ATTACHMENT 4: FIELD LOGS

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 2nd Quarter 2008 sampling event was conducted by Insight Environmental, Inc.

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 1

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73803
Navy Contract No.: Battelle
Sampled By: Marco Mendoza, Chase Brogdon
Date: 5/19/08
Weather: clear and hot

PURGE VOLUME CALCULATION (casing volume):

(120 TD (feet) - 23.58 WL (feet)) X 4^2 D (inches) X 3 # Vols X 0.0408 = 188.89 Calculated Purge Volume Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
732	23.58	0	5.25	0.669	2.94	10.84	17.35	163	Clear, no odor
744	23.58	38	5.60	0.607	0.62	10.93	17.41	143	Clear, no odor
757	23.58	76	5.82	0.600	0.59	10.34	17.77	133	Clear, no odor
809	23.58	114	6.02	0.591	1.07	10.61	18.02	122	Clear, no odor
822	23.58	152	5.93	0.589	0.22	11.01	18.40	118	Clear, no odor
834	23.58	190	6.16	0.603	0.63	9.90	18.63	118	Clear, no odor

Total Purge Volume: 190 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 3.00 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 725 Purge time start: 732

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-1	Sample ID:	Type:	Type:
Sample Time: 838	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 12 (MS/MSD)	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 5

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/27/08
Weather: clear and sunny

PURGE VOLUME CALCULATION (casing volume):

(140 (TD feet) - 50.96 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 174.38 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0740	50.96	0	4.82	38.5	55.2	8.39	15.2	156	Clear, no odor
0751	50.96	35	4.83	37.1	10.03	7.86	15.7	88	Clear, no odor
0803	50.96	70	5.20	37.1	3.28	8.31	15.6	119	Clear, no odor
0814	50.96	105	5.08	37.2	2.22	8.12	16.0	120	Clear, no odor
0826	50.96	140	5.17	37.5	1.12	8.15	16.0	127	Clear, no odor
0837	50.96	175	5.41	38.0	1.00	8.24	16.2	138	Clear, no odor

Total Purge Volume: 175 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 3.00 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 0733 Purge time start: 0740

RECHARGE BEHAVIOR: **X** Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-5	Sample ID: DUPE-8-2Q08	Type: _____	Type: _____
Sample Time: 0843	Sample Time: ----------	Sample ID: _____	Sample ID: _____
No. of Containers: 6	No. of Containers: 6	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 6

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/27/08
Weather: clear and sunny

PURGE VOLUME CALCULATION (casing volume):

(245 TD (feet) - 159.33 WL (feet)) X 4^2 D (inches) X 3 # Vols X 0.0408 = 167.78 Calculated Purge Volume Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0925	159.33	0	5.43	0.097	132	8.28	18.5	298	Reddish brown color, no odor
0939	159.33	34	5.49	0.093	112	5.52	18.7	305	Reddish brown color, no odor
0953	159.33	68	5.76	0.090	36.2	5.25	18.6	340	Cloudy, no odor
1007	159.33	102	5.91	0.099	14.0	7.45	18.6	225	Cloudy, no odor
1021	159.33	1036	6.02	0.095	7.34	7.01	18.8	271	Clear, no odor
1035	159.33	170	5.86	0.093	5.03	7.86	18.9	240	Clear, no odor

Total Purge Volume: 170 (Gallons)

Total Discharge: 3.04 (Casing Volumes)

Approx. Purge Rate: 2.50 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 915 Purge time start: 925

RECHARGE BEHAVIOR: **X** Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-6	Sample ID:	Type:	Type:
Sample Time: 1040	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 6	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 7

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/20/08
Weather: clear and warm

PURGE VOLUME CALCULATION (casing volume):

(275 (TD feet) - 187.65 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 171.1 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0754	187.65	0	5.20	75.4	49.4	8.02	22.3	244	Yellowish brown color, no odor
0814	187.65	34	5.75	70.0	3.28	8.10	22.4	201	Clear, no odor
0834	187.65	69	6.11	69.7	11.4	6.8	22.8	233	Clear, no odor
0854	187.65	103	6.27	70.0	10.38	8.44	22.9	186	Clear, no odor
0914	187.65	138	6.32	69.7	14.10	6.48	23.2	252	Clear, no odor
0934	187.65	172	6.44	70.4	9.55	7.61	23.3	223	Clear, no odor

Total Purge Volume: 172 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 1.75 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 0749 Purge time start: 0754

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-7	Sample ID: DUPE- 5 -2Q08	Type: _____	Type: _____
Sample Time: 940	Sample Time: ---------	Sample ID: _____	Sample ID: _____
No. of Containers: 6	No. of Containers: 6	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 8

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
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Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/21/08
Weather: clear and hot

PURGE VOLUME CALCULATION (casing volume):

(205 (TD feet) - 114.77 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 176.71 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
1230	114.77	0	6.81	74.3	7.84	12.32	24.2	178	Clear, no odor
1243	114.77	36	6.86	72.2	4.17	14.24	21.3	222	Clear, no odor
1256	114.77	71	6.91	68.3	0.56	14.85	20.6	253	Clear, no odor
1309	114.77	107	6.82	71.0	-0.13	11.21	21.5	252	Clear, no odor
1323	114.77	142	6.87	71.5	9.54	13.83	21.9	240	Clear, no odor
1336	114.77	178	6.86	71.1	0.18	13.50	23.1	283	Clear, no odor

Total Purge Volume: 178 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 2.75 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1225 Purge time start: 1230

RECHARGE BEHAVIOR: **X** Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-8	Sample ID:	Type:	Type:
Sample Time: 1343	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 6	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 9

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73803
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/19/08
Weather: clear and hot

PURGE VOLUME CALCULATION (casing volume):

(68 (TD feet) - 19.30 (WL feet)) X 4² (D (inches)) X 3 (# Vols) X 0.0408 = 95.37 (Calculated Purge Volume) Gallons

PURGE METHOD | **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos

Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0925	19.30	0	6.30	0.532	3.20	8.79	23.85	115	Clear, no odor
0938	19.30	19	6.16	0.529	7.78	8.13	23.74	129	Clear, no odor
0951	19.30	38	6.33	0.523	2.85	7.55	24.06	117	Clear, no odor
1004	19.30	58	6.35	0.534	0.43	8.29	24.46	112	Clear, no odor
1017	19.30	77	6.58	0.534	-0.24	9.40	24.67	115	Clear, no odor
1030	19.30	96	6.06	0.537	-0.56	8.53	24.98	139	Clear, no odor

Total Purge Volume: 96 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 1.50 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 920 Purge time start: 925

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source /)***
Sample ID: MW-9	Sample ID:	Type:	Type:
Sample Time: 1032	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 6	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 10

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/22/08
Weather: partly cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(155 (TD feet) - 66.39 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 173.53 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0701	66.39	0	4.88	96.1	10.53	8.07	18.8	191	Slightly cloudy, no odor
0713	66.39	35	5.44	97.1	4.66	7.66	19.0	126	Clear, no odor
0725	66.39	70	5.75	97.9	0.77	7.70	18.7	99	Clear, no odor
0737	66.39	105	5.88	98.0	0.73	7.73	19.1	104	Clear, no odor
0749	66.39	140	6.03	99.2	0.40	8.15	18.7	122	Clear, no odor
0801	66.39	175	6.30	0.10	-0.13	8.56	18.4	213	Clear, no odor

Total Purge Volume: 175 (Gallons)

Total Discharge: 3.03 (Casing Volumes)

Approx. Purge Rate: 3.00 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 656 Purge time start: 701

RECHARGE BEHAVIOR: **X** Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank

Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-10	Sample ID: _____	Type: _____	Type: _____
Sample Time: 809	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: 6	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 13

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/21/08
Weather: partly cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(235 (TD feet) - 159.30 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 148.25 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0734	159.30	0	4.97	80.4	25.4	13.51	20.2	263	Cloudy, no odor
0749	159.30	30	5.41	74.4	5.10	13.05	20.4	189	Clear, no odor
0804	159.30	60	5.87	73.9	1.62	12.42	20.1	158	Clear, no odor
0819	159.30	90	6.06	73.5	0.92	12.40	20.2	147	Clear, no odor
0834	159.30	120	6.17	73.9	0.75	9.30	20.8	246	Clear, no odor
0849	159.30	150	6.24	74.7	0	13.19	21.0	179	Clear, no odor

Total Purge Volume: 150 (Gallons)

Total Discharge: 3.04 (Casing Volumes)

Approx. Purge Rate: 2.00 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 0728 Purge time start: 0734

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-13	Sample ID:	Type:	Type:
Sample Time: 855	Sample Time:	Sample ID:	Sample ID:
No. of Containers: 9	No. of Containers:	Sample Time:	Sample Time:
		No. of Containers:	No. of Containers:

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 15

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/22/08
Weather: partly cloudy and warm

PURGE VOLUME CALCULATION (casing volume):

(74 TD (feet) - 30.66 WL (feet)) X 4^2 D (inches) X 3 # Vols X 0.0408 = 84.87 Calculated Purge Volume Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0900	30.66	0	6.37	59.4	8.36	6.30	18.0	246	Clear, no odor
0906	30.66	17	6.48	57.8	4.08	8.68	18.0	124	Clear, no odor
0912	30.66	34	6.65	58.0	2.38	8.96	18.1	125	Clear, no odor
0918	30.66	51	6.63	58.3	0.92	9.14	18.1	95	Clear, no odor
0924	30.66	68	6.64	57.8	2.09	8.03	18.1	135	Clear, no odor
0930	30.66	85	6.80	57.8	0.39	7.41	18.7	149	Clear, no odor

Total Purge Volume: 85 (Gallons)

Total Discharge: 3.00 (Casing Volumes)

Approx. Purge Rate: 3.00 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 0849 Purge time start: 0900

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-15	Sample ID: DUPE- 7 – 2Q08	Type: _____	Type: _____
Sample Time: 0941	Sample Time: ----------	Sample ID: _____	Sample ID: _____
No. of Containers: 6	No. of Containers: 6	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 16

INSIGHT
Environmental, Engineering and Construction, Inc.

22632 Golden Springs Dr., Suite 270
Diamond Bar, CA 91765
Telephone: (909) 396-7662
Fax: (909) 396-1455

Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
Project No: 4-73805
Navy Contract No.: Battelle
Sampled By: Chase Brogdon, Andrew Wells
Date: 5/21/08
Weather: clear and warm

PURGE VOLUME CALCULATION (casing volume):

(285 (TD feet) - 211.60 (WL feet)) X 4^2 (D inches) X 3 (# Vols) X 0.0408 = 143.75 (Calculated Purge Volume) Gallons

PURGE METHOD **PUMP INTAKE SETTING**

☐ Bailer – Type: _____ **X** Pump – Type: 2" Grundfos Depth in feet (BTOC): _____

FIELD PARAMETER MEASUREMENT

Time	Depth to Water (Feet)	Total Discharge (Gallons)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (º C)	ORP (mV)	Comments
0942	211.60	0	6.34	69.3	5.16	12.93	25.1	220	Clear, no odor
1001	211.60	29	6.49	71.8	1.39	10.26	24.2	248	Clear, no odor
1021	211.60	58	6.59	71.8	20.5	11.82	24.9	133	Clear, no odor
1040	211.60	87	6.72	71.0	0.18	12.29	24.5	191	Clear, no odor
1100	211.60	116	6.82	71.1	-0.08	12.10	24.8	214	Clear, no odor
1119	211.60	145	6.89	72.2	-0.71	12.11	25.2	169	Clear, no odor

Total Purge Volume: 145 (Gallons)

Total Discharge: 3.03 (Casing Volumes)

Approx. Purge Rate: 1.50 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 0938 Purge time start: 0942

RECHARGE BEHAVIOR:
X Fast recharging
□ Slow recharging (80% recharge did not occur after two hours)

WATER DISPOSAL

Purge water storage: polytank
Purge water disposal: _____

WELL SAMPLING

Sample Depth in feet (BTOC): _____

Original	***Duplicate***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-16	Sample ID: DUPE – 6 – 2Q08	Type: _____	Type: _____
Sample Time: 1126	Sample Time: ----------	Sample ID: _____	Sample ID: _____
No. of Containers: 9	No. of Containers: 9	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

INSIGHT
Environmental, Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-3
Sampling Zone No.: 5 to 1
Depth (ft): 653, 558, 346, 252, 172
Beginning of Session: 14.07 psia
End of Session: 14.09 psia

Start Time: 0837
Finish Time: 1127

Date: 05/06/08
Page: 1 of 1

Water Pressure Inside Casing: →

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	pH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	251.28	✓	256.26	✓	256.25	✓	✓	251.26	1406	5.46	13.6	46.0	8.24	15.8	227
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	209.88	✓	215.18	✓	215.17	✓	✓	209.90	849	5.55	0.89	44.1	8.90	15.9	140
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	117.51	✓	127.15	✓	127.14	✓	✓	117.57	935	5.69	0.29	49.1	9.04	15.3	81
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	76.58	✓	86.34	✓	86.34	✓	✓	76.60	1015	5.75	2.81	60.3	9.04	15.6	160
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	42.23	✓	53.05	✓	53.05	✓	✓	42.28	1055	6.06	3.31	64.0	9.44	15.5	186
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	42.24	✓	53.03	✓	53.04	✓	✓	42.26	—	—	—	—	—	—	—

Notes:
port 5: YELLOWISH COLOR - STRONG ODOR port 4: CLEAR STRONG ODOR. port 3: CLEAR STRONG ODOR
port 2: CLEAR FAINT ODOR. port 1: CLEAR FAINT ODOR.

Total Volume: —

EB 1037

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-11
Sampling Zone No.: 5 to 1
Depth (ft): 639, 524, 429, 259, 149
Beginning of Session: 14.09 psia
End of Session: 14.05 psia

Start Time: 715
Finish Time: 1120

Date: 5/8/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	240.04	✓	232.73	✓	232.69	✓	✓	24906	805	5.65	33.9	40.6	10.58	15.5	129
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	240.08	✓	232.76	✓	232.72	✓	✓	240.03	—	—	—	—	—	—	—
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	192.31	✓	190.86	✓	190.77	✓	✓	192.28	902	5.98	10.88	24.7	8.35	16.3	82
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	151.35	✓	148.44	✓	148.35	✓	✓	151.33	945	5.76	3.86	43.3	7.79	16.6	52
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	77.56	✓	76.64	✓	76.61	✓	✓	77.57	1020	5.89	1.20	51.5	8.21	17.7	91
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	30.61	✓	36.76	✓	36.74	✓	✓	30.65	1057	6.04	0.84	59.0	8.35	18.1	67

> 5

Notes:
port 5: SLIGHTLY CLOUDY, SLIGHT ODOR port 4: CLEAR, STRONG ODOR port 3: CLEAR, SLIGHT ODOR
port 2: CLEAR, SLIGHT ODOR port 1: CLEAR, FAINT ODOR

Total Volume: —

INSIGHT
Environmental Engineering and Construction

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-14
Sampling Zone No.: 5 to 1
Depth (ft): 540, 456, 382, 277, 207
Beginning of Session: 14.06 psia
End of Session: 14.07 psia

Start Time: 0757
Finish Time: 1220

Date: 04/22/06
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	192.96	✓	186.98	✓	186.96	✓	✓	192.95	0841	5.47	1.68	37.9	9.95	18.4	216
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	156.26	✓	150.62	✓	150.61	✓	✓	156.23	0925	5.32	0.16	64.1	9.90	20.3	203
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	123.96	✓	118.55	✓	118.54	✓	✓	123.96	1008	5.27	1.89	0.1	10.38	20.8	171
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	77.98	✓	73.03	✓	73.05	✓	✓	78.06	1052	5.70	1.03	0.097	11.00	23.0	243
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	78.86	✓	73.06	✓	73.06	✓	✓	78.07	1135	—	—	—	—	—	—
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	47.93	✓	43.04	✓	43.04	✓	✓	47.98	1216	7.03	1.09	0.1	9.82	24.3	215

MS/MSD

MS/MSD

Notes:
port 5: CLEAR, STRONG ODOR port 4: CLEAR, FAINT ODOR port 3: CLEAR NO ODOR
port 2: CLEAR NO ODOR port 1: CLEAR NO ODOR.

