

## **ATTACHMENT 4: FIELD LOGS**

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This attachment contains the groundwater sample collection field logs for the relatively shallow standpipe monitoring wells (MW-1, MW-5 through MW-10, MW-13, MW-15, and MW-16), as well as the field data sheets for the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-26). Groundwater sample collection for the 2<sup>nd</sup> Quarter 2014 sampling event was conducted by Blaine Tech Services, Inc.

## WELL MONITORING DATA SHEET

Project #: <u>140418-AW1</u>	Site: <u>JPL</u>
Sampler: <u>AW</u>	Gauging Date: <u>5-1-14</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>120'</u>	Depth to Water (DTW): <u>28.07</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type <u>YSI</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>46.45</u>	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Waters

2" Rediflo pump  
Extraction Pump  
Other Dedicated RFZ

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing  
Other:

Flow Rate = 4 gpm

Start Purge Date = 5-1-14 0925

<u>59.8</u> (Gals.) X	<u>3</u>	= <u>179.4</u> Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or $\mu$ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
0933	17.6	7.42	463	4	0.14	211	32	29.54
0940	17.6	7.39	464	3	0.07	201	60	29.60
0948	17.5	7.40	466	3	0.06	193	92.4	29.60
0955	17.7	7.36	464	3	0.05	183	120	29.59
091003	17.6	7.35	468	2	0.05	179	152	29.60
1010	17.8	7.33	466	2	0.05	172	180	29.60

Did well dewater? Yes  No  Gallons actually evacuated: 180

Sampling Date: 5-1-14 Sampling Time: 1015 Depth to Water: 29.60

Sample I.D.: MW-1 Laboratory: BC

Analyzed for: See COC Other: BC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-6-2014 <sup>1030</sup>

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: <u>140418-AW1</u>	Site: <u>JPL</u>
Sampler: <u>AW</u>	Gauging Date: <u>5-1-2014</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>140</u>	Depth to Water (DTW): <u>102.80'</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type <u>YSI</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>110.24</u>	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Water

2" Rediflo pump  
Extraction Pump

Other Dedicated RF2

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing

Other:

Flow Rate = 3 gpm

Start Purge Date = 1237

24.2 (Gals.) X 3 = 72.6 Gals.  
1 Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
1241	17.3	6.82	466	1	0.93	201	13	103.17
1245	16.8	6.74	477	1	0.95	186	25	103.19
1249	16.6	6.65	467	1	0.92	179	37	103.19
1253	16.4	6.66	469	1	0.93	156	49	103.20
1257	16.1	6.61	472	1	0.91	144	61	103.20
1301	16.0	6.57	474	1	0.94	136	73	103.21

Did well dewater? Yes  No  Gallons actually evacuated: 73

Sampling Date: 5-1-14      Sampling Time: 1305      Depth to Water: 103.21

Sample I.D.: MW-5      Laboratory: BC

Analyzed for: See COC      Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: 140418-AW1	Site: JPL
Sampler: NIC	Gauging Date: 5/1/14
Well I.D.: MW-6	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 245.20	Depth to Water (DTW): 208.72
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	Flow Cell Type: VSI
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 215.97	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Waters  
2" Rediflo pump  
Extraction Pump  
Other \_\_\_\_\_

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing  
Other: \_\_\_\_\_

Flow Rate = 1.5 GPM  
Start Purge Date = 5/1/14 0856

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

23.5 (Gals.) X 3 = 70.5 Gals.  
I Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
0904	21.6	6.77	1247	7.57	7.19	118	12.0	208.81
0912	21.2	6.81	1249	4.20	7.42	113	24.0	208.84
0920	21.3	6.76	1245	2.15	7.06	111	36.0	208.85
0928	21.3	6.76	1242	1.25	7.04	112	48.0	208.85
0936	21.1	6.72	1244	1.01	7.02	114	60.0	208.85
0944	21.2	6.72	1242	1.35	7.00	115	71.0	208.85

Did well dewater? Yes  No  Gallons actually evacuated: 71.0

Sampling Date: 5/1/14      Sampling Time: 0945      Depth to Water: 208.85

Sample I.D.: MW-6      Laboratory: BC

Analyzed for: See COL      Other: \_\_\_\_\_

EB I.D. (if applicable): @ Time      Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time      Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

M3/M30      3 VOA (+ 6 VOA) [9 L/10], 1.500, 1 IL

## WELL MONITORING DATA SHEET

Project #: 140413-AW1	Site: JPL
Sampler: NIC	Gauging Date: 5/2/14
Well I.D.: MW-7	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 275	Depth to Water (DTW): <del>463</del> 242.61
Depth to Free Product: -	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: Y51
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 249.08	

Purge Method: Water Sampling Method:

Disposable Bailer  2" Rediflo pump  Disposable Bailer  
 Positive Air Displacement  Extraction Pump  Extraction Port  
 Electric Submersible  Other  Dedicated Tubing

Flow Rate = 2 GPM 32.39 Other:

Start Purge Date = 05/07 Pump 2265

210 (Gals.) X	3	= 630 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
1102	26.5	7.12	726.9	14.9	7.18	171	10.5	242.80
1108	26.0	7.05	<del>745</del> 760.8	8.66	6.90	157	21	242.82
1113	26.5	7.01	759.2	8.06	6.69	150	30.5	242.82
1119	26.5	7.04	755.1	4.97	6.63	143	42.0	242.82
1124	26.3	6.99	755.7	3.63	6.55	148	52.5	242.82
1130	26.4	7.01	750.6	2.76	6.61	151	63.0	242.82

Did well dewater? Yes  No  Gallons actually evacuated: 63

Sampling Date: 5/2/14      Sampling Time: 1131      Depth to Water: 242.82

Sample I.D.: MW-7      Laboratory: BC

Analyzed for: See Col      Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-8-2014

FB I.D. (if applicable): @ Time Analyzed for: See Col e 1146

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: 140418-AWI	Site: JPL
Sampler: NK	Gauging Date: 5/2/14
Well I.D.: MW-8	Well Diameter: 2 3 4 6 8
Total Well Depth (TD): 205	Depth to Water (DTW): 168.81
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	Flow Cell Type Y51
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 176.04	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Watera  
2" Rediflo pump  
Extraction Pump  
Other \_\_\_\_\_

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing  
Other: \_\_\_\_\_

Flow Rate= 2 GPM

Start Purge Date= 5/2/14 0845

Pump @ 195'

23.5 (Gals.) X 3 = 70.5 Gals.  
I Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
0951	19.8	7.25	526.8	0.90	6.89	196	12.0	168.90
0957	19.2	6.96	508.1	0.81	6.52	179	24.0	168.92
1003	19.1	6.95	506.7	0.99	6.46	168	36.0	168.93
1009	19.1	6.95	508.0	2.73	6.50	160	48.0	198.93
1015	19.0	6.96	506.4	0.57	6.48	156	60.0	198.93
1021	19.1	6.97	506.0	0.55	6.50	154	71.0	198.93

Did well dewater? Yes  No  Gallons actually evacuated: 71.0

Sampling Date: 5/2/14      Sampling Time: 1022      Depth to Water: 198.93

Sample I.D.: MW-8      Laboratory: BC

Analyzed for: See LOC      Other: \_\_\_\_\_

EB I.D. (if applicable): @ \_\_\_\_\_ Duplicate I.D. (if applicable): \_\_\_\_\_

FB I.D. (if applicable): TB-10-5/2/14 @ 0930 Time Analyzed for: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: <u>140418-AW1</u>	Site: <u>JPL</u>
Sampler: <u>AW</u>	Gauging Date: <u>5-1-14</u>
Well I.D.: <u>MW-9</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>68</u>	Depth to Water (DTW): <u>20.17</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type <u>YSI</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>29.73</u>	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Water

2" Rediflo pump  
Extraction Pump

Other Dedicated RF2

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing

Other:

Flow Rate = 3 gpm

Start Purge Date: 5-1-14 0749

<u>31.1</u> (Gals.) X	<u>3</u> Specified Volumes	<u>= 93.3</u> Gals. Calculated Volume
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Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
0749	18.6	7.11	508	3	1.49	197	16	22.22
0759	18.5	7.03	480	3	1.32	188	32	22.15
0805	18.6	6.98	487	2	0.77	177	48	22.26
0810	18.6	6.99	493	2	0.49	169	64	22.26
0815	18.5	7.02	494	2	0.44	163	79	22.26
0820	18.6	7.04	494	2	0.42	159	94	22.26

Did well dewater? Yes  No  Gallons actually evacuated: 94

Sampling Date: 5-1-14 Sampling Time: 0816<sup>00</sup>21 Depth to Water: 22.26

Sample I.D.: MW-9 Laboratory: BC

Analyzed for: See COC Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-5-2014 0811

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: 140418-AW1	Site: JPL
Sampler: NK	Gauging Date: 5/11/14
Well I.D.: MW-10	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 155.00	Depth to Water (DTW): 117.92
Depth to Free Product: -	Thickness of Free Product (feet): ~
Referenced to: PVC Grade	Flow Cell Type VSI
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 125.33	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

WATERA  
2" Rediflo pump  
Extraction Pump  
Other \_\_\_\_\_

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing  
Other: \_\_\_\_\_

Flow Rate = 1.6 gpm 1.5 gpm

Start Purge Date = 5/11/14 1321

24.1 (Gals.) X 3 = 72.3 Gals.  
I Case Volume      Specified Volumes      Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
1330	23.9	7.24	1194	0.98	7.35	144	12.5	117.96
1338	21.7	6.71	1214	0.67	7.20	114	24.5	117.97
1346	21.6	6.64	1221	0.50	7.17	108	36.5	117.98
1354	21.6	6.62	1222	0.48	7.20	107	48.5	117.98
1402	21.9	6.61	1220	0.33	7.15	105	60.5	117.98
1410	21.8	6.65	1219	0.41	7.13	102	72.5	117.98

Did well dewater? Yes  No  Gallons actually evacuated: 72.5

Sampling Date: 5/11/14      Sampling Time: 1411      Depth to Water:

Sample I.D.: MW-10      Laboratory: BC

Analyzed for: See COC      Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**

3 WA  
1.500 + Big Cooler + 2 Asters



## WELL MONITORING DATA SHEET

Project #: 140418-AW1	Site: JPL
Sampler: MK	Gauging Date: 5/1/13
Well I.D.: MW-13	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 235.00	Depth to Water (DTW): 212.53
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	Flow Cell Type: VSI
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 217.02	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Waters  
2" Rediflo pump  
Extraction Pump  
Other \_\_\_\_\_

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing  
Other: \_\_\_\_\_

Flow Rate = 1 GPM

Start Purge Date = 5/1/14 0725

22.47

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

14.6 (Gals.) X 3 = 43.8 Gals.  
I Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
0733	22.3	7.12	1206	13.5	7.17	213	7.5	212.80
0741	22.5	6.52	1102	18.2	7.22	173	15.0	212.82
0748	22.7	6.59	1095	9.39	7.20	118	22.0	212.83
0755	22.5	6.62	1098	4.98	7.11	101	29.5	212.84
0804	22.6	6.68	1096	4.17	7.15	96	32.0	212.85
0811	22.8	6.69	1097	4.85	7.24	92	44.0	212.85

Did well dewater? Yes  No  Gallons actually evacuated: 44.0

Sampling Date: 5/1/14      Sampling Time: 0812      Depth to Water: 212.85

Sample I.D.: MW-13      Laboratory: BC

Analyzed for: See CAC      Other: \_\_\_\_\_

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

parameter 2 1/2 cu

14, 1, 600, 3, 0.92

## WELL MONITORING DATA SHEET

Project #: <u>140418-AW1</u>	Site: <u>JPL</u>
Sampler: <u>AW</u>	Gauging Date: <u>5-1-14</u>
Well I.D.: <u>MW-15</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>74'</u>	Depth to Water (DTW): <u>32.72</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type <u>PSI</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>40.97</u>	

Purge Method:

Disposable Bailer  
Positive Air Displacement  
Electric Submersible

Waters

2" Rediflo pump  
Extraction Pump

Other: Dedicated RFZ

Sampling Method:

Disposable Bailer  
Extraction Port  
Dedicated Tubing

Other:

Flow Rate = 3 gpm

Start Purge Date = 5-1-14 1142

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

26.9 (Gals.) X 3 = 80.7 Gals.  
 I Case Volume      Specified Volumes      Calculated Volume

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
1147	19.6	7.27	494	1	0.22	158	15	33.41
1151	18.4	7.22	497	1	0.23	162	27	33.41
1156	18.9	7.21	494	1	0.20	161	42	33.43
1200	18.6	7.17	496	1	0.24	159	54	33.45
1205	18.5	7.15	498	1	0.22	158	69	33.46
1209	18.3	7.14	498	1	0.23	156	81	33.47

Did well dewater?      Yes      No      Gallons actually evacuated: 81

Sampling Date: 5-1-14      Sampling Time: 1210      Depth to Water: 33.47

Sample I.D.: MW-15      Laboratory: BC

Analyzed for: See COC      Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-7-2014 <sup>1225</sup>

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: 140418-AW1	Site: JPL
Sampler: NK	Gauging Date: 5/1/14
Well I.D.: MW-16	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 285'	Depth to Water (DTW): 264.32
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: PVC Grade	Flow Cell Type: YSI
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:

- Disposable Bailer
- Positive Air Displacement
- Electric Submersible

Waters

- 2" Rediflo pump
- Extraction Pump
- Other: No Purge

Sampling Method:

- Disposable Bailer
- Extraction Port
- Dedicated Tubing

Flow Rate= \_\_\_\_\_

Start Purge Date= 5/1/14

_____ (Gals.) X _____	= _____ Gals.	
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Gals. Removed	DTW
—	—	Water	below	pump	level	—	—	—
—	—	No	purge	sample	taken	—	—	—
1055	28.0	7.64	770	107	3.93	176	—	264.32

Did well dewater? Yes  No  Gallons actually evacuated:

Sampling Date: 5-1-14      Sampling Time: 1055      Depth to Water: 264.32

Sample I.D.: MW-16      Laboratory: BC

Analyzed for: See COC      Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

FB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Analyzed for: \_\_\_\_\_

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-3  
 SAMPLING DATE(S): 4-23-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 178.28  
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.06  
18.01°C 20.30°C

