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 Incorporated.

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 1

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/6/05
Weather: partly cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(120 - 21.18) X 4^2 X 3 X 0.0408 = 193.53 Gallons

TD (feet) | WL (feet) | D (inches) | # Vols | Calculated Purge Volume

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
737	21.18	0	5.10	.103	6.5	6.4	14.4	286	Clear, no odor
747	21.18	39	5.52	.101	5.5	5.5	14.6	243	Clear, no odor
756	21.18	77	6.22	.101	5.3	5.3	15.1	216	Clear, no odor
806	21.18	116	6.55	.101	5.2	5.2	15.5	210	Clear, no odor
815	21.18	154	6.72	.101	5.6	5.6	15.8	207	Clear, no odor
825	21.18	194	6.89	.100	7.0	6.1	15.8	207	Clear, no odor

Total Purge Volume: 194 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 4 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 735 Purge time start: 737

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: DUPE-2-2Q05	Type:	Type:
Sample Time: 833	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 # 5

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/20/05
Weather: clear and sunny

PURGE VOLUME CALCULATION (casing volume):

(140 TD (feet) - 28.80 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 217.77 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
726	28.80	0	5.20	31.6	16.0	5.7	17.6	200	Clear, no odor
741	28.80	44	5.52	29.6	8.9	6.0	17.8	175	Clear, no odor
756	28.80	88	5.80	29.9	8.7	5.7	18.0	156	Clear, no odor
811	28.80	132	6.15	30.0	8.4	6.1	18.2	148	Clear, no odor
826	28.80	176	6.25	30.2	8.3	6.1	18.5	146	Clear, no odor
841	28.80	220	6.42	30.7	8.3	5.0	21.9	157	Clear, no odor

Total Purge Volume: 220 (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: 724 Purge time start: 726

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 5	Sample ID: MW-5	Type:	Type:
Sample Time: 846	Sample Time: 846	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

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/20/05
Weather: clear and sunny

PURGE VOLUME CALCULATION (casing volume):

(245 TD (feet) - 145.05 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 195.74 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
910	145.05	0	6.25	0.153	32	5.6	21.7	328	Clear, no odor
930	145.05	39	6.59	0.150	18	5.3	21.7	292	Clear, no odor
950	145.05	78	6.86	0.155	21	5.5	21.5	293	Clear, no odor
1010	145.05	117	7.02	0.155	12	5.6	21.9	285	Clear, no odor
1030	145.05	156	7.11	0.154	7.4	5.6	22.1	294	Clear, no odor
1050	145.05	196	7.07	0.155	8.1	5.7	22.4	290	Clear, no odor

Total Purge Volume: 196 (Gallons)

Total Discharge: 3.00 (Casing Volumes)

Approx. Purge Rate: 2 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 905 Purge time start: 910

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 6	Sample ID: DUPE-8-2Q05	Type: _____	Type: _____
Sample Time: 1053	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 # 7

GEOFON INCORPORATED
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: 4-12812
Navy Contract No.:
Sampled By: Marco Mendoza
Date: 5/24/05
Weather: clear and warm

PURGE VOLUME CALCULATION (casing volume):

(275 TD (feet) - 167.95 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 209.64 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
1125	167.95	0	8.17	0.534	95	11.72	24.65	122	Brownish, slight odor
1146	167.95	42	7.74	0.530	28	11.94	24.79	133	Clear, no odor
1207	167.95	84	8.01	0.524	14	11.44	24.61	119	Clear, no odor
1228	167.95	126	8.42	0.528	10	11.67	24.76	118	Clear, no odor
1249	167.95	168	8.40	0.532	10	11.24	25.30	122	Clear, no odor
1310	167.95	210	8.35	0.534	8.8	10.87	25.84	129	Clear, no odor

Total Purge Volume: 210 (Gallons)

Total Discharge: 3.01 (Casing Volumes)

Approx. Purge Rate: 2 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 1123 Purge time start: 1125

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 7	Sample ID: MW-7	Type:	Type:
Sample Time: 1315	Sample Time: 1315	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

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/24/05
Weather: partly cloudy and warm

PURGE VOLUME CALCULATION (casing volume):

(205 TD (feet) - 94.12 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 217.15 Gallons Calculated Purge Volume

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
920	94.12	0	7.49	0.459	18	11.43	19.39	128	Slightly cloudy, no odor
934	94.12	43	7.91	0.450	8.8	11.87	19.49	135	Clear, no odor
949	94.12	87	7.98	0.449	6.1	11.92	19.53	138	Clear, no odor
1003	94.12	130	7.96	0.451	5.8	11.76	20.03	144	Clear, no odor
1018	94.12	174	8.11	0.451	5.9	12.26	20.08	142	Clear, no odor
1032	94.12	217	7.45	0.446	5.7	10.79	21.38	150	Clear, no odor

Total Purge Volume: 217 (Gallons)

Total Discharge: 3.00 (Casing Volumes)

Approx. Purge Rate: 3 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 918 Purge time start: 920

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 8	Sample ID: MW-8	Type: _____	Type: _____
Sample Time: 1038	Sample Time: 1038	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 # 9

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/6/05
Weather: partly cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(68 TD (feet) - 17.52 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 98.86 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
918	17.52	0	6.88	44.8	13	15.8	18.4	123	Clear, no odor
925	17.52	20	6.97	44.9	8.0	5.7	17.5	112	Clear, no odor
932	17.52	40	7.01	44.6	10	5.7	17.1	110	Clear, no odor
938	17.52	60	7.03	44.2	11	6.0	17.9	111	Clear, no odor
945	17.52	80	7.19	43.7	8.3	5.8	18.9	111	Clear, no odor
951	17.52	100	7.11	43.4	9.1	5.8	18.3	110	Clear, no odor

Total Purge Volume: 100 (Gallons)

Total Discharge: 3.03 (Casing Volumes)

Approx. Purge Rate: 3 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at: 915 Purge time start: 918

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
Sample ID: MW- 9
Sample Time: 958
No. of Containers: 6

MS/MSD
Sample ID: DUPE-3-2Q05
Sample Time: ----------
No. of Containers: 6

Blank
Type: _____
Sample ID: _____
Sample Time: _____
No. of Containers: _____

Other (Trip / Source / _____)
Type: _____
Sample ID: _____
Sample Time: _____
No. of Containers: _____

ORIGINAL FIELD RECORD

GROUNDWATER COLLECTION AND SAMPLE LOG
WELL ID # 10

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/24/05
Weather: cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(155 TD (feet) - 46.89 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 211.72 Gallons Calculated Purge Volume

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
710	46.89	0	5.93	1.06	19	11.28	19.03	175	Cloudy, no odor
724	46.89	42	7.12	1.03	8.8	11.19	19.06	152	Cloudy, no odor
738	46.89	85	7.79	1.02	7.1	11.21	18.98	154	Slightly cloudy, no odor
752	46.89	127	7.62	1.02	6.6	11.03	19.11	161	Clear, no odor
806	46.89	170	7.57	1.00	6.2	10.81	19.29	155	Clear, no odor
820	46.89	212	7.61	1.01	5.6	10.35	19.88	148	Clear, no odor

Total Purge Volume: 212 (Gallons)

Total Discharge: 3.00 (Casing Volumes)

Approx. Purge Rate: 3 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 708 Purge time start: 710

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW-10	Sample ID: DUPE-9-2Q05	Type:	Type:
Sample Time: 825	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 # 13

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza, Jason Estep
Date: 5/23/05
Weather: clear and hot

PURGE VOLUME CALCULATION (casing volume):

(235 TD (feet) - 141.17 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 183.76 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
955	141.17	0	6.14	0.640	11	10.37	23.56	154	Clear, no odor
1010	141.17	37	7.43	0.607	7.1	10.03	24.00	116	Clear, no odor
1025	141.17	74	7.72	0.605	8.5	10.29	24.60	112	Clear, no odor
1040	141.17	111	7.84	0.603	6.0	10.17	24.57	112	Clear, no odor
1055	141.17	148	8.03	0.606	6.6	10.41	24.05	130	Clear, no odor
1110	141.17	185	7.95	0.615	5.6	10.47	25.90	123	Clear, no odor

Total Purge Volume: 185 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 2.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 952 Purge time start: 955

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 13	Sample ID: _____	Type: _____	Type: _____
Sample Time: 1114	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

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/6/05
Weather: partly cloudy and cool

PURGE VOLUME CALCULATION (casing volume):

(74 TD (feet) - 28.44 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 89.22 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
1050	28.44	0	7.41	37.2	9.9	6.1	17.5	129	Clear, no odor
1102	28.44	18	7.42	37.6	5.6	6.1	17.1	114	Clear, no odor
1114	28.44	36	7.45	38.0	5.7	6.0	17.7	111	Clear, no odor
1126	28.44	54	7.46	38.1	5.7	5.9	18.2	111	Clear, no odor
1138	28.44	72	7.51	38.4	5.6	6.1	17.5	110	Clear, no odor
1150	28.44	90	7.52	38.3	5.8	5.8	17.6	117	Clear, no odor

Total Purge Volume: 90 (Gallons)

Total Discharge: 3.03 (Casing Volumes)

Approx. Purge Rate: 1.5 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 1045 Purge time start: 1050

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 15	Sample ID: MW-15	Type: _____	Type: _____
Sample Time: 1153	Sample Time: 1153	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

GEOFON INCORPORATED
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.:
Sampled By: Marco Mendoza
Date: 5/20/05
Weather: clear and hot

PURGE VOLUME CALCULATION (casing volume):

(285 TD (feet) - 192.56 WL (feet)) X 4² D (inches) X 3 # Vols X 0.0408 = 181.03 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
1220	192.56	0	7.11	57.4	40	7.8	27.9	209	Clear, no odor
1238	192.56	36	7.20	57.5	11	8.0	27.1	206	Clear, no odor
1256	192.56	72	7.25	56.3	7.2	7.2	27.6	206	Clear, no odor
1314	192.56	109	7.18	54.6	6.2	7.3	27.4	229	Clear, no odor
1332	192.56	144	7.36	57.7	6.0	7.0	27.1	219	Clear, no odor
1350	192.56	180	7.51	57.2	5.8	7.0	29.9	225	Clear, no odor
1351	192.56	182	7.48	57.3	6.1	7.0	29.2	221	Clear, no odor

Total Purge Volume: 182 (Gallons)

Total Discharge: 3.02 (Casing Volumes)

Approx. Purge Rate: 2 (GPM)

OBSERVATIONS DURING PUMPING

NOTES: (well condition, color, clarity, odor): Purge start at 1215 Purge time start: 1220

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	***MS/MSD***	***Blank***	***Other (Trip / Source / _____)***
Sample ID: MW- 16	Sample ID: _____	Type: _____	Type: _____
Sample Time: 1400	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

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-21
Sampling Zone No.: 5 to 1
Depth (ft): 372, 310, 240, 167, 90
Beginning of Session: 14.15 psia
End of Session: 14.12 psia

Start Time: 754
Finish Time: 1125

Date: 4/26/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	129.53	✓	167.45	✓	167.45	✓	✓	129.49	820	5.61	5.40	21.2	.109	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	128.48	✓	167.43	✓	167.43	✓	✓	128.49	844	6.16	5.51	20.8	.113	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	103.41	✓	140.60	✓	140.59	✓	✓	103.41	911	6.61	5.86	21.1	.105	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	73.31	✓	110.69	✓	110.70	✓	✓	73.30	943	6.93	5.92	21.5	.149	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	38.87	✓	76.48	✓	76.45	✓	✓	38.86	1018	7.43	4.71	24.2	.164	
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	39.30	✓	76.43	✓	76.43	✓	✓	39.32	644	7.69	5.16	23.4	.164	>2
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.17	✓	45.05	✓	45.04	✓	✓	14.16	1122	7.78	8.39	26.4	.144	

15/NP

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: ------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #: BATTELLE

Well ID: MW-19
Sampling Zone No.: 6 to 1
Depth (ft): 498, 444, 392, 314, & 242
Beginning of Session: 14.11 psia
End of Session: 14.14 psia

Start Time: 817
Finish Time: 1222

Date: 4/27/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	147.25	✓	178.75	✓	178.75	✓	✓	147.23	944	5.25	12	16.8	.105	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	146.79	✓	178.74	✓	178.73	✓	✓	146.80	903	5.38	11	16.5	.106	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	124.20	✓	155.36	✓	155.33	✓	✓	124.18	940	5.98	0.40	17.3	.111	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	101.60	✓	133.23	✓	133.22	✓	✓	101.58	1036	6.63	2.1	19.2	.100	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	67.65	✓	99.16	✓	99.16	✓	✓	67.67	1115	6.62	6.4	21.7	.137	>2
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	67.66	✓	99.16	✓	99.18	✓	✓	67.67	1138	7.19	1.9	19.1	.139	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	36.57	✓	69.11	✓	69.12	✓	✓	36.60	1216	7.53	28	18.3	42.3	

Notes:

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

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

Total Volume: --------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-20
Sampling Zone No.: 5 to 1
Depth (ft): 900, 700, 562, 392, 230
Beginning of Session: 14.15 psia
End of Session: 14.20 psia

Start Time: 730
Finish Time: 1140

Date: 4/24/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	308.92	✓	336.45	✓	336.45	✓	✓	308.92	809	5.75	5.8	17.1	31.4	
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	307.87	✓	336.45	✓	336.45	✓	✓	307.87	838	6.02	5.2	17.2	30.1	>5
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	222.71	✓	250.81	✓	250.75	✓	✓	222.70	918	6.49	8.9	17.1	31.0	
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	222.67	✓	250.79	✓	250.74	✓	✓	222.65	951	6.71	15	17.5	30.7	>4
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	162.55	✓	188.06	✓	188.06	✓	✓	162.54	1025	6.45	6.0	17.9	49.0	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	88.45	✓	115.88	✓	115.91	✓	✓	88.47	1102	6.59	5.7	17.8	34.7	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	18.28	✓	45.56	✓	45.57	✓	✓	18.31	1135	6.67	11	19.8	48.3	

Notes:

port 5: CLEAR, H_2S ODOR

port 4: BLACKISH GRAY, STRONG ODOR

port 3: CLEAR, SLIGHT ODOR

port 2: CLEAR, NO ODOR

port 1: CLEAR, NO ODOR

Total Volume: ------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-17
Sampling Zone No.: 5 to 1
Depth (ft): 726, 582, 468, 370, 250
Beginning of Session: 14.05 psia
End of Session: 14.07 psia

Start Time: 0723
Finish Time: 1310

Date: 5/2/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	170.30	✓	256.20	✓	256.15	✓	✓	170.25	759	5.52	75	17.6	42.1	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	169.32	✓	256.19	✓	256.15	✓	✓	169.27	827	6.32	260	16.9	30.9	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	108.59	✓	194.19	✓	194.18	✓	✓	108.59	904	6.51	6.4	18.6	30.0	4
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	108.55	✓	194.23	✓	194.23	✓	✓	108.54	931	6.87	6.1	18.1	31.5	
4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	108.03	✓	194.29	✓	194.30	✓	✓	108.04	1003	7.14	6.2	17.7	29.2	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	58.70	✓	145.17	✓	145.21	✓	✓	58.71	1151	7.01	1.7	23.0	64.4	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	16.00	✓	105.34	✓	105.35	✓	✓	16.01	1231	7.24	7.2	23.2	87.1	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.20	✓	56.31	✓	56.30	✓	✓	14.21	1305	7.82	5.4	23.8	34.9	

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

Total Volume: -----

GEOFON INCORPORATED

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-18
Sampling Zone No.: 5 to 1
Depth (ft): 684, 564, 424, 330, 270
Beginning of Session: 14.05 psia
End of Session: 14.07 psia

Start Time: 721
Finish Time: 1126

Date: 5/3/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	159.83	✓	221.14	✓	221.11	✓	✓	159.82	856	5.50	6.7	18.6	35.1	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	158.77	✓	221.18	✓	221.15	✓	✓	158.74	840	6.03	7.2	19.2	27.0	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	108.47	✓	171.63	✓	171.61	✓	✓	108.47	913	6.00	8.1	21.1	39.8	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	47.46	✓	113.83	✓	113.85	✓	✓	47.47	944	6.08	6.3	21.3	52.8	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.23	✓	72.51	✓	72.50	✓	✓	14.23	1018	6.77	10	21.5	45.8	
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.23	✓	72.52	✓	72.51	✓	✓	14.23	1045	6.52	11	21.7	48.2	>2
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.20	✓	46.76	✓	46.72	✓	✓	14.23	1121	7.11	7.9	25.5	44.6	

DUP#1

Notes:

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

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

Total Volume: ---

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-3
Sampling Zone No.: 5 to 1
Depth (ft): 653, 558, 346, 252, 172
Beginning of Session: 14.12 psia
End of Session: 14.10 psia

Start Time: 0705
Finish Time: 1050

Date: 5/4/25
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	252.28	✓	266.77	✓	266.77	✓	✓	252.29	736	5.54	14	16.4	34.0	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	251.27	✓	266.77	✓	266.78	✓	✓	251.29	800	6.02	13	16.6	34.1	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	211.91	✓	225.72	✓	225.70	✓	✓	211.89	834	6.25	6.0	17.5	38.3	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	119.58	✓	136.85	✓	136.84	✓	✓	119.57	905	6.68	6.4	17.8	45.2	
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	119.55	✓	136.83	✓	136.83	✓	✓	119.56	935	6.92	6.7	18.1	45.4	>3
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	79.10	✓	96.35	✓	96.38	✓	✓	79.11	1007	7.10	7.3	19.8	45.9	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	44.23	✓	63.45	✓	63.51	✓	✓	44.32	1044	7.26	8.6	21.3	46.2	

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: ------

GEOFON INCORPORATED

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-14
Sampling Zone No.: 5 to 1
Depth (ft): 540, 456, 382, 277, & 207
Beginning of Session: 14.08 psia
End of Session: 14.10 psia

Start Time: 0725
Finish Time: 1127

Date: 5/9/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	196.36	✓	192.51	✓	192.51	✓	✓	196.34	754	5.28	9.0	17.8	34.2	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	195.31	✓	192.51	✓	192.51	✓	✓	195.29	817	5.86	7.3	17.6	31.3	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	160.69	✓	156.10	✓	156.11	✓	✓	160.68	848	5.92	5.4	17.5	55.4	
4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	160.65	✓	156.10	✓	156.10	✓	✓	160.63	919	—	—	—	—	>4
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	128.36	✓	124.03	✓	124.03	✓	✓	128.34	952	6.78	5.6	17.9	.139	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.04	✓	78.58	✓	78.56	✓	✓	83.03	1036	7.15	6.2	17.2	.151	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	52.48	✓	48.39	✓	48.40	✓	✓	52.47	1122	7.49	14	18.2	.159	

Notes:

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

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

Total Volume: -----

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-22
Sampling Zone No.: 5 to 1
Depth (ft): 588, 467, 389, 329, 245
Beginning of Session: 14.03 psia
End of Session: 14.05 psia

Start Time: 702
Finish Time: 1118

Date: 5/10/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	201.62	✓	208.99	✓	208.98	✓	✓	201.64	733	5.63	5.6	16.6	36.0	
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	201.15	✓	208.98	✓	208.96	✓	✓	201.14	759	6.62	5.4	16.9	34.4	>5
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	149.55	✓	157.45	✓	157.44	✓	✓	149.53	837	6.79	5.7	16.3	34.3	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	115.71	✓	124.81	✓	124.81	✓	✓	115.71	922	6.41	5.6	16.5	53.7	
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	115.70	✓	124.79	✓	124.75	✓	✓	115.68	957	—	—	—	—	>3
2	1	✓	✓	✓	✓	✓	✓	✓	—	✓	89.61	✓	98.72	✓	98.74	✓	✓	89.64	1038	6.58	6.1	24.4	52.1	
1	1	✓	✓	✓	✓	—	—	✓	—	✓	52.86	✓	62.55	✓	62.63	✓	✓	52.93	1113	6.92	6.9	24.8	.135	

Notes:

port 5: CLEAR, STRONG H_2S ODOR port 4: CLEAR, NO ODOR port 3: CLEAR, SLIGHT ODOR

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

Total Volume: --------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-24
Sampling Zone No.: 5 to 1
Depth (ft): 678, 554, 435, 373, 279
Beginning of Session: 14.03 psia
End of Session: 14.02 psia

Start Time: 724
Finish Time: 1128

Date: 5/11/05
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)	Temp. (oC)	Cond (mmhos)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	198.82	✓	235.56	✓	235.55	✓	✓	198.80	758	5.38	5.7	20.2	39.0
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	145.02	✓	182.87	✓	182.86	✓	✓	145.02	839	6.76	6.2	22.0	28.5
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	93.37	✓	132.67	✓	132.69	✓	✓	93.38	917	7.05	7.5	22.3	34.5
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	66.48	✓	106.36	✓	106.37	✓	✓	66.48	1000	7.24	8.4	21.5	41.6
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	25.66	✓	67.31	✓	67.38	✓	✓	25.67	1036	7.37	12	21.4	46.2
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	25.64	✓	67.26	✓	67.28	✓	✓	25.66	1059	7.50	8.7	20.2	47.1
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	25.63	✓	67.13	✓	67.11	✓	✓	25.66	1125	7.40	10	20.6	46.5

#1

Notes:

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

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

Total Volume: ------

GEOFON INCORPORATED

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-25
Sampling Zone No.: 5 + 1
Depth (ft): 713,633,503,423,358
Beginning of Session: 14.14 psia
End of Session: 14.15 psia

Start Time: 0720
Finish Time: 1235

Date: 5/12/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	203.27	✓	203.31	✓	203.29	✓	✓	203.25	746	5.59	6.0	18.9	45.6	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	203.26	✓	203.31	✓	203.29	✓	✓	203.20	841	5.91	5.6	20.1	43.5	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	170.56	✓	169.55	✓	169.56	✓	✓	170.57	940	5.88	6.6	23.4	66.1	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	114.11	✓	114.26	✓	114.27	✓	✓	114.11	1029	6.67	9.4	24.7	59.5	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	79.23	✓	79.64	✓	79.70	✓	✓	79.28	1118	7.68	17	27.4	56.6	
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	78.65	✓	79.61	✓	79.69	✓	✓	78.74	1147	7.95	16	25.1	56.7	>2
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	50.78	✓	50.87	✓	50.91	✓	✓	50.79	1229	7.60	8.9	28.1	84.2	

Notes:

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

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

Total Volume: ------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-11
Sampling Zone No.: 5 to 1
Depth (ft): 639,524,429,259,149
Beginning of Session: 14.03 psia
End of Session: 14.03 psia

Start Time: 708
Finish Time: 1134

Date: 5/16/05
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)	Temp. (oC)	Cond (mmhos)	
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	244.75	✓	242.29	✓	242.22	✓	✓	244.72	805	5.49	32	18.2	36.6	>5
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	243.69	✓	242.24	✓	242.22	✓	✓	243.68	828	5.82	6.0	18.0	32.8	
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	195.96	✓	197.96	✓	197.90	✓	✓	195.94	906	6.34	6.0	18.2	21.3	
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	154.96	✓	156.12	✓	156.07	✓	✓	154.97	946	6.41	12	17.2	39.0	>3
3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	154.95	✓	156.12	✓	156.07	✓	✓	154.91	1017	6.59	15	17.7	39.7	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	81.71	✓	84.49	✓	84.46	✓	✓	81.71	1052	6.93	6.1	17.7	45.8	
1	1	✓	✓	✓	—	✓	—	—	✓	✓	34.32	✓	42.28	✓	42.27	✓	✓	34.31	1128	7.11	6.6	18.1	55.3	

Notes:

port 5: CLEAR, H_2S ODOR port 4: CLEAR, SLIGHT ODOR port 3: CLEAR, SLIGHT ODOR

port 2: CLEAR, H_2S ODOR port 1: CLEAR, NO ODOR

Total Volume: ---

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-23
Sampling Zone No.: 5+1
Depth (ft,.: 542, 445, 319, 254, 174
Beginning of Session: 14.05 psia
End of Session: 14.08 psia

Start Time: 0710
Finish Time: 1035

Date: 5/17/05
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)	Temp. (oC)	Cond (mmhos)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	207.35	✓	217.52	✓	217.40	✓	✓	207.30	747	6.42	6.9	19.9	41.4
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	206.91	✓	217.50	✓	217.44	✓	✓	206.94	816	7.66	6.9	19.2	42.7
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	165.69	✓	175.61	✓	175.61	✓	✓	165.70	846	7.70	5.9	19.2	36.3
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	111.04	✓	122.26	✓	122.29	✓	✓	111.06	918	7.02	19	20.4	39.1
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.01	✓	94.26	✓	94.28	✓	✓	83.04	952	7.00	6.0	21.5	94.5
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	48.25	✓	60.69	✓	60.71	✓	✓	48.29	1026	7.19	10	23.0	.154

> 5

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

Total Volume: --------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-4
Sampling Zone No.: 5 to 1
Depth (ft): 513,392,322,240,150
Beginning of Session: 14.11 psia
End of Session: 14.11 psia

Start Time: 704
Finish Time: 1035

Date: 5/19/05
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)	Temp. (oC)	Cond (mmhos)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	143.11	✓	215.62	✓	215.62	✓	✓	143.11	732	5.48	10	19.5	33.0
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	90.33	✓	163.26	✓	163.26	✓	✓	90.33	802	5.64	16	20.7	35.5
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	59.78	✓	133.36	✓	133.36	✓	✓	59.80	835	5.92	18	21.6	42.5
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	24.48	✓	98.23	✓	98.24	✓	✓	24.53	906	6.04	19	21.8	98.3
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.15	✓	62.42	✓	62.38	✓	✓	14.18	938	6.47	11	23.6	45.8
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.16	✓	62.40	✓	62.38	✓	✓	14.17	1006	6.76	9.6	21.3	44.9
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.16	✓	62.39	✓	62.36	✓	✓	14.18	1025	6.90	12	23.8	44.9

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

Total Volume: ------

GEOFON INCORPORATED

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

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: 14.06 psia

Start Time: 706
Finish Time: 1225

Date: 5/18/05
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)	Temp. (oC)	Cond (mmhos)
5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	202.20	✓	220.65	✓	220.65	✓	✓	202.21	745	5.19	5.5	16.9	44.6
5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	202.62	✓	220.63	✓	220.61	✓	✓	202.61	822	5.78	5.7	18.2	44.6
5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	202.09	✓	220.62	✓	220.63	✓	✓	202.07	953	6.10	5.6	18.9	44.5
4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	153.75	✓	174.42	✓	174.32	✓	✓	153.79	931	6.46	5.7	20.9	47.7
3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	104.42	✓	126.15	✓	126.18	✓	✓	104.46	1006	6.82	6.1	21.7	44.8
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	70.00	✓	92.05	✓	92.11	✓	✓	70.01	1046	7.17	6.9	22.7	51.0
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	24.96	✓	51.51	✓	51.52	✓	✓	25.06	1159	7.47	10	24.3	56.0

Notes:

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

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

Total Volume: ------

GEOFON INCORPORATED

Groundwater Sampling
Multi-Port Well Field Data Sheet

JPL Pasadena
Contract #:

Well ID: MW-26
Sampling Zone No.: 2 to 1
Depth (ft): 215, 135
Beginning of Session: 14.08 psia
End of Session: 14.14 psia

Start Time: 0730
Finish Time: 1135

Date: 5/25/05
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)	Temp. (oC)	Cond (mmhos)	
2	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.46	✓	83.43	✓	83.46	✓	✓	83.45	807	6.70	8.4	19.82	0.97	
2	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.40	✓	83.45	✓	83.45	✓	✓	83.46	829	7.84	11	20.35	0.97	
2	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.41	✓	83.43	✓	83.46	✓	✓	83.43	849	8.09	15	21.21	0.92	2
2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.44	✓	83.43	✓	83.42	✓	✓	83.44	908	8.13	10	21.66	0.96	
2	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.40	✓	83.42	✓	83.44	✓	✓	83.44	926	8.15	16	21.95	0.97	
2	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	83.36	✓	83.40	✓	83.43	✓	✓	83.41	947	8.55	10	22.90	0.96	
1	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	48.75	✓	45.68	✓	45.72	✓	✓	48.79	1031	8.50	5.9	25.53	1.06	1
1	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	48.74	✓	45.64	✓	45.72	✓	✓	48.77	1103	8.54	5.6	25.84	1.11	
1	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	48.75	✓	45.67	✓	45.72	✓	✓	48.75	1132	—	—	—	—	

Notes:

Total Volume: ------

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