

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 was conducted by Geofon Inc.

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 1



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/4/06
 Weather: clear and cold

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{120}{\text{TD (feet)}} - \frac{23.15}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{189.67}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (°C)	ORP (mV)	Comments
735	23.15	0	5.41	66.7	1.08	8.85	11.3	151	Clear, no odor
748	23.15	38	5.86	63.2	0.57	13.53	12.8	99	Clear, no odor
800	23.15	76	6.08	62.1	0.43	7.78	13.1	255	Clear, no odor
813	23.15	14	6.19	62.1	-0.12	13.85	13.5	98	Clear, no odor
825	23.15	152	6.29	62.4	-0.10	15.23	13.6	104	Clear, no odor
838	23.15	190	6.40	62.8	0	14.19	13.8	110	Clear, no odor

Total Purge Volume: 190 (Gallons)

Total Discharge: 3.0 (Casing Volumes)

Approx. Purge Rate: 3.0 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 732 Purge time start: 735

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-1</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>840</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 5



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/1/06
 Weather: clear and cold

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{140}{\text{TD (feet)}} - \frac{56}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{164.51}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (° C)	ORP (mV)	Comments
757	56	0	5.41	57.2	27.7	13.83	12.9	140	Clear, no odor
819	56	33	5.22	53.7	8.44	15.03	14.7	126	Clear, no odor
841	56	66	6.30	54.5	4.90	15.22	15.2	131	Clear, no odor
903	56	99	6.38	54.3	2.06	14.84	15.9	135	Clear, no odor
925	56	132	6.43	54.5	1.50	14.09	15.7	125	Clear, no odor
947	56	165	6.43	54.9	0.94	6.18	16.4	302	Clear, no odor

Total Purge Volume: 165 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 750 Purge time start: 757

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-5</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>946</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>34 (MS/MSD)</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 6



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/1/06
 Weather: clear and mild

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{245}{\text{TD (feet)}} - \frac{155.99}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{174.32}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (°C)	ORP (mV)	Comments
1046	155.99	0	6.36	0.1	163	14.67	19.8	291	Orange brown color, no odor
1109	155.99	35	6.42	0.1	46.8	17.63	19.2	198	Slightly brown color, no odor
1133	155.99	70	6.58	0.1	10.69	6.41	19.4	304	Clear, no odor
1156	155.99	105	6.54	0.1	7.12	15.50	19.9	184	Clear, no odor
1220	155.99	140	6.64	0.1	13.03	11.17	19.8	335	Clear, no odor
1243	155.99	175	6.80	0.1	2.28	15.76	20.8	182	Clear, no odor

Total Purge Volume: 175 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1040 Purge time start:1046

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-6</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1245</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 7



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/5/06
 Weather: clear and cool

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{275}{\text{TD (feet)}} - \frac{193.57}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{159.47}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (°C)	ORP (mV)	Comments
738	193.57	0	5.20	65.1	102.6	14.19	17.3	137	Pinkish brown color, no odor
759	193.57	32	5.49	63.5	9.34	14.79	17.9	133	Clear, no odor
821	193.57	64	5.80	63.1	2.44	12.64	18.0	114	Clear, no odor
842	193.57	96	5.99	63.1	2.62	12.20	18.0	105	Clear, no odor
904	193.57	128	6.22	63.2	1.45	5.57	18.9	301	Clear, no odor
925	193.57	160	6.27	63.6	0.74	14.08	19.7	137	Clear, no odor

Total Purge Volume: 160 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 732 Purge time start: 738

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-7</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>928</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>12 (MS/MSD)</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 8



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/6/06
 Weather: clear and mild

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PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{205}{\text{TD (feet)}} - \frac{120.98}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{164.54}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (° C)	ORP (mV)	Comments
1036	120.98	0	6.63	63.2	30.0	16.50	17.2	143	Clear, no odor
1049	120.98	33	6.68	63.0	5.08	17.43	17.2	151	Clear, no odor
1102	120.98	66	6.70	62.8	2.94	16.71	17.2	154	Clear, no odor
1115	120.98	99	6.73	62.6	2.72	16.78	17.2	157	Clear, no odor
1129	120.98	132	6.75	62.9	0.78	16.52	17.4	143	Clear, no odor
1142	120.98	165	6.77	62.4	0.09	15.49	17.2	136	Clear, no odor

Total Purge Volume: 165 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 2.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1030 Purge time start:: 1036

RECHARGE BEHAVIOR: 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: <u>MW-8</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1132</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 9



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/4/06
 Weather: clear and mild

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{68}{\text{TD (feet)}} - \frac{19.08}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{95.80}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (°C)	ORP (mV)	Comments
926	19.08	0	6.43	55.9	2.48	12.49	18.3	118	Clear, no odor
933	19.08	20	6.52	55.6	1.57	13.84	18.1	126	Clear, no odor
940	19.08	40	6.58	58.3	11.8	13.64	17.8	124	Clear, no odor
947	19.08	60	6.63	58.6	6.82	15.29	17.9	130	Clear, no odor
954	19.08	80	6.68	59.4	1.35	14.39	18.9	139	Clear, no odor
1001	19.08	100	6.66	60.0	0.23	12.35	19.5	100	Clear, no odor

Total Purge Volume: 100 (Gallons)

Total Discharge: 3.13 (Casing Volumes)

Approx. Purge Rate: 3.0 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 923 Purge time start: 926

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-9</u>	Sample ID: <u>DUPE-7-4Q06</u>	Type: _____	Type: _____
Sample Time: <u>1005</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: <u>6</u>	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 10



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/7/06
 Weather: clear and cool

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{155}{\text{TD (feet)}} - \frac{69.09}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{168.25}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (° C)	ORP (mV)	Comments
828	69.09	0	4.90	0.1	16.6	15.72	17.5	143	Clear, no odor
839	69.09	34	5.56	0.1	3.04	16.25	18.1	230	Clear, no odor
851	69.09	68	5.90	0.1	1.37	14.82	18.4	242	Clear, no odor
902	69.09	102	6.05	0.1	1.08	19.34	18.4	139	Clear, no odor
914	69.09	136	6.19	0.1	0.59	17.68	18.6	243	Clear, no odor
925	69.09	170	6.30	0.1	0.44	18.34	19.1	238	Clear, no odor

Total Purge Volume: 170 (Gallons)

Total Discharge: 3.03 (Casing Volumes)

Approx. Purge Rate: 3.0 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 825 Purge time start: 828

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-10</u>	Sample ID: <u>DUPE-8-4Q06</u>	Type: _____	Type: _____
Sample Time: <u>930</u>	Sample Time: <u>-----</u>	Sample ID: _____	Sample ID: _____
No. of Containers: <u>17</u>	No. of Containers: <u>17</u>	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 13



