06:39 PM
m,p-Xylene	ND		2.0	µg/L	1	6/7/2015 06:39 PM
o-Xylene	ND		1.0	µg/L	1	6/7/2015 06:39 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 06:39 PM
Xylenes, Total	ND		3.0	µg/L	1	6/7/2015 06:39 PM
Surr: 1,2-Dichloroethane-d4	91.2		75-120	%REC	1	6/7/2015 06:39 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 5
Collection Date: 6/1/2015 02:02 PM

Work Order: 1506164
Lab ID: 1506164-05
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.4		80-110	%REC	1	6/7/2015 06:39 PM
Surr: Dibromofluoromethane	101		85-115	%REC	1	6/7/2015 06:39 PM
Surr: Toluene-d8	94.4		85-110	%REC	1	6/7/2015 06:39 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	ND		0.20	mg/L	1	6/9/2015 09:42 PM
Chloride	19		1.0	mg/L	1	6/9/2015 09:42 PM
Fluoride	0.15		0.10	mg/L	1	6/9/2015 09:42 PM
Sulfate	110		10	mg/L	10	6/9/2015 01:36 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	ND		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 6
Collection Date: 6/1/2015 01:36 PM

Work Order: 1506164
Lab ID: 1506164-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	ND		0.10	mg/L	1	6/5/2015 05:25 PM
Surr: 4-Terphenyl-d14	101		31-176	%REC	1	6/5/2015 05:25 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	ND		0.20	mg/L	1	6/5/2015 12:29 PM
Surr: Toluene-d8	111		70-130	%REC	1	6/5/2015 12:29 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	68		0.50	mg/L	1	6/4/2015 06:32 PM
Iron	0.11		0.080	mg/L	1	6/4/2015 06:32 PM
Magnesium	31		0.20	mg/L	1	6/4/2015 06:32 PM
Manganese	0.012		0.0050	mg/L	1	6/4/2015 06:32 PM
Potassium	0.82		0.20	mg/L	1	6/5/2015 10:53 AM
Sodium	64		0.20	mg/L	1	6/4/2015 06:32 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 08:00 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 08:00 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 08:00 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:00 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 08:00 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 08:00 PM
Naphthalene	ND		5.0	µg/L	1	6/8/2015 08:00 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 08:00 PM
Surr: 2-Fluorobiphenyl	93.7		20-140	%REC	1	6/8/2015 08:00 PM
Surr: 4-Terphenyl-d14	98.6		22-172	%REC	1	6/8/2015 08:00 PM
Surr: Nitrobenzene-d5	93.4		8-140	%REC	1	6/8/2015 08:00 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	ND		1.0	µg/L	1	6/7/2015 07:04 PM
Ethylbenzene	ND		1.0	µg/L	1	6/7/2015 07:04 PM
m,p-Xylene	ND		2.0	µg/L	1	6/7/2015 07:04 PM
o-Xylene	ND		1.0	µg/L	1	6/7/2015 07:04 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 07:04 PM
Xylenes, Total	ND		3.0	µg/L	1	6/7/2015 07:04 PM
Surr: 1,2-Dichloroethane-d4	89.1		75-120	%REC	1	6/7/2015 07:04 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 6
Collection Date: 6/1/2015 01:36 PM

Work Order: 1506164
Lab ID: 1506164-06
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.6		80-110	%REC	1	6/7/2015 07:04 PM
Surr: Dibromofluoromethane	101		85-115	%REC	1	6/7/2015 07:04 PM
Surr: Toluene-d8	92.9		85-110	%REC	1	6/7/2015 07:04 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	ND		0.20	mg/L	1	6/9/2015 10:02 PM
Chloride	32		5.0	mg/L	5	6/9/2015 01:56 PM
Fluoride	0.15		0.10	mg/L	1	6/9/2015 10:02 PM
Sulfate	56		5.0	mg/L	5	6/9/2015 01:56 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	3.1		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 7
Collection Date: 6/1/2015 01:42 PM

Work Order: 1506164
Lab ID: 1506164-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	ND		0.10	mg/L	1	6/5/2015 05:55 PM
Surr: 4-Terphenyl-d14	99.5		31-176	%REC	1	6/5/2015 05:55 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	ND		0.20	mg/L	1	6/5/2015 12:53 PM
Surr: Toluene-d8	108		70-130	%REC	1	6/5/2015 12:53 PM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	86		0.50	mg/L	1	6/4/2015 06:38 PM
Iron	ND		0.080	mg/L	1	6/4/2015 06:38 PM
Magnesium	42		0.20	mg/L	1	6/4/2015 06:38 PM
Manganese	0.47		0.0050	mg/L	1	6/4/2015 06:38 PM
Potassium	1.1		0.20	mg/L	1	6/4/2015 06:38 PM
Sodium	89		0.20	mg/L	1	6/4/2015 06:38 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		5.0	µg/L	1	6/8/2015 08:28 PM
Anthracene	ND		5.0	µg/L	1	6/8/2015 08:28 PM
Benzo(a)anthracene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Benzo(a)pyrene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Benzo(b)fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Benzo(k)fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Chrysene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Dibenzo(a,h)anthracene	ND		2.0	µg/L	1	6/8/2015 08:28 PM
Fluoranthene	ND		1.0	µg/L	1	6/8/2015 08:28 PM
Fluorene	ND		5.0	µg/L	1	6/8/2015 08:28 PM
Indeno(1,2,3-cd)pyrene	ND		2.0	µg/L	1	6/8/2015 08:28 PM
Naphthalene	ND		5.0	µg/L	1	6/8/2015 08:28 PM
Pyrene	ND		5.0	µg/L	1	6/8/2015 08:28 PM
Surr: 2-Fluorobiphenyl	93.1		20-140	%REC	1	6/8/2015 08:28 PM
Surr: 4-Terphenyl-d14	99.1		22-172	%REC	1	6/8/2015 08:28 PM
Surr: Nitrobenzene-d5	95.7		8-140	%REC	1	6/8/2015 08:28 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	ND		1.0	µg/L	1	6/7/2015 07:29 PM
Ethylbenzene	ND		1.0	µg/L	1	6/7/2015 07:29 PM
m,p-Xylene	ND		2.0	µg/L	1	6/7/2015 07:29 PM
o-Xylene	ND		1.0	µg/L	1	6/7/2015 07:29 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 07:29 PM
Xylenes, Total	ND		3.0	µg/L	1	6/7/2015 07:29 PM
Surr: 1,2-Dichloroethane-d4	91.6		75-120	%REC	1	6/7/2015 07:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 7
Collection Date: 6/1/2015 01:42 PM