PROBE TYPE: Sampler 0-500 PSI  
 SERIAL NO.: EM52502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): KW  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
5	1	✓	✓	✓	✓	✓	224.97	✓	227.47	✓	227.97	✓	224.97	14.6	485	7.97	91	8.07	194	0700	MW-3-5
4	2	✓	✓	✓	✓	✓	183.61	✓	187.38	✓	187.41	✓	183.61	15.8	492	7.84	238	6.76	194	0740	MW-3-4
3	1	✓	✓	✓	✓	✓	91.18	✓	95.76	✓	95.76	✓	91.18	15.6	506	7.85	17	7.26	189	0815	MW-3-3
2	1	✓	✓	✓	✓	✓	50.69	✓	57.94	✓	57.94	✓	50.70	15.5	476	8.01	22	7.32	182	0840	MW-3-2
	2	✓	✓	✓	✓	✓	50.69	✓	57.93	✓	57.93	✓	50.69					5-TR			
	3	✓	✓	✓	✓	✓	50.67	✓	57.97	✓	57.96	✓	50.67								
	4	✓	✓	✓	✓	✓	50.67	✓	57.97	✓	57.97	✓	50.67								
	5	✓	✓	✓	✓	✓	50.66	✓	57.94	✓	57.94	✓	50.66								
	6	✓	✓	✓	✓	✓	48.61	✓	57.96	✓	57.96	✓	48.61								
1	1	✓	✓	✓	✓	✓	15.71	✓	28.10	✓	28.10	✓	15.71	18.2	527	8.02	24	5.98	167	1040	MW-3-1

Comments: TB-3-4/23/14 EB-3-4/23/14 Level IV @ Port 5  
0620 0630

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-4  
 SAMPLING DATE(S): 9-30-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING:  
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.06  
25.63°C 17.73°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): kw  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar						Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)						Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample	
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample					
5	1	✓	✓	✓	✓	✓	181.94	✓	181.11	✓	181.11	✓	181.94	21.5	443	8.13	6	6.78	139	0940	MW-4-5					
4	1	✓	✓	✓	✓	✓	129.66	✓	128.70	✓	128.70	✓	129.66	21.60	470	7.91	4	7.34	151	1020	MW-4-4					
3	1	✓	✓	✓	✓	✓	98.60	✓	98.36	✓	98.36	✓	98.60	20.0	484	8.03	4	7.07	161	1055	MW-4-3					
2	1	✓	✓	✓	✓	✓	63.20	✓	63.49	✓	63.49	✓	63.20	21.3	1053	7.78	60	6.01	176	1130	MW-4-2					
	2	✓	✓	✓	✓	✓	63.20	✓	63.49	✓	63.49	✓	63.20													
	3	✓	✓	✓	✓	✓	63.18	✓	63.49	✓	63.49	✓	63.18													
	4	✓	✓	✓	✓	✓	63.17	✓	63.47	✓	63.47	✓	63.17													
	5	✓	✓	✓	✓	✓	63.17	✓	63.47	✓	63.47	✓	63.17													
	6	✓	✓	✓	✓	✓	62.41	✓	63.47	✓	63.47	✓	62.41													
1	1	✓	✓	✓	✓	✓	23.32	✓	29.94	✓	29.92	✓	23.32	21.7	517	8.13	13	4.46	154	1320	MW-4-1					
	2	✓	✓	✓	✓	✓	23.32	✓	29.94	✓	29.89	✓	23.32													

Comments: MS/MSD @ Port 4 Level III @ Port 3

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-11  
 SAMPLING DATE(S): 4-21-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 176.14  
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.09  
18.61°C 20.66°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM5250Z  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
5	1	✓	✓	✓	✓	✓	218.07	✓	197.91	✓	197.90	✓	218.07	16.0	341	8.17	508	6.74	183	0730	MW-11-5
4	1	✓	✓	✓	✓	✓	168.37	✓	165.57	✓	165.49	✓	168.37	16.6	274	8.55	6	7.22	-8	0810	MW-11-4
3	1	✓	✓	✓	✓	✓	127.42	✓	123.28	✓	123.14	✓	127.42	17.2	408	8.36	0	5.12	69	0845	MW-11-3
2	1	✓	✓	✓	✓	✓	53.67	✓	53.58	✓	53.58	✓	53.67	17.8	485	8.27	3	4.55	91	0920	MW-11-2
	2	✓	✓	✓	✓	✓	51.10	✓	53.58	✓	53.49	✓	51.11	19.3	493	8.11	3	4.75	113	TK	
1	1	✓	✓	✓	✓	✓	14.19	✓	25.76	✓	25.39	✓	14.19	19.3	493	8.11	3	4.75	113	1000	MW-11-1
	2	✓	✓	✓	✓	✓	14.19	✓	25.78	✓	25.78	✓	14.19								

Comments: SB-1-4/21/14 EB-1-4/21/14 TB-1-4/21/14 MS/MSD @ Port 2  
0645 0650 0630

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-12  
 SAMPLING DATE(S): 7-29-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 107.51  
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.17  
22.34°C 17.64°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample	
5	1	✓	✓	✓	✓	✓	210.71	✓	167.71	✓	167.71	✓	210.41	19.0	441	8.20	7	7.29	27	0800	MW-12-5	
4	1	✓	✓	✓	✓	✓	161.63	✓	134.86	✓	134.86	✓	161.63	19.2	478	8.05	2	6.70	34	0840	<del>0743</del>	
3	1	✓	✓	✓	✓	✓	112.33	✓	89.16	✓	89.16	✓	112.33	19.4	433	8.20	2	7.07	22	0815	MW-12-4	
2	1	✓	✓	✓	✓	✓	77.41	✓	56.00	✓	56.00	✓	77.41	19.7	526	8.00	5	6.27	17	0945	MW-12-3	
1	1	✓	✓	✓	✓	✓	32.41	✓	19.82	✓	19.78	✓	32.41	19.8	470	8.17	14	5.47	80	1015	MW-12-2	
	2	✓	✓	✓	✓	✓	32.42	✓	19.86	✓	19.81	✓	32.42									MW-12-1

Comments: TB-7-4/29/14 0700 EB-7-4/29/14 0715 DUP-4-2014 @ Port 1 1030





WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-17  
 SAMPLING DATE(S): 4-28-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 205.77  
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.04  
15.16°C 18.33°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: E.M.S 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): tw  
 WEATHER: Clear

Port Number	Run Number	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)						Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters						Sample	
		Arm out / Land Probe	Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
5	1	✓	✓	✓	✓	✓	241.96	✓	208.36	✓	208.36	✓	241.96	13.8	447	8.08	31	8.23	192	0700	MW-17-5
4	1	✓	✓	✓	✓	✓	179.72	✓	148.96	✓	148.96	✓	179.72	13.9	521	8.05	9	9.81	192	0740	MW-17-4
	2	✓	✓	✓	✓	✓	179.70	✓	148.96	✓	148.96	✓	179.70								
3	1	✓	✓	✓	✓	✓	130.31	✓	106.27	✓	106.27	✓	130.31	15.9	622	8.17	4	8.86	182	0815	MW-17-3
	2	✓	✓	✓	✓	✓	130.28	✓	106.27	✓	106.27	✓	130.28								
	3	✓	✓	✓	✓	✓	130.28	✓	106.26	✓	106.26	✓	130.28								
	4	✓	✓	✓	✓	✓	130.27	✓	106.26	✓	106.26	✓	130.27								
	5	✓	✓	✓	✓	✓	130.10	✓	106.26	✓	106.26	✓	130.10								
	6	✓	✓	✓	✓	✓	129.61	✓	106.26	✓	106.26	✓	129.61								
4 <sup>2</sup>	1	✓	✓	✓	✓	✓	87.42	✓	67.12	✓	67.12	✓	87.42	18.4	449	8.15	13	5.72	117	1030	MW-17-2
1	1	✓	✓	✓	✓	✓	35.41	✓	17.60	✓	17.60	✓	35.41	19.4	453	7.89	3	6.77	102	1110	MW-17-1
	2	✓	✓	✓	✓	✓	34.92	✓	17.54	✓	17.54	✓	34.92								

Comments: TB-6-4/28/14 EB-6-4/28/14 MS/MSD @ Port 1  
0600 0620

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-18  
 SAMPLING DATE(S) 4-25-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 292.31'  
 ATM. PRESSURE (PSI): (Start) 14.01 (Finish) 14.01  
18.89" ~ 17.88"C

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. FMSZ502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S) KW  
 WEATHER Overcast

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
5	1	✓	✓	✓	✓	✓	188.66	✓	179.74	✓	179.74	✓	188.66	19.3	306	8.62	2	5.50	64	1020	MW-18-5
4	1	✓	✓	✓	✓	✓	137.00	✓	129.49	✓	129.49	✓	137.00	19.5	394	8.29	4	6.69	57	1100	MW-18-4
	2	✓	✓	✓	✓	✓	136.98	✓	129.49	✓	129.49	✓	136.98								
	3	✓	✓	✓	✓	✓	136.97	✓	129.49	✓	129.49	✓	136.97								
	4	✓	✓	✓	✓	✓	136.98	✓	129.49	✓	129.49	✓	136.98								
	5	✓	✓	✓	✓	✓	135.70	✓	129.49	✓	129.49	✓	135.70								
	6	✓	✓	✓	✓	✓	135.67	✓	129.49	✓	129.49	✓	135.67								
3	1	✓	✓	✓	✓	✓	75.76	✓	75.32	✓	75.32	✓	75.76	19.4	508	8.26	3	4.76	-13	1330	MW-18-3
	2	✓	✓	✓	✓	✓	75.76	✓	75.30	✓	75.28	✓	75.76								
2	1	✓	✓	✓	✓	✓	35.23	✓	35.83	✓	35.83	✓	35.23	19.0	479	8.22	5	8.15	95	1430	MW-18-2
1	1	✓	✓	✓	✓	✓	14.16	✓	14.15	✓	14.15	✓	14.16	Port is dry. No sample collected							

Comments: DUP-3-ZQ14 @ Port 3  
134.5

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-19  
 SAMPLING DATE(S): 4-22-14 4-28-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 136.77  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 19.08  
20.81°C 18.00°C

PROBE TYPE: Sampler 0-500 PSI  
 SERIAL NO.: EMS2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): Kwiff  
 WEATHER: Overcast

Port Number	Run Number	Probe to Top Collar					Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)						Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters						Sample	
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample					
2	1	✓	✓	✓	✓	✓	93.66	✓	64.79	✓	64.84	✓	93.67	18.9	1052	7.69	131	4.10	163	1140	MW-19-2					
	2	✓	✓	✓	✓	✓	93.62	✓	64.94	✓	64.94	✓	93.63													
	3	✓	✓	✓	✓	✓	93.62	✓	65.06	✓	65.08	✓	93.62													
	4	✓	✓	✓	✓	✓	93.61	✓	65.08	✓	65.09	✓	93.61													
	5	✓	✓	✓	✓	✓	93.60	✓	65.21	✓	65.18	✓	93.60													
	6	✓	✓	✓	✓	✓	93.10	✓	65.28	✓	65.28	✓	93.10													
1	1	✓	✓	✓	✓	✓	62.10	✓	36.83	✓	36.80	✓	62.10	20.7	485	8.10	31	4.87	160	1410	MW-19-1					
3	1	✓	✓	✓	✓	✓	127.11	✓	98.48	✓	98.48	✓	127.11	21.8	615	7.89	5	8.43	178	1445	MW-19-3					
5	1	✓	✓	✓	✓	✓	173.22	✓	136.29	✓	136.26	✓	173.22	22.0	633	8.10	3	6.16	150	1200	MW-19-5					
4	1	✓	✓	✓	✓	✓	149.68	✓	113.03	✓	113.03	✓	149.68	21.0	639	7.90	2	7.28	158	1240	MW-19-4					

Comments: TB-2-4/22/14 EB-2-4/22/14  
1100 1110



WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-21  
 SAMPLING DATE(S): 4-29-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 117.51  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.09  
27.11°C 18.42°C

PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): fwj  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
53	1	✓	✓	✓	✓	✓	129.21	✓	138.87	✓	138.87	✓	129.21	25.7	834	8.05	1	6.21	117	1215	MW-21-5
4	1	✓	✓	✓	✓	✓	102.28	✓	111.99	✓	112.01	✓	102.28	25.5	783	7.97	16	5.31	142	1300	MW-21-4
3	1	✓	✓	✓	✓	✓	72.10	✓	82.21	✓	82.21	✓	72.10	25.3	1199	7.94	2	4.38	161	1335	MW-21-3
2	1	✓	✓	✓	✓	✓	37.81	✓	48.26	✓	48.26	✓	37.81	24.8	1347	7.86	2	4.54	156	1405	MW-21-2
1	1	✓	✓	✓	✓	✓	14.17	✓	17.22	✓	17.13	✓	14.17	26.2	902	7.54	4	4.50	152	1440	MW-21-1
	2	✓	✓	✓	✓	✓	14.17	✓	17.23	✓	17.10	✓	14.17								

Comments: Level III @ Port 4

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-22  
 SAMPLING DATE(S): 4-24-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 160.62'  
 ATM. PRESSURE (PSI): (Start) 14.00 (Finish) 14.02  
17.49°C 19.14°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	201.73	✓	173.02	✓	173.02	✓	201.73	16.7	343	8.35	3	6.61	-36	0720	MW-22-5
4	1	✓	✓	✓	✓	✓	149.41	✓	123.68	✓	123.69	✓	149.39	16.5	383	8.03	3	8.29	71	0800	MW-22-4
3	1	✓	✓	✓	✓	✓	115.49	✓	94.41	✓	94.41	✓	115.49	16.8	534	8.03	1	7.22	88	0840	MW-22-3
2	1	✓	✓	✓	✓	✓	89.46	✓	68.19	✓	68.19	✓	89.46	17.0	635	8.12	2	6.99	111	0915	MW-22-2
1	1	✓	✓	✓	✓	✓	52.72	✓	31.96	✓	31.96	✓	52.72	17.1	1183	<del>8.09</del> 7.77	9	8.09	133	0950	MW-22-1
	2	✓	✓	✓	✓	✓	52.72	✓	31.96	✓	31.96	✓	52.72								

Comments: TB-4-4/24/14 0600 SB-2-4/24/14 0630 EB-2-4-4/24/14 0640 Level IV @ Ports 5+2 MS/MSD @ Port 1



WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-24  
 SAMPLING DATE(S): 4-24-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 203.40'  
 ATM. PRESSURE (PSI): (Start) 14.03 (Finish) 14.01  
19.96°C 23.02°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM57502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (0 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample
5	1	✓	✓	✓	✓	✓	221.54	✓	195.06	✓	195.06	✓	221.54	21.0	399	8.33	2	7.59	131	1045	MW-24-5
4	1	✓	✓	✓	✓	✓	167.81	✓	146.44	✓	146.44	✓	167.81	21.2	240	9.20	3	5.45	-62	1130	MW-24-4
3	1	✓	✓	✓	✓	✓	116.21	✓	99.77	✓	99.77	✓	116.21	21.3	455	8.36	2	5.37	-12	1205	MW-24-3
2	1	✓	✓	✓	✓	✓	89.61	✓	73.31	✓	73.31	✓	89.61	20.9	543	8.10	2	5.83	14	1240	MW-24-2
	2	✓	✓	✓	✓	✓	89.62	✓	73.34	✓	73.34	✓	89.61								
1	1	✓	✓	✓	✓	✓	48.44	✓	34.99	✓	34.99	✓	48.44	21.8	716	7.93	4	5.38	52	1345	MW-24-1
	2	✓	✓	✓	✓	✓	48.21	✓	34.97	✓	34.97	✓	48.21								
	3	✓	✓	✓	✓	✓	48.20	✓	34.96	✓	34.96	✓	48.20								

Comments: DUP-2-2014 @ Port 2  
1300







## **ATTACHMENT 5: WATER LEVEL MEASUREMENTS**

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This attachment contains water level measurements for the JPL relatively shallow standpipe monitoring wells (MW-1, MW-5 through MW-10, MW-13, MW-15, and MW-16) and the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-26) obtained during the 2<sup>nd</sup> Quarter 2014. Water level measurements were recorded before the sampling event on April 18, 2014 for the relatively shallow standpipe monitoring wells and for the Westbay™ multiport wells. Water level measurements were recorded after the sampling event on May 2, 2014 for the relatively shallow standpipe monitoring wells and the Westbay™ multiport wells. Water levels for the shallow wells were measured using a Solinst™ water level meter. In the deep multiport wells, the hydraulic head at each sampling port was measured with a Westbay™ MOSDAX sampling probe. Water level measurements were conducted by Blaine Tech Services, Inc.