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/6/06
 Weather: clear and cool

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{235}{\text{TD (feet)}} - \frac{162.67}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{141.65}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (° C)	ORP (mV)	Comments
744	162.67	0	4.98	98.7	11.8	15.81	17.2	158	Clear, no odor
803	162.67	28	5.49	91.5	4.82	15.30	17.7	143	Clear, no odor
822	162.67	57	5.81	91.0	2.20	14.51	17.8	132	Clear, no odor
841	162.67	85	6.03	90.1	1.34	14.45	18.5	147	Clear, no odor
900	162.67	114	6.20	91.3	0.80	15.20	19.1	154	Clear, no odor
919	162.67	142	6.36	91.7	0.56	14.39	19.1	138	Clear, no odor

Total Purge Volume: 142 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 740 Purge time start: 744

RECHARGE BEHAVIOR: 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): _____

<u>Original</u>	<u>Duplicate</u>	<u>Blank</u>	<u>Other (Trip / Source /)</u>
Sample ID: <u>MW-13</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>922</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 15



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/4/06
 Weather: clear and warm

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

PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{74}{\text{TD (feet)}} - \frac{29.55}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{87.05}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (°C)	ORP (mV)	Comments
1042	29.55	0	6.70	65.4	136	12.40	22.5	141	Brownish color, no odor
1054	29.55	18	6.86	69.5	3.94	14.10	20.2	129	Clear, no odor
1106	29.55	36	6.94	68.9	-0.07	14.61	20.1	141	Clear, no odor
1118	29.55	54	6.96	67.8	-0.71	14.50	20.8	140	Clear, no odor
1130	29.55	72	7.01	66.8	-0.49	13.99	20.8	155	Clear, no odor
1142	29.55	90	7.07	68.5	-2.24	10.11	22.1	110	Clear, no odor

Total Purge Volume: 90 (Gallons)

Total Discharge: 3.10 (Casing Volumes)

Approx. Purge Rate: 1.50 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1037 Purge time start: 1042

RECHARGE BEHAVIOR: 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: <u>MW-15</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1145</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG

WELL ID # 16



Project Name: Quarterly Monitoring at JPL, Pasadena, CA.
 Project No: 4-73803
 Navy Contract No.: Battelle
 Sampled By: Marco Mendoza, Chase Brogdon
 Date: 12/5/06
 Weather: clear and warm

22632 Golden Springs Dr., Suite 270
 Diamond Bar, CA 91765
 Telephone: (909) 396-7662
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PURGE VOLUME CALCULATION (casing volume):

$$\left(\frac{285}{\text{TD (feet)}} - \frac{216.01}{\text{WL (feet)}} \right) \times \frac{4^2}{\text{D (inches)}} \times \frac{3}{\text{\# Vols}} \times 0.0408 = \frac{135.11}{\text{Calculated Purge Volume}} \text{ Gallons}$$

PURGE METHOD

PUMP INTAKE SETTING

Bailer – Type: _____ 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 (° C)	ORP (mV)	Comments
1024	216.01	0	6.34	68.6	39.9	15.50	23.7	181	Clear, no odor
1042	216.01	27	6.53	62.5	8.13	16.43	23.1	192	Clear, no odor
1100	216.01	54	6.75	6.75	2.59	16.19	23.0	193	Clear, no odor
1118	216.01	81	6.82	6.82	1.44	16.40	23.3	180	Clear, no odor
1136	216.01	108	6.86	6.86	0.69	16.52	23.3	195	Clear, no odor
1154	216.01	136	6.89	6.89	0.20	13.09	23.7	147	Clear, no odor

Total Purge Volume: 136 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1020 Purge time start: 1024

RECHARGE BEHAVIOR: 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): _____

<i>Original</i>	<i>Duplicate</i>	<i>Blank</i>	<i>Other (Trip / Source /)</i>
Sample ID: <u>MW-16</u>	Sample ID: _____	Type: _____	Type: _____
Sample Time: <u>1158</u>	Sample Time: _____	Sample ID: _____	Sample ID: _____
No. of Containers: <u>6</u>	No. of Containers: _____	Sample Time: _____	Sample Time: _____
		No. of Containers: _____	No. of Containers: _____

ORIGINAL FIELD RECORD



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

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

Start Time: 732
 Finish Time:

Date: 11/6/06
 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)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.95	✓	255.59	✓	255.59	✓	✓	255.94	820	6.08	1.18	49.7	11.16	19.6	80
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.90	✓	255.58	✓	255.58	✓	✓	255.89	—	—	—	—	—	—	—
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.83	✓	255.58	✓	255.57	✓	✓	255.83	—	—	—	—	—	—	—
5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.78	✓	255.58	✓	255.57	✓	✓	255.77	—	—	—	—	—	—	—
5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.71	✓	255.59	✓	255.57	✓	✓	255.70	—	—	—	—	—	—	—
5	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	255.70	✓	255.59	✓	255.57	✓	✓	255.72	—	—	—	—	—	—	—
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	214.66	✓	214.51	✓	214.51	✓	✓	214.67	1105	5.94	1.03	51.4	11.64	25.9	198
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	214.57	✓	214.50	✓	214.51	✓	✓	214.58	—	—	—	—	—	—	—
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	214.49	✓	214.50	✓	214.52	✓	✓	214.53	—	—	—	—	—	—	—
4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	214.43	✓	214.51	✓	214.51	✓	✓	214.42	—	—	—	—	—	—	—
4	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	213.85	✓	214.49	✓	214.49	✓	✓	213.86	—	—	—	—	—	—	—
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.96	✓	125.09	✓	125.09	✓	✓	121.96	750	5.67	0.04	50.2	11.95	18.8	130
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.94	✓	125.09	✓	125.09	✓	✓	121.95	819	5.95	-0.40	49.0	11.58	20.0	106
3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.88	✓	125.08	✓	125.07	✓	✓	121.89	—	—	—	—	—	—	—
3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.86	✓	125.07	✓	125.07	✓	✓	121.89	—	—	—	—	—	—	—
3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.81	✓	125.06	✓	125.06	✓	✓	121.83	—	—	—	—	—	—	—
3	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	121.26	✓	125.06	✓	125.06	✓	✓	122.28	—	—	—	—	—	—	—
3	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	122.18	✓	125.06	✓	125.07	✓	✓	122.18	—	—	—	—	—	—	—
3	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	122.83	✓	125.05	✓	125.05	✓	✓	122.85	—	—	—	—	—	—	—
3	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	122.78	✓	125.05	✓	125.05	✓	✓	122.78	—	—	—	—	—	—	—
3	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	119.26	✓	125.03	✓	125.04	✓	✓	119.23	—	—	—	—	—	—	—