Total Volume: —

~~605 1120~~

INSIGHT

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-12
Sampling Zone No.: 5 to 1
Depth (ft): 548, 436, 323, 243, 140
Beginning of Session: 14.08 psia
End of Session: 14.12 psia

Start Time: 0720
Finish Time: 1045

Date: 05/07/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	222.62	✓	211.07	✓	211.04	✓	✓	222.61	0751	5.18	2.82	0.403	6.35	16.0	227
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	173.81	✓	165.86	✓	165.81	✓	✓	173.80	0832	5.47	0.53	57.9	9.01	15.5	161
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	124.53	✓	117.68	✓	117.68	✓	✓	124.51	917	5.58	0.93	45.4	8.62	15.5	100
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	89.59	✓	83.57	✓	83.51	✓	✓	89.59	957	5.92	3.47	56.8	8.34	16.0	120
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	45.13	✓	42.68	✓	42.67	✓	✓	45.11	1038	6.03	3.23	57.0	8.27	15.9	83

Notes:
port 5: CLEAR FAINT ODOR. port 4: CLEAR FAINT ODOR. port 3: CLEAR FAINT ODOR.
port 2: CLEAR STRONG ODOR port 1: CLEAR STRONG ODOR

Total Volume: —

EB: 1021

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-17
Sampling Zone No.: 5 to 1
Depth (ft): 726, 582, 468, 370, 250
Beginning of Session: 14.04 psia
End of Session: 14.03 psia

Start Time: 726
Finish Time: 1110

Date: 5/1/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	246.26	✓	247.45	✓	247.35	✓	✓	246.26	800	5.65	20.4	41.8	8.18	15.2	138
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	183.58	✓	183.51	✓	183.49	✓	✓	183.57	836	5.91	0.56	38.0	9.04	15.9	87
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	183.56	✓	183.51	✓	183.51	✓	✓	183.56	—	—	—	—	—	—	—
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	183.54	✓	183.51	✓	183.51	✓	✓	183.54	—	—	—	—	—	—	—
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	134.21	✓	132.02	✓	132.04	✓	✓	134.22	954	5.74	14.5	83.6	10.54	18.0	144
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	91.60	✓	93.94	✓	93.96	✓	✓	91.65	1030	5.93	2.21	0.1	10.16	19.1	277
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	39.47	✓	44.35	✓	44.35	✓	✓	39.49	11:05	6.32	2.40	45.3	10.19	19.9	138

〉 4

Notes:

port 5: CLEAR, STRONG ODOR port 4: CLEAR, NO ODOR port 3: CLEAR, NO ODOR

port 2: CLEAR, NO ODOR port 1: CLEAR, STRONG ODOR

Total Volume: —

INSIGHT
Environmental Engineering and Consulting, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-18
Sampling Zone No.: 5 TO 1
Depth (ft): 684, 564, 424, 330, 270
Beginning of Session: 13.99 psia
End of Session: 14.02 psia

Start Time: 0744
Finish Time: 1134

Date: 05/05/09
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe In	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.99	✓	210.38	✓	210.25	✓	✓	161.96	815	5.15	1.42	34.2	8.71	15.4	190
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.73	✓	159.71	✓	159.70	✓	✓	109.71	855	5.39	7.24	47.5	8.59	16.1	164
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	48.72	✓	102.91	✓	102.90	✓	✓	48.73	933	5.36	0.55	56.8	8.97	15.5	138
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.19	✓	62.09	✓	62.08	✓	✓	14.23	1013	5.76	3.37	50.8	8.93	15.3	159
DUPE < 1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.15	✓	36.35	✓	36.33	✓	✓	14.17	1059	5.87	5.56	50.8	9.15	15.5	136 > DUPE
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.16	✓	36.33	✓	36.34	✓	✓	14.18	1128	6.23	5.79	50.2	8.88	15.7	154

Notes:
port 5: CLEAR STRONG ODOR port 4: CLEAR STRONG ODOR port 3: CLEAR FAINT ODOR.
port 2: CLEAR FAINT ODOR port 1: CLEAR NO ODOR.

Total Volume: —

EB: 1039

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-19
Sampling Zone No.: 5 to 1
Depth (ft): ~~498, 434, 392, 314~~, 242
Beginning of Session: 14.02 psia
End of Session: 14.06 psia

Start Time: 0714
Finish Time: 1040

Date: 04/29/06
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	174.87	✓	169.75	✓	169.74	✓	✓	174.86	0743	4.27	0.42	85.4	8.92	17.1	132	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	151.40	✓	146.35	✓	146.34	✓	✓	151.40	0818	4.74	-0.09	70.5	8.83	16.0	160	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	128.80	✓	124.72	✓	124.71	✓	✓	128.79	0853	5.01	0.26	71.0	9.10	19.4	169	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	94.89	✓	90.53	✓	90.54	✓	✓	94.90	0925	5.19	2.52	0.1	11.13	20.9	182	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	63.79	✓	59.57	✓	59.60	✓	✓	63.82	1007	5.14	1.15	51.8	9.35	22.6	256	MS/MSD MW-19-1
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	63.74	✓	59.56	✓	59.56	✓	✓	63.79	1033	—	—	—	—	—	—	

MS/MSD

Notes:
port 5: CLEAR FAINT ODOR port 4: CLEAR NO ODOR. port 3: CLEAR NO ODOR.
port 2: CLEAR NO ODOR. port 1: CLEAR NO ODOR

Total Volume: —

EB 946

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-20
Sampling Zone No.: 5 TO 1
Depth (ft): 900, 700, 562, 392, 230
Beginning of Session: 14.01 psia
End of Session: 14.04 psia

Start Time: 0730
Finish Time: 1130

Date: 04/30/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	323.74	✓	328.90	✓	328.87	✓	✓	323.72	805	5.34	1.68	32.5	7.44	15.6	-42
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	236.97	✓	240.06	✓	240.01	✓	✓	236.95	847	5.82	0.57	36.6	8.28	16.1	-35
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	177.07	✓	175.28	✓	176.23	✓	✓	177.06	930	5.73	4.47	56.1	8.82	18.5	144
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	103.28	✓	106.33	✓	106.33	✓	✓	103.28	1010	5.84	0.00	44.9	9.11	17.3	103
MS/MSD 1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	33.07	✓	35.92	✓	35.92	✓	✓	33.07	1054	5.80	1.26	56.7	9.63	17.3	217
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	33.04	✓	35.87	✓	35.87	✓	✓	33.05	1124	—	—	—	—	—	—

MS/MSD 1

Notes:
port 5: CLEAR, STRONG ODOR port 4: CLEAR STRONG ODOR. port 3: CLEAR FAINT ODOR.
port 2: CLEAR STRONG ODOR port 1: CLEAR STRONG ODOR.

Total Volume: —

CB: 1032

INSIGHT

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-21
Sampling Zone No.: 5 TO 1
Depth (ft): 372, 310, 240, 161, 90
Beginning of Session: 14.17 psia
End of Session: 14.10 psia

Start Time: 0745
Finish Time: 1100

Date: 04/28/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks							Position Sampler		Sample Collection Checks								Water Quality Parameters						
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	129.70	✓	160.39	✓	160.39	✓	✓	129.73	824	4.90	1.92	92.0	9.95	22.4	199
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	129.70	✓	160.37	✓	160.38	✓	✓	129.72	—	—	—	—	—	—	—
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	103.65	✓	133.52	✓	133.52	✓	✓	103.63	903	5.29	4.86	84.0	11.95	23.3	174
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	73.50	✓	103.60	✓	103.54	✓	✓	[illegible]	939	5.62	0.74	0.090	9.67	24.2	298
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	39.03	✓	69.36	✓	69.37	✓	✓	[illegible]	1010	5.82	-0.14	0.106	12.16	24.4	325
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.16	✓	37.97	✓	37.96	✓	✓	14.19	1050	6.15	0.95	0.094	14.19	28.6	336

Notes:
port 5: CLEAR, NO ODOR port 4: CLEAR, NO ODOR. port 3: CLEAR NO ODOR
port 2: CLEAR, NO ODOR port 1: CLEAR NO ODOR.

Total Volume: —

EB:1037

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-22
Sampling Zone No.: 5 TO 1
Depth (ft): 588, 467, 389, 329, 245
Beginning of Session: 14.06 psia
End of Session: 14.10 psia

Start Time: 0815
Finish Time: 1135

Date: 04/23/08
Page: 1 of 1

Water Pressure Inside Casing: ~

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	203.43	✓	201.91	✓	201.89	✓	✓	203.40	0845	5.30	0.64	42.9	8.59	16.0	-114
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	151.01	✓	150.74	✓	150.73	✓	✓	150.98	0927	5.72	0.76	47.8	9.09	17.0	75
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	117.15	✓	118.64	✓	118.62	✓	✓	117.12	1006	5.49	0.00	71.1	11.65	19.9	94
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	91.03	✓	92.53	✓	92.56	✓	✓	91.06	1045	5.88	0.12	65.9	11.96	23.4	150
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	54.31	✓	56.12	✓	56.17	✓	✓	54.33	1130	6.03	2.16	0.999	11.76	22.7	295
	Fin																								

Total Volume: ~

Notes:
port 5: CLEAR STRONG ODOR port 4: CLEAR STRONG ODOR. port 3: CLEAR FAINT ODOR.
port 2: CLEAR FAINT ODOR port 1: CLEAR FAINT ODOR.

INSIGHT
Environmental, Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-23
Sampling Zone No.: 5+1
Depth (ft): 542, 445, 319, 254, 174
Beginning of Session: 14.06 psia
End of Session: 14.03 psia

Start Time: 720
Finish Time: 1110

Date: 5/12/08
Page: 1 of 1

Water Pressure Inside Casing: ——

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe in	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	205.96	✓	209.57	✓	209.31	✓	✓	205.93	747	5.90	1.08	48.4	8.85	16.9	33
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	163.90	✓	167.61	✓	167.60	✓	✓	163.89	825	6.20	0.38	40.5	8.61	16.9	78
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.29	✓	114.76	✓	114.74	✓	✓	109.28	859		0.96					*
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	81.06	✓	86.64	✓	86.63	✓	✓	81.03	943	5.63	0.54	94.5	10.84	16.69	197
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	81.04	✓	86.63	✓	86.62	✓	✓	81.01	1027	6.54	0.47	94.8	9.86	18.27	135
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.49	✓	52.98	✓	52.97	✓	✓	46.47	1103	6.97	10.04	126.5	10.51	18.23	86

→ 2

Notes:
port 5: CLEAR, STRONG ODOR port 4: CLEAR, FAINT ODOR port 3: CLEAR, NO ODOR
port 2: CLEAR, NO ODOR port 1: CLEAR, NO ODOR

Total Volume: ——

* HORIBA NON-OPERATIONAL (BATTERY LINE BREAK)

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-24
Sampling Zone No.: 5+1
Depth (ft): 678, 554, 435, 373, 279
Beginning of Session: 14.05 psia
End of Session: 14.02 psia

Start Time: 730
Finish Time: 1250

Date: 5/13/08
Page: 1 of 1

Water Pressure Inside Casing: ——

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	235.23	✓	226.30	✓	226.28	✓	✓	235.21	820	6.34	1.27	0.408	12.73	20.26	120
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	182.26	✓	174.23	✓	174.23	✓	✓	182.26	910	7.85	0.78	0.288	11.53	21.18	-124
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	129.73	✓	124.38	✓	124.38	✓	✓	129.73	942	10.26	35.4	0.290	1.83	22.22	-270
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	102.98	✓	97.77	✓	97.78	✓	✓	102.99	1030	8.16	1.31	0.508	10.65	23.93	-23
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	62.18	✓	58.79	✓	58.82	✓	✓	62.22	1116	7.66	23.4	0.633	9.11	25.11	-22
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	62.17	✓	58.81	✓	58.81	✓	✓	62.19	1139	7.89	8.24	0.623	8.94	23.51	18
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	62.14	✓	58.80	✓	58.80	✓	✓	62.18	—	—	—	—	—	—	—
1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	62.13	✓	58.80	✓	58.78	✓	✓	62.16	—	—	—	—	—	—	—
1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	62.11	✓	58.80	✓	58.81	✓	✓	62.13	—	—	—	—	—	—	—

UPE

Notes:
port 5: CLEAR, NO ODOR port 4: CLEAR, STRONG ODOR port 3: SLIGHTLY CLOUDY, NO ODOR
port 2: CLEAR, NO ODOR port 1: SLIGHTLY CLOUDY, NO ODOR

Total Volume: ——

INSIGHT
Environmental Engineering and Construction Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-25
Sampling Zone No.: 5 to 1
Depth (ft): 713, 633, 503, 423, 358
Beginning of Session: 14.17 psia
End of Session: 14.18 psia

Start Time: 0803
Finish Time: 1200

Date: 05/14/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	209.22	✓	207.55	✓	207.54	✓	✓	209.19	837	6.52	0.16	455	12.01	21.4	-109
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	174.58	✓	170.82	✓	170.80	✓	✓	174.69	920	6.70	0.19	69.2	14.72	22.1	63
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	118.15	✓	117.85	✓	117.45	✓	✓	118.18	1002	7.11	-0.83	59.7	11.50	21.7	65
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.36	✓	86.68	✓	86.73	✓	✓	83.37	1041	7.39	-1.00	69.1	13.36	22.8	63
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	54.89	✓	59.87	✓	59.92	✓	✓	59.00	1126	7.43	16.6	92.3	12.99	24.7	41
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	54.90	✓	59.86	✓	59.90	✓	✓	54.94	1153	—	—	—	—	—	—

MS/MSD

MS/MSD

Notes:
port 5: CLEAR, STRONG ODOR port 4: CLEAR FAINT ODOR port 3: CLEAR NO ODOR
port 2: CLEAR NO ODOR port 1: CLEAR NO ODOR

Total Volume: —

EB: 1109

INSIGHT
Environmental Engineering and Construction, Inc.

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-26
Sampling Zone No.: 2 to 1
Depth (ft): 215, 135
Beginning of Session: 14.07 psia
End of Session: 14.04 psia

Start Time: 720
Finish Time: 845

Date: 5/15/08
Page: 1 of 1

Water Pressure Inside Casing: —

Port #	Run #	Function Checks							Position Sampler	Sample Collection Checks									Water Quality Parameters								
		Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	76.98	✓	76.97	✓	76.98	✓	✓	76.97	737	5.09	38.0	0.549	7.41	20.11	210		
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	42.37	✓	40.02	✓	39.99	✓	✓	42.35	820	5.31	0.14	0.994	6.95	21.81	157		> 1
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	42.33	✓	42.01	✓	39.99	✓	✓	42.33	—	—	—	—	—	—	—		

Notes:

Total Volume: —

SLIGHTLY YELLOWISH
port 2: ~~CLEAR~~, NO ODOR port 1: CLEAR, NO ODOR

INSIGHT
Environmental, Engineering and Construction, Inc.

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:Battelle

Well ID: MW-4
Sampling Zone No.: 5 to 1
Depth (ft): 513, 392, 322, 240, 150
Beginning of Session: 14.15 psia
End of Session: 14.14 psia

Start Time: 738
Finish Time: 1230

Date: 4/24/08
Page: 1 of 1

Water Pressure Inside Casing: ——

	Port #	Run #	Surface Function Checks: Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm In	Position Sampler: Deactivate Set Arm Locate Port	Arm out	Sample Collection Checks: Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Water Quality Parameters: Time	PH	Turb. (NTU)	Cond (mmhos)	Dissolved Oxygen	Temp. (oC)	ORP
	5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.42	✓	208.38	✓	208.55	✓	✓	149.43	805	5.41	6.48	44.5	10.02	18.4	79
	4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.65	✓	156.19	✓	156.18	✓	✓	96.65	839	5.57	2.50	50.7	11.49	19.9	78
BIMSD <	3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	66.08	✓	126.29	✓	126.28	✓	✓	66.09	915	5.78	13.0	50.5	12.26	20.5	89
	3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	66.07	✓	126.25	✓	126.25	✓	✓	66.05	—	—	—	—	—	—	—
	2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	30.28	✓	90.90	✓	90.90	✓	✓	30.29	1010	5.90	4.94	0.1	13.40	21.7	119
	1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.22	✓	54.86	✓	54.85	✓	✓	14.23	1048	6.16	2.79	64.7	13.74	21.9	102
UPE <	1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.21	✓	54.86	✓	54.84	✓	✓	14.23	1113	6.38	1.55	63.2	11.61	21.8	105
	1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.21	✓	54.85	✓	54.84	✓	✓	14.21	—	—	—	—	—	—	—
	1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.21	✓	54.85	✓	54.83	✓	✓	14.22	—	—	—	—	—	—	—
	1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.18	✓	54.85	✓	54.84	✓	✓	14.21	—	—	—	—	—	—	—

> 3

1

Notes:

port 5: CLEAR, STRONG ODOR port 4: CLEAR, NO ODOR port 3: BROWNISH COLOR, SLIGHT ODOR

port 2: CLEAR, NO ODOR port 1: CLEAR, NO ODOR

Total Volume: ——

ATTACHMENT 5: WATER LEVEL MEASUREMENTS

This attachment contains water level measurements for the Westbay™ multiport JPL monitoring wells obtained during the 2nd quarter of 2008. Water level measurements were recorded before the sampling event on April 21, 2008, and after the sampling event on May 28, 2008. Water levels in the shallow wells were measured using a Solinst™ water level meter and the results are provided with the field logs (Attachment 4). In the deep multiport wells, the hydraulic head at each sampling port was measured with a Westbay™ pressure-transducer probe. Water level measurements were conducted by Insight Environmental, Inc.

