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March 18th, 2015

Dr. Tomas Oberding
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

Re: **2014 Annual Report**
Vacuum F-35 & G-35 SWDs, Sec 35, T17S, R35E
OCD Case No. AP-59

Sent by E-mail

Dr. Oberding:

This letter summarizes the results of groundwater monitoring over the past year pursuant to the NMOCD approved Abatement Plan for Rice Operating Company (ROC)'s Vacuum F&G-35 project. Site and monitor well locations are given in the Appendix (Figures 1 & 2, respectively). In brief:

Vacuum F-35

- Groundwater chloride concentrations in the at-source monitor well (MW-1) were little changed from the previous year, averaging 280 mg/l in 2014 versus 270 mg/l in 2013 (Appendix – Figure 3a, Table 1). Nevertheless, this is substantially less than values measured in previous years. Similarly, there was little change in groundwater chlorides in the down-gradient well, MW-3S (shallow) and MW-3D (deep), averaging 42 mg/l and 40 mg/l, respectively, for 2014 and indicating that the magnitude of up-gradient chloride mass being diluted is apparently small (Appendix – Figure 3a, Table 1).

- Total BTEX concentrations in MW-1 (Appendix - Figure 3b) averaged 0.141 mg/l, which is substantially below their historic high value of 5.941 mg/l measured in March 2005 and indicating that dissolved hydrocarbons appear to be a diminishing concern at this location.

Vacuum G-35

- Groundwater chloride concentrations in the at-source monitor well (MW-1) and the near-source down-gradient monitor well (MW-4) remained low in comparison to values measured over past several years, averaging 78 mg/l and 238 mg/l , respectively for 2014. (Appendix - Figure 4a, Table 2). Average chloride concentrations in the down-gradient well MW-3S (shallow) dropped from 545 mg/l in 2013 to 330 mg/l in 2014,

with the December 2014 sampling being 232 mg/l. Average chloride concentrations in the down-gradient well MW-3D (deep) dropped from 985 mg/l in 2013 to 675 mg/l in 2014. The December 2014 sample measured 410 mg/l.

- Total BTEX concentrations (Appendix - Figure 4b, Table 2) continued their decline in the at-source well (MW-1), averaging 0.0080 mg/l in 2014 versus 0.0570 mg/l in 2013. Average total BTEX concentrations in the near-source down-gradient well (MW-4) was slightly elevated in 2014 at 0.4935 mg/l compared to 0.3595 mg/l in 2013.

In summary, it appears that chloride is attenuating through dilution of a relatively small original mass and that BTEX is gradually being reduced through natural microbial metabolism.

ROC will continue to monitor groundwater semi-annually (two sampling events) through 2015. Upon analysis of this additional data, we will consider if a change in course of action is warranted. As it presently stands, it appears that natural attenuation (dilution) will effectively reduce groundwater chloride concentrations at the affected locations and that the chloride mass is sufficiently small so that down-gradient impacts will be negligible.

ROC is the service provider (agent) for the Vacuum SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

We appreciate your consideration of this Annual Report. Please do not hesitate to contact either Rice Operating Company or myself if you have any questions or need additional information.