Work Order: 1506164
Lab ID: 1506164-07
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	97.4		80-110	%REC	1	6/7/2015 07:29 PM
Surr: Dibromofluoromethane	102		85-115	%REC	1	6/7/2015 07:29 PM
Surr: Toluene-d8	94.2		85-110	%REC	1	6/7/2015 07:29 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.39		0.20	mg/L	1	6/9/2015 10:22 PM
Chloride	56		5.0	mg/L	5	6/9/2015 02:17 PM
Fluoride	0.12		0.10	mg/L	1	6/9/2015 10:22 PM
Sulfate	40		5.0	mg/L	5	6/9/2015 02:17 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	ND	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	0.15		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 8
Collection Date: 6/1/2015 02:30 PM

Work Order: 1506164
Lab ID: 1506164-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	0.93		0.15	mg/L	1	6/5/2015 06:25 PM
Surr: 4-Terphenyl-d14	94.0		31-176	%REC	1	6/5/2015 06:25 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	1.7		0.20	mg/L	1	6/5/2015 01:18 AM
Surr: Toluene-d8	117		70-130	%REC	1	6/5/2015 01:18 AM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	84		0.50	mg/L	1	6/4/2015 07:11 PM
Iron	2.0		0.080	mg/L	1	6/4/2015 07:11 PM
Magnesium	43		0.20	mg/L	1	6/4/2015 07:11 PM
Manganese	0.33		0.0050	mg/L	1	6/4/2015 07:11 PM
Potassium	1.8		0.20	mg/L	1	6/4/2015 07:11 PM
Sodium	75		0.20	mg/L	1	6/4/2015 07:11 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		7.5	µg/L	1	6/8/2015 08:55 PM
Anthracene	ND		7.5	µg/L	1	6/8/2015 08:55 PM
Benzo(a)anthracene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Benzo(a)pyrene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Benzo(b)fluoranthene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Benzo(k)fluoranthene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Chrysene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Dibenzo(a,h)anthracene	ND		3.0	µg/L	1	6/8/2015 08:55 PM
Fluoranthene	ND		1.5	µg/L	1	6/8/2015 08:55 PM
Fluorene	ND		7.5	µg/L	1	6/8/2015 08:55 PM
Indeno(1,2,3-cd)pyrene	ND		3.0	µg/L	1	6/8/2015 08:55 PM
Naphthalene	ND		7.5	µg/L	1	6/8/2015 08:55 PM
Pyrene	ND		7.5	µg/L	1	6/8/2015 08:55 PM
Surr: 2-Fluorobiphenyl	102		20-140	%REC	1	6/8/2015 08:55 PM
Surr: 4-Terphenyl-d14	100		22-172	%REC	1	6/8/2015 08:55 PM
Surr: Nitrobenzene-d5	94.9		8-140	%REC	1	6/8/2015 08:55 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	40		1.0	µg/L	1	6/7/2015 07:54 PM
Ethylbenzene	24		1.0	µg/L	1	6/7/2015 07:54 PM
m,p-Xylene	480		20	µg/L	10	6/9/2015 12:15 PM
o-Xylene	23		1.0	µg/L	1	6/7/2015 07:54 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 07:54 PM
Xylenes, Total	500		30	µg/L	10	6/9/2015 12:15 PM
Surr: 1,2-Dichloroethane-d4	97.6		75-120	%REC	10	6/9/2015 12:15 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 8
Collection Date: 6/1/2015 02:30 PM

Work Order: 1506164
Lab ID: 1506164-08
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	88.9		75-120	%REC	1	6/7/2015 07:54 PM
Surr: 4-Bromofluorobenzene	98.1		80-110	%REC	10	6/9/2015 12:15 PM
Surr: 4-Bromofluorobenzene	99.9		80-110	%REC	1	6/7/2015 07:54 PM
Surr: Dibromofluoromethane	95.6		85-115	%REC	10	6/9/2015 12:15 PM
Surr: Dibromofluoromethane	99.5		85-115	%REC	1	6/7/2015 07:54 PM
Surr: Toluene-d8	99.4		85-110	%REC	10	6/9/2015 12:15 PM
Surr: Toluene-d8	95.2		85-110	%REC	1	6/7/2015 07:54 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.31		0.20	mg/L	1	6/9/2015 10:42 PM
Chloride	56		5.0	mg/L	5	6/9/2015 02:37 PM
Fluoride	0.15		0.10	mg/L	1	6/9/2015 10:42 PM
Sulfate	93		5.0	mg/L	5	6/9/2015 02:37 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	0.034	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	1.3		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 9
Collection Date: 6/1/2015 02:10 PM