## WELL GAUGING DATA

Project # 140418-AW1 Date 4-18-14 Client Tidelwater

Site JPL, Pasadena

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	0951	4					27.71	Pump		
MW-5	0714	4					101.09			
MW-6	0911	4					208.37			
MW-7	0800	4					242.11			
MW-8	0831	4					168.11			
MW-9	0956	4					19.86			
MW-10	0706	4					117.03			
MW-13	0604	4					212.13			
MW-15	0838	4					32.43			
MW-16	0616	4					264.03	↓	↓	

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1100.34  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.03 (finish) 14.06  
 Temp(°C) 17.01 18.86

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (°C)				
5	653	651	221.14	231.77	221.14	19.57	502.33	150.67	653	10 11
4	558	556	179.89	190.89	179.89	22.44	408.02	149.98	558	10 12
3	346	345	87.63	99.29	87.63	20.70	196.69	149.31	346	10 13
2	252	251	46.77	60.83	46.77	20.40	107.97	144.03	252	10 14
1	172	171	14.20	29.10	14.20	19.68	34.77	137.23	172	10 15

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-4  
 DATE: 4-30-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1082.84'  
 WEATHER: Clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM52502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.12 (finish) 25.63°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (oC)				
5	513	511	181.94	181.11	181.94	20.69	385.25	127.75	513	0929
4	392	390	129.66	128.70	129.66	20.42	264.34	127.66	392	0932
3	322	321	98.60	98.36	98.60	20.76	194.34	127.66	322	0933
2	240	240	63.20	63.49	63.20	19.16	113.90	126.10	240	0934
1	150	150	23.32	23.94	23.32	18.76	36.50	113.50	150	0935

Comments: Collar detect is 1.5' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1139.30  
 WEATHER: Rainy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.02  
 Temp: 15.67°C 17.90°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (oC)				
5	639	637	213.14	199.34	213.14	18.10	427.56	211.44	639	0740
4	524	522	163.61	166.40	163.61	19.19	351.56	172.44	524	0741
3	429	427	122.81	123.72	122.81	19.28	253.10	175.90	429	0743
2	259	258	49.21	53.61	49.21	18.81	91.36	167.64	259	0745
1	149	149	14.12	25.68	14.12	18.28	26.92	122.08	149	0746

Comments: Collar defect is 6" above sample port





**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1173.47  
 WEATHER: Rainy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.03  
 Temp: 16.54°C 18.94°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (oC)				
5	540	539	171.64	165.44	171.64	18.18	349.44	190.56	540	0853
4	456	455	134.99	129.06	134.99	19.04	265.40	190.60	456	0854
3	382	381	102.89	96.98	102.89	19.31	191.39	190.61	382	0855
2	277	276	57.10	51.24	57.10	19.27	85.87	191.13	277	0856
1	207	206	26.62	20.91	26.62	19.04	15.90	191.10	207	0857

Comments: Cellar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-17  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1191.21  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.04  
 Temp (°C) 17.56 16.60

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	726	725	240.29	211.57	240.29	18.12	455.77	270.23	726	1030
4	582	581	177.96	152.43	177.96	18.72	319.33	262.67	582	1032
3	468	467	128.49	106.84	128.49	18.47	214.16	253.84	468	1033
2	370	369	86.01	68.93	86.01	17.82	126.70	243.30	370	1034
1	250	249	33.81	17.58	33.81	17.08	8.24	241.76	250	1035

Comments: Collar defect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1225.41  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.00 (finish) 14.03  
 Temp (°C): 16.69 17.32

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	684	681	184.94	181.74	184.94	18.29	386.98	297.02	684	1051
4	564	562	132.82	130.79	132.82	19.23	269.43	294.57	564	1052
3	424	422	72.01	77.31	72.01	19.11	146.06	277.94	424	1053
2	330	328	31.08	36.03	31.08	18.36	50.82	279.18	330	1054
1	270	268	14.17	14.15	14.17	17.78	0.35	269.65	270	1055

Comments: Collar at 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-19  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING 1142.94  
 WEATHER: Cloudy

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2508  
 PROJECT JPL, Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.03  
 Temp(°C): 16.76 17.61

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	498	495	171.71	137.59	171.71	17.60	285.10	212.90	498	0936
4	444	441	148.21	114.27	148.21	17.91	231.30	212.70	444	0937
92-3	<del>385</del> 314	<del>391</del> 311	126.58	100.56	126.58	18.48	199.67	192.33	392	0938
2	314	311	91.87	66.84	91.87	18.63	121.88	192.12	314	0939
1	242	239	60.59	37.39	60.59	18.46	53.94	188.06	242	0940

Comments: Cellar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-20  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1165.05  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.04  
 Temp(°C) 17.38 17.86

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	900	897	321.06	309.38	321.06	19.77	681.42	218.58	900	1112
4	700	697	234.40	215.41	234.40	21.28	464.63	235.37	700	1114
3	562	560	174.64	154.00	174.64	21.12	322.96	239.04	562	1115
2	392	390	100.83	84.86	100.83	20.18	163.45	228.55	392	1117
1	230	228	30.49	14.34	30.49	18.66	0.76	229.24	230	1118

Comments: Collar detect is 6" above the sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: ~~757R~~ 1059.10  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.03 (finish) 14.09  
 Temp (°C) 21.24 19.43

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	372	372	125.69	139.78	125.69	20.85	290.11	81.89	372	12 27
4	310	310	98.71	112.92	98.71	20.66	228.14	81.86	310	12 28
3	240	241	68.74	83.06	68.74	20.27	159.25	80.75	240	12 29
2	161	162	34.31	48.92	34.31	19.88	80.49	80.51	161	12 30
1	90	90	14.17	17.51	14.17	19.64	8.03	81.97	90	12 31

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22  
 DATE: 4-24-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1176.98  
 WEATHER: Clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.00 (finish) 14.02  
 Temp (°C) 17.49°C 19.19°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	588	585	201.73	173.02	201.73	21.36	366.86	221.14	588	0700
4	467	464	144.33	123.70	144.33	21.46	253.08	213.92	467	0703
3	389	386	115.61	94.41	115.61	21.72	185.51	203.49	389	0704
2	329	327	89.61	68.21	89.61	21.34	125.06	203.94	329	0706
1	245	244	53.40	31.97	53.40	20.39	41.46	203.54	245	0708

Comments: Collar detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-23  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1108.84  
 WEATHER: Rainy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 13.97 (finish) 14.04  
 Temp: 19.84°C 20.24°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
<del>2024</del>	542	540	202.47	183.91	202.47	20.84	392.05	149.95	542	0651
4	445	443	106.41	141.71	106.41	21.38	294.70	150.30	445	0653
3	319	318	106.01	91.44	106.01	21.23	178.72	140.28	319	0654
2	254	253	77.64	63.31	77.64	20.99	113.83	140.17	254	0655
1	174	173	42.91	30.12	42.91	20.56	37.26	136.74	174	0656

Comments: Collar defect is 1' above sample port



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-24  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1200.94  
 WEATHER: Rainy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 13.94 (finish) 14.02  
 Temp: 16.08°C 21.51

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (oC)				
5	678	676	220.01	196.42	220.01	19.09	475.40	202.60	678	0815
4	554	552	166.23	147.44	166.23	20.04	351.33	202.67	554	0816
3	435	434	114.62	100.18	114.62	20.47	232.27	202.73	435	0817
2	373	372	87.81	73.69	87.81	20.71	170.42	202.58	373	0818
1	279	278	47.11	35.10	47.11	19.98	76.52	202.48	279	0819

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-25  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 934.53  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.12 (finish) 14.16  
 Temp(°C) 18.02 20.03

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (°C)				
5	713	709	211.79	220.73	211.79	19.88	476.65	236.35	713	1147
4	633	629	177.32	186.92	177.32	20.47	398.65	234.35	633	1148
3	503	500	121.11	131.34	121.11	20.57	270.43	232.57	503	1149
2	423	420	86.44	96.78	86.44	20.46	190.70	232.30	423	1150
1	358	355	58.01	68.48	58.01	20.31	125.41	232.59	358	1151

Comments: Collar detect is 2' below sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26  
 DATE: 4-18-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1059.08  
 WEATHER: Cloudy

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.09  
 Temp(°C) 20.67 19.66

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
2	215	214	79.36	59.92	79.36	20.27	105.71	109.29	215	1208
1	135	134	44.42	24.58	44.42	20.00	<del>124.81</del> 24.18	110.82	135	1209

Comments: collar defect is 2' below sample port

## WELL GAUGING DATA

Project # 1402 140418-061 Date 9/2/14 Client TideWater

Site Jet Propulsion Lab, Pasadena

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-13	0727	4					212.73	Pump	TOC	
MW-1	0735	4					28.10			
MW-5	0905 <del>0844</del>	4 <del>4</del>				NK	102.84 <del>32.68</del>			
MW-6	0802	4					208.54			
MW-7	0820	4					242.61			
MW-8	0725	4					168.81			
MW-9	0730	4					19.95			
MW-10	0857	4					118.01			
MW-15	0844	4					32.68			
MW-18	0832	4					264.35	↓	↓	

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1100.34  
 WEATHER: clear

PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.12 (finish) 14.12  
 Temp(°C) 23.03 19.61

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	653	651	221.01	229.01	221.01	22.00	495.75	157.25	653	0847
4	558	556	179.82	188.06	179.82	22.28	401.28	156.72	558	0848
3	346	344	87.56	96.52	87.56	21.98	190.10	155.90	346	0849
2	252	251	46.66	57.94	46.66	21.44	101.09	150.91	252	0850
1	172	171	14.21	27.86	14.21	20.56	31.70	140.30	172	0851

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1139.30  
 WEATHER: Clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.10  
 Temp (°C): 18.91 17.97

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	639	636	213.91	198.46	213.91	19.28	425.34	213.66	639	0651
4	524	521	164.47	165.71	164.47	20.04	349.79	174.21	524	0652
3	429	426	123.61	123.36	123.61	19.87	252.09	176.91	429	0654
2	259	256	50.01	53.37	50.01	19.41	90.62	168.38	259	0655
1	149	148	14.20	25.79	14.20	18.83	26.99	122.01	149	0656

Comments: collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1173.47  
 WEATHER: clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): Aw  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.09  
 Temp(°C): 21.45 19.78

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mh <sup>2</sup> O Inside Casing	Trans. Temp. (°C)				
5	540	539	171.33	165.26	171.33	21.01	348.75	191.25	540	0741
4	456	455	134.79	128.94	134.79	21.14	264.96	191.04	456	0742
3	382	381	102.69	96.84	102.69	20.92	190.90	191.10	382	0743
2	277	276	57.01	51.14	57.01	20.53	85.47	191.53	277	0744
1	207	206	26.41	20.91	26.41	20.14	15.73	191.27	207	0745

Comments: collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-17  
 DATE: 5-2-14  
 LOCATION: SPL  
 ELEV. TOP OF WESTBAY CASING: 1191.21  
 WEATHER: Clear

PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL ~~ATK~~ Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.08  
 Temp(°C) 23.99 17.78

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	726	724	240.10	209.10	240.10	21.55	449.89	276.11	726	0920
4	582	580	178.02	148.21	178.02	21.29	309.41	272.59	582	0921
3	468	467	128.41	104.64	128.41	20.54	208.90	259.10	468	0922
2	370	369	86.01	66.48	86.01	19.76	120.86	249.14	370	0923
1	250	249	33.70	17.55	33.70	18.55	7.98	242.02	250	0924

Comments: Collar detect is 6" above sample port



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18  
 DATE: 5-2-14  
 LOCATION: JPL 1225.41 TR  
 ELEV. TOP OF WESTBAY CASING: 1225.41  
 WEATHER: Sunny

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.08 (finish) 14.07  
 Temp(°C) 20.46 18.11

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	684	681	185.24	180.34	185.24	20.37	383.56	300.44	684	0937
4	564	562	133.23	129.72	133.23	20.71	266.78	297.22	564	0939
3	424	422	72.30	74.84	72.30	20.31	140.17	283.83	424	0940
2	330	329	31.32	35.44	31.32	19.50	49.28	280.72	330	0941
1	270	269	14.20	14.22	14.20	18.76	0.32	269.68	270	0942

Comments: Collar detect 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-19  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1142.94  
 WEATHER: Clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.10  
 Temp(°C) 25.06 18.32