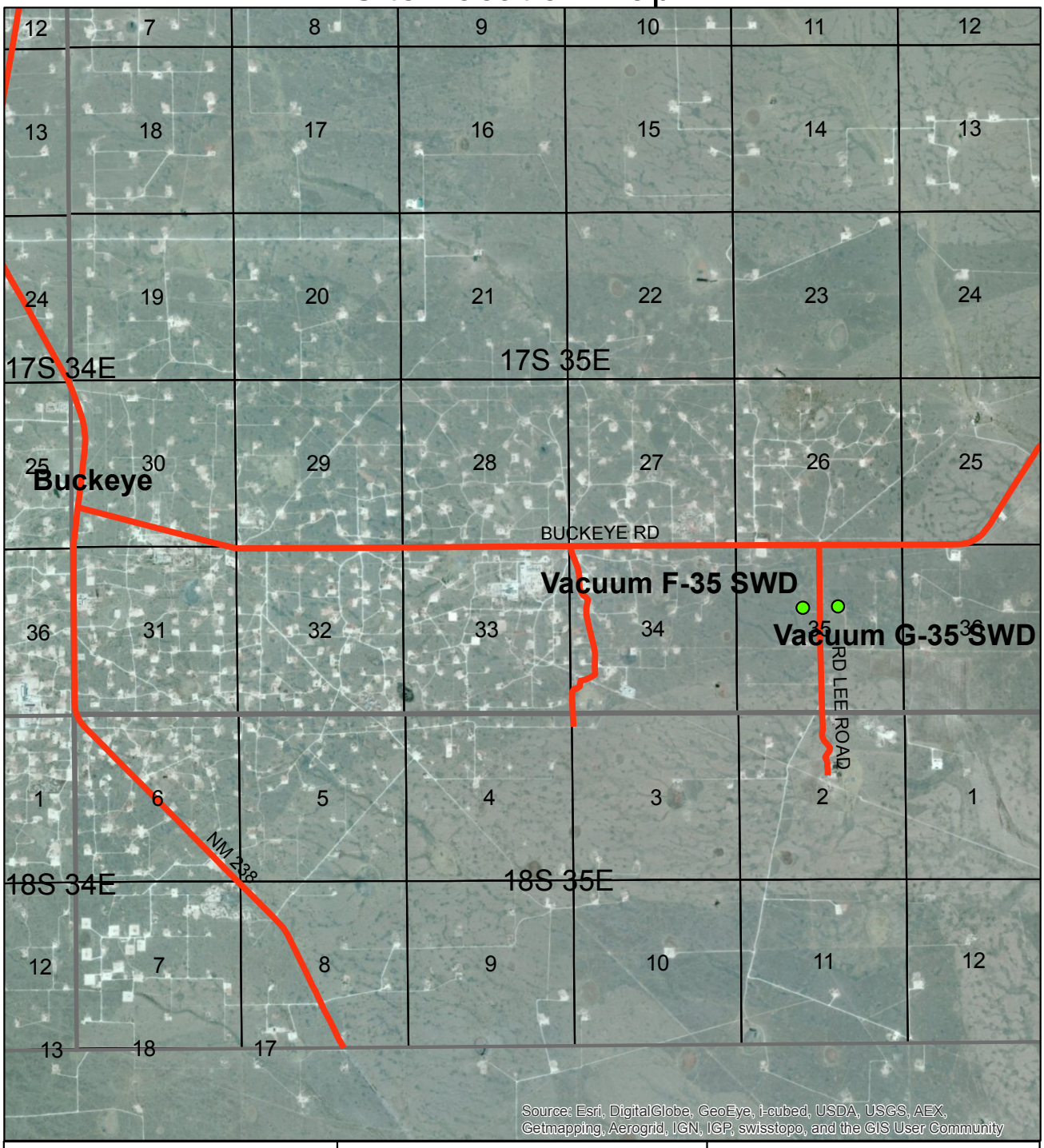
Sincerely,

L. Peter Galusky, Jr. P.E.
NM Prof. Engineer No. 22561

Copy: Rice Operating Company

Attachments: Appendix

Site Location Map



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

Vacuum F-35 SWD & G-35 SWD

Legals: UL/F, G sec. 35 T17S R35E
NMOCD Case #: AP-59

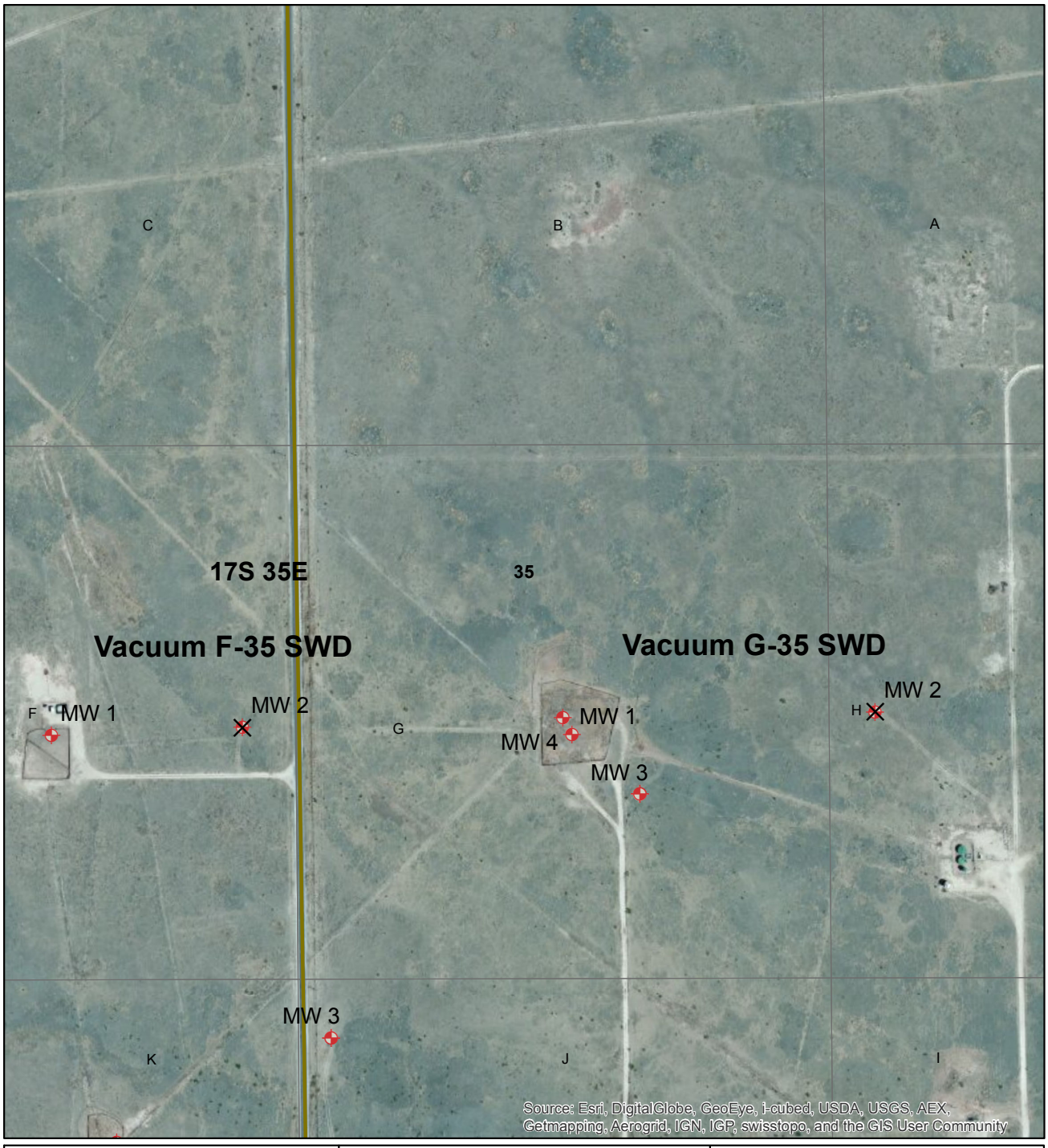
Figure 1

N
W E
S

0 0.175 0.35 0.7 1.05 1.4
Miles

Drawing date: 3/24/14
Drawn by: L. Flores

Monitor Well Locations



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

Vacuum F-35 SWD & G-35 SWD

Legals: UL/F, G sec. 35 T17S R35E
NMOCD Case #: AP-59

Figure 2

N
W E
S

0 150 300 600 Feet

Drawing date:3/24/14
Drafted by: L. Flores

Figure 3-a

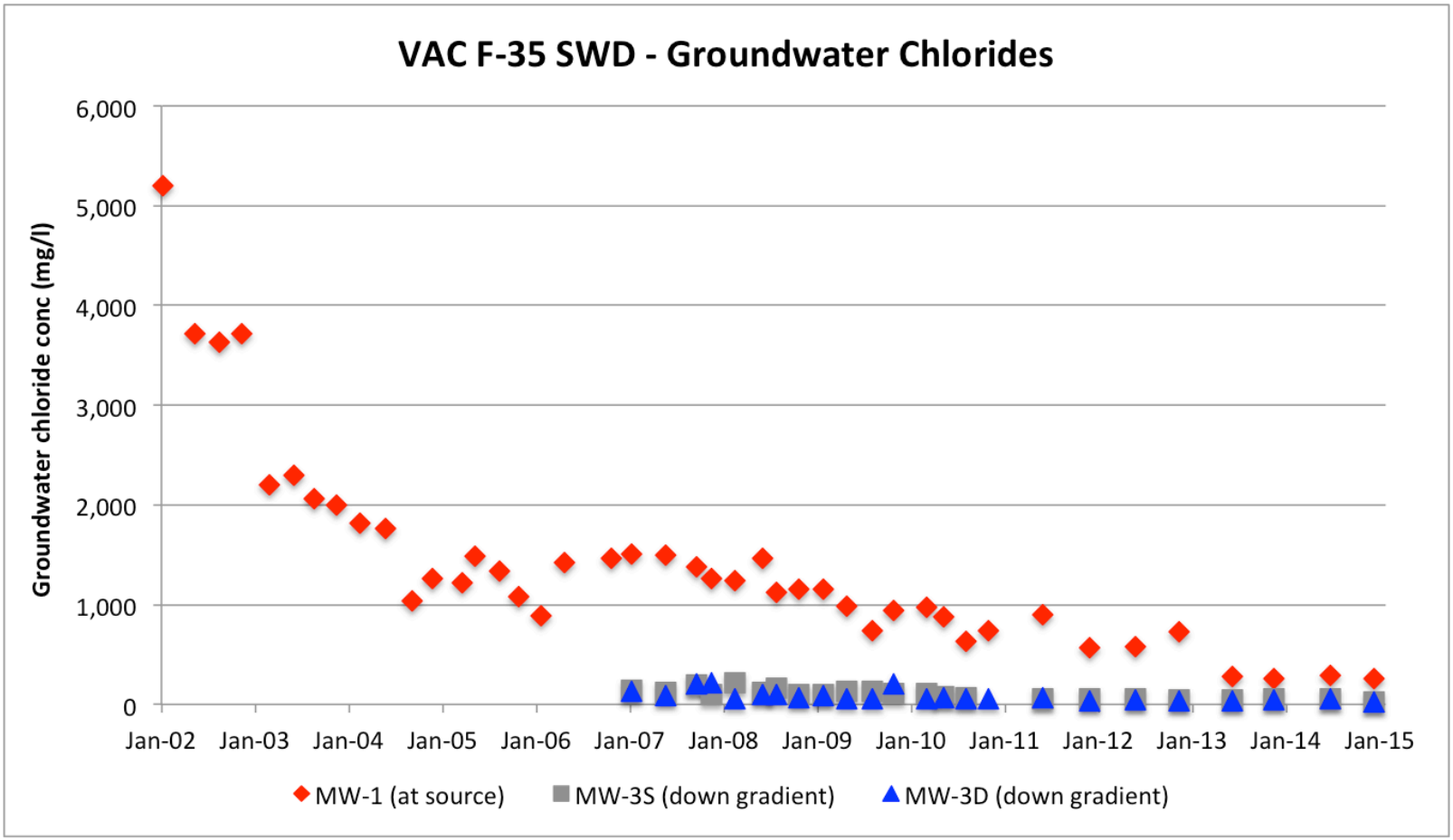

VAC F-35 SWD - Groundwater Chlorides
Groundwater chloride conc (mg/l)
6,000
5,000
4,000
3,000
2,000
1,000
0
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
MW-1 (at source)
MW-3S (down gradient)
MW-3D (down gradient)