Work Order: 1506164
Lab ID: 1506164-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID						
			SW8015C		Prep Date: 6/4/2015	Analyst: RM
DRO (C10-C28)	1.0		0.15	mg/L	1	6/5/2015 06:55 PM
Surr: 4-Terphenyl-d14	70.6		31-176	%REC	1	6/5/2015 06:55 PM
GASOLINE RANGE ORGANICS BY GC-FID						
			SW8015D			Analyst: RM
GRO (C6-C10)	0.21		0.20	mg/L	1	6/5/2015 01:43 AM
Surr: Toluene-d8	110		70-130	%REC	1	6/5/2015 01:43 AM
METALS ANALYSIS BY ICP (DISSOLVED)						
			SW846 6010C		Prep Date: 6/4/2015	Analyst: JEC
Calcium	79		0.50	mg/L	1	6/4/2015 07:17 PM
Iron	1.3		0.080	mg/L	1	6/4/2015 07:17 PM
Magnesium	41		0.20	mg/L	1	6/4/2015 07:17 PM
Manganese	0.13		0.0050	mg/L	1	6/4/2015 07:17 PM
Potassium	1.4		0.20	mg/L	1	6/4/2015 07:17 PM
Sodium	66		0.20	mg/L	1	6/4/2015 07:17 PM
SEMI-VOLATILE ORGANIC COMPOUNDS						
			SW846 8270D		Prep Date: 6/4/2015	Analyst: RM
Acenaphthene	ND		7.5	µg/L	1	6/8/2015 09:22 PM
Anthracene	ND		7.5	µg/L	1	6/8/2015 09:22 PM
Benzo(a)anthracene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Benzo(a)pyrene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Benzo(b)fluoranthene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Benzo(k)fluoranthene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Chrysene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Dibenzo(a,h)anthracene	ND		3.0	µg/L	1	6/8/2015 09:22 PM
Fluoranthene	ND		1.5	µg/L	1	6/8/2015 09:22 PM
Fluorene	ND		7.5	µg/L	1	6/8/2015 09:22 PM
Indeno(1,2,3-cd)pyrene	ND		3.0	µg/L	1	6/8/2015 09:22 PM
Naphthalene	ND		7.5	µg/L	1	6/8/2015 09:22 PM
Pyrene	ND		7.5	µg/L	1	6/8/2015 09:22 PM
Surr: 2-Fluorobiphenyl	90.4		20-140	%REC	1	6/8/2015 09:22 PM
Surr: 4-Terphenyl-d14	72.8		22-172	%REC	1	6/8/2015 09:22 PM
Surr: Nitrobenzene-d5	89.7		8-140	%REC	1	6/8/2015 09:22 PM
VOLATILE ORGANIC COMPOUNDS						
			SW8260			Analyst: JNJ
Benzene	2.7		1.0	µg/L	1	6/7/2015 08:19 PM
Ethylbenzene	1.5		1.0	µg/L	1	6/7/2015 08:19 PM
m,p-Xylene	25		2.0	µg/L	1	6/7/2015 08:19 PM
o-Xylene	1.2		1.0	µg/L	1	6/7/2015 08:19 PM
Toluene	ND		1.0	µg/L	1	6/7/2015 08:19 PM
Xylenes, Total	26		3.0	µg/L	1	6/7/2015 08:19 PM
Surr: 1,2-Dichloroethane-d4	86.1		75-120	%REC	1	6/7/2015 08:19 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Project: WPX TR 31-5-697 Qtr. MW Sampling
Sample ID: MW 9
Collection Date: 6/1/2015 02:10 PM

Work Order: 1506164
Lab ID: 1506164-09
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	100		80-110	%REC	1	6/7/2015 08:19 PM
Surr: Dibromofluoromethane	102		85-115	%REC	1	6/7/2015 08:19 PM
Surr: Toluene-d8	92.4		85-110	%REC	1	6/7/2015 08:19 PM
ANIONS BY ION CHROMATOGRAPHY			SW9056A			Analyst: EE
Bromide	0.24		0.20	mg/L	1	6/9/2015 11:03 PM
Chloride	45		10	mg/L	10	6/9/2015 03:37 PM
Fluoride	0.15		0.10	mg/L	1	6/9/2015 11:03 PM
Sulfate	110		10	mg/L	10	6/9/2015 03:37 PM
NITROGEN, NITRITE			A4500-NO2 B			Analyst: ED
Nitrogen, Nitrite	0.046	H	0.020	mg/L	1	6/4/2015 01:30 PM
NITROGEN, NITRATE			E353.2 R2.0			Analyst: JB
Nitrogen, Nitrate	1.7		0.020	mg/L	1	6/5/2015 02:29 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 10-Jun-15

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71861** Instrument ID **GC8** Method: **SW8015C**

MBLK		Sample ID: DBLKW1-71861-71861				Units: mg/L		Analysis Date: 6/4/2015 05:12 PM		
Client ID:		Run ID: GC8_150603B				SeqNo: 3307908		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) ND 0.10
Surr: 4-Terphenyl-d14 0.1411 0 0.1143 0 123 31-176 0

LCS		Sample ID: DLCSW1-71861-71861				Units: mg/L		Analysis Date: 6/4/2015 05:41 PM		
Client ID:		Run ID: GC8_150603B				SeqNo: 3307911		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 6.946 0.10 11.43 0 60.8 35-95 0
Surr: 4-Terphenyl-d14 0.1286 0 0.1143 0 113 31-176 0

MS		Sample ID: 1506172-01D MS				Units: mg/L		Analysis Date: 6/4/2015 06:11 PM		
Client ID:		Run ID: GC8_150603B				SeqNo: 3307913		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28) 6.562 0.10 11.43 0 57.4 29-96 0
Surr: 4-Terphenyl-d14 0.1274 0 0.1143 0 111 31-176 0

The following samples were analyzed in this batch:

1506164-01B	1506164-02B	1506164-03B
1506164-04B	1506164-05B	1506164-06B
1506164-07B	1506164-08B	1506164-09B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R164835** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: GBLKW1-150604-R164835				Units: µg/L		Analysis Date: 6/4/2015 09:35 PM		
Client ID:		Run ID: GC9_150604A				SeqNo: 3307856		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	ND	200								
<i>Surr: Toluene-d8</i>	110.3	0	100	0	110	70-130	0			

LCS		Sample ID: GLCSW1-150604-R164835				Units: µg/L		Analysis Date: 6/4/2015 07:56 PM		
Client ID:		Run ID: GC9_150604A				SeqNo: 3307853		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	8707	200	10000	0	87.1	70-130	0			
<i>Surr: Toluene-d8</i>	102.3	0	100	0	102	70-130	0			