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	498	495	171.62	136.15	171.62	22.58	281.57	216.43	498	0819
4	444	441	148.17	112.87	148.17	21.90	227.86	216.14	444	0820
3	<del>309.75</del> 309	389	125.60	99.83	125.60	20.44	197.78	194.22	392	0822
2	314	311	91.72	66.04	91.72	21.12	119.83	194.17	314	0823
1	242	240	60.47	36.82	60.47	19.64	52.42	189.58	242	0824

Comments: Collar defect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-20  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1165.05  
 WEATHER: Sunny

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.08 (finish) 14.10  
 Temp(°C): 22.66 18.22

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	900	897	320.98	308.99	320.98	21.91	680.36	219.64	900	1003
4	700	697	234.41	213.18	234.41	22.38	459.32	240.68	700	1005
3	562	559	174.43	151.23	174.43	21.96	316.41	245.59	562	1006
2	392	390	100.82	84.21	100.82	20.77	161.79	230.21	392	1007
1	230	228	30.48	14.18	30.48	19.07	0.23	229.77	230	1008

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1059.10  
 WEATHER: Sunny

PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.14  
 Temp(°C) 30.84 21.18

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (°C)				
5	372	372	125.61	139.27	125.61	26.93	288.77	83.23	372	1133
4	310	310	98.56	112.40	98.56	25.41	226.78	83.22	310	1134
3	240	241	68.51	82.54	68.51	23.47	157.89	82.11	240	1135
2	161	162	34.13	48.46	34.13	22.37	79.27	81.73	161	1136
1	90	90	14.16	17.28	14.16	21.57	7.34	82.66	90	1137

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1176.98  
 WEATHER: clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): Aw  
 ATM. PRESSURE (Patm): (start) 14.06 (finish) 14.06  
 Temp 23.86°C 20.87°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	588	586	200.06	173.60	200.06	22.68	368.06	219.94	588	0610
4	467	466	147.68	124.09	147.68	22.57	253.84	213.16	467	0611
3	389	388	113.89	94.42	113.89	22.33	185.39	203.61	389	0612
2	329	328	87.88	68.22	87.88	22.01	124.95	204.05	329	0613
1	245	243	50.94	31.91	50.94	21.45	41.18	203.82	245	0614

Comments: collar defect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-23  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1108.84  
 WEATHER: clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.11  
19.42 20.18

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	542	540	202.26	183.47	202.26	20.02	390.76	151.24	542	0633
4	445	443	160.41	141.39	160.41	20.86	293.68	151.32 <sup>←</sup>	445	0634
3	319	317	105.79	91.22	105.79	20.87	177.94	141.06	319	0635
2	254	252	77.61	63.08	77.61	20.71	113.02	140.98	254	0636
1	174	172	42.86	29.88	42.86	20.42	36.43	137.57	174	0637

Comments: collar detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-24  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING: 1200.94  
 WEATHER: clear

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.06  
 Temp(°C) 17.79 21.71

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (°C)				
5	678	675	219.84	195.90	219.84	19.89	419.55	258.45	678	0717
4	554	551	166.10	147.05	166.10	20.65	306.85	247.15	554	0718
3	435	432	114.58	99.90	114.58	20.91	198.08	236.92	435	0719
2	373	370	87.69	73.42	87.69	21.06	136.99	236.01	373	0720
1	279	276	46.96	34.89	46.96	21.25	48.10	230.90	279	0721

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-25  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 934.53  
 WEATHER: Sunny

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.20 (finish) 14.21  
 Temp(°C) 25.43 20.93

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307$ ft/psi	Depth to Water Outside Port (ft) DTW = Dp - P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sub>2</sub> O Inside Casing	Trans. Temp. (°C)				
5	713	711	211.63	220.84	211.63	23.46	476.72	236.28	713	1053
4	633	631	177.07	187.02	177.07	23.26	398.70	234.30	633	1054
3	503	502	121.04	131.44	121.04	22.60	270.47	232.53	503	1055
2	423	422	86.19	96.89	86.19	22.08	190.77	232.23	423	1056
1	358	357	57.96	68.61	57.96	21.60	125.52	232.48	358	1057

Comments: Collar defect is 2' below sample port



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26  
 DATE: 5-2-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: 1059.08  
 WEATHER: Sunny

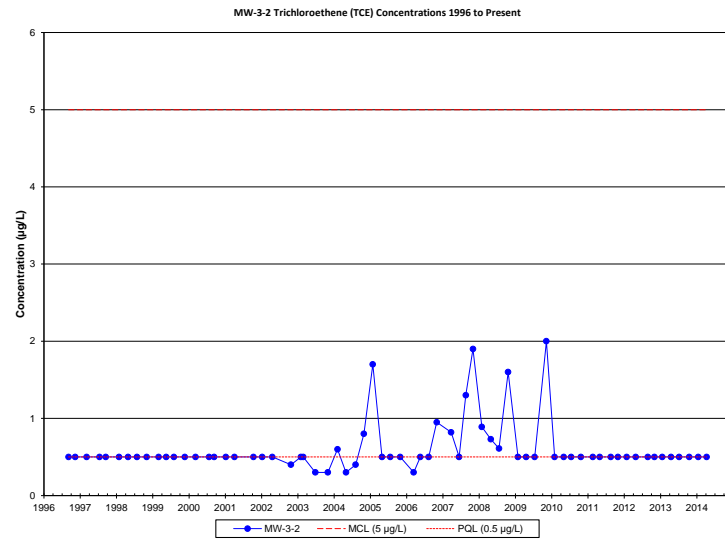
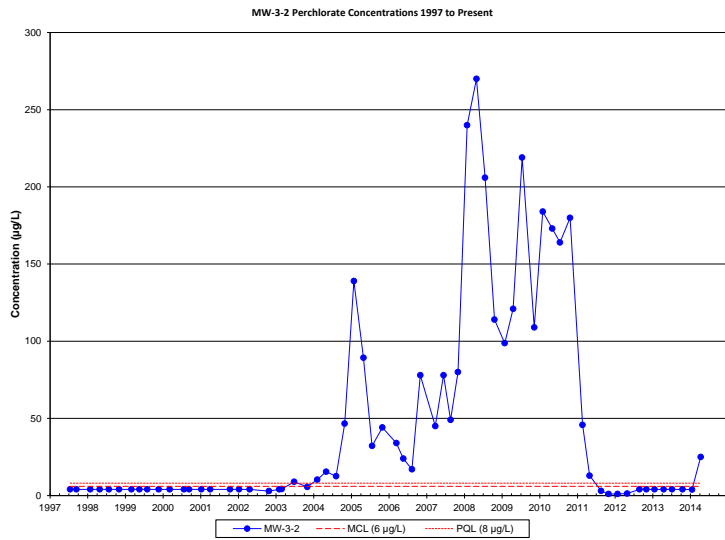
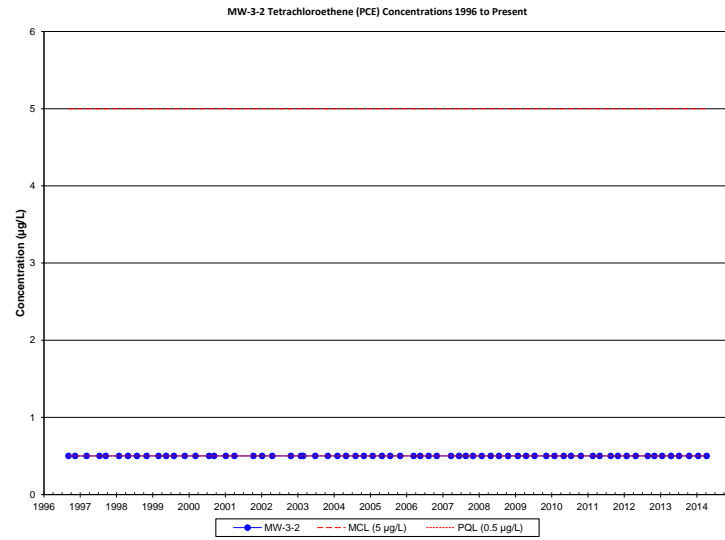
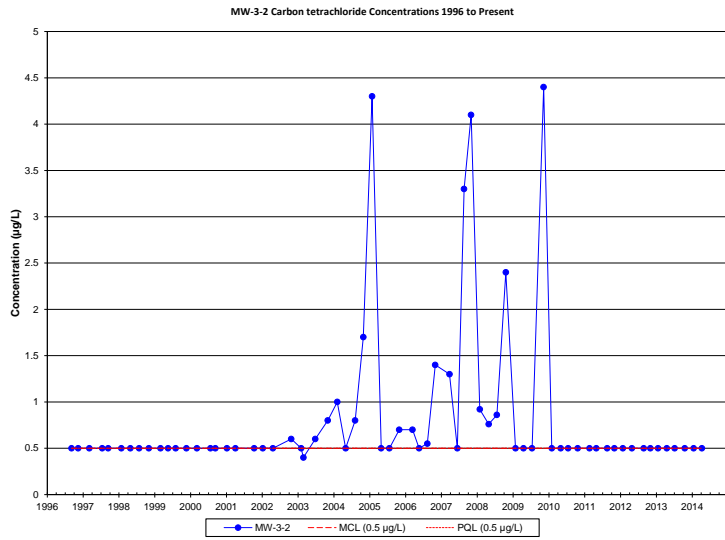
PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.12 (finish) 14.12  
 Temp °C: 27.20 22.71

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm <sup>2</sup> Outside Casing P2	mH <sup>2</sup> O Inside Casing	Trans. Temp. (oC)				
2	215	213	79.20	59.58	79.20	25.57	104.88	110.12	215	1032
1	135	133	44.41	24.66	44.41	23.99	24.32	110.68	135	1033

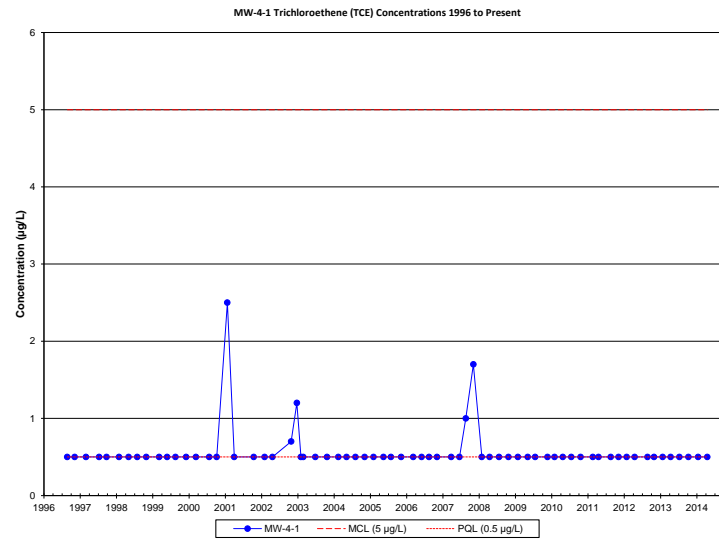
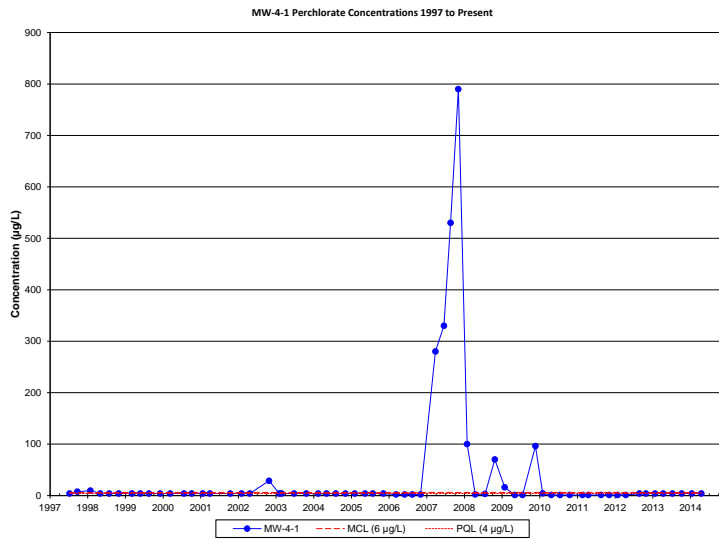
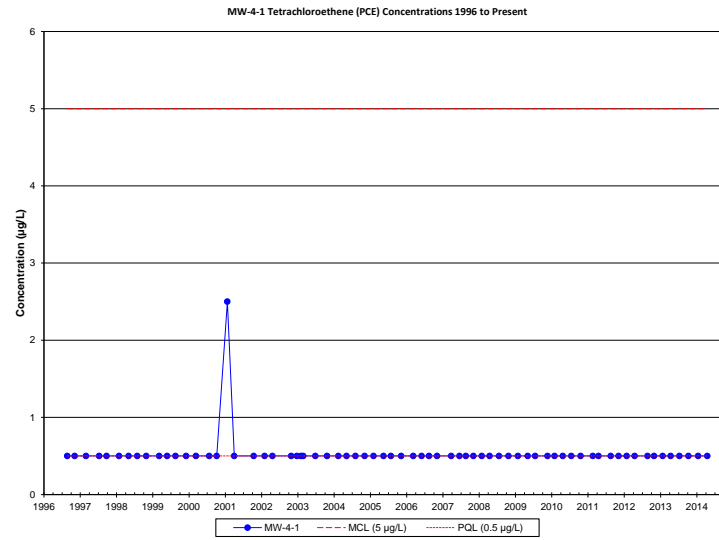
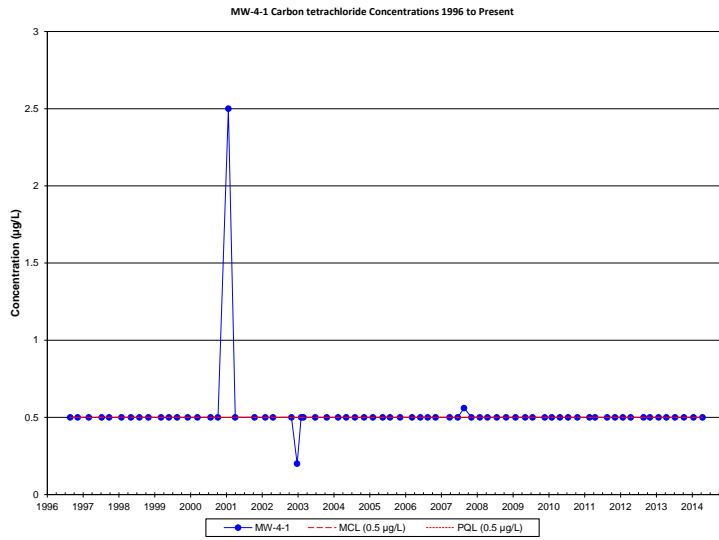
Comments: collar detect is 2' below sample port