Figure 3-b

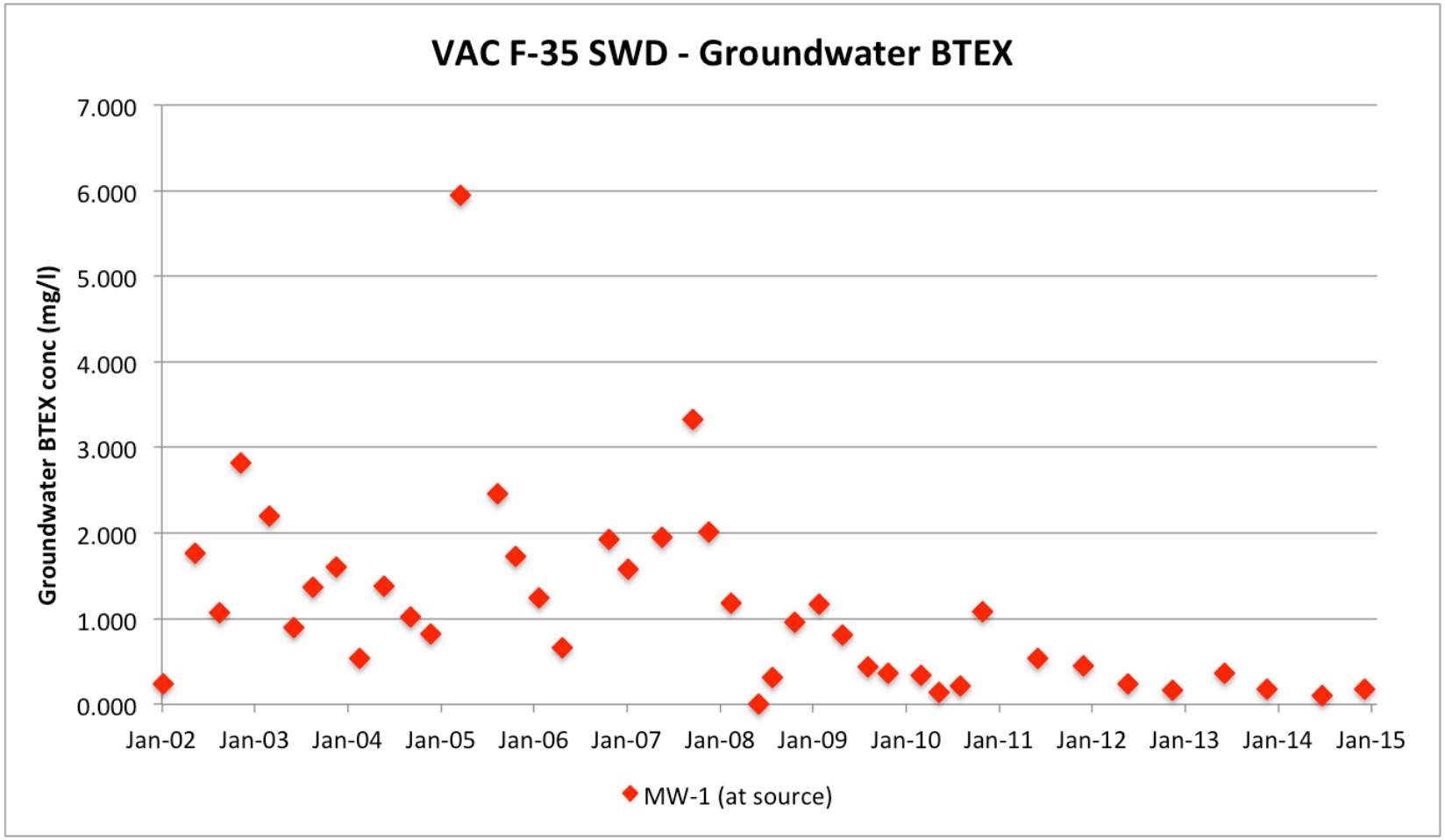

VAC F-35 SWD - Groundwater BTEX
Groundwater BTEX conc (mg/l)
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
MW-1 (at source)

Table 1

ROC - Vacuum F-35 (AP-59)
Unit Letter F, Section 35, T17S, R35E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	58	66	1.3	3.9	1/10/2002	5200	9425	0.05	0.053	0.05	0.09	5	
1	XXX	XXX	XXX	XXX	5/15/2002	3720	7050	0.744	0.207	0.51	0.309	3.2	
1	XXX	XXX	XXX	XXX	8/19/2002	3630	6040	0.705	0.172	0.112	0.076	10.7	
1	XXX	XXX	XXX	XXX	11/11/2002	3720	6020	1.21	0.343	0.835	0.431	2.8	
1	XXX	XXX	XXX	XXX	2/28/2003	2200	4040	0.909	0.84	0.321	0.124	26.2	
1	XXX	XXX	XXX	XXX	6/5/2003	2300	4180	0.632	0.134	0.061	0.067	20.3	
1	XXX	XXX	XXX	XXX	8/21/2003	2060	4000	0.617	0.36	0.202	0.192	4.9	
1	XXX	XXX	XXX	XXX	11/19/2003	2000	3760	0.797	0.301	0.264	0.248	5.1	
1	58.2	64	0.93	2.78	2/18/2004	1819	3932	0.349	0.038	0.121	0.027	0.19	
1	58.5	64	0.88	2.64	5/27/2004	1759	4008	0.726	0.176	0.268	0.215	8.7	
1	58.2	64.2	0.96	2.9	9/7/2004	1040	3000	0.429	0.221	0.143	0.2247	19.9	mod. odor; gray
1	57.81	64.2	1.02	3.1	11/24/2004	1260	2740	0.0489	0.313	0.209	0.2507	51	mod. odor; gray
1	57.18	64.2	1.2	3.6	3/21/2005	1220	2210	2.2	1.61	0.848	1.283	110	mod. odor; gray
1					5/11/2005	1490	2970	6.86	451	374	176.2	24.6	
1	58.4	64.2	0.9	2.8	8/15/2005	1340	2890	0.819	0.393	0.666	0.584	69.5	
1	57.45	64.2	1.1	4	10/25/2005	1080	2540	0.779	0.243	0.394	0.3062	72.7	
1	57.38	64.2	1.1	4	1/23/2006	886	2080	0.447	0.222	0.28	0.3006	88.2	Heavy skim of Oil: Septic Odor
1	57.58	64.2	1.1	4	4/25/2006	1420	3040	0.227	0.0956	0.174	0.1614	62.5	
1	XXX	64.2	XXX	XXX	10/24/2006	1460	3190	0.462	0.489	0.23	0.745	45.2	Clear with a strong septic odor
1	XXX	64.2	XXX	5	1/9/2007	1510	2980	0.486	0.577	0.185	0.333	67.2	Clear Strong Septic Odor
1	XXX	64.2	XXX	XXX	5/23/2007	1500	2850	0.557	0.387	0.323	0.681	44.4	Clear Strong Septic Odor
1	XXX	64.2	XXX	XXX	9/19/2007	1380	2902	0.902	0.706	0.582	1.14	23.2	Clear Strong Septic Odor
1	XXX	64.2	XXX	XXX	11/19/2007	1260	2642	0.719	0.203	0.429	0.665	44.2	Clear Strong septic odor
1	XXX	64.2	XXX	XXX	2/15/2008	1240	2650	0.305	0.099	0.218	0.563	49.7	Clear Strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	58.38	63.08	0.8	4	6/3/2008	1460	2840	<0.002	<0.002	<0.002	<0.006	25.4	Sand/silt to clear Strong septic odor
1	XXX	XXX	XXX	XXX	7/28/2008	1120	2510	0.051	0.023	0.066	0.172	35	Clear Strong septic odor
1	59.12	64.2	0.8	5	10/23/2008	1150	2580	0.193	0.013	0.232	0.526	27	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	XXX	1/28/2009	1150	2440	0.431	0.044	0.332	0.362	16.8	Clear Sheen Strong septic odor
1	XXX	XXX	XXX	XXX	4/28/2009	980	1970	0.26	0.038	0.234	0.282	15.2	Clear Sheen Strong septic odor
1	XXX	XXX	XXX	5	8/5/2009	740	1660	0.063	0.024	0.116	0.236	18.7	Clear Sheen Strong hydrocarbon odor
1	XXX	XXX	XXX	5	10/26/2009	940	1890	0.034	0.019	0.136	0.177	15.6	Clear Sheen Strong hydrocarbon odor
1	XXX	XXX	XXX	5	3/3/2010	970	2010	0.041	0.02	0.122	0.154	15.8	Sheen present Strong septic odor
1	XXX	XXX	XXX	6	5/12/2010	880	1840	0.004	0.011	0.05	0.08	22.1	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	6	8/4/2010	630	1540	0.017	0.022	0.059	0.117	23.8	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	6	11/1/2010	740	1850	0.075	0.115	0.312	0.584	18.1	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	6	6/2/2011	900	2170	0.071	0.032	0.191	0.239	<10.0	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	6	11/30/2011	570	1310	0.057	0.011	0.2	0.183	31.3	Clear Sheen present Strong septic odor
1	XXX	XXX	XXX	6	5/25/2012	580	1420	0.061	0.016	0.078	0.085	30.8	Gray color/Product present with strong septic odor
1	XXX	XXX	XXX	6	11/13/2012	730	1900	0.04	0.013	0.058	0.057	34.9	Gray color/Product present with strong septic odor
1	XXX	XXX	XXX	6	6/6/2013	280	887	0.06	0.059	0.099	0.149	63.1	Gray color/Product present with a strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	XXX	XXX	XXX	6	11/18/2013	260	810	0.04	0.015	0.064	0.063	26.2	Gray color/Product present with a strong septic odor
1	XXX	XXX	XXX	6	6/26/2014	296	834	0.025	0.004	0.033	0.04	44.1	Gray color product present with a strong septic odor
1	XXX	XXX	XXX	6	12/10/2014	264	810	0.048	0.006	0.075	0.05	55.2	Gray color/product present w/strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	52.57	68.1	2.5	10	6/6/2006	97.6	724	<0.001	<0.001	<0.001	<0.001	63.3	Clear no odor
2	52.77	68.1	2.5	10	10/24/2006	89.1	598	<0.001	<0.001	<0.001	<0.001	67.2	
2	52.91	68.1	2.4	10	1/9/2007	101	590	<0.001	<0.001	<0.001	<0.001	69.4	Clear No Odor
2	53.12	67.24	2.3	10	5/23/2007	88.3	512	<0.001	<0.001	<0.001	<0.001	61	Clear No Odor
2	53.33	67.24	2.2	10	9/19/2007	100	587	<0.002	<0.002	<0.002	<0.006	71.7	Clear No Odor
2	53.41	67.24	2.2	10	11/18/2007	96	571	<0.002	<0.002	<0.002	<0.006	85.7	Clear No odor
2	53.49	67.4	2.2	10	2/4/2008	100	652	<0.002	<0.002	<0.002	<0.006	60.6	Clear No odor
2	53.5	67.4	2.2	10	4/28/2008	96	604	<0.002	<0.002	<0.002	<0.006	79.8	Clear No odor
2	53.68	67.4	2.2	10	7/28/2008	96	586	<0.001	<0.001	<0.001	<0.003	62	Clear No odor
2	53.84	67.4	2.2	10	10/23/2008	100	710	<0.001	<0.001	<0.001	<0.003	77.7	Clear No odor
2	53.91	68.07	2.3	10	1/28/2009	96	660	XXX	XXX	XXX	XXX	73.2	Clear No odor
2	53.98	68.07	2.3	10	4/28/2009	100	663	XXX	XXX	XXX	XXX	73.6	Clear No odor
2	54.12	68.07	2.2	10	8/5/2009	104	666	XXX	XXX	XXX	XXX	76.2	Clear No odor
2	54.21	68.07	2.2	10	10/26/2009	20	296	XXX	XXX	XXX	XXX	21.3	Clear No odor
2	54.39	67.98	2.2	10	3/3/2010	124	689	XXX	XXX	XXX	XXX	84.8	Clear No odor
2	54.44	67.98	2.2	10	5/12/2010	128	680	XXX	XXX	XXX	XXX	99.8	Clear No odor
2	54.53	67.98	2.2	10	8/4/2010	132	733	XXX	XXX	XXX	XXX	91	Clear No odor
MW-2 plugged 10/2010													