MS		Sample ID: 1506196-01A MS				Units: µg/L		Analysis Date: 6/4/2015 08:21 PM		
Client ID:		Run ID: GC9_150604A				SeqNo: 3307854		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9472	200	10000	0	94.7	70-130	0			
<i>Surr: Toluene-d8</i>	97.2	0	100	0	97.2	70-130	0			

MSD		Sample ID: 1506196-01A MSD				Units: µg/L		Analysis Date: 6/4/2015 08:46 PM		
Client ID:		Run ID: GC9_150604A				SeqNo: 3307855		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	9307	200	10000	0	93.1	70-130	9472	1.76	30	
<i>Surr: Toluene-d8</i>	97.08	0	100	0	97.1	70-130	97.2	0.124	30	

The following samples were analyzed in this batch:

1506164-01A	1506164-02A	1506164-03A
1506164-04A	1506164-05A	1506164-06A
1506164-07A	1506164-08A	1506164-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71871** Instrument ID **ICP2** Method: **SW846 6010C**

MBLK		Sample ID: MBLK-71871-71871				Units: mg/L		Analysis Date: 6/4/2015 03:31 PM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3307061		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	0.02273	0.50								J
Iron	ND	0.080								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Potassium	0.04082	0.20								J
Sodium	ND	0.20								

MBLK		Sample ID: MBLK-71870-71871				Units: mg/L		Analysis Date: 6/5/2015 10:08 AM		
Client ID:		Run ID: ICP2_150605A				SeqNo: 3308190		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	0.03792	0.50								J
Iron	ND	0.080								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Potassium	ND	0.20								
Sodium	ND	0.20								

MBLK		Sample ID: MBLK-71871-71871				Units: mg/L		Analysis Date: 6/5/2015 10:19 AM		
Client ID:		Run ID: ICP2_150605A				SeqNo: 3308192		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	0.03444	0.50								J
Iron	ND	0.080								
Magnesium	0.02783	0.20								J
Manganese	ND	0.0050								
Potassium	ND	0.20								
Sodium	ND	0.20								

LCS		Sample ID: LCS-71871-71871				Units: mg/L		Analysis Date: 6/4/2015 03:37 PM		
Client ID:		Run ID: ICP2_150604A				SeqNo: 3307062		Prep Date: 6/4/2015		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	10.65	0.50	10	0	106	80-120	0			
Iron	10.43	0.080	10	0	104	80-120	0			
Magnesium	10.84	0.20	10	0	108	80-120	0			
Manganese	0.1057	0.0050	0.1	0	106	80-120	0			
Potassium	10.67	0.20	10	0	107	80-120	0			
Sodium	10.72	0.20	10	0	107	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71871** Instrument ID **ICP2** Method: **SW846 6010C**

LCS				Sample ID: LCS-71870-71871				Units: mg/L			Analysis Date: 6/5/2015 10:14 AM		
Client ID:			Run ID: ICP2_150605A				SeqNo: 3308191		Prep Date: 6/4/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Calcium	10.57	0.50	10	0	106	80-120	0						
Iron	10.52	0.080	10	0	105	80-120	0						
Magnesium	10.75	0.20	10	0	108	80-120	0						
Manganese	0.1057	0.0050	0.1	0	106	80-120	0						
Potassium	10.15	0.20	10	0	102	80-120	0						
Sodium	10.39	0.20	10	0	104	80-120	0						

LCS				Sample ID: LCS-71871-71871			Units: mg/L		Analysis Date: 6/5/2015 10:25 AM		
Client ID:			Run ID: ICP2_150605A			SeqNo: 3308193		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Calcium	10.25	0.50	10	0	102	80-120	0				
Iron	10.4	0.080	10	0	104	80-120	0				
Magnesium	10.57	0.20	10	0	106	80-120	0				
Manganese	0.1053	0.0050	0.1	0	105	80-120	0				
Potassium	10.09	0.20	10	0	101	80-120	0				
Sodium	10.28	0.20	10	0	103	80-120	0				

MS					Sample ID: 1506164-05CMS		Units: mg/L		Analysis Date: 6/4/2015 04:00 PM		
Client ID: MW 5			Run ID: ICP2_150604A			SeqNo: 3307066		Prep Date: 6/4/2015		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Calcium	80.58	5.0	10	71.17	94.1	75-125	0			O	
Iron	10.5	0.80	10	0.1556	103	75-125	0				
Magnesium	44.44	2.0	10	34.93	95.1	75-125	0				
Manganese	0.1566	0.050	0.1	0.05547	101	75-125	0				
Potassium	11.7	2.0	10	0.9827	107	75-125	0				
Sodium	87.4	2.0	10	80.61	67.9	75-125	0			SO	

MSD					Sample ID: 1506164-05CMSD		Units: mg/L		Analysis Date: 6/4/2015 04:05 PM		
Client ID: MW 5			Run ID: ICP2_150604A			SeqNo: 3307067		Prep Date: 6/4/2015		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Calcium	80.32	5.0	10	71.17	91.5	75-125	80.58	0.321	20	O	
Iron	10.64	0.80	10	0.1556	105	75-125	10.5	1.33	20		
Magnesium	44.19	2.0	10	34.93	92.5	75-125	44.44	0.572	20		
Manganese	0.1546	0.050	0.1	0.05547	99.1	75-125	0.1566	1.28	20		
Potassium	11.45	2.0	10	0.9827	105	75-125	11.7	2.21	20		
Sodium	86.81	2.0	10	80.61	62	75-125	87.4	0.685	20	SO	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71871** Instrument ID **ICP2** Method: **SW846 6010C**

The following samples were analyzed in this batch:

1506164-01C	1506164-02C	1506164-03C
1506164-04C	1506164-05C	1506164-06C
1506164-07C	1506164-08C	1506164-09C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71862** Instrument ID **SVMS7** Method: **SW846 8270D**