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and cool

Well ID: MW-3
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (ft. + MSL): 1,100.34

Ambient Readings	Start	Finish
Time	1158	1211
Pressure (psia)	14.18	14.14
Temperature (°C)	20.95	18.26

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	653	246.96	257.00	246.94	23.45	1200		
							92.81	1007.53
4	558	205.71	215.94	205.86	23.42	1202		
							92.54	1007.80
3	346	113.47	128.12	113.54	22.66	1204		
							83.14	1017.20
2	252	72.63	87.35	72.67	21.55	1206		
							83.20	1017.14
1	172	37.91	54.31	37.92	20.13	1208		
							79.42	1020.92

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. +MSL): 1,082.84
Weather: clear and cool

Well ID: MW-4
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	0819	0833
Pressure (psia)	14.16	14.15
Temperature (°C)	18.09	19.50

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	513	145.05	208.46	145.06	20.19	822		
							64.75	1018.09
4	392	92.43	156.08	92.40	21.02	824		
							64.59	1018.25
3	322	62.00	126.34	61.97	21.06	826		
							63.20	1019.64
2	240	26.31	91.04	26.35	20.74	828		
							62.64	1020.20
1	150	14.24	55.11	14.22	20.11	830		
							55.53	1027.31

INSIGHT EEC, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and cool

Well ID: MW-11
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,139.30

Ambient Readings	Start	Finish
Time	1050	1102
Pressure (psia)	14.10	14.10
Temperature (°C)	21.40	17.97

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	639	237.69	233.60	237.58	21.24	1052		
							132.61	1006.69
4	524	188.46	191.66	188.10	21.48	1054		
							114.37	1024.93
3	429	147.12	149.47	147.19	21.04	1056		
							116.70	1022.60
2	259	73.62	77.77	73.59	20.06	1058		
							112.11	1027.19
1	149	26.31	37.72	26.30	18.70	1100		
							94.51	1044.79

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,102.14
Weather: clear and cool

Well ID: MW-12
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1524	1536
Pressure (psia)	14.15	14.12
Temperature (°C)	21.39	17.73

Screen No.	Depth (Ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	548	218.26	211.68	218.25	21.01	1526		
							92.30	1009.84
4	436	169.49	166.85	169.51	21.73	1528		
							83.72	1018.42
3	323	120.42	118.65	120.37	20.57	1530		
							81.92	1020.22
2	243	85.55	84.60	85.57	19.25	15.32		
							80.47	1021.67
1	140	40.70	44.26	40.71	18.08	1534		
							70.54	1031.60

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,173.47
Weather: clear and cool

Well ID: MW-14
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	724	738
Pressure (psia)	14.05	14.10
Temperature (°C)	18.03	19.17

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	540	189.77	213.90	188.72	21.36	727		
							78.95	1094.52
4	456	153.09	204.84	153.06	21.35	729		
							15.85	1157.62
3	382	117.92	165.43	117.81	20.90	731		
							32.77	1140.70
2	277	75.14	95.86	75.15	20.36	733		
							88.26	1085.21
1	207	44.66	58.37	44.66	19.17	735		
							104.75	1068.72

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,191.21
Weather: clear and cool

Well ID: MW-17
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1301	1314
Pressure (psia)	14.10	14.09
Temperature (°C)	17.73	16.49

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	726	244.53	247.65	244.45	18.67	1303		
							187.20	1004.01
4	582	182.16	183.23	182.08	19.60	1305		
							191.82	999.39
3	468	132.60	131.83	132.62	19.09	1307		
							196.40	994.81
2	370	90.02	94.21	90.08	18.09	1309		
							185.19	1006.02
1	250	37.92	45.13	37.95	17.26	1311		
							178.41	1012.80

INSIGHT EEC, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and cool

Well ID: MW-18
Probe Type: Westbay
Serial No.:
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,225.41

Ambient Readings	Start	Finish
Time	1323	1336
Pressure (psia)	14.10	14.08
Temperature (°C)	17.01	16.92

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	684	157.92	210.75	157.90	19.85	1325		
							230.33	995.08
4	564	105.70	160.10	105.74	20.57	1327		
							227.18	998.23
3	424	44.84	103.63	44.87	20.04	1329		
							217.45	1007.96
2	330	14.24	62.97	14.24	18.46	1331		
							217.26	1008.15
1	270	14.19	37.33	14.20	17.59	1333		
							216.41	1009.00

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. +MSL): 1,142.94
Weather: clear and cool

Well ID: MW-19
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1224	1236
Pressure (psia)	14.16	14.12
Temperature (°C)	17.62	17.14

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	498	173.19	170.08	173.18	19.26	1226		
							138.29	1004.65
4	444	149.69	146.67	149.72	19.49	1228		
							138.30	1004.64
3	392	127.06	125.01	127.19	19.42	1230		
							136.27	1006.67
2	314	93.24	90.83	93.32	19.34	1232		
							137.12	1005.82
1	242	62.07	59.93	62.06	18.78	1234		
							136.41	1006.53

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,165.05
Weather: clear and cool

Well ID: MW-20
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1348	1401
Pressure (psia)	14.12	14.12
Temperature (°C)	18.47	17.74

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	900	321.97	329.13	321.95	20.77	1350		
							173.27	991.78
4	700	235.21	239.93	235.25	22.00	1352		
							179.06	985.99
3	562	174.44	172.01	175.42	21.53	1354		
							197.75	967.30
2	392	101.69	105.82	101.70	20.94	1356		
							180.45	984.60
1	230	31.40	35.63	31.39	17.54	1358		
							180.38	984.67

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena | Well ID: MW-21
Project No: 4-73803 | Probe Type: Westbay
Date: 4/21/08 | Serial No.: 2508
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC | Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,059.10
Weather: clear and cool

Ambient Readings	Start	Finish
Time	844	858
Pressure (psia)	14.14	14.17
Temperature (°C)	17.72	18.95

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	372	126.08	160.53	126.67	19.29	847		
							34.28	1024.82
4	310	100.21	138.72	100.21	19.76	849		
							22.59	1036.51
3	240	69.66	103.76	69.67	19.62	851		
							33.25	1025.85
2	161	35.26	69.52	35.28	19.30	853		
							33.24	1025.86
1	90	14.21	38.12	14.20	19.02	855		
							34.68	1024.42

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,176.98
Weather: clear and cool

Well ID: MW-22
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	913	926
Pressure (psia)	14.11	14.10
Temperature (°C)	19.39	20.39

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	588	201.58	201.49	201.60	21.20	916		
							155.71	1021.27
4	467	149.15	150.43	149.18	22.19	918		
							152.51	1024.47
3	389	115.37	118.42	115.38	21.91	920		
							148.36	1028.62
2	329	89.39	92.37	89.37	21.36	922		
							148.45	1028.53
1	245	52.50	56.21	52.50	20.88	924		
							147.88	1029.10

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,108.84
Weather: clear and cool

Well ID: MW-23
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	701	712
Pressure (psia)	14.07	14.14
Temperature (°C)	14.97	19.88

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	542	204.22	210.83	204.20	19.71	704		
							88.07	1020.77
4	445	160.03	168.19	160.02	20.55	706		
							89.45	1019.39
3	319	107.59	116.11	107.61	20.68	708		
							83.59	1025.25
2	254	79.51	88.03	79.43	20.43	709		
							83.37	1025.47
1	174	44.68	54.35	44.69	20.08	710		
							81.07	1027.77

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,200.94
Weather: clear and cool

Well ID: MW-24
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	950	1003
Pressure (psia)	14.10	14.07
Temperature (°C)	20.49	21.36

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	678	234.20	227.49	234.25	21.51	953		
							185.71	1015.23
4	554	180.53	175.51	180.54	21.94	955		
							181.63	1019.31
3	435	128.95	125.79	129.01	21.85	957		
							177.33	1023.61
2	373	102.11	99.22	102.13	21.78	959		
							176.63	1024.31
1	279	61.36	60.50	61.39	21.62	1001		
							171.96	1028.98

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 4/21/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. + MSL): 934.52
Weather: clear and cool

Well ID: MW-25
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1426	1437
Pressure (psia)	14.25	14.22
Temperature (°C)	18.79	20.07

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	713	205.10	207.42	205.07	20.57	1428		
							267.36	667.16
4	633	170.57	171.40	170.55	21.75	1430		
							270.45	664.07
3	503	114.32	118.61	114.33	21.45	1432		
							262.24	672.28
2	423	79.51	86.96	79.57	21.09	1434		
							255.26	679.26
1	358	51.32	59.40	51.31	20.72	1436		
							253.84	680.68

INSIGHT EEC, Inc.
Piezometric Pressure/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name:	JPL Pasadena	Well ID:	MW-26
Project No:	4-73803	Probe Type:	Westbay
Date:	4/21/08	Serial No.:	2508
Personnel:	Chase Brogdon, Andrew Wells		
Datum:	TOC	Casing Size/Type:	1.5" Westbay
	Elevation of Datum (ft. + MSL):	1,059.08	
Weather:	clear and cool		

Ambient Readings	Start	Finish
Time	1458	1504
Pressure (psia)	14.17	14.16
Temperature (°C)	21.22	19.31

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
2	215	77.07	77.06					
				77.07	20.54	1500		
							69.91	989.17
1	135	42.63	40.09					
				42.49	20.11	1502		
							75.20	983.88

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and warm

Well ID: MW-3
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (ft. + MSL): 1,100.34

Ambient Readings	Start	Finish
Time	1003	1015
Pressure (psia)	14.16	14.14
Temperature (°C)	19.43	16.48

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	653	246.72	255.41	246.69	21.34	1005		
							96.44	1003.90
4	558	205.49	214.34	205.47	22.26	1007		
							96.18	1004.16
3	346	113.30	126.15	113.31	21.63	1009		
							87.64	1012.70
2	252	72.46	85.26	72.45	20.43	1011		
							87.97	1012.37
1	172	37.71	51.82	37.72	17.30	1013		
							85.12	1015.22

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. +MSL): 1,082.84
Weather: clear and warm

Well ID: MW-4
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1444	1458
Pressure (psia)	14.09	14.14
Temperature (°C)	22.87	20.32

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	513	145.22	206.68	145.21	22.57	1448		
							68.69	1014.15
4	392	92.59	154.33	92.60	22.43	1450		
							68.47	1014.37
3	322	62.11	124.47	62.14	22.02	1452		
							67.35	1015.49
2	240	26.39	89.02	26.41	21.62	1454		
							67.14	1015.70
1	150	14.23	52.55	14.21	20.99	1456		
							61.27	1021.57

INSIGHT EEC, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and warm

Well ID: MW-11
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,139.30

Ambient Readings	Start	Finish
Time	939	951
Pressure (psia)	14.10	14.11
Temperature (°C)	20.38	18.16

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	639	237.31	232.07	237.32	20.82	941		
							136.14	1003.16
4	524	187.80	190.28	187.81	21.17	943		
							117.55	1021.75
3	429	146.92	147.78	146.93	20.74	945		
							120.60	1018.70
2	259	73.32	75.67	73.32	19.64	947		
							116.96	1022.34
1	149	26.01	35.70	26.02	18.71	949		
							99.17	1040.13

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,102.14
Weather: clear and warm

Well ID: MW-12
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1502	1515
Pressure (psia)	14.07	14.14
Temperature (°C)	21.42	17.76

Screen No.	Depth (Ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	548	217.99	210.15	217.97	20.93	1505		
							95.64	1006.50
4	436	169.34	165.16	169.36	21.48	1507		
							87.44	1014.70
3	323	120.15	116.78	120.17	20.61	1509		
							86.05	1016.09
2	243	85.31	82.53	85.30	19.19	1511		
							85.06	1017.08
1	140	40.41	41.50	40.40	18.63	1513		
							76.72	1025.42

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,173.47
Weather: clear and warm

Well ID: MW-14
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	750	802
Pressure (psia)	14.09	14.09
Temperature (°C)	19.37	19.41

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	540	188.27	185.79	188.27	20.19	752		
							143.89	1029.58
4	456	151.75	149.44	151.74	20.61	754		
							143.75	1029.72
3	382	119.51	117.38	119.54	20.41	756		
							143.71	1029.76
2	277	73.83	71.89	73.84	19.95	758		
							143.66	1029.81
1	207	43.37	42.01	43.38	19.60	800		
							142.59	1030.88

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,191.21
Weather: clear and warm

Well ID: MW-17
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1128	1140
Pressure (psia)	14.10	14.09
Temperature (°C)	18.02	16.23

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	726	244.22	246.28	244.23	18.99	1130		
							190.36	1000.85
4	582	181.86	181.77	181.85	19.70	1132		
							195.19	996.02
3	468	132.44	130.32	132.41	18.62	1134		
							199.88	991.33
2	370	89.91	92.36	89.87	17.95	1136		
							189.45	1001.76
1	250	37.76	42.35	37.75	16.90	1138		
							184.83	1006.38

INSIGHT EEC, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Well ID: MW-18
Probe Type: Westbay
Serial No.:
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,225.41
Weather: clear and warm

Ambient Readings	Start	Finish
Time	1241	1254
Pressure (psia)	13.98	14.03
Temperature (°C)	18.42	17.13

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	684	157.70	209.54	157.68	20.08	1244		
							232.84	992.57
4	564	105.57	158.64	105.58	20.78	1246		
							230.27	995.14
3	424	44.69	101.74	44.70	19.85	1248		
							221.54	1003.87
2	330	14.20	60.71	14.21	18.40	1250		
							222.19	1003.22
1	270	14.15	34.73	14.14	17.63	1252		
							222.13	1003.28

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. +MSL): 1,142.94
Weather: clear and warm

Well ID: MW-19
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1100	1112
Pressure (psia)	14.13	14.07
Temperature (°C)	19.34	16.82

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	498	172.98	168.57	172.96	19.38	1102		
							141.71	1001.23
4	444	149.53	145.17	149.54	19.48	1104		
							141.69	1001.25
3	392	127.01	123.60	126.99	19.40	1106		
							139.45	1003.49
2	314	93.15	89.43	93.13	19.19	1108		
							140.28	1002.66
1	242	61.88	58.40	61.88	18.65	1110		
							139.87	1003.07

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,165.05
Weather: clear and warm

Well ID: MW-20
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1316	1330
Pressure (psia)	14.01	14.07
Temperature (°C)	19.79	17.69

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	900	324.16	328.28	324.18	21.28	1320		
							174.98	990.07
4	700	237.56	238.90	237.57	22.14	1322		
							181.18	983.87
3	562	177.74	175.31	177.76	21.71	1324		
							189.88	975.17
2	392	104.06	106.06	104.08	20.15	1326		
							179.64	985.41
1	230	33.71	35.55	33.70	18.21	1328		
							180.31	984.74

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and warm

Well ID: MW-21
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,059.10

Ambient Readings	Start	Finish
Time	817	830
Pressure (psia)	14.16	14.14
Temperature (°C)	19.14	18.84

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	372	126.38	159.26	126.38	19.74	819		
							37.25	1021.85
4	310	99.41	132.40	99.42	19.96	821		
							37.22	1021.88
3	240	69.38	102.51	69.39	19.82	823		
							36.18	1022.92
2	161	35.01	68.25	35.00	18.89	825		
							36.21	1022.89
1	90	14.19	36.83	14.17	19.12	827		
							37.70	1021.40

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Weather: clear and warm

Well ID: MW-22
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay
Elevation of Datum (Ft. + MSL): 1,176.98

Ambient Readings	Start	Finish
Time	839	851
Pressure (psia)	14.09	14.09
Temperature (°C)	18.86	20.23

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	588	201.67	199.97	201.68	20.86	841		
							159.17	1017.81
4	467	149.28	148.94	149.28	21.57	843		
							155.90	1021.08
3	389	115.47	116.89	115.47	21.45	845		
							151.84	1025.14
2	329	89.46	90.80	89.45	21.19	847		
							152.03	1024.95
1	245	52.59	54.23	52.57	20.60	849		
							152.40	1024.58