## **ATTACHMENT 6: TIME SERIES PLOTS**

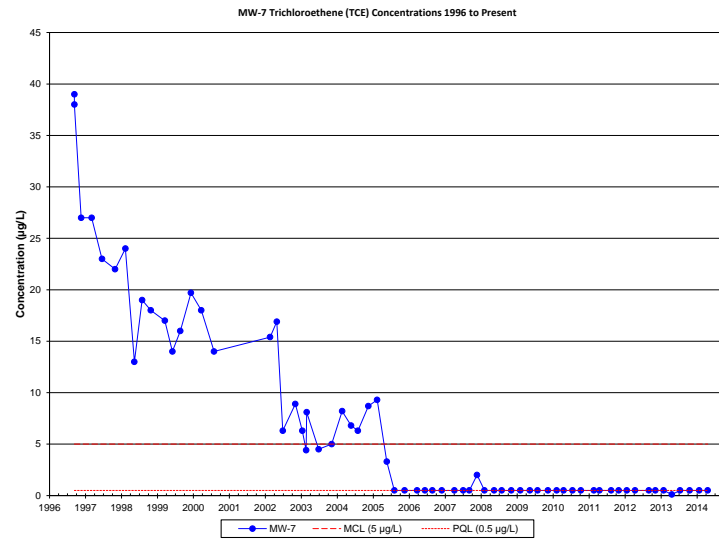
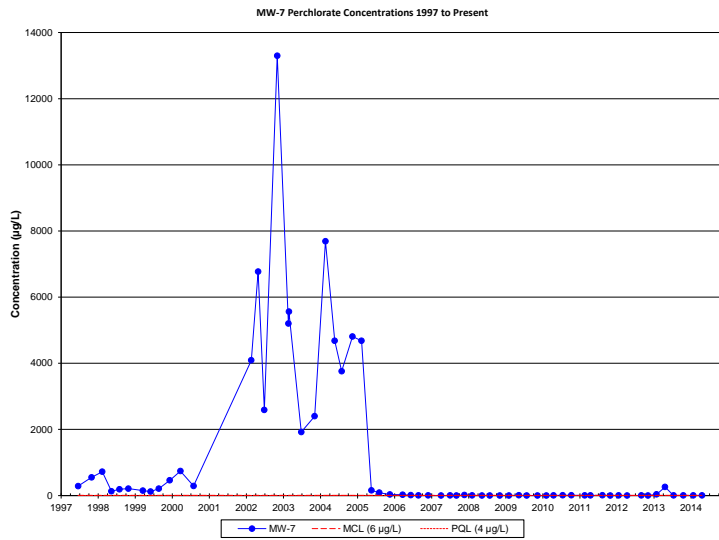
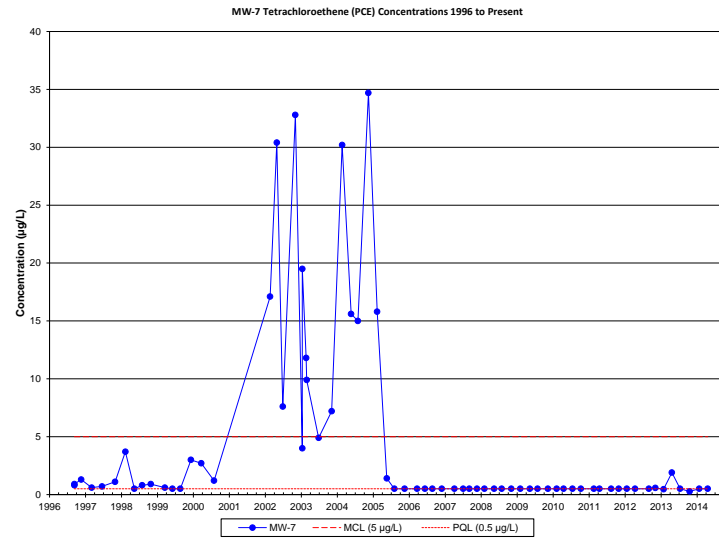
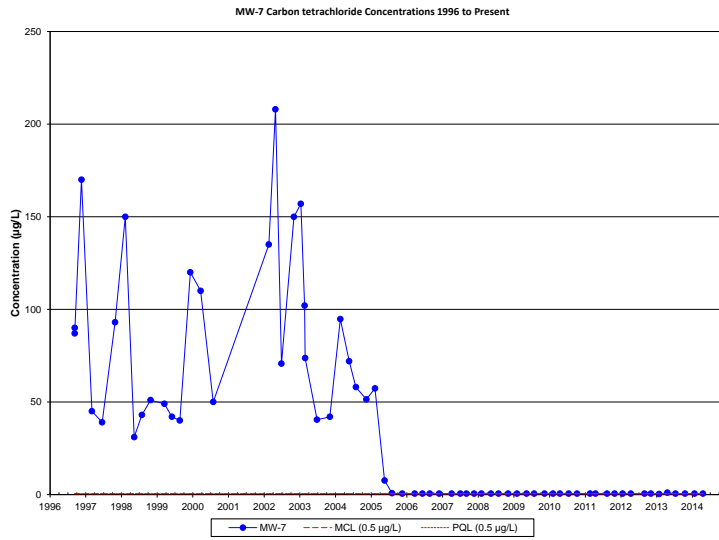
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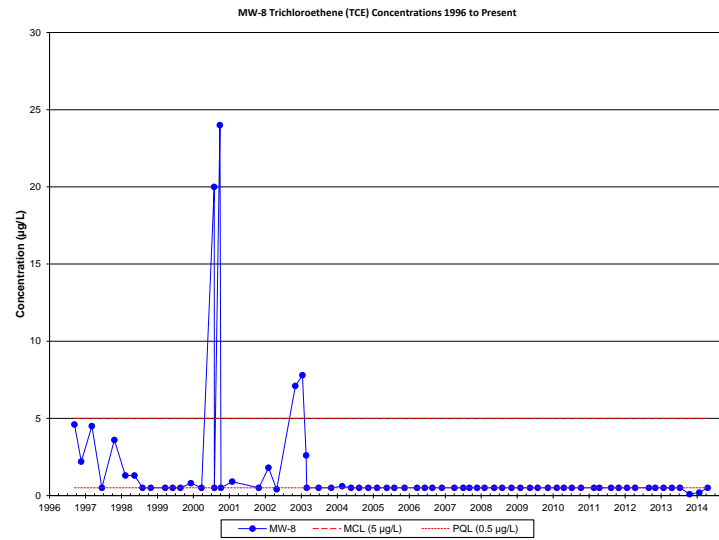
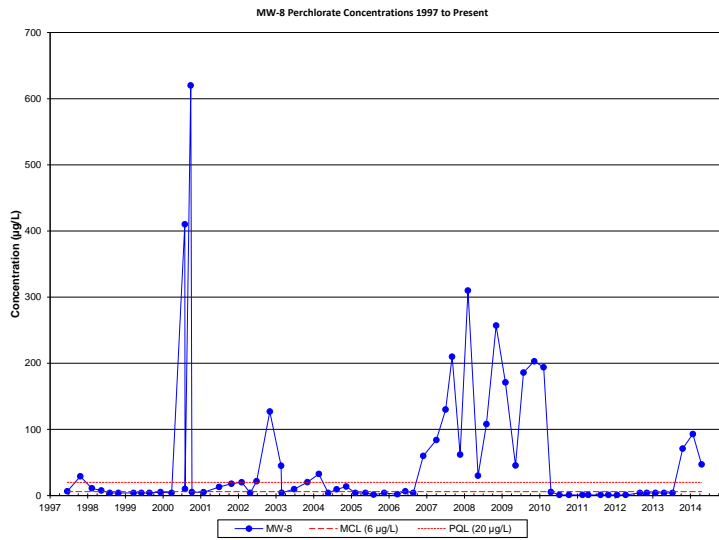
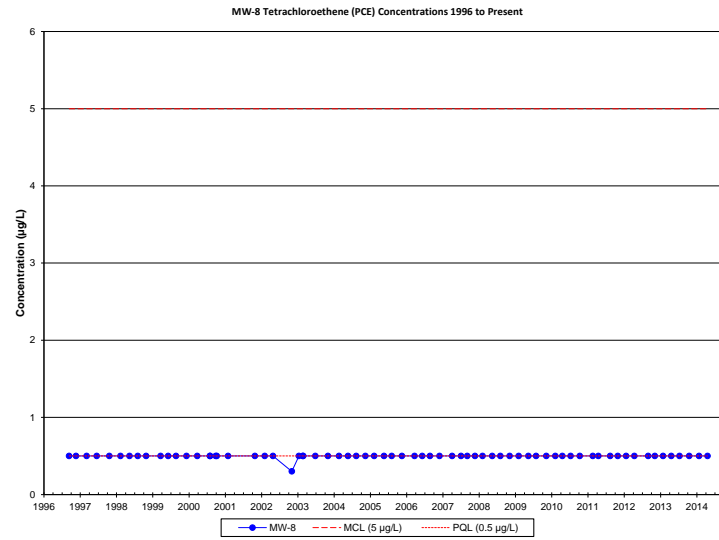
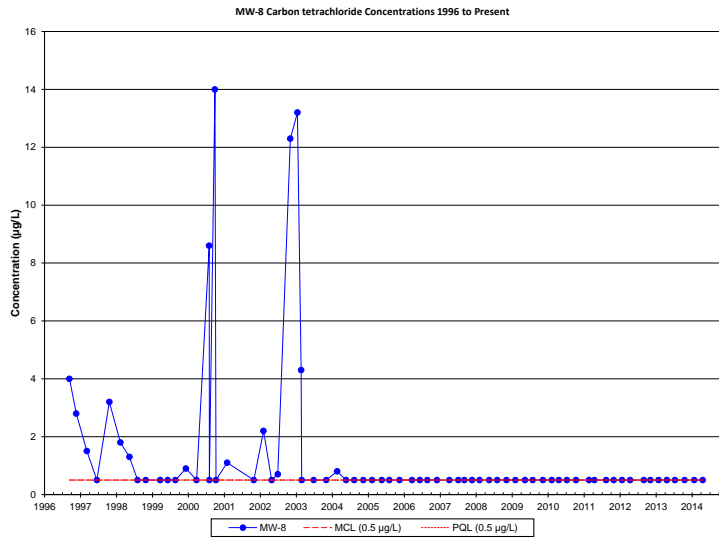
VOCs and Perchlorate Time Series Plots for MW-3-2



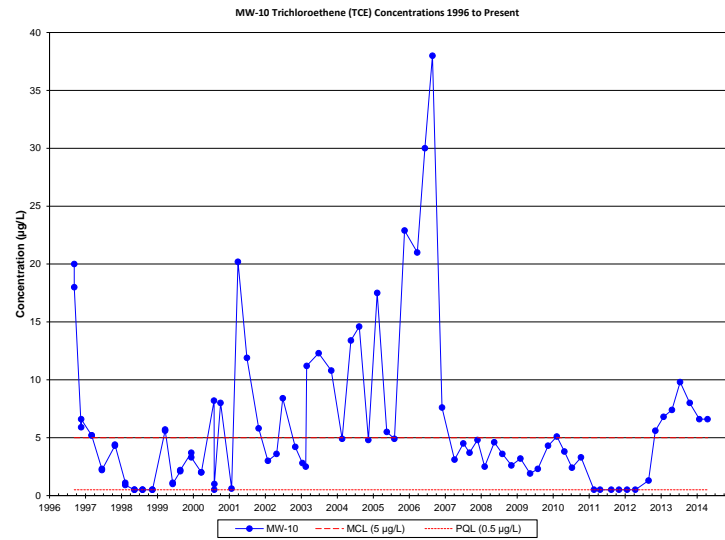
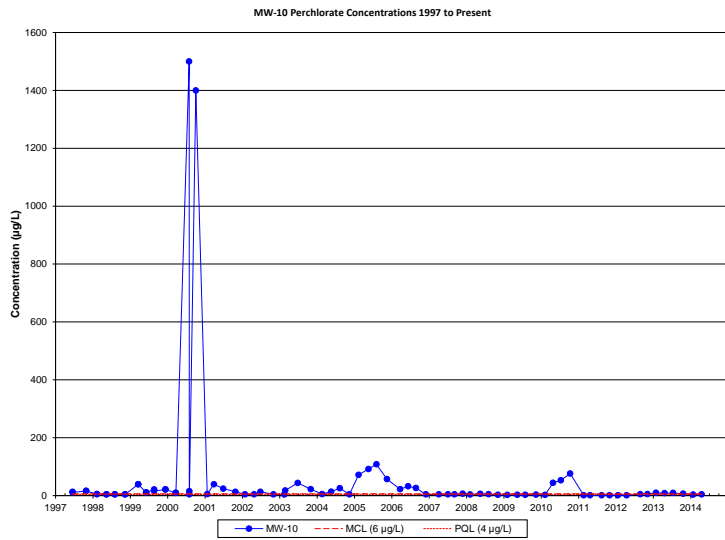
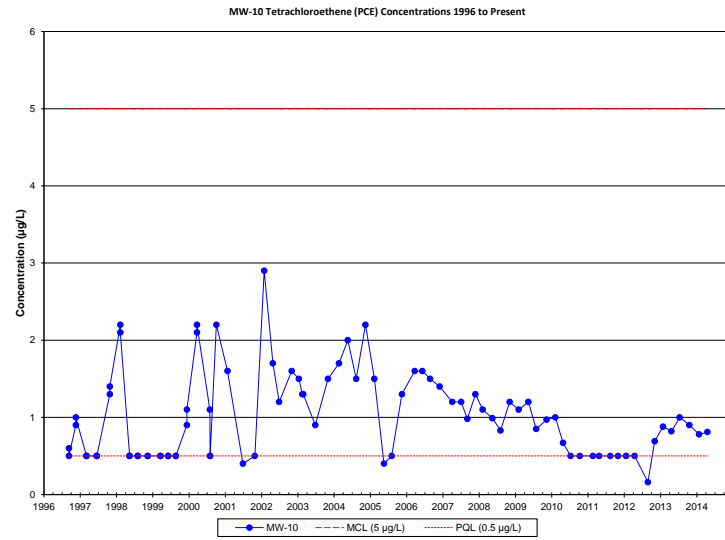
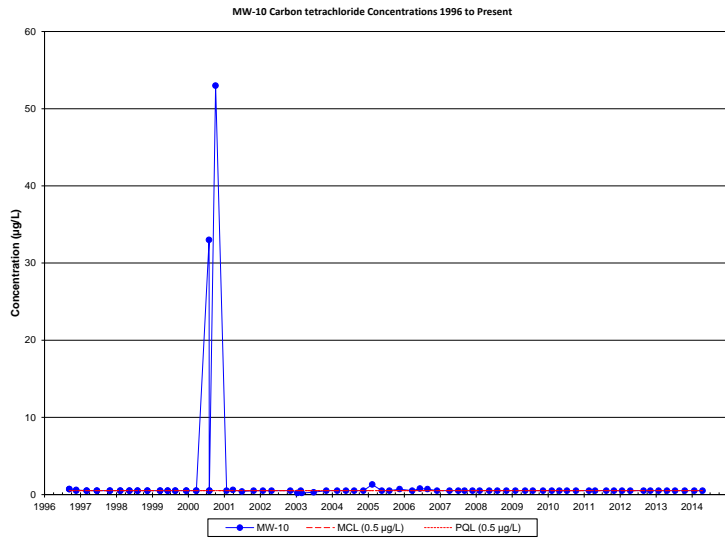
VOCs and Perchlorate Time Series Plots for MW-4-1