MBLK				Sample ID: SBLKW1-71862-71862			Units: µg/L		Analysis Date: 6/8/2015 03:28 PM		
Client ID:			Run ID: SVMS7_150608A		SeqNo: 3314286		Prep Date: 6/4/2015		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	ND	5.0									
Anthracene	ND	5.0									
Benzo(a)anthracene	ND	5.0									
Benzo(a)pyrene	ND	5.0									
Benzo(b)fluoranthene	ND	5.0									
Benzo(k)fluoranthene	ND	5.0									
Chrysene	ND	5.0									
Dibenzo(a,h)anthracene	ND	5.0									
Fluoranthene	ND	5.0									
Fluorene	ND	5.0									
Indeno(1,2,3-cd)pyrene	ND	5.0									
Naphthalene	ND	5.0									
Pyrene	ND	5.0									
Surr: 2-Fluorobiphenyl	111.2	0	114	0	97.5	20-140		0			
Surr: 4-Terphenyl-d14	99.75	0	114	0	87.5	22-172		0			
Surr: Nitrobenzene-d5	112	0	114	0	98.3	8-140		0			

LCS				Sample ID: SLCSW1-71862-71862			Units: µg/L		Analysis Date: 6/8/2015 03:55 PM		
Client ID:			Run ID: SVMS7_150608A			SeqNo: 3314287		Prep Date: 6/4/2015		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	45.35	5.0	45.7	0	99.2	60-140	0				
Anthracene	45.49	5.0	45.7	0	99.5	60-140	0				
Benzo(a)anthracene	49.3	5.0	45.7	0	108	60-140	0				
Benzo(a)pyrene	44.32	5.0	45.7	0	97	60-140	0				
Benzo(b)fluoranthene	47.22	5.0	45.7	0	103	60-140	0				
Benzo(k)fluoranthene	41.12	5.0	45.7	0	90	60-140	0				
Chrysene	47.41	5.0	45.7	0	104	60-140	0				
Dibenzo(a,h)anthracene	45.76	5.0	45.7	0	100	60-140	0				
Fluoranthene	46.29	5.0	45.7	0	101	60-140	0				
Fluorene	45.65	5.0	45.7	0	99.9	60-140	0				
Indeno(1,2,3-cd)pyrene	44.02	5.0	45.7	0	96.3	60-140	0				
Naphthalene	45.99	5.0	45.7	0	101	40-140	0				
Pyrene	48.18	5.0	45.7	0	105	60-140	0				
<i>Surr: 2-Fluorobiphenyl</i>	115.1	0	114	0	101	20-140	0				
<i>Surr: 4-Terphenyl-d14</i>	125.5	0	114	0	110	22-172	0				
<i>Surr: Nitrobenzene-d5</i>	115.1	0	114	0	101	8-140	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
 Work Order: 1506164
 Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **71862** Instrument ID **SVMS7** Method: **SW846 8270D**

MS				Sample ID: 1506164-01B MS			Units: µg/L		Analysis Date: 6/8/2015 04:22 PM	
Client ID: MW 1				Run ID: SVMS7_150608A			SeqNo: 3314288		Prep Date: 6/4/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	45.23	5.0	45.7	0	99	60-140	0			
Anthracene	45.01	5.0	45.7	0	98.5	60-140	0			
Benzo(a)anthracene	48.96	5.0	45.7	0	107	60-140	0			
Benzo(a)pyrene	44	5.0	45.7	0	96.3	60-140	0			
Benzo(b)fluoranthene	48.8	5.0	45.7	0	107	60-140	0			
Benzo(k)fluoranthene	39.57	5.0	45.7	0	86.6	60-140	0			
Chrysene	43.79	5.0	45.7	0	95.8	60-140	0			
Dibenzo(a,h)anthracene	44.98	5.0	45.7	0	98.4	60-140	0			
Fluoranthene	44.37	5.0	45.7	0	97.1	60-140	0			
Fluorene	45.33	5.0	45.7	0	99.2	60-140	0			
Indeno(1,2,3-cd)pyrene	43.47	5.0	45.7	0	95.1	60-140	0			
Naphthalene	45.17	5.0	45.7	0	98.8	40-140	0			
Pyrene	46.63	5.0	45.7	0	102	60-140	0			
Surr: 2-Fluorobiphenyl	112.8	0	114	0	98.9	20-140	0			
Surr: 4-Terphenyl-d14	119.4	0	114	0	105	22-172	0			
Surr: Nitrobenzene-d5	112.8	0	114	0	99	8-140	0			

DUP				Sample ID: 1506164-02B DUP			Units: µg/L		Analysis Date: 6/8/2015 05:17 PM	
Client ID: MW 2				Run ID: SVMS7_150608A			SeqNo: 3314290		Prep Date: 6/4/2015	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	ND	7.5	0	0	0	0-0	0	0	30	
Anthracene	ND	7.5	0	0	0	0-0	0	0	30	
Benzo(a)anthracene	ND	7.5	0	0	0	0-0	0	0	30	
Benzo(a)pyrene	ND	7.5	0	0	0	0-0	0	0	30	
Benzo(b)fluoranthene	ND	7.5	0	0	0	0-0	0	0	30	
Benzo(k)fluoranthene	ND	7.5	0	0	0	0-0	0	0	30	
Chrysene	ND	7.5	0	0	0	0-0	0	0	30	
Dibenzo(a,h)anthracene	ND	7.5	0	0	0	0-0	0	0	30	
Fluoranthene	ND	7.5	0	0	0	0-0	0	0	30	
Fluorene	ND	7.5	0	0	0	0-0	0	0	30	
Indeno(1,2,3-cd)pyrene	ND	7.5	0	0	0	0-0	0	0	30	
Naphthalene	11.93	7.5	0	0	0	0-0	11.55	3.21	30	
Pyrene	ND	7.5	0	0	0	0-0	0	0	30	
Surr: 2-Fluorobiphenyl	190.5	0	114	0	167	20-140	205.6	7.63	30	S
Surr: 4-Terphenyl-d14	98.3	0	114	0	86.2	22-172	96.51	1.83	30	
Surr: Nitrobenzene-d5	252	0	114	0	221	8-140	269.7	6.8	30	S