INSIGHT EEC, Inc.
Piezometric Pressures/Levels
Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,108.84
Weather: clear and warm

Well ID: MW-23
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	728	742
Pressure (psia)	14.11	14.11
Temperature (°C)	16.08	19.95

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	542	204.03	209.21	204.03	19.76	732		
							91.90	1016.94
4	445	161.98	167.29	162.02	20.55	734		
							91.61	1017.23
3	319	107.43	114.42	107.40	20.66	736		
							87.58	1021.26
2	254	79.26	86.24	79.25	20.57	738		
							87.60	1021.24
1	174	44.52	52.28	44.53	20.17	740		
							85.94	1022.90

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (Ft. + MSL): 1,200.94
Weather: clear and warm

Well ID: MW-24
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	919	931
Pressure (psia)	14.11	14.09
Temperature (°C)	19.32	21.24

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	678	233.26	225.94	233.25	21.07	921		
							189.31	1011.63
4	554	179.57	173.97	179.58	21.53	923		
							185.20	1015.74
3	435	127.96	124.06	128.02	21.59	925		
							181.35	1019.59
2	373	101.15	97.31	101.15	21.58	927		
							181.06	1019.88
1	279	60.42	58.02	60.42	21.36	929		
							177.70	1023.24

INSIGHT EEC, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. + MSL): 934.52
Weather: clear and warm

Well ID: MW-25
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

Ambient Readings	Start	Finish
Time	1352	1404
Pressure (psia)	14.17	14.22
Temperature (°C)	20.74	20.37

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
5	713	204.68	207.55	204.64	21.58	1354		
							266.87	667.65
4	633	170.21	171.52	170.23	21.79	1356		
							269.99	664.53
3	503	113.97	118.78	113.98	21.61	1358		
							261.66	672.86
2	423	79.23	87.12	79.24	21.21	1400		
							254.70	679.82
1	358	50.96	60.01	50.93	20.86	1402		
							252.25	682.27

INSIGHT EEC, Inc.
Piezometric Pressure/Levels

Field Data Sheet for Multi-Port Monitoring Wells

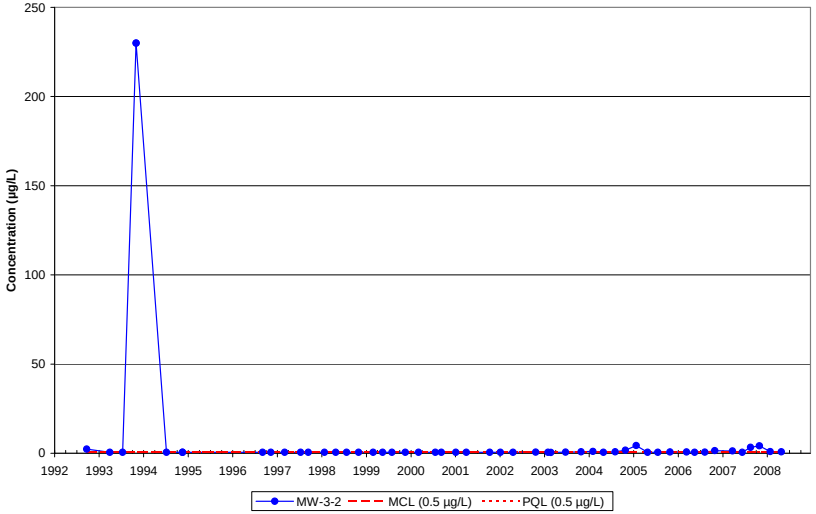
Project Name: JPL Pasadena
Project No: 4-73803
Date: 5/28/08
Personnel: Chase Brogdon, Andrew Wells
Datum: TOC
Elevation of Datum (ft. + MSL): 1,059.08
Weather: clear and warm

Well ID: MW-26
Probe Type: Westbay
Serial No.: 2508
Casing Size/Type: 1.5" Westbay

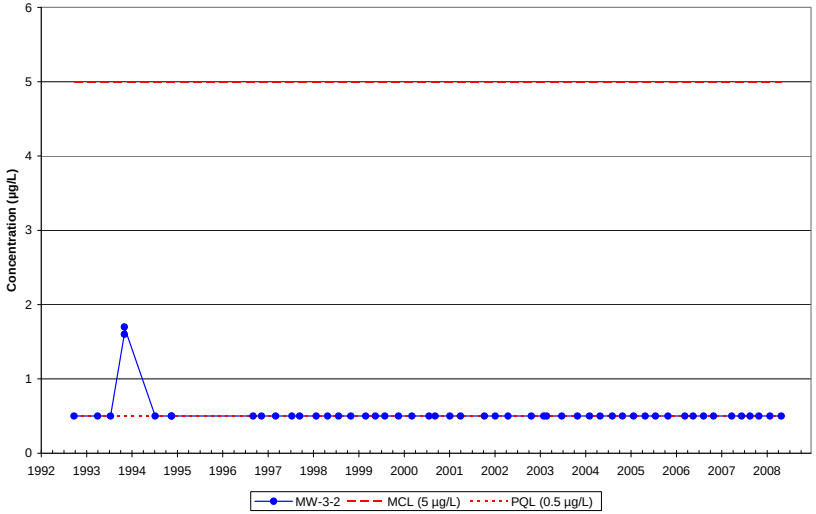
Ambient Readings	Start	Finish
Time	1415	1421
Pressure (psia)	14.10	14.17
Temperature (°C)	22.12	19.76

Screen No.	Depth (ft. BTOC)	Fluid Pressure Readings			Temp. (°C)	Time	Piezometric Level Outside Port (ft.)	Water Level Elevation (ft.)
		Inside Casing (psia)	Outside Casing (psia)	Inside Casing (psia)				
2	215	76.67	76.68	76.65	20.85	1417	70.63	988.45
1	135	42.07	39.86	42.03	20.35	1419	75.57	983.51

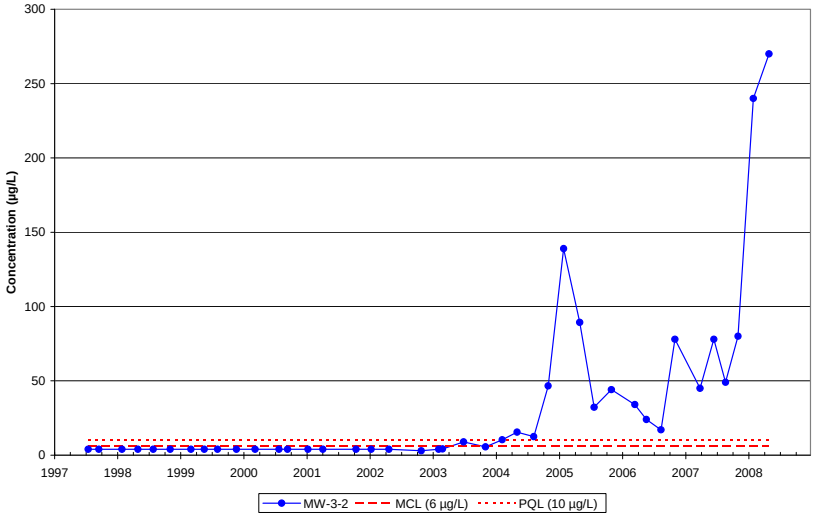
MW-3-2 Carbon tetrachloride Concentrations 1992 to Present



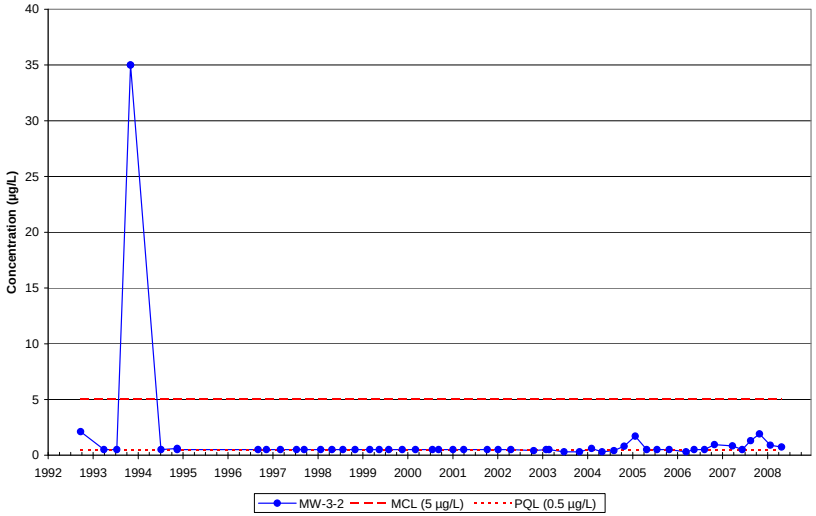
MW-3-2 Tetrachloroethene (PCE) Concentrations 1992 to Present



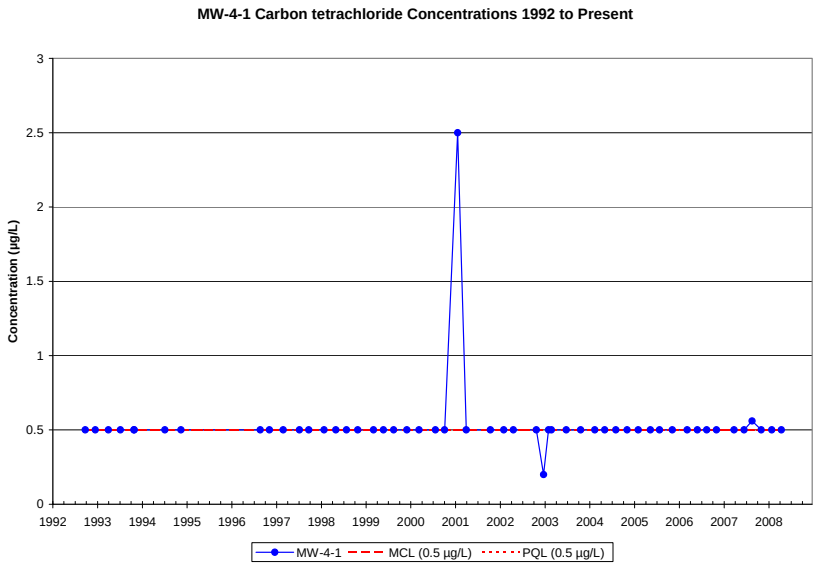
MW-3-2 Perchlorate Concentrations 1997 to Present

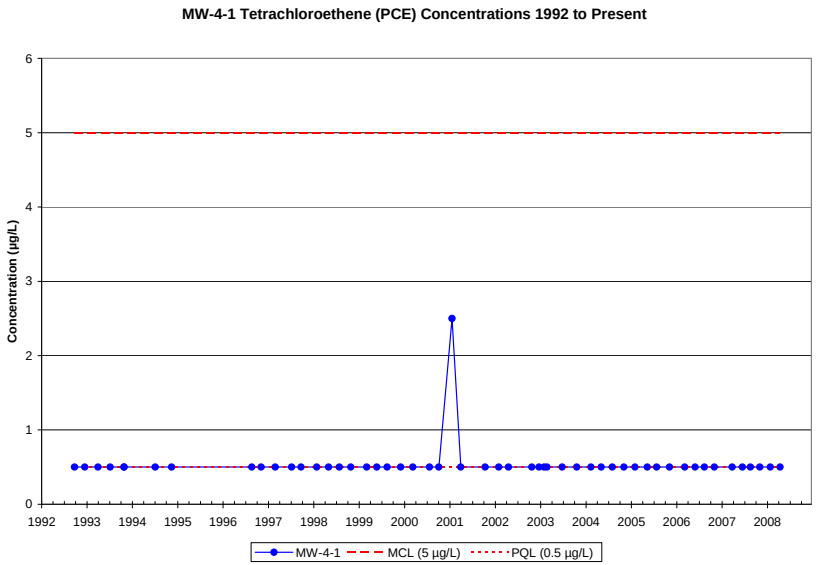


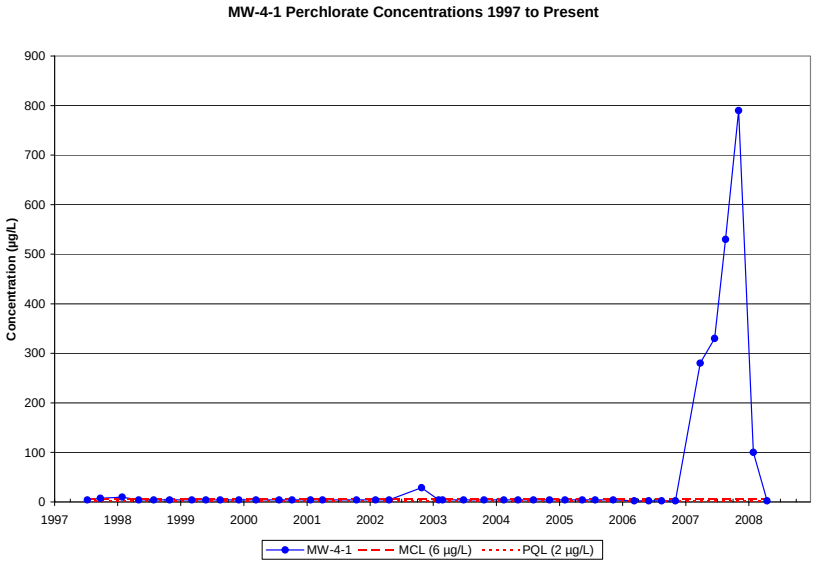
MW-3-2 Trichloroethene (TCE) Concentrations 1992 to Present