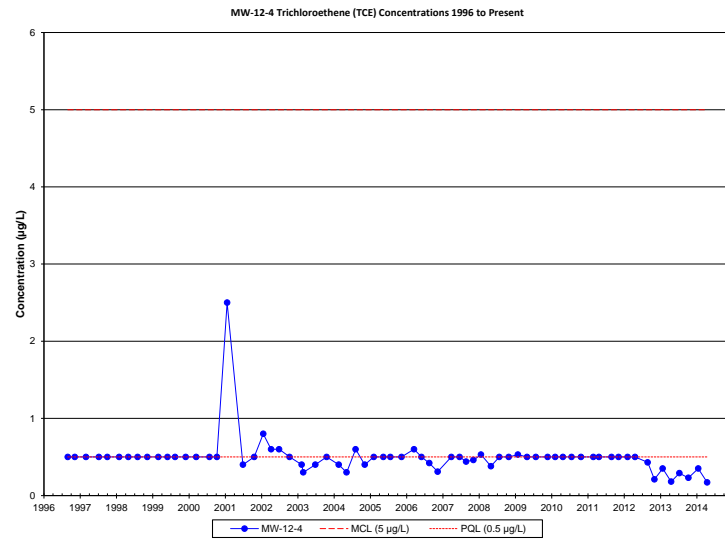
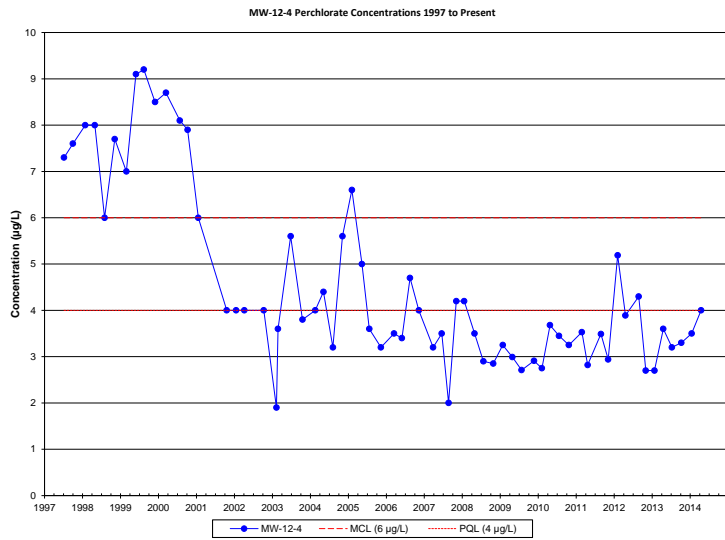
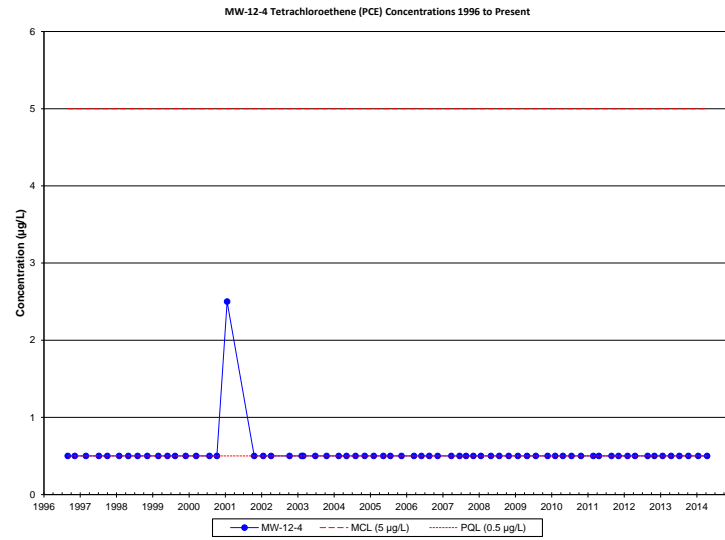
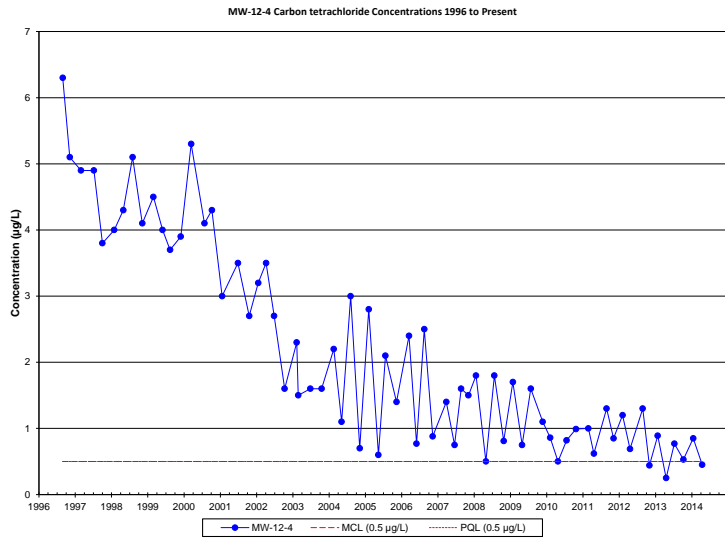
**VOCs and Perchlorate Time Series Plots for MW-7**



**VOCs and Perchlorate Time Series Plots for MW-8**

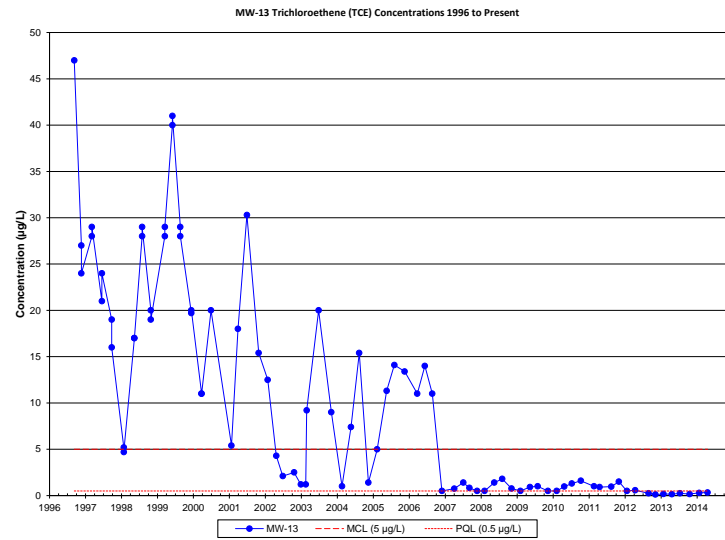
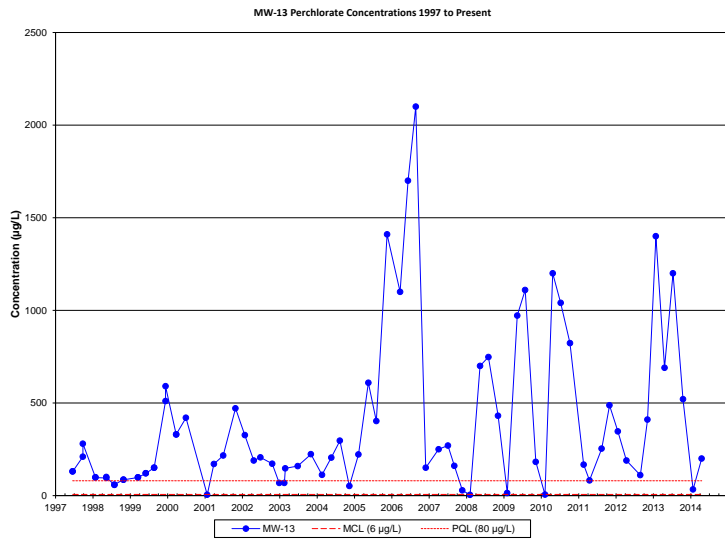
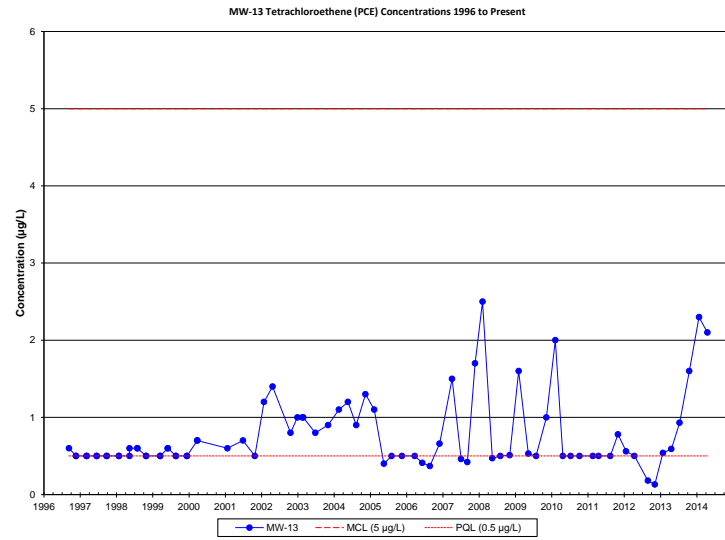
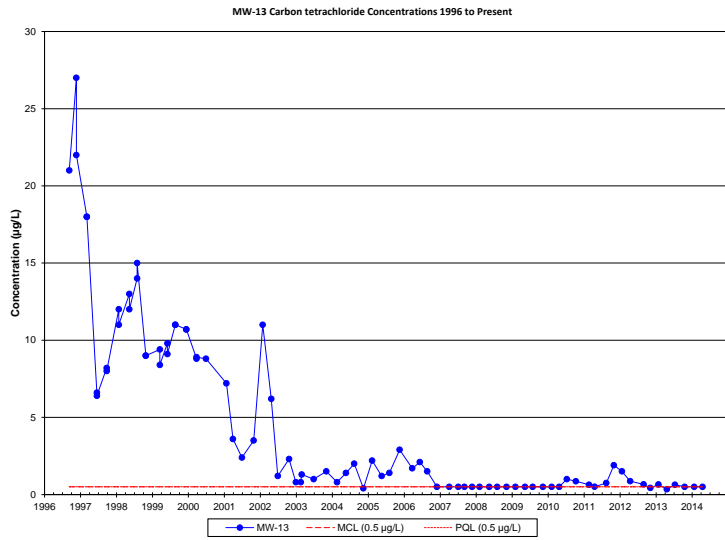