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Shallow	52.35	102.8	32.8	100	1/9/2007	144	512	<0.001	0.015	<0.001	<0.001	99	Clear Slight Odor
3 Shallow	52.5	102.8	32.7	100	5/23/2007	117	494	<0.001	0.0013	<0.001	<0.001	56.9	Clear Slight Odor
3 Shallow	52.82	102.8	32.5	100	9/19/2007	192	789	<0.002	<0.002	<0.002	<0.006	73.5	Clear Slight Odor
3 Shallow	52.82	102.8	32.5	150	11/19/2007	104	467	<0.002	<0.002	<0.002	<0.006	66.3	Clear Slight odor
3 Shallow	52.92	102.8	32.4	200	2/5/2008	212	821	<0.002	<0.002	<0.002	<0.006	60.6	Clear Slight odor
3 Shallow	52.93	102.8	32.4	200	4/28/2008	116	502	<0.002	<0.002	<0.002	<0.006	63.1	Clear Slight odor
3 Shallow	53.12	102.8	32.3	200	7/28/2008	164	650	<0.001	<0.001	<0.001	<0.003	58	Clear Slight odor
3 Shallow	53.31	102.8	32.1	200	10/22/2008	104	690	<0.001	<0.001	<0.001	<0.003	74.3	Clear Slight odor
3 Shallow	53.38	101.1	31	200	1/28/2009	100	445	XXX	XXX	XXX	XXX	65	Clear Slight odor
3 Shallow	53.44	101.1	31	200	4/28/2009	128	579	XXX	XXX	XXX	XXX	74	Clear Slight odor
3 Shallow	53.6	101.1	31	200	8/5/2009	128	560	XXX	XXX	XXX	XXX	70.6	Clear Slight odor
3 Shallow	53.67	101.1	31	200	10/26/2009	108	535	XXX	XXX	XXX	XXX	63.1	Clear Slight odor
3 Shallow	53.84	101.1	31	200	3/4/2010	108	541	XXX	XXX	XXX	XXX	77.4	Clear Slight odor
3 Shallow	53.89	101.1	31	200	5/12/2010	80	442	XXX	XXX	XXX	XXX	79.2	Clear Slight odor
3 Shallow	53.93	101.1	31	200	8/3/2010	64	430	XXX	XXX	XXX	XXX	63.6	Clear Slight odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Shallow	54.03	101.1	31	200	11/2/2010	570	1320	XXX	XXX	XXX	XXX	19.4	Clear Slight odor
3 Shallow	54.13	101.1	31	200	6/2/2011	52	375	XXX	XXX	XXX	XXX	61.8	Clear Slight odor
3 Shallow	54.26	101.1	30	200	11/30/2011	52	420	XXX	XXX	XXX	XXX	64.6	Clear Slight odor
3 Shallow	54.5	101.1	30	200	5/25/2012	52	406	XXX	XXX	XXX	XXX	54.9	Clear Slight odor
3 Shallow	54.55	101.1	30	200	11/14/2012	44	393	XXX	XXX	XXX	XXX	61.9	Clear Slight odor
3 Shallow	54.62	101.1	30	200	6/7/2013	292	1090	XXX	XXX	XXX	XXX	47.2	Clear Slight odor
3 Shallow	54.86	101.1	30	200	11/17/2013	52	380	XXX	XXX	XXX	XXX	60.5	Clear Slight odor
3 Shallow	55.04	101.1	30	200	6/27/2014	56	358	XXX	XXX	XXX	XXX	59.9	Clear/slight odor
3 Shallow	54.67	101.1	30	200	12/10/2014	28	246	XXX	XXX	XXX	XXX	29	Clear Slight Odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Deep	52.35	102.8	32.8	100	1/9/2007	133	500	<0.001	0.0103	<0.001	<0.001	86.9	Clear Slight Odor
3 Deep	52.5	102.8	32.7	100	5/23/2007	91.9	452	<0.001	0.0024	<0.001	<0.001	47.5	Clear Slight Odor
3 Deep	52.82	102.8	32.5	100	9/19/2007	204	772	<0.002	<0.002	<0.002	<0.006	72.8	Clear Slight Odor
3 Deep	52.82	102.8	32.5	150	11/19/2007	216	735	<0.002	<0.002	<0.002	<0.006	64.6	Clear Slight odor
3 Deep	52.92	102.8	32.4	200	2/5/2008	52	393	<0.002	<0.002	<0.002	<0.006	59.8	Clear Slight odor
3 Deep	52.93	102.8	32.4	200	4/28/2008	104	485	<0.002	<0.002	<0.002	<0.006	65.2	Clear Slight odor
3 Deep	53.12	102.8	32.2	200	7/28/2008	96	510	<0.001	<0.001	<0.001	<0.003	52	Clear Slight odor
3 Deep	53.31	102.8	32.1	200	10/22/2008	72	665	<0.001	<0.001	<0.001	<0.003	160	Clear Slight odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Deep	53.38	101.1	31	200	1/28/2009	84	477	XXX	XXX	XXX	XXX	65	Clear Slight odor
3 Deep	53.44	101.1	31	200	4/28/2009	60	416	XXX	XXX	XXX	XXX	61.9	Clear Slight odor
3 Deep	53.6	101.1	30.9	200	8/5/2009	56	397	XXX	XXX	XXX	XXX	58.4	Clear Slight odor
3 Deep	53.67	101.1	30.8	200	10/26/2009	208	542	XXX	XXX	XXX	XXX	42	Clear Slight odor
3 Deep	53.84	101.1	30.7	200	3/4/2010	56	428	XXX	XXX	XXX	XXX	70.4	Clear Slight odor
3 Deep	53.89	101.1	30.7	200	5/12/2010	64	397	XXX	XXX	XXX	XXX	74.1	Clear Slight odor
3 Deep	53.93	101.1	30.7	200	8/3/2010	52	396	XXX	XXX	XXX	XXX	59.8	Clear Slight odor
3 Deep	54.03	101.1	30.6	200	11/2/2010	52	382	XXX	XXX	XXX	XXX	64.7	Clear Slight odor
3 Deep	54.13	101.1	30.5	200	6/2/2011	68	423	XXX	XXX	XXX	XXX	66.3	Clear Slight odor
3 Deep	54.26	101.1	30.4	200	11/30/2011	40	352	XXX	XXX	XXX	XXX	59.5	Clear Slight odor
3 Deep	54.5	101.1	30.3	200	5/25/2012	44	368	XXX	XXX	XXX	XXX	54.6	Clear Slight odor
3 Deep	54.55	101.1	30.3	200	11/14/2012	40	362	XXX	XXX	XXX	XXX	55.6	Clear Slight odor
3 Deep	54.62	101.1	30.2	200	6/7/2013	32	599	XXX	XXX	XXX	XXX	24.8	Clear Slight Odor
3 Deep	54.86	101.1	30	200	11/17/2013	44	343	XXX	XXX	XXX	XXX	60.3	Clear Slight Odor
3 Deep	55.04	101.1	29.9	200	6/27/2014	52	354	XXX	XXX	XXX	XXX	60.2	Clear Slight Odor
3 Deep	54.67	101.1	30.2	200	12/10/2014	28	252	XXX	XXX	XXX	XXX	25.6	Clear Slight Odor