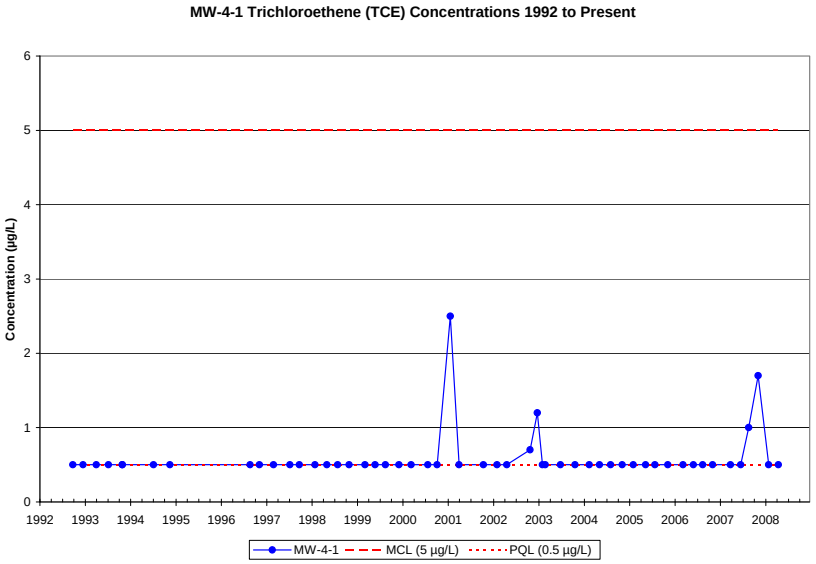


VOCs and Perchlorate Time Series Plots for MW-3-2



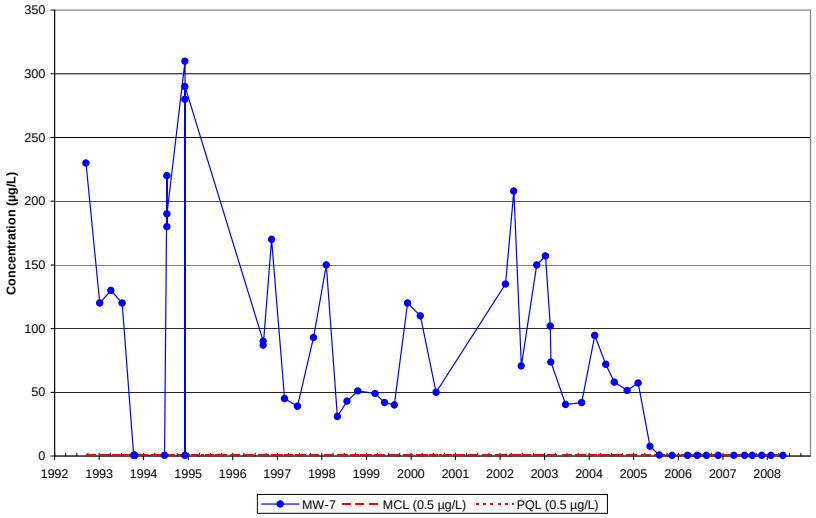




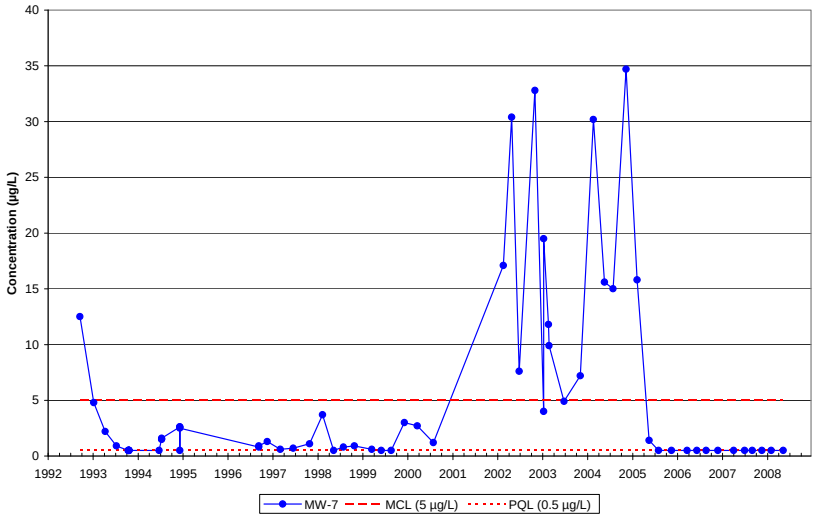


VOCs and Perchlorate Time Series Plots for MW-4-1

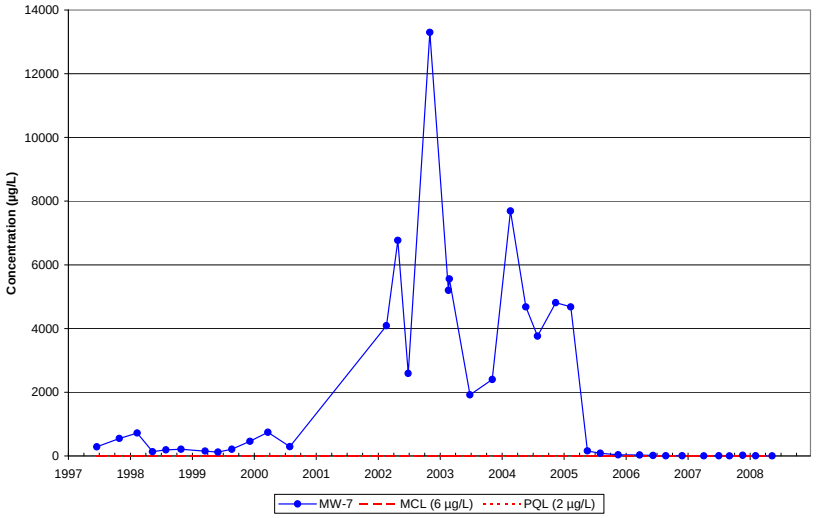
MW-7 Carbon tetrachloride Concentrations 1992 to Present



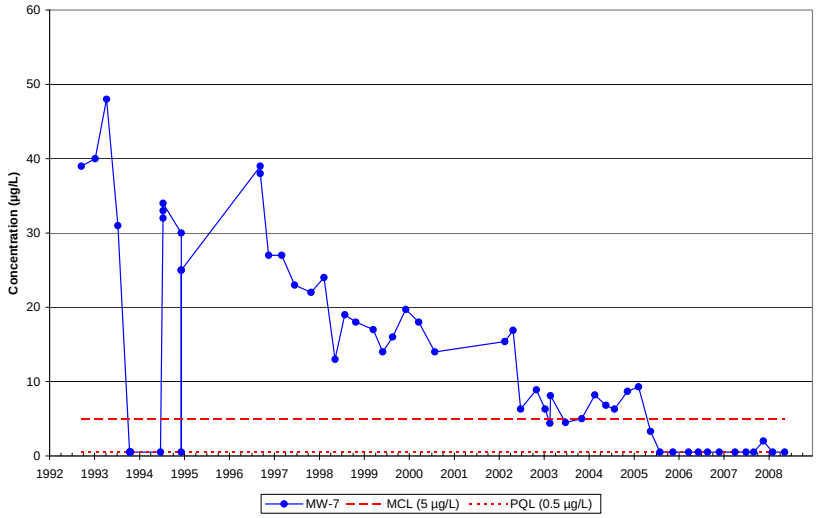
MW-7 Tetrachloroethene (PCE) Concentrations 1992 to Present



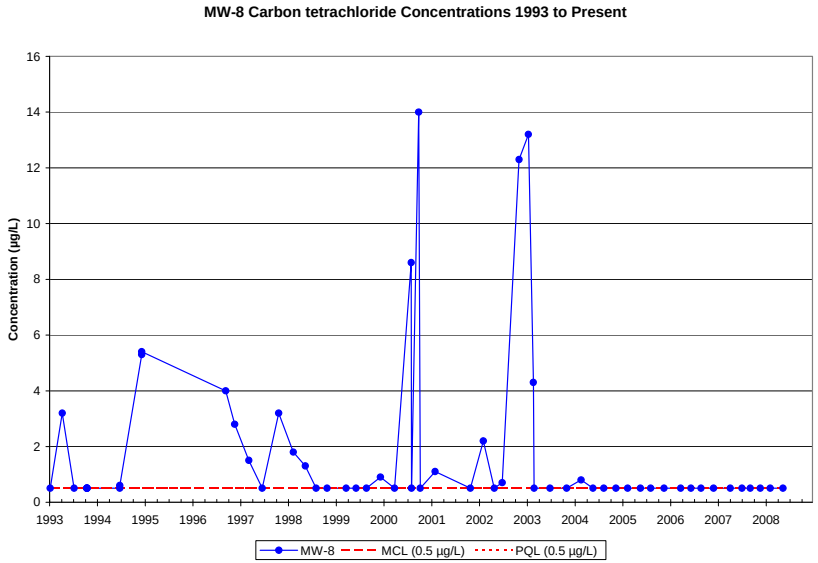
MW-7 Perchlorate Concentrations 1997 to Present

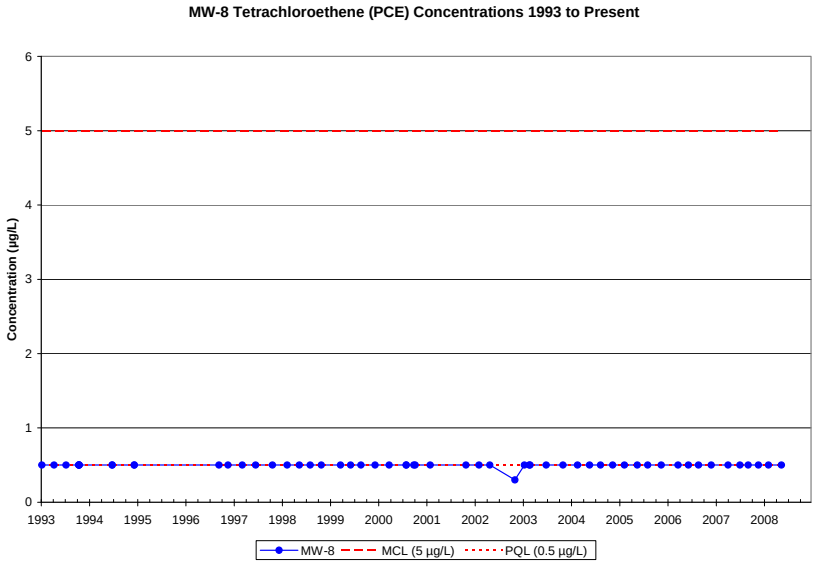


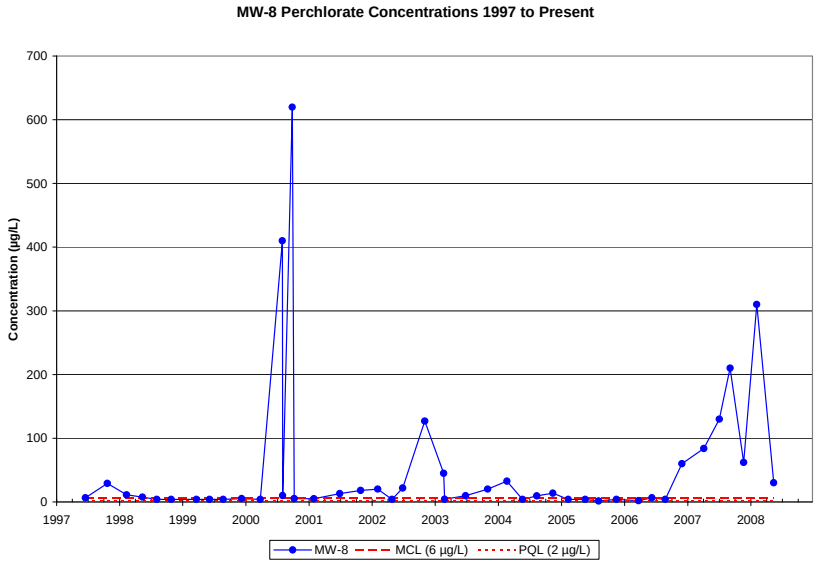
MW-7 Trichloroethene (TCE) Concentrations 1992 to Present