Notes:

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

Total Volume:



Groundwater Sampling Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-3
 Sampling Zone No.: 2101
 Depth (ft): 653, 558, 346, 252, 172
 Beginning of Session: 14.07 psia
 End of Session: 14.04 psia

Start Time:
 Finish Time:

Date: 11/7/66
 Page: 1 of 1

Water Pressure Inside Casing:

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	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	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
2	1	✓	✓	✓	✓	✓	✓	✓	✓	81.27	✓	83.89	✓	83.92	✓	✓	81.32	1141	5.92	1.52	57.7	12.35	27.3	251
2	2	✓	✓	✓	✓	✓	✓	✓	✓	81.26	✓	83.91	✓	83.91	✓	✓	81.25	-	-	-	-	-	-	-
2	3	✓	✓	✓	✓	✓	✓	✓	✓	81.19	✓	83.90	✓	83.93	✓	✓	81.20	-	-	-	-	-	-	-
2	4	✓	✓	✓	✓	✓	✓	✓	✓	81.16	✓	83.90	✓	83.92	✓	✓	81.17	-	-	-	-	-	-	-
2	5	✓	✓	✓	✓	✓	✓	✓	✓	81.10	✓	83.89	✓	83.91	✓	✓	81.11	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	46.69	✓	49.16	✓	49.18	✓	✓	46.73	1047	5.78	0.92	46.6	12.59	22.9	186
1	2	✓	✓	✓	✓	✓	✓	✓	✓	46.67	✓	49.17	✓	49.18	✓	✓	46.69	-	-	-	-	-	-	-
1	3	✓	✓	✓	✓	✓	✓	✓	✓	46.63	✓	49.16	✓	49.17	✓	✓	46.64	-	-	-	-	-	-	-
1	4	✓	✓	✓	✓	✓	✓	✓	✓	46.61	✓	49.17	✓	49.18	✓	✓	46.62	-	-	-	-	-	-	-
1	5	✓	✓	✓	✓	✓	✓	✓	✓	46.59	✓	49.15	✓	49.16	✓	✓	46.60	-	-	-	-	-	-	-
1	6	✓	✓	✓	✓	✓	✓	✓	✓	46.55	✓	49.17	✓	49.16	✓	✓	46.55	-	-	-	-	-	-	-
1	7	✓	✓	✓	✓	✓	✓	✓	✓	46.51	✓	49.16	✓	49.17	✓	✓	46.53	-	-	-	-	-	-	-
1	8	✓	✓	✓	✓	✓	✓	✓	✓	46.49	✓	49.17	✓	49.18	✓	✓	46.50	-	-	-	-	-	-	-
1	9	✓	✓	✓	✓	✓	✓	✓	✓	46.46	✓	49.17	✓	49.17	✓	✓	46.46	-	-	-	-	-	-	-
1	10	✓	✓	✓	✓	✓	✓	✓	✓	43.48	✓	49.15	✓	49.14	✓	✓	43.46	-	-	-	-	-	-	-

5/33
12/66

} 2
} 1

Notes:

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

Total Volume:



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-3
 Sampling Zone No.: 1
 Depth (ft): 653, 558, 346, 252, 172
 Beginning of Session: 14.04 psia
 End of Session: 14.07 psia

Start Time: 9:35
 Finish Time:

Date: 11/15/06
 Page: 1 of 1

Water Pressure Inside Casing:

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	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	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)
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.57	✓	49.20	✓	49.20	✓	✓	46.61	9:59	5.99	0.73	48.2	12.83	23.2	186
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.54	✓	49.22	✓	49.23	✓	✓	46.57	-	-	-	-	-	-	-
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.52	✓	49.22	✓	49.21	✓	✓	46.53	-	-	-	-	-	-	-
1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.49	✓	49.22	✓	49.25	✓	✓	46.52	-	-	-	-	-	-	-
1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	46.48	✓	49.24	✓	49.22	✓	✓	46.47	-	-	-	-	-	-	-
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	81.01	✓	84.26	✓	84.23	✓	✓	80.99	-	-	-	-	-	-	-

Isolate
SAMPLE

Notes:
 port 5: port 4: port 3:
 port 2: port 1: CLEAR, NO ODOUR

Total Volume:



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-4
 Sampling Zone No.: 2701
 Depth (ft): 513, 392, 322, 240, 150
 Beginning of Session: 14.02 psia
 End of Session: 14.04 psia

Start Time: 727
 Finish Time:

Date: 11/12/06
 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)
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.22	✓	88.11	✓	88.11	✓	✓	26.26	758	5.33	0.05	0.1	15.54	17.4	171
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.21	✓	88.09	✓	88.09	✓	✓	26.25	826	6.47	0.79	0.1	10.97	17.9	246
2	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.19	✓	88.09	✓	88.10	✓	✓	26.24	-	-	-	-	-	-	-
2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.19	✓	88.09	✓	88.09	✓	✓	26.22	-	-	-	-	-	-	-
2	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.19	✓	88.08	✓	88.09	✓	✓	26.22	-	-	-	-	-	-	-
2	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.18	✓	88.09	✓	88.10	✓	✓	26.21	-	-	-	-	-	-	-
2	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.17	✓	88.09	✓	88.09	✓	✓	26.20	-	-	-	-	-	-	-
2	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	26.16	✓	88.09	✓	88.10	✓	✓	26.20	-	-	-	-	-	-	-
2	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	24.65	✓	88.08	✓	88.10	✓	✓	24.64	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.17	✓	49.70	✓	49.69	✓	✓	14.19	1130	6.77	0.65	45.7	11.03	27.4	182
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.14	✓	49.70	✓	49.69	✓	✓	14.17	-	-	-	-	-	-	-
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.15	✓	49.70	✓	49.70	✓	✓	14.17	-	-	-	-	-	-	-
1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.15	✓	49.70	✓	49.70	✓	✓	14.15	-	-	-	-	-	-	-
1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.15	✓	49.70	✓	49.70	✓	✓	14.15	-	-	-	-	-	-	-

Dupe (written on the left side of the table, bracketed around rows 2-9)

Dupe (written on the right side of the table, bracketed around rows 2-9)

1 (written on the right side of the table, bracketed around rows 1-5)

Notes:

port 5: _____ port 4: _____ port 3: _____
 port 2: CLEAR, NO ODOR port 1: CLEAR, NO ODOR

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-4
Sampling Zone No.: 5
Depth (ft): 513, 392, 322, 240, 150
Beginning of Session: 14.00 psia
End of Session: 14.01 psia

Start Time: 7:15
Finish Time:

Date: 11/8/06
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)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	144.91	✓	206.32	✓	206.31	✓	✓	144.89	743	5.60	14.7	44.8	13.49	18.4	175
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	144.86	✓	206.32	✓	206.32	✓	✓	144.84	-	-	-	-	-	-	-
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	144.86	✓	206.31	✓	206.33	✓	✓	144.86	-	-	-	-	-	-	-
5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	144.83	✓	206.32	✓	206.30	✓	✓	144.84	-	-	-	-	-	-	-
5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	143.80	✓	206.32	✓	206.30	✓	✓	143.80	-	-	-	-	-	-	-
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.07	✓	153.96	✓	153.96	✓	✓	92.07	743	5.68	1.39	49.9	13.76	16.8	174
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.05	✓	153.96	✓	153.96	✓	✓	92.07	-	-	-	-	-	-	-
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.05	✓	153.96	✓	153.96	✓	✓	92.05	-	-	-	-	-	-	-
4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.03	✓	153.96	✓	153.96	✓	✓	92.04	-	-	-	-	-	-	-
4	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	91.51	✓	153.93	✓	153.95	✓	✓	91.54	-	-	-	-	-	-	-
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	61.46	✓	123.84	✓	123.85	✓	✓	61.47	958	6.07	12.3	52.1	11.35	22.4	182
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	61.45	✓	123.84	✓	123.83	✓	✓	61.48	-	-	-	-	-	-	-
3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	61.44	✓	123.84	✓	123.84	✓	✓	61.47	-	-	-	-	-	-	-
3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	61.42	✓	123.82	✓	123.84	✓	✓	61.45	-	-	-	-	-	-	-
3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	61.41	✓	123.82	✓	123.83	✓	✓	61.44	-	-	-	-	-	-	-

11/8/06

5
4
3

Notes:

port 5: CLEAR, NO ODOR port 4: CLEAR, NO ODOR port 3: YELLOWISH IN COLOR, NO ODOR
port 2: port 1:

Total Volume:



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-17
 Sampling Zone No.: 5
 Depth (ft): 726, 582, 468, 370, 250
 Beginning of Session: 14.00 psia
 End of Session: 14.02 psia

Start Time: 1226
 Finish Time: 1522

Date: 10/31/06
 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)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	247.44	✓	246.59	✓	246.50	✓	✓	247.44	1255	6.29	108.1	39.8	11.27	19.8	37
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	247.41	✓	246.60	✓	246.49	✓	✓	247.40	-	-	-	-	-	-	-
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	247.37	✓	246.59	✓	246.51	✓	✓	247.38	-	-	-	-	-	-	-
5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	247.37	✓	246.59	✓	246.53	✓	✓	247.36	-	-	-	-	-	-	-
5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	247.35	✓	246.59	✓	246.53	✓	✓	247.32	-	-	-	-	-	-	-
5	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	246.70	✓	246.60	✓	246.46	✓	✓	246.71	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.45	✓	40.51	✓	40.51	✓	✓	40.46	1338	7.29	-0.17	50.1	13.24	22.0	139
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.45	✓	40.51	✓	40.52	✓	✓	40.43	-	-	-	-	-	-	-
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.45	✓	40.51	✓	40.51	✓	✓	40.43	-	-	-	-	-	-	-
1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.61	✓	40.50	✓	40.49	✓	✓	40.62	-	-	-	-	-	-	-
1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.59	✓	40.51	✓	40.50	✓	✓	40.60	-	-	-	-	-	-	-

11/2/06

Notes:

port 5: GRAYISH BROWN, NO ODOR port 4: port 3:
 port 2: port 1: CLEAR, NO ODOR

Total Volume:



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-17
 Sampling Zone No.: 4 to
 Depth (ft): 726, 582, 468, 370, 250
 Beginning of Session: 14.03 psia
 End of Session: 14.02 psia

Start Time: 730
 Finish Time: 1253

Date: 11/1/06
 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. (°C)
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	185.18	✓	182.52	✓	182.51	✓	✓	185.17	806	5.60	0.46	46.8	13.09	14.6	61
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	185.16	✓	182.53	✓	182.51	✓	✓	185.16	-	-	-	-	-	-	-
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	185.12	✓	182.51	✓	182.48	✓	✓	185.14	-	-	-	-	-	-	-
4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	185.12	✓	182.52	✓	182.50	✓	✓	185.10	-	-	-	-	-	-	-
4	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	184.89	✓	182.51	✓	182.49	✓	✓	184.89	-	-	-	-	-	-	-
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	135.60	✓	130.16	✓	130.16	✓	✓	135.60	1035	5.55	11.3	93.2	13.08	18.9	118
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	135.57	✓	130.17	✓	130.15	✓	✓	135.56	-	-	-	-	-	-	-
3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	135.55	✓	130.15	✓	130.15	✓	✓	135.60	-	-	-	-	-	-	-
3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	135.54	✓	130.16	✓	130.17	✓	✓	135.55	-	-	-	-	-	-	-
3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	135.04	✓	130.14	✓	130.14	✓	✓	135.11	-	-	-	-	-	-	-
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.91	✓	91.30	✓	91.31	✓	✓	92.93	813	5.48	1.48	0.1	11.38	16.9	68
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.91	✓	91.31	✓	91.31	✓	✓	92.91	854	5.98	0.99	0.1	13.03	15.1	152
2	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.84	✓	91.29	✓	91.28	✓	✓	92.84	-	-	-	-	-	-	-
2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.85	✓	91.29	✓	91.29	✓	✓	92.85	-	-	-	-	-	-	-
2	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.83	✓	91.29	✓	91.29	✓	✓	92.83	-	-	-	-	-	-	-
2	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.80	✓	91.28	✓	91.29	✓	✓	92.80	-	-	-	-	-	-	-
2	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.79	✓	91.29	✓	91.29	✓	✓	92.78	-	-	-	-	-	-	-
2	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.79	✓	91.29	✓	91.28	✓	✓	92.76	-	-	-	-	-	-	-
2	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.74	✓	91.27	✓	91.27	✓	✓	92.74	-	-	-	-	-	-	-
2	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	92.76	✓	91.28	✓	91.27	✓	✓	92.71	-	-	-	-	-	-	-

NOPE
1/2/06

NOPE

Notes:

port 5: _____ port 4: CLEAR, NO ODOR port 3: CLEAR, NO ODOR
 port 2: CLEAR, SLIGHT ODOR port 1: _____

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-18
Sampling Zone No.: 5+1
Depth (ft): 684, 564, 424, 330, 270
Beginning of Session: 14.01 psia
End of Session: 14.04 psia