Figure 4-a

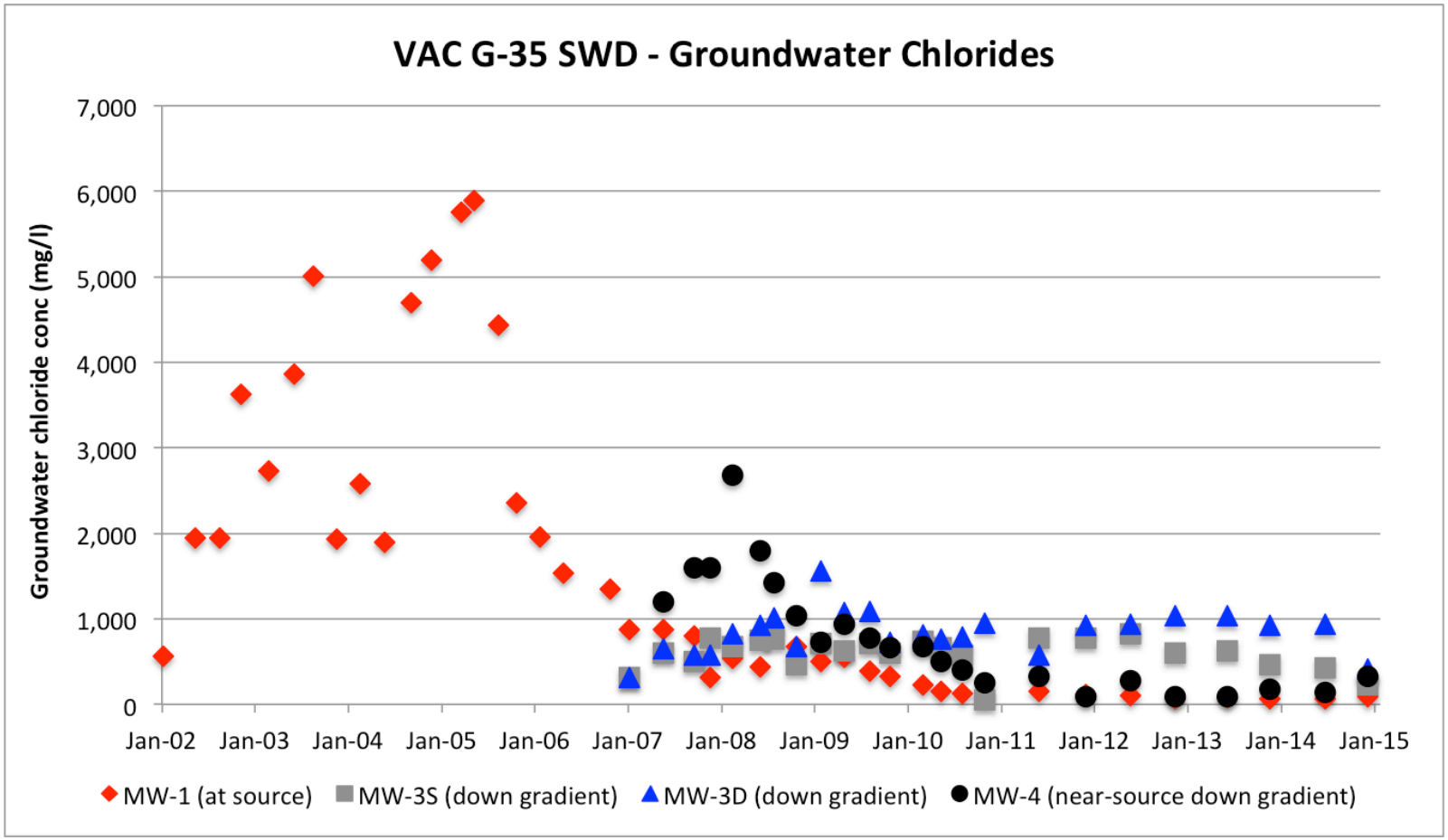

VAC G-35 SWD - Groundwater Chlorides
Groundwater chloride conc (mg/l)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
MW-1 (at source)
MW-3S (down gradient)
MW-3D (down gradient)
MW-4 (near-source down gradient)

Figure 4-b

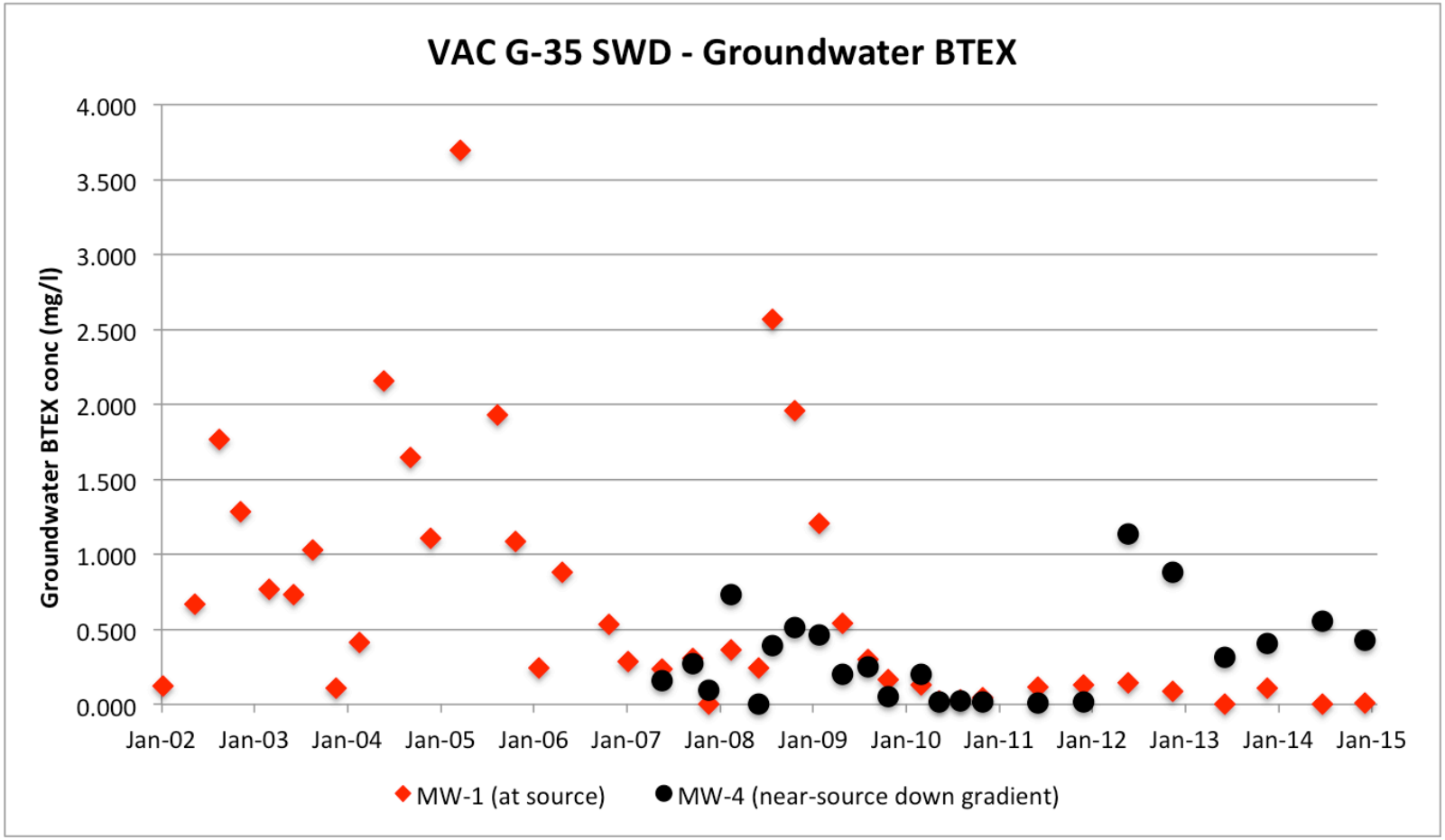

VAC G-35 SWD - Groundwater BTEX
Groundwater BTEX conc (mg/l)
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
MW-1 (at source)
MW-4 (near-source down gradient)