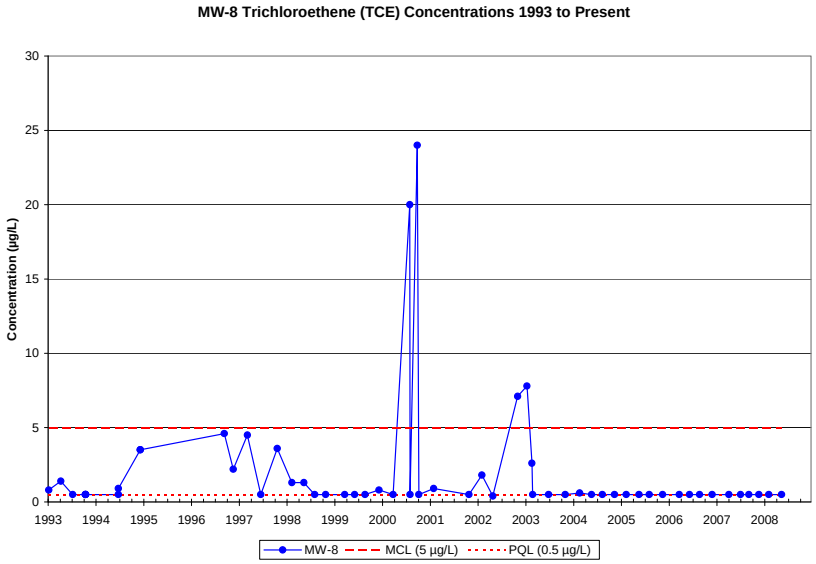


VOCs and Perchlorate Time Series Plots for MW-7

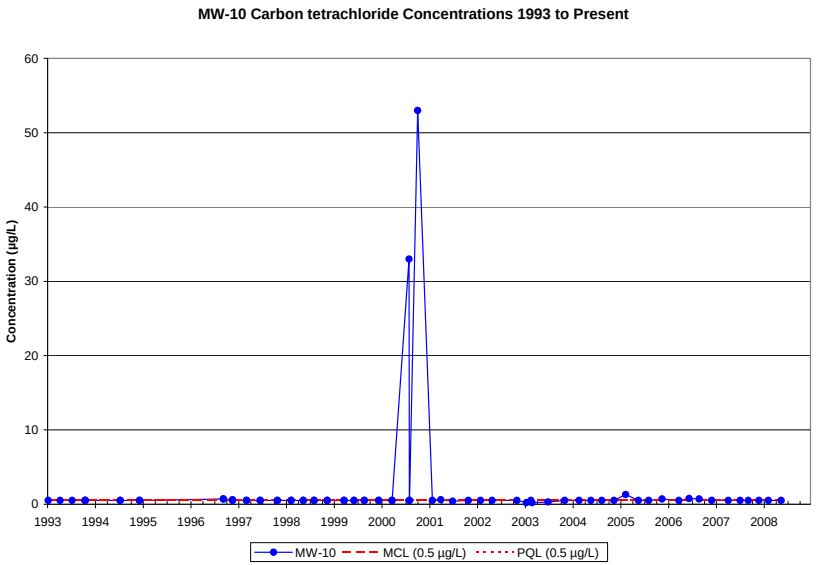


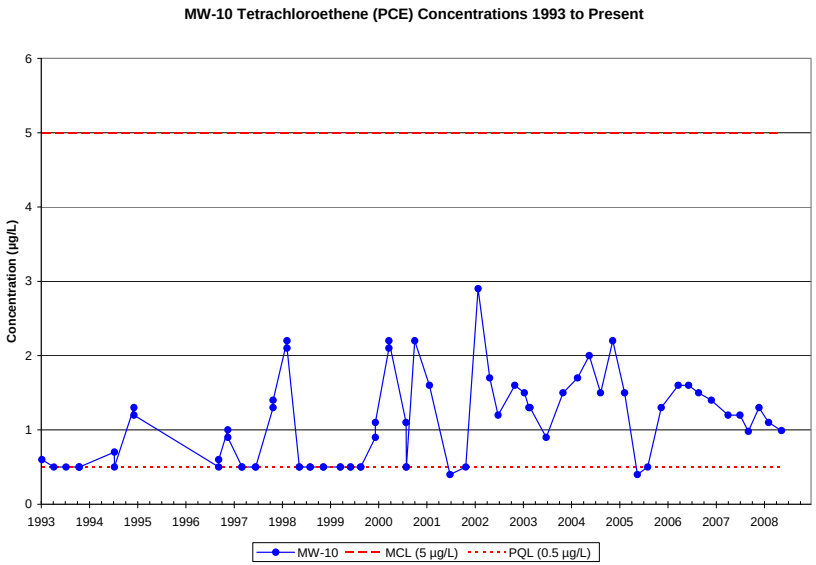


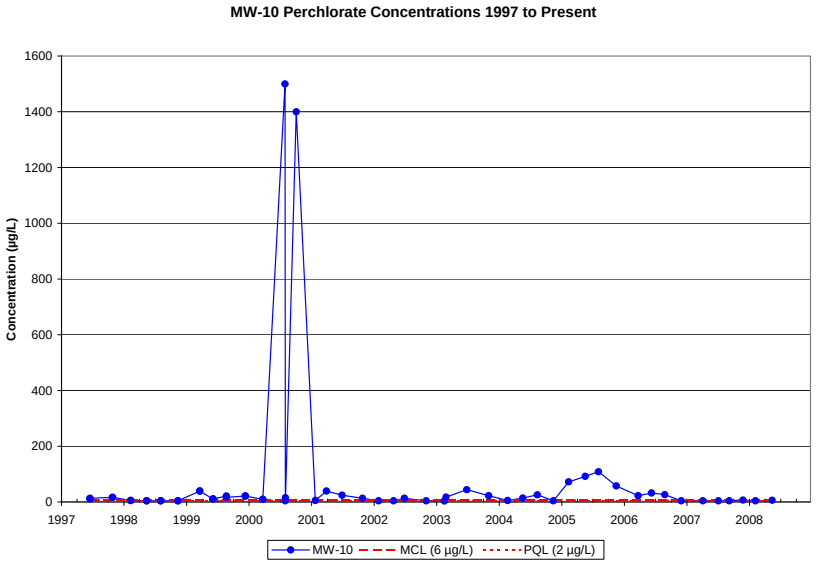


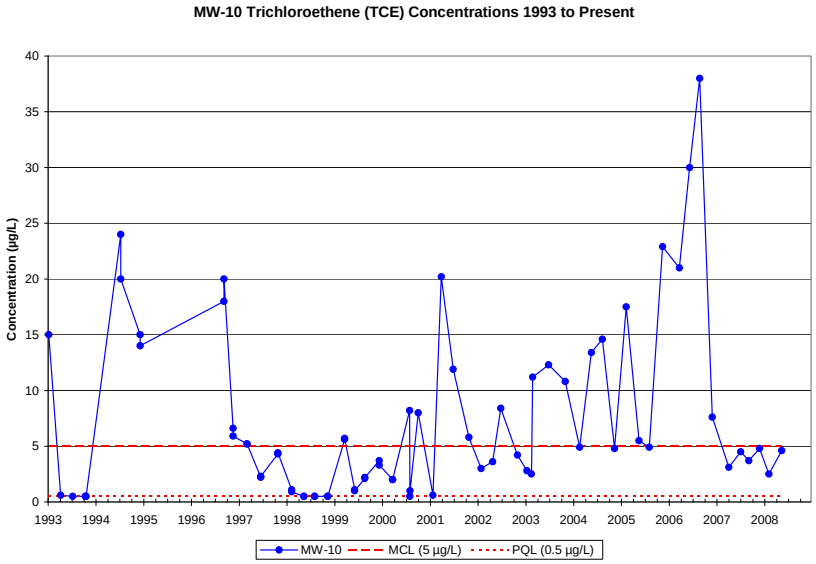


VOCs and Perchlorate Time Series Plots for MW-8



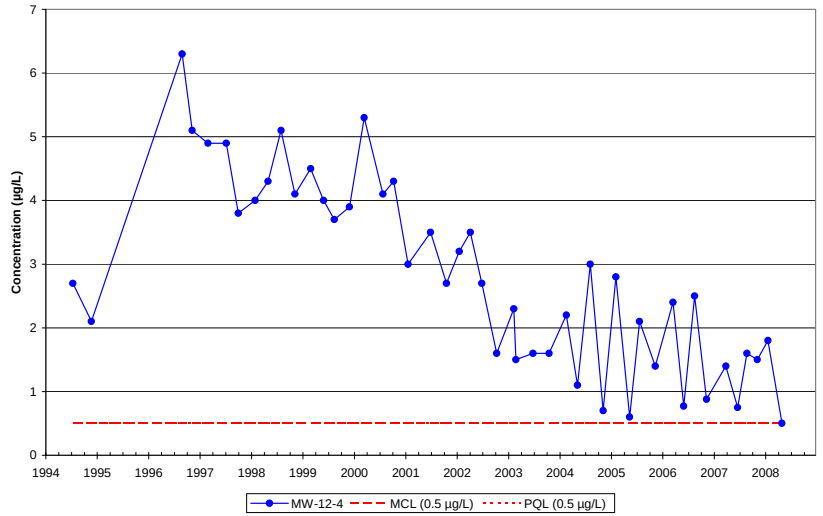




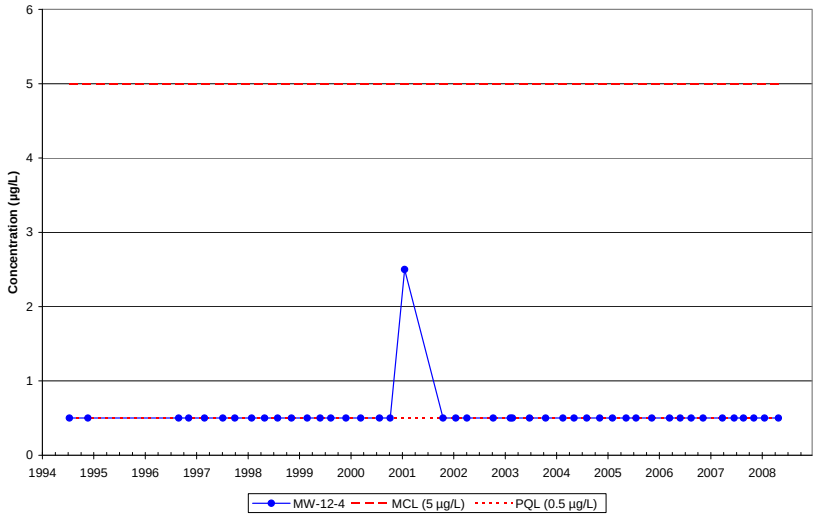


VOCs and Perchlorate Time Series Plots for MW-10

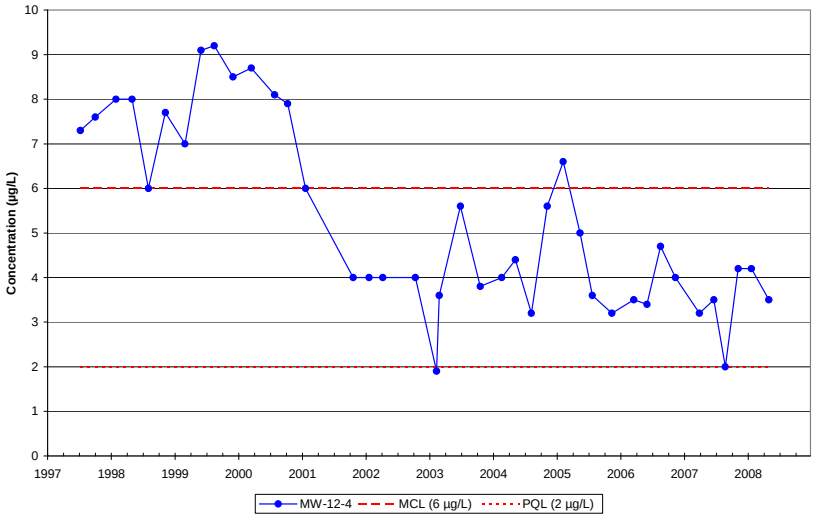
MW-12-4 Carbon tetrachloride Concentrations 1994 to Present



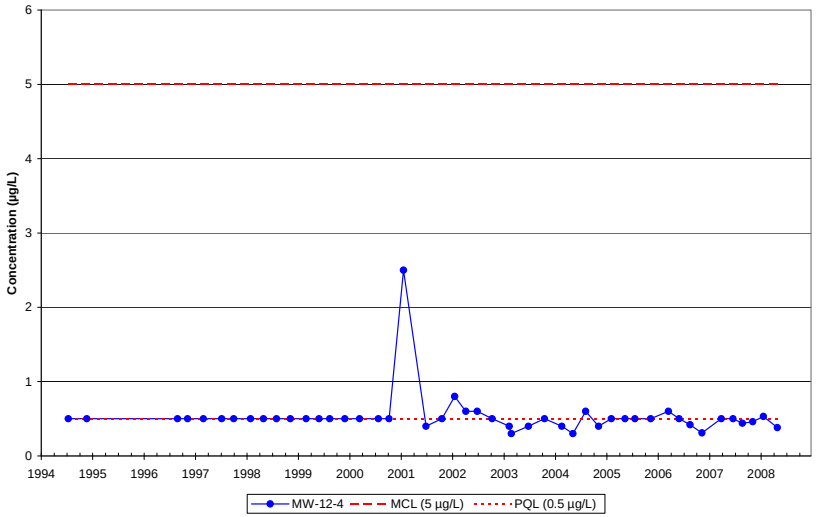
MW-12-4 Tetrachloroethene (PCE) Concentrations 1994 to Present



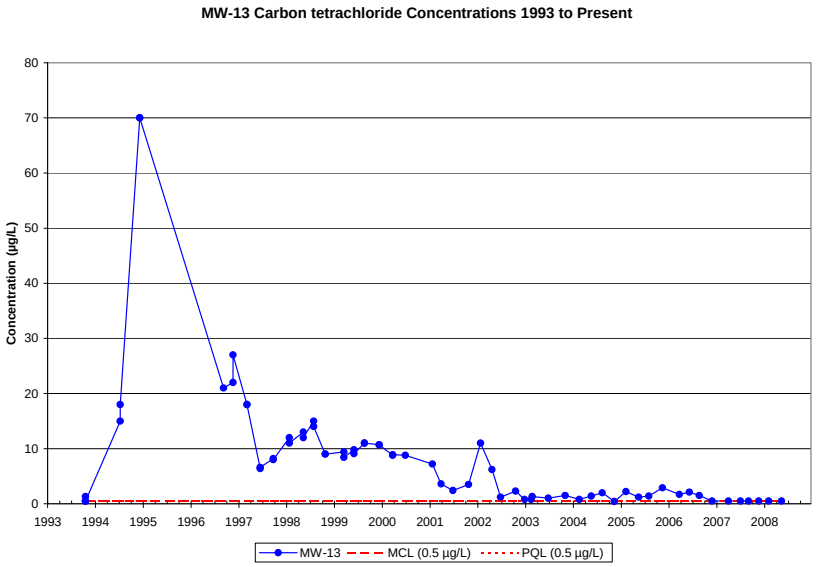
MW-12-4 Perchlorate Concentrations 1997 to Present

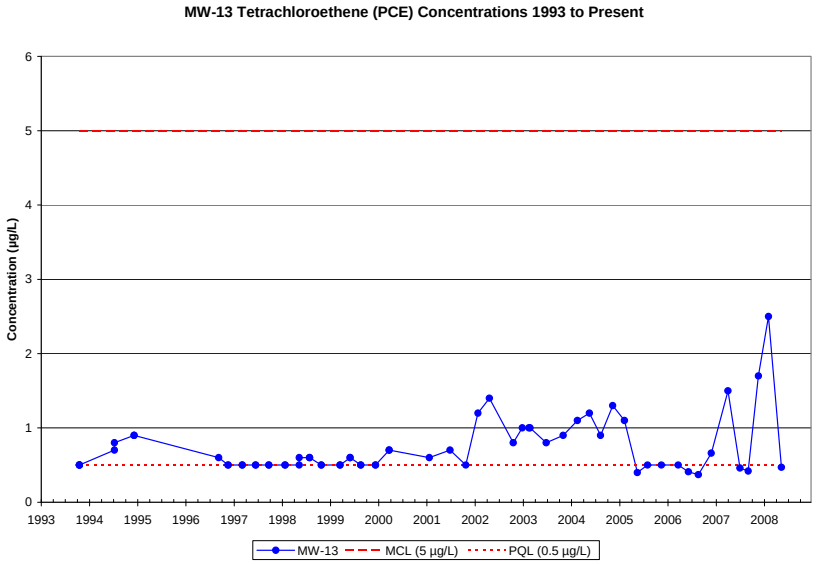


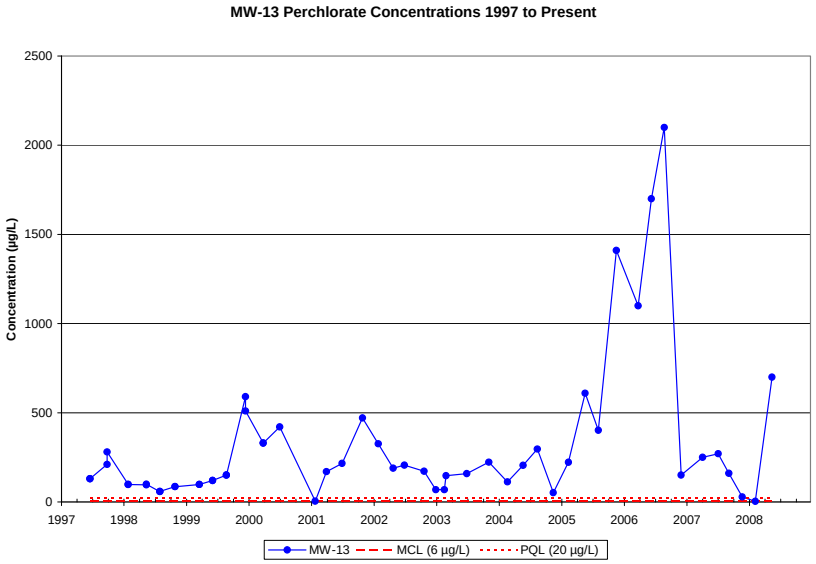
MW-12-4 Trichloroethene (TCE) Concentrations 1994 to Present

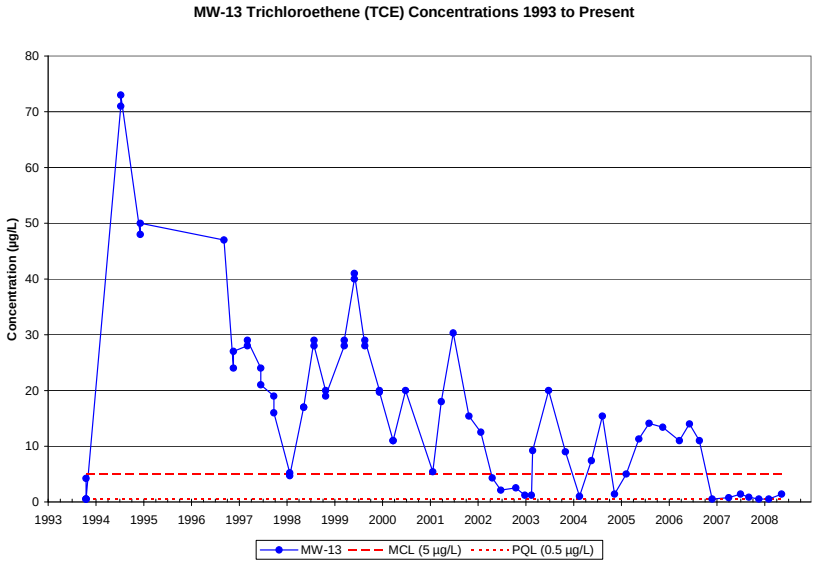


VOCs and Perchlorate Time Series Plots for MW-12-4



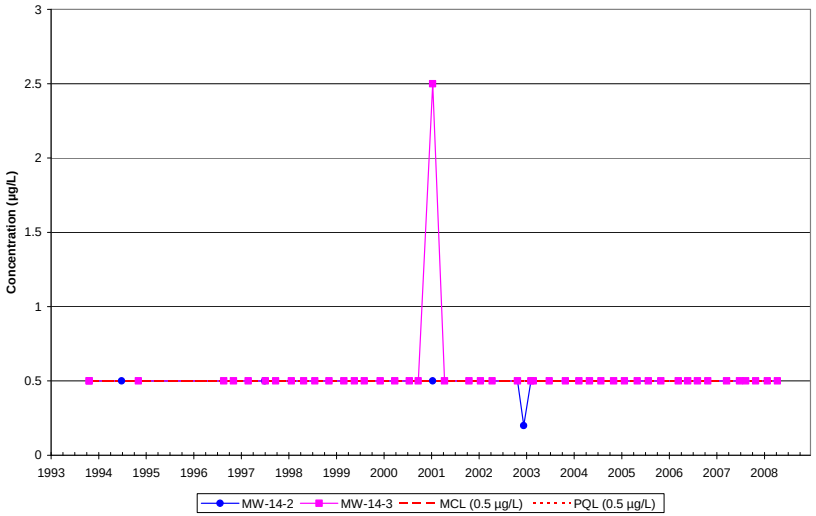




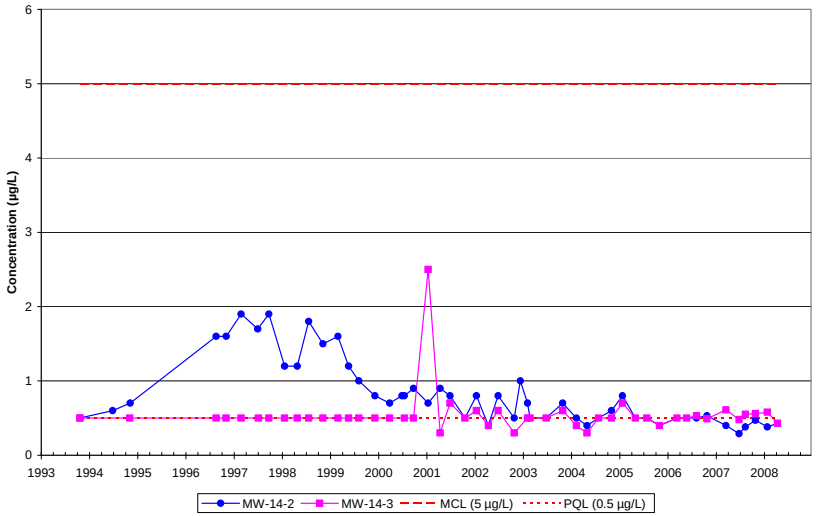


VOCs and Perchlorate Time Series Plots for MW-13

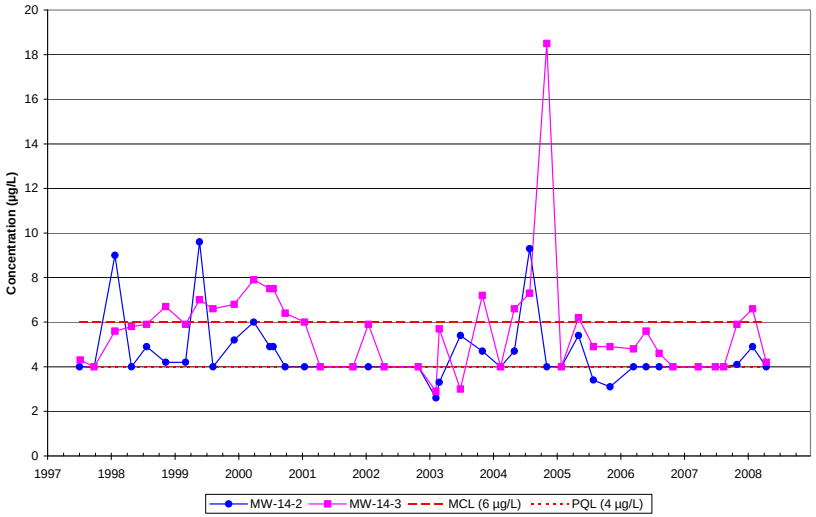
MW-14-2 and MW-14-3 Carbon tetrachloride Concentrations 1993 to Present