Start Time: 801
Finish Time: _____

Date: 11/13/06
Page: 1 of 1

Water Pressure Inside Casing: _____

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	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	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)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.97	✓	210.64	✓	210.60	✓	✓	161.97	833	6.04	0.90	39.9	13.28	19.5	165
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.90	✓	210.64	✓	210.60	✓	✓	161.90	—	—	—	—	—	—	
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.86	✓	210.62	✓	210.58	✓	✓	161.86	—	—	—	—	—	—	
5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.79	✓	210.62	✓	210.56	✓	✓	161.79	—	—	—	—	—	—	
5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	161.74	✓	210.63	✓	210.55	✓	✓	161.75	—	—	—	—	—	—	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.45	✓	158.87	✓	158.87	✓	✓	109.45	1054	6.20	1.30	47.1	13.93	20.5	166
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.41	✓	158.86	✓	158.87	✓	✓	109.42	—	—	—	—	—	—	
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.37	✓	158.88	✓	158.87	✓	✓	109.37	—	—	—	—	—	—	
4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.32	✓	158.87	✓	158.88	✓	✓	109.35	—	—	—	—	—	—	
4	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	109.27	✓	158.87	✓	158.89	✓	✓	109.29	—	—	—	—	—	—	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.19	✓	59.11	✓	59.11	✓	✓	14.21	1318	6.44	1.60	59.0	4.18	21.5	300
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.18	✓	59.11	✓	59.11	✓	✓	14.21	—	—	—	—	—	—	
2	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.17	✓	59.10	✓	59.09	✓	✓	14.21	—	—	—	—	—	—	
2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.17	✓	59.11	✓	59.11	✓	✓	14.19	—	—	—	—	—	—	
2	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.17	✓	59.12	✓	59.12	✓	✓	14.17	—	—	—	—	—	—	

5
4
2

Notes:

port 5: CLEAR, NO ODOR port 4: CLEAR, SLIGHT ODOR port 3: _____
port 2: CLEAR, NO ODOR port 1: _____

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-19
Sampling Zone No.: 5+1
Depth (ft): 498, 444, 392, 314, 242
Beginning of Session: 14.06 psia
End of Session: 14.01 psia

Start Time: 720
Finish Time: 1345

Date: 10/30/26
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)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	176.30	✓	169.42	✓	169.41	✓	✓	176.36	750	5.05	0.70	94.1	11.99	16.1	35
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	176.27	✓	169.42	✓	169.42	✓	✓	176.27	-	-	-	-	-	-	-
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	176.21	✓	169.43	✓	169.42	✓	✓	176.17	-	-	-	-	-	-	-
5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	176.26	✓	169.43	✓	169.42	✓	✓	176.26	-	-	-	-	-	-	-
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	152.76	✓	146.05	✓	146.03	✓	✓	152.77	952	5.88	0.62	77.1	14.12	17.7	77
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	152.75	✓	146.04	✓	146.02	✓	✓	152.73	-	-	-	-	-	-	-
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	152.72	✓	146.02	✓	146.00	✓	✓	152.73	-	-	-	-	-	-	-
4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	152.71	✓	145.98	✓	145.98	✓	✓	152.73	-	-	-	-	-	-	-
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	130.09	✓	123.92	✓	123.90	✓	✓	130.06	1147	5.98	0.53	87.4	14.51	19.4	144
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	130.06	✓	123.88	✓	123.89	✓	✓	130.08	-	-	-	-	-	-	-
3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	130.04	✓	123.84	✓	123.86	✓	✓	130.02	-	-	-	-	-	-	-
3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	129.97	✓	123.83	✓	123.83	✓	✓	129.99	-	-	-	-	-	-	-

5
4
3

Notes:

port 5: CLEAR, NO ODOR port 4: CLEAR, NO ODOR port 3: CLEAR, NO ODOR
port 2: _____ port 1: _____

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-19
 Sampling Zone No.: 2+1
 Depth (ft): 498, 444, 392, 314, 242
 Beginning of Session: 14.02 psia
 End of Session: 14.04 psia

Start Time: 735
 Finish Time: 1135

Date: 10/31/06
 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. (°C)	ORP
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.09	✓	89.36	✓	89.36	✓	✓	96.10	759	5.20	7.82	0.1	13.93	16.3	191
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.08	✓	89.38	✓	89.37	✓	✓	96.09	-	-	-	-	-	-	-
2	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.06	✓	89.37	✓	89.36	✓	✓	96.07	-	-	-	-	-	-	-
2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.07	✓	89.37	✓	89.36	✓	✓	96.05	-	-	-	-	-	-	-
2	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	96.03	✓	89.36	✓	89.37	✓	✓	96.05	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	64.71	✓	57.93	✓	57.92	✓	✓	64.73	950	5.40	19.1	43.1	13.28	17.3	93
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	64.71	✓	57.95	✓	57.94	✓	✓	64.72	-	-	-	-	-	-	-
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	64.69	✓	57.93	✓	57.93	✓	✓	64.69	-	-	-	-	-	-	-
1	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	64.70	✓	57.93	✓	57.91	✓	✓	64.66	-	-	-	-	-	-	-
1	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	64.69	✓	57.94	✓	57.92	✓	✓	64.65	-	-	-	-	-	-	-

5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	174.36	✓	168.75	✓	168.75	✓	✓	174.32	-	-	-	-	-	-	-
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	150.89	✓	145.36	✓	145.36	✓	✓	150.90	-	-	-	-	-	-	-
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	128.34	✓	123.64	✓	123.63	✓	✓	128.33	-	-	-	-	-	-	-
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	94.41	✓	89.35	✓	89.35	✓	✓	94.45	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	63.14	✓	57.91	✓	57.89	✓	✓	63.12	-	-	-	-	-	-	-

11/06 {

Notes:

port 5: _____ port 4: _____ port 3: _____
 port 2: CLEAR, NO ODOR port 1: SLIGHTLY BROWNISH IN COLOR, NO ODOR

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-21
 Sampling Zone No.: 5+1
 Depth (ft): 372, 310, 240, 161, 90
 Beginning of Session: 14.13 psia
 End of Session: 14.14 psia

Start Time: 732
 Finish Time: 1039

Date: 10/26/06
 Page: 1 of 1

Water Pressure Inside Casing: _____

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	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	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
5	1	✓	✓	✓	✓	✓	✓	✓	✓	128.63	✓	159.74	✓	159.69	✓	✓	128.61	808	5.38	3.14	0.1	16.06	13.5	210
4	1	✓	✓	✓	✓	✓	✓	✓	✓	101.58	✓	132.88	✓	129.26	✓	✓	102.28	840	5.76	3.18	97.9	11.78	14.2	7
3	1	✓	✓	✓	✓	✓	✓	✓	✓	72.79	✓	102.93	✓	102.92	✓	✓	72.84	916	5.87	6.15	0.1	10.64	16.1	-13
2	1	✓	✓	✓	✓	✓	✓	✓	✓	38.32	✓	68.64	✓	68.65	✓	✓	38.32	945	6.50	6.70	0.1	11.44	17.4	89
1	1	✓	✓	✓	✓	✓	✓	✓	✓	14.21	✓	37.13	✓	37.14	✓	✓	14.26	1022	6.89	1.68	0.09	14.71	22.2	118
1	2	✓	✓	✓	✓	✓	✓	✓	✓	14.19	✓	37.15	✓	37.14	✓	✓	14.25	-	-	-	-	-	-	-