Table 2

ROC - Vacuum G-35 (AP-59)
Unit Letter G, Section 35, T17S, R35E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	53.6	64.3	1.8	5.3	1/10/2002	568	1284	0.011	0.022	0.034	0.055	23	
1	52.89	65.03	1.94	6	5/15/2002	1950	3260	0.414	0.057	0.131	0.065	2.1	oil skim
1	53.02	64.75	1.877	5.75	8/19/2002	1950	3850	0.705	0.598	0.209	0.253	7	
1	53.08	64.7	1.859	5.6	11/11/2002	3630	6740	0.921	0.078	0.154	0.131	5.8	oil skim; yellow
1	53.06	64.19	1.78	5.3	2/28/2003	2730	4770	0.713	0.01	0.018	0.027	24.6	
1	53.2	64.2	1.75	5.28	5/22/2003	3860	7320	0.583	0.002	0.12	0.027	5.3	
1	53.21	64.1	1.74	5.2	8/21/2003	5010	8850	0.689	0.004	0.307	0.032	3.5	
1	53.29	64.2	1.746	5.2	11/19/2003	1930	3590	0.012	0.002	0.09	0.003	20.9	
1	53.3	64.15	1.73	5.2	2/18/2004	2579	5000	0.059	<0.002	0.35	0.007	1.49	
1	52.9	64.15	1.8	5	5/27/2004	1899	4188	1.17	0.308	0.357	0.319	2.15	
1	52.6	64.4	1.89	5.66	9/7/2004	4700	8270	1.11	0.0525	0.346	0.1382	17.7	mod. odor; gray
1	52.91	64.4	1.84	5.5	11/24/2004	5200	10400	0.881	0.0226	0.133	0.0717	799	mod. odor; gray
1	52.4	64.4	1.92	5.8	3/21/2005	5750	9190	2.76	0.247	0.399	0.2862	136	mod. odor; gray; sheen
1					5/11/2005	5890	10700	2490	466	672	693	9.75	
1	52.35	64.4	1.93	5.8	8/15/2005	4430	6960	1.07	0.226	0.396	0.2417	126	
1	52.51	64.4	1.9	6	10/25/2005	2360	4420	0.799	0.0607	0.146	0.0839	166	light skim oil: strong septic odor
1	52.46	64.4	1.9	6	1/23/2006	1960	3540	0.141	J[0.00537]	0.078	0.0229	80.5	light skim oil: strong septic odor
1	52.7	64.4	1.9	6	4/25/2006	1540	3280	0.749	0.0143	0.093	0.0282	67.4	
1	52.88	64.4	1.8	6	10/25/2006	1350	2800	0.394	0.0204	0.0774	0.0438	45.2	Light
1	53.08	64.4	1.8	6	1/9/2007	873	1950	0.188	<0.001	0.0883	0.00764	34.6	Light Skim of Oil Clear turning Dark Grey Strong Septic Odor
1	53.2	64.4	1.8	10	5/24/2007	873	1820	0.143	0.00735	0.0664	0.0227	41.2	Light Skim of Oil Clear Turning Dark Grey Strong Septic Odor
1	53.37	64.4	1.8	10	9/20/2007	800	1738	0.189	0.004	0.082	0.029	22.2	Light Skim of Oil Clear to Dark Gray with Strong Septic Odor
1	53.39	64.4	1.8	10	11/20/2007	320	969	0.003	<0.002	<0.002	<0.006	35.3	Light skim of oil Clear to dark gray Strong septic odor
1	53.68	64.4	1.7	6	2/4/2008	540	1380	0.159	0.061	0.087	0.058	23.1	Light skim of oil Clear to Dark gray Strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	53.74	64.4	1.7	6	4/29/2008	440	1150	0.109	0.02	0.074	0.038	22.4	Light skim of oil Clear turning to dark gray Strong septic odor
1	53.81	64.4	1.7	6	7/29/2008	860	2160	0.915	0.261	0.74	0.649	<10	Light skim of oil Clear turning dark gray Strong septic odor
1	53.9	64.4	1.7	6	10/23/2008	680	1790	0.785	0.192	0.531	0.45	<10	Clear turning to dark gray Light sheen Strong septic odor
1	53.77	64.45	1.7	6	1/26/2009	500	1330	0.62	0.044	0.372	0.173	<10	Clear turning to dark gray Light sheen Strong septic odor
1	54.04	64.45	1.7	6	4/27/2009	550	1300	0.216	0.004	0.212	0.11	14.9	Clear turning to dark gray Light sheen Strong septic odor
1	54.23	64.45	1.6	6	8/6/2009	384	1090	0.091	0.016	0.086	0.109	14.8	Clear turning to dark gray Light sheen Strong septic odor
1	54.32	64.45	1.6	6	10/23/2009	332	896	0.04	0.001	0.086	0.037	10.9	Clear turning to dark gray Light sheen Strong septic odor
1	54.5	64.39	1.6	6	3/3/2010	232	795	0.013	0.004	0.075	0.041	22.6	Light sheen Clear to dark gray Strong septic odor
1	54.55	64.39	1.6	6	5/13/2010	152	599	<0.001	<0.001	0.016	0.005	29.9	Light sheen Clear to dark gray Strong septic odor
1	54.6	64.39	1.6	6	8/3/2010	124	520	0.003	0.001	0.023	0.006	24.1	Light sheen Clear to dark gray Strong septic odor
1	54.65	64.39	1.6	6	11/1/2010	100	489	0.003	0.003	0.031	0.008	25.4	Light sheen Clear to dark gray Strong septic odor
1	54.81	64.39	1.5	6	6/2/2011	156	565	0.018	<0.001	0.076	0.025	30.9	Light sheen Clear to dark gray Strong septic odor
1	54.96	64.39	1.5	6	11/30/2011	120	526	0.043	0.001	0.078	0.011	29.1	Light sheen Clear to dark gray Strong septic odor
1	55.08	64.39	1.5	6	5/25/2012	100	488	0.072	0.003	0.054	0.017	26.2	Light sheen Clear to dark gray Strong septic odor
1	55.24	64.39	1.5	6	11/13/2012	68	421	0.017	<0.001	0.058	0.012	30.9	Light sheen Clear to dark gray Strong septic odor
1	55.33	64.39	1.4	6	6/6/2013	72	441	0.002	0.001	<0.001	<0.003	38.6	Light Sheen Clear to dark gray w/Srong septic odor
1	55.53	64.39	1.4	6	11/18/2013	64	425	0.022	0.002	0.08	0.007	40.1	Light Sheen Clear turning to dark gray with a strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	55.79	64.39	1.4	6	6/26/2014	68	408	0.003	<0.001	<0.001	<0.003	38	Light Sheen clear turning to Dark Gray with strong septic odor
1	55.65	64.39	1.4	6	12/9/2014	88	432	0.01	0.002	0.001	<0.003	44.6	Light sheen, clear turning to dk. gray with strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	52.08	63.65	1.9	6	6/6/2006	17.4	286	<0.001	j[0.000839]	j[0.000385]	0.0044	24.7	
2	52.35	63.65	1.8	6	10/25/2006	13.4	264	<0.001	<0.001	<0.001	<0.001	22.8	Clear
2	52.56	63.65	1.8	6	1/9/2007	13.7	322	<0.001	j[0.000540]	<0.001	<0.001	21.7	Clear No Odor Well Pumps Off
2	52.66	63.94	1.8	6	5/24/2007	17.2	254	<0.001	<0.001	<0.001	<0.001	20.1	Clear No Odor Well Pumps Off
2	52.84	63.94	1.8	6	9/20/2007	16	262	<0.002	<0.002	<0.002	<0.006	25.6	Clear No Odor Well Pumps Off
2	52.86	63.94	1.8	6	11/20/2007	16	283	<0.002	<0.002	<0.002	<0.006	25	Clear No odor Well pumps off
2	52.95	64.2	1.8	6	2/4/2008	16	296	<0.002	<0.002	<0.002	<0.006	23	Clear No odor Well pumps off
2	53.01	64.2	1.8	6	4/29/2008	16	283	<0.002	<0.002	<0.002	<0.006	23.8	Clear No odor Well pumps off
2	53.15	64.2	1.8	6	7/29/2008	16	312	<0.001	<0.001	<0.001	<0.003	24	Clear No odor Well pumps off
2	53.36	64.2	1.7	6	10/23/2008	16	386	<0.001	<0.001	<0.001	<0.003	24.6	Clear No odor
2	53.42	66.51	2.1	6	1/28/2009	16	282	XXX	XXX	XXX	XXX	24	Clear No odor
2	53.51	66.51	2.1	8	4/27/2009	16	288	XXX	XXX	XXX	XXX	21.6	Clear No odor
2	53.62	66.51	2.1	8	8/6/2009	16	296	XXX	XXX	XXX	XXX	21.2	Clear No odor
2	53.66	66.51	2.1	8	10/23/2009	116	666	XXX	XXX	XXX	XXX	71	Clear No odor
2	53.8	66.51	2	8	3/3/2010	16	333	XXX	XXX	XXX	XXX	26.2	Clear No odor
2	53.86	66.51	2	8	5/13/2010	16	273	XXX	XXX	XXX	XXX	22.6	Clear No odor
2	53.87	66.51	2	8	8/4/2010	20	311	XXX	XXX	XXX	XXX	19.3	Clear No odor
MW-2 plugged 10/20/2010													