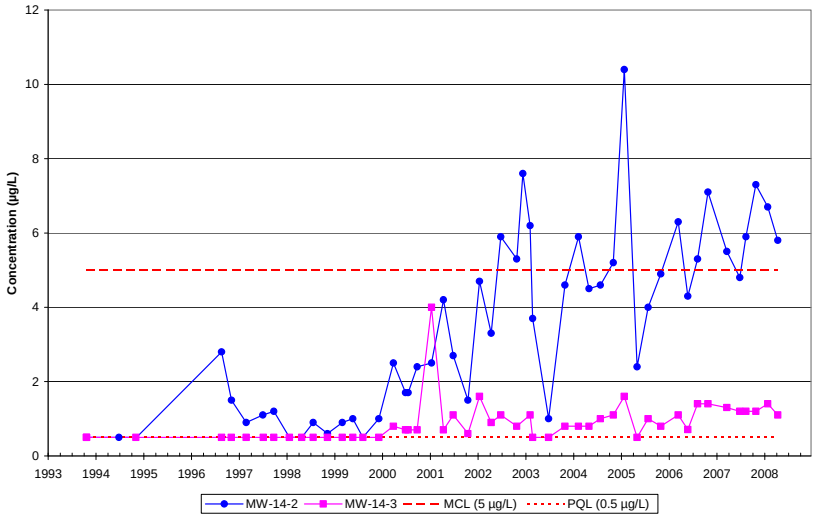
MW-14-2 and MW-14-3 Tetrachloroethene (PCE) Concentrations 1993 to Present



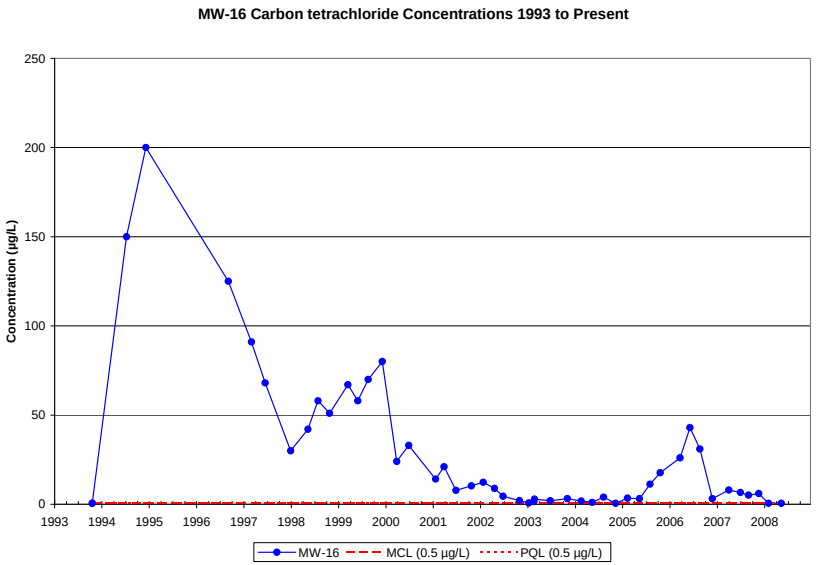
MW-14-2 and MW-14-3 Perchlorate Concentrations 1997 to Present

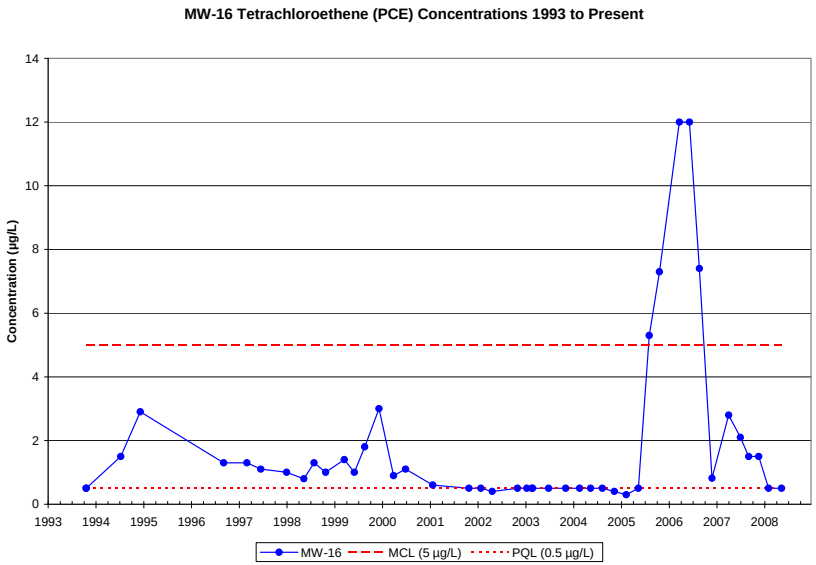


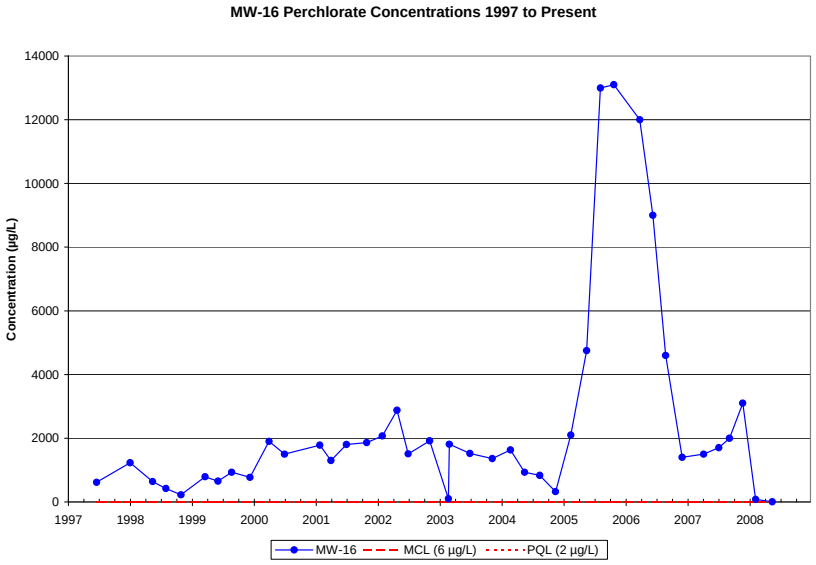
MW-14-2 and MW-14-3 Trichloroethene (TCE) Concentrations 1993 to Present

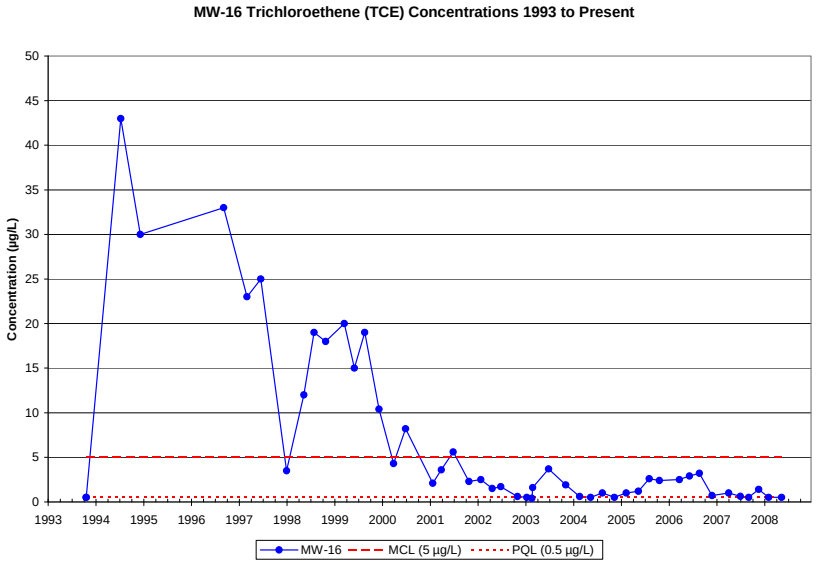


VOCs and Perchlorate Time Series Plots for MW-14-2 and MW-14-3



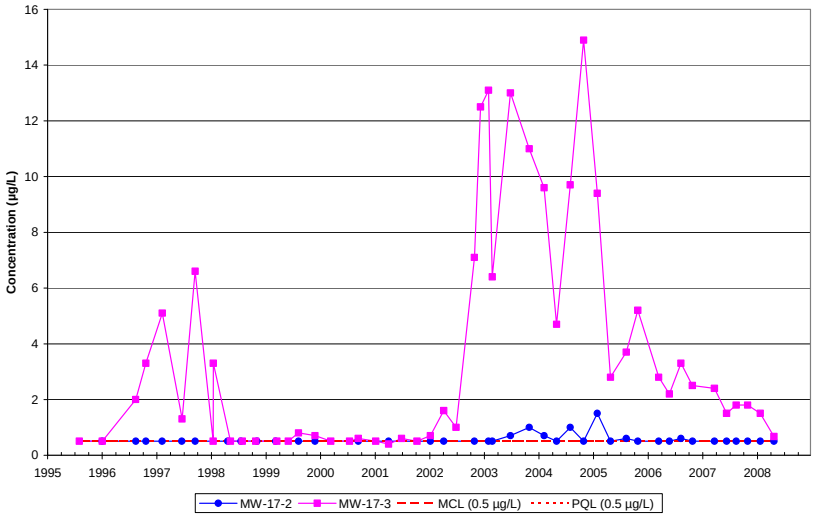




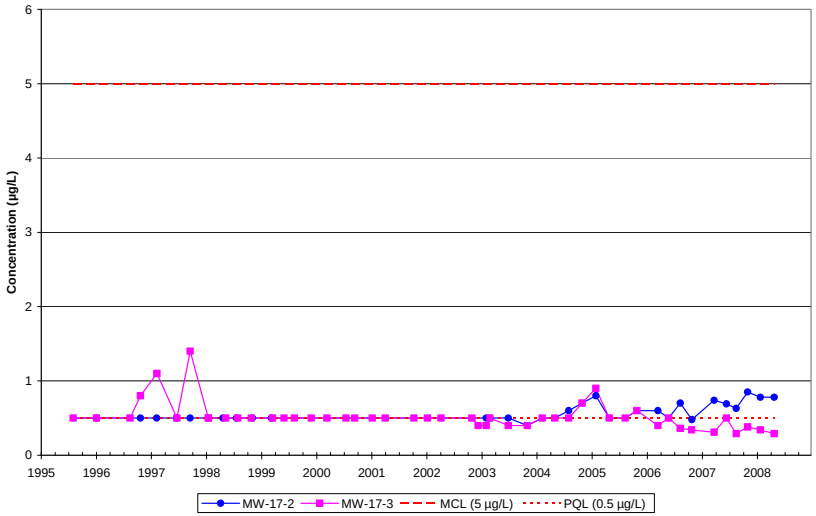


VOCs and Perchlorate Time Series Plots for MW-16

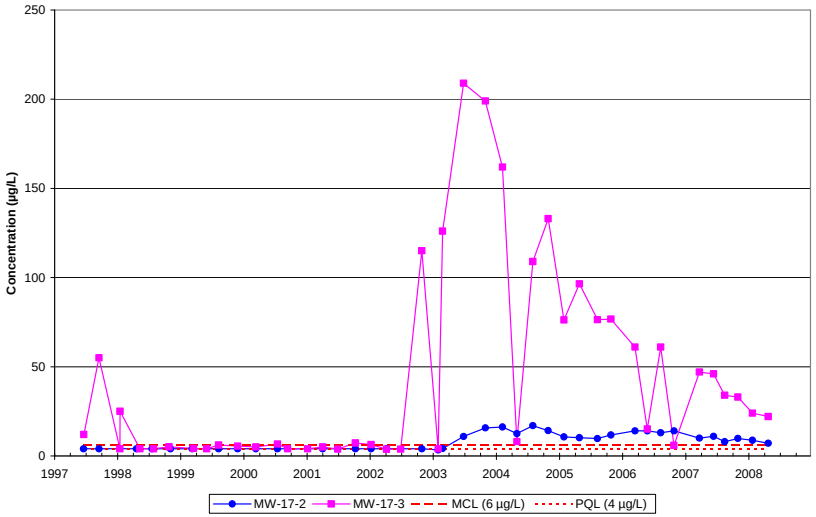
MW-17-2 and MW-17-3 Carbon tetrachloride Concentrations 1995 to Present



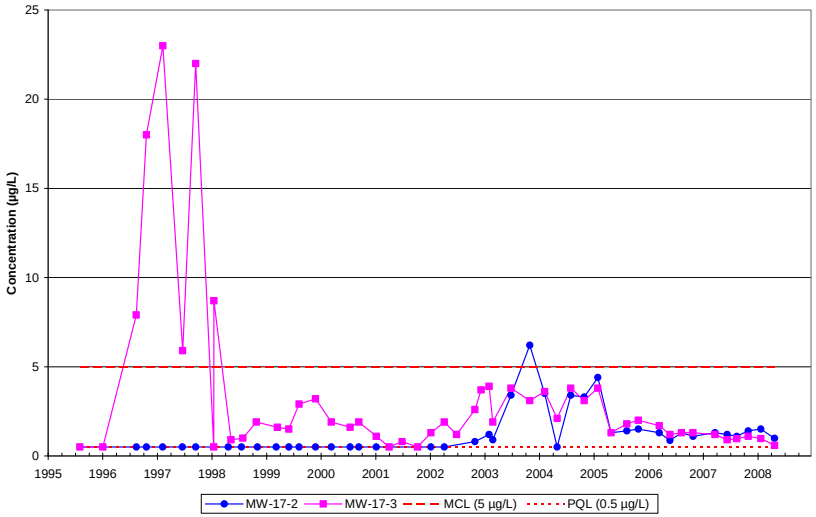
MW-17-2 and MW-17-3 Tetrachloroethene (PCE) Concentrations 1995 to Present