The following samples were analyzed in this batch:

1506164-01B	1506164-02B	1506164-03B
1506164-04B	1506164-05B	1506164-06B
1506164-07B	1506164-08B	1506164-09B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R164937B** Instrument ID **VMS6** Method: **SW8260**

MBLK				Sample ID: VBLKW2-150606-R164937B				Units: µg/L			Analysis Date: 6/7/2015 12:28 PM		
Client ID:			Run ID: VMS6_150606B			SeqNo: 3311826			Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzene	ND	1.0											
Ethylbenzene	ND	1.0											
m,p-Xylene	ND	2.0											
o-Xylene	ND	1.0											
Toluene	ND	1.0											
Xylenes, Total	ND	3.0											
Surr: 1,2-Dichloroethane-d4	18.4	0	20	0	92	75-120	0						
Surr: 4-Bromofluorobenzene	19.8	0	20	0	99	80-110	0						
Surr: Dibromofluoromethane	20.05	0	20	0	100	85-115	0						
Surr: Toluene-d8	18.99	0	20	0	95	85-110	0						

LCS					Sample ID: VLCSW2-150606-R164937B			Units: µg/L		Analysis Date: 6/7/2015 12:03 PM		
Client ID:			Run ID: VMS6_150606B			SeqNo: 3311825		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Benzene	20.18	1.0	20	0	101	85-125	0					
Ethylbenzene	21.19	1.0	20	0	106	85-125	0					
m,p-Xylene	43.62	2.0	40	0	109	75-130	0					
o-Xylene	21.31	1.0	20	0	107	80-125	0					
Toluene	20.69	1.0	20	0	103	85-125	0					
Xylenes, Total	64.93	3.0	60	0	108	80-126	0					
Surr: 1,2-Dichloroethane-d4	18.22	0	20	0	91.1	75-120	0					
Surr: 4-Bromofluorobenzene	19.59	0	20	0	98	80-110	0					
Surr: Dibromofluoromethane	20.22	0	20	0	101	85-115	0					
Surr: Toluene-d8	18.81	0	20	0	94	85-110	0					

MS				Sample ID: 1506164-03A MS			Units: µg/L		Analysis Date: 6/7/2015 09:08 PM		
Client ID: MW 3			Run ID: VMS6_150606B			SeqNo: 3311842		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	2013	100	2000	36	98.8	85-125	0				
Ethylbenzene	2199	100	2000	52	107	85-125	0				
m,p-Xylene	5090	200	4000	601	112	75-130	0				
o-Xylene	2165	100	2000	0	108	80-125	0				
Toluene	2100	100	2000	0	105	85-125	0				
Xylenes, Total	7255	300	6000	601	111	80-126	0				
Surr: 1,2-Dichloroethane-d4	1823	0	2000	0	91.2	75-120	0				
Surr: 4-Bromofluorobenzene	2032	0	2000	0	102	80-110	0				
Surr: Dibromofluoromethane	2053	0	2000	0	103	85-115	0				
Surr: Toluene-d8	1893	0	2000	0	94.6	85-110	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R164937B** Instrument ID **VMS6** Method: **SW8260**

MSD				Sample ID: 1506164-03A MSD			Units: µg/L		Analysis Date: 6/7/2015 09:33 PM	
Client ID: MW 3				Run ID: VMS6_150606B			SeqNo: 3311843		Prep Date:	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2084	100	2000	36	102	85-125	2013	3.47	30	
Ethylbenzene	2272	100	2000	52	111	85-125	2199	3.27	30	
m,p-Xylene	5212	200	4000	601	115	75-130	5090	2.37	30	
o-Xylene	2248	100	2000	0	112	80-125	2165	3.76	30	
Toluene	2168	100	2000	0	108	85-125	2100	3.19	30	
Xylenes, Total	7460	300	6000	601	114	80-126	7255	2.79	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	1787	0	2000	0	89.4	75-120	1823	1.99	30	
<i>Surr: 4-Bromofluorobenzene</i>	2021	0	2000	0	101	80-110	2032	0.543	30	
<i>Surr: Dibromofluoromethane</i>	1994	0	2000	0	99.7	85-115	2053	2.92	30	
<i>Surr: Toluene-d8</i>	1870	0	2000	0	93.5	85-110	1893	1.22	30	

The following samples were analyzed in this batch:

1506164-01A	1506164-02A	1506164-03A
1506164-04A	1506164-05A	1506164-06A
1506164-07A	1506164-08A	1506164-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R165075A** Instrument ID **VMS9** Method: **SW8260**

MBLK				Sample ID: VBLKW1-150608-R165075A				Units: µg/L		Analysis Date: 6/8/2015 10:08 PM	
Client ID:			Run ID: VMS9_150608A			SeqNo: 3313480		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	ND	1.0									
Ethylbenzene	ND	1.0									
m,p-Xylene	ND	2.0									
o-Xylene	ND	1.0									
Toluene	ND	1.0									
Xylenes, Total	ND	3.0									
Surr: 1,2-Dichloroethane-d4	19.49	0	20	0	97.4	75-120	0				
Surr: 4-Bromofluorobenzene	18.85	0	20	0	94.2	80-110	0				
Surr: Dibromofluoromethane	19.5	0	20	0	97.5	85-115	0				
Surr: Toluene-d8	19.42	0	20	0	97.1	85-110	0				