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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: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-22
 Sampling Zone No.: 5-6/1
 Depth (ft): 588, 467, 389, 329, 245
 Beginning of Session: 14.03 psia
 End of Session: 14.03 psia

Start Time: 722
 Finish Time: 1015

Date: 11/20/06
 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
5	1	✓	✓	✓	✓	✓	✓	✓	✓	203.29	✓	200.37	✓	200.38	✓	✓	203.27	746	5.84	0.25	52.7	10.96	19.2	37
4	1	✓	✓	✓	✓	✓	✓	✓	✓	150.85	✓	149.51	✓	149.50	✓	✓	150.84	816	5.82	0.70	44.3	11.39	19.6	85
3	1	✓	✓	✓	✓	✓	✓	✓	✓	117.00	✓	117.38	✓	117.38	✓	✓	117.00	844	5.78	-0.14	80.6	12.51	19.4	97
2	1	✓	✓	✓	✓	✓	✓	✓	✓	90.92	✓	91.20	✓	91.19	✓	✓	90.94	915	6.09	-0.38	63.1	12.32	19.7	102
1	1	✓	✓	✓	✓	✓	✓	✓	✓	53.98	✓	53.81	✓	53.82	✓	✓	53.99	943	6.37	9.45	0.1	14.00	18.7	115
1	2	✓	✓	✓	✓	✓	✓	✓	✓	54.20	✓	53.81	✓	53.83	✓	✓	54.20	1013	6.54	9.26	0.1	14.25	19.2	113

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Notes:

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

Total Volume: _____



Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: Battelle

Well ID: MW-25
 Sampling Zone No.: 5+1
 Depth (ft): 713, 633, 503, 423, 358
 Beginning of Session: 14.17 psia
 End of Session: 14.12 psia

Start Time: 727
 Finish Time: 1115

Date: 11/29/66
 Page: 1 of 1

Water Pressure Inside Casing: _____

Port #	Run #	Surface Function Checks							Position Sampler	Arm out	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	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Cond (µmhos)	Dissolved Oxygen
5	1	✓	✓	✓	✓	✓	✓	✓	✓	209.41	✓	205.74	✓	205.73	✓	✓	209.40	758	5.81	0.31	50.7	11.21	14.8	63
4	1	✓	✓	✓	✓	✓	✓	✓	✓	174.84	✓	169.47	✓	169.46	✓	✓	174.84	837	5.66	0.27	84.6	12.41	15.5	111
3	1	✓	✓	✓	✓	✓	✓	✓	✓	118.45	✓	117.04	✓	117.05	✓	✓	118.46	913	5.91	1.21	88.9	10.56	16.5	122
2	1	✓	✓	✓	✓	✓	✓	✓	✓	83.61	✓	85.87	✓	85.85	✓	✓	83.64	948	6.44	0.37	85.9	13.48	16.5	128
2	2	✓	✓	✓	✓	✓	✓	✓	✓	83.59	✓	85.86	✓	85.85	✓	✓	83.59	-	-	-	-	-	-	-
1	1	✓	✓	✓	✓	✓	✓	✓	✓	55.17	✓	58.91	✓	58.92	✓	✓	55.14	1047	6.62	10.92	0.1	12.75	17.4	127
1	2	✓	✓	✓	✓	✓	✓	✓	✓	55.17	✓	58.93	✓	58.93	✓	✓	55.18	1108	6.75	4.90	0.1	12.01	17.3	132

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Notes:

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

Total Volume: _____



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: 14.23 psia
 End of Session: 14.26 psia

Start Time: 830
 Finish Time: 930

Date: 11/30/06
 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)
2	1	✓	✓	✓	✓	✓	✓	✓	✓	77.81	✓	77.83	✓	77.86	✓	✓	77.84	853	5.60	9.93	67.8	11.81	19.2	164	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	43.22	✓	40.80	✓	40.80	✓	✓	43.20	925	5.84	-0.13	97.9	13.65	18.6	143	
					</																				

ATTACHMENT 5: WATER LEVEL MEASUREMENTS

This attachment contains water level measurements for the Westbay™ multiport JPL monitoring wells obtained during the fourth quarter 2006. Water level measurements were recorded before the sampling event on October 25, 2006, and after the sampling event on December 8, 2006. Water levels in the shallow wells were measured using a Solinst™ water level meter and the results are provided in 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 taken by Geofon Inc.

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-3
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. + MSL): 1,100.34
 Weather: clear and cool

Ambient Readings		
Time	853	909
Pressure (psia)	14.07	14.08
Temperature (°C)	17.16	16.13

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	653	255.18	255.40	255.14	20.63	857	96.25	1004.09
4	558	213.94	214.35	213.92	21.77	859	95.95	1004.39
3	346	121.75	125.06	121.72	21.77	900	89.95	1010.39
2	252	80.90	83.97	80.94	20.77	902	90.74	1009.60
1	172	46.12	49.31	46.12	16.67	907	90.70	1009.64

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-4
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. +MSL): 1,082.84
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1215	1223
Pressure (psia)	14.07	14.10
Temperature (°C)	18.94	19.86

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	140.64	206.24	140.66	20.72	1218	69.66	1013.18
4	392	88.01	153.87	88.01	21.36	1219	69.48	1013.36
3	322	57.50	123.81	57.54	21.37	1220	68.83	1014.01
2	240	21.80	88.08	21.81	21.02	1221	69.26	1013.58
1	150	14.17	49.86	14.17	20.51	1222	67.43	1015.41

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-11
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,139.30
 Weather: clear and cool

Ambient Readings	Start	Finish
Time	835	845
Pressure (psia)	14.04	14.07
Temperature (°C)	19.20	18.21

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	239.84	232.08	239.84	19.79	838			
								135.98	1003.32
4	524	190.36	189.90	190.37	20.75	840			
								118.29	1021.01
3	429	149.51	147.31	149.50	20.51	841			
								121.55	1017.75
2	259	75.83	74.33	75.86	19.71	843			
								119.91	1019.39
1	149	28.53	33.29	28.54	18.78	844			
								104.59	1034.71

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-12
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,102.14
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1201	1209
Pressure (psia)	14.06	14.05
Temperature (°C)	21.49	18.29

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	197.16	210.13	197.18	21.15	1204	95.67	1006.47
4	436	148.42	164.57	148.49	21.44	1205	88.77	1013.37
3	323	9934.00	115.74	99.32	20.67	1206	88.42	1013.72
2	243	64.44	81.17	64.47	19.81	1207	88.18	1013.96
1	140	19.48	37.95	19.50	18.92	1208	84.89	1017.25

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-14
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,173.47
 Weather: _____

Ambient Readings	Start	Finish
Time	719	729
Pressure (psia)	14.02	14.03
Temperature (°C)	18.21	19.43

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	191.44	186.66	191.43	19.88	722		
								141.72
4	456	154.87	150.28	154.92	20.50	723		
								141.65
3	382	122.68	118.20	122.71	20.39	724		
								141.66
2	277	76.95	72.64	76.99	19.94	726		
								141.76
1	207	46.47	42.78	46.51	19.58	727		
								140.65

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-17
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,191.21
 Weather: clear and cool

Ambient Readings	Start	Finish
Time	1015	1025
Pressure (psia)	14.02	14.06
Temperature (°C)	19.12	16.42

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	245.85	246.28	245.84	19.51	1018		
								190.18
4	582	183.44	182.27	183.49	19.94	1020		
								193.85
3	468	134.07	130.05	134.06	19.01	1021		
								200.32
2	370	91.55	91.26	91.50	17.94	1022		
								191.81
1	250	39.31	40.64	39.31	16.93	1024		
								188.59

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-18
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,225.41

Note: cool and clear

Ambient Readings	Start	Finish
Time	1035	1045
Pressure (psia)	14.00	14.01
Temperature (°C)	17.50	17.12

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	157.58	209.88	157.55	19.74	1038			
								232.10	993.31
4	564	105.47	158.64	105.44	20.48	1039			
								230.32	995.09
3	424	44.50	100.61	44.53	19.94	1041			
								224.19	1001.22
2	330	14.21	59.25	14.18	18.56	1042			
								225.61	999.80
1	270	14.17	33.13	14.15	17.85	1043			
								225.87	999.54

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-19
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. +MSL): 1,142.94
 Weather: _____

Ambient Readings	Start	Finish
Time	951	1002
Pressure (psia)	14.03	14.08
Temperature (°C)	15.92	16.83

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	174.50	168.64	174.52	17.51	954	141.31	1001.63
4	444	151.09	145.26	151.09	18.22	955	141.25	1001.69
3	392	128.55	123.58	128.54	18.41	957	139.27	1003.67
2	314	94.68	89.28	94.67	18.43	958	140.40	1002.54
1	242	63.35	57.95	63.39	17.91	1001	140.68	1002.26

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-20
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/20/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,165.05
 Weather: clear and cool

Ambient Readings	Start	Finish
Time	1055	1108
Pressure (psia)	14.02	14.06
Temperature (°C)	19.23	17.61

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	330.63	329.12	330.57	20.79	1059	173.06	991.99
4	700	243.95	241.49	243.97	22.06	1101	175.23	989.82
3	562	184.23	179.32	184.15	21.35	1104	180.65	984.40
2	392	110.40	107.32	110.47	20.06	1105	176.76	988.29
1	230	40.10	36.95	40.07	18.47	1107	177.10	987.95

GEOFON, 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: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 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	740	747
Pressure (psia)	14.04	14.10
Temperature (°C)	17.92	18.92

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	372	125.40	159.70	125.42	18.72	742	35.96	1023.14
4	310	98.42	132.85	98.41	19.33	743	35.91	1023.19
3	240	68.37	102.92	68.41	19.41	744	34.95	1024.15
2	161	33.96	68.64	33.95	19.23	745	35.04	1024.06
1	90	14.15	37.14	14.16	19.06	746	36.71	1022.39

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-22
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,176.98
 Weather: clear and cool

Ambient Readings	Start	Finish
Time	757	806
Pressure (psia)	14.03	14.05
Temperature (°C)	17.00	20.27

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	201.04	199.97	201.03	19.51	800	159.04	1017.94
4	467	148.66	149.06	148.68	20.83	802	155.49	1021.49
3	389	114.81	116.97	114.87	21.01	803	151.52	1025.46
2	329	88.82	90.80	88.85	20.96	804	151.89	1025.09
1	245	51.90	53.66	51.91	20.61	805	153.57	1023.41

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-23
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,108.84
 Weather: clear and cool

Ambient Readings	Start	Finish
Time	658	706
Pressure (psia)	14.04	14.08
Temperature (°C)	18.43	19.99

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	205.21	209.18	205.19	19.84	700	91.81	1017.03
4	445	163.24	167.29	163.20	20.64	701	91.45	1017.39
3	319	108.56	114.22	108.63	20.82	702	87.88	1020.96
2	254	80.39	85.90	80.41	20.65	703	88.22	1020.62
1	174	45.67	51.37	45.66	20.33	704	87.88	1020.96

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-24
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,200.94
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	816	825
Pressure (psia)	14.00	14.05
Temperature (°C)	18.34	20.91

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	235.39	225.91	235.41	20.44	819	189.12	1011.82
4	554	181.76	173.93	181.76	21.24	821	185.04	1015.90
3	435	130.21	123.70	130.22	21.40	822	181.92	1019.02
2	373	103.33	96.55	103.35	21.47	823	182.56	1018.38
1	279	62.52	56.20	62.58	21.34	824	181.64	1019.30

GEOFON, Inc.
Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-25
 Project No: 4-73803 Probe Type: Westbay
 Date: 10/25/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. + MSL): 934.52

Weather: clear and warm

Ambient Readings	Start	Finish
Time	1122	1132
Pressure (psia)	14.12	14.17
Temperature (°C)	19.48	20.10

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	206.16	210.38	206.17	20.92	1125	260.23	674.29
4	633	171.65	176.73	171.72	21.58	1127	257.86	676.66
3	503	115.44	121.61	115.44	21.44	1128	255.02	679.50
2	423	80.64	87.28	80.69	21.07	1129	254.22	680.30
1	358	52.35	58.93	52.35	20.69	1130	254.62	679.90

GEOFON, Inc.

Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-3
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. + MSL): 1,100.34
 Weather: clear and cool

Ambient Readings		
Time	814	825
Pressure (psia)	14.07	14.10
Temperature (°C)	18.95	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	653	250.97	255.90	250.96	20.79	818	95.10	1005.24
4	558	209.77	214.84	209.80	21.88	819	94.82	1005.52
3	346	117.59	125.40	117.67	21.76	821	89.16	1011.18
2	252	76.77	84.23	76.86	20.77	822	90.14	1010.20
1	172	42.00	49.47	42.06	19.01	824	90.33	1010.01

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-4
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. +MSL): 1,082.84
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1126	1134
Pressure (psia)	14.07	14.11
Temperature (°C)	18.95	20.00

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	140.72	206.73	140.69	20.50	1129	68.53	1014.31
4	392	88.08	154.37	88.07	21.25	1130	68.33	1014.51
3	322	57.60	124.26	57.63	21.28	1131	67.79	1015.05
2	240	21.87	88.43	21.92	20.98	1132	68.45	1014.39
1	150	14.21	49.95	14.19	20.53	1133	67.22	1015.62

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-11
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,139.30
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1144	1153
Pressure (psia)	14.04	14.12
Temperature (°C)	20.22	18.44

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	239.51	232.56	239.48	20.48	1147		
								134.87
4	524	190.03	190.36	189.99	21.07	1148		
								117.23
3	429	149.13	147.80	149.15	20.85	1149		
								120.42
2	259	75.57	74.68	75.52	19.97	1151		
								119.10
1	149	28.17	33.50	28.16	19.03	1152		
								104.11

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-12
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,102.14
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1110	1120
Pressure (psia)	14.09	14.09
Temperature (°C)	21.80	18.34

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	196.94	210.64	196.95	20.97	1113	94.56	1007.58
4	436	148.25	165.02	148.25	21.60	1115	87.80	1014.34
3	323	99.10	116.13	99.11	20.73	1117	87.59	1014.55
2	243	64.26	81.51	64.25	19.81	1118	87.46	1014.68
1	140	19.34	38.09	19.31	18.89	1119	84.63	1017.51

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-14
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,173.47
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	658	706
Pressure (psia)	14.02	14.07
Temperature (°C)	15.35	19.16

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	540	191.08	188.07	191.09	17.95	700	138.47	1035.00
4	456	154.56	151.63	154.57	19.16	702	138.53	1034.94
3	382	122.34	119.54	122.39	19.47	703	138.57	1034.90
2	277	76.66	73.85	76.67	19.40	704	138.97	1034.50
1	207	46.14	43.82	46.17	19.23	705	138.25	1035.22

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-17
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,191.21
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	922	932
Pressure (psia)	14.09	14.08
Temperature (°C)	15.92	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	245.25	246.81	245.24	17.75	925	189.11	1002.10
4	582	182.91	182.84	182.89	18.98	926	192.69	998.52
3	468	133.44	130.66	133.44	18.22	928	199.07	992.14
2	370	90.89	91.65	90.89	17.52	929	191.07	1000.14
1	250	38.72	40.45	38.73	16.79	930	189.19	1002.02

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-18
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,225.41

Note: clear and warm

Ambient Readings	Start	Finish
Time	941	950
Pressure (psia)	14.06	14.05
Temperature (°C)	17.11	17.19

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	157.24	210.90	157.21	18.67	944		
								229.89
4	564	105.10	159.20	105.14	19.83	946		
								229.16
3	424	44.22	100.90	44.20	19.60	947		
								223.66
2	330	14.26	59.30	14.25	18.53	948		
								225.63
1	270	14.17	33.05	14.17	17.74	949		
								226.19

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-19
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. +MSL): 1,142.94
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	835	845
Pressure (psia)	14.07	14.12
Temperature (°C)	15.61	17.03

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	174.02	168.98	174.02	16.81	837	140.62	1002.32
4	444	150.58	145.59	150.57	17.55	838	140.58	1002.36
3	392	128.06	123.84	128.03	18.03	839	138.76	1004.18
2	314	94.20	89.48	94.17	18.19	840	140.03	1002.91
1	242	62.87	57.92	62.90	17.80	844	140.84	1002.10

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-20
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,165.05
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1000	1413
Pressure (psia)	14.05	14.09
Temperature (°C)	18.44	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	900	330.51	329.67	330.45	20.40	1004			
								171.86	993.19
4	700	243.83	243.13	243.83	21.91	1006			
								171.51	993.54
3	562	184.06	180.07	184.03	21.38	1008			
								178.99	986.06
2	392	110.25	107.99	110.34	19.79	1010			
								175.28	989.77
1	230	39.97	37.86	39.95	18.28	1011			
								175.07	989.98

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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: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,059.10
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	716	724
Pressure (psia)	14.15	14.15
Temperature (°C)	17.37	18.83

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	126.69	160.45	126.74	18.30	719	34.49	1024.61
4	310	99.68	133.59	99.72	19.03	720	34.45	1024.65
3	240	69.67	103.60	69.68	19.19	721	33.64	1025.46
2	161	35.28	69.22	35.25	19.07	722	33.95	1025.15
1	90	14.20	37.55	14.19	18.92	723	36.02	1023.08

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-22
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,176.98
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	736	745
Pressure (psia)	14.03	14.11
Temperature (°C)	15.57	20.28

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	201.76	200.61	201.78	20.07	739	157.56	1019.42
4	467	149.40	149.81	149.43	20.99	741	153.76	1023.22
3	389	115.59	117.81	115.61	21.08	742	149.58	1027.40
2	329	89.59	91.59	89.57	20.97	743	150.07	1026.91
1	245	52.67	54.06	52.66	20.63	744	152.65	1024.33

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Piezometric Pressures/Levels

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-24
 Project No: 4-73803 Probe Type: Westbay
 Date: _____ Serial No.: 2508
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (Ft. + MSL): 1,200.94
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	753	802
Pressure (psia)	14.04	14.07
Temperature (°C)	18.10	20.94

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	235.32	226.44	235.31	20.29	755	187.99	1012.95
4	554	181.63	174.49	181.63	21.18	757	183.84	1017.10
3	435	130.04	124.26	130.05	21.40	758	180.72	1020.22
2	373	103.18	97.05	103.19	21.44	759	181.50	1019.44
1	279	62.45	56.31	62.41	21.33	800	181.48	1019.46

Field Data Sheet for Multi-Port Monitoring Wells

Project Name: JPL Pasadena Well ID: MW-25
 Project No: 4-73803 Probe Type: Westbay
 Date: 12/8/06 Serial No.: 2502
 Personnel: Marco Mendoza, Chase Brogdon
 Datum: TOC Casing Size/Type: 1.5" Westbay
 Elevation of Datum (ft. + MSL): 934.52
 Weather: clear and warm

Ambient Readings	Start	Finish
Time	1028	1038
Pressure (psia)	14.18	14.21
Temperature (°C)	20.28	20.13

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	713	205.88	205.51	205.90	21.04	1031	271.60	662.92
4	633	171.47	169.40	171.43	21.72	1032	274.91	659.61
3	503	115.17	116.94	115.15	21.48	1034	265.93	668.59
2	423	80.37	85.73	80.40	21.12	1035	257.93	676.59
1	358	52.14	58.79	52.12	20.69	1036	255.08	679.44