MW-17-2 and MW-17-3 Perchlorate Concentrations 1997 to Present

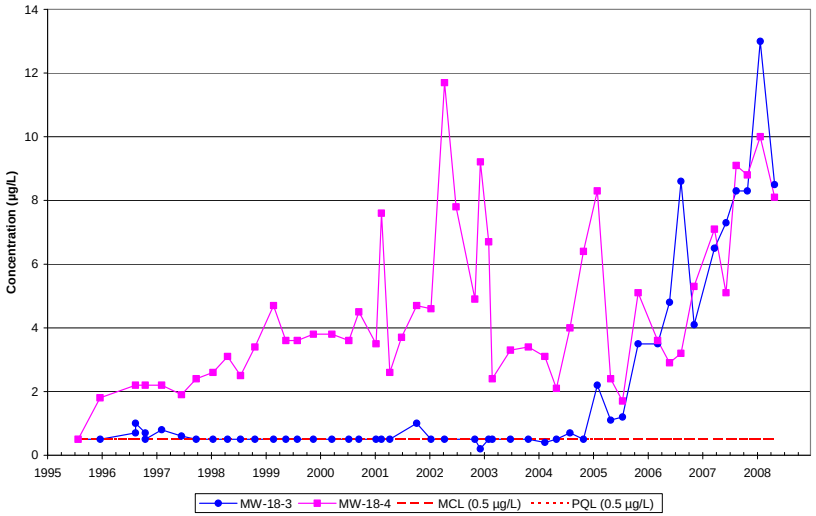


MW-17-2 and MW-17-3 Trichloroethene (TCE) Concentrations 1995 to Present

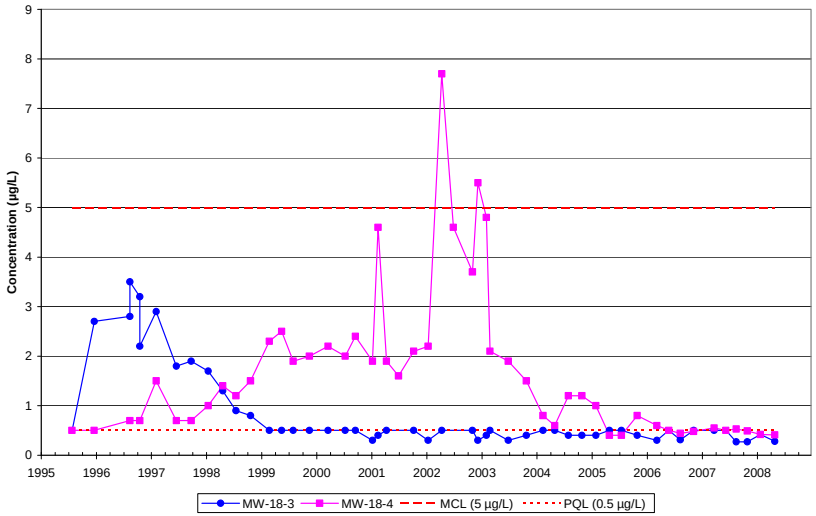


VOCs and Perchlorate Time Series Plots for MW-17-2 and MW-17-3

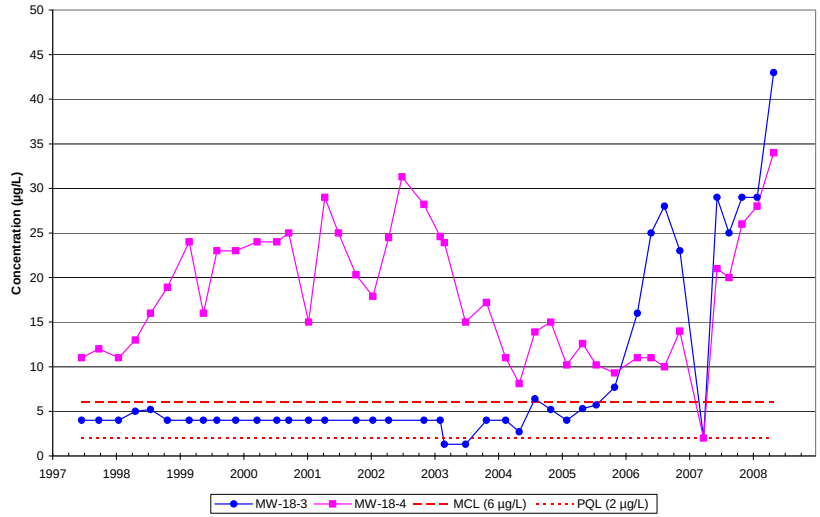
MW-18-3 and MW-18-4 Carbon tetrachloride Concentrations 1995 to Present



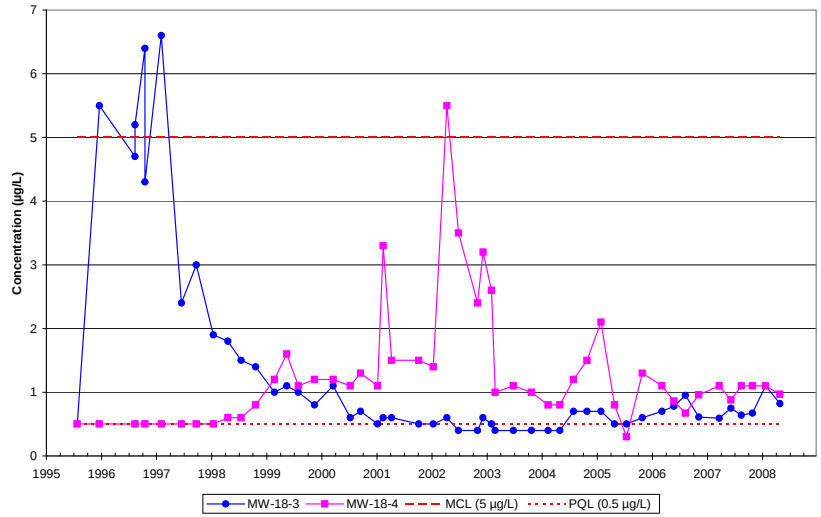
MW-18-3 and MW-18-4 Tetrachloroethene (PCE) Concentrations 1995 to Present



MW-18-3 and MW-18-4 Perchlorate Concentrations 1997 to Present

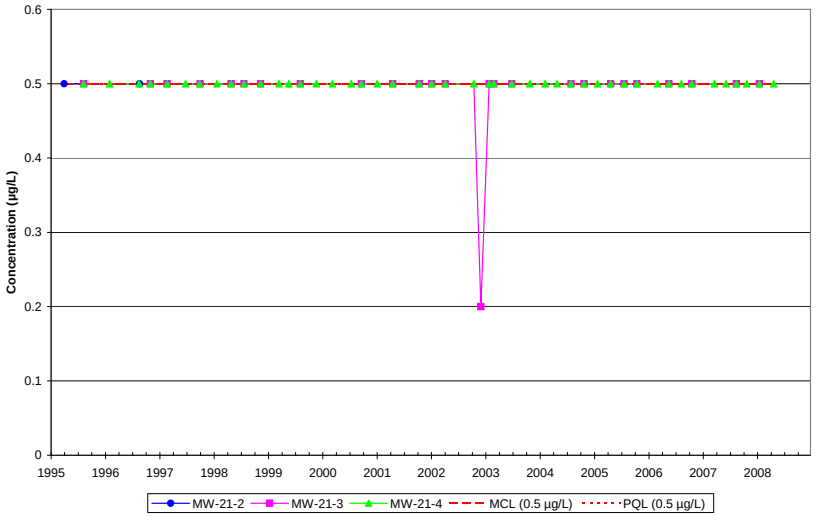


MW-18-3 and MW-18-4 Trichloroethene (TCE) Concentrations 1995 to Present

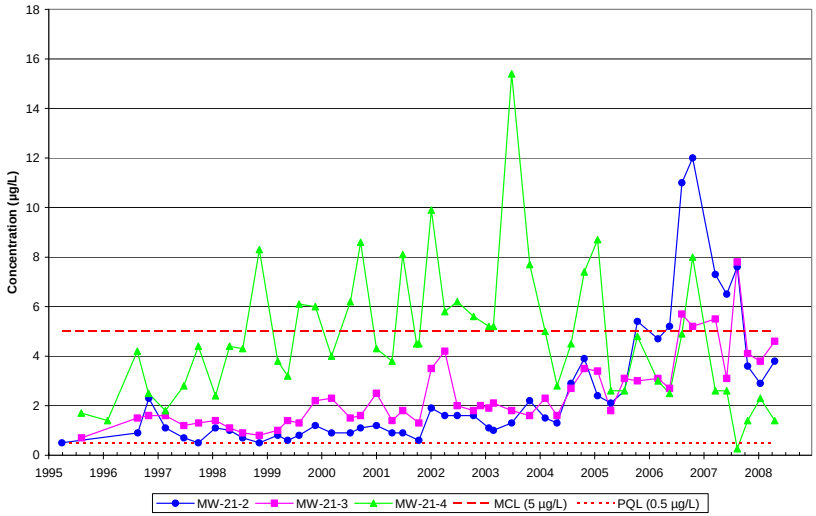


VOCs and Perchlorate Time Series Plots for MW-18-3 and MW-18-4

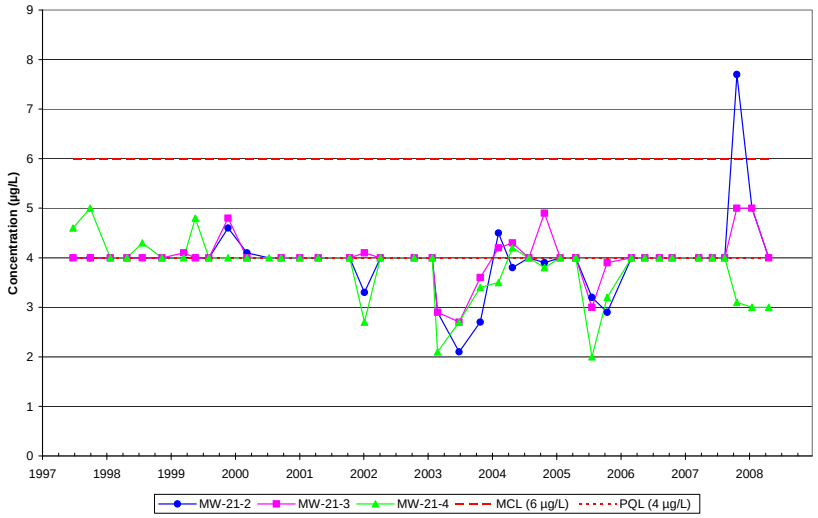
MW-21-2, MW-21-3, and MW-21-4 Carbon tetrachloride Concentrations 1995 to Present



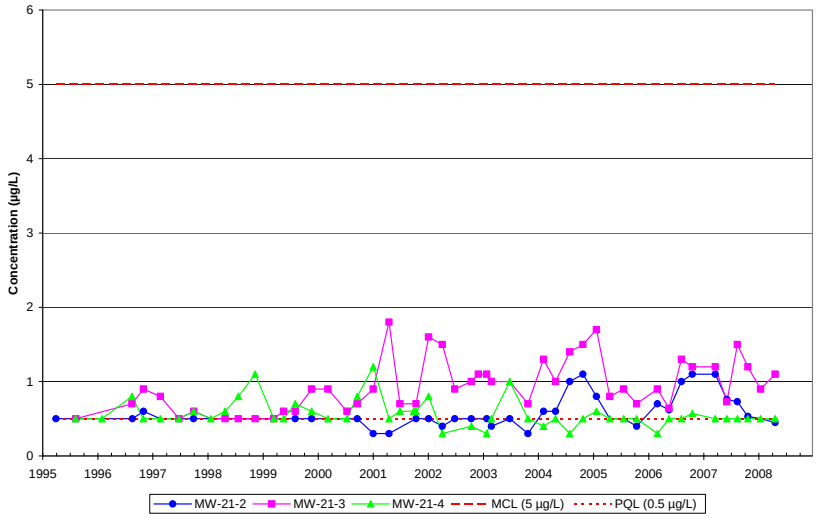
MW-21-2, MW-21-3, and MW-21-4 Tetrachloroethene (PCE) Concentrations 1995 to Present



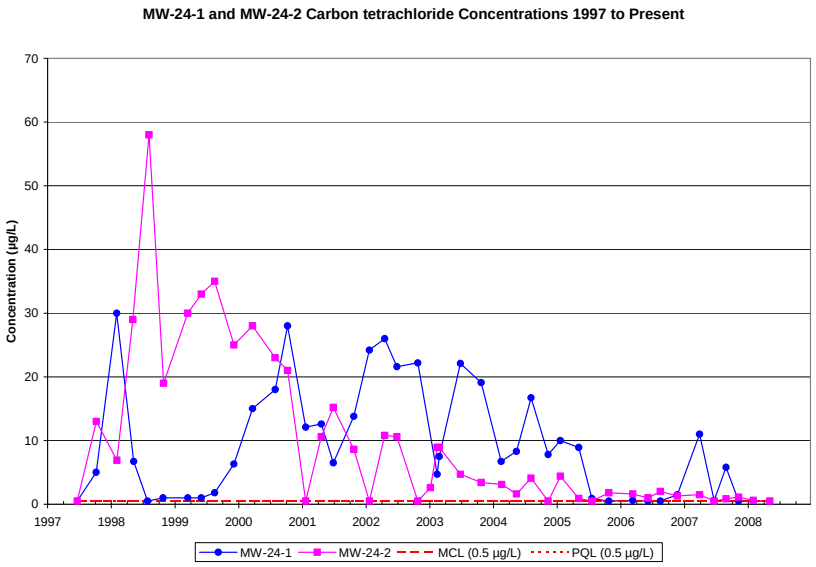
MW-21-2, MW-21-3, and MW-21-4 Perchlorate Concentrations 1997 to Present

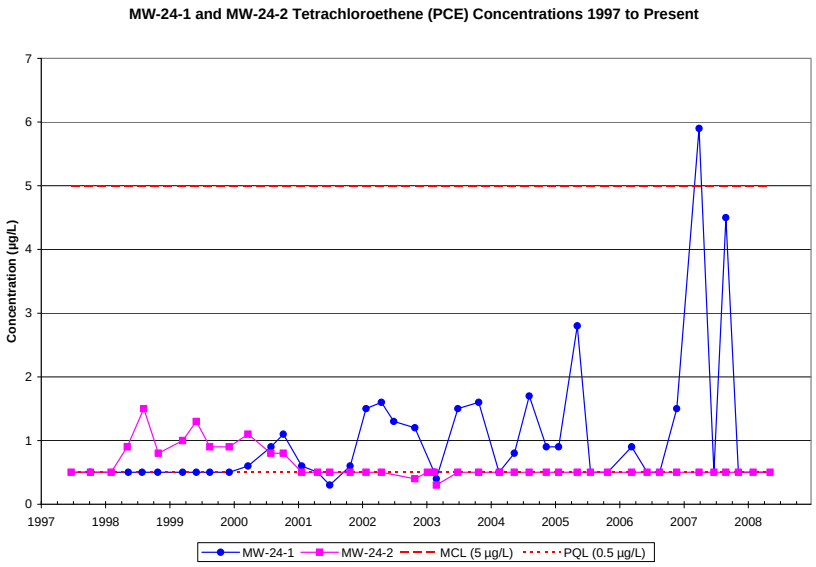


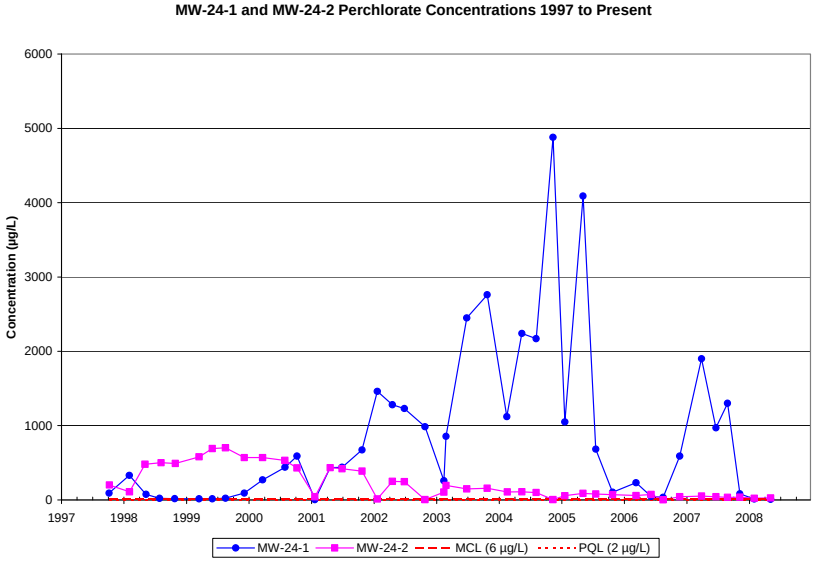
MW-21-2, MW-21-3, and MW-21-4 Trichloroethene (TCE) Concentrations 1995 to Present

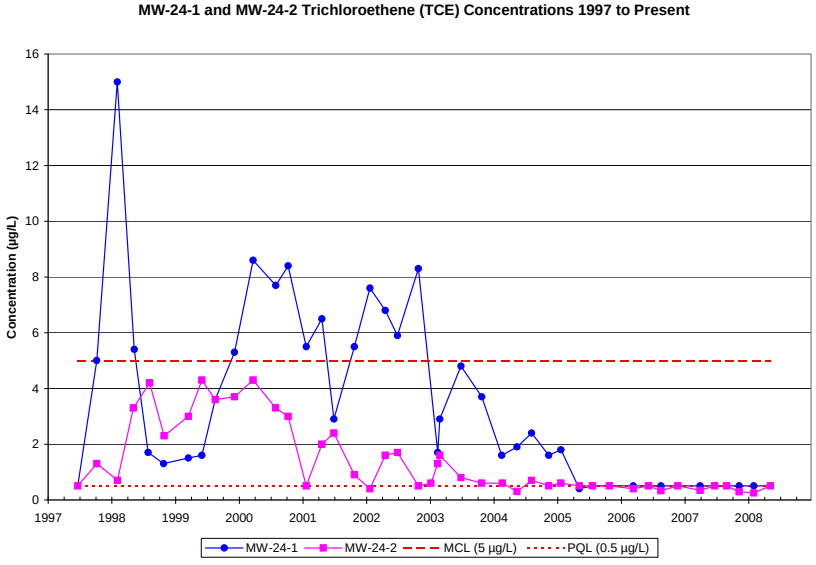


VOCs and Perchlorate Time Series Plots for MW-21-2, MW-21-3 and MW-21-4









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