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Shallow	52.77	103.05	32.7	100	1/9/2007	311	804	<0.001	0.0191	<0.001	<0.001	48.9	Clear Slight Odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Shallow	52.9	103.05	32.6	100	5/24/2007	599	1070	<0.001	j[0.000380]	<0.001	<0.001	34.5	Clear Slight Odor
3 Shallow	53.11	103.05	32.5	120	9/20/2007	500	1373	<0.002	<0.002	<0.002	<0.006	39.1	Clear Strong Odor
3 Shallow	53.15	103.05	32.4	150	11/20/2007	776	1670	<0.002	<0.002	<0.002	<0.006	40.4	Clear Strong odor
3 Shallow	53.29	103.05	32.3	200	2/5/2008	670	1590	<0.002	<0.002	<0.002	<0.006	34.3	Clear Strong odor
3 Shallow	53.31	103.05	32.3	200	4/29/2008	750	1790	<0.002	<0.002	<0.002	<0.006	31.8	Clear Strong odor
3 Shallow	53.47	103.05	32.2	200	7/29/2008	760	1870	<0.001	<0.001	<0.001	<0.003	27	Clear Strong odor
3 Shallow	53.6	103.05	32.1	200	10/22/2008	464	1570	<0.001	<0.001	<0.001	<0.003	68.6	Clear Strong odor
3 Shallow	53.68	102.95	32	200	1/28/2009	710	1690	XXX	XXX	XXX	XXX	24.3	Clear Strong odor
3 Shallow	53.79	102.95	32	200	4/27/2009	630	1790	XXX	XXX	XXX	XXX	18.8	Clear Strong odor
3 Shallow	53.59	102.95	32.1	200	8/6/2009	710	1680	XXX	XXX	XXX	XXX	16.5	Clear Strong odor
3 Shallow	53.97	102.95	31.8	200	10/23/2009	600	1320	XXX	XXX	XXX	XXX	17.3	Clear Strong odor
3 Shallow	54.13	102.95	31.7	200	3/4/2010	740	1950	XXX	XXX	XXX	XXX	26.9	Clear Strong odor
3 Shallow	54.21	102.95	31.7	200	5/12/2010	660	1620	XXX	XXX	XXX	XXX	25.8	Clear Strong odor
3 Shallow	54.23	102.95	31.7	200	8/3/2010	580	1470	XXX	XXX	XXX	XXX	21	Clear Strong odor
3 Shallow	54.25	102.95	31.7	200	11/2/2010	52	396	XXX	XXX	XXX	XXX	62.1	Clear Strong odor
3 Shallow	54.45	102.95	31.5	200	6/2/2011	770	1560	XXX	XXX	XXX	XXX	34.6	Clear Strong odor
3 Shallow	54.56	102.95	31.5	200	11/30/2011	780	1690	XXX	XXX	XXX	XXX	38.7	Clear Strong odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Shallow	54.71	102.95	31.4	200	5/25/2012	830	1680	XXX	XXX	XXX	XXX	38.7	Clear Strong odor
3 Shallow	54.8	102.95	31.3	200	11/14/2012	600	1380	XXX	XXX	XXX	XXX	30.3	Clear Strong odor
3 Shallow	54.89	102.95	31.2	200	6/7/2013	630	1410	XXX	XXX	XXX	XXX	64.3	Clear/Strong Odor
3 Shallow	55.18	102.95	31.1	200	11/17/2013	460	1200	XXX	XXX	XXX	XXX	35.9	Clear/strong odor
3 Shallow	55.41	102.95	30.9	200	6/27/2014	428	1140	XXX	XXX	XXX	XXX	30.3	Clear strong odor
3 Shallow	55.09	102.95	31.1	200	12/9/2014	232	600	XXX	XXX	XXX	XXX	24	Clear/strong odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Deep	52.77	103.05	32.7	100	1/9/2007	313	830	<0.001	0.0136	<0.001	<0.001	46.5	Clear Slight Odor
3 Deep	52.9	103.05	32.6	100	5/24/2007	648	1090	<0.001	j[0.000320]	<0.001	<0.001	34.7	Clear Slight Odor
3 Deep	53.11	103.05	32.5	120	9/20/2007	570	1442	<0.002	<0.002	<0.002	<0.006	34	Clear Strong Odor
3 Deep	53.15	103.05	32.4	150	11/20/2007	570	1312	<0.002	<0.002	<0.002	<0.006	42.5	Clear Strong odor
3 Deep	53.29	103.05	32.3	200	2/5/2008	820	1710	<0.002	<0.002	<0.002	<0.006	32.7	Clear Strong odor
3 Deep	53.31	103.05	32.3	200	4/29/2008	930	1920	<0.002	<0.002	<0.002	<0.006	36.7	Clear Strong odor
3 Deep	53.47	103.05	32.2	200	7/29/2008	1010	2110	<0.001	<0.001	<0.001	<0.003	40	Clear Strong odor
3 Deep	53.6	103.05	32.1	200	10/22/2008	670	1710	<0.001	<0.001	<0.001	<0.003	<10	Clear Strong odor
3 Deep	53.68	102.95	32	200	1/28/2009	1560	3000	XXX	XXX	XXX	XXX	31	Clear Strong odor
3 Deep	53.79	102.95	32	200	4/27/2009	1080	2770	XXX	XXX	XXX	XXX	19.2	Clear Strong odor
3 Deep	53.59	102.95	32.1	200	8/6/2009	1090	2110	XXX	XXX	XXX	XXX	26.8	Clear Strong odor
3 Deep	53.97	102.95	31.8	200	10/23/2009	720	1930	XXX	XXX	XXX	XXX	14.4	Clear Strong odor
3 Deep	54.13	102.95	31.7	200	3/4/2010	810	1860	XXX	XXX	XXX	XXX	32.2	Clear Strong odor
3 Deep	54.21	102.95	31.7	200	5/12/2010	760	1940	XXX	XXX	XXX	XXX	28.2	Clear Strong odor
3 Deep	54.23	102.95	31.7	200	8/3/2010	790	1510	XXX	XXX	XXX	XXX	29.4	Clear Strong odor
3 Deep	54.25	102.95	31.7	200	11/2/2010	950	2050	XXX	XXX	XXX	XXX	22.4	Clear Strong odor
3 Deep	54.45	102.95	31.5	200	6/2/2011	570	1400	XXX	XXX	XXX	XXX	48.6	Clear Strong odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3 Deep	54.56	102.95	31.5	200	11/30/2011	930	2140	XXX	XXX	XXX	XXX	23.2	Clear Strong odor
3 Deep	54.71	102.95	31.4	200	5/25/2012	940	2090	XXX	XXX	XXX	XXX	35.5	Clear Strong odor
3 Deep	54.8	102.95	31.3	200	11/14/2012	1040	2450	XXX	XXX	XXX	XXX	27.6	Clear Strong odor
3 Deep	54.89	102.95	31.2	200	6/7/2013	1040	2520	XXX	XXX	XXX	XXX	55.1	Clear Strong odor
3 Deep	55.18	102.95	31.1	200	11/17/2013	930	2090	XXX	XXX	XXX	XXX	29	Clear Srong Odor
3 Deep	55.71	102.95	30.7	200	6/27/2014	940	2200	XXX	XXX	XXX	XXX	22.2	Clear strong odor
3 Deep	55.09	102.95	31.1	200	12/9/2014	410	1040	XXX	XXX	XXX	XXX	27.6	Clear strong odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	52.98	68.25	9.9	35	5/24/2007	1200	2050	0.0521	0.0582	0.017	0.02819	43.2	Clear to Grey Strong Odor Light Sheen of Oil
4	53.18	68.25	9.8	35	9/20/2007	1600	3262	0.146	0.058	0.023	0.042	17.8	Clear to Gray Strong Odor Light Sheen of Oil
4	53.21	68.25	9.8	35	11/20/2007	1600	3256	0.036	0.034	0.01	0.017	26	Clear turning to gray Strong odor Light sheen of oil
4	53.28	68.25	9.7	35	2/4/2008	2680	5140	0.411	0.151	0.082	0.092	9.94	Clear to gray Light sheen of oil Clear to dark gray Strong septic odor
4	53.33	68.25	9.7	35	4/29/2008	1800	3370	0.529	0.222	0.15	0.176	11.2	Clear turning to dark gray Light sheen of oil Strong septic odor
4	53.43	68.25	9.6	35	7/29/2008	1420	2620	0.208	0.086	0.041	0.06	20	Clear turning to dark gray Light sheen of oil Strong septic odor
4	53.52	68.25	9.6	35	10/23/2008	1040	2110	0.189	0.137	0.078	0.109	21.5	Clear turning to dark gray Light sheen of oil Strong septic odor
4	53.58	68.17	9.5	35	1/26/2009	730	1650	0.196	0.16	0.048	0.059	21.9	Clear turning to dark gray Light sheen Strong septic odor
4	53.72	68.17	9.4	35	4/27/2009	940	1970	0.097	0.033	0.037	0.032	20.9	Clear turning to dark gray Light sheen Strong septic odor
4	53.72	68.17	9.4	35	8/6/2009	770	1750	0.079	0.055	0.046	0.069	16.9	Clear turning to dark gray Light sheen Strong septic odor
4	53.94	68.17	9.2	35	10/23/2009	660	1420	0.018	0.012	0.012	0.01	13.6	Clear turning to dark gray Light sheen Strong septic odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
4	54.13	68.17	9.1	35	3/3/2010	670	1490	0.066	0.064	0.025	0.047	20.2	Product present Sock in well Clear to gray Strong odor
4	54.19	66.17	9.1	35	5/13/2010	500	1270	0.002	0.005	0.002	0.005	26.4	Product present Sock in well Clear to gray Strong odor
4	54.22	68.17	9.1	35	8/3/2010	396	1010	0.011	0.008	0.003	0.005	23.3	Product present Sock in well Clear to gray Strong odor
4	54.27	68.17	9	35	11/1/2010	252	689	0.006	0.007	0.003	0.004	24.5	Heavy sheen Clear to gray Strong odor Sock in well
4	54.42	68.17	8.9	35	6/2/2011	328	887	0.003	0.003	0.003	<0.003	32.5	Heavy sheen Clear to gray Strong odor Sock in well
4	54.64	68.17	8.8	35	11/30/2011	88	457	0.008	0.006	0.003	<0.003	30.8	Heavy sheen Clear to gray Strong odor Sock in well
4	54.78	68.17	8.7	35	5/25/2012	280	792	0.157	0.405	0.212	0.363	25.9	Heavy Sheen Clear to Gray Strong Odor Sock in well
4	54.91	68.17	8.6	35	11/13/2012	92	469	0.142	0.224	0.2	0.314	27.4	Heavy Sheen Clear to Gray Strong Odor Sock in well
4	55.01	68.17	8.6	35	6/6/2013	96	462	0.153	0.019	0.118	0.023	23.6	Heavy Sheen Present/Sock Placed in well/Clear to Gray/Strong Odor
4	55.24	68.17	8.4	35	11/18/2013	180	590	0.118	0.05	0.195	0.043	23.3	Heavy Sheen present/sock placed in well/clear to gray/strong odor/heavy sheen present
4	55.49	68.17	8.2	35	6/27/2014	144	478	0.244	0.082	0.177	0.055	13.8	Heavy sheen present/sock placed in well/clear to gray/strong odor
4	55.12	68.17	8.5	35	12/9/2014	332	852	0.143	0.086	0.156	0.044	28.5	Heavy sheen present/sock placed in well. Clear to gray/strong odor/heavy sheen present.