**VOCs and Perchlorate Time Series Plots for MW-10**

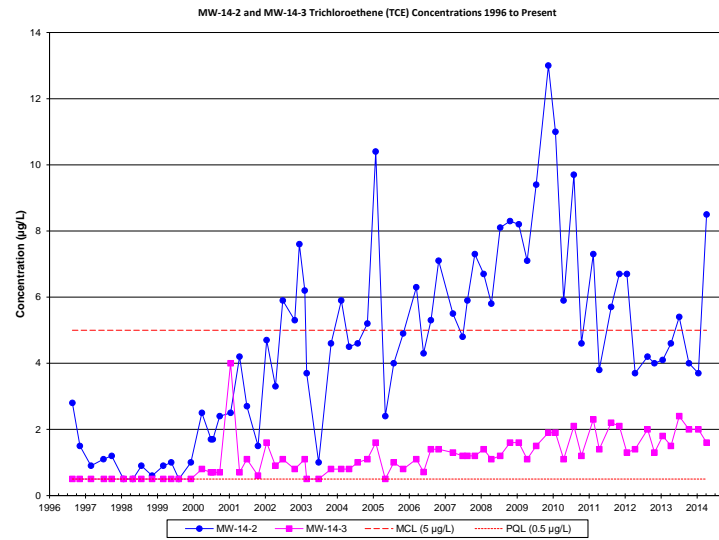
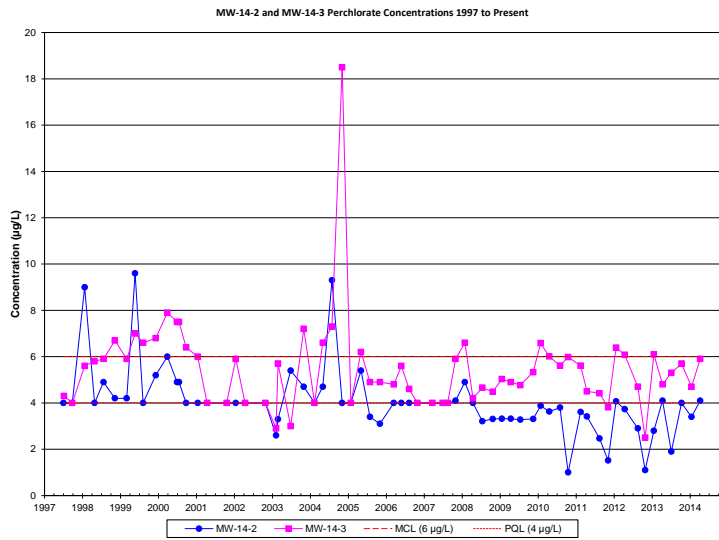
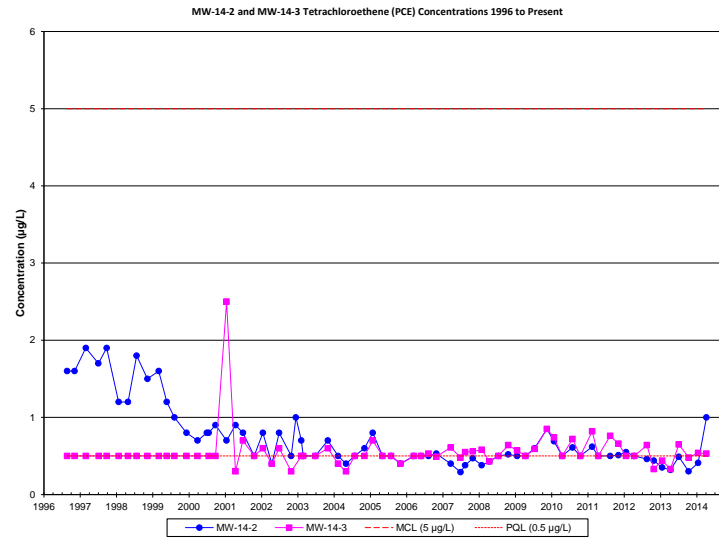
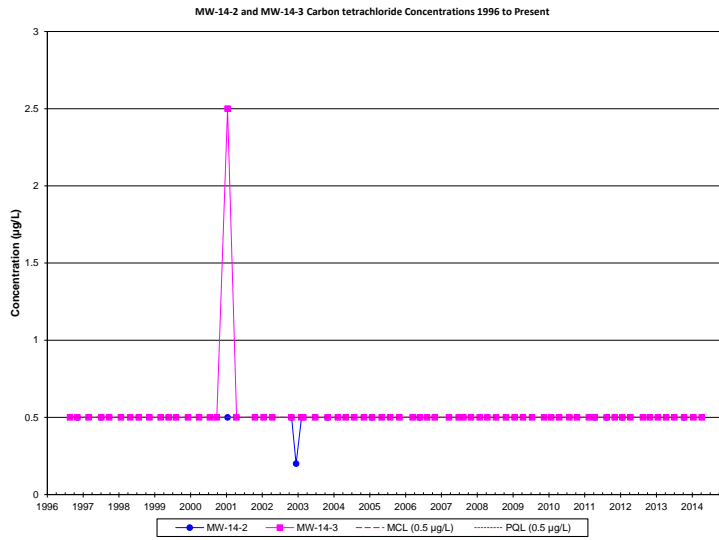


VOCs and Perchlorate Time Series Plots for MW-12-4

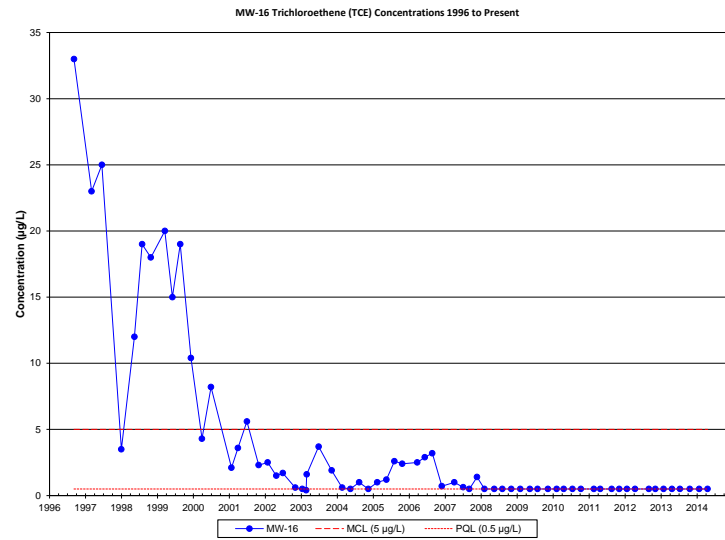
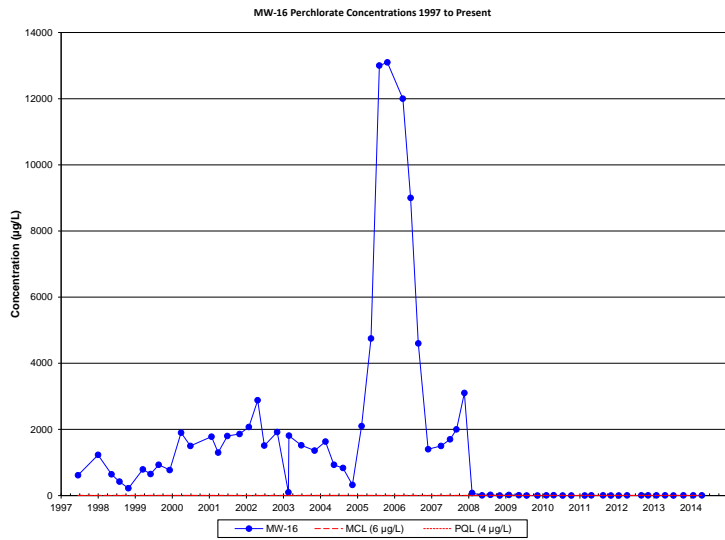
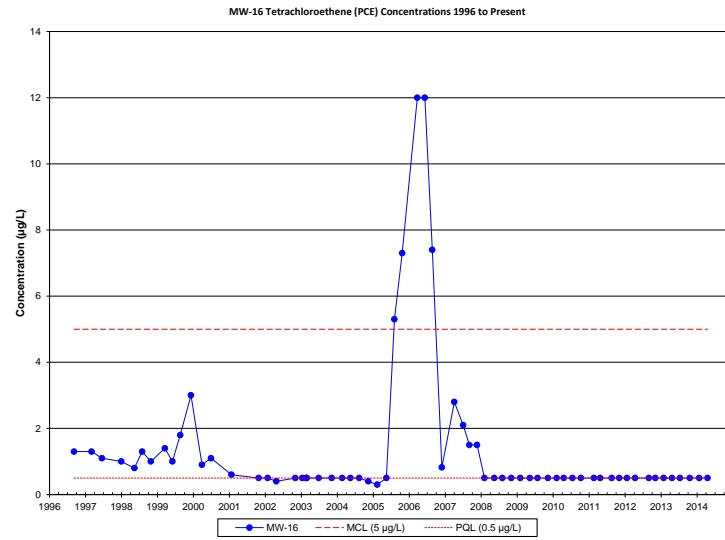
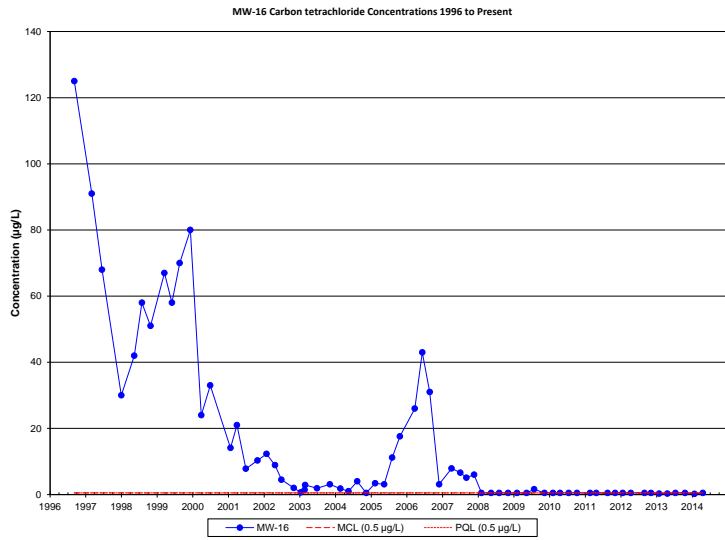




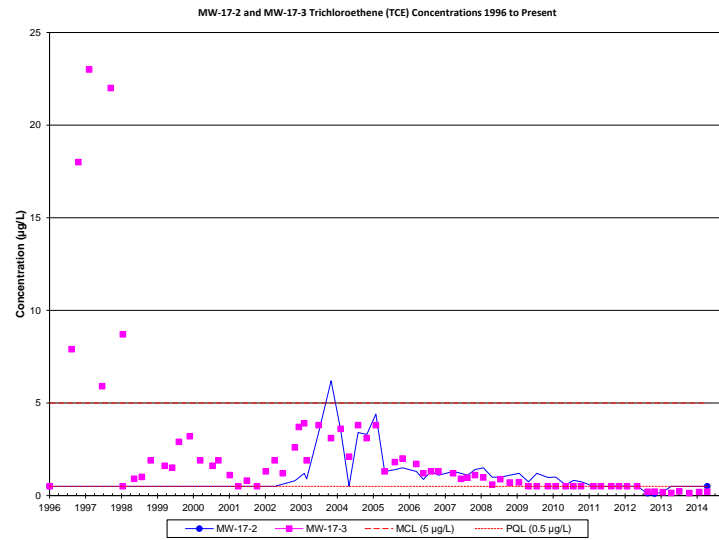
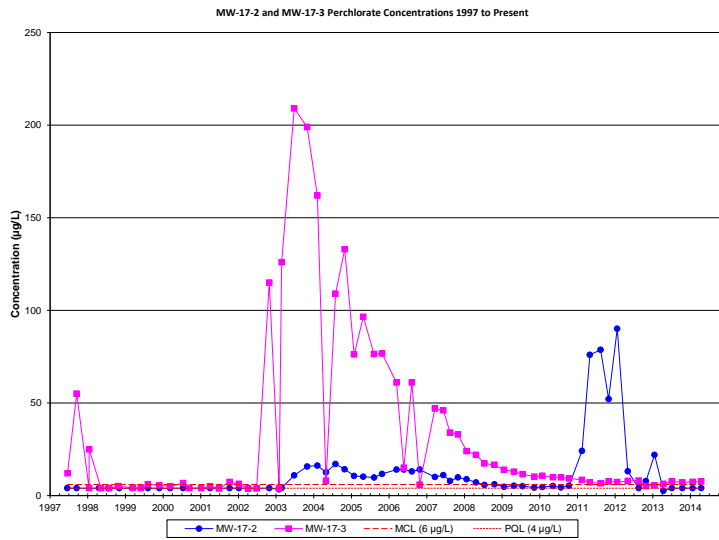
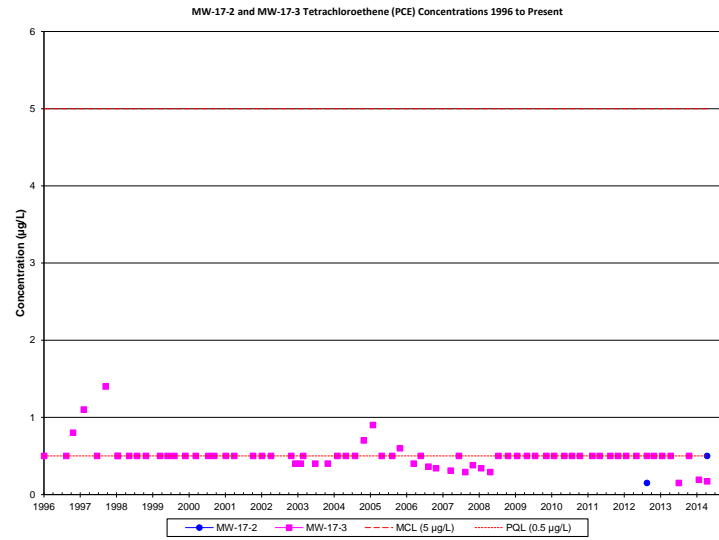
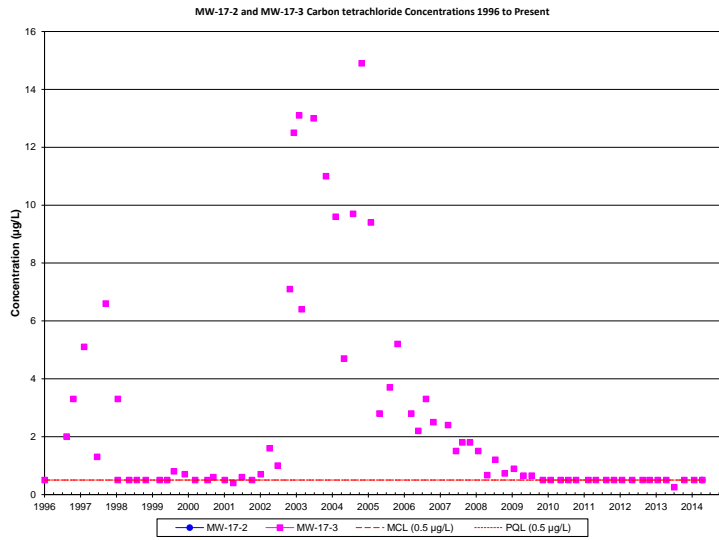
**VOCs and Perchlorate Time Series Plots for MW-13**