LCS					Sample ID: VLCSW1-150608-R165075A			Units: µg/L		Analysis Date: 6/8/2015 08:51 PM		
Client ID:			Run ID: VMS9_150608A			SeqNo: 3313479		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Benzene	18.59	1.0	20	0	93	85-125	0					
Ethylbenzene	19.87	1.0	20	0	99.4	85-125	0					
m,p-Xylene	41.09	2.0	40	0	103	75-130	0					
o-Xylene	19.59	1.0	20	0	98	80-125	0					
Toluene	19.42	1.0	20	0	97.1	85-125	0					
Xylenes, Total	60.68	3.0	60	0	101	80-126	0					
Surr: 1,2-Dichloroethane-d4	20.45	0	20	0	102	75-120	0					
Surr: 4-Bromofluorobenzene	19.81	0	20	0	99	80-110	0					
Surr: Dibromofluoromethane	20	0	20	0	100	85-115	0					
Surr: Toluene-d8	19.86	0	20	0	99.3	85-110	0					

MS				Sample ID: 1506164-03A MS			Units: µg/L		Analysis Date: 6/9/2015 07:01 AM		
Client ID: MW 3			Run ID: VMS9_150608A		SeqNo: 3313483		Prep Date:		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	136.2	5.0	100	37.55	98.7	85-125	0				
Ethylbenzene	156.1	5.0	100	47.3	109	85-125	0				
m,p-Xylene	795.5	10	200	583.4	106	75-130	0				
o-Xylene	113.2	5.0	100	5.95	107	80-125	0				
Toluene	105.8	5.0	100	0	106	85-125	0				
Xylenes, Total	908.8	15	300	589.3	106	80-126	0				
Surr: 1,2-Dichloroethane-d4	94.8	0	100	0	94.8	75-120	0				
Surr: 4-Bromofluorobenzene	104.6	0	100	0	105	80-110	0				
Surr: Dibromofluoromethane	98.8	0	100	0	98.8	85-115	0				
Surr: Toluene-d8	101.6	0	100	0	102	85-110	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R165075A** Instrument ID **VMS9** Method: **SW8260**

MSD				Sample ID: 1506164-03A MSD			Units: µg/L		Analysis Date: 6/9/2015 07:27 AM	
Client ID: MW 3				Run ID: VMS9_150608A			SeqNo: 3313484		Prep Date:	
									DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	137.5	5.0	100	37.55	100	85-125	136.2	0.913	30	
Ethylbenzene	158	5.0	100	47.3	111	85-125	156.1	1.21	30	
m,p-Xylene	801.6	10	200	583.4	109	75-130	795.5	0.764	30	
o-Xylene	114	5.0	100	5.95	108	80-125	113.2	0.616	30	
Toluene	105.8	5.0	100	0	106	85-125	105.8	0.0473	30	
Xylenes, Total	915.6	15	300	589.3	109	80-126	908.8	0.745	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>98.75</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>98.8</i>	<i>75-120</i>	<i>94.8</i>	<i>4.08</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>101.8</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>102</i>	<i>80-110</i>	<i>104.6</i>	<i>2.71</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>97.15</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>97.2</i>	<i>85-115</i>	<i>98.8</i>	<i>1.68</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>101.4</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>101</i>	<i>85-110</i>	<i>101.6</i>	<i>0.246</i>	<i>30</i>	

The following samples were analyzed in this batch:

1506164-02A	1506164-03A	1506164-08A
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R164807** Instrument ID **WETCHEM** Method: **A4500-NO2 B**

MBLK		Sample ID: WBLKW1-150604-R164807				Units: mg/L		Analysis Date: 6/4/2015 01:30 PM		
Client ID:		Run ID: WETCHEM_150604J				SeqNo: 3307120		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite ND 0.020

LCS		Sample ID: WLCSW1-150604-R164807				Units: mg/L		Analysis Date: 6/4/2015 01:30 PM		
Client ID:		Run ID: WETCHEM_150604J				SeqNo: 3307121		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.1989 0.020 0.2 0 99.4 80-120 0

MS		Sample ID: 1506225-03B MS				Units: mg/L		Analysis Date: 6/4/2015 01:30 PM		
Client ID:		Run ID: WETCHEM_150604J				SeqNo: 3307135		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.1976 0.020 0.2 0 98.8 75-125 0

MSD		Sample ID: 1506225-03B MSD				Units: mg/L		Analysis Date: 6/4/2015 01:30 PM		
Client ID:		Run ID: WETCHEM_150604J				SeqNo: 3307136		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Nitrogen, Nitrite 0.1962 0.020 0.2 0 98.1 75-125 0.1976 0.711 20

The following samples were analyzed in this batch:

1506164-01C	1506164-02C	1506164-03C
1506164-04C	1506164-05C	1506164-06C
1506164-07C	1506164-08C	1506164-09C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R164927** Instrument ID **LACHAT2** Method: **E353.2 R2.0**

MBLK		Sample ID: WBLKW1-150605-R164927				Units: mg/L		Analysis Date: 6/5/2015 02:29 PM		
Client ID:		Run ID: LACHAT2_150605E				SeqNo: 3310223		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate	ND	0.020								

LCS		Sample ID: WLCSW1-150605-R164927				Units: mg/L		Analysis Date: 6/5/2015 02:29 PM		
Client ID:		Run ID: LACHAT2_150605E				SeqNo: 3310224		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate	5.027	0.020	5	0	101	90-110	0			

MS		Sample ID: 1506164-04C MS				Units: mg/L		Analysis Date: 6/5/2015 02:29 PM		
Client ID: MW 4		Run ID: LACHAT2_150605E				SeqNo: 3310229		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate	7.328	0.020	5	2.78	91	90-110	0			

MSD		Sample ID: 1506164-04C MSD				Units: mg/L		Analysis Date: 6/5/2015 02:29 PM		
Client ID: MW 4		Run ID: LACHAT2_150605E				SeqNo: 3310230		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate	7.344	0.020	5	2.78	91.3	90-110	7.328	0.218	20	

The following samples were analyzed in this batch:

1506164-01C	1506164-02C	1506164-03C
1506164-04C	1506164-05C	1506164-06C
1506164-07C	1506164-08C	1506164-09C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: HRL Compliance Solutions, Inc
Work Order: 1506164
Project: WPX TR 31-5-697 Qtr. MW Sampling