CARDINAL Laboratories

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December 22, 2014

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: VACUUM F-35 SWD AND G-35 SWD

Enclosed are the results of analyses for samples received by the laboratory on 12/15/14 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	12/15/2014	Sampling Date:	12/10/2014
Reported:	12/22/2014	Sampling Type:	Water
Project Name:	VACUUM F-35 SWD AND G-35 SWD	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 F & G -LEA CTY, NM		

Sample ID: F-35 SWD MONITOR WELL #1 (H403814-01)

BTEX 8021B mg/L Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.048**	0.001	12/16/2014	ND	0.020	98.1	0.0200	1.65	
Toluene*	**0.006**	0.001	12/16/2014	ND	0.020	99.8	0.0200	2.69	
Ethylbenzene*	**0.075**	0.001	12/16/2014	ND	0.020	98.3	0.0200	3.39	
Total Xylenes*	**0.050**	0.003	12/16/2014	ND	0.060	99.8	0.0600	3.12	
Total BTEX	**0.178**	0.006	12/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 95.0 % 66.2-142

Chloride, SM4500Cl-B mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**264**	4.00	12/16/2014	ND	104	104	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**55.2**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**810**	5.00	12/17/2014	ND	478	90.7	527	1.32	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

Rice Operating Company
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Received:	12/15/2014	Sampling Date:	12/10/2014
Reported:	12/22/2014	Sampling Type:	Water
Project Name:	VACUUM F-35 SWD AND G-35 SWD	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 F & G -LEA CTY, NM		

Sample ID: F-35 SWD MONITOR WELL #3-SHALLOW (H403814-02)

Chloride, SM4500Cl-B mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**29.0**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**246**	5.00	12/17/2014	ND	478	90.7	527	1.32	

Sample ID: F-35 SWD MONITOR WELL #3-DEEP (H403814-03)

Chloride, SM4500Cl-B mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**28.0**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**25.6**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**252**	5.00	12/17/2014	ND	478	90.7	527	1.32	

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CARDINAL Laboratories

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Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	12/15/2014	Sampling Date:	12/09/2014
Reported:	12/22/2014	Sampling Type:	Water
Project Name:	VACUUM F-35 SWD AND G-35 SWD	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 F & G -LEA CTY, NM		

Sample ID: G-35 SWD MONITOR WELL #1 (H403814-04)

BTEX 8021B mg/L Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.010**	0.001	12/16/2014	ND	0.020	98.1	0.0200	1.65	
Toluene*	**0.002**	0.001	12/16/2014	ND	0.020	99.8	0.0200	2.69	
Ethylbenzene*	**0.001**	0.001	12/16/2014	ND	0.020	98.3	0.0200	3.39	
Total Xylenes*	<0.003	0.003	12/16/2014	ND	0.060	99.8	0.0600	3.12	
Total BTEX	**0.013**	0.006	12/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 95.5 % 66.2-142

Chloride, SM4500Cl-B mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**88.0**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**44.6**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**432**	5.00	12/17/2014	ND	478	90.7	527	1.32	

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Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	12/15/2014	Sampling Date:	12/09/2014
Reported:	12/22/2014	Sampling Type:	Water
Project Name:	VACUUM F-35 SWD AND G-35 SWD	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 F & G -LEA CTY, NM		

Sample ID: G-35 SWD MONITOR WELL #3 - SHALLOW (H403814-05)

Chloride, SM4500Cl-B mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**232**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**24.0**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**600**	5.00	12/17/2014	ND	478	90.7	527	1.32	

Sample ID: G-35 SWD MONITOR WELL #3-DEEP (H403814-06)

Chloride, SM4500Cl-B mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**410**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**27.6**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1040**	5.00	12/17/2014	ND	478	90.7	527	1.32	

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CARDINAL Laboratories

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Analytical Results For:

Rice Operating Company
Hack Conder
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	12/15/2014	Sampling Date:	12/09/2014
Reported:	12/22/2014	Sampling Type:	Water
Project Name:	VACUUM F-35 SWD AND G-35 SWD	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S-R35E-SEC35 F & G -LEA CTY, NM		

Sample ID: G-35 SWD MONITOR WELL #4 (H403814-07)

BTEX 8021B mg/L Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.143**	0.001	12/16/2014	ND	0.020	98.1	0.0200	1.65	
Toluene*	**0.086**	0.001	12/16/2014	ND	0.020	99.8	0.0200	2.69	
Ethylbenzene*	**0.156**	0.001	12/16/2014	ND	0.020	98.3	0.0200	3.39	
Total Xylenes*	**0.044**	0.003	12/16/2014	ND	0.060	99.8	0.0600	3.12	
Total BTEX	**0.429**	0.006	12/16/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 93.9 % 66.2-142

Chloride, SM4500Cl-B mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**332**	4.00	12/16/2014	ND	100	100	100	0.00	

Sulfate 375.4 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	**28.5**	10.0	12/16/2014	ND	18.5	92.6	20.0	7.68	

TDS 160.1 mg/L Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**852**	5.00	12/17/2014	ND	478	90.7	527	1.32	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene, Lab Director/Quality Manager

Cardinal Laboratories, Inc.

101 East Marland - Hobbs, New Mexico 88240
(575) 393-2326 Tel
(575) 393-2476 Fax

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Hack Conder	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: Vacuum F-35 SWD and G-35 SWD
Project Location: T17S-R35E-Sec35 F and G ~ Lea County - New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

LAB # (LAB USE ONLY) H403815	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2014)	TIME
1	F-35 SWD Monitor Well #1	G	3	X				2				1		12/10	12:40
2	F-35 SWD Monitor Well #3-Shallow	G	1	X								1		12/10	11:40
3	F-35 SWD Monitor Well #3-Deep	G	1	X								1		12/10	11:30
4	G-35 SWD Monitor Well #1	G	3	X				2				1		12/9	13:00
5	G-35 SWD Monitor Well #3-Shallow	G	1	X								1		12/9	12:10
6	G-35 SWD Monitor Well #3-Deep	G	1	X								1		12/9	12:05
7	G-35 SWD Monitor Well #4	G	3	X				2				1		12/9	14:40

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB #	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1		X																	X	X	X	
2																			X	X	X	
3																			X	X	X	
4		X																	X	X	X	
5																			X	X	X	
6																			X	X	X	
7		X																	X	X	X	

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

Relinquished by: Rozanne Johnson	Date: 12/15/14	Time: 16:44
Relinquished by:	Date:	Time:
Received by:	Date:	Time:
Received By: (Laboratory Staff) Jodi Henson	Date: 12/15/14	Time: 16:45

REMARKS:

Email Results to: hconder@riceswd.com
lweinheimer@rice-ecs.com
kjones@riceswd.com
rozanne11@windstream.net

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials)

#54