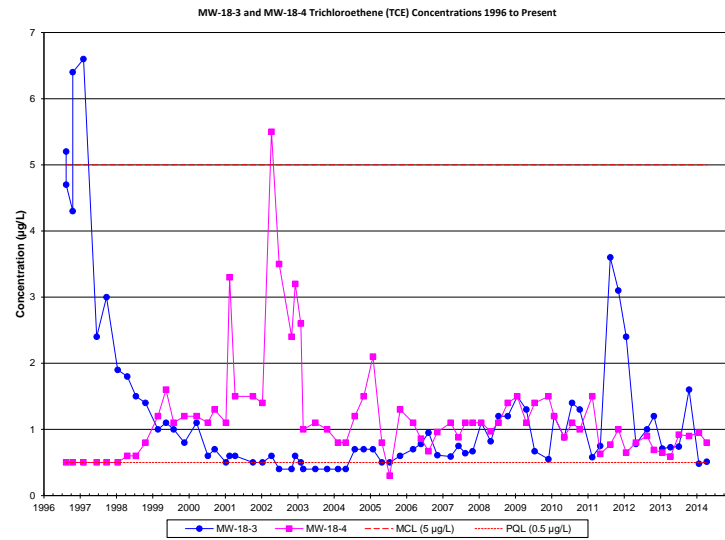
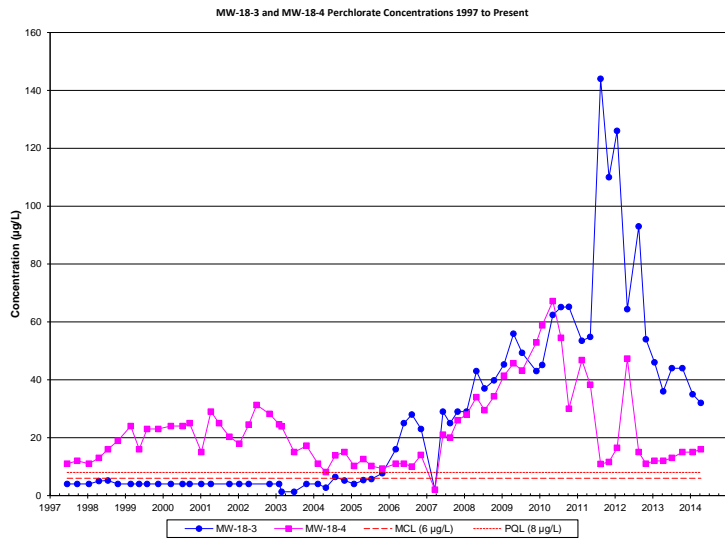
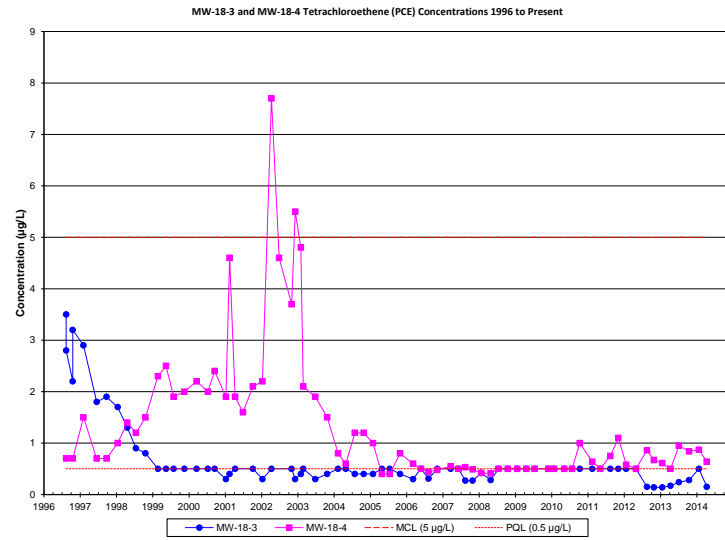
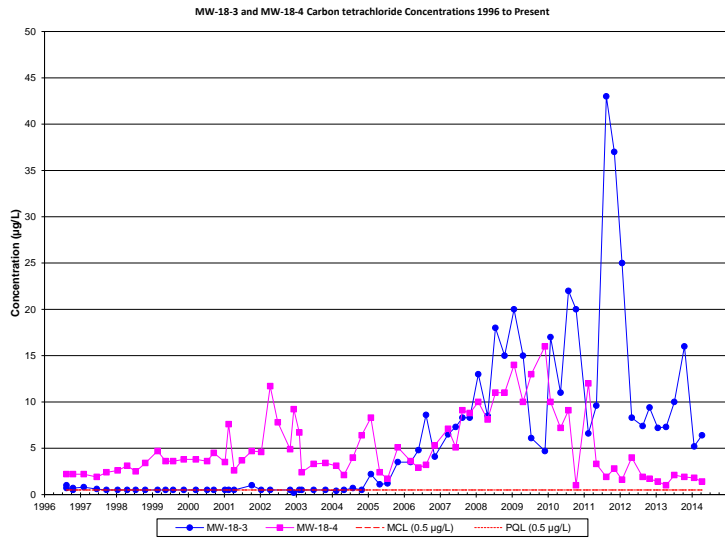
**VOCs and Perchlorate Time Series Plots for MW-14-2 and MW-14-3**



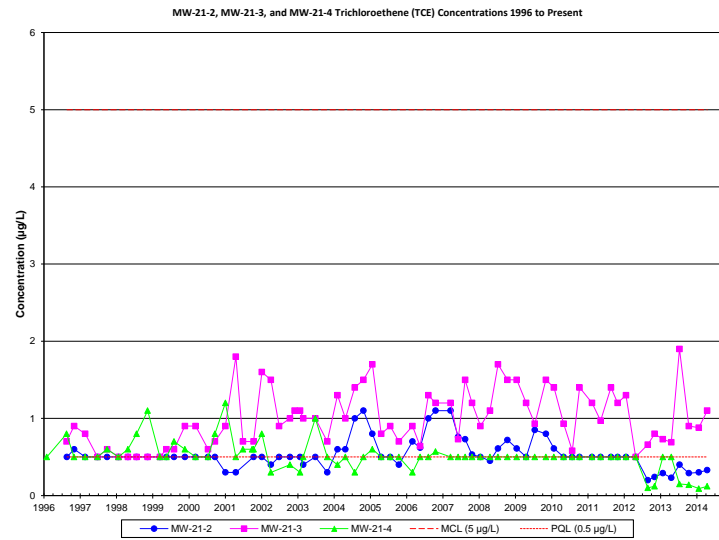
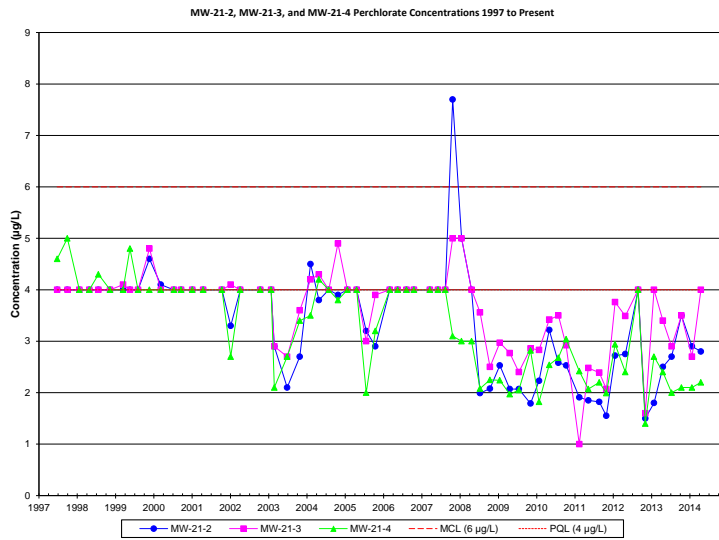
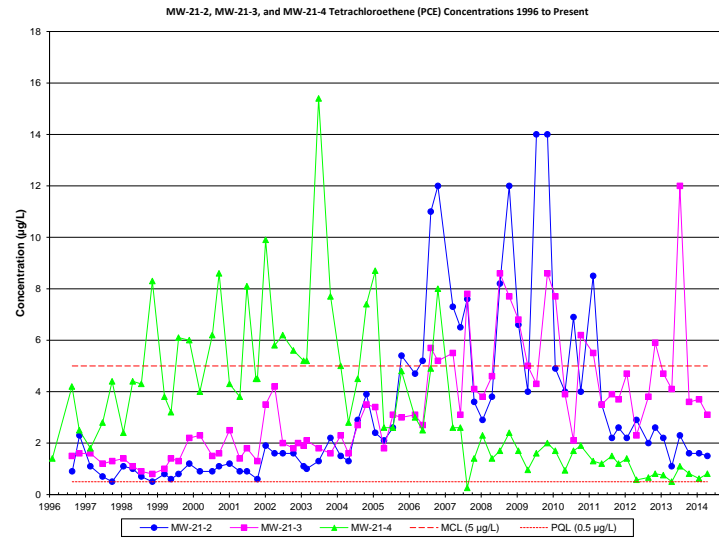
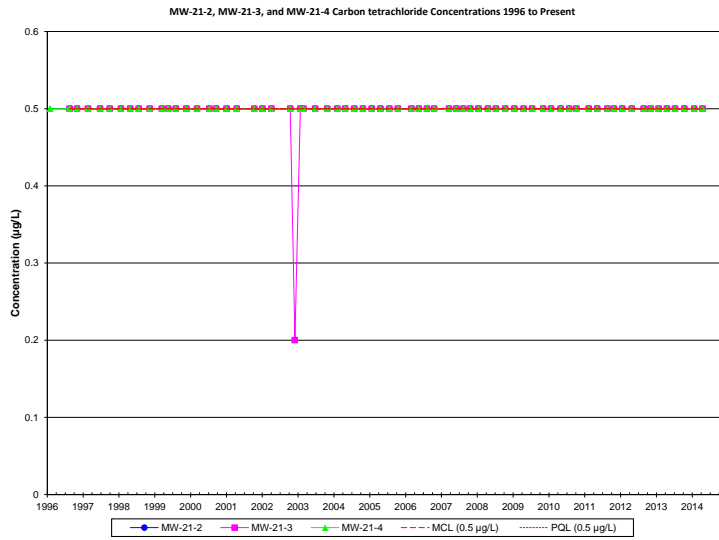
**VOCs and Perchlorate Time Series Plots for MW-16**



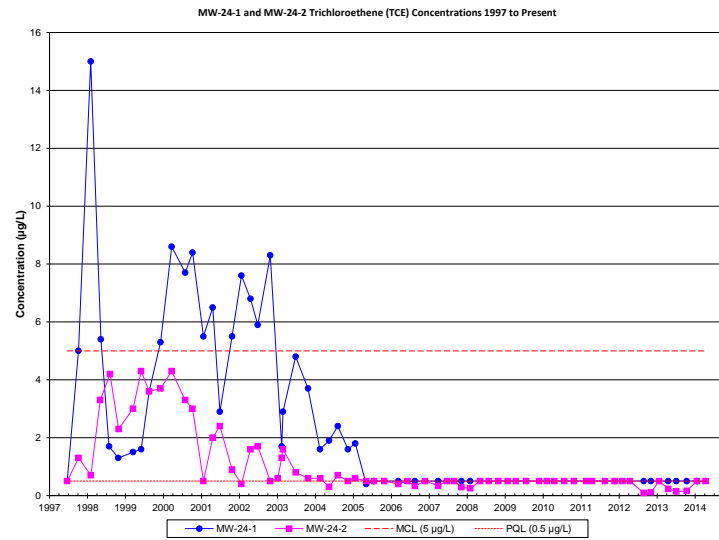
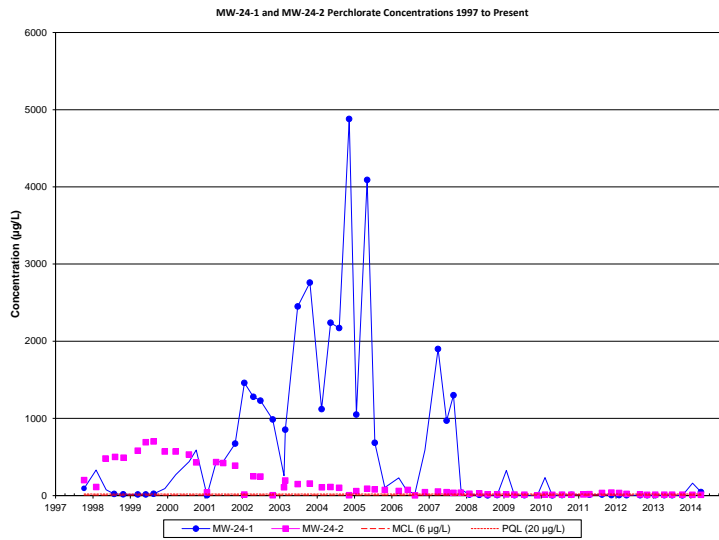
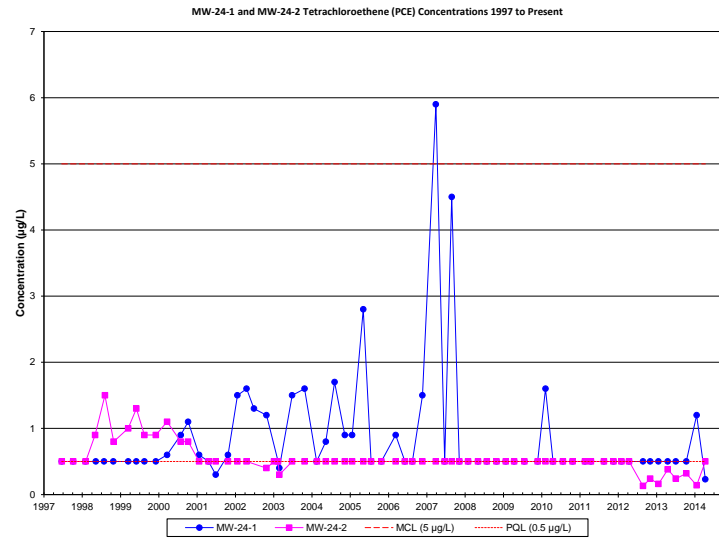
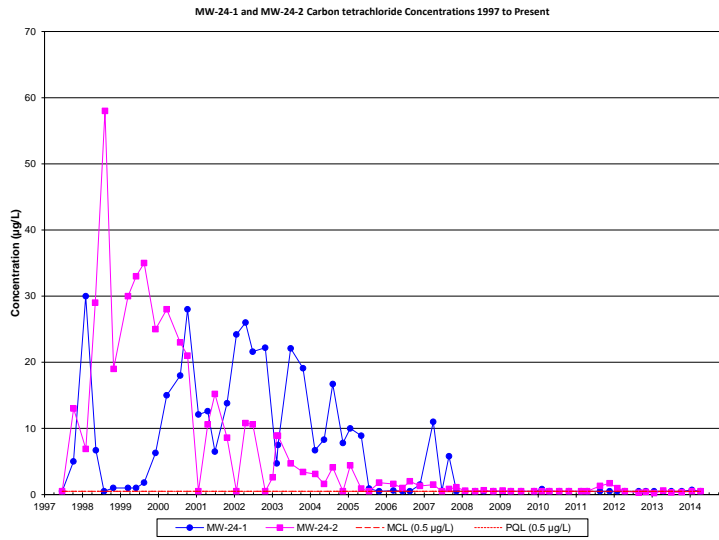
**VOCs and Perchlorate Time Series Plots for MW-17-2 and MW-17-3**



**VOCs and Perchlorate Time Series Plots for MW-18-3 and MW-18-4**



**VOCs and Perchlorate Time Series Plots for MW-21-2 and MW-21-3 and MW-21-4**



**VOCs and Perchlorate Time Series Plots for MW-24-1 and MW-24-2**