QC BATCH REPORT

Batch ID: **R165129** Instrument ID **IC4** Method: **SW9056A**

MBLK		Sample ID: CCB/MBLK-R165129				Units: mg/L		Analysis Date: 6/9/2015 10:38 AM		
Client ID:		Run ID: IC4_150609A				SeqNo: 3314418		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	ND	0.20								
Chloride	0.2842	1.0								J
Fluoride	ND	0.10								
Sulfate	ND	1.0								

LCS		Sample ID: LCS-R165129				Units: mg/L		Analysis Date: 6/9/2015 10:58 AM		
Client ID:		Run ID: IC4_150609A				SeqNo: 3314419		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	1.901	0.20	2	0	95.1	88-113	0			
Chloride	9.302	1.0	10	0	93	88-110	0			
Fluoride	1.81	0.10	2	0	90.5	86-111	0			
Sulfate	9.565	1.0	10	0	95.6	85-110	0			

MS		Sample ID: 1506164-06C MS				Units: mg/L		Analysis Date: 6/9/2015 05:59 PM		
Client ID: MW 6		Run ID: IC4_150609A				SeqNo: 3314452		Prep Date:		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	23.39	2.0	20	0	117	75-125	0			
Chloride	134.3	10	100	31.54	103	75-125	0			
Fluoride	19.63	1.0	20	0	98.1	75-125	0			
Sulfate	160.2	10	100	55.63	105	75-125	0			

MSD		Sample ID: 1506164-06C MSD				Units: mg/L		Analysis Date: 6/9/2015 06:19 PM		
Client ID: MW 6		Run ID: IC4_150609A				SeqNo: 3314453		Prep Date:		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bromide	23.63	2.0	20	0	118	75-125	23.39	1.03	20	
Chloride	134.3	10	100	31.54	103	75-125	134.3	0.00819	20	
Fluoride	19.8	1.0	20	0	99	75-125	19.63	0.893	20	
Sulfate	159.3	10	100	55.63	104	75-125	160.2	0.542	20	

The following samples were analyzed in this batch:

1506164-01C	1506164-02C	1506164-03C
1506164-04C	1506164-05C	1506164-06C
1506164-07C	1506164-08C	1506164-09C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424
TF: (800) 443-1511 PH: (616) 399-8070 FX: (616) 399-6185

Chain-of-Custody

Form 202r8

WORKORDER
#

1506164

PAGE

1 of 1

DISPOSAL

By Lab or Return to Client

PROJECT NAME WPX TR 31-5-697 Qtr. MW Sampling

SAMPLER

Casey Richardson/Matt Fought

DATE

6/2/2015

SITE ID

TR 31-5-697

TURNAROUND

Standard

PROJECT No.

EDD FORMAT

PURCHASE ORDER

COMPANY NAME HRL Compliance Solutions, Inc.

BILL TO COMPANY

WPX Energy

SEND REPORT TO Mark Mumby

INVOICE ATTN TO

Karolina Blaney

ADDRESS 2385 F 1/2 Road

ADDRESS

1058 County Road 215

CITY / STATE / ZIP Grand Junction, CO. 81505

CITY / STATE / ZIP

Parachute, CO 81635

PHONE 970-243-3271

PHONE

970-683-2295

FAX 970-243-3280

FAX

970-285-9573

E-MAIL mmumby@hrlcomp.com

E-MAIL

karolina.blaney@wpxenergy.com

Lab ID

Field ID

Matrix

Sample Date

Sample Time

Bottles

Pres.

QC

BTEX

DRO

GRO

SEMI VOL'S - PAH

DISSOLVED METALS - CATIONS

ANIONS

1

MW 1

GW

6/1/2015

1325

9

1.8

x

x

x

x

x

x

2

MW 2

GW

6/1/2015

1448

9

1.8

x

x

x

x

x

x

3

MW 3

GW

6/1/2015

1438

9

1.8

x

x

x

x

x

x

4

MW 4

GW

6/1/2015

1350

9

1.8

x

x

x

x

x

x

5

MW 5

GW

6/1/2015

1402

9

1.8

x

x

x

x

x

x

6

MW 6

GW

6/1/2015

1336

9

1.8

x

x

x

x

x

x

7

MW 7

GW

6/1/2015

1342

9

1.8

x

x

x

x

x

x

8

MW 8

GW

6/1/2015

1430

9

1.8

x

x

x

x

x

x

9

MW 9

GW

6/1/2015

1410

9

1.8

x

x

x

x

x

x

*Time Zone (Circle): EST CST ~~MST~~ PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:

QC PACKAGE (check below)

x

LEVEL II (Standard QC)

LEVEL III (Std QC + forms)

LEVEL IV (Std QC + forms + raw data)

2.400

SIGNATURE

PRINTED NAME

DATE

TIME

RELINQUISHED BY

C. Richardson

CASEY RICHARDSON

6-2-15

1630

RECEIVED BY

K. Warren

KERRY WARREN

6/3/15

0930


RELINQUISHED BY


RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL	Date: <u>6-2-15</u> Time: <u>1450</u> Name: <u>STW</u> Company: <u>HBL</u>
	Seal Broken By: _____ Date: _____	

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL	Seal Broken By: _____ Date: _____
	Date: <u>6-2-15</u> Time: <u>1450</u> Name: <u>STW</u> Company: <u>HBL</u>	

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **03-Jun-15 09:30**

Work Order: **1506164**

Received by: **KRW**

Checklist completed by Keith Wierenga
eSignature

03-Jun-15
Date

Reviewed by: Tom Bramish
eSignature

03-Jun-15
Date

Matrices: **Water**

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Sample(s) received on ice?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

2.4 C

Water

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

6/3/2015 11:20:30 AM

Water - VOA vials have zero headspace?

Yes ☒

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☒

N/A ☐

pH adjusted by:

-

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: