Previous

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/20/01

Monitoring Well No.: M14-01 (Site 14) Chain of Custody No.:

Personnel: Gary Thomas, Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14 ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.35 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0916	1	0.25	6.59	6.90	4,026	17.09	27.9	1.33	1.9
0920	2	0.25	6.58	6.94	3,900	17.04	19.0	0.86	-18.7
0923	3	0.25	6.58	6.97	3,649	17.01	13.0	0.97	-33.7
0927	4	0.25	6.58	7.00	3,195	16.99	6.8	0.74	-43.6
0931	5	0.25	6.56	7.01	2,974	17.00	5.0	0.75	-48.0
0935	6	0.25	6.53	7.03	2,874	17.00	3.3	0.63	-52.4
0938	7	0.25	6.51	7.04	2,790	16.97	2.7	0.60	-55.0
0942	8	0.25	6.49	7.05	2,609	17.02	2.5	0.60	-56.5
0946	9	0.25	6.45	7.05	2,543	17.08	2.6	0.61	-57.1

Begin Purge: 0915 Method of Purging Slow Purge with Peristaltic Pump Purged Dry? No

End Purge: 0950 Total Volume Purged: 9 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/20/01 @ 0950 Sample Number (s): 385-514-013

Description of Purge Water: Water is clear, colorless, and has a slight H_2S odor

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/19/01

Monitoring Well No.: M14-02 (Site 14) Chain of Custody No.: \

Personnel: Gary Thomas, Rick Endman

Organic Vapor Concentration TOC: ppm Breathing Zone: 6 ppm

Depth to Well Bottom: ft.btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.99 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1158	1	0.20	4.85	7.29	1,427	20.87	1.7	2.95	180.9
1202	2	0.25	4.87	7.32	1,309	20.33	1.7	1.07	188.6
1206	3	0.25	4.86	7.33	1,239	20.27	2.0	1.13	189.8
1210	4	0.25	4.84	7.34	1,214	20.31	1.6	0.84	182.9
1213	5	0.25	4.81	7.35	1,183	20.40	1.1	0.86	172.2
1218	6	0.25	4.80	7.36	1,165	20.31	1.0	0.68	155.2
1222	7	0.25	4.78	7.37	1,151	20.41	1.1	0.60	141.3
1227	8	0.25	4.75	7.38	1,129	20.35	0.5	0.68	130.5

Begin Purge: 1155 Method of Purging Slow Purge Peristaltic Pump Purged Dry? No

End Purge: 1230 Total Volume Purged: 8 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/19/01 @ 1230 Sample Number (s): 385-514-014

Description of Purge Water: Colorless, odorless, clear

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/19/01

Monitoring Well No.: M14-03 (Site 14) Chain of Custody No.: 4735

Personnel: MIKE B. / GARY THOMAS

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 14.00 ft.btoc Well Volume (2)inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.01 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1317	INITIAL	.25	5.01	6.79	948.0	22.55	7.8	7.03	212.0
1321	1	.25	6.71	6.75	987.0	22.63	23.1	4.85	225.0
1323	2	0.55	8.20	6.74	974.0	22.43	27.1	4.47	217.0
1326	3	.20	7.98	6.73	936.0	22.15	9.2	4.51	216.1
1330	4	.25	7.80	6.72	876.0	21.65	1.8	3.55	190.2
1334	5	.25	7.80	6.72	863.00	21.50	1.0	3.40	161.3
1339	6	.25	7.85	6.73	803.0	21.44	0.6	3.11	141.6
1344	7	.25	8.00	6.73	798.00	21.33	0.1	3.00	130.7
1348	8	.25	8.07	6.73	860.0	21.37	0.2	2.95	120.6
1352	9	.25	8.08	6.74	804.0	21.31	2.4	2.93	114.4

Begin Purge: 1317 Method of Purging PERISTALTIC PUMP (Slow purge) Purged Dry? NO

End Purge: 1348 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/19/01 @ 1350 Sample Number (s): 385-514-015

Description of Purge Water: YELLOWISH TINT / FLOATING ORGANICS / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/20/01

Monitoring Well No.: M112-A (Site 14) Chain of Custody No.:

Personnel: Gary Thomas, Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: ~~0~~ ppm

Depth to Well Bottom: 12 ft. btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.45 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1424	1	0.25	4.52	6.97	570	22.24	10.4	1.79	205.7
1427	2	0.25	4.52	6.98	570	22.56	4.7	1.19	151.5
1431	3	0.25	4.51	6.99	572	22.49	4.5	1.11	69.8
1435	4	0.25	4.50	7.01	576	22.50	3.0	0.89	62.1
1439	5	0.25	4.52	7.02	575	22.32	2.0	0.80	51.9
1443	6	0.25	4.52	7.02	574	22.42	1.3	0.81	53.2
1447	7	0.25	4.52	7.03	577	22.33	3.4	0.91	45.5
1451	8	0.25	4.52	7.04	577	22.30	1.3	0.82	39.2

Begin Purge: 1420 Method of Purging: Slow Purge with Peristaltic Pump Purged Dry? No

End Purge: 1452 Total Volume Purged: 8 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/20/01 @ 1500 Sample Number (s): 385-514-017

Description of Purge Water: Clear, Colorless, odorless

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/20/01

Monitoring Well No.: M113-A (Site 14) Chain of Custody No.: _____

Personnel: Gary Thomas

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 11.1 ft. btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.31 ft. btoc

Water Column: _____ ft. Well Volume Calculation: _____ gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1054	1	0.25	3.39	7.23	1,749	21.96	29.3	0.72	-122.0
1058	2	0.25	3.39	7.22	1,756	21.85	17.4	0.77	-124.2
1102	3	0.25	3.40	7.22	1,748	21.80	11.2	0.63	-125.9
1107	4	0.25	3.40	7.22	1,742	21.83	6.6	0.62	-126.2
1111	5	0.25	3.40	7.21	1,737	21.73	6.5	0.56	-125.4
1115	6	0.25	3.41	7.20	1,724	21.58	6.5	0.50	-124.9
1119	7	0.25	3.41	7.20	1,719	21.53	9.2	0.49	-124.0
1123	8	0.25	3.41	7.19	1,721	21.52	13.4	0.51	-123.3

Begin Purge: 1053 Method of Purging: Slow Purge with Peristaltic Pump Purged Dry? No

End Purge: 1128 Total Volume Purged: 8 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/20/01 @ 1130 Sample Number (s): 385-514-018

Description of Purge Water: Yellowish hue, slight H_2S odor, clear

Comments: _____

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/20/01

Monitoring Well No.: M114-A (site 14) Chain of Custody No.:

Personnel: Gary Thomas, Rick Endman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.02 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1253	1	0.25	3.07	7.70	2686	18.78	4.7	0.47	-114.7
1256	2	0.25	3.07	7.70	2658	18.77	7.3	0.76	-105.7
1301	3	0.25	3.07	7.70	2631	18.69	3.8	0.57	-105.9
1305	4	0.25	3.07	7.71	2622	18.71	2.2	0.58	-111.3
1309	5	0.25	3.07	7.72	2616	18.76	1.1	0.46	-114.5
1313	6	0.25	3.08	7.72	2604	18.64	0.3	0.33	-116.8
1316	7	0.25	3.08	7.72	2598	18.67	0.3	0.60	-115.8
1320	8	0.25	3.08	7.73	2596	18.67	0.3	0.50	-115.8
1324	9	0.25	3.08	7.73	2596	18.77	0.4	0.48	-113.1

Begin Purge: 1248 Method of Purging Slow Purge with Peristaltic Pump Purged Dry? No

End Purge: 1324 Total Volume Purged: 9 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/20/01 / 1330 Sample Number (s): 385-514-022

Description of Purge Water: Clear, odorless, slight yellowish hue

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/21/01

Monitoring Well No.: M-101A (Site 14) Chain of Custody No.: 4732

Personnel: MIKE B. / RICK E

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 12.50 ft. btoc

Depth to Water: 3.80 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0838	INITIAL	.25	3.88	6.94	2549	20.71	10.1	1.29	-176.0
0842	1	.25	4.09	6.90	2431	20.91	8.1	0.65	-165.0
0846	2	.25	4.09	6.89	2428	20.93	8.6	0.89	-163.5
0850	3	.25	4.09	6.87	2441	20.98	7.6	1.11	-160.5
0854	4	.25	4.09	6.88	2488	21.02	7.2	2.31	-161.6
0858	5	.25	4.09	6.90	2559	21.06	8.1	0.36	-163.0
0902	6	.25	4.09	6.93	2681	21.14	10.2	0.56	-164.0
0906	7	.25	4.09	6.94	2714	21.11	11.0	0.70	-165.3
0910	8	.25	4.09	6.93	2790	21.14	10.2	0.64	-166.3

Begin Purge: 0838 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 0920 Total Volume Purged: 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/21/01 @ 0920 Sample Number (s): 385-S14-019

Description of Purge Water: SLIGHTLY TURBID, BLACKISH GRAY, BLACK PRECIPITATE, SLIGHT PETROLEUM ODOR

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/21/01

Monitoring Well No.: D14-01 (Site 14) Chain of Custody No.:

Personnel: Gary Thomas, Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.29 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1157	1	0.25	6.09	9.03	31,498	20.89	0.1	7.64	28.8
* 1201	2	0.25	5.99	6.82	31,576	21.14	7.1	4.15	15.5
1247	3	0.25	5.65	6.93	31,763	20.85	11.8	2.26	-68.4
1252	4	0.25	5.63	6.92	31,799	20.91	10.3	2.00	-69.2
1256	5	0.25	5.61	6.94	31,884	21.02	11.9	1.89	-70.5
1259	6	0.25	5.59	6.95	32,030	21.14	10.7	1.75	-71.6
1303	7	0.25	5.56	6.95	32,136	21.29	10.9	1.68	-72.9
1307	8	0.25	5.53	6.95	32,064	21.10	11.3	1.65	-73.0
1311	9	0.25	5.51	6.95	32,044	21.11	11.4	1.56	-74.3

Begin Purge: 1155 Method of Purging: Slow Purge with Redi-Flow Pump Purged Dry? No

End Purge: 1312 Total Volume Purged: 9 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☒ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 6/21/01 @ 1330 Sample Number (s): 385-514-901 (Duplicate: 6/21/01 @ 1315, 385-514-016)

Description of Purge Water: Clear, colorless odorless

Comments: * Display was malfunctioning

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/21/01

Monitoring Well No.: M101-C (Site 14) Chain of Custody No.: 4732

Personnel: MIKE B. / RICK E.

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 58.5 ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.58 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0938	INITIAL	.25	4.58	6.93	51,546	20.87	169.0	2.61	-147.2
0942	1	.25	5.22	6.86	51,774	20.03	48.9	1.27	-166.7
0946	2	.25	5.38	6.81	51,072	21.10	140.0	0.71	-190.8
0950	3	.25	5.55	6.80	50,487	21.15	130.0	0.44	-222.2
0954	4	.25	5.52	6.79	50,622	21.46	243.5	0.49	-245.6
* 0958	5	.15	5.51	6.80	50,467	21.93	147.0	0.51	-260.5
1002	6	.25	5.62	6.79	50,508	21.46	167.0	0.44	-267.5
1006	7	.25	5.68	6.79	50,474	21.50	168.9	0.49	-274.0
1010	8	.25	5.70	6.78	50,618	21.72	200.00	0.55	-277.1
10									

Begin Purge: 0938 Method of Purging Slow Purge REDI-FLOW PUMP Purged Dry? NO

End Purge: 1010 Total Volume Purged: 8 l How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/21/01 @ 1030 Sample Number (s): 385-S14-020

Description of Purge Water: GRAY IN COLOR, HEAVY H_2SO_4 ODOR, BLACK PARTICULATE, NO SHEEN

Comments: ~~None~~ / *TURBIDITY DID NOT DROP. FLOW RATE DROPPED TO .15 TO SEE IF TURBIDITY WOULD DROP. IT DID NOT.

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 10/11/01

Monitoring Well No.: M16-04 (Site 16) Chain of Custody No.: 5038

Personnel: Gary Thomas, Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13.1 ft. btoc Well Volume: (2) inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.65 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Specific Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1802	Initial		5.64						
1811	1	0.18	5.71	6.59	236	18.33	9.3	1.88	144.2
1817	2	0.18	5.71	6.91	235	18.24	5.5	1.49	121.3
1822	3	0.25	5.72	7.06	234	18.20	3.7	1.30	93.2
1826	4	0.25	5.72	7.22	235	18.10	2.8	1.20	57.0
1830	5	0.25	5.72	7.37	236	18.08	1.6	1.22	25.4
1834	6	0.25	5.72	7.47	236	18.07	1.5	1.20	14.3
1838	7	0.25	5.72	7.56	235	18.01	1.5	1.17	3.0
1841	8	0.25	5.72	7.62	233	17.98	1.0	1.11	-10.4
1845	9	0.25	5.72	7.66	234	17.95	1.0	1.09	-17.8

Begin Purge: 1803 Method of Purging: Low-Flow-Rate Sampling with Peristaltic Pump Purged Dry? No

End Purge: 1845 Total Volume Purged: 9 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 10/11/01 @ 1845 Sample Number (s): 385-516-014

Description of Purge Water: Water is clear, colorless, and has an unknown odor

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: MWC2-1 (Site 16) Chain of Custody No.: 4787

Personnel: Gregorio Ramirez / Eric Endman

Organic Vapor Concentration TOC: ____ ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13.5 ft. btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.73 ft. btoc

Water Column: ____ ft. Well Volume Calculation: ____ gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1406	Initial	0.24	4.06	8.12	713.0	22.86	4.9	0.39	125.0
1410	1	0.20	4.06	8.07	793	22.59	2.7	0.25	134.0
1414	2	0.24	4.03	8.07	837.0	22.64	2.2	0.28	140.4
1418	3	0.25	4.01	8.08	852.0	22.70	1.9	0.27	143.0
1422	4	0.25	4.01	8.09	874	22.69	2.1	0.29	150.1
1426	5	0.25	4.01	8.03	~~876~~ 879	22.65	2.1	0.27	152.0
1430	6	0.25	4.01	8.06	876.	22.60	2.4	0.28	153.0
1434	7	0.25	4.01	8.09	873	22.62	1.9	0.26	155.0
1438	8	0.25	4.01	8.09	890	22.67	1.9	0.27	163.7

Begin Purge: 1406 Method of Purging slow purge with peristaltic pump Purged Dry? NO

End Purge: 1500 Total Volume Purged: 8L How Measured? Graduated cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 / 1440 Sample Number (s): 385-S16-011

Description of Purge Water: Light brown / no order.

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/22/01

Monitoring Well No.: MWC2-2 (Site 16) Chain of Custody No.: 4731

Personnel: Mike B. & Gregorio Ramirez

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.93 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1154	INITIAL	.25	4.98	7.36	1,122	22.55	11.8	0.22	148.5
1158	1	.25	4.98	7.30	1,040	22.31	12.4	0.23	174.7
1202	2	.25	4.98	7.31	1,079	22.71	11.8	0.25	187.9
1206	3	.25	4.98	7.32	1,065	22.76	2.9	0.29	198.7
1210	4	.25	4.98	7.32	1,042	22.83	1.8	0.32	206.6
1214	5	.25	4.98	7.33	1,093	22.67	2.6	0.35	211.14
1218	6	.25	4.98	7.34	1,080	22.61	1.4	0.35	215.0
1222	7	.25	4.98	7.35	1,023	22.67	0.6	0.36	216.5
1226	8	.25	4.98	7.35	1,062	22.72	0.3	0.35	215.9

Begin Purge: 1154 Method of Purging: REDI FLOW PUMP / (Slow Purge) PERISTALTIC PUMP Purged Dry? NO

End Purge: 1226 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/22/01 @ 1235 Sample Number (s): 385-516-012

Description of Purge Water: BLACKISH COLOR / NO ODOR / NO SHEEN

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/22/01

Monitoring Well No.: MWC2-3 (Site 16) Chain of Custody No.: 4731

Personnel: MIKE B. & RICK E.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.21 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0955	INITIAL	.25	3.35	7.95	213	20.97	14.9	2.95	101.5
0959	1	.25	3.37	7.76	198	20.43	6.3	0.53	101.2
1003	2	.25	3.37	7.70	194	20.86	3.8	0.37	105.2
1007	3	.25	3.37	7.70	214	21.14	3.3	0.34	105.7
1011	4	.25	3.37	7.74	225	21.16	2.4	0.29	105.9
1015	5	.25	3.37	7.76	223	21.12	4.0	0.25	106.2
1019	6	.25	3.37	7.77	228	21.12	6.5	0.22	107.4
1023	7	.25	3.37	7.78	229	21.23	11.4	0.22	108.5
1027	8	.25	3.37	7.78	231	21.17	13.0	0.21	110.0

Begin Purge: ~~1027~~ 0955 Method of Purging REDI FLOW PUMP / Slow Purge PERISTALTIC PUMP Purged Dry? NO

End Purge: 1027 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/22/01 @ 1035 Sample Number (s): 385-516-013

Description of Purge Water: CLEAR, SMALL PARTICULATE, SLIGHT SOLVENT ODOR

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/22/01

Monitoring Well No.: 608MJ-MW1 (Site 16) Chain of Custody No.: 4731

Personnel: MIKE B. & RICK E.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.5 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft

Depth to Water: 3.98 ft. btoc 4-inch well = water column x 0.652 gal/ft

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0903	INITIAL	.25	4.02	7.01	231	21.86	91.2	2.77	79.1
0907	1	.25	4.02	7.52	228	21.97	42.4	0.62	80.5
0911	2	.25	4.02	7.53	229	22.42	28.7	0.58	80.1
0915	3	.25	4.02	7.58	233	22.59	18.3	0.56	80.4
0919	4	.25	4.02	7.59	239	22.80	12.2	0.52	81.9
0922	5	.25	4.02	7.57	242	22.90	8.5	0.49	82.6
0926	6	.25	4.02	7.57	242	23.06	6.8	0.47	83.6
0930	7	.25	4.02	7.56	242	23.17	4.3	0.46	84.1
0934	8	.25	4.02	7.57	243	23.22	3.3	0.46	83.5

Begin Purge: 0903 Method of Purging REDI FLOW PUMP / (Slow Purge) PERISTALTIC PUMP Purged Dry? NO

End Purge: 0934 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/22/01 @ 0945 Sample Number (s): 385-S16-017

Description of Purge Water: BLACKISH GRAY / STRONG SOLVENT ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/22/01

Monitoring Well No.: 608MJ-MW 2 (Site 16) Chain of Custody No.: 4731

Personnel: MIKE B. & RICK C.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.50 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.27 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0807	INITIAL	.25	4.31	8.47	1052	19.54	5.1	2.28	438
0812	1	.25	4.33	8.43	479.0	19.96	3.4	0.91	0.4
0816	2	.25	4.34	8.14	315.0	20.51	3.5	0.63	-33.5
0820	3	.25	4.35	8.06	287.0	20.71	3.6	0.53	-38.8
0824	4	.25	4.35	7.98	261.0	21.01	2.1	0.42	-38.7
0828	5	.25	4.35	7.98	252	21.06	1.9	0.39	-36.4
0832	6	.25	4.35	7.96	248	21.23	1.0	0.34	-33.4
0836	7	.25	4.35	7.93	250	21.24	0.8	0.32	-32.1
0840	8	.25	4.35	7.92	250	21.42	0.7	0.27	-30.1
0844	9	.25	4.35	7.92	250	21.44	0.6	0.25	-27.6

Begin Purge: 0807 Method of Purging REDI FLOW PUMP / (Slow Purge) PERISTALTIC PUMP Purged Dry? NO

End Purge: 0840 Total Volume Purged: 9 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/22/01 @ 0850 Sample Number (s): 385-S16-~~002~~ 016

Description of Purge Water: CLEAR, NO ODOR, NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/22/01

Monitoring Well No.: 608MJ-MW3 (Site 16) Chain of Custody No.: 4731

Personnel: MIKE B. & RICKLE

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.50 ft.btoc

Depth to Water: 5.17 ft. btoc

Water Column: N/A ft.

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1047	INITIAL	.25	5.37	7.92	337	22.21	0.8	0.54	107.4
1051	1	.25	5.41	7.83	319	21.33	0.0	0.17	126.5
1055	2	.25	5.41	7.87	315	21.48	-0.3	0.14	138.7
1101	3	.25	5.41	7.91	317	21.55	1.1	0.08	149.7
1105	4	.25	5.41	7.92	319	21.55	1.0	0.11	153.4
1109	5	.25	5.41	7.93	322	21.56	1.3	0.07	157.0
1112	6	.25	5.41	7.94	323	21.55	1.0	0.09	159.5
1116	7	.25	5.41	7.95	325	21.62	1.1	0.08	160.0
1120	8	.25	5.41	7.95	326	21.68	0.9	0.09	161.9

Begin Purge: 1047 Method of Purging REDI FLOW PUMP / (SLOW PURGE PERISTALTIC PUMP) Purged Dry? NO

End Purge: 1120 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/22/01 @ 1130 Sample Number (s): 385-516-015

Description of Purge Water: CLEAR, ORGANIC DEBRIS, NO SITTEN, SLIGHT ODOR (SOLVENT?)

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/2/01

Monitoring Well No.: MW-D13-1 (Site 19) Chain of Custody No.: 4766

Personnel: MIKE B. / GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.63 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0758	INITIAL	.25	5.00	6.92	1,508	22.56	28.7	3.71	-111.5
0802	1	.25	5.15	7.07	1,532	23.21	53.4	1.83	-159.4
0806	2	.25	5.20	7.10	1,506	23.53	110.0	1.62	-163.4
0810	3	.25	5.23	7.09	1,522	23.75	69.7	1.42	-165.5
0814	4	.25	5.29	7.09	1,539	23.99	34.1	1.28	-169.2
0818	5	.25	5.33	7.09	1,552	24.02	14.9	1.21	-172.9
0822	6	.25	5.38	7.08	1,556	24.00	8.4	1.19	-172.9
0826	7	.25	5.40	7.08	1,560	24.13	6.4	1.21	-173.9
0830	8	.25	5.39	7.08	1,558	24.14	5.2	1.18	-174.0

Begin Purge: 0758 Method of Purging PERISTALTIC PUMP (Slow Purge) Purged Dry? NO

End Purge: 0830 Total Volume Purged: 8 l How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 7/2/01 @ 0840 Sample Number (s): 385-519-001

Description of Purge Water: YELLOWISH - BROWN, SLIGHT PETROLEUM ODOR & SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/2/01

Monitoring Well No.: MWD13-2 (Site 19) Chain of Custody No.: 4766

Personnel: Mike B./GR

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.37 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0916	INITIAL	.25	4.48	7.66	317	21.70	50.1	5.53	170.0
0920	1	.25	4.47	7.3	336	21.94	10.5	1.03	187.1
0924	2	.25	4.50	7.32	356	22.07	6.5	0.74	176.4
0928	3	.25	4.50	7.34	365	22.26	7.7	0.59	159.6
0932	4	.25	4.52	7.39	383	22.38	3.4	0.51	120.7
0936	5	.25	4.52	7.43	390	22.41	2.4	0.44	79.2
0940	6	.25	4.47	7.44	398	22.42	3.1	0.42	47.6
0944	7	.25	4.48	7.45	399	22.49	1.6	0.42	20.7
0948	8	.25	4.48	7.45	396	22.61	6.8	0.39	3.2

Begin Purge: 0916 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 0948 Total Volume Purged: ~~1000~~ 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/2/01 @ 1000 Sample Number (s): 395-519-002

Description of Purge Water: Clear / Some particulate / No odor / Brown

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/2/01

Monitoring Well No.: MW-D13-3 (Site 19) Chain of Custody No.: 4766

Personnel: Mike B / Gregorio R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.80 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1035	INITIAL	.25	4.80	8.25	355	18.88	4.0	3.55	161.9
1039	1	.25	4.81	8.34	399	19.04	1.6	0.57	87.5
1043	2	.25	4.81	8.44	395	19.15	1.3	0.45	21.7
1047	3	.25	4.81	8.50	392	19.16	2.0	0.34	-9.2
1051	4	.25	4.81	8.52	392	19.22	2.1	0.30	-32.4
1055	5	.25	4.81	8.52	391	19.18	1.9	0.27	-50.4
1059	6	.25	4.81	8.53	391	19.22	2.1	0.27	-64.3
1103	7	.25	4.81	8.52	392	19.34	1.6	0.26	-75.6
1107	8	.25	4.81	8.52	390	19.38	1.2	0.26	-80.4

Begin Purge: 1035 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1107 Total Volume Purged: 8 l How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/2/01 @ 1115 Sample Number (s): 385-519-003

Description of Purge Water: Clear / Black "slimy" material in water / Petroleum

Comments: None Odor / Sheen

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/2/01

Monitoring Well No.: MW013-4 (site 19) Chain of Custody No.: 4766

Personnel: MIKE B. / GREGORIO R

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc

Depth to Water: 6.00 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1144	INITIAL	.25	6.10	11.29	1,072	21.01	12.6	1.20	60.7
1148	1	.25	6.06	11.29	1,286	21.12	9.5	0.49	6.6
1152	2	.25	6.08	11.29	1,280	21.02	15.8	0.35	-17.5
1156	3	.25	6.09	11.29	1,281	21.05	2.1	0.30	-31.4
1200	4	.25	6.10	11.29	1,275	21.02	3.0	0.57	-46.1
1204	5	.25	6.10	11.29	1,271	21.06	3.0	0.69	-55.1
1208	6	.25	6.09	11.30	1,271	21.03	2.6	0.31	-60.6
1212	7	.25	6.09	11.30	1,270	21.03	2.8	0.30	-64.8
1216	8	.25	6.09	11.29	1,269	21.01	3.0	0.29	-68.1

Begin Purge: 1144 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1216 Total Volume Purged: 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/2/01 @ 1220 Sample Number (s): 385-519-004

Description of Purge Water: CLEAR / NO ODOR / NO SHEEN

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/2/01

Monitoring Well No.: M19-05 (Site 19) Chain of Custody No.: 4766

Personnel: MIKE B. / GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 30.00 ft.btoc Well Volume (2) inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.80 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1332	INITIAL	.25	5.35	7.40	3833	22.79	25.7	1.96	198.9
1336	1	.25	5.47	6.75	3,978	22.05	1.8	1.93	224.5
1340	2	.25	5.49	6.67	3,925	22.26	1.7	1.87	228.6
1344	3	.25	5.51	6.64	5,304	21.92	2.2	1.47	230.5
1348	4	.25	5.46	6.63	5,296	22.26	3.7	0.43	233.0
1352	5	.25	5.48	6.62	3,876	22.08	2.3	0.72	235.1
1356	6	.25	5.50	6.62	3,900	22.06	2.0	0.68	233.2
1400	7	.25	5.50	6.62	3,498	21.82	1.3	0.70	231.5
1404	8	.25	5.50	6.62	3,491	21.81	1.5	0.83	230.5

Begin Purge: 1332 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1404 Total Volume Purged: 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/2/01 @ 1415 Sample Number (s): 585-519-005

Description of Purge Water: SLIGHT GREYISH-BLACK TINT / NO ODOR / NO SHEEN

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

S04-912
S04-DGS-ER-1
Csite 19

Date: 7/3/01

Monitoring Well No.: D19-01 S19-DGS-D19-01-GW Chain of Custody No.: 4711

Personnel: L Genin

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: 0 ppm

Depth to Well Bottom: _____ ft. btoc

Depth to Water: 5.40 ft. btoc

Water Column: _____ ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: _____ gal

Time	Vol. Purged (Liter/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1422	1	0.25	5.52	6.60	16,050	24.54	2.5	1.35	232.6
1426	2	0.25	5.52	6.68	16,600	24.93	9.5	0.94	246.8
1432	3	0.25	5.52	6.72	16,772	25.05	7.8	0.59	261.3
1437	4	0.25	5.52	6.71	16,757	24.98	6.5	0.52	271.3
1442	5	0.25	5.53	6.70	16,759	24.89	9.7	0.49	279.6
1446	6	0.25	5.53	6.68	16,225	23.87	9.5	0.45	286.5
1450	7	0.25	5.53	6.67	16,397	24.09	3.8	0.43	290.1
1454	8	0.25	5.53	6.68	16,475	24.23	11.0	0.40	294.3
End Purge									

Begin Purge: 1422 Method of Purging grunfos submersible/slowpurge Purged Dry? NO

End Purge: 1520 Total Volume Purged: 8L How Measured? graduated cylender

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/3/01 1515 Sample Number (s): 395-S19-006

Description of Purge Water: Clear

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: NA-8 (Site 21) Chain of Custody No.: 4771

Personnel: Mike B. / Kirk M.

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 16.00 ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 7.31 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1145	INITIAL	.25	7.60	7.37	2,702	19.89	250	2.76	285.6
1147	1	.70	7.91	7.04	3,468	18.28	60.5	0.40	289.6
1148	2	.70	8.10	7.01	3,412	18.58	107.1	0.32	255.6
1150	3	.70	8.20	7.01	3,366	18.67	114.9	0.30	203.0
1155	4	.20	8.25	7.01	2,955	18.72	35.9	0.34	121.5
1200	5	.15	8.32	7.01	3,367	18.70	29.6	0.39	37.4
1208	6	.10	8.41	7.01	3,417	18.58	21.4	0.36	-34.0
1215	7	.10	8.53	7.01	3,029	18.60	10.6	0.46	-65.9
1222	8	.70	8.82	7.02	3,450	18.5	120.8	0.24	-72.0
1223	9	.70	9.05	7.02	2,993	18.29	29.48	0.18	-76.8
1225	10	.70	9.25	7.03	2,949	18.46	77.0	0.18	-79.9
1227	11	.70	9.44	7.03	2,937	18.57	35.2	0.24	-79.5
1229	12	.70	9.65	7.03	2,992	18.58	58.7	0.25	-79.0
1231	13	.70	9.88	7.03	2,997	18.53	57.5	0.23	-81.1
1232	14	.70	10.06	7.03	2,941	18.54	61.5	0.21	-82.5
1233	15	.70	10.24	7.03	2,950	18.50	77.5	0.20	-83.9
1243	16	.10	10.17	7.03	3,018	18.55	43.5	0.41	-86.6
1253	17	.10	10.11	7.03	3,051	18.53	13.1	0.41	-92.0
1303	18	.10	10.06	7.03	3,060	18.59	11.7	0.41	-163.2

Begin Purge: 1145 Method of Purging: Slow Purge Peristaltic Pump / Grundfos Pump Purged Dry? NO

End Purge: 1222 Total Volume Purged: 18 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 @ 1230 Sample Number (s): 385-S21-022

Description of Purge Water: Orange in color / slight H_2SO_4 odor / No sheen

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/26/01

Monitoring Well No.: MOTB-01 (site 21) Chain of Custody No.: 4733

Personnel: MIKE B. & GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 11.25 ft.btoc Well Volume (2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.82 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0822	INITIAL	.25	5.87	7.64	1,084	19.34	26.3	6.21	233.2
0826	1	.25	5.91	7.70	1,100	19.68	13.3	1.95	188.2
0830	2	.25	5.97	7.71	1,107	19.79	7.2	1.61	151.5
0834	3	.25	5.91	7.69	1,106	19.97	2.9	1.32	97.1
0838	4	.25	5.91	7.67	1,100	20.13	3.0	0.97	49.5
0842	5	.25	5.91	7.69	1,074	20.25	1.3	0.70	4.7
0846	6	.25	5.91	7.69	1,080	20.26	1.3	0.67	1.2
0850	7	.25	5.91	7.69	1,032	20.33	1.1	0.73	-8.3
0854	8	.25	5.91	7.69	1,004	20.41	3.7	0.65	-16.2

Begin Purge: 0822 Method of Purging REDI FLOW PUMP / PERISTALTIC PUMP Purged Dry? NO

End Purge: 0854 Total Volume Purged: 8 l How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/26/01 @ 0900 Sample Number (s): 385-521-023

Description of Purge Water: SLIGHT YELLOWISH COLOR / NO ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/26/01

Monitoring Well No.: 398-MW1 (Site 21) Chain of Custody No.: 4733

Personnel: MIKE B. & GREGORIO RAMIREZ

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.5 ft.btoc

Depth to Water: 5.58 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1246	INITIAL	.25	5.74	7.75	711	19.76	0.9	8.84	250.4
1250	1	.25	5.86	7.72	675	19.56	1.7	3.70	254.2
1254	2	.25	6.03	7.72	658	19.66	4.5	3.68	257.8
1258	3	.25	6.21	7.73	660	19.85	67.9	3.89	259.8
1302	4	.25	6.41	7.73	660	19.80	1.6 ~~330~~	4.00	261.8
1306	5	.20	6.55	7.74	564	20.11	1.8	4.14	262.4
1310	6	.20	6.71	7.74	563	20.09	1.8	4.01	263.4
1316	7	.15	6.80	7.74	561	20.18	3.0	3.83	265.1
1323	8	.15	6.89	7.75	562	20.11	3.6	3.69	266.1
1330	9	.15	6.93	7.75	561	20.20	3.2	3.59	267.4

Begin Purge: 1246 Method of Purging REDI FLOW PUMP / PERISTALTIC PUMP Purged Dry? NO

End Purge: 1330 Total Volume Purged: 9 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/26/01 @ 1330 Sample Number (s): 385-521-024

Description of Purge Water: CLEAR / NO ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/26/01

Monitoring Well No.: 398-MW2 (Site 21) Chain of Custody No.: 4733

Personnel: Mike B. & Gregorio R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13 ft.btoc

Depth to Water: 5.19 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
~~1117~~ 1123	INITIAL	0.25	5.37	7.08	1,274	21.57	86.6	1.90	-142.3
1131	1	0.25	5.45	7.07	1,255	21.52	28.0	0.78	-138.1
1136	2	0.25	5.48	7.08	1,248	21.82	18.2	0.58	-137.4
1141	3	0.25	5.51	7.08	1,236	21.86	17.2	0.56	-132.9
1144	4	0.25	5.52	7.08	1,241	22.04	12.5	0.56	-128.5
1149	5	0.25	5.51	7.08	1,253	22.04	9.3	0.54	-127.2
1154	6	0.25	5.51	7.08	1,253	22.27	7.8	0.52	-126.3
1158	7	0.25	5.52	7.08	1,254	22.23	6.5	0.49	-127.1
1202	8	0.25	5.52	7.08	1,253	22.35	4.9	0.49	-127.0

Begin Purge: 1123 Method of Purging REDI FLOW PUMP / PERISTALTIC PUMP Purged Dry? NO

End Purge: 1202 Total Volume Purged: 8L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/26/01 / 1215 Sample Number (s): 385-S21-025

Description of Purge Water: Water has a slight yellowish tint, and an H_2S odor

Comments: none NO SHEEN

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/26/01

Monitoring Well No.: 398-NW3 (Site 21) Chain of Custody No.: 4733

Personnel: MIKE B. & GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc

Depth to Water: ~~6.48~~ 5.20 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0937	INITIAL	.25	5.20	7.68	2,221	23.20	53.0	4.87	224.7
0941	1	.25	5.30	7.26	2,635	22.27	2.9	1.44	167.4
0945	2	.25	5.41	7.24	2,506	22.8	5.5	0.81	157.3
0949	3	.25	5.52	7.23	2,446	22.34	5.4	0.78	154.4
0953	4	.25	5.61	7.22	2,330	22.43	5.4	0.92	152.4
0957	5	.25	5.70	7.22	2,468	22.48	5.9	0.95	152.6
1001	6	.25	5.72	7.22	2,368	22.65	5.2	0.97	151.1
1005	7	.25	5.77	7.22	2,399	22.82	5.1	0.91	147.7
1009	8	.25	5.82	7.23	2,429	22.99	6.1	1.00	144.8
1014	9	0.20	5.85	7.23	2,459	23.22	3.0	1.05	146.8
1019	10	0.20	5.85	7.23	2,492	23.19	3.2	1.14	145.0
1023	11	0.20	5.85	7.22	2,515	23.26	1.9	1.26	143.4

Begin Purge: 0937 Method of Purging REDI FLOW PUMP / PERISTALTIC PUMP Purged Dry? NO

End Purge: 1009 Total Volume Purged: 8 l How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/26/01 @ 1015 Sample Number (s): 355-S21-026

Description of Purge Water: CLEAR / SMALL PARTICULATE (BLACK) / NO ODOR /

Comments: NONE NO SHEEN

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 6/27/01

Monitoring Well No.: 398-MW4 (Site 21) Chain of Custody No.: 4726

Personnel: MIKE B. & GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 13.50 ft.btoc

Depth to Water: 4.83 ft. btoc

Water Column: N/A ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0805	INITIAL	.25	4.90	6.92	5,788	22.31	1.6	4.56	-72.0
0809	1	.25	5.10	7.04	5,719	22.87	1.2	1.07	-126.5
0813	2	.25	5.25	7.03	5,674	22.85	1.5	-0.12	121.2
0817	3	.25	5.35	7.01	5,476	23.01	1.2	0.17	-128.0
0821	4	.25	5.50	7.01	5,484	22.96	2.2	0.48	-138.8
0825	5	.25	5.55	7.05	5,097	22.74	2.9	0.59	-135.0
0829	6	.25	5.60	7.04	5,996	22.73	3.0	0.72	-135.0
0833	7	.25	5.65	7.05	5,613	22.58	3.2	0.70	-136.0
0837	8	.25	5.68	7.06	5,268	22.63	2.8	0.71	-138.9

Begin Purge: 0805 Method of Purging REDI FLOW PUMP / PERISTALTIC PUMP Purged Dry? NO

End Purge: 0837 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 6/27/01 @ 0845 Sample Number (s): 398-S21-027

Description of Purge Water: YELLOWISH / SMALL BLACK PARTICULATE / NO ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: M07C-06 (Site 22) Chain of Custody No.: 4813

Personnel: L Genin / R Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 14' ft. btoc Well Volume (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.21 ft. btoc

Water Column: ft. Well Volume Calculation: gal

	Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
	0803	1	0.25	4.82	7.19	435	21.91	50.4	1.17	-94.8
	0811	2	0.15	5.26	7.09	378	22.66	41.1	0.84	-126.5
	0818	3	0.15	5.54	7.06	375	22.79	50.7	0.82	-126.2
Begin ~~test~~ stressing well	0821	4	0.34	5.90	7.06	385	23.77	32.9	0.54	-128.2
	0825	5	0.34	6.20	7.06	396	23.94	37.8	0.45	-127.6
	0829	6	0.34	6.51	7.07	414	23.80	30.2	0.45	-126.1
	0831	7	0.34	6.79	7.07	424	23.63	27.5	0.42	-123.2
	0835	8	0.34	7.05	7.08	431	23.51	26.7	0.41	-121.5
	0837	9	0.34	7.32	7.08	441	23.42	21.4	0.38	-120.9
	0841	10	0.34	7.54	7.08	441	23.27	16.5	0.37	-119.7
End stress	0846	11	0.15	7.64	7.09	444	22.47	7.7	0.49	-118.2
	0854	12	0.15	7.69	7.10	449	22.23	4.9	0.58	-116.6
	0900	13	0.15	7.74	7.10	456	22.16	4.1	0.58	-115.7
	0907	14	0.15	7.81	7.11	468	22.04	3.3	0.55	-116.3
End Purge	0915	15	0.15	7.86	7.12	473	21.93	3.2	0.57	-115.7

Begin Purge: 0803 Method of Purging Parastaltic Pump (Slow purge) Purged Dry? NO

End Purge: 915 Total Volume Purged: 15 L How Measured? graduated cylender

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 0915 Sample Number (s): 385-522-006

Description of Purge Water: Clear

Comments: Begin stressing well @ 0821 End stressing well @ 0846

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: M07C-07 (Site 22) Chain of Custody No.: 4813

Personnel: L Glnin / Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: ~13.5 ft. btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.74 ft. btoc

Water Column: ~~3.5~~ ft. Well Volume Calculation: gal

	Time	Vol. Purged (Liter/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
	1004	0		3.74	7.23	1199	21.08	3.5	5.67	59.7
	1008	1	0.25	4.12	6.70	1,218	21.52	1.9	1.11	68.6
~~Begin stress~~	1014	2	0.15	4.48	6.69	1,229	21.98	0.6	0.91	71.5
Begin stress	1018	3	0.40	4.87	6.69	1,243	22.73	11.4	0.55	71.1
	1021	4	0.40	5.27	6.70	1,255	22.81	10.1	0.45	70.6
	1024	5	0.40	5.50	6.71	1,258	22.67	8.9	0.43	70.9
	1026	6	0.40	5.71	6.72	1,251	22.39	8.4	0.38	71.3
	1028	7	0.40	5.91	6.72	1,246	22.25	12.7	0.35	71.8
	1031	8	0.40	6.11	6.72	1,240	22.03	16.3	0.33	72.2
	1036	9	0.40	6.36	6.73	1,234	21.69	21.6	0.32	72.6
End stress	1039	10	0.40	6.54	6.73	1,230	21.57	29.5	0.29	72.8
	1046	11	0.10	6.47	6.75	1,216	~~37.1~~ 21.01	37.1	0.40	75.9
	1055	12	0.15	6.54	6.75	1,223	21.14	~~8~~ 5.1	0.48	78.8
	1105	13	0.15	6.52	6.76	1,226	21.34	2.3	0.55	83.4
End purge	1111	14	0.15	6.54	6.76	1,228	21.37	2.4	0.69	87.0

Begin Purge: 1004 Method of Purging Peristaltic pump (Slow purge) Purged Dry? NO

End Purge: 1111 Total Volume Purged: 14 L How Measured? graduated cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 1115 Sample Number (s): 385-522-007

Description of Purge Water: Clear

Comments: Begin stressing well @ 1018. End stressing well @ 1039

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: M07C-08 (site 22) Chain of Custody No.: 4813

Personnel: Gerin / Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: _____ ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.96 ft. btoc

Water Column: _____ ft. Well Volume Calculation: _____ gal

	Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µmhos/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
	1201	0	0	3.46	7.05	316	21.03	99.2	2.95	107.9
	1205	1	0.25	4.38	6.76	300	21.21	10.3	1.13	96.2
	1210	2	0.20	4.55	6.61	272	21.72	14.1	1.02	66.3
	1216	3	1.5	4.64	6.58	272	21.93	4.3	0.94	63.1
	1223	4	1.5	4.78	6.57	269	21.87	2.2	0.77	63.5
Stress well →	1227	5	0.5	5.05	6.57	267	21.74	3.1	0.49	63.8
	1229	6	0.5	5.29	6.56	269	21.81	26.4	0.40	63.2
	1231	7	0.5	5.54	6.56	272	21.80	11.3	0.34	62.9
	1233	8	0.5	5.75	6.56	271	21.69	6.5	0.31	62.8
End stress	1235	9	0.5	5.95	6.55	267	21.59	1.4	0.28	62.8
	1237	10	0.5	6.15	6.54	265	21.50	1.9	0.27	62.8
	1242	11	0.15	6.07	6.54	274	21.61	1.3	0.43	62.2
	1248	12	0.15	6.04	6.52	276	21.63	3.3	0.43	59.3
	1255	13	0.15	~~6.40~~ 5.98	6.53	283	21.56	6.5	0.49	57.7
	1300	14	0.15	5.96	6.53	286	21.48	7.7	0.59	5.83

Begin Purge: 1201 Method of Purging peristaltic pump (Slow Purge) Purged Dry? NO

End Purge: 1300 Total Volume Purged: 14L How Measured? graduated cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 1315 Sample Number (s): 385-522-008

Description of Purge Water: Clear

Comments: Began stressing well @ 1227 ; Stopped stressing well @ 1237

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: M07C-09 (Site 22) Chain of Custody No.: 4813

Personnel: L. Genin / Rick Erdman

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: _____ ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.76 ft. btoc

Water Column: _____ ft. Well Volume Calculation: _____ gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1338	1	0.25	4.60	6.78	746	24.67	12.8	0.81	31.6
1344	2	0.15	4.95	6.80	748	24.73	4.1	0.67	-9.1
1350	3	0.15	4.80	6.81	752	24.97	4.8	0.69	-28.9
1357	4	0.15	4.95	6.81	755	25.23	6.2	0.59	-33.5
1404	5	0.15	5.00	6.81	750	24.71	8.5	0.47	-33.4
1409	6	0.15	4:95	6.80	748	24.69	9.6	0.43	-32.7
1415	7	0.15	5.00	6.80	751	24.63	10.3	0.42	-31.2
1420	8	0.15	5.05	6.80	753	24.42	12.1	0.41	-29.5
1425	9	0.15	5.07	6.80	753	24.49	13.2	0.39	-28.3

Begin Purge: 1338 Method of Purging Peristaltic Pump / slow purge Purged Dry? No

End Purge: 1425 Total Volume Purged: 9L How Measured? graduated cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 14:30 Sample Number (s): 385-522-009

Description of Purge Water: yellow but clear.

Comments: Peristaltic pump constantly changing rate of purge.
Reason for poor stabilization of water level

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: MW547-1 (Site 22) Chain of Custody No.: 4768

Personnel: MIKE B. / GREGORIO

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.00 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0813	1 pint	.25	4.00	7.24	655	19.71	73.2	0.64	314.8
0817	1	.25	5.60	7.15	654	19.97	51.0	0.58	174.0
0818	2	.70	6.70	7.13	650	20.38	77.0	0.39	87.9
0820	3	.70	7.63	7.16	640	20.73	74.8	1.36	48.2
0824	4	.25	6.94	7.16	645	20.09	55.7	1.16	39.2
0828	5	0.10 ~~.25~~	6.83	7.15	645	20.21	23.7	1.48	43.9
0834	6	0.10 ~~.25~~	6.86	7.16	649	20.30	23.6	1.64	56.9
0836	7	0.10 ~~.25~~	~~6.94~~ 7.15	7.16	654	20.26	14.0	2.04	69.9
0840	8	0.10 ~~.25~~	~~6.96~~ 7.45	7.14	662	20.14	22.5	1.97	70.9
	RECOVERY TOO SLOW / PURGING DRY / WILL SAMPLE UPON 80% RECOVERY								
7/05/01 1105	N/A	N/A	4.25	8.07	655	21.92	164.0	16.22	183

Begin Purge: 0813 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? ~~NO~~ YES

End Purge: 0840 Total Volume Purged: ~~[illegible]~~ 7 bns How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 @ ~~0845~~ 0900 Sample Number (s): 385-S22-001

Description of Purge Water: YELLOWISH - BROWN / NO ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: MW547-2 (site 22) Chain of Custody No.: 4768

Personnel: Mike B. / Gregorio R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 2.80 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0923	INITIAL	.25	4.20	7.01	1,063	17.68	101.9	15.4	135.2
0924	1	.70	5.00	6.97	1,062	17.55	97.6	0.90	101.2
0925	2	.70	5.51	6.97	1,063	17.55	86.7	0.54	66.7
0926	3	.70	5.83	6.97	1,061	17.54	157.1	0.37	29.4
0928	4	.70	6.08	6.97	1,063	17.50	234.7	0.37	-1.4
0932	5	.25	4.80	6.98	1,070	17.58	219.0	0.39	-26.0
0936	6	.25	4.54	6.98	1,070	17.53	~~[illegible]~~ 15.8	0.48	-41.5
0940	7	.25	4.40	6.98	1,069	17.54	13.7	0.35	-50.9
0944	8	.25	4.35	6.98	1,068	17.55	14.2	0.55	-59.0
0948	9	.25	4.30	6.99	1,067	17.63	14.2	0.50	-64.6

Begin Purge: 0923 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 0948 Total Volume Purged: 9 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☒ Duplicate ☒ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 @ 1000 Sample Number (s): 385-522-002

Description of Purge Water: Yellowish-Brown / No Odor / No Sheen

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: MW547-3 (Site 22) Chain of Custody No.: 4768

Personnel: MIKE B. / GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.85 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1122	INITIAL	.25	6.05	7.03	1,818	22.69	1.3	1.94	-75.1
1123	1	.70	6.65	6.98	1,825	22.89	4.7	0.82	-140.
1125	2	.70	7.00	6.97	1,823	23.55	9.7	0.62	-152.4
1126	3	.70	7.25	6.97	1,829	23.28	11.6	0.44	-157.8
1128	4	.70	7.50	6.98	1,842	23.77	27.7	0.41	-163.6
1130	5	.70	7.65	6.99	1,827	23.50	10.0	0.47	-169.6
1131	6	.70	7.94	6.99	1,823	23.48	1.7	0.56	-172.3
1135	7	.25	8.00	7.00	1,815	23.20	3.5	0.73	-176.0
1139	8	.20	8.22	7.01	1,806	23.17	3.6	0.52	-177.2
1143	9	.20	8.22	7.01	1,795	23.08	4.0	0.54	-174.7
1148	10	.20	8.20	7.02	1,707	22.83	3.8	0.45	-170.4

Begin Purge: 1122 Method of Purging Peristaltic Pump (Slow purge) Purged Dry? NO

End Purge: 1148 Total Volume Purged: 10 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 @ 1200 Sample Number (s): 385-522-003

Description of Purge Water: YELLOWISH-BROWN / NO SHEEN / STRONG PETROLEUM ODOR

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: MW547-4 (site 22) Chain of Custody No.: 4768

Personnel: Mike B.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.12 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1246	INITIAL	.25	4.12	7.09	867	21.37	2.3	11.19	-61.2
1247	1	.70	5.49	6.99	862	21.21	33	0.77	-95.6
1248	2	.70	5.49	6.92	861	21.33	3.6	0.61	-110.5
1249	3	.70	5.59	6.88	843	21.61	3.8	0.55	-125.2
1253	4	.25	5.46	6.88	823	21.60	3.5	0.54	-137.4
1257	5	.25	5.42	6.88	837	21.56	2.3	0.51	-142.7
1301	6	.25	5.48	6.88	785	21.47	2.6	0.47	-146.9
1305	7	.25	5.41	6.89	785	21.47	2.7	0.45	-148.1
1309	8	.25	5.42	6.89	791	21.45	2.9	0.43	-150.8

Begin Purge: 1246 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1309 Total Volume Purged: 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 @ 1315 Sample Number (s): 385-522-004

Description of Purge Water: YELLOWISH-BROWN / NO SHEEN / PETROLEUM ODOR

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/5/01

Monitoring Well No.: NW547-5 (Site 22) Chain of Custody No.: 4768

Personnel: MIKE B. / GREGORIO R.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.30 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1340	INITIAL	INITIAL	4.30	7.31	1285	18.23	230	2.27	168.2
1342	1	.70	5.40	7.19	1,251	17.35	46.0	1.12	9.3
1343	2	.70	5.40	7.18	1,220	17.46	46.0	0.89	-60.1
1346	3	.25	5.36	7.16	1,210	17.92	25.9	0.60	-137.5
1350	4	.25	5.40	7.19	1,204	18.15	20.4	0.50	-155.1
1355	5	.20	5.57	7.21	1,199	18.21	19.4	0.48	-163.4
1359	6	.20	5.61	7.20	1,217	18.51	7.7	0.47	-165.0
1404	7	.20	5.67	7.19	1,230	18.45	4.1	0.42	-167.0
1408	8	.20	5.75	7.19	1,233	18.10	3.3	0.38	-168.8

Begin Purge: 1340 Method of Purging: PERISTALTIC PUMP (Slow Purge) Purged Dry? NO

End Purge: 1407 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 7/5/01 @ 1415 Sample Number (s): 585-522-005

Description of Purge Water: YELLOW IN COLOR / NO SHEEN / PETROLEUM ODOR

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: D07C-01 (Site 22) Chain of Custody No.: 4815

Personnel: Gregorio Ramirez / Rick Endman

Organic Vapor Concentration TOC: ppm Breathing Zone: 6 ppm

Depth to Well Bottom: ft. btoc

Depth to Water: 5.08 ft. btoc

Water Column: ft.

Well Volume (2) inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0843	Initial	.25	6.15	6.87	1,364	17.60	17.7	1.30	260.0
0847	1	.25	6.12	6.98	1364	17.74	14.2	0.83	256.0
0851	2	.25	6.03	7.02	1,367	17.84	12.9	0.74	254.0
0855	3	.25	5.99	7.04	1,367	17.87	11.9	0.65	252.1
0859	4	.25	5.99	7.06	1,367	18.01	9.4	0.55	250.1
0903	5	.25	5.99	7.07	1367	18.20	19.4	0.48	248.2
0907	6	.27	5.99	7.07	1,365	18.24	9.6	0.46	246.1
0911	7	.25	5.99	7.08	1,364	18.38	8.3	0.47	244.1
0915	8	.25	5.98	7.08	1,365	18.34	8.7	0.42	243.1

Begin Purge: 0843 Method of Purging: Slow Purge (Peristaltic Pump) Purged Dry? no

End Purge: 0935 Total Volume Purged: 8L How Measured? Graduated Cylinder.

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 / 0930 Sample Number (s): 385-S22-010

Description of Purge Water: Clear and no odor.

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: NW530-01 (site 23) Chain of Custody No.: 4770

Personnel: MIKE B. / ~~GREGORIO~~ KIRK M.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.37 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0914	INITIAL	.25	5.87	7.01	1,933	21.08	3.1	2.88	168.8
0915	1	.70	6.60	6.55	2,138	21.32	269.4	0.74	120.6
0916	2	.70	7.68	6.51	2,106	22.01	655.1	0.62	71.8
0917	3	.70	8.50	6.50	2,103	21.01	52.1	0.62	50.2
0921	4	.25	7.30	6.48	2,097	20.80	~~15.2~~ 1.2	0.53	4.8
0925	5	.25	7.11	6.49	2,087	20.86	2.0	0.49	-30.1
0929	6	.25	7.07	6.49	2,089	20.78	1.4	0.43	-47.5
0933	7	.25	7.19	6.49	2,083	20.86	1.9	0.42	-58.7
0937	8	.25	7.22	6.50	2,078	21.16	4.2	0.41	-65.2

Begin Purge: 0914 Method of Purging PERISTALTIC PUMP (slow Purge) Purged Dry? NO

End Purge: 0937 Total Volume Purged: 8 L How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 @ 0945 Sample Number (s): 385-523-002

Description of Purge Water: YELLOW IN COLOR / STRONG PETROLEUM ODOR / NO SHEEN

Comments: NONE

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: NW530-2 (Site 23) Chain of Custody No.: 4770

Personnel: NIKE B. / KIRK M.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 5.20 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1013	INITIAL	.25	5.25	7.63	761	22.54	3.6	1.47	79.4
1017	1	.25	5.27	7.67	760	22.73	1.9	0.95	71.3
1021	2	.25	5.27	7.71	765	22.60	1.3	0.77	57.4
1025	3	.25	5.26	7.73	781	22.59	1.0	0.77	48.6
1029	4	.25	5.26	7.74	793	22.77	1.0	0.66	40.3
1033	5	.25	5.26	7.74	799	22.88	0.9	0.61	36.4
1037	6	.25	5.26	7.74	806	22.91	1.0	0.59	32.0
1041	7	.25	5.26	7.74	813	23.01	1.3	0.61	29.2
1045	8	.25	5.26	7.74	818	23.01	1.4	0.59	26.7

Begin Purge: 1013 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1045 Total Volume Purged: 8 l How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 @ 1100 Sample Number (s): 385-S03-003

Description of Purge Water: CLEAR / NO ODOR / NO SHEEN

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: MW530-3 (site 23) Chain of Custody No.: 4770

Personnel: MIKE B. / KIRK M.

Organic Vapor Concentration TOC: 0 ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 15.00 ft.btoc Well Volume: 2 inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 3.82 ft. btoc

Water Column: N/A ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1116	INITIAL	.25	3.89	7.72	468	23.77	4.3	2.11	190.2
1120	1	.25	3.91	7.59	448	23.52	2.5	0.43	170.2
1124	2	.25	3.92	7.57	422	23.60	1.9	0.33	92.8
1128	3	.25	3.91	7.56	424	23.54	2.0	0.29	26.2
1132	4	.25	3.91	7.56	430	23.62	2.7	0.27	-17.9
1136	5	.25	3.91	7.56	441	23.65	1.0	0.26	-46.3
1140	6	.25	3.91	7.56	441	23.68	2.0	0.25	-53.0
1144	7	.25	3.91	7.56	447	23.58	1.8	0.27	-60.6
1148	8	.25	3.91	7.56	448	23.58	1.6	0.26	-60.2

Begin Purge: 1116 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 1148 Total Volume Purged: 8 L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 @ 1200 Sample Number (s): 385-S03-004

Description of Purge Water: CLEAR / NO ODOR / NO SHEEN

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: 530MJ-MW1-MOJ (Site 23) Chain of Custody No.: 4745

Personnel:

Organic Vapor Concentration TOC: ppm Breathing Zone: 0 ppm

Depth to Well Bottom: Not Measured ft.btoc

Depth to Product: 4.02

Depth to Water: 4.11 ft. btoc

Water Column: ft.

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (__S/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
Well Contains Floating Product; No Field Parameters Were Measured									

Begin Purge: Method of Purging Floating Product Sampled with a Disposable Bailer Well was not Purged Purged Dry? N/A

End Purge: Total Volume Purged: N/A How Measured? N/A

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 @ 1120 Sample Number (s): 385-523-008

Description of Purge Water: No Purge Water was Generated; Floating Product was Sampled

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: 530MJ-MW2-MOJ (Site 23) Chain of Custody No.: 4745

Personnel:

Organic Vapor Concentration TOC: ppm Breathing Zone: 0 ppm

Depth to Well Bottom: Not Measured ft.btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
No measured Product, only thin layer Present 3-inch well = water column x 0.367 gal/ft

Depth to Water: 4.23 ft. btoc 4-inch well = water column x 0.652 gal/ft

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (_S/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
Well Contains a Very Thin Layer of Floating Product; No Field Parameters were Measured									

Floating Product Sampled with a Disposable Bailer

Begin Purge: Method of Purging Well was not Purged Purged Dry? N/A

End Purge: Total Volume Purged: N/A How Measured? N/A

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 @ 1200 Sample Number (s): 385-523-009

Description of Purge Water: No Purge Water Generated; Floating Product was Sampled

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: 530 MJ - MW3 - MOJ (Site 23) Chain of Custody No.:

Personnel: Gary Thomas, Rick Erdman

Organic Vapor Concentration TOC: ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12 ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.80 ft. btoc

Water Column: ft. Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0921	Initial	0.15	4.80	8.00	946	22.34	0.5	0.92	191.8
0927	1	0.15	4.84	8.12	892	22.18	0.5	0.56	183.8
0932	2	0.25	4.88	8.10	871.0	22.52	0.4	0.45	179.1
0936	3	0.25	4.88	8.08	852.0	22.76	0.3	0.55	173.2
0940	4	0.25	4.88	8.08	838.00	22.83	0.2	0.64	168.5
0944	5	0.25	4.88	8.09	839.00	23.04	0.3	0.67	163.7
0948	6	0.25	4.88	8.09	835.00	22.93	0.3	0.76	161.1
0952	7	0.25	4.88	8.11	838.00	22.86	0.3	0.80	158.1
0956	8	0.25	4.88	8.10	843.0	22.84	1.3	0.76	155.7

Begin Purge: 0919 Method of Purging Slow Purge with Peristaltic Pump Purged Dry? NO

End Purge: 0957 Total Volume Purged: 8 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 // 1000 Sample Number (s): 385-523-010

Description of Purge Water: CLEAR, SLIGHT YELLOWISH TINT, ODORLESS

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET
(Site 23)

Date: 7/6/01

Monitoring Well No.: 530MJ-MW4-MOJ

Chain of Custody No.:

Personnel: Gary Thomas / Rick Endman

Organic Vapor Concentration TOC: ppm Breathing Zone: 6 ppm

Depth to Well Bottom: 12 ft. btoc

Depth to Water: 4.49 ft. btoc

Water Column: ft.

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1042	Initial	0.20	4.49	8.46	1063	22.74	0.5	0.85	161.2
1049	1	0.20	4.54	8.46	1063	22.91	0.3	0.49	159.7
1053	2	0.25	4.55	8.38	1061	22.23	0.3	0.34	157.9
1057	3	0.25	4.55	8.38	1061	22.30	0.4	0.34	157.2
1102	4	0.25	4.55	8.36	1062	23.34	0.1	0.33	156.2
1106	5	0.25	4.55	8.34	1066	23.45	0.2	0.36	155.2
1110	6	0.25	4.56	8.34	1071	23.45	0.2	0.37	153.7
1114	7	0.25	4.56	8.33	1074	23.41	0.3	0.37	151.8
1118	8	0.25	4.56	8.27	1078	23.44	0.2	0.29	152.5

Begin Purge: 1042 Method of Purging: Slow Purge with Peristaltic Pump Purged Dry? No

End Purge: 1120 Total Volume Purged: 8 Liters How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 @ 1120 Sample Number (s): 385-523-011

Description of Purge Water: Clear, slight yellowish tint, odorless

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET
(Site 23)

Date: 7/6/01

Monitoring Well No.: 530MJ-MW5-MOJ

Chain of Custody No.: 4787

Personnel: Rick Endman / Gregorio Ramirez

Organic Vapor Concentration TOC: _____ ppm Breathing Zone: 0 ppm

Depth to Well Bottom: 12.00 ft. btoc

Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.39 ft. btoc

Water Column: _____ ft.

Well Volume Calculation: _____ gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1238	Initial	0.25	4.04	8.33	1,012	24.12	2.9	0.31	-133.9
1242	1	0.25	4.44	8.30	985	24.02	6.3	0.32	134.5
1246	2	0.25	4.45	8.27	982	24.10	4.6	0.37	136.1
1250	3	0.25	4.45	8.27	982	24.12	4.5	0.37	136.2
1254	4	0.25	4.45	8.28	986	24.09	2.1	0.45	136.9
1258	5	0.25	4.45	8.28	990	24.17	1.2	0.47	137.1
1302	6	0.25	4.45	8.27	990	24.18	1.2	0.53	136.2
1306	7	0.25	4.45	8.23	996	24.03	4.6	0.54	137.2
1310	8	0.25	4.45	8.23	996	24.13	10.3	0.58	136.7

Begin Purge: 1238 Method of Purging Slow Purge with Peristaltic Pump Purged Dry? no

End Purge: 1320 Total Volume Purged: 8L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 / 1315 Sample Number (s): 385-S23-012

Description of Purge Water: Water is clear / no order.

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/6/01

Monitoring Well No.: M10B-01 (Site 23) Chain of Custody No.: 4770

Personnel: Mike B & Kirk

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 11.00 ft.btoc Well Volume: (2)-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 6.36 ft. btoc

Water Column: ft. Well Volume Calculation: N/A gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0802	INITIAL	.25	6.49	7.11	4,045	20.34	3.6	3.00	383.4
0804	1	.25	6.50	7.18	4,744	21.44	2.0	3.08	367
0808	2	.25	6.47	7.19	5,180	21.38	1.4	0.83	239.7
0812	3	.25	6.47	7.20	5,418	21.19	1.3	1.05	-3.5
0816	4	.25	6.47	7.20	5,431	21.04	1.8	0.70	-64.7
0820	5	.25	6.47	7.21	5,460	21.33	3.1	0.67	-95.1
0824	6	.25	6.47	7.21	5,461	21.36	3.0	0.67	-95.5
0828	7	.25	6.47	7.22	5,470	21.47	3.2	0.66	-102.1
0832	8	.25	6.47	7.22	5,469	21.39	5.2	0.70	-105.4

Begin Purge: 0802 Method of Purging Peristaltic Pump (Slow Purge) Purged Dry? NO

End Purge: 0832 Total Volume Purged: 8 l How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/6/01 @ 0845 Sample Number (s): 385-523-005

Description of Purge Water: YELLOWISH-BROWN / SLIGHT ODOR (PETROLEUM)

Comments: None

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: D16B-01 (Site 23) Chain of Custody No.: 4815

Personnel: Gregorio Ramirez / Rick Endman

Organic Vapor Concentration TOC: — ppm Breathing Zone: 0 ppm

Depth to Well Bottom: _____ ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.48 ft. btoc

Water Column: — ft. Well Volume Calculation: _____ gal

Time	Vol. Purged (Liters Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C °F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1052	Initial	.29	5.42	6.68	36,778	20.63	4.6	1.10	270.4
1056	1	.25	5.61	6.66	32,172	21.00	10.3	0.54	265.9
1100	2	.25	5.624	6.67	32,243	20.94	10.2	0.59	261.0
1104	3	.25	5.72	6.69	32,313	21.26	10.3	0.59	259.2
1108	4	.25	5.76	6.69	32,544	21.49	9.2	0.57	254.9
1102	5	.25	5.76	6.70	32,611	21.81	7.2	0.62	250.1
1106	6	.25	5.75	6.70	32,521	21.92	5.2	0.67	246.1
1110	7	.25	5.76	6.71	32,627	22.04	6.3	0.65	243.1
1114	8	.25	5.76	6.71	32,460	22.07	6.1	0.67	240.0

Begin Purge: 1052 Method of Purging: ~~Blow purge~~ / ~~Peristaltic~~ Grundfos Pump Purged Dry? NO

End Purge: 1155 Total Volume Purged: 8L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 / 1130 Sample Number (s): 385-523-006

Description of Purge Water: Clean water / low egg odor, H_2S

Comments:

2

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 7/9/01

Monitoring Well No.: D10B-02 (Site 23) Chain of Custody No.: 4786

Personnel: Gregorio Ramirez / Rick Erdman

Organic Vapor Concentration TOC: — ppm Breathing Zone: 0 ppm

Depth to Well Bottom: _____ ft. btoc Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Depth to Water: 4.85 ft. btoc

Water Column: — ft. Well Volume Calculation: — gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1240	Initial	.20	5.95	7.97	1,276	21.63	11.8	7.61	183.0
1244	1	.20	6.20	7.91	5,391	21.89	13.9	2.78	198.2
1248	2	.25	6.60	8.28	6,623	21.81	15.9	1.70	196.0
1252	3	.20	6.65	8.31	6,700	22.09	13.4	1.36	195.2
1254	4	.20	6.72	8.32	6,721	22.32	29.4	1.06	195.5
1258	5	.20	6.70	8.34	6,707	22.13	10.0	1.06	194.2
1302	6	.20	6.71	8.36	6,730	22.24	10.6	1.04	193.2
1306	7	.20	6.70	8.37	6,750	22.29	9.6	1.01	192.3
1310	8	.20	6.70	8.38	6,781	22.38	9.1	0.92	190.7

Begin Purge: 1240 Method of Purging: Slow Purge / ~~Peristaltic~~ Grundfos Pump Purged Dry? NO

End Purge: 1335 Total Volume Purged: 8L How Measured? Graduated Cylinder

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☒ No QA/QC Sample

Date and Time of Sample Collection: 7/9/01 / 1330 Sample Number (s): 385-S23-007

Description of Purge Water: Clean / no order.

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 9/27/01

Monitoring Well No.: 584-MW1 (Site CAA9A) Chain of Custody No.: 5028

Personnel: RICK ERDMANN

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 12.0 ft. btoc

Depth to Water: 7.16 ft. btoc

Water Column: 4.84 ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: NA gal
MICROPURGE

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft. btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1421	adjust flow	rate	7.16	7	~~916~~	~~21.50~~			
1428	1	.15	7.21	7.68	916	21.50	1.8	1.43	167.6
1434	2	.22	7.22	7.63	660	21.41	0.9	1.13	170.5
1437	3	.35	7.22	7.63	583	21.35	0.9	1.00	173.0
1441	4	.35	7.23	7.62	540	21.31	0.9	0.89	173.6
1445	5	.35	7.24	7.63	538	21.35	1.1	0.85	173.7
1448	6	.35	7.25	7.63	538	21.36	1.3	0.87	173.7
1451	7	.35	7.25	7.63	538	21.41	1.1	0.91	173.9
1454	8	.35	7.25	7.63	538	21.39	1.1	0.96	174.4

Begin Purge: 1421 Method of Purging PERISTALTIC PUMP (Slow Purge) Purged Dry? NO

End Purge: 1454 Total Volume Purged: 8 Liters How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☑ No QA/QC Sample

Date and Time of Sample Collection: 9/27/01 / 1510 Sample Number (s): 385-CAA9A-008

Description of Purge Water: CLEAR

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 9/27/01

Monitoring Well No.: 584-MW12 (Site CAA9A) Chain of Custody No.: 5028

Personnel: RICK ERDMAN

Organic Vapor Concentration TOC: ø ppm Breathing Zone: ø ppm

Depth to Well Bottom: 13.3 ft.btoc

Depth to Water: 6.91 ft. btoc

Water Column: 6.39 ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: NA gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
0930	BEGIN: ADJUST FLOW		6.91						
0938	1	.15	7.03	7.67	636	19.75	28.2	0.89	254.5
0945	2	.15	7.06	7.81	641	20.08	15.6	0.86	239.7
0952	3	.15	7.07	7.86	644	20.36	8.2	0.84	228.1
0959	4	.15	7.07	7.83	643	20.52	6.3	0.89	221.9
1006	5	.15	7.07	7.81	644	20.58	5.6	0.99	216.3
1013	6	.15	7.07	7.81	645	20.61	6.0	1.00	212.6
1020	7	.15	7.07	7.80	645	20.65	6.7	0.98	209.7
1027	8	.15	7.07	7.78	643	20.71	6.9	0.98	208.8

Begin Purge: 0930 Method of Purging MICROPURGE/PERISTALTIC PUMP Purged Dry? NO

End Purge: 1027 Total Volume Purged: 8-Liters How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☐ Duplicate ☑ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 9/27/01 / 1100 Sample Number (s): CAA9A-009 (385)

Description of Purge Water: CLEAR, YELLOWISH HUE, SLIGHT ORGANIC ODOR

Comments:

TETRA TECH EM INC.
MONITORING WELL SAMPLING SHEET

Date: 9/27/01

Monitoring Well No.: 584-MW3 (Site CAA9A) Chain of Custody No.: 5028

Personnel: RICK ERDMAN

Organic Vapor Concentration TOC: Ø ppm Breathing Zone: Ø ppm

Depth to Well Bottom: 13.3 ft.btoc

Depth to Water: 7.01 ft. btoc

Water Column: 6.28 ft.

Well Volume: 2-inch well = water column x 0.163 gal/ft
3-inch well = water column x 0.367 gal/ft
4-inch well = water column x 0.652 gal/ft

Well Volume Calculation: NA gal

Time	Vol. Purged (Liters/Gal.)	Flow Rate (L/min)	Water Level (ft btoc)	pH	Conductivity (µS/cm)	Temperature (°C/°F)	Turbidity (NTU)	D. O. (mg/L)	O. R. P. (mV)
1154	BEGIN ADJUST FLOW		7.01						
1201	1	.15	7.21	7.60	5,804	20.64	0.9	1.66	177.8
1206	2	.20	7.27	7.56	6,230	20.37	0.9	1.87	139.0
1211	3	.20	7.30	7.54	6,364	20.24	1.0	1.88	78.8
1216	4	.20	7.32	7.52	6,499	20.16	0.9	1.95	16.0
1221	5	.20	7.32	7.51	6,711	20.37	1.1	2.10	-40.3
1226	6	.20	7.32	7.49	6,909	20.30	1.3	2.40	-86.5
1230	7	.25	7.35	7.48	7,040	20.21	0.8	2.36	-106.8
1234	8	.25	7.36	7.47	7,160	20.19	1.0	2.42	-116.8
1238	9	.25	7.37	7.47	7,199	20.21	0.9	2.42	-128.7
1242	10	.25	7.37	7.47	7,210	20.21	0.9	2.45	-130.1

Begin Purge: 1154 Method of Purging MICROPURGE / PERISTALTIC Purged Dry? NO

End Purge: 1242 Total Volume Purged: 10 Liters How Measured? GRADUATED CYLINDER

QA/QC Sample Collected Here? ☑ Duplicate ☐ Matrix Spike ☐ Equip. Blank ☐ No QA/QC Sample

Date and Time of Sample Collection: 9/27/01 / 1300 Sample Number (s): 385-CAA9A-010
385-CAA9A-901 FD

Description of Purge Water: CLEAR

Comments:

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW97-1	S03	6/28/2001	385-S03-040	5.49	Yes	Slow Purge	0.15	8L	7.13	7,816	22.73	0.4	0.33	-163.1
MW97-2	S03	6/28/2001	385-S03-041	5.50	Yes	Bailed Dry	NA	4.5G	7.17	36,009	20.22	57.9	6.07	-119.1
MW97-3	S03	6/28/2001	385-S03-042	4.88	Yes	Slow Purge	0.25	8L	6.91	653	17.73	0.1	0.76	15.7
M03-04	S03	6/27/2001	385-S03-043	5.77	Yes	Slow Purge	0.25	18L	6.95	12,638	20.69	279	0.43	-156.9
M03-05	S03	6/27/2001	385-S03-044	6.36	Yes	Slow Purge	0.25	19L	7.46	7,940	20.75	0.1	2.19	-185.1
M03-06	S03	6/27/2001	385-S03-045	6.52	Yes	Slow Purge	0.25	8L	8.13	1,033	21.57	1.5	0.26	-226.8
M03-07	S03	6/29/2001	385-S03-046	3.71	Yes	Bailed Dry	NA	4.5G	NR	NR	NR	NR	NR	NR
M03-08A	S03	6/28/2001	385-S03-047	5.87	Yes	Bailed Dry	NA	3.5G	6.87	38,833	20.00	77.2	2.00	-119.2
D03-01	S03	6/29/2001	385-S03-048	6.94	Yes	Slow Purge	0.25	14L	6.54	41,862	22.25	10.8	0.84	107.8
MW360-1	S04	7/10/2001	385-S04-123	4.21	Yes	Slow Purge	0.25	9L	6.82	3,859	20.15	7.1	0.28	169.6
MW360-2	S04	7/16/2001	385-S04-124	4.83	Yes	Slow Purge	0.25	8L	6.26	3,962	18.80	10.3	1.80	135.6
MW360-3	S04	7/16/2001	385-S04-125	4.55	Yes	Slow Purge	0.25	8L	7.04	1,214	21.22	1.5	0.80	279.0
MW360-4	S04	6/29/2001	385-S04-126	3.91	Yes	Slow Purge	0.15	8L	7.21	711	21.31	8.9	0.41	-10.9
M04-05	S04	7/16/2001	385-S04-127	5.07	Yes	Slow Purge	0.25	8L	7.04	845	22.10	0.1	2.29	275.0
M04-06	S04	7/2/2001	385-S04-128	2.65	Yes	Slow Purge	0.25	12L	6.66	1,058	19.35	36.9	0.37	232.4
M04-07	S04	7/2/2001	385-S04-129	5.13	Yes	Slow Purge	0.14	13L	7.45	913	23.55	35.2	0.51	141.5
M04-07[a]	S04	7/25/2001	385-S04-129A	5.25	Yes	Slow Purge	0.20	8L	7.36	920	23.06	2.2	2.10	155.0
MW-1 (Battelle)	S04	7/16/2001	385-S04-175	4.67	Yes	Slow Purge	0.25	9L	6.81	10,758	20.41	12.3	2.10	289.9
SW-1 (Battelle)	S04	7/16/2001	385-S04-176	4.70	Yes	Slow Purge	0.25	10L	6.87	10,837	19.85	7.7	2.12	308.0
MW-5 (Battelle)	S04	7/16/2001	385-S04-174	5.45	Yes	Slow Purge	0.12	8L	7.24	6,149	20.73	5.7	1.20	142.0
MW-10 (Battelle)	S04	7/10/2001	385-S04-173	4.46	Yes	Slow Purge	0.10	11L	6.78	14,611	20.87	6.2	0.31	275.0
MBG-3	S04	7/10/2001	385-S04-135	4.75	Yes	Slow Purge	0.25	15L	6.94	1,115	18.55	2.7	0.28	-140.5
D04-01	S04	7/3/2001	385-S04-130	6.11	Yes	Slow Purge	0.25	8L	6.92	44,329	21.37	2.9	0.36	-76.1
D04-02	S04	7/3/2001	385-S04-131	6.40	Yes	Slow Purge	0.25	10L	6.87	43,401	21.16	5.9	0.55	-96.2
D04-03	S04	7/10/2001	385-S04-132	6.75	Yes	Slow Purge	0.25	9L	6.55	62,665	19.72	2.5	0.61	-41.9
372-MW1	S04	6/29/2001	385-S04-133	1.98	Yes	Slow Purge	0.25	8L	7.63	165	23.09	18.6	2.11	44.8
372-MW3	S04	6/29/2001	385-S04-134	4.57	Yes	Slow Purge	0.12	16L	7.04	563	22.81	15.5	0.46	29.0

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
M05-01	S05	7/11/2001	385-S05-102	7.73	Yes	Slow Purge	0.15	8L	7.06	24,048	20.43	1.97	1.97	-109.8
M05-02	S05	7/11/2001	385-S05-103	6.98	Yes	Slow Purge	0.25	8L	7.55	3,659	22.32	2.0	2.21	-100.8
M05-03[b]	S05	7/12/2001	385-S05-104	NM	NA	NA	NA	NA	NM	NM	NM	NM	NM	NM
M05-04	S05	7/13/2001	385-S05-105	6.55	Yes	Slow Purge	0.25	8L	7.17	10,846	22.96	5.1	0.44	-112.4
M05-05	S05	7/12/2001	385-S05-106	7.28	Yes	Slow Purge	0.25	8L	7.27	3,310	20.16	2.5	0.70	-108.2
M05-06	S05	7/12/2001	385-S05-107	6.61	Yes	Slow Purge	0.25	8L	7.36	5,242	21.61	5.5	0.67	-38.3
M05-07	S05	7/12/2001	385-S05-108	7.41	Yes	Slow Purge	0.25	9L	6.91	8,555	21.35	14.1	0.45	-97.0
M05-08	S05	7/12/2001	385-S05-109	8.45	Yes	Slow Purge	0.25	8L	7.16	1,072	22.42	6.5	0.57	-102.0
M05-09	S05	7/11/2001	385-S05-110	7.08	Yes	Slow Purge	0.25	8L	7.42	461	22.72	1.4	2.19	264.2
M05-10	S05	7/11/2001	385-S05-111	7.47	Yes	Slow Purge	0.25	12L	7.67	467	18.47	0.1	0.52	138.0
M05-11	S05	7/11/2001	385-S05-112	8.13	Yes	Slow Purge	0.25	10L	7.19	11,371	17.67	0.3	0.47	-149.8
M05-12	S05	7/11/2001	385-S05-113	8.28	Yes	Slow Purge	0.25	8L	6.98	7,388	18.03	0.3	0.49	-107.8
M05BS-01	S05	7/13/2001	385-S05-114	8.01	Yes	Slow Purge	0.25	13L	7.07	5,341	19.69	3.5	0.46	-134.5
M05HW-01	S05	7/13/2001	385-S05-115	5.45	Yes	Slow Purge	0.25	8L	7.42	821	21.26	3.5	0.45	-20.1
D05-01	S05	7/10/2001	385-S05-116	7.22	Yes	Slow Purge	0.25	8L	6.70	36,311	20.77	47.7	0.35	15.0
D05-02	S05	7/10/2001	385-S05-117	7.50	Yes	Slow Purge	0.25	8L	6.85	41,396	22.25	36.0	0.29	-106.0
D05-03	S05	7/10/2001	385-S05-118	5.25	Yes	Slow Purge	0.25	8L	6.76	45,339	22.85	11.8	0.69	-140.3
M06-01	S06	6/18/2001	385-S06-017	4.04	Yes	Slow Purge	0.25	8L	7.26	1,123	24.81	0.4	0.35	-210.3
M06-02	S06	6/19/2001	385-S06-018	4.35	Yes	Slow Purge	0.25	8L	7.99	651	21.68	0.1	0.70	46.7
M06-03	S06	6/18/2001	385-S06-019	4.92	Yes	Slow Purge	0.25	8L	7.25	8,436	23.54	0.7	0.31	-151.0
M06-04	S06	6/18/2001	385-S06-020	3.55	Yes	Slow Purge	0.20	8L	7.68	4,251	23.38	3.0	0.94	236.9
M06-05	S06	6/18/2001	385-S06-021	4.51	Yes	Slow Purge	0.20	8L	7.67	4,759	22.71	0.2	0.36	-171.9
M06-06	S06	6/18/2001	385-S06-022	4.20	Yes	Slow Purge	0.25	8L	7.62	710	24.01	0.2	0.56	-10.2
MW-410-1	S09	6/25/2001	385-S09-025	5.32	Yes	Slow Purge	0.25	9L	7.62	827	22.70	2.01	2.01	155.6
MW410-2	S09	6/25/2001	385-S09-026	6.45	Yes	Slow Purge	0.22	9L	6.90	1,016	18.25	21.3	0.86	-78.7

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MW410-3	S09	6/26/2001	385-S09-027	4.99	Yes	Slow Purge	0.25	10L	7.51	514	22.23	1.6	1.04	156.5
MW410-4	S09	6/26/2001	385-S09-028	5.40	Yes	Slow Purge	0.25	8L	7.96	507	22.47	0.4	3.72	191.8
M09-05	S09	6/25/2001	385-S09-029	6.07	Yes	Slow Purge	0.25	9L	7.67	467	20.60	0.5	1.97	556.6
M09-06	S09	6/25/2001	385-S09-030	6.59	Yes	Slow Purge	0.25	9L	7.70	313	21.21	0.1	4.21	173.9
D09-01	S09	6/25/2001	385-S09-031	8.24	Yes	Slow Purge	0.25	14L	6.75	37,745	20.47	3.4	0.37	-36.5
M10-01	S10	7/6/2001	385-S10-004	4.30	Yes	Slow Purge	0.25	8L	7.17	6,982	20.75	1.6	1.27	102.1
M10-02	S10	7/9/2001	385-S10-005	4.18	Yes	Slow Purge	0.25	8L	8.20	310	23.13	3.8	0.88	256.9
M10-03	S10	7/9/2001	385-S10-006	3.52	Yes	Slow Purge	0.25	10L	8.35	123	21.94	85.9	0.07	263.9
D10A-01	S10	7/9/2001	385-S10-007	5.81	Yes	Slow Purge	0.25	9L	6.61	56,451	22.31	25.6	0.84	118.9
M11-01	S11	7/2/2001	385-S11-006	6.96	Yes	Slow Purge	0.20	8L	7.01	1,673	22.56	3.6	0.36	-138.6
M11-02	S11	7/2/2001	385-S11-007	5.98	Yes	Slow Purge	0.25	8L	6.87	982	24.98	2.1	1.11	207.9
M11-03	S11	7/3/2001	385-S11-008	5.59	Yes	Slow Purge	0.25	8L	7.40	1,203	23.81	0.7	0.23	146.0
M11-04	S11	7/3/2001	385-S11-009	6.76	Yes	Slow Purge	0.25	8L	7.11	871	25.13	1.7	0.97	225.9
M11-05	S11	7/3/2001	385-S11-010	5.80	Yes	Slow Purge	0.25	8L	7.55	2,368	22.53	1.1	0.28	163.0
M11-06	S11	7/3/2001	385-S11-011	6.09	Yes	Slow Purge	0.25	8L	7.72	1,029	20.71	0.9	0.47	97.5
D11-01	S11	7/3/2001	385-S11-012	5.41	Yes	Slow Purge	0.25	12L	6.44	52,514	25.47	56.0	0.36	249.5
M12-01	S12	7/16/2001	385-S12-001	5.68	Yes	Slow Purge	0.25	8L	7.43	1,208	22.07	2.5	1.75	296.6
M12-02	S12	7/16/2001	385-S12-002	4.91	Yes	Slow Purge	0.25	8L	7.79	461	22.08	85.6	0.46	-126.8
M12-03	S12	7/16/2001	385-S12-003	4.65	Yes	Slow Purge	0.25	8L	7.46	609	23.42	127.3	0.81	10.8
M12-04	S12	7/16/2001	385-S12-004	4.39	Yes	Slow Purge	0.25	9L	7.27	630	22.84	8.5	0.57	59.8
D12-01	S12	7/11/2001	385-S12-005	6.32	Yes	Slow Purge	0.25	8L	6.59	50,191	20.13	20.8	1.63	9.3
MWOR-1	S13	6/27/2001	385-S13-001	5.16	Yes	Slow Purge	0.25	9L	6.98	1,136	20.30	10.0	0.45	-46.8
MWOR-2	S13	6/28/2001	385-S13-002	4.92	Yes	Slow Purge	0.25	9L	7.59	676	21.62	9.2	2.20	170.5
MWOR-2[a]	S13	7/19/2001	385-S13-002A	5.10	Yes	Slow Purge	0.25	8L	7.65	695	21.67	6.9	2.18	71.1
MWOR-3	S13	6/28/2001	385-S13-003	4.34	Yes	Slow Purge	0.25	8L	7.42	649	23.36	1.2	2.35	143.5

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MWOR-4	S13	6/29/2001	385-S13-004	3.57	Yes	Slow Purge	0.25	8L	6.44	327	22.26	5.2	1.43	299.1
MWOR-5	S13	6/29/2001	385-S13-005	4.35	Yes	Slow Purge	0.25	8L	6.92	571	21.46	3.0	0.92	240.9
M13-06	S13	6/27/2001	385-S13-006	5.31	Yes	Slow Purge	0.25	8L	7.32	949	20.64	2.8	0.52	-75.2
M13-07	S13	6/27/2001	385-S13-007	5.20	Yes	Bailed Dry	NA	2G	6.58	1,816	22.90	206	5.67	-38.3
M13-08	S13	6/28/2001	385-S13-008	3.11	Yes	Slow Purge	0.25	8L	6.96	698	20.91	3.7	0.43	204.1
M13-09	S13	6/28/2001	385-S13-009	3.33	Yes	Slow Purge	0.25	8L	6.21	759	22.30	4.6	0.69	220.0
MW-1	S13	6/27/2001	385-S13-010	5.64	Yes	Bailed Dry	NA	2.25G	6.26	768	20.80	49.0	3.33	193.1
D13-01	S13	6/29/2001	385-S13-011	3.75	Yes	Slow Purge	0.25	9L	7.36	2,339	22.22	10.0	3.25	186.2
M14-01	S14	6/20/2001	385-S14-013	6.35	Yes	Slow Purge	0.25	9L	7.05	2,543	17.08	2.6	0.61	-57.1
M14-02	S14	6/19/2001	385-S14-014	4.99	Yes	Slow Purge	0.25	8L	7.38	1,129	20.35	0.5	0.68	130.5
M14-03	S14	6/19/2001	385-S14-015	5.01	Yes	Slow Purge	0.25	9L	6.74	804	21.31	2.4	2.93	114.4
M112-A	S14	6/20/2001	385-S14-017	4.45	Yes	Slow Purge	0.25	8L	7.04	577	22.30	1.3	0.82	39.2
M113-A	S14	6/20/2001	385-S14-018	3.31	Yes	Slow Purge	0.25	8L	7.19	1,721	21.52	13.4	0.51	-123.3
M114-A	S14	6/20/2001	385-S14-022	3.02	Yes	Slow Purge	0.25	9L	7.73	2,596	18.77	0.4	0.48	-113.1
M-101A	S14	6/21/2001	385-S14-019	3.80	Yes	Slow Purge	0.25	8L	6.93	2,790	21.14	10.2	0.64	-166.3
D14-01	S14	6/21/2001	385-S14-016	6.29	Yes	Slow Purge	0.25	9L	6.95	32,044	21.11	11.4	1.56	-74.3
M101-C	S14	6/21/2001	385-S14-020	4.58	Yes	Slow Purge	0.25	8L	6.78	50,618	21.72	200	0.55	-277.1
M16-04	S16	10/11/2001	385-S16-014	5.65	Yes	Slow Purge	0.25	9L	7.66	234	17.95	1.0	1.09	-17.8
MWC2-1	S16	7/6/2001	385-S16-011	3.73	Yes	Slow Purge	0.25	8L	8.09	890	22.67	1.9	0.27	163.7
MWC2-2	S16	6/22/2001	385-S16-012	4.93	Yes	Slow Purge	0.25	8L	7.35	1,062	22.72	0.3	0.35	215.9
MWC2-3	S16	6/22/2001	385-S16-013	3.21	Yes	Slow Purge	0.25	8L	7.78	231	21.17	13.0	0.21	110.0
608MJ-MW1	S16	6/22/2001	385-S16-017	3.98	Yes	Slow Purge	0.25	8L	7.57	243	23.22	3.3	0.46	83.5
608MJ-MW2	S16	6/22/2001	385-S16-016	4.27	Yes	Slow Purge	0.25	9L	7.92	250	21.44	0.6	0.25	-27.6
608MJ-MW3	S16	6/22/2001	385-S16-015	5.17	Yes	Slow Purge	0.25	8L	7.95	326	21.68	0.9	0.09	161.9
MW-D13-1	S19	7/2/2001	385-S19-001	4.63	Yes	Slow Purge	0.25	8L	7.08	1,558	24.14	5.2	1.18	-174.0

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
MWD13-2	S19	7/2/2001	385-S19-002	4.37	Yes	Slow Purge	0.25	8L	7.45	396	22.61	6.8	0.39	3.2
MWD13-3	S19	7/2/2001	385-S19-003	4.80	Yes	Slow Purge	0.25	8L	8.52	390	19.38	1.2	0.26	-80.4
MWD13-4	S19	7/2/2001	385-S19-004	6.00	Yes	Slow Purge	0.25	8L	11.29	1,269	21.01	3.0	0.29	-68.1
M19-05	S19	7/2/2001	385-S19-005	4.80	Yes	Slow Purge	0.25	8L	6.62	3,491	21.81	1.5	0.83	230.5
D19-01	S19	7/3/2001	385-S19-006	5.40	Yes	Slow Purge	0.25	8L	6.68	16,475	24.23	11.0	0.40	294.3
WA-8	S21	7/9/2001	385-S21-022	7.31	Yes	Slow Purge	0.10	18L	7.03	3,060	18.59	11.7	0.41	-103.2
M07B-01	S21	6/26/2001	385-S21-023	5.82	Yes	Slow Purge	0.25	8L	7.69	1,004	20.41	3.7	0.65	-16.2
398-MW1	S21	6/26/2001	385-S21-024	5.58	Yes	Slow Purge	0.15	9L	7.75	561	20.20	3.2	3.59	267.4
398-MW2	S21	6/26/2001	385-S21-025	5.19	Yes	Slow Purge	0.25	8L	7.08	1,253	22.35	4.9	0.49	-127.0
398-MW3	S21	6/26/2001	385-S21-026	5.20	Yes	Slow Purge	0.20	11L	7.22	2,515	23.26	1.9	1.26	143.4
398-MW4	S21	6/27/2001	385-S21-027	4.83	Yes	Slow Purge	0.15	8L	7.06	5,268	22.63	2.8	0.71	-138.9
M07C-06	S22	7/5/2001	385-S22-006	4.21	Yes	Slow Purge	0.15	15L	7.12	473	21.93	3.2	0.57	-115.7
M07C-07	S22	7/5/2001	385-S22-007	3.74	Yes	Slow Purge	0.15	14L	6.76	1,228	21.37	2.4	0.69	87.0
M07C-08	S22	7/5/2001	385-S22-008	3.96	Yes	Slow Purge	0.15	14L	6.53	286	21.48	7.7	0.59	58.3
M07C-09	S22	7/5/2001	385-S22-009	3.76	Yes	Slow Purge	0.15	9L	6.80	753	24.49	13.2	0.39	-28.3
MW547-1	S22	7/5/2001	385-S22-001	4.00	Yes	Bailed Dry	NA	7G	8.07	655	21.92	164	1.97	183.0
MW547-2	S22	7/5/2001	385-S22-002	2.80	Yes	Slow Purge	0.25	9L	6.99	1,067	17.63	14.2	0.50	-64.6
MW547-3	S22	7/5/2001	385-S22-003	5.85	Yes	Slow Purge	0.20	10L	7.02	1,707	22.83	3.8	0.45	-170.4
MW547-4	S22	7/5/2001	385-S22-004	4.12	Yes	Slow Purge	0.25	8L	6.89	791	21.45	2.9	0.43	-150.8
MW547-5	S22	7/5/2001	385-S22-005	4.30	Yes	Slow Purge	0.20	8L	7.19	1,233	18.40	3.3	0.38	-168.8
D07C-01	S22	7/5/2001	385-S22-010	5.08	Yes	Slow Purge	0.25	8L	7.08	1,365	18.34	8.7	0.42	243.1
MW530-01	S23	7/6/2001	385-S23-002	5.37	Yes	Slow Purge	0.25	8L	6.50	2,078	21.16	4.2	0.41	-65.2
MW530-2	S23	7/6/2001	385-S23-003	5.20	Yes	Slow Purge	0.25	8L	7.74	818	23.01	1.4	0.59	26.7
MW530-3	S23	7/6/2001	385-S23-004	3.82	Yes	Slow Purge	0.25	8L	7.56	448	23.58	1.6	0.26	-60.2
530MJ-MW1-MOI	S23	7/9/2001	385-S23-008	4.02[c]	NA	NA	NA	NA	NM	NM	NM	NM	NM	NM

TABLE M-1

SUMMARY OF WELL PURGING RESULTS AND GROUNDWATER PARAMETERS
SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OU-1 AND OU-2
ALAMEDA POINT, ALAMEDA CALIFORNIA

Well Identification Number	Site	Date Sampled	Sample Identification	Initial Depth to Water (feet btoc)	Slow Purge Attempted?	Final Purge Method	Low-flow-rate Purge Sampling Rate (L/min)	Volume Purged	pH	Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)
530MJ-MW2-MOJ	S23	7/9/2001	385-S23-009	4.23[d]	NA	NA	NA	NA	NM	NM	NM	NM	NM	NM
530MJ-MW3-MOJ	S23	7/6/2001	385-S23-010	4.80	Yes	Slow Purge	0.25	8L	8.10	843	22.84	1.3	0.76	155.7
530MJ-MW4-MOJ	S23	7/6/2001	385-S23-011	4.49	Yes	Slow Purge	0.25	8L	8.27	1,078	23.44	0.2	0.29	152.5
530MJ-MW5-MOJ	S23	7/6/2001	385-S23-012	4.39	Yes	Slow Purge	0.25	8L	8.23	996	24.13	10.3	0.58	136.7
M10B-01	S23	7/6/2001	385-S23-005	6.36	Yes	Slow Purge	0.25	8L	7.22	5,469	21.39	5.2	0.70	-105.4
D10B-01	S23	7/9/2001	385-S23-006	4.48	Yes	Slow Purge	0.25	8L	6.71	32,460	22.07	6.1	0.67	240.0
D10B-02	S23	7/9/2001	385-S23-007	4.85	Yes	Slow Purge	0.20	8L	8.38	6,781	22.38	9.1	0.92	190.7
584-MW1	CAA9A	9/27/2001	385-CAA9A-008	7.16	Yes	Slow Purge	0.35	8L	7.63	538	21.39	1.1	0.96	174.4
584-MW2	CAA9A	9/27/2001	385-CAA9A-009	6.91	Yes	Slow Purge	0.15	8L	7.78	643	20.71	6.9	0.98	208.8
584-MW3	CAA9A	9/27/2001	385-CAA9A-010	7.01	Yes	Slow Purge	0.25	10L	7.47	7,210	20.21	0.9	2.45	-130.1

Notes:

btoc = Below top of casing
°C = Degrees Celsius
G = Gallons
L = Liters
L/min = Liters per minute
mg/L = Milligram per liter
µS/cm = Micro-siemens per centimeter
mV = Millivolt
NA = Not applicable
NM = Not measured
NR = Not recorded
NTU = Nephelometric turbidity unit
a = Well was resampled for semi-volatile organic compounds and total petroleum hydrocarbons as extractables.
b = Well contained floating product; the well was not purged prior to sampling the product.
c = Measurement was for depth to product; the well was not purged prior to sampling the product.
d = Well contained a very thin layer of floating product that was not detected by the interface probe; the well was not purged prior to sampling the product.

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ALAMEDA POINT
SSIC NO. 5090.3

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN II)
Northern and Central California, Nevada, and Utah
Contract Number N62474-94-D-7609
Contract Task Order No. 385

Prepared For

DEPARTMENT OF THE NAVY
Mr. Greg Lorton, Remedial Project Manager
Engineering Field Division, Southwest
Naval Facilities Engineering Command
San Diego, California

VOLUME 3 OF 3
APPENDICES N THROUGH R
DATA SUMMARY REPORT
SUPPLEMENTAL REMEDIAL INVESTIGATION
DATA GAP SAMPLING FOR
OPERABLE UNITS 1 AND 2

ALAMEDA POINT
ALAMEDA, CALIFORNIA

DS.0385.15645
July 25, 2002

Prepared By

TETRA TECH EM INC.
10670 White Rock Road, Suite 100
Rancho Cordova, California 95670
(916) 853-4500

Neal Hutchison, Project Manager

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ABBREVIATIONS AND ACRONYMS

BTEX	Benzene, toluene, ethylbenzene, and xylenes
bgs	Below ground surface
BSU	Bay Sediment Unit
CAA	Corrective action area
CAP	Corrective action plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-term Environmental Action Navy
COC	Chemicals of concern
Cr (III)	Trivalent chromium
Cr (VI)	Hexavalent chromium
DNAPL	Dense, nonaqueous-phase liquid
DQO	Data quality objective
EBS	Environmental baseline survey
EPA	U.S. Environmental Protection Agency
ERV	Environmental reference value
FLCAA	Flight line corrective action area
FS	Feasibility study
FSP	Field sampling plan
FTA	Fire Training Area
IDW	Investigation-derived waste
IWTP	Industrial waste treatment plant
LNAPL	Light, nonaqueous-phase liquid
MCL	Maximum Contaminant Level
NAPL	Nonaqueous-phase liquid
Navy	U.S. Department of the Navy
OU	Operable unit
PCB	Polychlorinated biphenyl
PDB	Passive diffusion bag
PRG	Preliminary Remediation Goal
QAPP	Quality assurance project plan
RI	Remedial investigation
RI/FS	Remedial investigation/feasibility study
RNS	Ribbon NAPL sampler

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ABBREVIATIONS AND ACRONYMS (Continued)

SVOC	Semivolatile organic compound
TEPH	Total extractable petroleum hydrocarbons
TPH	Total petroleum hydrocarbons
TPPH	Total purgeable petroleum hydrocarbons
TtEMI	Tetra Tech EM Inc.
UST	Underground storage tank
VOC	Volatile organic compound

APPENDIX N
WATER LEVEL MEASUREMENTS
(4 Pages)

SUMMARY OF WATER LEVEL MEASUREMENTS
OU-1/2 DATA GAP SAMPLING
ALAMEDA POINT

Operable Unit	Site	Well Name	Hydrostratigraphic Unit	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Date Measured
OU-1	Site 6	M06-01	FWBZL	4.04	Not Present	18-Jun-01
OU-1	Site 6	M06-02	FWBZL	4.32	Not Present	18-Jun-01
OU-1	Site 6	M06-03	FWBZL	4.92	Not Present	18-Jun-01
OU-1	Site 6	M06-04	FWBZL	3.53	Not Present	18-Jun-01
OU-1	Site 6	M06-05	FWBZL	4.51	Not Present	18-Jun-01
OU-1	Site 6	M06-06	FWBZL	4.20	Not Present	18-Jun-01
OU-1	Site 14	M14-01	FWBZL	4.22	Not Present	19-Jun-01
OU-1	Site 14	M14-02	FWBZL	5.81	Not Present	19-Jun-01
OU-1	Site 14	M14-03	FWBZL	5.03	Not Present	19-Jun-01
OU-1	Site 14	M112-A	FWBZU	4.45	Not Present	19-Jun-01
OU-1	Site 14	M113-A	FWBZU	3.25	Not Present	19-Jun-01
OU-1	Site 14	M114-A	FWBZL	2.98	Not Present	19-Jun-01
OU-1	Site 14	M101-A	FWBZU	3.87	Not Present	19-Jun-01
OU-1	Site 14	M101-C	BSU	4.39	Not Present	19-Jun-01
OU-1	Site 14	D14-01	SWBZL	6.40	Not Present	19-Jun-01
OU-1	Site 16	MWC2-1	FMSU	3.73	Not Present	06-Jul-01
OU-1	Site 16	MWC2-2	FMSU	4.93	Not Present	22-Jun-01
OU-1	Site 16	MWC2-3	FMSU	3.21	Not Present	22-Jun-01
OU-1	Site 16	M16-04	FMSU	5.65	Not Present	11-Oct-01
OU-1	Site 16	608MJ-MW1	NA	3.98	Not Present	22-Jun-01
OU-1	Site 16	608MJ-MW2	NA	4.27	Not Present	22-Jun-01
OU-1	Site 16	608MJ-MW3	NA	5.17	Not Present	22-Jun-01
OU-2A	Site 9	MW410-1	FMSU	5.36	Not Present	25-Jun-01
OU-2A	Site 9	MW410-2	FMSU	6.45	Not Present	25-Jun-01
OU-2A	Site 9	MW410-3	FMSU	4.99	Not Present	25-Jun-01
OU-2A	Site 9	MW410-4	FMSU	5.39	Not Present	25-Jun-01
OU-2A	Site 9	M09-05	FMSU	6.07	Not Present	25-Jun-01
OU-2A	Site 9	M09-06	FMSU	6.60	Not Present	25-Jun-01
OU-2A	Site 9	D09-01	FMSL	8.27	Not Present	25-Jun-01
OU-2A	Site 13	MWOR-1	FMSU	5.16	Not Present	27-Jun-01
OU-2A	Site 13	MWOR-2	FMSU	4.92	Not Present	28-Jun-01
OU-2A	Site 13	MWOR-3	FMSU	4.34	Not Present	27-Jun-01
OU-2A	Site 13	MWOR-4	FMSU	3.57	Not Present	29-Jun-01
OU-2A	Site 13	MWOR-5	FMSU	4.35	Not Present	29-Jun-01
OU-2A	Site 13	M13-06	FMSU	5.31	Not Present	27-Jun-01
OU-2A	Site 13	M13-07	FMSU	5.20	Not Present	27-Jun-01
OU-2A	Site 13	M13-08	FMSU	3.11	Not Present	28-Jun-01
OU-2A	Site 13	M13-09	FMSU	3.33	Not Present	28-Jun-01
OU-2A	Site 13	MW-1	FMSU	5.64	Not Present	27-Jun-01
OU-2A	Site 13	D13-01	FMSL	3.75	Not Present	29-Jun-01

SUMMARY OF WATER LEVEL MEASUREMENTS
OU-1/2 DATA GAP SAMPLING
ALAMEDA POINT

Operable Unit	Site	Well Name	Hydrostratigraphic Unit	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Date Measured
OU-2A	Site 19	MWD13-1	FMSU	4.63	Not Present	02-Jul-01
OU-2A	Site 19	MWD13-2	FMSU	4.37	Not Present	02-Jul-01
OU-2A	Site 19	MWD13-3	FMSU	4.80	Not Present	02-Jul-01
OU-2A	Site 19	MWD13-4	FMSU	6.00	Not Present	02-Jul-01
OU-2A	Site 19	M19-05	FMSL	4.80	Not Present	02-Jul-01
OU-2A	Site 19	D19-01	FMSL	5.40	Not Present	03-Jul-01
OU-2A	Site 22	MW547-1	FMSU	4.00	Not Present	05-Jul-01
OU-2A	Site 22	MW547-2	FMSU	2.80	Not Present	05-Jul-01
OU-2A	Site 22	MW547-3	FMSU	5.85	Not Present	05-Jul-01
OU-2A	Site 22	MW547-4	FMSU	4.12	Not Present	05-Jul-01
OU-2A	Site 22	MW547-5	FMSU	4.30	Not Present	05-Jul-01
OU-2A	Site 22	M07C-06	FMSU	4.21	Not Present	05-Jul-01
OU-2A	Site 22	M07C-07	FMSU	3.74	Not Present	05-Jul-01
OU-2A	Site 22	M07C-08	FMSU	3.96	Not Present	05-Jul-01
OU-2A	Site 22	M07C-09	FMSU	4.33	Not Present	05-Jul-01
OU-2A	Site 22	D07C-01	FMSL	5.08	Not Present	09-Jul-01
OU-2A	Site 23	MW530-1	NA	5.37	Not Present	06-Jul-01
OU-2A	Site 23	MW530-2	NA	5.20	Not Present	06-Jul-01
OU-2A	Site 23	MW530-3	NA	3.82	Not Present	06-Jul-01
OU-2A	Site 23	M10B-01	NA	6.36	Not Present	06-Jul-01
OU-2A	Site 23	530MJ-MW1-M0J	NA	4.11	4.02	09-Jul-01
OU-2A	Site 23	530MJ-MW2-M0J	NA	4.23	Sheen but not detected by instrument	09-Jul-01
OU-2A	Site 23	530MJ-MW3-M0J	NA	4.80	Not Present	06-Jul-01
OU-2A	Site 23	530MJ-MW4-M0J	NA	4.49	Not Present	06-Jul-01
OU-2A	Site 23	530MJ-MW5-M0J	NA	4.39	Not Present	06-Jul-01
OU-2A	Site 23	D10B-01	NA	4.48	Not Present	09-Jul-01
OU-2A	Site 23	D10B-02	NA	4.85	Not Present	09-Jul-01
OU-2B	Site 3	MW97-1	BSU	5.51	Not Present	27-Jun-01
OU-2B	Site 3	MW97-2	FMSU	5.50	Not Present	28-Jun-01
OU-2B	Site 3	MW97-3	FMSU	4.88	Not Present	28-Jun-01
OU-2B	Site 3	M03-04	FWBZU	5.77	Not Present	27-Jun-01
OU-2B	Site 3	M03-05	FMSU	6.36	Not Present	27-Jun-01
OU-2B	Site 3	M03-06	FMSU	6.52	Not Present	27-Jun-01
OU-2B	Site 3	M03-07	FMSU	3.71	Not Present	27-Jun-01
OU-2B	Site 3	M03-08A	SWBZU	5.87	Not Present	28-Jun-01
OU-2B	Site 3	D03-01	SWBZL	7.01	Not Present	27-Jun-01
OU-2B	Site 4	MW360-1	FMSU	4.12	Not Present	02-Jul-01
OU-2B	Site 4	MW360-2	FMSU	4.70	Not Present	29-Jun-01

SUMMARY OF WATER LEVEL MEASUREMENTS
OU-1/2 DATA GAP SAMPLING
ALAMEDA POINT

Operable Unit	Site	Well Name	Hydrostratigraphic Unit	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Date Measured
OU-2B	Site 4	MW360-3	FMSU	4.38	Not Present	02-Jul-01
OU-2B	Site 4	MW360-4	FMSU	3.91	Not Present	29-Jun-01
OU-2B	Site 4	M04-05	FMSU	4.97	Not Present	29-Jun-01
OU-2B	Site 4	M04-06	FMSU	2.65	Not Present	02-Jul-01
OU-2B	Site 4	M04-07	FMSU	5.13	Not Present	02-Jul-01
OU-2B	Site 4	MW372-1	NA	2.20	Not Present	29-Jun-01
OU-2B	Site 4	MW372-3	NA	4.66	Not Present	29-Jun-01
OU-2B	Site 4	MBG-3	FMSU	4.75	Not Present	10-Jul-01
OU-2B	Site 4	GW-1 (Battelle)	NA	4.67	Not Present	16-Jul-01
OU-2B	Site 4	SW-1 (Battelle)	NA	4.70	Not Present	16-Jul-01
OU-2B	Site 4	MW-5 (Battelle)	NA	5.45	Not Present	16-Jul-01
OU-2B	Site 4	MW-10 (Battelle)	NA	4.46	Not Present	10-Jul-01
OU-2B	Site 4	D04-01	FMSL	6.06	Not Present	02-Jul-01
OU-2B	Site 4	D04-02	FMSL	6.40	Not Present	03-Jul-01
OU-2B	Site 4	D04-03	FMSL	6.74	Not Present	02-Jul-01
OU-2B	Site 11	M11-01	FMSU	6.96	Not Present	02-Jul-01
OU-2B	Site 11	M11-02	FWBZU	5.98	Not Present	02-Jul-01
OU-2B	Site 11	M11-03	FMSU	5.60	Not Present	03-Jul-01
OU-2B	Site 11	M11-04	FMSU	6.76	Not Present	03-Jul-01
OU-2B	Site 11	M11-05	FMSU	5.83	Not Present	03-Jul-01
OU-2B	Site 11	M11-06	FMSU	6.09	Not Present	03-Jul-01
OU-2B	Site 11	D11-01	SWBZL	5.41	Not Present	03-Jul-01
OU-2B	Site 21	WA-8	NA	7.31	Not Present	09-Jul-01
OU-2B	Site 21	398-MW1	NA	5.58	Not Present	26-Jun-01
OU-2B	Site 21	398-MW2	NA	5.19	Not Present	26-Jun-01
OU-2B	Site 21	398-MW3	NA	5.20	Not Present	26-Jun-01
OU-2B	Site 21	398-MW4	NA	4.83	Not Present	27-Jun-01
OU-2B	Site 21	M07B-01	FMSU	5.82	Not Present	26-Jun-01
OU-2C	Site 5	M05-01	FWBZL	7.73	Not Present	11-Jul-01
OU-2C	Site 5	M05-02	FWBZL	6.98	Not Present	11-Jul-01
OU-2C	Site 5	M05-03	FWBZL	NA	Not Present	NA
OU-2C	Site 5	M05-04	FWBZU	6.55	Not Present	13-Jul-01
OU-2C	Site 5	M05-05	FWBZU	7.28	Not Present	11-Jul-01
OU-2C	Site 5	M05-06	FWBZL	6.66	Not Present	11-Jul-01
OU-2C	Site 5	M05-07	FWBZL	7.41	Not Present	11-Jul-01
OU-2C	Site 5	M05-08	FWBZL	8.48	Not Present	11-Jul-01
OU-2C	Site 5	M05-09	FWBZU	7.08	Not Present	11-Jul-01
OU-2C	Site 5	M05-10	FWBZU	7.47	Not Present	11-Jul-01
OU-2C	Site 5	M05-11	FWBZL	8.13	Not Present	11-Jul-01
OU-2C	Site 5	M05-12	FWBZL	8.28	Not Present	11-Jul-01

SUMMARY OF WATER LEVEL MEASUREMENTS
OU-1/2 DATA GAP SAMPLING
ALAMEDA POINT

Operable Unit	Site	Well Name	Hydrostratigraphic Unit	Depth to Water (feet btoc)	Depth to Product (feet btoc)	Date Measured
OU-2C	Site 5	M05BS-01	FWBZL	8.01	Not Present	11-Jul-01
OU-2C	Site 5	M05HW-01	FWBZL	5.43	Not Present	11-Jul-01
OU-2C	Site 5	D05-01	SWBZ	7.22	Not Present	10-Jul-01
OU-2C	Site 5	D05-02	SWBZU	7.50	Not Present	10-Jul-01
OU-2C	Site 5	D05-03	SWBZU	5.25	Not Present	10-Jul-01
OU-2C	Site 10	M10-01	FWBZL	4.30	Not Present	06-Jul-01
OU-2C	Site 10	M10-02	FWBZL	4.18	Not Present	09-Jul-01
OU-2C	Site 10	M10-03	FWBZL	3.52	Not Present	09-Jul-01
OU-2C	Site 10	D10A-01	NA	5.81	Not Present	09-Jul-01
OU-2C	Site 12	M12-01	FWBZL	5.68	Not Present	16-Jul-01
OU-2C	Site 12	M12-02	FWBZL	4.91	Not Present	16-Jul-01
OU-2C	Site 12	M12-03	FWBZL	4.65	Not Present	16-Jul-01
OU-2C	Site 12	M12-04	FWBZL	4.39	Not Present	16-Jul-01
OU-2C	Site 12	D12-01	SWBZU	6.32	Not Present	11-Jul-01
NA	Site CAA9A	584-MW1	NA	7.16	Not Present	27-Jun-01
NA	Site CAA9A	584-MW2	NA	6.91	Not Present	27-Jun-01
NA	Site CAA9A	584-MW3	NA	7.01	Not Present	27-Jun-01

APPENDIX O
BORING LOGS AND
DIRECT-PUSH GROUNDWATER PARAMETER SUMMARY TABLES
(560 Pages)

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CERCLA SITE 23

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EBS PARCEL 23

EBS PARCEL 98

FUEL LINE CORRECTIVE ACTION AREA A

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TABLE O-1 DIRECT-PUSH GROUNDWATER PARAMETER SUMMARY TABLES

Boring Logs for DGS Site 03

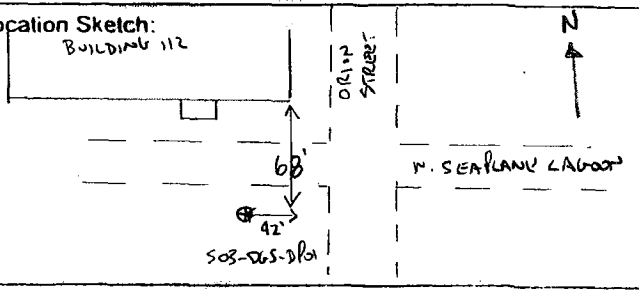
Direct Push Boring	Direct Push Soil Gas Boring	Vacuum Excavation Boring	Hydro Punch Borings
S03-DGS-DP01	S03-DGS-SG01		SO3-DGS-DP16
S03-DGS-DP02	S03-DGS-SG02		SO3-DGS-DP17
S03-DGS-DP03	S03-DGS-SG04		SO3-DGS-DP18
S03-DGS-DP04	S03-DGS-SG05		S03-DGS-DP20
S03-DGS-DP05	S03-DGS-SG07		S03-DGS-DP21
S03-DGS-DP06	S03-DGS-SG08		S03-DGS-DP22
S03-DGS-DP07	S03-DGS-SG10		S03-DGS-DP23
S03-DGS-DP08	S03-DGS-SG11		S03-DGS-DP24
S03-DGS-DP09	S03-DGS-SG13		S03-DGS-DP25
S03-DGS-DP10	S03-DGS-SG15		S03-DGS-DP26
S03-DGS-DP11			S03-DGS-DP28
S03-DGS-DP12			S03-DGS-DP29
S03-DGS-DP13			S03-DGS-DP30
S03-DGS-DP14			SO3-DGS-DP41
S03-DGS-DP15			
S03-DGS-DP16			
S03-DGS-DP17			
S03-DGS-DP18			
S03-DGS-DP19			
S03-DGS-DP27			
S03-DGS-DP31			
S03-DGS-DP32			
S03-DGS-DP33			
S03-DGS-DP34			
S03-DGS-DP35			
S03-DGS-DP36			
S03-DGS-DP37			
S03-DGS-DP38			
S03-DGS-DP39			
S03-DGS-DP40			
SO3-DGS-DP41			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP01	Date Started: 7/23/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/23/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 7'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						GRAVELY CLAYEY SAND; DK. GREENISH GREY; SLT. MOIST; LOOSE; POORLY SORTED; GRAVEL - 20% ANGULAR, CLAY - 15%, SILT - 5%, SAND (F-M. GRAINED) - 60%	SP		Ø
	2					SILTY SAND; LT. OLIVE GREY; MOIST; LOOSE; NON-PLASTIC; POORLY SORTED; SILT - 20%, SAND - 80%	SM		
							SC		Ø
	4				NA	CLAYEY SAND W/ SILT; DK. GREENISH GREY; MOIST; LOOSE; NON PLASTIC; SAND - (FINE TO M. GRAINED) 75%; CLAY - 15%, SILT - 10% w 10% GRAVEL FROM 3-3.5'	SM	NA	Ø
0845				385-S03 001					
	6					SILTY SAND; OLIVE GREY; MOIST, LOOSE; NON PLASTIC; POORLY SORTED; SILT - 20%, SAND (FINE TO M. GRAINED) - 80%, TRACE CLAY.			
1000	8			HYDRO PUNCH 385-S03 002		HYDROPUNCH GROUNDWATER SAMPLE 385-S03-002 FROM 7-9' BGS pH - 6.7 TRB - 1289 NTU ORP - -103.5 mV CND - 25,319 µS/cm DO - 1.38 mg/L TMP - 20.41 °C			
	10								

* DEPTHS MEASURED FROM SOIL SURFACE BELOW 1.0' OF ASPHALT

TOTAL DEPTH = 9'

BORING BACKFILLED W/ CEMENT GROUT

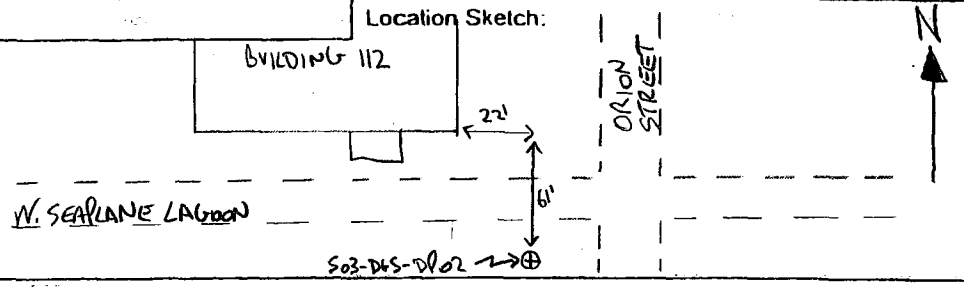
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP02	Date Started: 7/23/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/23/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



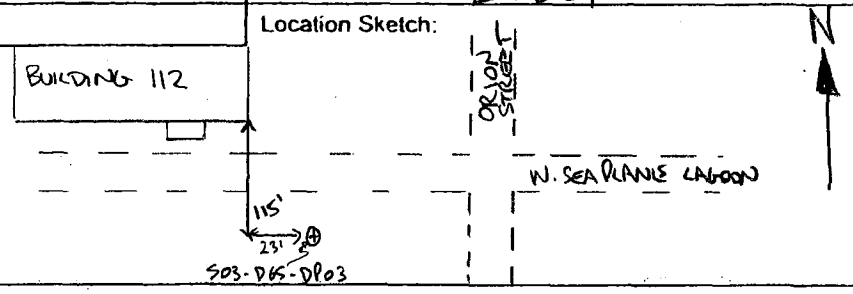
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2					SANDY GRAVEL; OLIVE GREY; DRY; M. DENSE; POORLY SORTED; NON PLASTIC; GRAVEL- 70%, SAND- 20%, CLAY- 5%, SILT- 5%.	GC		
	4				NA	SILTY SAND; LT YELLOWISH GREY; MOIST; LOOSE; NON PLASTIC; SAND- 80% (FINE TO M. GRAINED) COLOR CHANGE @ 5.5'- OLIVE GREEN.	SM	NA	
1240				385-S03 D03					
	6					HYDROPUNCH GROUNDWATER SAMPLE 385-S03-004 FROM 7.0-9.0' BGS			
1310	8			HYDRO PUNCH 385-S03-004		PH- 7.5 DO- 5.1 mg/L CND- 30,327 µS/cm TMP- 20.78 °C TRB 1289.7 NTU ORP- 75.0 mV			
	10					TOTAL DEPTH = 9' BORING BACKFILLED W/ CEMENT GROUT.			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP03	Date Started: 8/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 5.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2					GRAVELY SAND w/ CLAY; DARK YELLOWISH BROWN (10YR 4/4); MOIST; M. DENSE; GRAVEL - 25%, CLAY - 15%, SILT - 5% SAND - 55%	SP		
	4			HYDRO PUNCH	NA	SILTY SAND; DARK GREY (5Y 4/1); MOIST; LOOSE; SILT - 20%, SAND - 80% (F.G.); WET @ 5.5'; STRONG ODOR @ 5-6' (PETROL)	SM	NA	
1310	6			385-S03-006		HYDROPUNCH GROUNDWATER SAMPLE 385-S03-006 FROM _____ PH - 7.37 DO - 0.23 mg/L CND 17,983 mS/cm ORP - -192.9 mV TRB - 9.6 NTU TMP - 23.91 °C			

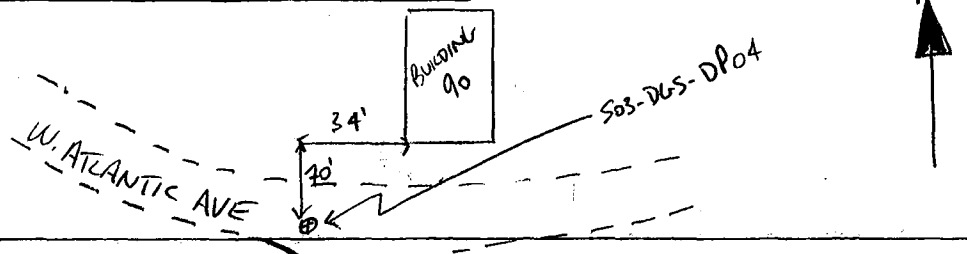
TOTAL DEPTH = 7'
BORING BACKFILLED w/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP04	Date Started: 7/23/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/23/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2					GRAVELY SAND w/ CLAY; DK. GREENISH GREY; SLT. MOIST; LOOSE; NON PLASTIC; GRAVEL-30%, CLAY-10%, SAND-60%	GC		
						SILTY SAND; LT. YELLOWISH BROWN; SLT. MOIST; LOOSE; POORLY SORTED; SILT-20%, SAND-80%, SHELL FRAGMENTS-TRACE; 1/2" CEMENTED SECTIONS	SM		
1430	4			385-S03 008					
1400				385-S03 007					
	6					HYDROPUNCH GROUNDWATER SAMPLE 385-S03-008			
	8					PH - 7.6 CND - 1286 MS/cm TRB - 198.8 NTU ORP - -74.7 mV TMP - 24.74°C DO - 5.07 mg/L			
	10								

TOTAL DEPTH = 6'
BORING BACKFILLED w/ CEMENT GROUT

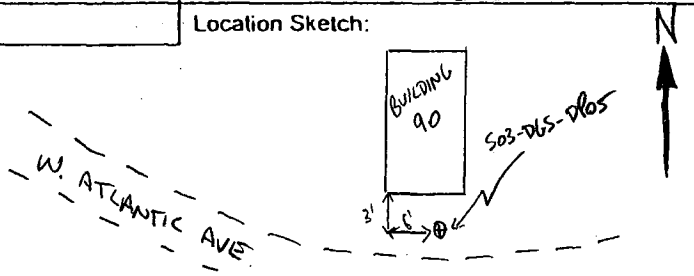
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP05	Date Started: 7/23/01 (SOIL COLLECTED)
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/24/01 (WATER COLLECTED)
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2					CLAY; DK GREY; SLT. MOIST; STIFF; PLASTIC; STRATIFIED; VARIOUS COLORS; MOTTLED	CH		
							SC		
	4					CLAYEY SAND w/ SILT; LT REDDISH BROWN; SLT. MOIST; POORLY SORTED; 65% SAND; 25% CLAY, 10% SILT	CH		
1520				385-S03 009,009A	NA	CLAY; DARK BLUISH BLACK; WET; LOOSE; PLASTIC		NA	
	6					CLAYEY SAND; DARK BLUISH GREY; WET; LOOSE SLT. PLASTIC; CLAY- 15%, SILT- 5%, SAND- 80%	SC		
	8					HYDROPUNCH GROUNDWATER SAMPLE 385-S03-010/010A			
1545				HYDRO PUNCH 385-S03-010/010A		PH- 7.67 TMP- 19.2°C TRB- >999 NTU ORP- -219 mV CND- 18.0 mS/cm DO- .08 mg/L			
	10								

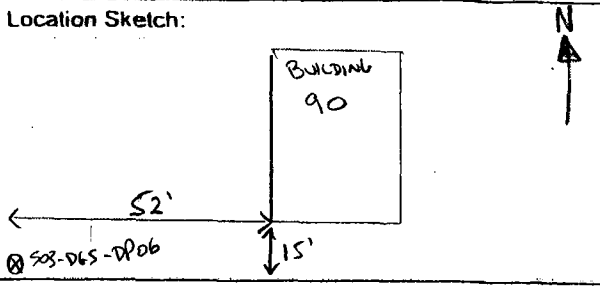
TOTAL DEPTH = 10'
BORING BACKFILLED W/ CONCRETE GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03- DGS- DP06	Date Started: 6/18/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/18/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.5	Location Sketch:



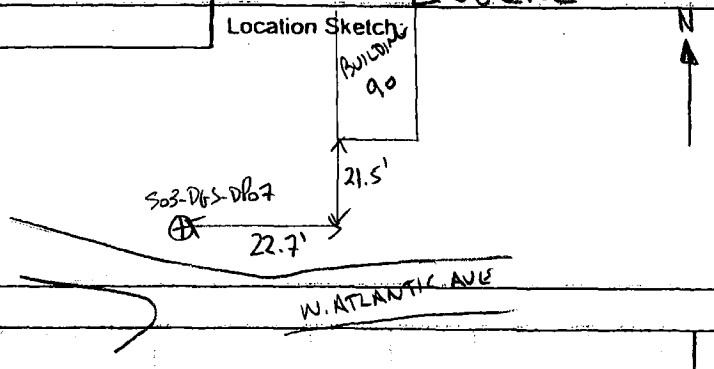
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1045				385-S03-011		ASPHALT GRAVELY SAND TR. CLAY; OLIVE BROWN (2.5Y 4/3); SL. MOIST; LOOSE; 35% GRAVEL, 5% CLAY, 60% CLAY, POORLY SORTED	SP		
	2					SAND W/ CLAY; DARK GREENISH BROWN (2.5Y 4/2) SL. MOIST; LOOSE; 80% M.G. SAND, 20% CLAY; SLIGHTLY PLASTIC.	SC		
1050				385-S03-012		- WET @ 4.5'			
	4				N/A				
1055				385-S03-013					
	6								
	8					TOTAL DEPTH = 7' BORING BACKFILLED W/ CEMENT GROUT.			
	10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP07	Date Started: 6/18/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/18/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.75'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1132				385-S03-015		ASPHALT CLAYEY SAND; DARK OLIVE GREY (5Y 3/2); SLT MOIST; M. DENSE; CLAY 30%, SAND 70%	SC		
	2					SAND; DARK OLIVE GREY (5Y 2/2), MOIST; LOOSE; WELL ROUNDED WELL SORTED; SAND 90%, GRAVEL 10% - ROUNDED 1-2 CM.	SW		
1144				385-S03-016		CLAY W/ SAND; BLUISH BLACK (2.5/1 5B GLEY 2); V. MOIST; V. SOFT; PLASTIC; 20% SAND, 80% CLAY GRADES INTO CLAY. - WET @ 4.75'	CL		
	4								
1150				385-S03-017		SAND W/ GRAVEL; BLACK (2.5Y 2.5/1); WET; LOOSE; F.G. SAND 85%, GRAVEL 15% - ROUNDED 2-4CM.	SP		
	6								
	8					TOTAL DEPTH = 7.0' BORING BACKFILLED W/ CEMENT GROUT.			

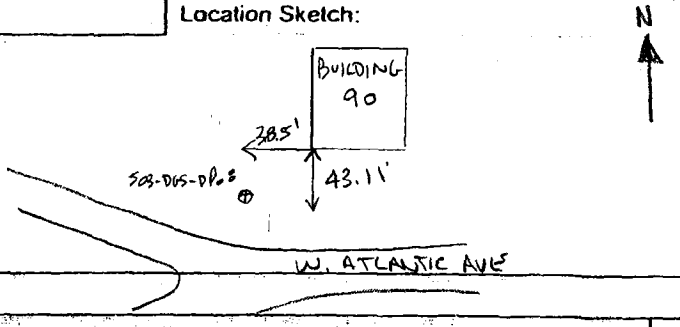
N/A

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP08	Date Started: 6/18/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/18/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1110				385-S03-019		ASPHALT			
						GRAVELY SAND; BROWN (2.5Y 5/6); SLT. MOIST; M. DENSE; SAND - 60% GRAVEL - 40% - ANGULAR, POORLY SORTED	SP		
	2			385-S03-020	N/A	SAND w/ SHELLS; YELLOWISH BROWN (10YR 5/8); SLT. MOIST; LOOSE; 90% FINE-M. GRAINED SAND; 10% SHELL FRAGMENTS.	SW	N/A	
	4			385-S03-021		-3.5' - MOIST - 4.0' - WET.			
	6					CLAY w/ SAND; V. DARK BROWN (10YR 2/2); WET; SOFT; HIGH PLASTIC, SAND - 20%, CLAY - 80%	CL		
	8					TOTAL DEPTH = 7' BORING BACKFILLED w/ CEMENT GROUT			

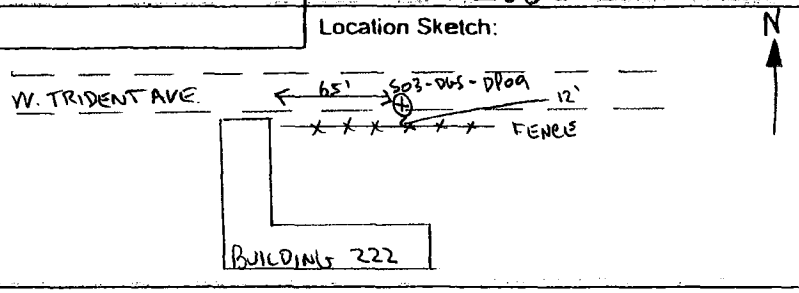
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP09	Date Started: 6/18/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/18/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1545				385-S03-023	N/A	ASPHALT		N/A	
						SANDY GRAVEL; VERY DARK BROWN; SLT MOIST; DENSE; SAND-30%, GRAVEL- 70% - ANGULAR - 0.5-3.0CM.	GP		
	2					SAND W/SHELLS; OLIVE GREY (5Y 4/2); SLT. MOIST; LOOSE; 95% - FINE GRAINED SAND, 5% SHELL FRAGS	SW		
						CLAYEY SAND; BLACK (5Y 2.5/1); SLT. MOIST; LOOSE; SAND 60% CLAY-40% SLT PLASTIC; CLAY POCKETS; GLASS FRAGS	SP		
1547	4			385-S03-024		CLAY; BLACK (5Y 2.5/1); SLT. MOIST; SOFT; PLASTIC GRADATIONAL CONTACTS	CH		
1554	6			385-S03-025		CLAYEY SAND; V. DARK GREY (5Y 3/1); SLT MOIST; LOOSE; 70% F.G. SAND, 30% CLAY; GRADATIONAL CONTACT; NON PLASTIC; WELL SORTED	SC		
	8					TOTAL DEPTH = 6' BORING BACKFILLED W/ CEMENT GROUT			

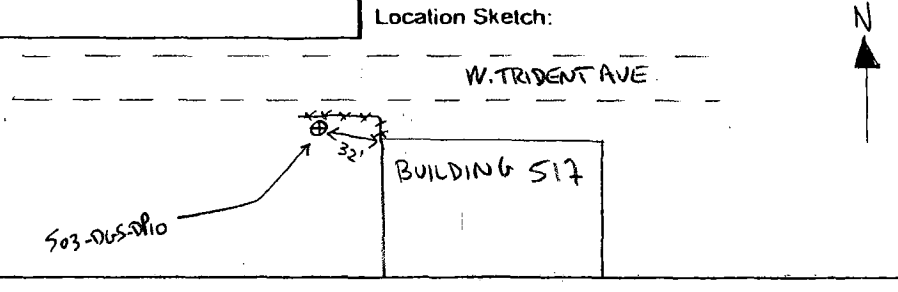
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP10	Date Started: 6/18/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/18/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 5.5'	Location Sketch:



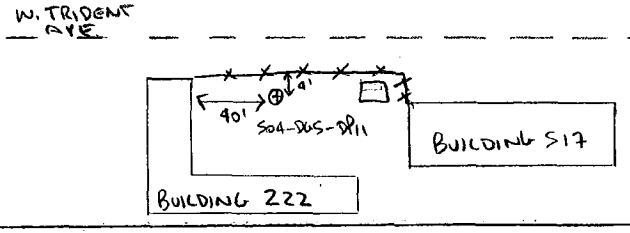
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1607	2			385-S03-027	N/A	ASPHALT CLAYEY SAND w/ SILT; GREENISH BLACK (10GY 2.5/1); SLT. MOIST; DENSE; NON PLASTIC; CLAY - 20%, SAND (F.G.) - 70%, SILT - 10%	SC	N/A	
1614	4			385-S03-028		SAND w/ GRAVEL; DARK GREENISH GREY (10GY 4/1); SLT. MOIST; LOOSE; F.G. SAND - 90%, GRAVEL - 10% - ROUNDED 1-2cm.	SW		
1616	6			385-S03-029		CLAYEY SAND TR. GRAVEL; GREENISH BLACK (10GY 2.5/1); V. MOIST - WET @ 5.5'; LOOSE; CLAY - 30%, SAND - 65%, GRAVEL - 5% SLT. ODOR, SAND - F.G.	SC		
	8					TOTAL DEPTH = 6' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP11	Date Started: 6/19/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6.25'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0900	2			385-S03-030	NA	SANDY GRAVEL; YELLOWISH BROWN (10YR 5/8); DRY; LOOSE; ANGULAR; SAND- 40%, GRAVEL- 60% - 0.5-3.0 cm	GP	NA	
						CLAY; D. GREENISH GREY (GLEY1 10GY 4/1); MOIST; SOFT; HIGHLY PLASTIC, CLAY 90%, F.G. SAND-10%	CL		
0911	4			385-S03-031		GRAVELY SAND; LIGHT YELLOWISH BROWN (2.5Y 6/4); DRY; LOOSE; SAND- 85%, GRAVEL -15% - 0.5-1.0 cm.	SP		
1007	6			385-S03-032		SANDY CLAY; V. DARK GREENISH BROWN (2.5Y 3/2); MOIST; V. SOFT; H. PLASTIC; SAND 30% -(F.G.), CLAY-70% - LARGE PIECE OF GLASS WET @ 6.25'	CL		
	8					TOTAL DEPTH = 6.5' BORING BACKFILLED W/ CEMENT GROUT			

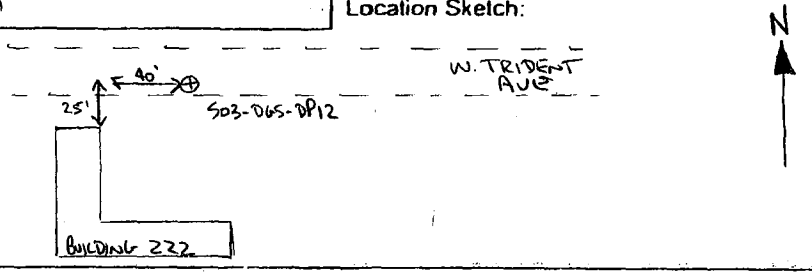
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP12	Date Started: 6/19/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6.25'	Location Sketch:



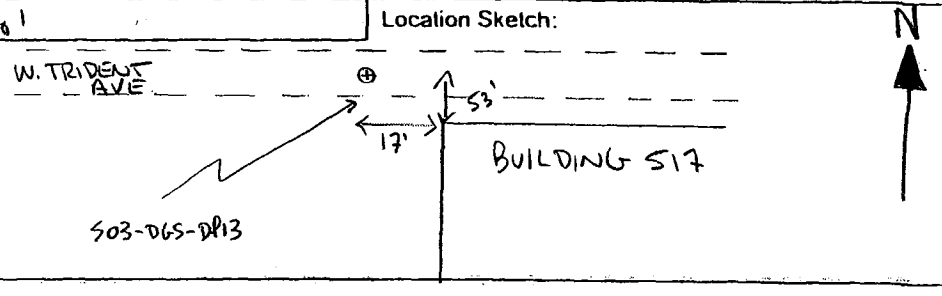
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1113	2			385-S03 033	N/A	GRAVELY SAND w/ CLAY; S. BROWN (7.5YR 5/6); SLT. MOIST; LOOSE; ANGULAR GRAVEL, POORLY SORTED; GRAVEL - 30%, SAND - 60%, CLAY - 10%. 0.8-1.25 - DECREASED CLAY, COLOR - (GLEY1 10GY 3/1)	SP	N/A	
							SW		
						SAND; DARK GREENISH GREY (5G 4/1); SLT. MOIST; LOOSE WELL SORTED; FINE GRAINED.	CL		
1119	4			385-S03 034		CLAY; DARK GREENISH GREY (GLEY1 5GY 3/1); MOIST; SOFT; MED. PLASTIC, GRADATIONAL CNTCT	SW		
	6					SAND; DARK GREENISH GREY (10GY 3/1); SLT MOIST; LOOSE; FINE GRAINED; WELL SORTED			
	8					TOTAL DEPTH = 6.5' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP13	Date Started: 6/19/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6.0'	Location Sketch:



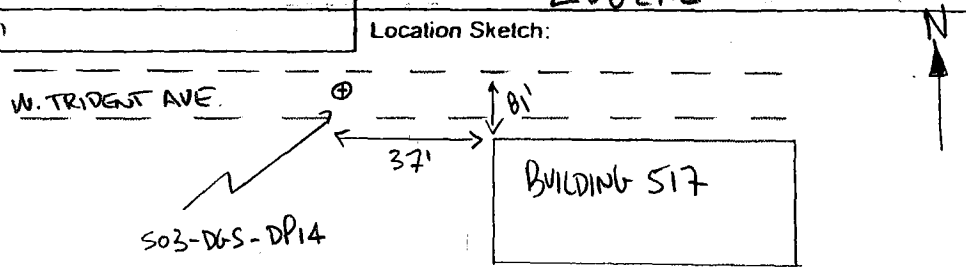
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0932	2			385-S03 037		SANDY GRAVEL w/ CLAY; STRONG BROWN (7.5YR 5/6); SLT. MOIST; M.DENSE; ANGULAR; POORLY SORTED; SAND - 30%, GRAVEL - 50%, CLAY - 20% - INCREASED CLAY w/ DEPTH	GC		
0944	4			385-S03-038	N/A	SAND w/ CLAY; DK. GREENISH GREY (GLEY1 10GY 3/1); SLT. MOIST; LOOSE; SAND - 90%, CLAY - 10% - INTERMITENT LAYERS OF CLAY	SC	N/A	
0949	6			385-S03 039	▼	GRAVELY SAND; DARK BROWN (10YR 3/3); V. MOIST; LOOSE; ANGULAR; GRAVEL - 40% - 0.5-3cm, SAND - 60% - M.GRAINED. WET @ 6.0'	SW		
	8					TOTAL DEPTH = 6.0' BORING BACKFILLED w/ CEMENT GROUT.			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP14	Date Started: 8/2/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 3.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1015	2			385-S03-069		SANDY GRAVEL; REDDISH BROWN (7.5YR 6/6); MOIST; M. DENSE; ANGULAR; NON PLASTIC; SAND- 35%, GRAVEL - 60%, CLAY 5%	GC		
1018	4			HYDRO PUNCH 385-S03-070	NA	SAND W/ GRAVEL; GREENISH GREY (5BG 6/1); MOIST; LOOSE; ANGULAR; GRAVEL- 20% - GRANITE 0.5-2cm, SAND- 70%, CLAY - 10% - DECREASED GRAVEL W/ DEPTH	SP	NA	
1020				385-S03-072					
1030	6			385-S03-071		SANDY GRAVEL; V. DK. GREYISH BLUE (10YR 3/2); WET; LOOSE; ANGULAR; GRAVEL- 70% - 0.5-4.0cm SAND- 15%, CLAY- 5%, WOOD- 5%	GC		
						COLOR CHANGE @ 6.0' BLACK (10YR 2/1)			
	8					HYDROPUNCH GROUNDWATER SAMPLE 385-S03-072 FROM 3.0-5.0' BGS TMP- 20.51°C TRB- 5.0 NTU DO - 4.55 mg/L PH- 7.10 ORP- -106.9 MV CND- -29.00 MS/cm			

TOTAL DEPTH = 6.5'
BORING BACKFILLED W/ CEMENT GROUT

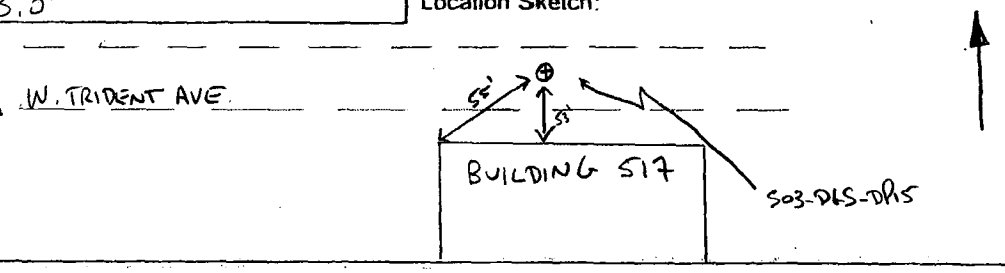
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP15	Date Started: 8/2/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 3.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0900	2			385-S03-073	NA	GRAVELY SAND W/ CLAY; (GLEY1 5BG 4/1); MOIST; DENSE; V. SLT. PLASTIC; ANGULAR; POORLY SORTED; SAND - 65%, GRAVEL - 25%, CLAY - 10% (0.5-2cm)	SP	NA	
						SANDY GRAVEL W/ CLAY; BLACK (7.5YR 2/0); SLT. MOIST; LOOSE; POORLY SORTED; NON PLASTIC; SAND - 40%, GRAVEL - 50%, CLAY - 10%	GC		
0950	4			385-S03-074		GRAVELY SAND; BLACK (7.5YR 2/0); WET; LOOSE; POORLY SORTED; ANGULAR; GRAVEL - 30% - 0.5CM, SAND - 70%	SP		
1000	6			385-S03-075		SAND GRAVEL; BLACK (7.5YR 2/0); WET; LOOSE; POORLY SORTED; ANGULAR; SAND - 40%, GRAVEL - 60%, STRONG ODOR, TR. WOOD FRAGMENTS	GC		
	8					TOTAL DEPTH = 7'			
						BORINGS BACKFILLED W/ CEMENT GROUT			

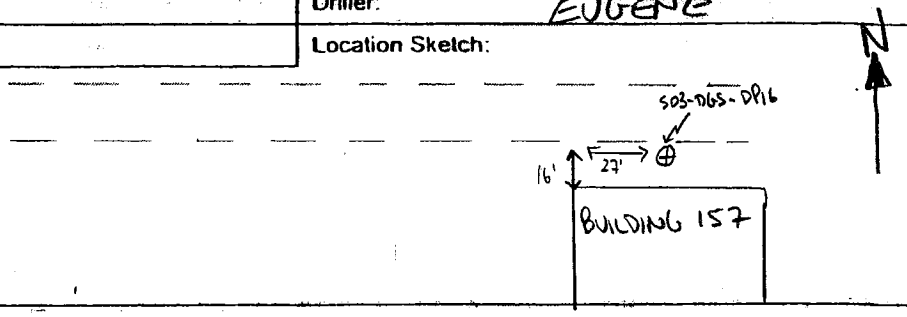
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP16	Date Started: 8/1/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/1/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 2.0'	Location Sketch:



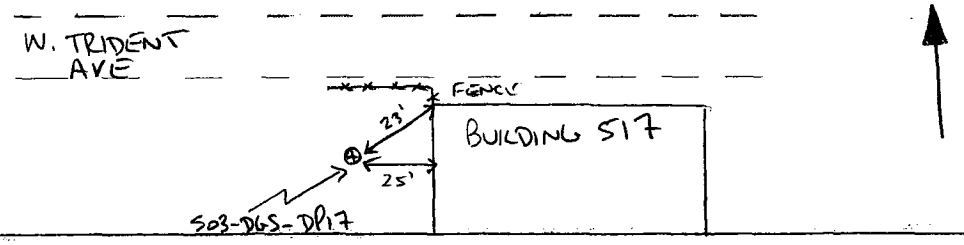
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1455	2			385-S03-076	NA	GRAVELY SAND; (GLEY 5G 5/1); MOIST; LOOSE; SUB-ANGULAR; NONPLASTIC; GRAVEL- 25%, SAND- 70%, CLAY- 5%, SHELLS - 5%, SAND IS F.G., GRAVEL 3-4 cm FROM 2-7' — GRAVEL -15%, SAND- 85%, MOIST, GLASS FRAGMENTS, NON PLASTIC, LOOSE, POORLY SORTED, GRAVEL 0.5cm, COLOR CHANGE GLEY 5G/ 4/2	SP	NA	
1500	4			385-S03-077					
1510	6			385-S03-078					
	8					TOTAL DEPTH = 7' BORING BACKFILLED w/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03- DGS- DP17	Date Started: 8/1/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/1/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EVGENE
Depth to Water (ft./bgs.) 5.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1340	2			385-S03 079	NA	SAND w/ CLAY ; PALE OLIVE (5Y 6/4); MOIST; LOOSE; WELL SORTED; SLT. PLASTIC; SAND (F.G.)- 90%, CLAY-10%, RARE GRAVEL - 2cm	SC	NA	
1345	4			385-S03 080		GRAVELY SAND; OLIVE YELLOW (2.5Y 6/6); MOIST; LOOSE; SUBANGULAR; NON PLASTIC; SAND (F.G.)- 60%, GRAVEL- 40%, SHARP CONTACTS.	SP		
1345	6			385-S03 081		4-6'- SAND; DARK GREENISH GREY (5GY 5/1), WET; LOOSE; NON PLASTIC, WELL SORTED, NON GRADED			

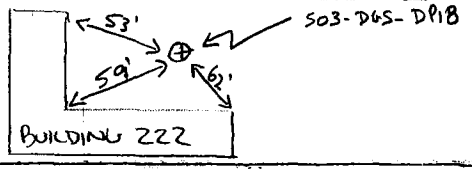
TOTAL DEPTH - 6.5'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP18	Date Started: 8/1/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/1/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2				NA	CLAYEY SAND w/ GRAVEL; YELLOWISH BROWN (10YR 5/4); SLT. MOIST; DENSE; NON PLASTIC; POORLY SORTED; CLAY- 30%, SAND (FINE - C. GRAINED) - 50%, GRAVEL- 20% - 0.5-1cm.	SC		
1415	4			385-S03 082		SILTY SAND; GREENISH GREY (GLEY1 5G 5/1); SLT. MOIST; LOOSE; NON PLASTIC; MOD. GRADED - FINING DOWN; SAND - 80%, SILT- 20%	SM	NA	
1420	6			385-S03 083		CLAY; GREENISH GREY (GLEY1 5BG 4/1); V. MOIST; SOFT- FIRM @ 6.5'- SHELL FRAGS -15%, GRADING TO SAND @ 6.75'	CH		
	8					TOTAL DEPTH = 7' BORING BACKFILLED W/ CEMENT GROUT			

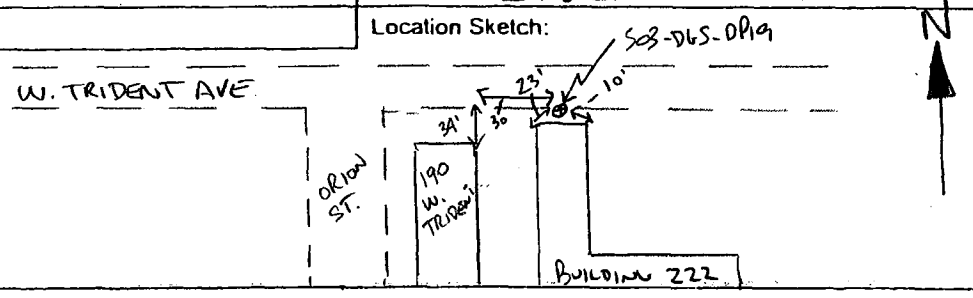
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP19	Date Started: 8/2/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2					SAND; OLIVE BROWN (2.5Y 4/4); SLT. MOIST; LOOSE; WELL SORTED; SAND - 97%(F.G.), GRAVEL-2%-2CM - SUBROUNDED	SW		
	4					CLAY W/ SAND; DK. GREENISH BROWN (2.5Y 4/2); MOIST; SLT. FIRM; PLASTIC; CLAY- 80%, SAND - 20%	CL		
1120				385-S03 084		GRAVELY SAND; DK. GREYISH BROWN (2.5Y 4/2); WET; LOOSE; WELL SORTED; SAND (F.G.) - 80%, GRAVEL - 20% - ANGULAR - 0.5CM	SW		
1145				HYDRO PUNCH 385-S03 086					
	6			385-S03 085		CLAY; DARK GREY (2.5Y 4/0); WET, SOFT-SLT. FIRM; H. PLASTIC; SHELL FRAGMENTS 5-20%.	CH		
1140									
	8					HYDROPUNCH GROUNDWATER SAMPLE FROM 4.5-6.5'			
						TMP - 21.50 CND - -29.00			
						PH - 6.84 DO - 14.12			
						TRB - 68.5 ORP - -99.7			

TOTAL DEPTH = 7'

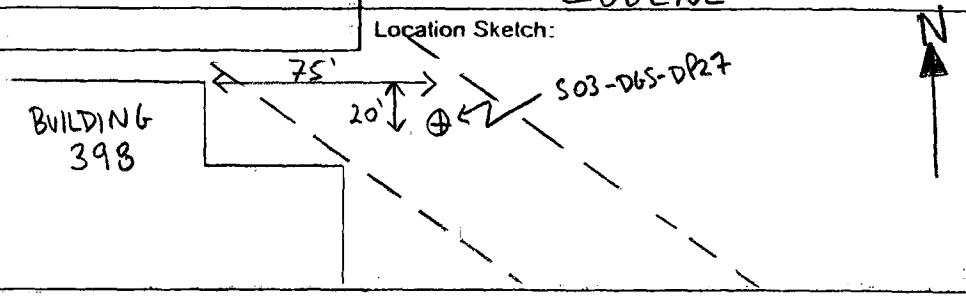
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03- DGS- DP27	Date Started: 8/31/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/31/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 5.0'	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					ASPHALT			
* 2 * * 4 * * 6 *				NA	SILTY SAND; LT. OLIVE BROWN (2.5Y 4/4); MOIST; LOOSE; POORLY GRADED; SILT-20%, SAND (FINE-M. GRAINED) - 80% COLOR CHANGE @ 4.5' V. DARK GREY (2.5Y 3/1) WET @ 5' STRONG HYDROCARBON ODOR, STAINING 5-6'	SM	2" PVC SCREENED (.010")	0 0 8 189 333
* 8 * * 10					SILTY CLAY; DK. GREENISH GREY (5.6Y 2.5/1); WET; SOFT; CLAY 85%, SILT-15%	CL		19 22 8

* QUALITATIVE LNAPL VOA TEST SAMPLE LOCATIONS. LNAPL DETECTED IN VOA SAMPLE @ 5.5'. TEMP WELL MONITORED W/ BAILER & INTERPHASE PROBE 5/9/01 RESULTS NEG. (SEE NOTES BOOK #4, PAGE 29).

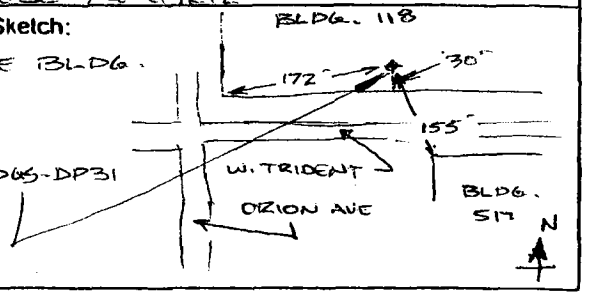
Total Depth = 10'
Boring Completed as temporary well by installing 10' of well screen to assess potential for LNAPL. No LNAPL layer detected in temporary well on 5/9/01. Screen removed and boring backfilled with cement grout.

CTO-385
Bldg./Site: 503
Project Name: SUPPLEMENTA REMEDIAL INVESTIGATIO DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S03-DGS-DP31	Date Started: 9/24/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~10'	Location Sketch:



GROUND WATER SAMPLE COLLECTED W/ TEFLON DISPOSABLE BAILER IN PVC 1" φ TEMP. OID SCREEN PLACED IN HAND AUGERED BOREHOLE TO 10'
TEMP - 17.02 °C SPC - 3,209
COND - 2,719 MS/cm pH - 7.73
D.O. - 1.60 mg/L TURB - 1,380 NTU
ORP - -166.0 mV

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						6" CONCRETE	CONC		
	2					YELLOWISH-BROWN SAND 10YR/66 (SP) MOIST, LOOSE. SOME CLAY BALLS FOUNDATION BASE MAT'L	SP	2	
1015	4			385 503 116	NA			4	
1030	6			385 503 117				NA 6	
	8					BLACK SANDY CLAY 2.5Y N2/ (CL) MOIST, SOFT. MUCH FILL DEBRIS EMBEDDED IN CLAY I.E.: WOOD, ROCK, BRICK ETC.	(CL) FILL DEBRIS	8	
	10			385 503 118		BLACK TURBID WATER, H_2S ODOR MUCH SEDIMENT		10	

TOTAL DEPTH = 10'
BORING BACKFILLED W/ CEMENT GROUT

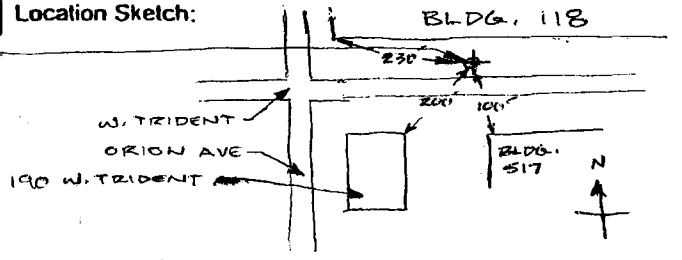
Sheet 1 of 1

CTO-385
Bldg./Site: 3
Project Name: SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: 503-D&S-DP32	Date Started: 9/24/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1" ϕ TEMP. PVC .010 SCREEN	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~8'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						8" CONCRETE 8"	CONC.		
	2					MULTI-COLORED FILL MATERIAL, MOSTLY GRAYISH-REDDISH BROWN ~ 2.5 YR 5/4 SANDY, CLAYEY GRAVEL (GC) 15% SAND, 30% CLAY, GRAVEL TO 1" ϕ, w/ DEBRIS I.E.: GLASS, WOOD, CONC., AC, ETC. DRY, LOOSE 3½'	GC		
1450	4			385 503 125	90 IL	GRAY CLAY (CH) 10YR 5/1 WET STIFF SHELL FRAGMENTS, SOME BLACK STAINED NODULES, SMALL SAND LENSES ~ 4.7' & 5.5'	CH	NA	
1455	6			385 503 126	90 IL				
1515	8			385 503 127	GW	GROUNDWATER SAMPLE SCREENED 5'-10' #385-503-127, DISSOLVED LEAD 1-500ml poly/HNO3 FILTERED THRU .45 μ TEMP - 23.97°C SpC - 5,870 COND - 5,760 MS/cm pH - 6.75 D.O. - 0.76 mg/L TURB - 466.3 NTU ORP - -198.8 mV			
	10								

TOTAL DEPTH = 10'
BORING BACKFILLED W/ CEMENT GROUT.

Sheet 1 of 1

CTO-385
Bldg./Site: 3
Project Name: SUPPLEMENTA REMEDIAL INVESTIGATIO DATA GAP SAMPLING

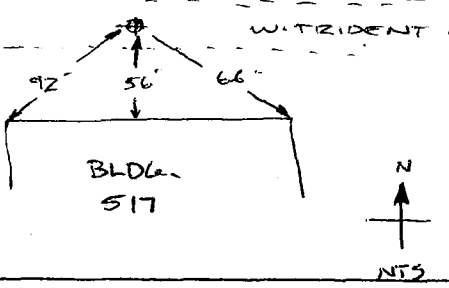
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: 503-DGS-DP33	Date Started: 9/24/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~6' / SAMPLED W/ PERISTALTIC PUMP	Location Sketch:

GROUNDWATER SAMPLE FROM BOREHOLE W/ 1"Φ TEMP PVC WELL SCREEN (.010) @ 0935 # 385-503-115

TEMP: 21.53°C SPC - 1,613 GRAYISH BLACK TURBID
COND = 1,496 MS/cm pH - 6.91 SILTY, SANDY WATER
D.O. = 1.42 mg/L TURB - 1,091 NTU ~~ODORLESS~~ SLIGHT H_2S ODOR
ORP - 75.8 mV



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE SURFACE TO 7"	CONCRETE		
0835	1			385 403 112	N/A	REDDISH-YELLOW (5YR 6/8) ~~ORANGE~~ SANDY GRAVELLY CLAY (CL) MOIST, STIFF 25% f.-c. SAND, 15% f. GRAVEL	CL		
						1 GRAY GRAVELLY SANDY CLAY (5G 4/1) (CL) MOIST, STIFF			
	2					1.5 GRAY (5G 4/1) SAND MOIST, DAED. DENSE (SP)	SP		
						2.5 GRAYISH BLACK CLAY (5Y 2.5/1) (CH) WET, SOFT	CH	N/A	
	3								
0840	4			385 403 113		4.5 GRAYISH BLACK SANDY CLAY (5Y 2.5/1) (CL) WET, SOFT 10% f.-m. SAND	CL		
	5								
0849	6			385 403		INCREASING WATER, SAND %			

TOTAL DEPT = 6' BORING BACKFILLED W/ CEMENT GROUT

Sheet 1 of 1

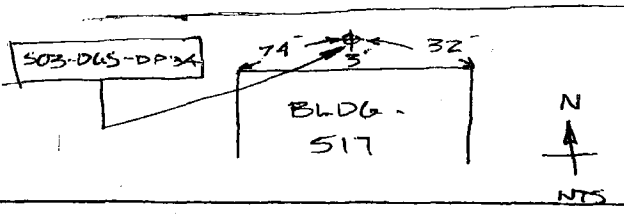
CTO-385
Bldg./Site: 3
Project Name: SUPPLEMENTA REMEDIAL INVESTIGATIO DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S03-DGS-DP3A	Date Started: 9/24/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: – 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: –	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~6'	Location Sketch:

GROUNDWATER SAMPLE COLLECTED W/ PERI-STALTIC PUMP, THROUGH PVC 1"Φ SCREEN .010
TURBID BLACK WATER, VISIBLE SHEEN, STRONG HYDROCARBON ODOR. #385-S03-122 @1210
TEMP- 18.37°C ORP- -121.3mV TURB- 987 NTU
COND 1,142 µS/cm SPC - 1,309
D.O. - 0.80 mg/L pH - 7.28



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1115	1			385 S03 119		ASPHALT 3"			
						BASE - GRAYISH BROWN SANDY GRAVEL 10YR 5/2 (GP) DRY, LOOSE 6"	GC		
	2					REDDISH BROWN CLAYEY GRAVELLY SAND 2.5 YR 5/4 DRY, MED. DENSE (SW) 10% CLAY 25% GRAVEL	SW		
				385 S03					
1120	4			120		4'			
						LIGHT BROWN SAND 10YR 6/4 (SP) MOIST, MED. DENSE	SP		
						5' BLACK GRAVELLY CLAYEY SAND 10 YR 2/1 (SC) WET, LOOSE 15% GRAVEL & DEBRIS, 20% CLAY, STRONG HC ODOR, SHEEN	SC		
1125	6			385 S03 121		6' GRAY CLAY 10YR 5/1 (CH) WET, STIFF, SOME BLACK DEBRIS FROM ABOVE EMBEDDED IN THIS BAY MUD.	CH		
	7								
	8					TOTAL DEPTH = 7' BORING BACKFILLED W/ CEMENT GROUT			
	10								

Sheet 1 of 1

CTO-385
Bldg./Site: 3
Project Name: SUPPLEMENTA REMEDIAL INVESTIGATIO DATA GAP SAMPLING

TETRA TECH EM INC.

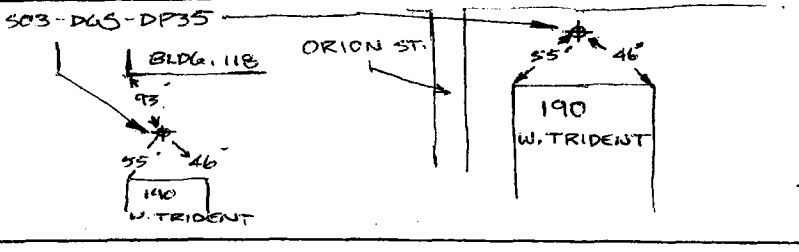
SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: 503-DGS-DP35	Date Started: 9/24/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) 28'	Location Sketch:

* QC: FIELD DUPLICATE ALSO COLLECTED #385-503-902

VERY LOW YIELDING SLOW RECOVERING BAY MUD

** PARAMETERS MEASURED ON 9/25/01



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						4" ASPHALT OVER	AC		
	2					MULTI-COLORED GRAYISH, REDDISH BROWN 10 YR 5/2 ↔ 2.5 YR 5/4 CLAYEY, SANDY GRAVEL (GP) DRY, LOOSE → MED. DENSE. 20% CLAY, 30% SAND RUST STAINING, FILL DEBRIS I.E.	GP		
	4				NA	GRAY CLAY (CH) 10YR 5/1 WET, STIFF, SLIGHT H2S ODOR SOME SHELL FRAGMENTS, DEBRIS	CH	NA	
1345	6			385-503-123	SOIL				
1400	7			385-503-124	GW	* GROUNDWATER SAMPLE #385-503-124 COLLECTED IN PVC TEMP. 3/4" Ø .010 SCREEN 4'-9' WITH PERISTALTIC PUMP, DISSOLVED LEAD 1-500 ml POLY/HNO3, FILTERED THROUGH .45 µ			
	8								
1800	9			385-503-902		** TEMP - 16.67°C SPC - 15,990 COND - 13,434 mS/cm pH - 7.24 D.O. - 4.26 mg/L TURB - 1,369 NTU ORP - 346.3 mV			
	10	BOH @ 9'							

TOTAL DEPTH = 9'
BORING BACKFILLED W/ CEMENT GROUT

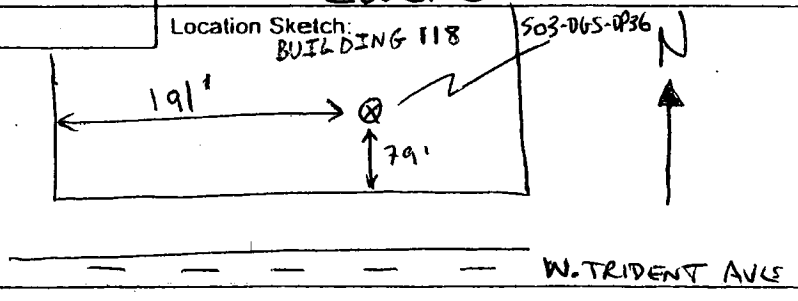
KFW

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP36	Date Started: 11/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 11/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M. CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE			
	2					CLAYEY SAND; YELLOWISH BROWN (10YR 5/4); MOIST-WET; V. LOOSE; MOD. SORTED; NON GRADED; NON PLASTIC; CLAY-10%, SAND (M.G.)-80%, 5% SHELL FRAGMENTS & TR. GRAVEL.	SC	4 2	
	4					INCREASED CLAY W/ DEPTH TO 20%. DECREASED SHELL FRAGMENTS	CL		
1330	6		HYDROPUNCH GW SAMPLE	385-S03-118			SC		
1345	8			385-S03-119		CLAY - D. GREENISH GREY (5G 4/1); WET; SOFT; V. PLASTIC; NOT SORTED; CLAY-100%, TR. SILT			
						CLAYEY SAND; D. GREENISH GREY (5G 4/1); WET; LOOSE; WEAKLY SORTED; NON GRADED; NON PLASTIC SAND-85%, CLAY-15%			

TOTAL DEPTH = 8.5'
BORING BACKFILLED W/ CONCRETE GROUT

HYDROPUNCH GW SAMPLE FROM 6.5-8.5'

DO PH CND

TRB ORP TMP

NOT ENOUGH SAMPLE VOL

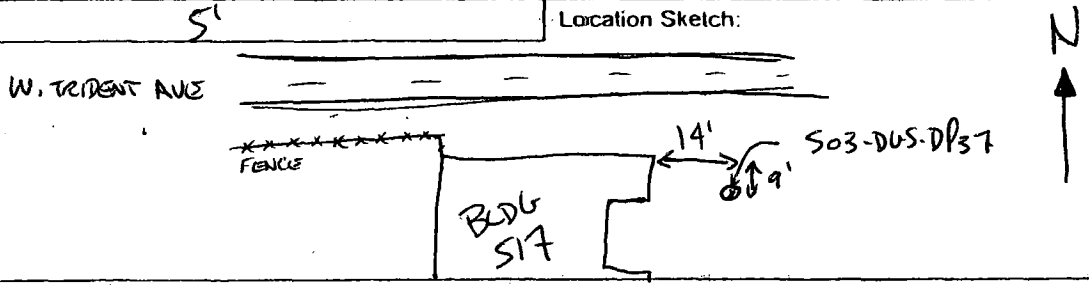
WFW

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

oring Number: S03-DUS-DP37	Date Started: 11/6/01
rilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 11/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M. CRUCKSHANK
uter Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
ner Diameter of Well Casing:	Driller: EUGENE
epth to Water (ft./bgs.) 5'	Location Sketch:



ime	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE			
	2					GRAVELY SAND; D. BROWN (7.5YR3/2); MOIST; LOOSE; POORLY SORTED; NON GRADED; GRAVEL ANGULAR - 25% - TO 3cm; CLAY - 5%, SAND - 70% - FINE - M. GRAINED.	SP		
	4				N/A	SILTY SAND; YELLOWISH BROWN (10YR5/4), MOIST; V. LOOSE; MOD. SORTED; NON GRADED; SILT - 15%, SAND - 85%, TR. GRAVEL; CLAY (2" @ 1.8')	SM	N/A	
0935	6			385-S03 121		COLOR CHANGE @ 2.5' - GREENISH GREY (5G 6/1) WET @ 5.0'	SC		
0945	8		HYDROPUNCH GW SAMPLE	385-S03-122		SILTY CLAY SAND; V. DK. BROWN (10YR2/2), WET; POORLY SORTED; LOOSE; FILL MATERIAL; SILT - 15%, CLAY - 20%, SAND (M.G.) - 60%, GRAVEL - 5% ANGULAR, TR. GLASS; WOOD FRAGMENTS.			

TOTAL DEPTH = 8.5'
BORING BACKFILLED W/ CONCRETE GROUT.

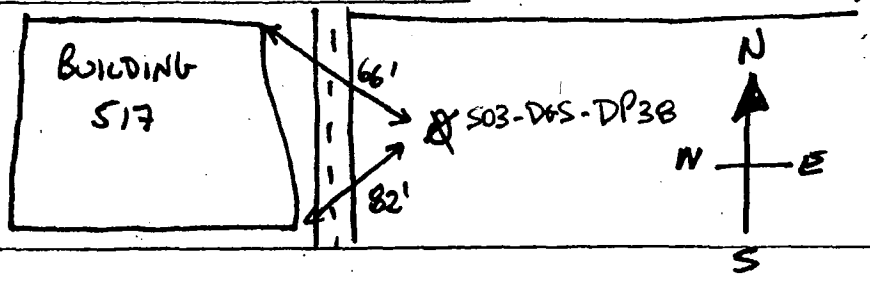
HYDROPUNCH GW SAMPLE FROM 6.5 - 8.5' BGS
DO 5.22 mg/L TMP 19.9°C ORP -100mV CND 6.02 mS/cm TRB 448NTU pH 7.23

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Boring Number: S03-DGS-DP38	Date Started: 2/8/02
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 2/8/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M. CRUICKSHANK
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 3/4"	Driller: JREAL
Depth to Water (ft./bgs.) 6.0'	Location Sketch: W. TRIDENT AVE



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						~1' ASPHALT & BASE ROCK ~1' CONCRETE		PVC	
	2					GRAVELY SILTY CLAY; YELLOWISH BROWN (10YR 5/6); SLT. MOIST; M. STIFF; POORLY SORTED; 20% ANGULAR GRAVEL TO 1cm	CL	BLANK	
	4					@ 4' - WET SAND, FINE - MED. GRAINED - 2" CLAY; DK. GREENISH GREY (1GLEY 5G 3/1); SOFT; H. PLASTIC; WELL SORTED; "BAM MUD" HYDROCARBON STAINING FROM 5.5 - 6.0'	CH		
1215 1400	6			38S-S03-132 38S-S03-133		SAND; GREENISH BLACK (1GLEY 10G 2.5/1); WET; LOOSE; MOD. SORTED; FINE MED. GRAINED; SLIGHT HYDROCARBON ODOR @ 6.0', SLIGHT HYDROCARBON STAIN THRUOUT.	SW	SLOTTED PVC	
	8					TOTAL DEPTH = 8' BORING BACKFILLED W/ CEMENT GROUT.			
	10								

Sheet 1 of 1

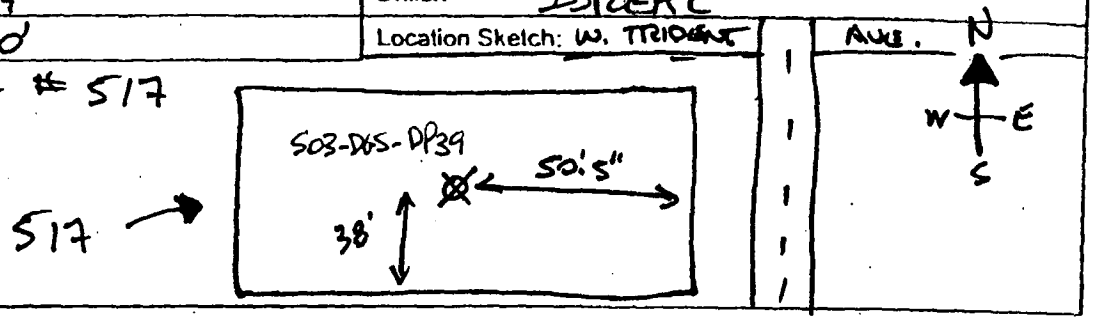
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Boring Number: S03-D6S-DP39	Date Started: 2/8/02
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 2/8/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M. CRUICKSHANK
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 3/4"	Driller: ISRAEL
Depth to Water (ft./bgs.) 6.0'	Location Sketch: W. TRIDENT

INSIDE BUILDING # 517



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE FLOOR			
	2					SANDY GRAVELY SILT; STRONG BROWN (7.5YR 5/6); DRY; V. STIFF; POORLY SORTED; NON GRADED; SECTIONS CLAYEY; 30% ANGULAR PUNTONIC GRAVEL TO 1CM; 20% SAND		BLANK PVC	
	4								
1020 1040	6			385-S03-134 385-S03-135		SAND; DK. YELLOWISH BROWN (10YR 4/6); WET; LOOSE; MOD. SORTED; NON GRADED; F. TO M. GRAINED.	SW	SLOTTED PVC	
	8					CLAY; DK. GREENISH GREY (10GY 5G 3/1); MOIST; SOFT; V. PLASTIC; WELL SORTED "BAY MUD."	CH		
						TOTAL DEPTH = 9', BORING BACKFILLED w/ CEMENT GROUT			

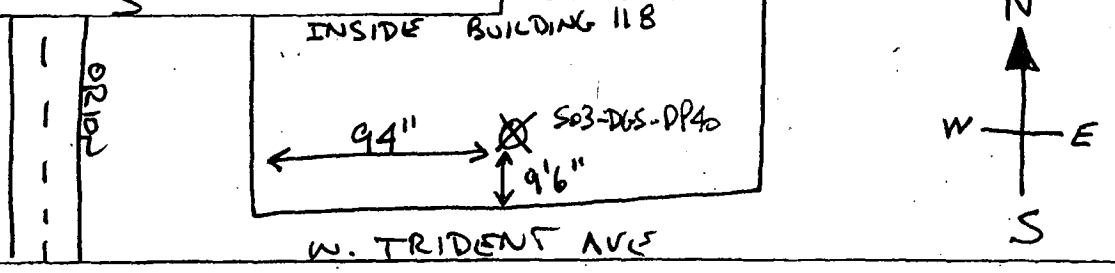
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Boring Number: S03-DGS-DP40	Date Started: 2/8/02
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 2/8/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M. CRUICK SHANK
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 3/4"	Driller: ISRAEL
Depth to Water (ft./bgs.) 5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility (type, dis.)	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE FLOOR			
						SAND; LT. OLIVE BROWN (2.5Y 5/4); MOIST; LOOSE; MOD. SORTED; NON GRADED; SAND FINE-MED. GRAINED	SW	BLANK PVC	
	3					CLAY; DK. BLUISH GREY (2 GLEY 10B/3/1); MOIST; SOFT; H. PLASTIC; HOMOGENOUS; WELL SORTED	CH		
						GRAVELY CLAYEY SAND; DK. YELLOWISH	GC		
1420 1445 1450	6			385-S03	-136 -137 913	BROWN (10YR 4/6); WET; SLT. DENSE; POORLY SORTED; SLT. PLASTIC; GRAVEL - SUB ANGULAR TO 2cm	CH	SLOTTED PVC	
	9					CLAY; DK. YELLOWISH BROWN (10YR 4/4) → DK. BLUISH GREY (2GLEY 10B 3/1); MOIST; SOFT; V. PLASTIC; HOMOGENOUS			
						GRAVELY CLAYEY SAND; DK. YELLOWISH	GC		
	12					BROWN (10YR 4/6); WET; M. DENSE; POORLY SORTED. SECTIONS BLACK.			
						TOTAL DEPTH = 11.0'; BORING BACK FILLED W/ CEMENT GROUT.			

N00236.000406
ALAMEDA POINT
SSIC NO. 5090.3

APPENDIX O
BORING LOGS AND DIRECT-PUSH GROUNDWATER PARAMETER SUMMARY TABLES
SO3-DGS-DP41

DATA SUMMARY REPORT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING FOR OPERABLE UNITS 1 AND 2

THE ABOVE IDENTIFIED PAGE IS NOT AVAILABLE.

EXTENSIVE RESEARCH WAS PERFORMED BY NAVFAC SOUTHWEST TO LOCATE THIS PAGE. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

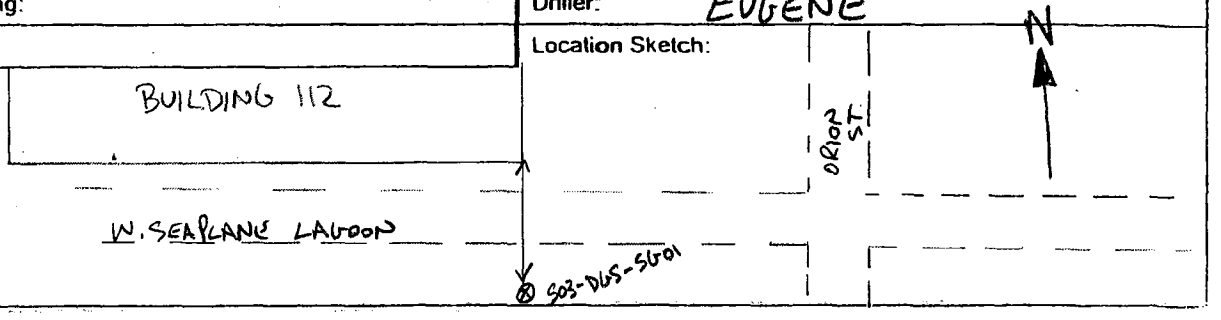
TELEPHONE: (619) 532-3676

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG01	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



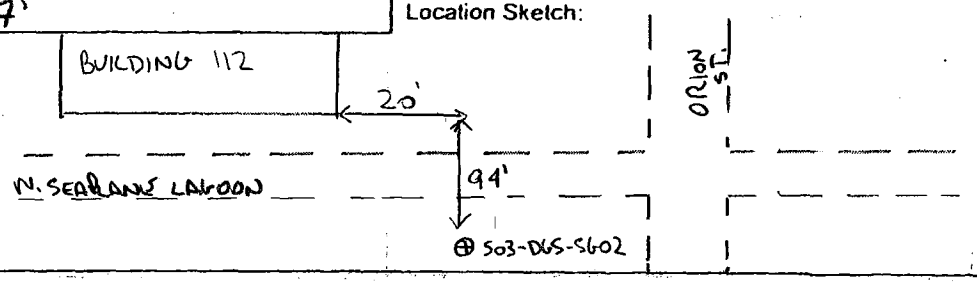
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1849	1			385-S03-049		SANDY SILT w/ GRAVEL; DK. GREENISH GREY (1GLEY 1 04 4/2.1); SLT. MOIST; LOOSE; POORLY SORTED; GRAVEL - 15%, SAND - 30% CLAY - 10%, SILT - 45%	CL		
	2					SILTY SAND; DK GREENISH GREY (5GY 3/1); MOIST; LOOSE; POORLY SORTED; SILT - 20%, SAND (FINE - M. GRAINED) 80%. CLAY LAYER @ 1.5'	SM		
	3					TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG02	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 7'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0906	2			385-S03 050	NA	GRAVELY SILTY SAND; DARK YELLOWISH BROWN (10 YR 4/6); DRY; M. DENSE; NON PLASTIC; POORLY SORTED; GRAVEL-30% (CHERT), 30% SILT, 40% SAND	SP	NA	
	4					SILTY SAND; OLIVE BROWN (2.5Y 4/3); MOIST; LOOSE; POORLY SORTED; SILT-20%, SAND-80%	SM		
	6					CLAY; DARK BLUISH GREY (2GLEY 10B 3/1); MOIST; SOFT; PLASTIC	CH		
	8					SILTY SAND; BLUISH BLACK (2GLEY 5B 2.5/1); MOIST; LOOSE; NON PLASTIC; WEAKLY SORTED; SILT-20%, SAND-80%	SM		
						CLAY; DARK GREENISH GREY (2GLEY 10G 3/1); MOIST; SOFT; PLASTIC WET @ 7.0'	CH		

TOTAL DEPTH = 8'
BORING BACKFILLED W/ CEMENT GROUT

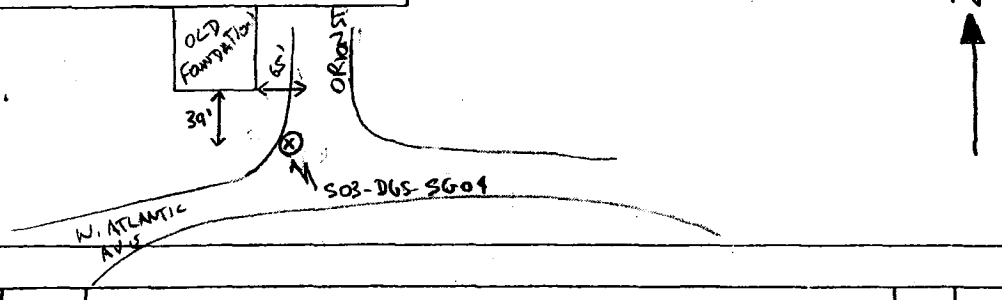
Sheet 1 of 1

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S03-DGS-SG04	Date Started: 7/5/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 7'	Location Sketch:



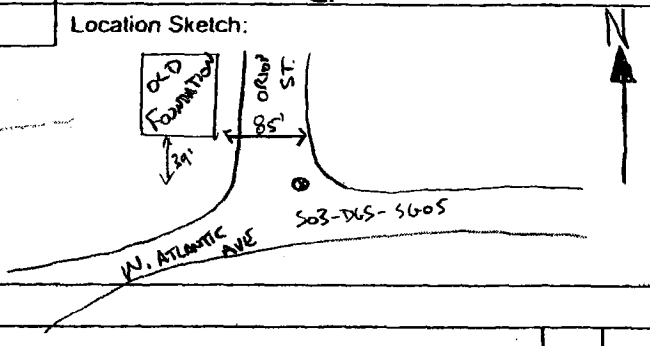
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0959	2			385-S04 0S4		SANDY CLAY W/ GRAVEL BROWN (7.5YR 4/4); DRY; M. DENSE; POORLY SORTED; CLAY - 40%, SAND - 30%, SILT - 10%, GRAVEL - 20%.	CL		
	4				NA	SILTY SAND W/ CLAY; OLIVE (5Y 4/2); MOIST; LOOSE; POORLY SORTED; SAND (FINE TO M. GRAINED) - 55%, GRAVEL - 15%, SILT - 20%, CLAY - 10%. STRONG ODOR. DECREASED GRAVEL, CLAY W/ DEPTH. COLOR CHANGE @ 5.0' - DK GREENISH GREY (10GY 4/1). 2" LAYER OF CLAY @ 6.0'	SM	NA	
	6								
	8					CLAY; V. DK. GREY (1GLEY N 3/1); MOIST; SOFT; PLASTIC; WET @ 7.0'	CH		
	10					TOTAL DEPTH = 9'. BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG05	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



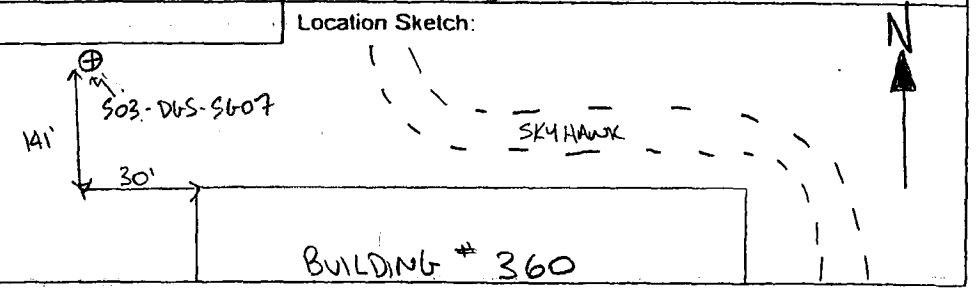
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						SANDY GRAVEL w/SILT; DK. YELLOWISH BROWN (10YR 4/4); DRY; LOOSE; 50% GRAVEL, 30% SAND, 10% SILT/CLAY GRAVEL - CHERT.	GC		
0943	1			385-S03-055	N/A	SILTY SAND; OLIVE BROWN (2.5Y 4/3); MOIST; LOOSE; MOD. SORTED; SILT - 20%, SAND 80% STRONG ODOR	SM	N/A	
	2								
	3					* NOTE - DEPTHS MEASURED FROM SOIL SURFACE, N 6" BELOW ASPHALT. TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT.			

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S03-DGS-S607	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2			385-S03 059		SILTY CLAYEY SAND; DARK OLIVE BROWN (2.5Y 3/3); MOIST; LOOSE; MOD. SORTED; SAND (F.G.) - 75%, CLAY - 15%, SILT - 15% COLOR CHANGE @ 1.0 - LT. OLIVE BROWN (2.5Y 5/4); DECREASED CLAY.	SM		
	4				NA	CLAYEY SAND w/ SILT; V. DARK GREYISH BROWN (2.5Y 3/2); MOIST; SLT. PLASTIC; POORLY SORTED; SILT - 10%, CLAY - 20%, SAND 70%, TRACE TILE	SC SM	NA	
	6					SILTY SAND; BLACK (10YR N 2.5/1); MOIST; LOOSE; NON PLASTIC; SILT - 30%, SAND - 70%; GRAVEL - TRACE COLOR CHANGE - @ 6'; DK. OLIVE GREY (5Y 3/2); WET, 20% SILT COLOR CHANGE @ 7' DK GREENISH GREY (10Y 4/1)			
	8								
	10					SOIL SURFACE TOTAL DEPTH = 9'			

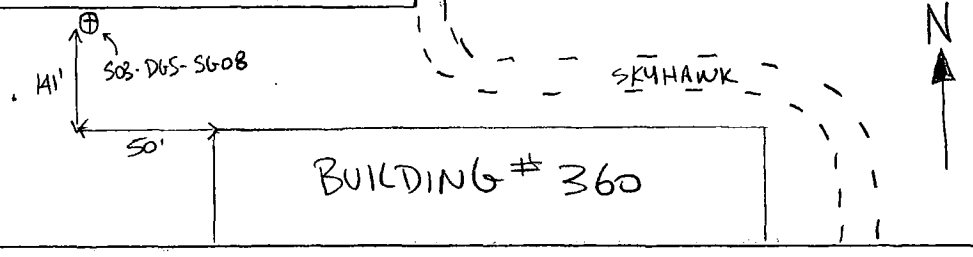
BORING BACKFILLED W/ CEMENT GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG08	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring:	Drilling Subcontractor:
Inner Diameter of Well Casing:	Driller:
Depth to Water (ft./bgs.)	Location Sketch:



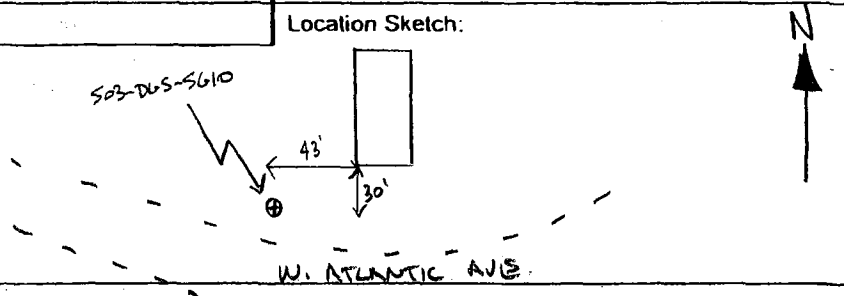
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1058	1			385-S03-060	NA	SILTY SAND W/ CLAY; OLIVE (5Y 4/3); MOIST; LOOSE; WEAKLY SORTED; SAND-70%, SILT-20%, CLAY-10%.	SM	NA	
	2								
	3								
						TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT.			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG10	Date Started: 7/3/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/3/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 7'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1516	2, 4, 6, 8, 10			385-S03 063	NA	ASPHALT SILTY SANDY CLAY; DK. GREENISH BROWN (2.5Y 4/2); DRY; M. DENSE; SLIGHTLY PLASTIC; SAND - 25%, CLAY - 40%, SILT - 28% COLOR CHANGE - 0.5-3.0 DARK BLUISH GREY (2GLEY 5GB 3/1), MOIST, DENSE, PLASTIC, TRACE WOOD FRAGS. COLOR CHANGE - 3.0-7.0 - BLACK (1-GLEY N 2.5/), V. MOIST; MOTTLED SILTY CLAYEY SAND; DARK GREENISH GREY (1-GLEY 10Y 3/1); WET; LOOSE, PLASTIC, WEAKLY SORTED SAND - 50%, SILT - 30%, CLAY - 20% TOTAL DEPTH = 9'	CL SM	NA	

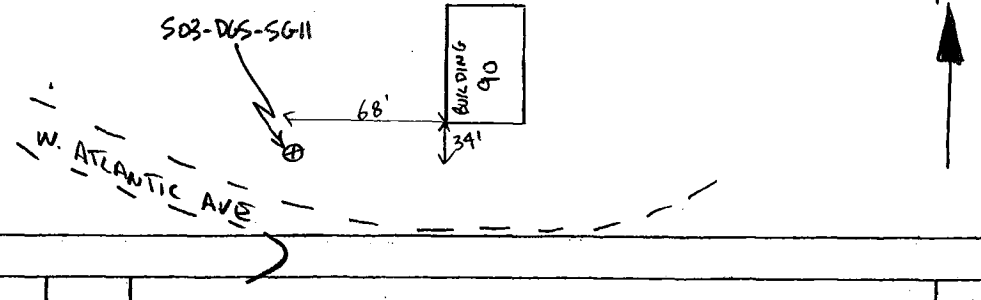
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG11	Date Started: 7/3/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/3/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



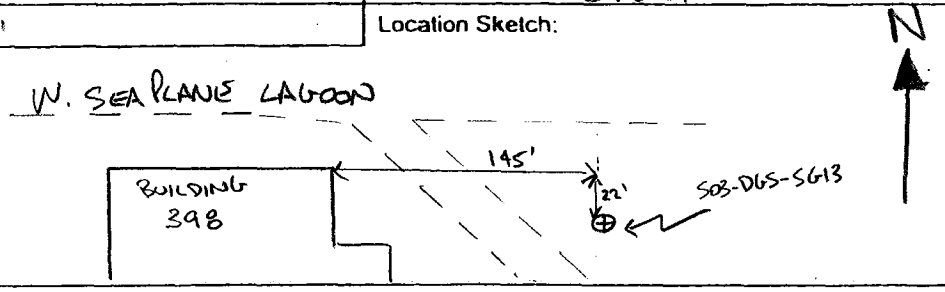
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1500	1			385-S03-065	N/A	GRAVELY CLAY W/ SAND; DBROWN (10YR 4/4); MOIST; M. STIFF; SLT. PLASTIC, ANGULAR GRAVEL- 30%, SAND(F-G)-20%, CLAY-45%, WOOD FRAGS- 3%	CL	N/A	
	2					SILTY SAND; DARK YELLOWISH BROWN (10YR 4/4); V. MOIST; LOOSE; MOD. SORTED; SAND-80% SILT-20%, TR. SHELL FRAGMENTS	SM		
	3					TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-SG13	Date Started: 9/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN / KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
0840	2			S85-S03 102		GRAVEL SAND W/ CLAY; DARK YELLOWISH BROWN (10YR 4/4); DRY; LOOSE; POORLY SORTED; GRAVEL-25% (0.5-1cm), SAND-60%, CLAY-15%. COLOR CHANGE 2-4'- OLIVE BROWN (3.5Y 4/4); SLT. MOIST; CLAY POCKETS.	SP		
	4				N/A	SILTY SAND; OLIVE GREY (5GY 4/1); MOIST; LOOSE; WELL SORTED; SILT-30%, SAND-70%; STRONG PETROL. ODOR; FINE GRAINED. COLOR CHANGE @ 6.5- DARK GREY (5Y 4/1). WET	SM	N/A	
	6								
	8					CLAY; V. DK. GREY (5Y 3/1); MOIST; SOFT; HIGHLY PLASTIC; 100% CLAY; GRADATIONAL UPPER CONTACT	CH		
	10								

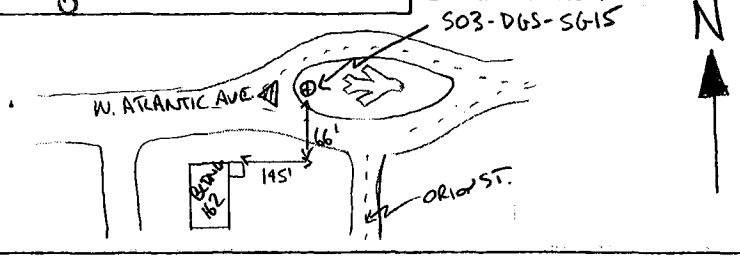
TOTAL DEPTH = 10'
BORING BACKFILLED W/ CEMENT GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03- DGS- SG15	Date Started: 9/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 8'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1000	2			385-S03-105	NA	SILTY SAND; (LOAM, TOPSOIL); DK. GRAYISH BROWN (10Y 4/2); DRY, LOOSE; SAND (FINE GRAINED) - 55%, SILT - 35%, GRAVEL 5% - 2MM-2CM SUBANGULAR; ORGANICS - 5%.	SM	NA	
							SC		
	4					CLAYEY SAND W/ GRAVEL; OLIVE BROWN (2.5Y 4/4); SLT. MOIST. MED. DENSE; SAND (F.-M. GRAIND) - 55%, CLAY - 25%, GRAVEL - 20%, SILT - TRACE	SM		
	6					SILTY SAND; OLIVE (5Y 4/4); SLT. MOIST; LOOSE; WELL GRADED; SILT - 20%, SAND - 80%; FINE TO MED. GRAINED	SP		
	8					SAND; DARK GREY (GLEY N 4/1); MOIST; M. DENSE; NON PLASTIC; POORLY SORTED; STRONG ODOR			
	10					CLAY W/ SILT; DARK GREY (GLEY N 4/1); WET; SOFT MOD. PLASTIC; CLAY - 85%, SILT - 15%, STRONG PETROL. ODOR	CL		

TOTAL DEPTH = 9'
BORING BACKFILLED W/ CEMENT GROUT.

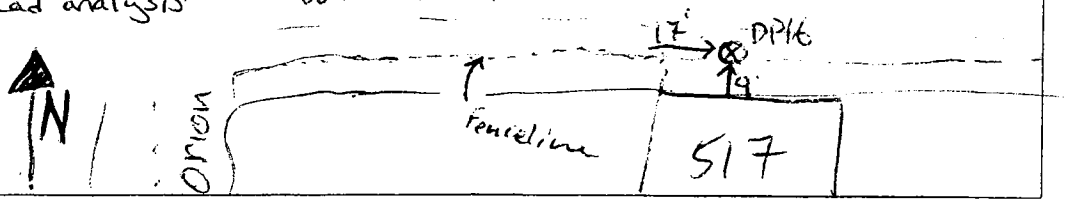
CTO- 385
Bldg./Site: site 3
Project Name: Alameda DGS

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: ~~516~~ 503-DGS-DP16 *	Date Started: 5-10-02 920
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 5-10-02 950
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: CLG
Inner Diameter of Boring: 1 1/4"	Drilling Subcontractor: Vironex
Inner Diameter of Well Casing: NA	Driller: Kasey Wood
Depth to Water (ft./bgs.)	Location Sketch:

*Note: co-locating previously drilled DP16 to collect groundwater for lead analysis



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
2					Hydropunch gw only, no soil collected or logged HP screen exposed at 6-8' bgs Sample 385-503-143 at: 935 Parameters: Temp: 19.89 Cond: 3160 DO: 0.06 ORP: -154.6 Sp. Cond: 3521 DO% : 0.7 pH: 8.32 ~~Temp~~: Turb: 2245.9			
4								
6			385-503-143					
935								
8								
10					Borehole back filled w/ bentonite cement grout 5-10-02 at 950			

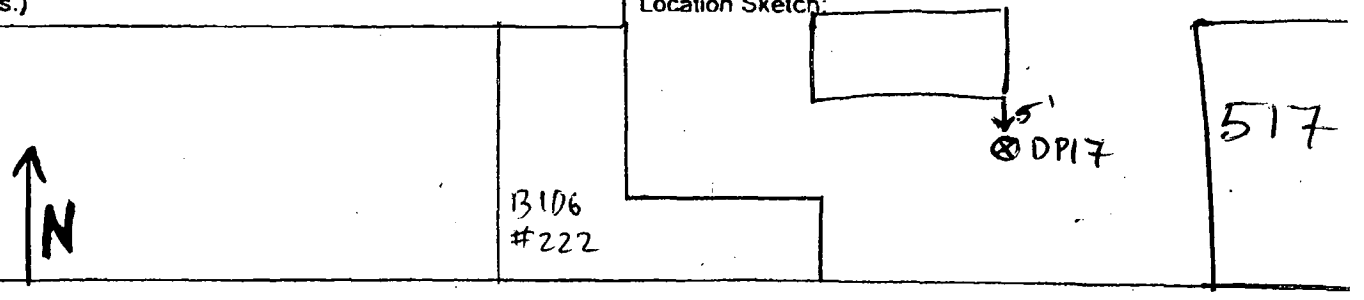
Sheet ____ of ____

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Boring Number: S03-D6S-DP17	Date Started: 4/23/02
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/23/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring:	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Marcos
Depth to Water (ft./bgs.)	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Hydropunch GW Sample Description	USCS soil symbol	Well construction	OVM (ppm)
					385-S03-139			
					PH: 7.10			
2					CND: 9304 ms/cm			
					TRB: 1861 NTU			
					DO: 2.3 mg/kg			
					ORP: -68.0 mV			
4					Temp: 21.57°C			
					GW: DK. brown; sl. odor; no sheen			
6			385-S03-139					
8					Total Depth: 8' bgs (6'-8')			
					*Boring backfilled w/cement grout			
10								

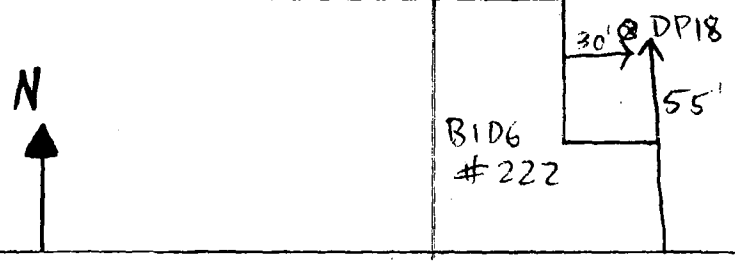
Sheet _____ of _____

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

oring Number: S03-D65-DP18	Date Started: 4/23/02
illing Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/23/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
uter Diameter of Boring:	Drilling Subcontractor: Precision
ner Diameter of Well Casing:	Driller: Marcos
epth to Water (ft./bgs.)	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Hydropunch GW Sample Description	USCS soil symbol	Well construction	OVM (ppm)
					385-S03-140			
2					PH: 7.75 CND: 11,227 ms/cm TRB: 206.9 NTU DO: 6.47 mg/kg ORP: 26.7 mV Temp: 22.92°C			
4					GW: Lt. yellowish grey; sl. cloudy; sl. turbid; no odor; no sheen			
6			385-S03-140					
8					Total Depth: 8' (6'-8') *Boring backfilled w/ Cement Grout			
10								

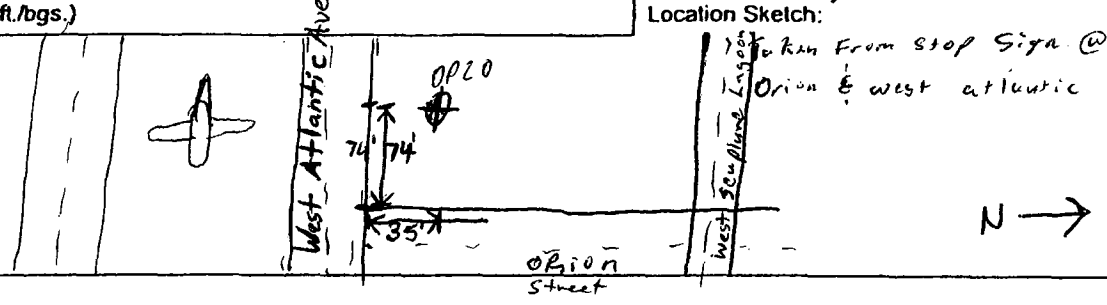
440

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 3
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03- 085- DP20	Date Started: 8/17
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/17
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1.5"	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



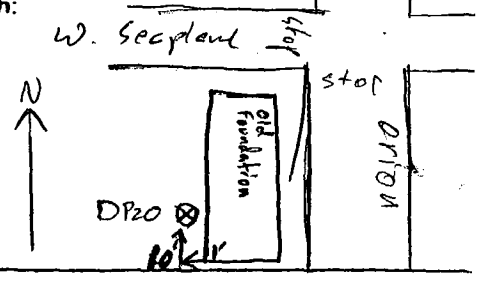
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						10-12' BGS			
						Ph 7.82			
	4					CND 0.972 MS/cm — Odor: ~~Hous~~ Slt Diesel odor.			
						Turb >999 NTU — Color: DK Grey Brown			
						DO 1.73 mg/L — Sheen: None			
						Temp 24.3°C			
	8					ORP -50.7 mV			
				385	10'				
1320				S03 085					
	12				12'				
						TOTAL DEPTH = 12'			
						BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S03-D6S-DP20	Date Started: 8/9/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



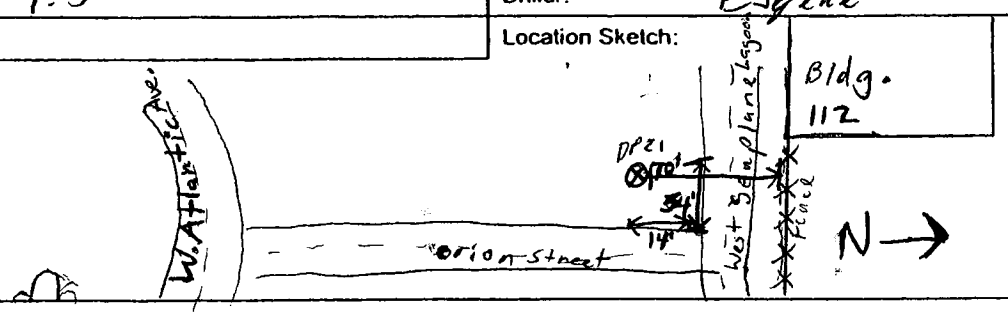
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Hydropunch GW Sample Description	USCS soil symbol	Well construction
1015	4			1015 385-S03-087		Hydropunch GW Sample 385-S03-087 PH: 6.96 DO: 13.69 mg/L Cond: 435 mslcm ORP: -72.6 mV Turb: 196.5 NTU GW: oily sheen; strong petrol. odor; DK gray; fairly clear; sl. cloudy Temp: 23.1°C		
	8					~~Hydropunch GW Sample 385-S03-088~~		
	12					TOTAL DEPTH = 7' BORING BACKFILLED W/ CEMENT GROUT		

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 3
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP21	Date Started: 8/17/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/17/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1.5"	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



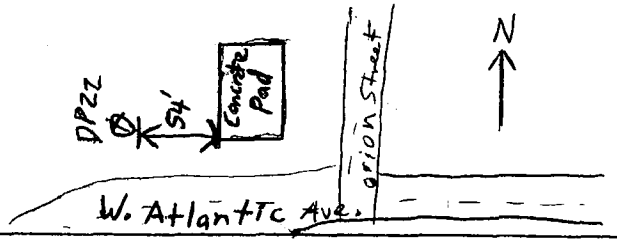
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2					5-7' Not enough Recharge for Parameters Strong odor, grey green color, No sheen			
	4					10-12' CND 34.1 mS/cm Turb 7999 NTU DO -3 Temp 25.0°C pH 7.13 ORP -36.6 mV			
1350	6			385 S03 090	5'				
	8				9'	TOTAL DEPTH = 12' BORING BACKFILLED W/ CEMENT GROUT			
	10								
1420	12			385 S03 091	12'				

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 3
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-D6S-DP22	Date Started: 8/17
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/17
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1.5"	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



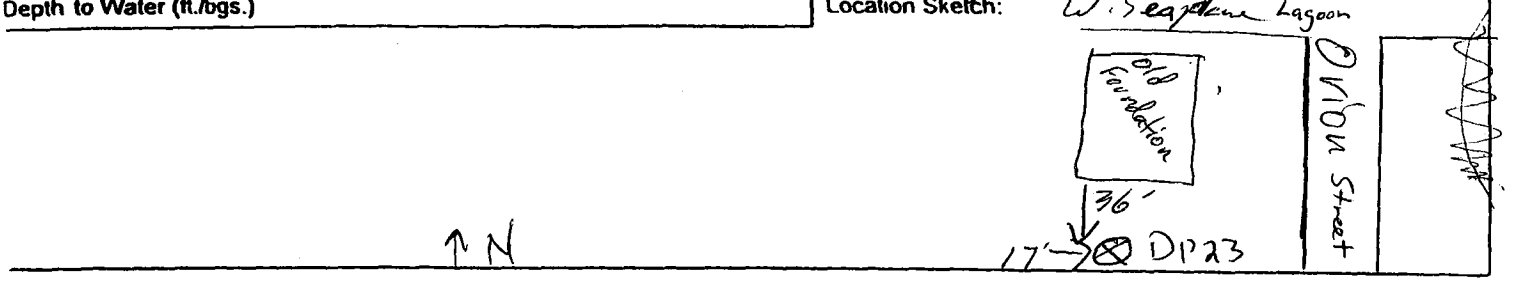
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2, 4					5-7' DO = -2.12 mg/L; Temp 29.9°C; pH 8.15; CND 1.99 mS/cm; Turb > 999 NTU; ORP -113.1 mV; ODOR - Strong petrolium; sheen: slight white sheen; color: Dk putrid grey; very Turbid			
					5'				
1450	6, 8, 10			385 S03 092	7'	10-12' Temp 22.6°C; pH 7.12; CND 5.26 mS/cm; Turb > 999 NTU; DO -0.85 mg/L; ORP -6.0 mV; ODOR: slight Petrolium; sheen: None; color: Grey Brown			
1520	12			385 S03 092	10' 12'	TOTAL DEPTH = 12' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-D6S-DP23	Date Started: 8/20/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch: W. Seaplane Lagoon



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sample 385-S03-094			
	4					Weeping H_2O - No Parameters			
0830				0830 385-S03-094		GW: Strong odor; cloudy Grey; no sheen; turbid (5'-7')			
	8								
						Hydropunch GW Sample 385-S03-095			
900				0900 385-S03-095		PH: 8.04 ~~Weeping~~: Weeping			
	12					CND:			
						TRB: GW: Strong odor; cloudy yellow; no sheen			
						Temp:			
						ORP: -27.2mV			
						DO:			
						(10'-12')			

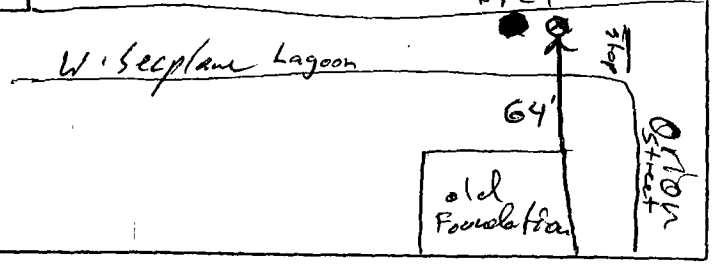
TOTAL DEPTH = 12'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 503-D65-DP24	Date Started: 8/23/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/23/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Terzene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sampler			
						385-503-096 (5'-7')			
						PH: DO:			
						CND: GW: Boring Weeping: no parameters taken			
1900	4			385-503-096		TRB:			
						Temp:			
						ORP:			
	8					385-503-097 (12'-14')			
						PH: 7.00			
						CND: 34.8mS/cm			
1945	12			0945 385-503-097		TRB: 690 NTU			
						Temp: 22.4°C			
						ORP: 104 mV			
						DO: 1.80 mg/L			
	16			~~385-503-096~~		GW: grey green, sulfuric odor, no sheen			
						Boring: Backfilled w/ ~~Bentonite~~ CEMENT grout.			

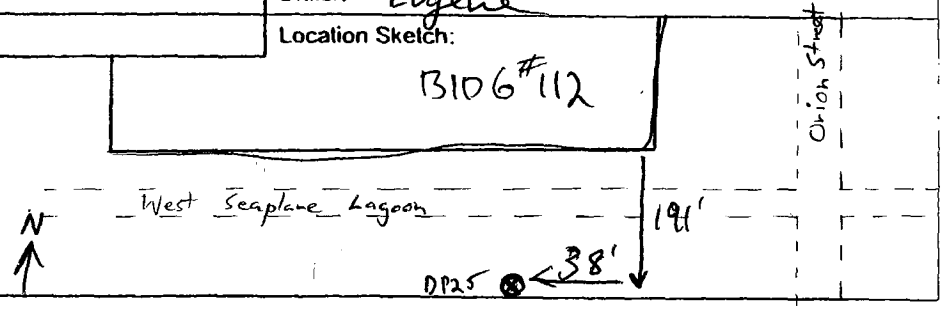
TOTAL DEPTH = 14'

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DG3-DP25	Date Started: 8/23/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/23/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Nick St. Martin
Outer Diameter of Boring:	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sampler			
1045	4			385-S03-098		Hydropunch 385-S03-098 (5'-7') ~~5-7'~~ Not enough H_2O for Parameters			
	8								
1145	12			385-S05-099		385-S03-099 (12'-14') PH 7.74 CND ~~16.75~~ 7.75 mS/cm TURB 7999NTU DO 10.00 mg/L Temp 29.1°C ORP 81 mV Grey green, sulfuric odor No sheen			
	16								

Boring is filled with ~~Bentonite~~ CEMENT grout.

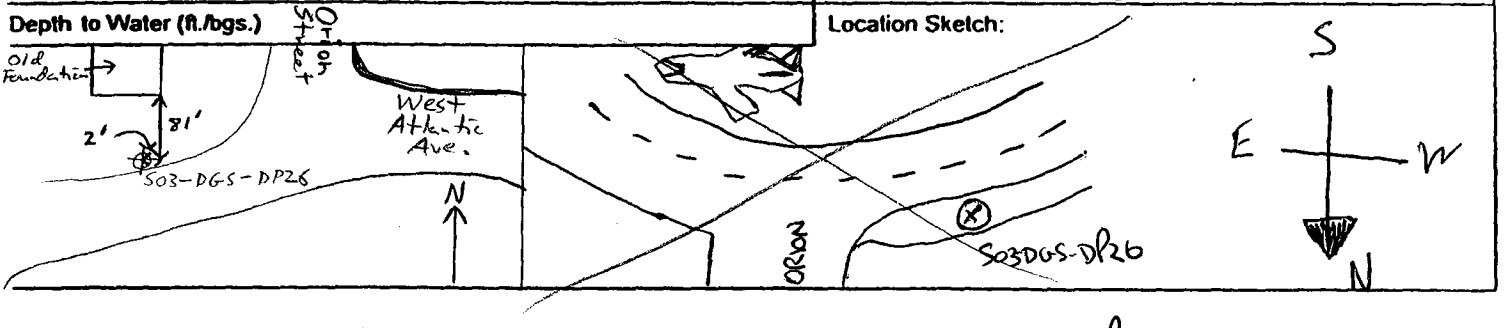
TOTAL DEPTH = 14'

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S03-DGS-DP26	Date Started: 8/28/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/28/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



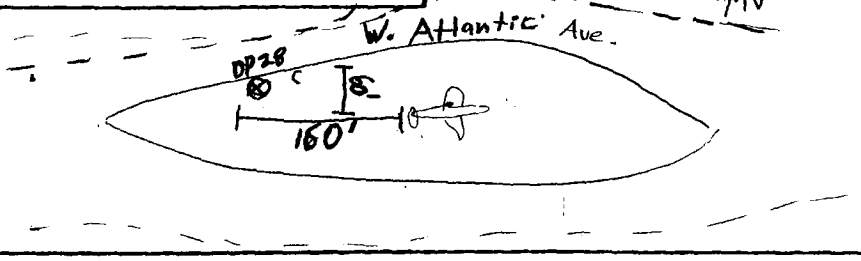
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, etc.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4					HYDROPUNCH GROUNDWATER SAMPLE,			
						HYDROPUNCH GW 385-S03-100, FROM 8.0-10.0' DO 3.66mg/L TRB 999NTU PH 7.00 TMP 23.5°C ORP -113mV CND 33.3mSem			
	8					HYDROPUNCH GW 385-S03-101 FROM			
1240				385-S03-100		DO 4.87mg/L TRB 999NTU. PH 5.97 TMP 22.0°C ORP -25mV CND 47.8mSem			
	12								
1345	16			385-S03-101		BORING COMPLETED @ 16.0' BGS, BACKFILLED W/ CEMENT GROUT.			

CTO-385
Bldg./Site:
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

ng Number: S03-DGS-DP28	Date Started: 9/10/01
ng Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/10/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LG
r Diameter of Boring: 2"	Drilling Subcontractor: Precision
r Diameter of Well Casing:	Driller: Eugene
h to Water (ft./bgs.)	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, etc.	Description	USCS soil symbol	Well construction	OVM (ppm)
2					Temp 23.78°C CND 1158.0 uS/cm DO 7.46 mg/L ORP -31.9 mV PH 6.80 TURB 134.9 NTU			
4								
6			385 S03 109		GW: Greyish-yellow; turbid hydrocarbon odor; no sheen			
HR								
8					TOTAL DEPTH = 7' BORING BACKFILLED W/ CEMENT GROUT			
10								

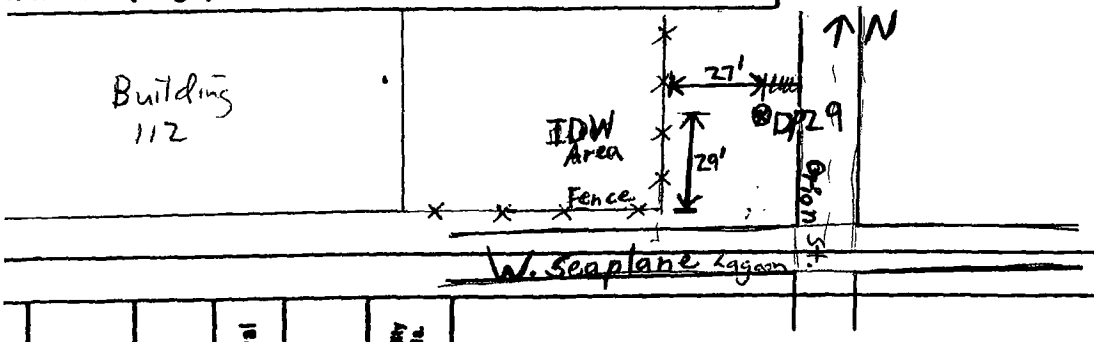
5'-7'
385-S03-109

CTO-385
Bldg./Site: Site 3
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

ETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

g Number: S03-DGS-DP29	Date Started: 9/10/01
g Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/10/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kristin Lehman
r Diameter of Boring:	Drilling Subcontractor:
Diameter of Well Casing:	Driller:
h to Water (ft./bgs.)	Location Sketch:



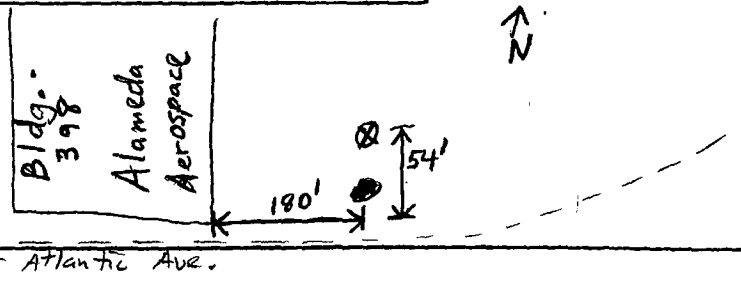
Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.E. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
2					Temp 25.66 °C			
					CND 1932.0 us/cm			
					DO 9.80 mg/L			
					ORP 113.0 mV			
4					PH 7.59			
					TURB 459.2 NTU			
1510 10			385 S03 110		Water Very Turbid ~~gre~~ medium ~~grey~~ grey color, No sheen, No odor			
8					TOTAL DEPTH = 7'			
					BORING BACKFILLED W/ CEMENT GROUT			
10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 3
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

...g Number: SO3-DGS-DP30	Date Started: 9/10/01
...g Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/10/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Gerin
...r Diameter of Boring: 2"	Drilling Subcontractor:
... Diameter of Well Casing:	Driller:
...h to Water (ft./bgs.)	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					Temp 24.77 °C 5-7'			
					CND 1113.0 uS/cm 385-SO3-111			
2					DO 4.83 mg/L			
					ORP -152.7 mV			
					~~DO~~ PH 6.87			
4					Turb 468.4 NTU			
				5'	No odor			
			385 SO3 111		SIR Turbid			
410 6					H grey Brown, No sheen			
				7'	TOTAL DEPTH = 7'			
8					BORING BACKFILLED w/ CEMENT GROUT			
10								

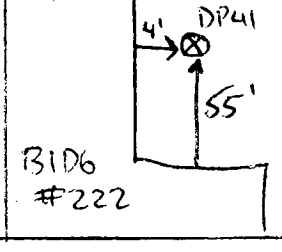
Sheet _____ of ____

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

oring Number: SO3-D6S-DP41	Date Started: 4/23/02
rilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/23/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
uter Diameter of Boring:	Drilling Subcontractor: Precision
nner Diameter of Well Casing:	Driller: Marcos
epth to Water (ft./bgs.) n/a	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Hydropunch GW Sample Description	USCS soil symbol	Well construction	OVM (ppm)
					385-SO3-141			
					PH: 7.77			
2					CND: 751 mS/cm			
					TER: 3174.8 NTU			
					DO: 2.35 mg/kg			
4					ORP: -43.9 mV			
					Temp: 21.25°C			
					GW: Very PK Grey; Highly Turbid; no odor; no sheen			
6			385-SO3-141					
					Total Depth: 8' (6'-8')			
8					* Boring backfilled w/cement Grout			
10								

Boring Logs for DGS Site 04

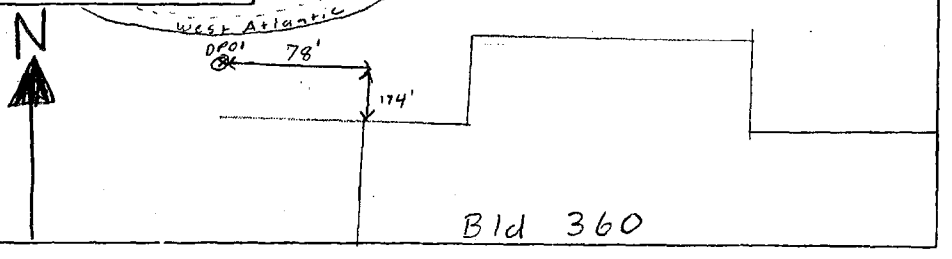
Direct Push Boring	Direct Push Soil Gas Boring	Vacuum Excavation Boring	Hydro Punch Borings
S04-DGS-DP01	S04-DGS-SG01	S04-DGS-VE01	S04-DGS-DP01
S04-DGS-DP02	S04-DGS-SG02	S04-DGS-VE02	S04-DGS-DP05
S04-DGS-DP03	S04-DGS-SG04	S04-DGS-VE03	S04-DGS-DP06
S04-DGS-DP04	S04-DGS-SG05	S04-DGS-VE04	S04-DGS-DP09
S04-DGS-DP05	S04-DGS-SG07	S04-DGS-VE05	S04-DGS-DP10
S04-DGS-DP06	S04-DGS-SG08	S04-DGS-VE06	S04-DGS-DP11
S04-DGS-DP07	S04-DGS-SG10		S04-DGS-DP12
S04-DGS-DP08	S04-DGS-SG11		S04-DGS-DP13
S04-DGS-DP14	S04-DGS-SG13		S04-DGS-DP24
S04-DGS-DP15	S04-DGS-SG14		S04-DGS-DP25
S04-DGS-DP16	S04-DGS-SG16		S04-DGS-DP26
S04-DGS-DP17	S04-DGS-SG17		S04-DGS-DP27
S04-DGS-DP18	S04-DGS-SG19		S04-DGS-DP28
S04-DGS-DP19			S04-DGS-DP29
S04-DGS-DP20			S04-DGS-DP30
S04-DGS-DP21			S04-DGS-DP31
S04-DGS-DP22			S04-DGS-DP32
S04-DGS-DP23			S04-DGS-DP33
			S04-DGS-DP34
			S04-DGS-DP35
			S04-DGS-DP36
			S04-DGS-DP37
			S04-DGS-DP38
			S04-DGS-DP39
			S04-DGS-DP40
			S04-DGS-DP41
			S04-DGS-DP42
			S04-DGS-DP43
			S04-DGS-DP44
			S04-DGS-DP45
			S04-DGS-DP46
			S04-DGS-DP47
			S04-DGS-DP48
			S04-DGS-DP49
			S04-DGS-DP50
			S04-DGS-DP51

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP01	Date Started: 7/20/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Mark Cruickshank / K. Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision Drilling
Inner Diameter of Well Casing:	Driller: Eugene / Val
Depth to Water (ft./bgs.) 7' BGS	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
2					GRAVELY SAND w/ SILT; Light Yellowish Brown (10YR 6/4) Dry, loose, poorly sorted, trace organics, angular gravel gravel is 2cm average diameter, Silt-10%, Gravel-15%, Sand-75% (Fine grained)	SP		
4					SANDY CLAY w/ GRAVEL; Dark yellowish Brown (10Y 4/4) Dry-wet, medium stiff, plastic, poorly sorted, gravel-15% (chert, angular), sand-40% (medium grained); Clay-45%	CL	NA	
6			* No NAPL DETECTED * Ribbon NAPL Sample	NA				
8					Clay; Bluish Black (2 GLEY 10B 2.5/1) wet, plastic, well sorted, 100% clay	CH		
10					Sand; wet, loose, moderately sorted, trace organics and shell fragments, Sand-5% (fine grained), sand-95% (medium grained)	SW		

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

S04-DGS-DP01

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL INVESTIGATION DATA GAP SAMPLING

Time	Depth (ft) bgs	Drive interval	Recovered interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	12				NA	CLAYEY SAND; Dark Yellowish Brown (10YR 4/6) Iron Mottling; wet, slightly plastic, loose, Sand-85% (medium grained), Clay-15%, medium dense with Depth,	SC	NA	
	14								
	16								
	18					COLOR CHANGE @ 17.0' Clayey Sand; Brown (7.5YR 4/4) wet, slightly plastic, Dense, well graded Sand-85%, clay 15%	SC		
	20								
	22								
	24					Sand; Yellowish Brown (10YR 5/6) wet, loose, nonplastic, moderatly sorted, Sand-5% (fine grained) Sand-95% (medium grained)	SW		
	26								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

S04-DGS-PP01

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL INVESTIGATION DATA GAP SAMPLING

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	28				NA	Clayey Sand; Dark Yellowish Brown (10YR 4/6) wet, medium dense, slightly plastic, Sand - 80% (medium grained, Clay - 20%	SC	NA	
	30								
	32								

TD= 31' BGS
Boring Back Filled with CEMENT grout

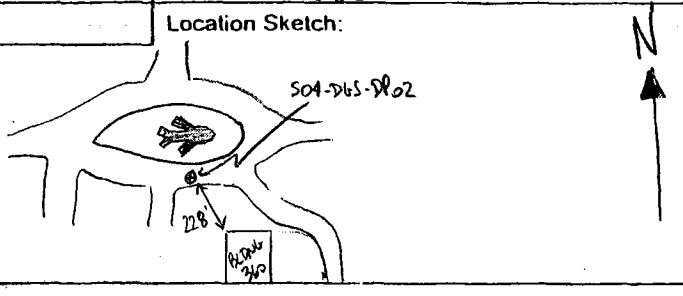
Sheet 1 of 2

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-DGS-DP02	Date Started: 8/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) NA	Location Sketch:



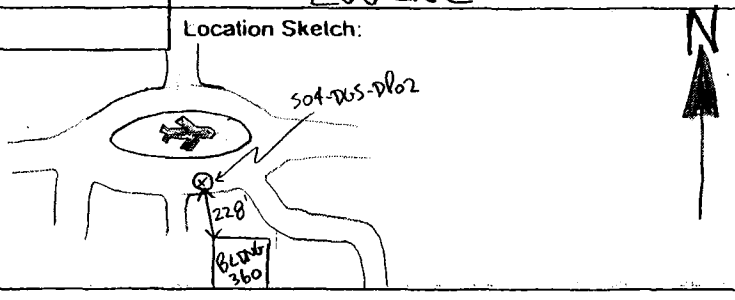
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4, 8, 12, 16, 20	X		RIBBON NAPL SAMPLE *NO NAPL DETECTED*	NA	BORING ADVANCED W/ SACRAFICAL TIP, ∴ NO CORE WAS RECOVERED TOTAL DEPTH = 20' BORING BACKFILLED W/ CEMENT GROUT		NA	

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP02	Date Started: 7/2/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 6"	Location Sketch:



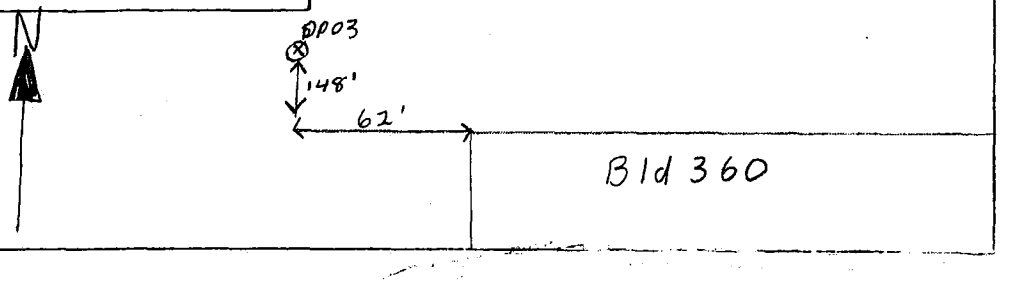
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						SANDY GRAVEL W/ SILT; STRONG BROWN (7.5YR 5/6); DRY; M. DENSE; POORLY SORTED; GRAVEL - 50%; SAND - 30%, SILT - 20%, GRAVEL SUBROUNDED.	GM		
	6					SILTY SAND; YELLOWISH BROWN (10YR 5/4); WET; LOOSE; POORLY SORTED, SILT - 25%, SAND - 75%	SM		
	12				NA	CLAYEY SAND W/ SILT; LIGHT OLIVE BROWN (2.5Y 5/6); WET; M. DENSE; SILT - 10%, CLAY - 20%, SAND (FINE TO M. GRAINED) - 70%, TRACE WOOD FRAGMENTS; MOTTLED TEXTURE; VARIABLE MOISTURE - DENSITY	SC	NA	
	18					SILTY SAND; DARK YELLOWISH BROWN (10YR 4/6); WET; LOOSE; POORLY SORTED, GRADATIONAL UPPER CONTACT; SILT - 20%, SAND - 80% @ 23.0' - 20% CLAY FOR 2"	SM		
	24					BORING REFUSED @ 24' BGS TOTAL DEPTH = 24' BORING BACKFILLED W/ CEMENT GROUT			
	32								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP03	Date Started: 6/25/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/25/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Mark Cruickshank
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4			* NO NAPL RETRIEVED *		SANDY GRAVEL w/ SILT ; Greenish Black (1GLEY 10Y2.5 Dry-Moist, loose, Nonplastic, sand- 20%, Silt-10%, Gravel-60%, Fill material	GM		
	8			RIBBON NAPL SAMPLES		Clayey Sand; Dark greyish green (1GLEY 10GY 4/1) wet, Nonplastic, Poorly sorted, Trace shell fragments Clay-15%, Sand-70%, Gravel-10%	SC		
						Clay; BLACK (1GLEY N2.5); wet, stiff, plastic	ML		
						Silty Sand; Yellowish Brown (10YR 4/4); wet, LOOSE moderatly sorted	SM		
	12					COLOR CHANGE @8.0'-Dark Greenish Gray (GLEY 1 10Y 3/1) wet, loose, Non-plastic, poorly sorted			
						Sandy clay; Olive yellow (2.5Y 6/8) wet, stiff, plastic, mottled Texture	SC		
						COLOR CHANGE @11.5' olive (5Y 4/4) wet, loose, Nonplastic, Poorly sorted, Fine-Medium grained			
	16	Refusal @ 15'				Refusal @ 15'			
						Total Depth = 15'			
						Boring Backfilled w/ CEMENT grout			

SOIL SURFACE WAS MEASURE BELOW 6" OF ASPHALT

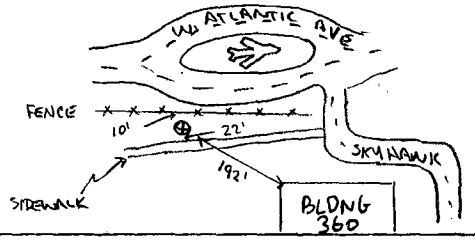
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP04	Date Started: 8/6/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENIS
Depth to Water (ft./bgs.) 13'	Location Sketch:



N

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
				RIBBON NAPL SAMPLE * NO NAPL RECOVERED	NA	GRAVELY SAND; YELLOWISH BROWN (10YR 5/4); DRY; LOOSE; HIGHLY ORGANIC, SILT-90%, GRAVEL-10%	OL SP	NA	
	4					SAND; BROWN (10YR 4/3); MOIST; LOOSE; POORLY SORTED; SAND (FINE-M. GRAINED)-90%, GRAVEL-10%, TRACE SHELL FRAGMENTS			
	8					CLAYEY SAND; BROWN (10YR 4/3); V. MOIST; LOOSE; NON PLASTIC; POORLY SORTED; SAND 70%, CLAY-20%, GRAVEL 10%, TRACE SHELL FRAGMENTS, CLAY RICH SEAMS.	SC		
	12					CLAY; DK. GREENISH GREY (7GY 4/1); V. MOIST-WET @ 13.0', M. STIFF; PLASTIC; WELL SORTED	CH		
	16					SAND; BROWN (7.5YR 4/4); WET; M. DENSE; POORLY SORTED; CLAY-5%, SAND-95%, IRON STAINED; MOTTLED W/ GREY SANDS.	SC		
	20					TOTAL DEPTH = 19'			

BORING BACKFILLED W/ CEMENT GROUT.

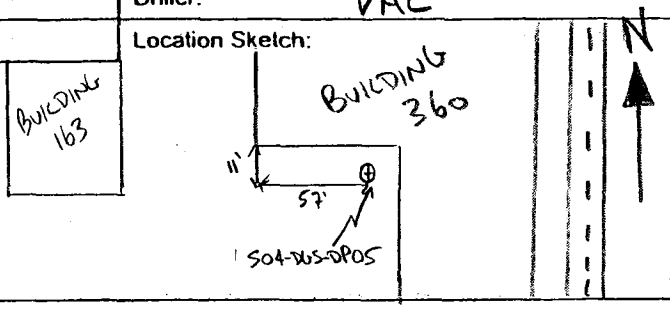
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP05	Date Started: 8/2/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4'	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.) 6.0'	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					CONCRETE			
8			RIBBON NAPL SAMPLE	NA	SAND W/ SILT; BROWN (7.5YR 5/3); MOIST; V. LOOSE; NON PLASTIC; WEAKLY SORTED; SAND (F.-M. GRAINED) - 90%, SILT - 10%, WET @ 6.0'	SM	NA	
16					CLAYEY SAND; BROWN (7.5YR 4/4); WET; LOOSE; NON PLASTIC; SAND (F.-M. GRAINED) - 85%, CLAY - 15%. COLOR CHANGE @ 11.0' - YELLOWISH RED (5YR 4/6), IRON STAINED; MOTTLED; M. DENSE. 13'-16' - TRACE WOOD FRAGMENTS. DECREASED CLAY W/ DEPTH	SC		
24								
32			* NO NAPL DETECTED*		TOTAL DEPTH = 30'. BORING BACKFILLED W/ CEMENT GROUT.			

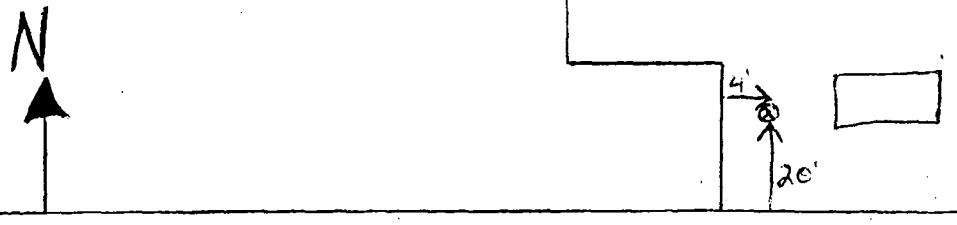
Sheet _____ of ___

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

oring Number: S04-D6S-D906	Date Started: 4/27/02
rilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/27/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
uter Diameter of Boring:	Drilling Subcontractor: Precision
nner Diameter of Well Casing:	Driller: Eugene
epth to Water (ft./bgs.)	Location Sketch: Inside BID6#360



Hydropunch GW Sample / Soil Sample

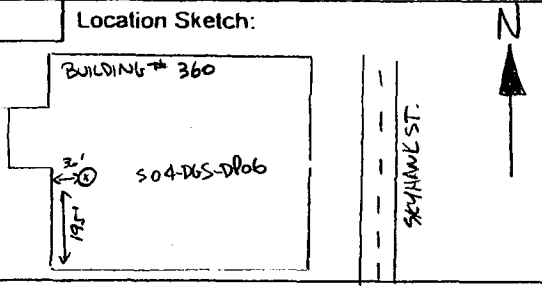
Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					* Floor is raised ~4'			
					385-S04-021			
2					Silty, clayey, Sand w/Gravel: Brown (7.5YR 4/3) moist; loose; well graded; 15% silt; 15% clay; 65% Sand (fine to med. grained); 5% gravel; mottled @ 2' bgs; trace shell frags; wet @ 3' bgs; (trace gravels @ 2' bgs)	SM		
650			385-S04-021					
4								
655			385-S04-022		No Soil Collected past 5.5'			
					385-S04-023			
6					* Not enough GW to collect parameters			
8					* Boring backfilled w/Cement Grout			
710			385-S04-023		Total Depth: 10' (8'-10')			
10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-D6S-DP06	Date Started: 8/8/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/8/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) NA	Location Sketch:



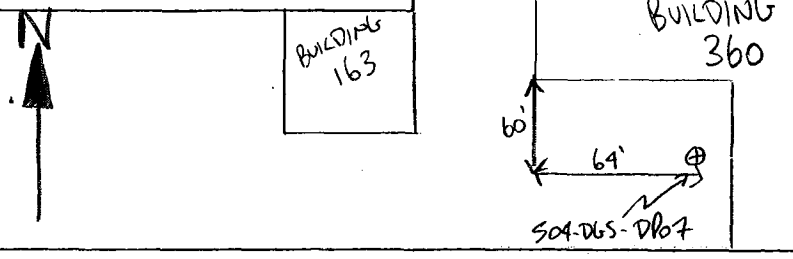
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	8			RIBBON NAPL SAMPLE	NA	BORING ADVANCED W/ SACRAFICIAL TIP		NA	
	16								
	24								
	32			* NO NAPL DETECTED *		TOTAL DEPTH = 30' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- DP07	Date Started: 8/3/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/3/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



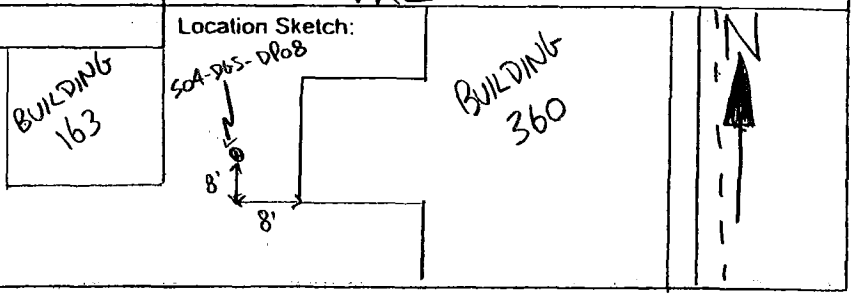
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dis.	Description	USCS soil symbol	Well construction	OVM (ppm)
	8, 16, 24, 32			RIBBON NAPL SAMPLE * NO NAPL DETECTED *	NA	~ 6" OF CONCRETE - BORING ADVANCED W/ A DISPOSABLE TIP. NO SOIL RECOVERED FOR LOGGING. TOTAL DEPTH = 30' BORING BACKFILLED W/ CEMENT GROUT.		NA	

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP08	Date Started: 8/3/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/3/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



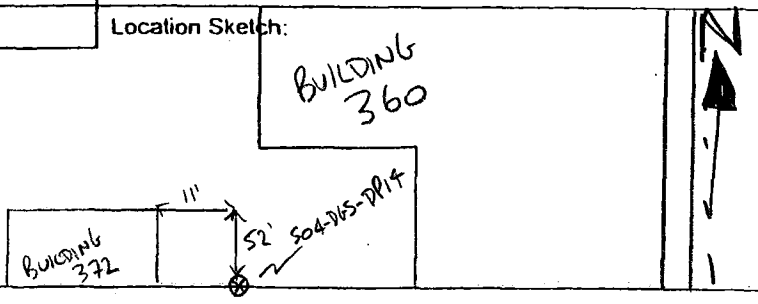
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	8, 16, 24, 32			RIBBON NAPL SAMPLES *NO NAPL DETECTED*	NA	~8" OF CONCRETE - BORING ADVANCED W/ A DISPOSABLE TIP, NO SOIL RECOVERED FOR LOGGING TOTAL DEPTH = 30' BORING BACKFILLED W/ CEMENT GROUT.		NA	

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- DP 14	Date Started: 7/24/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/24/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 8"	Drilling Subcontractor: BOART LONGYEAR
Inner Diameter of Well Casing:	Driller:
Depth to Water (ft./bgs.) 10'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE			
						CLAYEY SAND; BROWN (7.5YR 4/4); MOIST; LOOSE; SLT. PLASTIC; SAND 80%, CLAY - 20%	SC		
	8					SANDY CLAY; STRONG BROWN (7.5YR 5/6); MOIST-WET; FIRM; MED. PLASTIC; SAND - 50%, CLAY 50%.	CL		
1105				385-S04 052		HYDROPUNCH GW 385-S04-052 FROM 10-12' BGS DO- 0.25 mg/L CND- 2988 µS/cm PH- 6.61 TRB- 1305 NTU ORP- -99.6 mV TMP- 24.44°C	SC		
	16					CLAYEY SAND; STRONG BROWN (7.5YR 5/6); WET; LOOSE; POORLY SORTED; M. PLASTIC; SAND- 70%, CLAY- 30%		NA	
	24				NA				
1210				385-S04 053		COLOR CHANGE @ 17' - DARK BROWN (7.5YR 4/4); LOOSE			
	32					HYDROPUNCH GW 385-S04-053 FROM 25-27.0' BGS DO - 0.69 mg/L TRB- 917.7 NTU ORP- -172.8 mV CND- 3392 µS/cm PH- 6.79 TMP- 24.51°C			
1415				385-S04 054					
	40								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

S04-DGS-DP14

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL INVESTIGATION DATA GAP SAMPLING

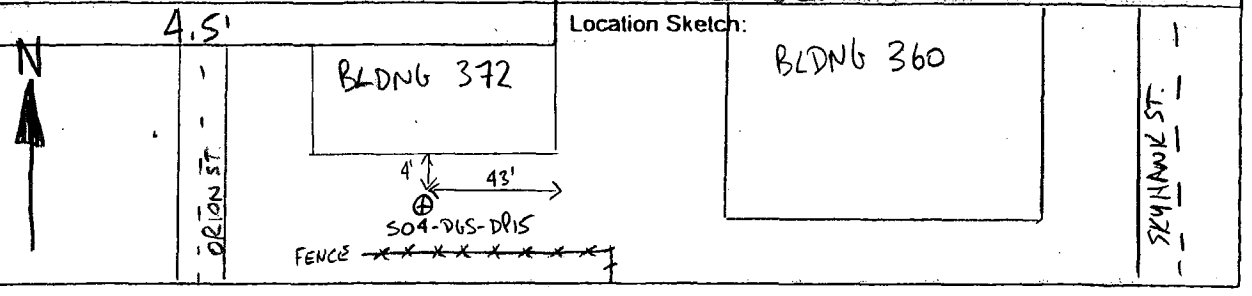
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1515	48			385-S04 055	NA	HYDROPUNCH GW 385-S04-054 FROM 35-37' BGS CND - 3253 µS/cm ORP - -5403.4 mV DO - 0.61 mg/L TRB - 320.8 NTU TMP - 24.47°C PH - 6.76 COLOR CHANGE @ 26.0' - STRONG BROWN (7.5YR 4/6); WET; M.DENSE; MOTTLED TEXTURE COLOR CHANGE @ 41.0' - DARK BROWN (7.5Y 4/4); CLAY - 20%	SW	NA	
1615	56			385-S04 056		SAND; DARK GREYISH BROWN (2.5Y 4/2); WET; M.DENSE; MOD. SORTED; NON PLASTIC			
						HYDROPUNCH GW 385-S04-055 FROM 45-47' BGS CND - 2915 µS/cm ORP - -582 mV DO - 0.41 mg/L TRB - 187.5 NTU TMP - 23.50°C PH - 6.86			
						HYDROPUNCH GW 385-S04-056 FROM 55-57' BGS CND - 3861 µS/cm PH - 6.91 TRB - 1025.4 TMP - 24.12°C ORP - -576.6 mV DO - 0.47 mg/L			
						TOTAL DEPTH = 57' BORING BACKFILLED W/ CONCRETE GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP15	Date Started: 8/7/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/7/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2				NA	SAND w/ SILT; DARK BROWN (10YR 3/4); MOIST; LOOSE; POORLY SORTED/GRADED; NON PLASTIC; SAND (FINE-M. GRAINED) - 85%, CLAY - 5%, SILT - 10%, FROM 1-2' - 35% GRAVEL WETR 4.5'	SM	NA	
1105	4			385-S04-057					
				HYDRO PUNCH					
1125	6			385-S04-058					
	8					TOTAL DEPTH = 6.5' BORING BACKFILLED w/ CEMENT GROUT.			

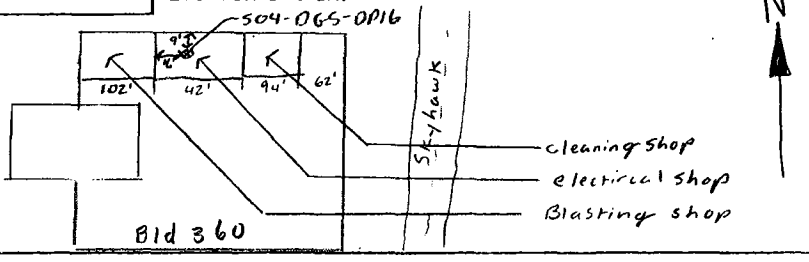
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP16	Date Started: 6/20/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 6.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CEMENT			
1107	2			385-S04-059	NA	Sand w/ shells; Olive (5Y 5/6) slightly moist, loose, well sorted, trace shell fragments, Fabric in Sand	SM	NA	
1110	4			385-S04 060					
1116				385-S04 061					
				HYDRO PUNCH					
1151	6			385-S04-062		COLOR CHANGE @ 6.0' Reddish Black (2.5YR 2.5/1) wet, loose, wellsorted, Trace shell fragments			
	8					COLOR CHANGE @ 7.0' Sand Olive 5Y (5/6) wet, loooose, well sorted			
	10					ELEVATED FLOOR N 4.0' HIGH, SOIL SURFACE MEASURED BELOW FLOOR			

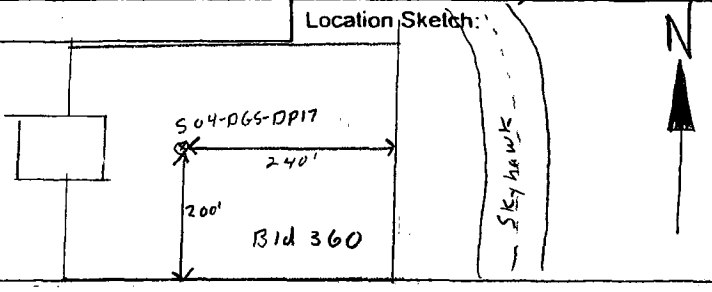
TOTAL DEPTH = 9'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP17	Date Started: 6/20/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Gemin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 7.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2					Silt; Dark Brown (7.5YR 3/4) Slightly moist, medium DENSE, Nonplastic, well sorted trace shell fragments	MH		
907	4			385 S04-063	NA	Sand; Olive 5Y (5/6) Slightly moist, loose, well sorted, Sand-100%, trace shell fragments, gradational contact.	SM	NA	
915	6			385-S04 064		@ 5.0' color change Reddish Black (2.5YR 2.5/1) @ 6.0' Return to original color. Olive 5Y (5/6) @ 7.0' wet			
	8								
	10					Total Depth = 9.0' BGS			

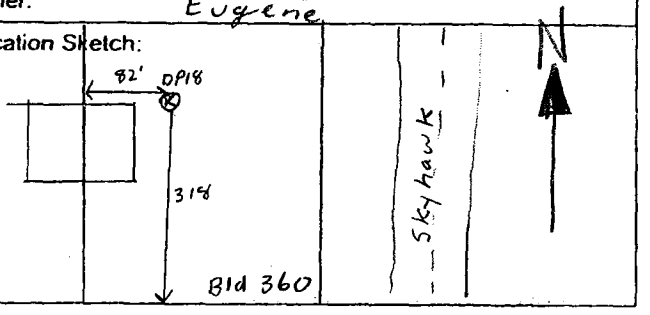
Boring Backfilled with CEMENT grout
SOIL SURFACE MEASURED FROM BELOW ELEVATED FLOOR N 4'

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 1
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP18	Date Started: 6/19/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 3.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					NA	Gravely Sand w/ silt; Yellow 2.5Y 7/6 Dry, loose, Nonplastic, poorly sorted, Gravel-25% (Angular), Silt-10%, sand-65%	SP	NA	
	2					Sandy gravel; Dark Yellowish Brown 10YR 4/4 Dry, medium Dense, Non plastic, poorly sorted Sand-35%, gravel-60% (angular), clay-5%	GC		
1400				385 S04-066					
	4					Sand; Very Dark grey (2.5Y 3/1) wet, loose, well sorted, fine grained	SW		
	6	Refusal				Refusal @ 5.5'			
	8								
	10					SOIL SURFACE MEASURED BELOW 4' ELEVATED CONCRETE FLOOR. Total Depth 5.5'			

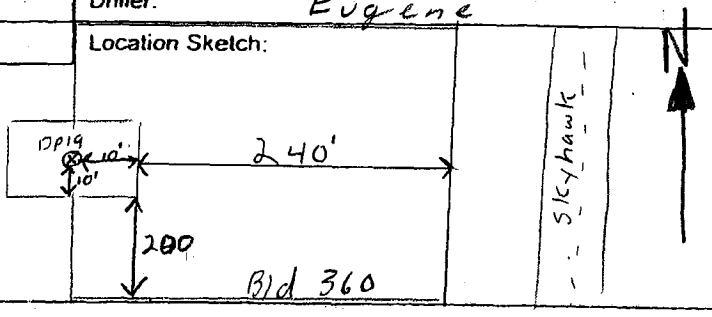
Borehole Backfilled with CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP19	Date Started: 6/19/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 6.0'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2					Gravelly Sandy Silt; Dry, loose, Nonplastic, Gravel - 30% (sub angular-subrounded) Sand - 30% (fine grained), Silt - 40%	GM		
1648	4			385-S04 009		Sand; light olive Brown (2.5YR 5/4) Slightly moist, Medium Dense, well sorted, No grading, Trace shell fragments 100% sand	SW		
1650	6			385-S04 010	NA	COLOR CHANGE @ 4', BLACK (10YR 2/1) Slightly moist, medium Dense, well sorted 100% sand		NA	
	8					COLOR CHANGE @ 6.0' Brown (2.5YR 5/4) Wet, Medium Dense, well sorted 100% sand			
	10					SOIL SURFACE MEASURED FROM BELOW 4' ELEVATED CONCRETE FLOOR. Total Depth = 9.0'			

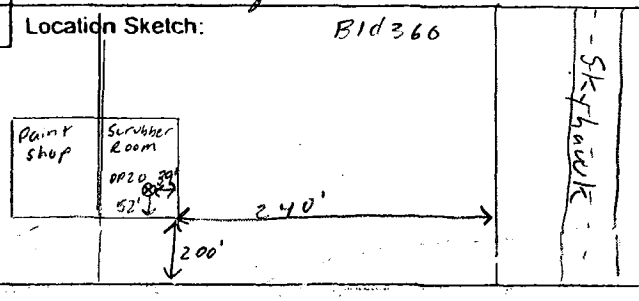
Borehole Backfilled with CEMENT grout

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP20	Date Started: 6/19/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 6.0'	Location Sketch: Bld 366



me	Depth (ft) bgs	Drive interval	Recovered interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2					SILTY GRAVELY SAND, Yellowish Brown (10YR5/6) Dry, Medium Dense, Nonplastic, poorly sorted, Gravel - 30% (rounded), Sand - 30%, silt - 40%	SM		
1514	4			385504 072		Sand, Olive (5Y 4/3) Slightly Moist, loose, Nonplastic, well sorted, fine grained, Sand - 98%, shell fragments - 2%		NA	
1516	6			385504 073		@ 6.0' groundwater	SW		
	8								
	10					SOIL SURFACE MEASURED BELOW 4' ELEVATED CONCRETE FLOOR. Total Depth = 9.0'			

Borehole Backfilled with cement grout

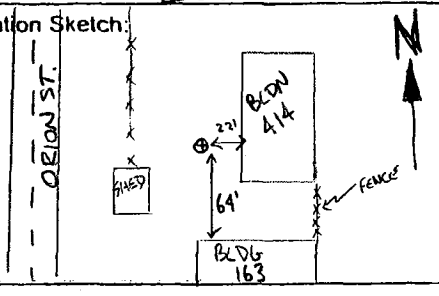
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP21	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/10/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



me	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			GP
	4				NA	SANDY GRAVEL; LIGHT BROWN; DRY; LOOSE; POORLY SORTED; GRAVEL - SUBANGULAR - 0.5-2CM - 60%, SAND 40%	SM SW		
						SILTY SAND; DARK BROWN; SLT. MOIST; LOOSE; WELL SORTED; SILT - 30%, SAND - 68% (FINE GRAINED) SHELL FRAGMENTS - 2%	GP		
1610	8			385-S04-075		SAND; OLIVE (5Y 5/6); DRY; LOOSE; WELL SORTED; SAND - 90%. SHELLS - 10%. WATER @ 4.5'	SW		
1720 0830	12			385-S04-076, 076A		GRAVEL W/ SAND; LIGHT PINK; DRY; LOOSE; POORLY SORTED; GRAVEL - (SEDIMENTARY) - 80% SAND - 20% (FINE - M. GRAINED)			
	16					SAND; BLACK; WET; LOOSE, WELL SORTED; FINE GRAINED; NO SHELLS			

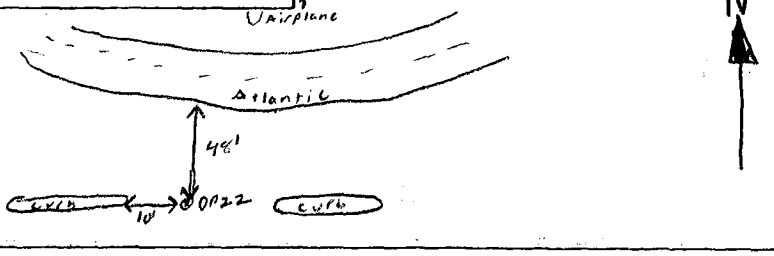
TOTAL DEPTH = 14
BORING BACKFILLED W/ CONCRETE GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP22	Date Started: 8/15/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/15/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Mike Barnes
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 7'	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					Asphalt & Base Rock	As		
2					GRAVEL SAND w/ SILT/CLAY Brown (10YR 4/3) Slightly moist, nonplastic, poorly sorted, Sand - 55%, gravel - 25% (subangular), clay - 10%, silt - 10%	SP		
4				NA	SILTY SAND; L. OLIVE BROWN (2.5Y 5/6); MOIST; SLIGHTLY DENSE; NON PLASTIC; MOD. SORTED; SAND - 85%, SILT - 15%	SM	NA	
6					COLOR CHANGE @ 6.0; Dark Greenish grey (1GLEY 10GY 3/1) Moist, Medium Dense, Non-Plastic, Moderatly Sorted, Sand - 85-%, silt - 15%			
8			385S04 136		Silty clay; Greenish Black (1GLEY 5G 2.5/1) wet, Medium stiff, Plastic clay - 80%, silt - 20%	CH		
10					Total Depth = 9' BGS			

1000

Boring Backfilled with cement grout

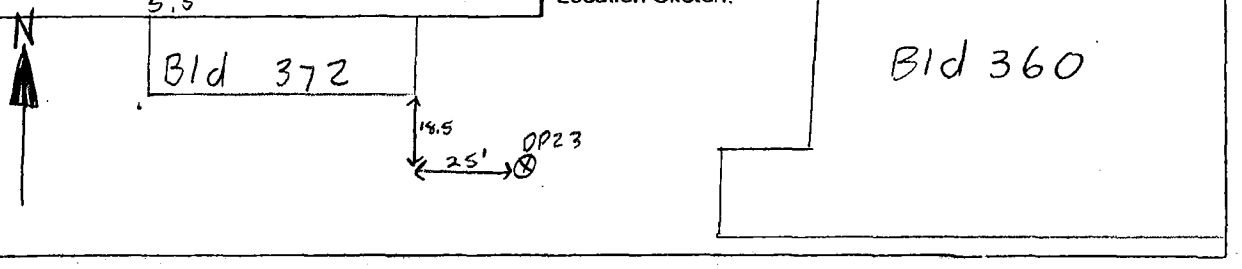
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- DP23	Date Started: 8/16/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/16/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 5.5'	Location Sketch:



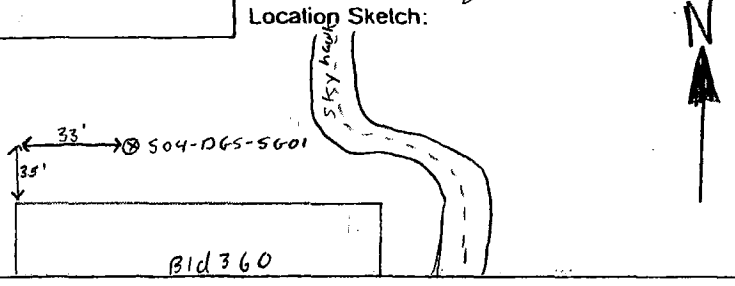
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Silty sand- Dark Brown (10YR 3/2) slightly moist, loose, nonplastic, well sorted, trace organics, Gravel- 5%, silt - 20%, sand-75%	SM		
	2					Silty sand; Light olive Brow (2.5Y 5/3); moist, loose, well sorted, silt -20%, sand-80%	SM		
					NA			NA	
	4					Silty clay; olive gray (5Y 5/2) wet, slightly plastic, clay -80%, Silt 20%	CL		
930				385-S04 139		Silty sand; Dark olive Brown (2.5Y 4/3) moist, loose, well sorted silt-20%, sand-80% (fine-medium grained)	SM		
	6					SOIL SURFACE MEASURED BELOWN 1' CONCRETE			
						TOTAL DEPTH = 5'			
	8					BORING BACKFILLED W/ CONCRETE GROUT			
	10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- SG01	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 5-6'	Location Sketch:



Name	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1337						Asphalt	AS		
						Silty Sand with clay; Very Dark Grayish Brown (10YR 3/2) moist, M, DENSE, PLASTIC, moderatly sorted Silt -25%, Clay - 10%, Sand-65%	SM		
	2			385-S04 142		COLOR CHANGE @ 1.5' - OLIVE BROWN (2.5Y 4/4)			
	4				NA			NA	
						groundwater @ 5.5'			
	6					SILTY CLAYEY SAND; Dark Greenish Gray (GLEY1 10Y 3/1) wet, moderatly sorted, nonplastic Silt-20%, Clay-15%, Sand-65%	SC		
	8					Silty Sand- Very Dark grayish Brown (10YR 3/2) wet, non-plastic, moderatly sorted Silt-20%, Sand-80% (fine grained)	SM		
	10					Total Depth: 9' BGS			

Borehole backfilled with cement grout

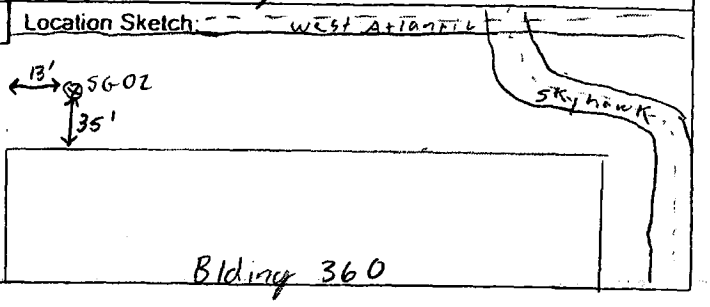
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG02	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Asphalt	AS		
1324	1			385 S04 143	NA	silty sand; Very Dark Gray (5Y 3/1) moist, Medium DENSE, non-plastic, silt-30%, sand-70% (fine grained)	SM	NA	
	2					COLOR CHANGE Olive Brown 2.5Y 4/4 moist, moderatly sorted, silt-25%, sand-75% (fine grained)			
	3								
	4								
	5					Total Depth 3'			

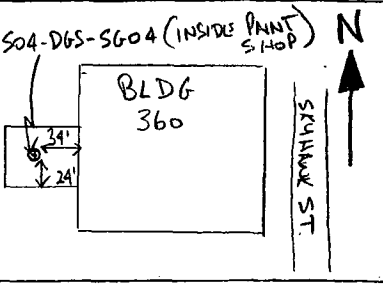
Borehole Backfilled with Cement Grout

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-D6S-SG04	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
0912	1			385-S04-147		SILTY SAND; V. DK. GREYISH BROWN (10YR 3/2); SLT. MOIST; DENSE; FINE GRAINED; SAND-78%, SILT-20%, SHELLS-2%.	SM		
	2					SAND; OLIVE (5Y 5/4); SLT. MOIST; LOOSE; FINE GRAINED SAND 95%, SHELLS-5%.	SP		

SOIL SURFACE MEASURED BELOW N 4' BELOW ELEVATED CONCRETE FLOOR.

TOTAL DEPTH = 2'

BORING BACKFILLED W/ CEMENT GROUT.

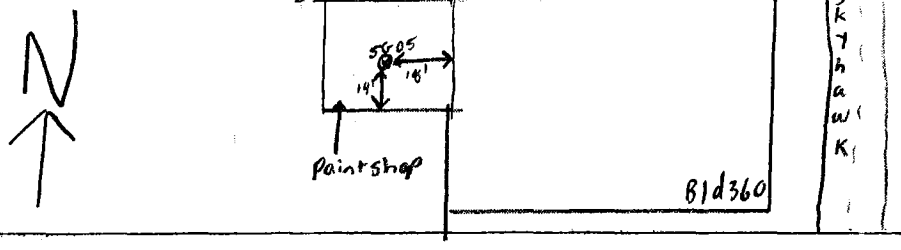
Sheet 1 of 1

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-DGS-SG05	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Jose
Depth to Water (ft./bgs.) 5.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
933	2			365-S04 .45	NA	Silty Sand. Brown (7.5YR 4/4) very slightly moist, medium dense, silt - 25%, sand - 70% (fine grained) shell fragments - 5%	SM	NA	0
	4					Sand Very Dark gray (5Y3/1) moist, loose, well sorted, Sand - 98% (fine grained), shells - 2%	SW		
	6					@ 6.0' Decrease in shell fragments 100% sand (fine grained)			
	8								
	10					Total Depth = 9.0' BGS Borehole Backfilled with cement grout			

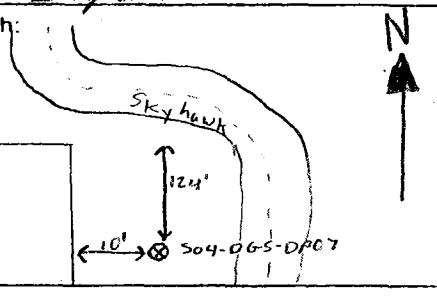
Soil surface 5' Below elevated Floor

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG07	Date Started: 6/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) NA	Location Sketch:



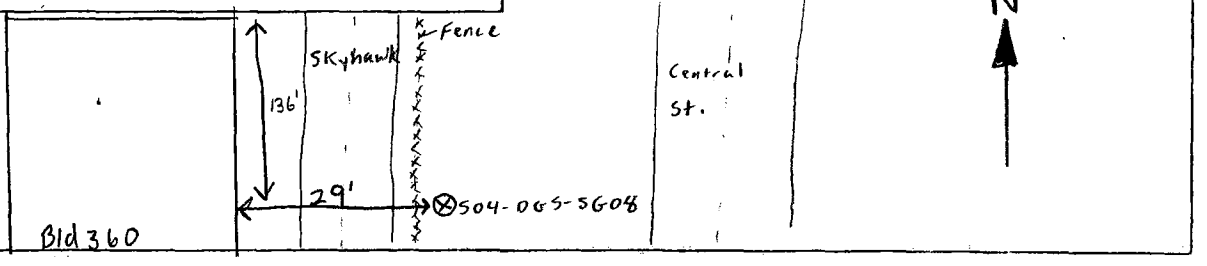
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Concrete	AS		
	1					Silty Sand w/ clay; Very Dark Grey 10YR 3/1 slightly moist, medium dense, Nonplastic, moderately graded	SM		
1418				385-S04 182	NA	Silty clayey sand; Brown (10YR 4/3) moist, nonplastic, mottling, trace shell fragments Silt-20%, clay-15%, Sand-65%	SC	NA	
	2					Silty sand; olive Brown, (2.5Y 4/4) moist, moderately sorted, fine grained	SM		
	3								
						TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG08	Date Started: 6/7/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 6/7/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 3	Location Sketch:



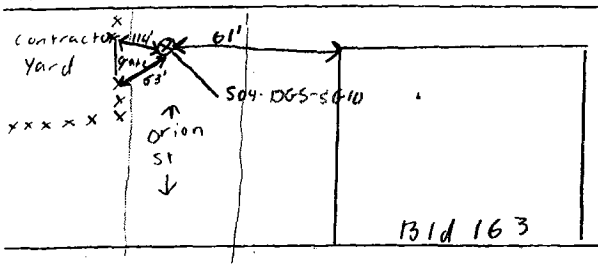
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Concrete	AS		
1435	2			385504 153	NA	Silty sand; Olive Brown 2.5Y 4/4 moist, non-plastic, moderately graded silt-20%, sand-80% (fine grained)	SM	NA	
	4					COLOR CHANGE Dark grayish Brown (2.5Y 3/2) wet, Non-plastic, moderately sorted	SM		
	6					SAND w/SILT/CLAY; Strong Brown (7.5YR 4/6) MOIST, M. DENSE, Rusty Red mottling silt-10%, sand-80%, clay-10%	GC		
						Silty sand; Dark grayish Brown (10YR 4/2) moist, moderately sorted, silt-20%, sand-80% (fine grained)	SM		
	8					CLAYEY SAND w/SILT; Black (GLEY1 N2.5/1) moist, moderately sorted clay-20%, silt-10%, sand-70% (fine grained)	SC		
	10					TOTAL DEPTH = 9' BORING BACKFILLED w/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- SG10	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



N

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Concrete			
1506	1			385 S04 157	NA	GRAVELY SILTY Sand; Dark Yellowish Brown (10YR 4/6) Slightly moist-dry, LOOSE, POORLY SORTED Silt- 15%, sand-65% (fine grained) gravel-20%	GM	NA	0
	2								0
	3					TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT			

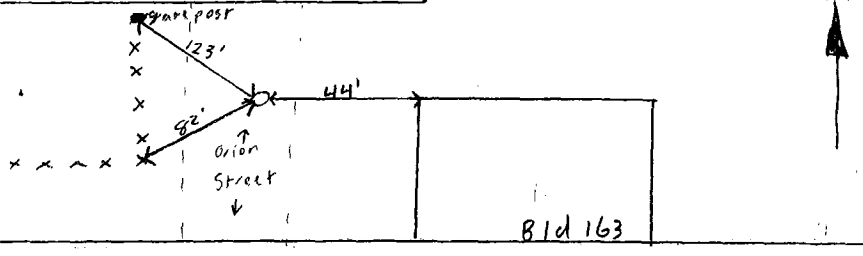
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG11	Date Started: 7/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.) 6'	Location Sketch:



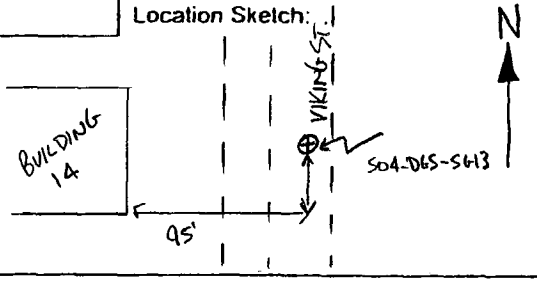
Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
2			345504 158	N/A	GRAVELY SAND W/ SILT, Dark Brown (10YR 4/3) poorly sorted Silt - 10%, Gravel - 40% (angular - subangular) Sand - 50% (fine - Medium grained) INCREASED GRAVEL, DECREASED SILT W/ DEPTH	SP	N/A	
4								
6					Silty Sand; Black (GLEY 1 N 2.5) Wet, well sorted, fine grained, Brick Debris	SM		
8								
10					TOTAL DEPTH = 9' BORING BACKFILLED W/ CEMENT GROUT SOIL SURFACE MEASURED BELOW A 1' OF CONCRETE			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG13	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1403	1			385-S04-162	NA	SANDY GRAVEL W/ CLAY; DARK RED (2.5YR 3/6); SLT. MOIST; LOOSE; POORLY SORTED; NON PLASTIC; SAND - 40%, GRAVEL - 50%, CLAY - 10%, CHERT FRAGMENTS, IRON STAINING.	GC	NA	
	2					SAND; PALE OLIVE (3Y 6/3); SLT. MOIST; LOOSE; WELL SORTED; SAND - 95% FINE GRAINED; GRAVEL - 5% - WELL ROUNDED - 0.5cm	SW		
						TOTAL DEPTH = 2' BORING BACKFILLED W/ CEMENT GROUT			

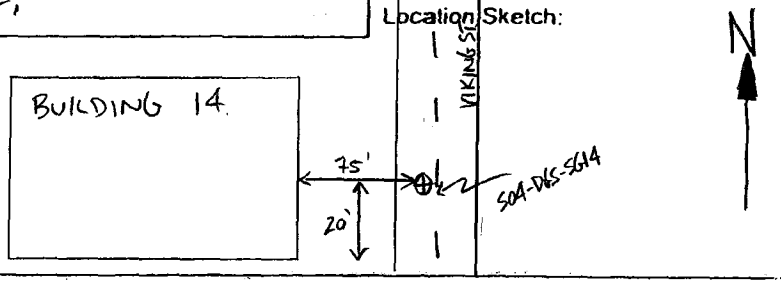
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG14	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE
Depth to Water (ft./bgs.) 5'	Location Sketch:



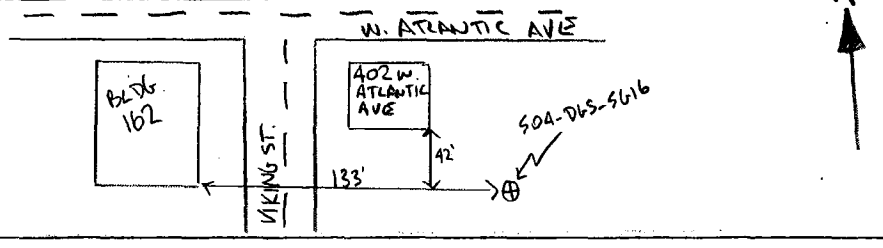
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1330	2			385-S04-163	NA	ASPHALT GRAVELY CLAYEY SAND; STRONG BROWN (7.5YR 4/6); SLT. MOIST; M. DENSE; V. SLT. PLASTIC; ANGULAR; GRAVEL- 25%, CLAY- 25%, SAND- 50%	SP SW	NA	
	4					SAND; PALE OLIVE (5Y 6/3); SLT. MOIST; LOOSE; FINE GRAINED; WELL SORTED, RARE ROUNDED GRAVEL W/ DEPTH			
	6 8					CLAYEY SAND; BLUISH BLACK (GLEY1 3/5B); WET; LOOSE; WELL SORTED; SAND (F.G.)- 50%, CLAY - 50%, VARIABLE %'S OF SAND/CLAY THRUOUT.	SC		
	10					TOTAL DEPTH = 9' BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG16	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
1207	1			385-S04-167	NA	GRAVELY SAND; BROWN (7.54R 4/4); V. SLT. MOIST; SLT. DENSE; ANGULAR; POORLY SORTED; SAND-65%. GRAVEL-35% COLOR CHANGE @ 1.5'- LT. OLIVE BROWN (2.54 5/3); DECREASED GRAVEL, SHELL FRAGMENTS- 2%, SLT. MOIST; LOOSE	SP	NA	
	2								
	3					TOTAL DEPTH = 3' BORING BACKFILLED W/ CEMENT GROUT			
	4								

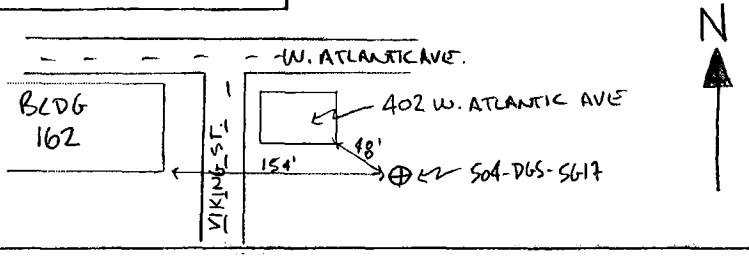
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-SG17	Date Started: 7/9/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/9/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: JOSE
Depth to Water (ft./bgs.) 4.5'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1134	2			385-S04-168	NA	GRAVELY SAND; BROWN (7.5YR 4/4); SLT. MOIST; LOOSE; POORLY SORTED; ANGULAR; GRAVEL- 0.5-3cm - 35% SAND- 65%. COLOR CHANGE @ 0.5'- LT. OLIVE BROWN (7.5Y 5/3); DECREASED GRAVEL, SHELL FRAGMENT TO 2% WET @ 4.5'	SP	NA	
	4					CLAY W/ SAND & GRAVEL; OLIVE BROWN (2.5Y 4/4); WET; SOFT; SLT. PLASTIC; POORLY SORTED; SAND-20% GRAVEL- 20% - ROUNDED - TO 3cm, CLAY- 60%	CL		
	6					GRAVELY SAND; OLIVE BROWN (2.5Y 4/4); WET; LOOSE; ANGULAR - SUBANGULAR, POORLY SORTED; GRAVEL- 40%, SAND- 60% COLOR CHANGE @ 6.0'- DK. GREENISH GREY (10GY 4/10Y) INCREASED CLAY TO 10%	SP		
	8					SOIL DEPTH MEASURED BELOW ~1' OF ASPHALT			
	10								

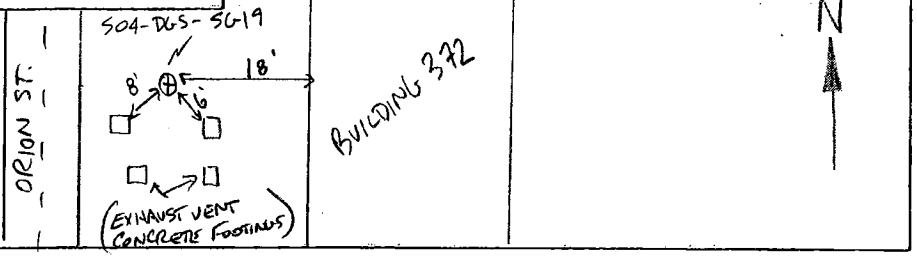
TOTAL DEPTH = 7'
BORING BACKFILLED W/ CEMENT GROUT.

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04- DGS- SG19	Date Started: 9/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: KIRK MARTIN
Outer Diameter of Boring: 4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) 2'	Location Sketch:



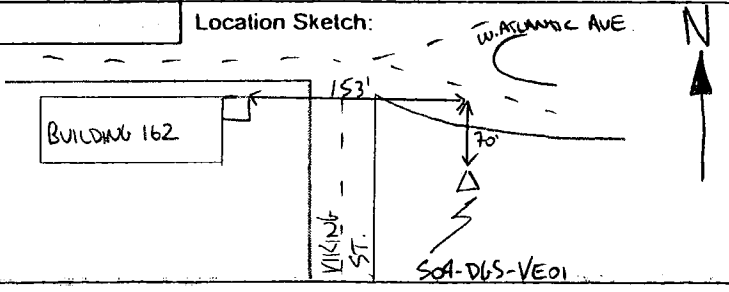
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT W/ BASE ROCK			
	2					SANDY GRAVEL W/ CLAY & SILT; BROWN (7.5YR 4/4); SLT. MOIST; LOOSE; POORLY SORTED; GRAVEL- 50%, SAND- 30%, SILT- 10%, CLAY 10%. WET @ 2.0' BGS	GM		
	4				NA		SM	NA	
	6					SILTY SAND; V. DARK GREY (5Y 3/1); WET; LOOSE; NON PLASTIC; WELL SORTED; SAND (F.G.) - 78%, SILT- 20%, GRAVEL- 2% (WELL ROUNDED) STRONG ODOR.			
	8					TOTAL DEPTH = 6' BORING BACKFILLED W/ CONCRETE GROUT			

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04- DGS- VE01	Date Started: 8/6/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 16 x 8"	Drilling Subcontractor: MILLER PIPELINE
Inner Diameter of Well Casing:	Driller:
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2					SAND; DARK YELLOWISH BROWN (10YR 4/6); MOIST; LOOSE; SAND (FINE GRAINED) - 95%, GRAVEL - 5% - 0.5cm ROUNDED; BEDDING MATERIAL.	SP		
	4				N/A	GROUNDWATER PARAMETERS TRB - 542 NTU CND - 12.5 mS/cm DO - 2.59 mg/L TMP - 22.4°C PH - 6.59		N/A	
	6								
1100	8			385-S04 137		PIPE ENCOUNTERED @ 8' - 36" CONCRETE			
1100				WATER SAMPLE 385-S04-138					
	10								

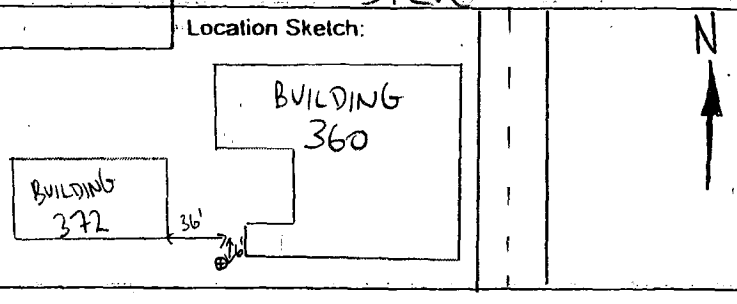
TOTAL DEPTH = 10'
BORING BACKFILLED W/ CLEAN FILL MATERIAL & FINISHED W/ AN ASPHALT CAP.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-VE02	Date Started: 8/7/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/7/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: LAURA GENIN
Outer Diameter of Boring: 16" x 8"	Drilling Subcontractor: MILLER PIPELINE
Inner Diameter of Well Casing:	Driller: STEVE
Depth to Water (ft./bgs.) 5'	Location Sketch:



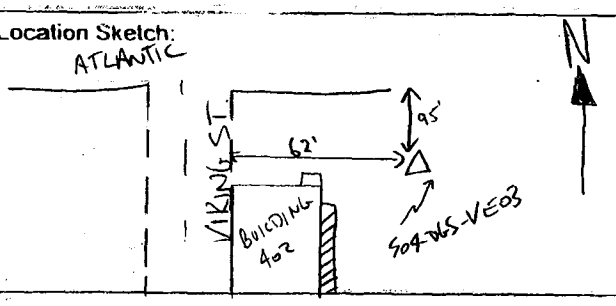
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						CONCRETE			
	2					SAND; DARK YELLOWISH BROWN (10YR 4/6); SLT. MOIST; LOOSE; NONPLASTIC; SAND(F.G.) - 95%, SHELL FRAGMENTS - 5%	SP		
	4					@ 5.5' BGS - CONCRETE PIPE (16" DIAMETER) ENCOUNTERED.			
0810				385-S04-140		- NO FIELD PARAMETERS COLLECTED DUE TO LACK OF WATER.			
1345	6			385-S04-141					
						TOTAL DEPTH = 6' BORING BACKFILLED W/ CLEAN-FILL MATERIAL W/ A CONCRETE PLUG.			
	8								
	10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04- DGS- VE03	Date Started: 8/21/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/21/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MIKE BARNES
Outer Diameter of Boring: 16" x 8"	Drilling Subcontractor: MILLER PIPELINE
Inner Diameter of Well Casing: NA	Driller:
Depth to Water (ft./bgs.) 7' BGS	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						ASPHALT			
	2, 4				NA	SAND W/ SILT; DARK YELLOWISH BROWN (10YR 4/6); MOIST; M. DENSE; SAND(F.G.)- 80%, GRAVEL- 10%, SILT- 10% @ 7.0' BGS STRONG PETROL ODOR, WET GROUND WATER PARAMETERS PH- 8.12 DO- 7.79 mg/L CND- 616 mS/cm ORP- 75 mV TMP- 16.26°C TRB- 1362 NTU	SP	NA	
	6, 8					CLAYEY SAND W/ SILT; DARK YELLOWISH BROWN (10YR 4/6); WET; SOFT; MED. PLASTICITY; SAND- 65%, CLAY- 25%, SILT- 10%, @ 9'11" PIPELINE ENCOUNTERED	SC		
0915 0920	10, 13			385-S04-212, 213		TOTAL DEPTH = 13' BORING BACKFILLED W/ CLEAN FILL MATERIAL W/ AN ASPHALT CAP			

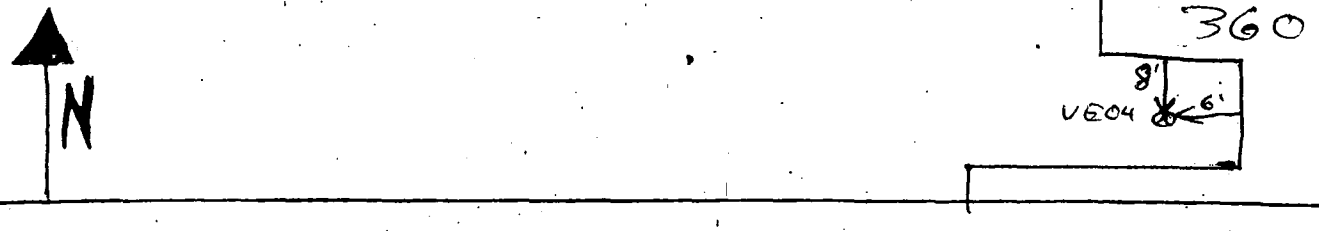
Sheet _____

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Number: S04-DGS-VE04	Date Started: 4/26/02
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/26/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring:	Drilling Subcontractor: Millers Pipeline
Inner Diameter of Well Casing:	Driller:
Depth to Water (ft./bgs.) n/a	Location Sketch:



Vacuum Extraction | Soil | GW Sample

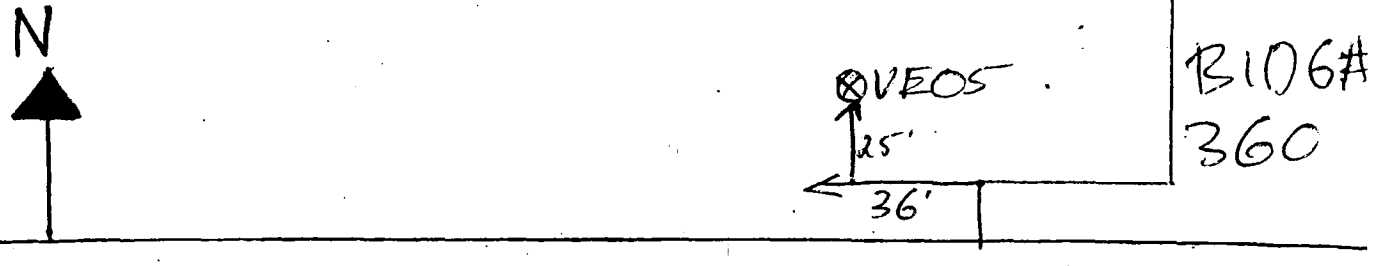
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility hyd. dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction
						Sand; DK. Olive Brown (2.5Y 3/3); moist; poorly graded; loose; trace clays; 5% silt; trace shell frags; fine to medium grained sand	SP	
	2							
				385	3.25'	- Pipe found @ 3' bgs (Terra Cotta)		
050				504 305	3.75'			
	4							
				385	5-5.5'			
1105				504				
				306				
	6			385 504 307	5-7' Screened			
125						Total Depth: 7' (5'-7')		
						Boring backfilled w/ baserock + cold patch		
	8					* Parameters not taken due to lack of H_2O		
	10							

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Boring Number: S04-D6S-VE05	Date Started: 4/26/02
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/26/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring:	Drilling Subcontractor: Miller Pipeline
Inner Diameter of Well Casing:	Driller:
Depth to Water (ft./bgs.) n/a	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Vacuum Extraction / Soil / GW Samples — Description	USCS soil symbol	Well construction
						Gravelly Sand; Dark Olive Brown (2.5Y 3/3); Moist; loose; mod. graded; 10% Gravel (Sub-angular 0-1.5cm); fine to med grained sand	SP	
	2							
1205				385 504 ~~308~~		*Pipe found @ 3' bgs (Terra Cotta)		
	4					*Parameters Not Taken Due to Lack of H_2O		
210				385 504 ~~309~~				
	6							
345				385 504 ~~310~~				
	8					Total Depth: 8'		
						Boring backfilled w/ baserock / Cold patch		
	10							

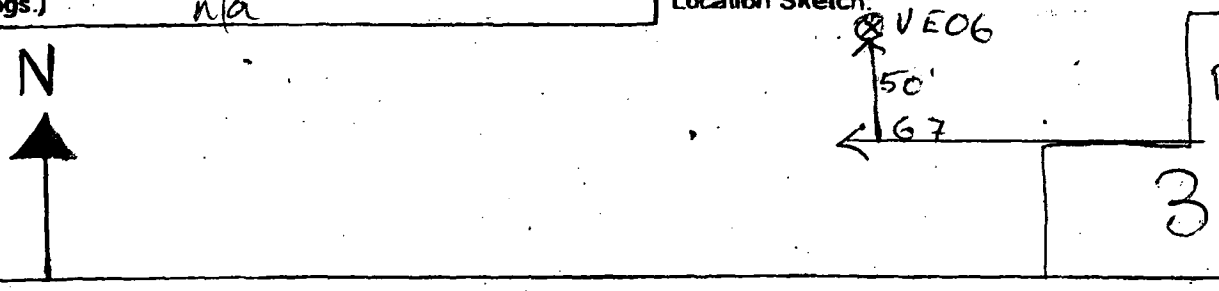
Sheet _____ of

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site:
Project Name:

Number: S04-D6S-VE06	Date Started: 4/26/02
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 4/26/02
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Diameter of Boring:	Drilling Subcontractor: Miller Pipeline
Diameter of Well Casing:	Driller:
Depth to Water (ft/bgs.) n/a	Location Sketch:



BIDG.# 360

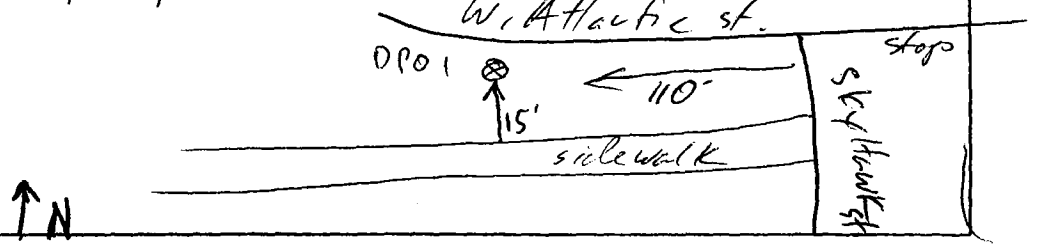
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.S. utility type, dia. / Blow count (per 6 inches)	Vacuum Extraction / GCO Sample / Soil Description	USCS soil symbol	Well construction
						Sand: Dark Olive Brown (2.5Y 3/3); moist; poorly graded; loose; trace clays; 5% silt; trace shell frags; fine to med. grained sand	SP	
	2					- Terra Cotta pipe found @ 3' bgs		
411				385-S04-3'				
	4					Soil Sample Collect @ 3'-3.5'		
						Total Depth: 4.5' (Refusal)		
						Boring backfilled w/ basecrack / Cold Patch		
	6							
	8							
	10							

CTO-385
Bldg./Site: 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-D6S-DP01	Date Started: 8/20/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 1 3/4"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1 1/8"	Driller: Eugene
Depth to Water (ft./bgs.) 1/2" @ SCREEN @ 5', 15', 20'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	5			1000	385-S04-209	Hydropunch GW Sample 385-S04-209 PH: 7.97 ORP: -32mV CND: 4.48ms/cm DO: 7.1mg/L TRB: >999 NTU GW: cloudy dk. brown; sl. odor; Temp: 19.4°C no sheen; turbid (5'-10')			
1000	10			1030	385-S04-210	Hydropunch Ground H_2O Sample 385-S04-210 PH: 6.99 ORP: 24.4 CND: 11.9 ms/cm DO: -4.6 mg/L TRB: 7999 NTU GW: orange brown, No sheen, Temp: 19°C No odor. (15'-17')			
1020	15								
1120	20			1120	385-S04-211	Hydropunch GW Sample 385-S04-211 PH: 7.2 ORP: -27 mV (20'-22') CND: 7.5 ms/cm DO: -3.0 mg/L ? TRB: 7999 NTU GW: Orange-brown; no odor; no sheen; highly turbid Temp: 19°C			
	25								

TOTAL DEPTH = 22'
BORING BACKFILLED W/ CEMENT GROUT

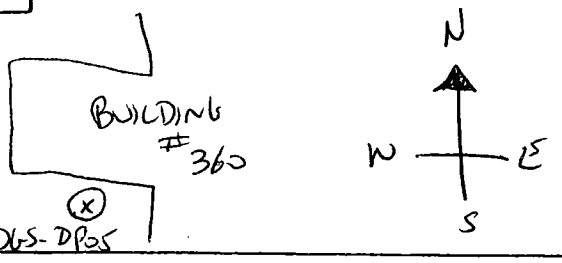
Sheet 1 of 1

CTO-385
Bldg./Site: 4
Project Name: SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-DGS-DP05	Date Started: 8/3/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/3/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 1 3/4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8"	Driller: VAL
Depth to Water (ft./bgs.) 1/2" SCREEN @ 13', 25', 30', 35'	Location Sketch:



Elev.	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	8					HYDROPUNCH GW 13.0-15.0' BGS DO 5.31mg/L PH 6.50 TRB 999NTU TMP 21.1°C CND 2.41mSCM ORP 20mV			
340	16			385-S04-002		HYDROPUNCH GW 25.0-27.0' DO 7.51mg/L PH 5.89 TRB 059 NTU TMP 21.3°C CND 4.45mSCM ORP 15mV			
	24					HYDROPUNCH GW 30.0-32.0' BGS DO 3.52mg/L PH 6.03 TRB 999NTU TMP 22.1°C CND 5.66mSCM ORP 25mV			
410				385-S04-003		HYDROPUNCH GW 35.0-37.0' BGS DO 5.17mg/L PH 6.20 TRB 999NTU TMP 22.3°C CND 6.66mSCM ORP -12mV			
450	32			385-S04-004 004A					
505	40			385-S04-005		TOTAL DEPTH = 37' BORING BACK FILLED W/ CEMENT GROUT			

-914
-985-EA-3

APPENDIX O
BORING LOGS AND DIRECT-PUSH GROUNDWATER PARAMETER SUMMARY TABLES
SO3-DGS-DP06

DATA SUMMARY REPORT
SUPPLEMENTAL REMEDIAL INVESTIGATION
DATA GAP SAMPLING FOR
OPERABLE UNITS 1 AND 2

THE ABOVE IDENTIFIED PAGE IS NOT AVAILABLE.

EXTENSIVE RESEARCH WAS PERFORMED BY NAVFAC SOUTHWEST TO LOCATE THIS PAGE. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

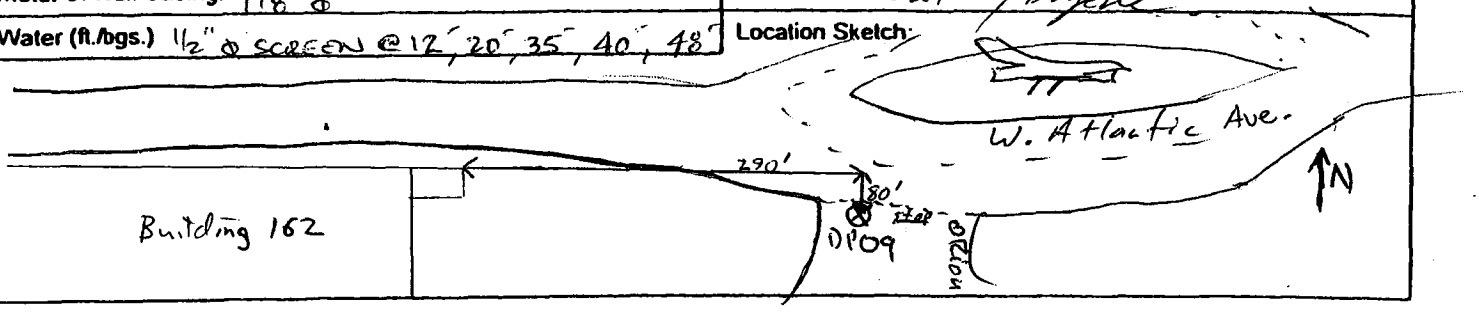
Sheet 1 of 1

CTO-385
Bldg./Site: 4
Project Name: SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Number: S04-D6S-DP09	Date Started: 7/19/01
Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/19/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Diameter of Boring: 1 3/4" Φ	Drilling Subcontractor: Precision
Diameter of Well Casing: 1 1/8" Φ	Driller: Val / Eugene
Water (ft./bgs.) 1 1/2" Φ SCREEN @ 12', 20', 35', 40', 48'	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
					HYDROPunch GW Samples ~6" Asphalt; Ground surface measured below asphalt			
					385-S04-024/024A (12'-14') PH: 7.33 Temp: 18.7°C GW: Highly Turbid; brown; no odor; no sheen Cond: 9.8ms/cm ORP 165mV DO: 4.14mg/L Turb: >1000 ntu			
10			0930	385-S04-024	385-S04-025 PH: 5.33 Temp: 19.5°C GW: Highly Turbid; brown; odorless; no sheen Cond: 8.40ms/cm ORP: 32mV DO: .96mg/L Turb: >1000NTU (20'-22')			
20			1005	385-S04-025	385-S04-026 PH: 6.33 Temp: 19.6°C GW: Brown; highly turbid; odorless; Cond: 3.39ms/cm ORP: 43mV Turb: >1000NTU DO: 1.24mg/L (35'-37')			
30			1045	385-S04-026	385-S04-027 PH: 5.86 Temp: 19.8°C GW: Brown; Highly turbid; no odor; no sheen Cond: 55.7 ms/cm ORP: -67mV Turb: >999NTU DO: -.08mg/L *Blowcounts increased from 40'-42' (40'-42')			
40			1145	385-S04-027	385-S04-028 PH: 7.28 Temp: 21°C GW: Cond: 5.25ms/cm ORP: -102mV Turb: >999NTU DO: -.09mg/cm *Refusal @ 50' (48'-50) ~~(50'-52')~~			
50								

TOTAL DEPTH = 50'
BORING BACKFILLED W/ CEMENT GROUT

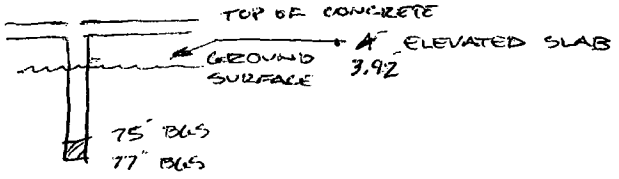
Sheet 1 of 1 3

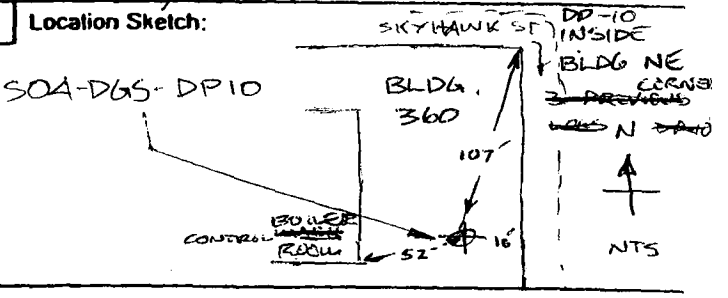
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: SITE 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: SO4 - DGS - DP10	Date Started: 9/20/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" DRIVE CASING	Drilling Subcontractor: PRECISION SAMPLING
Inner Diameter of Well Casing: 1 1/4" DRIVE CASING	Driller: VAL, MARCO
Depth to Water (ft./bgs.) 1/2" SCREEN @ 75'	Location Sketch:





Time	Depth (ft) bgs (elevated slab)	Drive Interval	Screened Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	5	3' Rods				GROUNDWATER HYDROPUNCH SAMPLE			
	10					# 385-SO4-262 3 VOA/HCL VOC			
	15					77'-75' @ 1125 LAB:			
	20					TEMP - 19.73°C SAMPLE METHOD:			
	25					COND - 44,608 µS/cm DISPOSABLE TEFLON			
	30					D.O. - 1.26 mg/L BAILER			
	35					ORP - -164.8 mV WATER ROSE TO			
	40					~18' BGS.			
	45					SPC - 49,587 VERY SILTY, SANDY			
	50					pH - 6.65 GRAY, ODORLESS			
	55					TURB - 1,376.5 NTU MUCH F. SAND			
	60								
	65								
	70					TOTAL DEPTH = 81'			
	75			385-SO4-262					
1125	80					BORING BACKFILLED W/ CEMENT GROUT			Ø
			BOH @ 81						

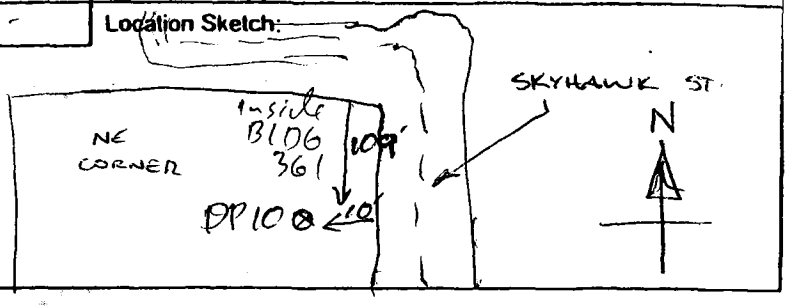
Sheet 3 of 3

CTO-385
Bldg./Site: 4
Project Name: SUPPLEMENT REMEDIAL INVESTIGATI DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-D6S-DP10	Date Started: 7/31/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 7/31/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 1¾"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1⅛	Driller: VAL
Depth to Water (ft./bgs.) ½" ϕ SCREEN @ 7', 12', 15', 25'	Location Sketch:



Time	Depth (ft) bgs	Drive interval	Recovered interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sample			
						4" Concrete + 3' of open space beneath floor; ground surface measured from below			
0950	5			0950	385-S04-029	PH: Weeping @ 7'-9' so Cond: Turb: no parameters Temp: DO: ORP: GW: 385-S04-029 (7'-9') No H2O @ 5'-7'			
1140	10			1140	385-S04-030	PH: 6.88 Cond: 1.80 mS/cm Turb: >999 NTU Temp: 19.2°C DO: 16.3 mg/L ORP: 74 mV GW: Brown; turbid; no odor no sheen 385-S04-030 (12'-14')			
1150	15			1150	385-S04-031	PH: Cond: Turb: Temp: DO: ORP: GW: 385-S04-031 (15'-17') Not enough H2O for parameters			
	20					PH: 7.19 Cond: 1.18 * mS/cm Turb: >999 NTU Temp: 19.8°C DO: 14.9 mg/L ORP: 49 mV GW: brown, turbid; no odor no sheen 385-S04-032 (25'-27')			
	25			1220	385-S04-032				

(25'-27') * Meter jumping from 0.782 to 1.18

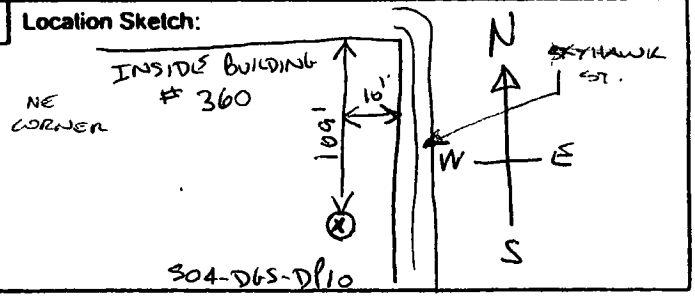
TOTAL DEPTH = 27' BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 4 B-360
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-D6S-DP10	Date Started: 9/6/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 1 3/4" ϕ	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" ϕ	Driller: VAL
Depth to Water (ft./bgs.) 1/2" ϕ SCREEN @ 48', 60'	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					HYDROPUNCH GROUNDWATER SAMPLE			
					HYDROPUNCH SAMPLE ~~S04~~ 385-S04-245 FROM 48.0-50.0'			
12					DO 6.32 mg/L PH 7.27 ORP 197.4 mV			
					TMP 19.33°C CND 6196 µS/cm TRB 710.1 NTU			
24					GW - LIGHT BROWN, NO ODOR, NO SHINE.			
					HYDROPUNCH SAMPLE 385-S04-246, FROM 60.0-62.0'			
36					DO 5.32 mg/L PH 7.23 ORP -237 mV			
					TMP 19.64°C CND 17548 µS/cm TRB 1376.5 NTU			
			385-S04-245		GW - BROWN, WATER HAS THICK FILM.			
48					TOTAL DEPTH = 62'			
					BORING BACKFILLED W/ CEMENT GROUT			
			385-S04-246					
60								

1010

1115

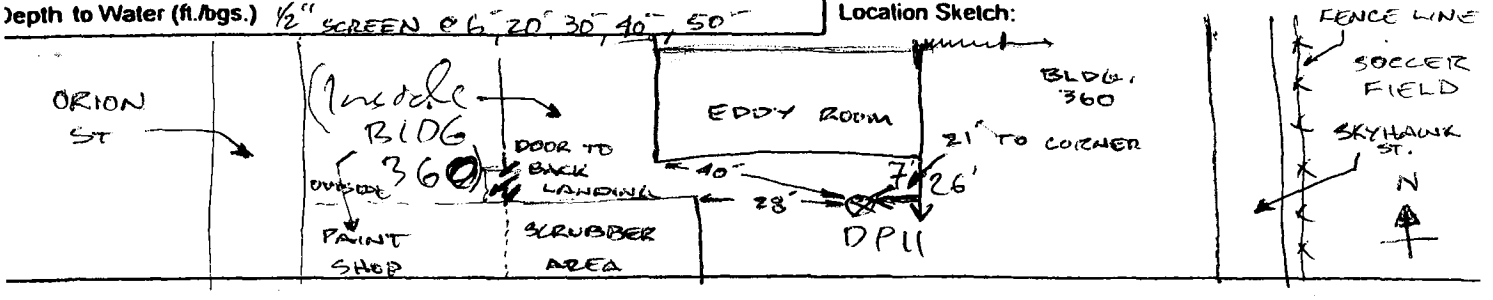
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 4
Project Name: SUPPLEME REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-D68-DP11	Date Started: 7/31/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/31/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 1 3/4" φ	Drilling Subcontractor: Precision
Inner Diameter of Well Casing: 1 1/8" φ	Driller: VAL
Depth to Water (ft./bgs.) 1/2" SCREEN @ 6', 20', 30', 40', 50'	Location Sketch:



Hydropunch GW Sample

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description (T.O.C. - 3.74' AGS)	USCS soil symbol	Well construction	OVM (ppm)
				1340	385-S04-033	21' concrete plus 3' basement space; ground surface measured from below			
1340	10			1350	385-S04-034	PH: 6.21 DO: 12.94 mg/L; Cond: 3.25 ms/cm ORP: -146; Turb: >999 NTU GW: DK brown, turbid, sl. odor, no sheen; Temp: 19.6°C			
1350						385-S04-033 (6'-8')			
1410	20			1410	385-S04-035	PH: 6.99 DO: 4.9 mg/L; Cond: 2.5 ms/cm ORP: -165; Turb: >999 GW: black, sl. odor, turbid, no sheen; Temp: 19.0°C			
						385-S04-034			
1505	30			1505	385-S04-036	PH: 6.34 DO: 7.7 mg/L; Cond: 6.06 ms/cm ORP: -18 mV; Turb: >999 NTU GW: slt. cloudy brown, sl. odor, turbid, no sheen; Temp: 20°C			
						385-S04-035 (20'-22')			
	40				385-S04-037	PH: 7.44 DO: 2.0 mg/L; Cond: 7.21 ms/cm ORP: -378; Turb: 311 NTU GW: DK grey, no odor, highly turbid, no sheen; Temp: 20.9°C			
						385-S04-036 (30'-32')			
0900	50				385-S04-038	Parameters on back →			
						385-S04-037 (40'-42')			
						385-S04-038 (50'-52')			

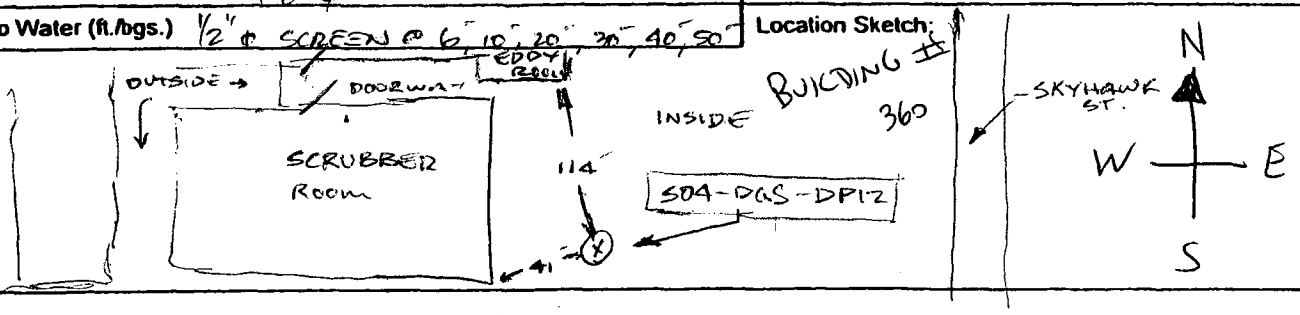
TOTAL DEPTH = 52'
BORING BACKFILLED W/ CEMENT GROUT

CTO-385
Bldg./Site: 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-DGS-DP12	Date Started: 8/1/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/1/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 1 3/4" ϕ DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" ϕ	Driller:
Depth to Water (ft./bgs.) 1/2" ϕ SCREEN @ 6', 10', 20', 30', 40', 50'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						3.58' TOC to g.s.			
1015				385-S04-039		HYDROPUNCH 6-8.0' BGS DO 8.49 mg/L PH 5.99 TRB 669 NTU TMP 19.0°C CND 2.75 mS/cm ORP -49 mV			
1045	10			385-S04-040		HYDROPUNCH 10.0-12.0' BGS DO 6.00 mg/L PH 6.27 TRB 999 NTU TMP 19.4°C CND 2.65 mS/cm ORP 9 mV			
1130	20			385-S04-041		HYDROPUNCH 20-22.0' BGS DO 4.90 mg/L PH 6.30 TRB 999 NTU TMP 19.4°C CND 2.16 mS/cm ORP ~~[illegible]~~ NO READING			
1200	30			385-S04-042		HYDROPUNCH 30.0-32.0' BGS DO 3.49 mg/L PH 6.68 TRB 999 NTU TMP 19.6°C CND 2.30 mS/cm ORP 96 mV			
1315	40			385-S04-043		385-S04-043 (40'-42') DO: 2.02 mg/L Cond: 6.91 ms/cm GW: Brown; turbid; no odor; no sheen Temp: 20°C Turb: 567 NTU PH: 7.1 ORP: -109 mV			
	50								

TOTAL DEPTH = 52'
BORING BACKFILLED WITH CEMENT GROUT

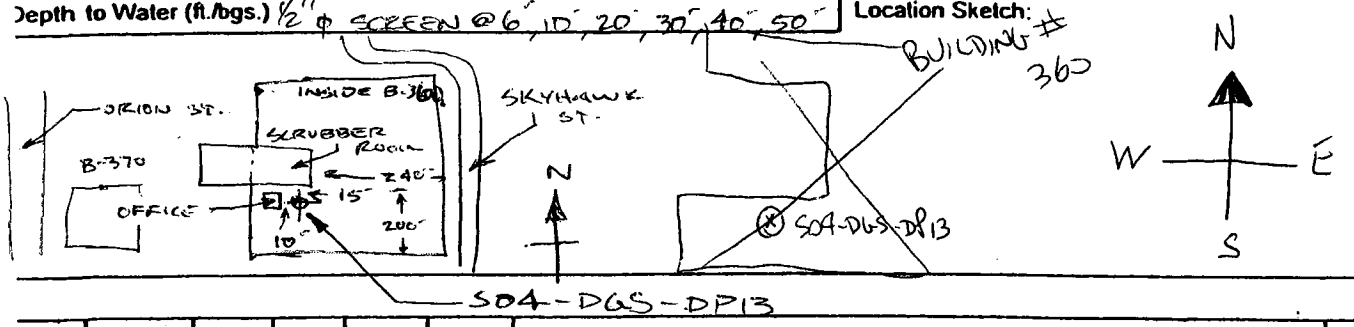
385-S04-044 (50-52') Parameter Reading on back

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 4
Project Name: SUPPLEMENT REMEDIAL INVESTIGATI DATA GAP SAMPLING

Boring Number: S04-DGS-DP13	Date Started: 8/1/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/2/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 1¾" φ	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" φ	Driller: STAFF
Depth to Water (ft./bgs.) 1/2" φ SCREEN @ 6', 10', 20', 30', 40', 50'	Location Sketch:



S04-DGS-DP13

Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GW SAMPLE 6.0-8.0' BGS			
1530				385-S04-045		DO CND TMP NOT ENOUGH SAMPLE ORP TRB			
0800	10			385-S04-046		HYDROPUNCH GW 10.0-12.0' BGS DO - 5.59 mg/L CND 3.48 mScm TRB 999 NTU TMP - 17.3°C PH 6.89 ORP - 148 mV			
0845	20			385-S04-047		HYDROPUNCH GW 20.0-22.0' BGS DO 8.39 mg/L PH 6.26 TRB 999 NTU TMP 18.1°C CND 3.88 mScm ORP - 16 mV			
0920	30			385-S04-048		HYDROPUNCH GW 30.0-32.0' BGS DO 7.90 mg/L PH 6.56 TRB 999 NTU TMP 18.1°C CND 4.82 mScm ORP - 111 mV			
1020	40			385-S04-049		HYDROPUNCH GW 40.0-42.0' BGS DO 8.69 mg/L PH 6.79 TRB 999 NTU TMP 18.8°C CND 5.63 mScm ORP - 64 mV			
1130	50			385-S04-050		HYDROPUNCH GW 50.0-52.0' BGS DO 5.09 mg/L PH 7.06 TRB 310 NTU TMP 18.6°C CND 8.14 mScm ORP - 174 mV			

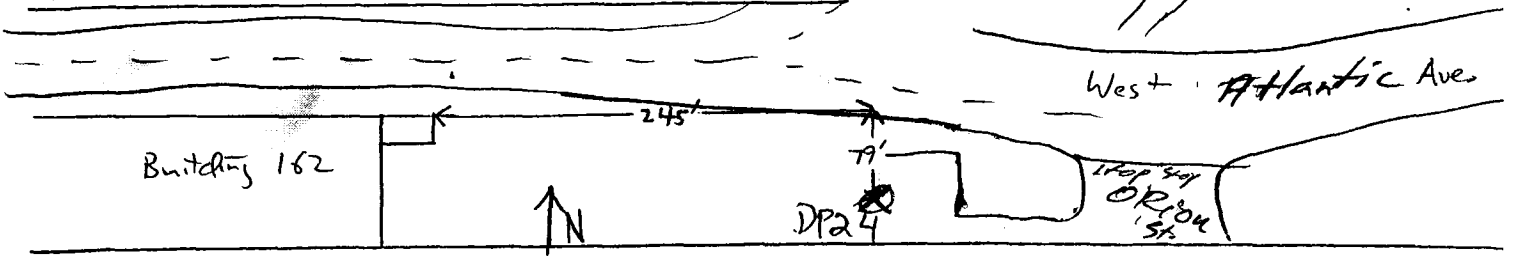
TOTAL DEPTH = 52'
BORING BACKFILLED W/ CEMENT GROUT

CTO-385
Bldg./Site:
Project Name: SUPPLEME REMEDIAL INVESTIGA DATA GAP SAMPLIN

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-D6S-DP24	Date Started: 8/10/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/10/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive interval	Recovered interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sample			
0830	6			0830 385-S04-177		Hydropunch GW Sample 385-S04-177 (7'-9') PH DO CND ORP TRB GW: Brown; odorless; Temp Not enough H_2O for Parameters			
0925	12			0925 385-S04-178		Hydropunch Ground H_2O Sample 385-S04-178 PH 7.26 DO 10.34 mg/L Cond 8813 mS/cm ORP -61.3 mV TRB 2600 NTU GW: brown; no odor; turbid; no sheen (14'-16') Temp 21.4			
0955	18			0955 385-S04-179		Hydropunch GW Sample 385-S04-179 PH 7.43 DO 12.65 mg/L Cond 6207 mS/cm ORP -62.8 mV Turb 302.3 NTU Temp 21.15°C GW: cloudy green/gray; no odor; no sheen (20'-22')			
1120	24 30			1120 385-S04-180	(28'-30')	Hydropunch GW Sample 385-S04-180 PH 7.07 Temp 22.19°C GW: Brown; CND 2587 mS/cm DO 5.59 mg/L turbid; odorless; TRB 2610.4 NTU ORP -111.8 mV no sheen (28'-30')			

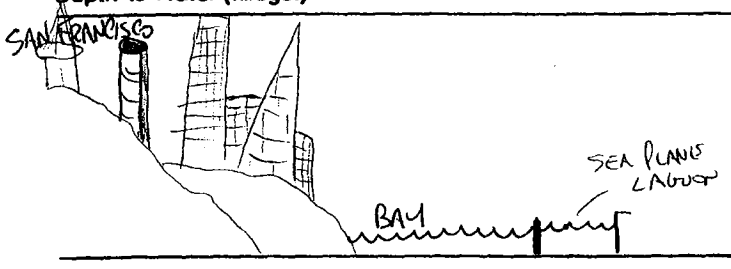
TOTAL DEPTH = 30'
BORING BACKFILLED W/ CEMENT GROUT

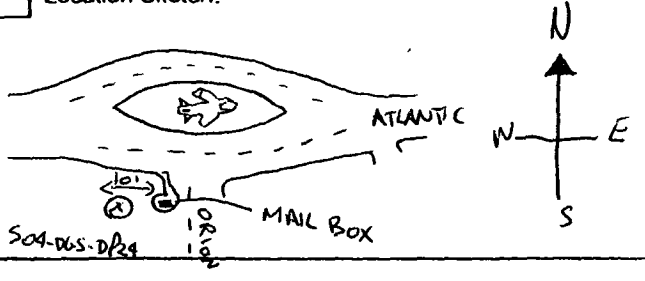
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-D6S-DP24	Date Started: 8/20/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: M.TC.
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:





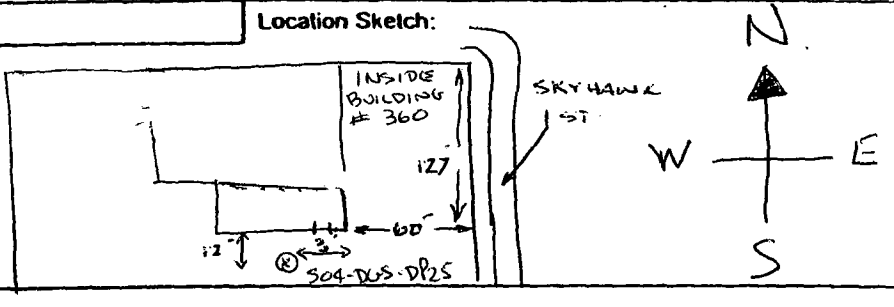
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDRORUNCH GROUNDWATER SAMPLE			
						HYDRORUNCH-GW SAMPLE 385-S04-207 FROM 40.0-42.0'			
						DO -22.30 (5.81 mg/L) TMP 20.43 ORP -50.2			
	12					CND 58572 TRB 1.4 PH 6.20			
						HYDRORUNCH GW SAMPLE 385-S04-208 FROM 50.0-52.1'			
	24					DO 7.12 mg/L TMP 19.4°C PH 6.99			
						CND 45.0 mS/cm TRB 999 ORP -511			
						SAMPLE HAD ODOR UPON REMOVAL AND THICK FILM ON TOP.			
	36					TOTAL DEPTH = 52'			
0920				385-S04-207		BORING BACKFILLED W/ CEMENT GROUT			
	48								
				385-S04-208					
	60								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 360/4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-DGS-DP25	Date Started: 9/7/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/7/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive interval	Recovered interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE			
						HYDROPUNCH GW 385-S04-249 FROM			
						DO 5.72 mg/L TMP 19.96 °C ORP -119.5 mV			
	12					PH 7.37 CND 7286 µS/cm TRB 1224 NTU			
						GROUNDWATER -			
	24					- LIGHT BROWN, NO SHINE, NO ODOR.			
						HYDROPUNCH GW 385-S04-250 FROM			
						DO 3.53 mg/L TMP 19.76 °C ORP -182.0 mV			
	36					PH 7.16 CND 16554 µS/cm TRB 1374.6 NTU			
				385-S04-249		GROUNDWATER			
0915	48					- LIGHT BROWN, LIGHT FILM FLOATING ON TOP			
				385-S04-250		TOTAL DEPTH = 62'			
						BORING BACKFILLED W/ CEMENT GROUT			
1030	60								

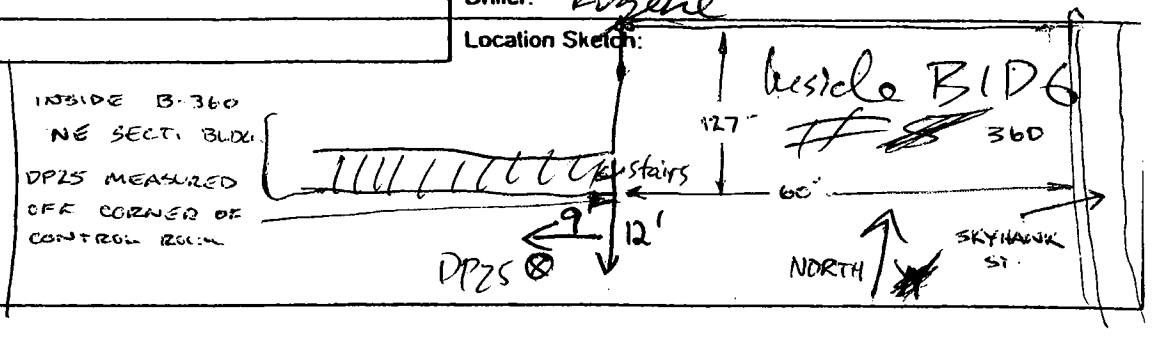
Sheet 2 of 2

CTO-385
Bldg./Site: B-360 / 4
Project Name: SUPPLEMENT REMEDIAL INVESTIGATI DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-D6S-DP25	Date Started: 8/14/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/14/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Mate
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GW SAMPLE			
0845	8			0845	385-S04-193	Hydropunch GW Sample 385-S04-193 @ 7'-9' pH: DO: Cond: ORP: Weeping: No Parameters Turb: GW: Temp:			
0935	16			0935	385-S04-194	385-S04-194 (15'-17') PH 6.38 DO: -0.01 CND: 1939 ORP -52.1 TRB 2589 GW: Brown / Turbid / No odor / No sheen Temp 19.92			
1035	24			1035	385-S04-195	385-S04-195 (25'-27') PH: 6.82 DO: -.57 mg/L Cond 2211 ms/cm ORP: -52.9 mV TURB: 1087 NTU GW: Brown; turbid; sl. cloudy; no sheen Temp: 20.53			
	40				385-S04-196	385-S04-196 PH: DO: CND: ORP: TRB: GW: Temp:			

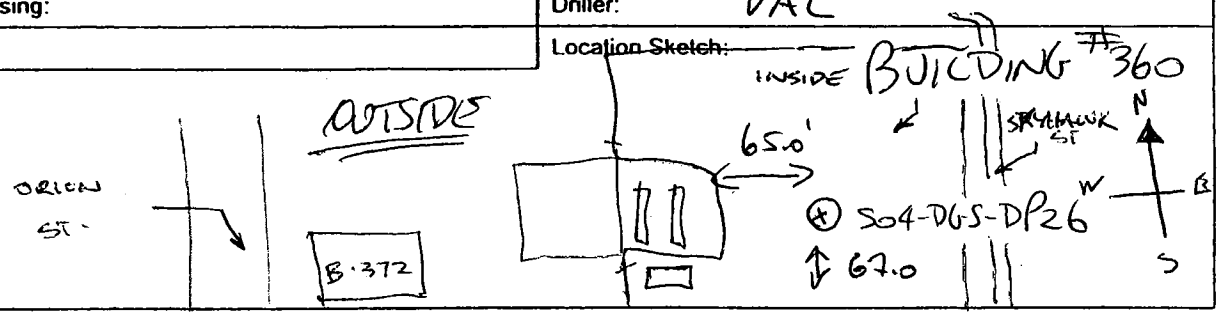
TOTAL DEPTH = 37'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 360/4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP26	Date Started: 8/14/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/15/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GW SAMPLE			
1320				385-S04-197		HYDROPUNCH GW 385-S04-197 FROM 10-12.0'BGS DO 10.04 mg/L TMP 20.2°C PH 6.68 CND 5.18 mSem TRB 773 NTU ORP 36 mV			
1410	12			385-S04-198 198A					
						HYDROPUNCH GW 385-S04-199 FROM 20-22.0'BGS DO 17.94 mg/L TMP 20.3°C PH 6.12 CND 5.66 mSem TRB 999 NTU ORP 28 mV			
1450	24			385-S04-199					
						HYDROPUNCH GW 385-S04-200 FROM 30.0-32.0'BGS DO 17.74 mg/L TMP 20.3°C PH 6.25 CND 4.22 mSem TRB 999 NTU ORP -20 mV.			
1525	36			385-S04-200					
						HYDROPUNCH GW 385-S04-201 FROM 40-42'BGS DO 2.78 TMP 18.18°C PH 7.42 CND 6233 TRB 103.8 ORP -75.6			
0820	48			385-S04-201					
						HYDROPUNCH GW 385-S04-202 FROM 50-52.0'BGS DO 7.93 TMP 19.53°C PH 6.98 CND 7241 TRB 2584 ORP -40.5			
0915	60			385-S04-202					

TOTAL DEPTH = 52'

BORING BACKFILLED W/ CEMENT GROUT

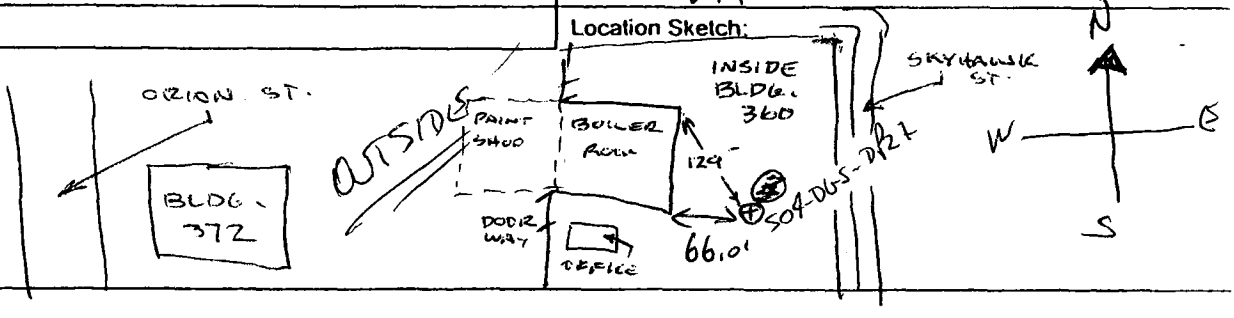
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 360/4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 304-DGS-DP27	Date Started: 8/13/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/14/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring:	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLES.			
						HYDROPUNCH GW 385-S04-187 FROM 7.0-9.0' BGS			
1430				385-S04-187		DO 12.09 mg/L TMP 20.1°C PH 6.45			
1500	12			385-S04-188		CND 3.79 mS/cm TRB 999 NTU ORP -78 mV			
						HYDROPUNCH GW 385-S04-189 FROM 20.0-22.0' BGS			
1550				385-S04-189		DO 11.31 mg/L TMP 20.6°C PH 6.89			
	24					CND 2.59 mS/cm TRB 255 NTU ORP 18 mV			
						HYDROPUNCH GW 385-S04-190 FROM 30-32.0' BGS			
0850				385-S04-190		DO 7.68 mg/L TMP 19.1°C PH 6.33			
	36					CND 4.14 mS/cm TRB 999 NTU ORP -110 mV			
1010				385-S04-191					
						HYDROPUNCH GW 385-S04-192 FROM 50.0-52.0' BGS			
	48					DO 15.31 mg/L TMP 19.6°C PH 6.70			
1140				385-S04-192		CND 6.47 mS/cm TRB 441 NTU ORP -133 mV			
						TOTAL DEPTH = 52'			
	60								

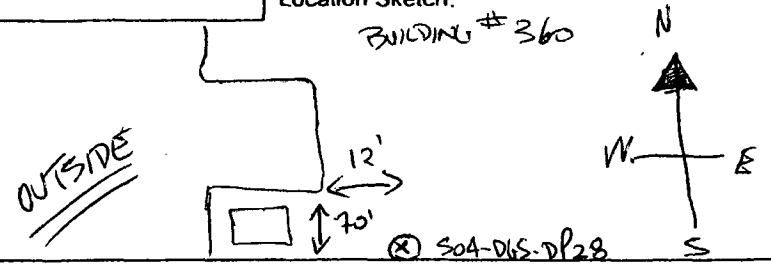
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-D6S-DP28	Date Started: 8/13/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/13/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



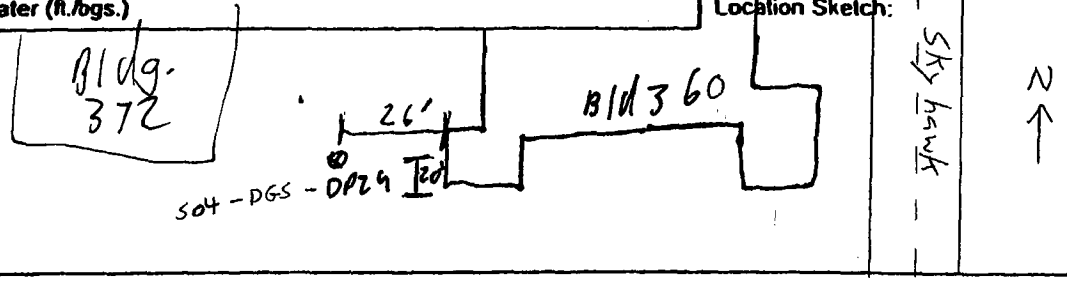
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE			
						SAMPLE 385-S04-18B FROM 20.0-22.0' BGS			
						DO - 5.31 mg/L TMP 19.1°C PH - 6.08			
0920				385-S04-181		CND 6.71 mS cm TRB 999 NTU ORP -16 mV			
1000	12			385-S04-182					
						SAMPLE 385-S04-184 FROM 30.0-32.0' BGS			
						DO 7.09 mg/L TMP 19.7°C PH 6.26			
1035				385-S04-183		CND 3.52 mSem TRB 999 NTU ORP -14 mV			
	24								
						SAMPLE 385-S04-185 FROM 40.0-42.0' BGS			
						DO 2.04 mg/L TMP 19.8°C PH 6.80			
1105				385-S04-184		CND 6.11 mSem TRB 402 NTU. ORP -151 mV			
	36								
						SAMPLE 385-S04-186 FROM 50.0-52.0' BGS			
1200				385-S04-185		DO 7.09 mg/L TMP 19.9°C PH 6.71			
						CND 7.10 mSem TRB 459 NTU ORP -140 mV			
	48								
1340				385-S04-186		TOTAL DEPTH = 52'			
						BORING BACKFILLED W/ CEMENT GROUT			
	60								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-DGS-DP29	Date Started: 9/17/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/17/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Israel Ramirez
Depth to Water (ft./bgs.)	Location Sketch:



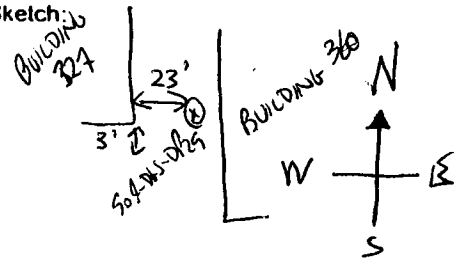
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						7-12' PVC Pipe 385-S04-261			
	4					Temp 22.69°C			
						CND 2691.0 MS/CM			
						DO 9.27 mg/L			
	8			385	7	ORP -197.6 mV			
1545				S04		pH 6.76			
				261		TURb 1393.0 NTU			
	12				12	Water Tan Brown, Turbid, No odor, No sheen			
						TOTAL DEPTH = 12'			
	16					BORING BACKFILLED W/ CEMENT GROUT			
	20								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 304-DGS-DP29	Date Started: 8/15/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/16/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



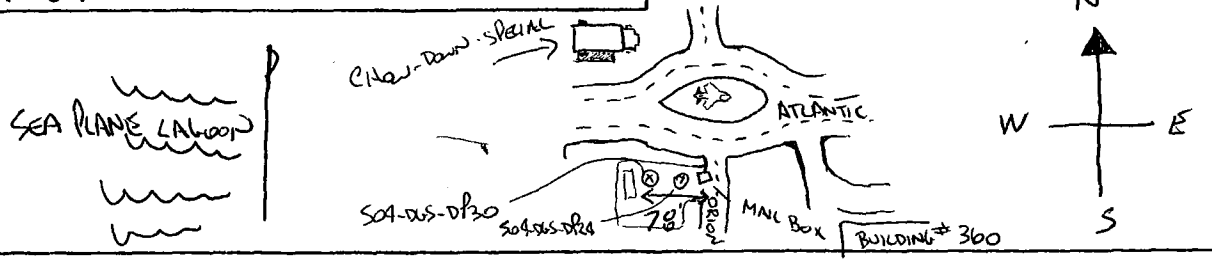
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE			
						HYDROPUNCH GW SAMPLE 385-304-204 FROM 25.0-27.0' BGS			
						DO 3.32 TMP 21.68°C PH 6.54			
	12					CND 5009 TRB 427.3 ORP -40.8			
1410				385-304-203		HYDROPUNCH GW SAMPLE 385-304-205 FROM 35.0-37.0' BGS			
						DO 1.97 TMP 19.10 PH 6.62			
						CND 5386 TRB 10.4 ORP -39.1			
	24								
1600				385-304-204		HYDROPUNCH GW SAMPLE 385-304-206 FROM 45.0-47.0' BGS			
						DO 0.39 TMP 19.58 PH 6.65			
						CND 8774 TRB 12.7 ORP -43.5			
0830	36			385-304-205					
						END OF BORING @ 47.0', GROUTED			
						W/ ~~CONCRETE~~ CEMENT			
0925	48			385-304-206					
	60								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POIN SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP30	Date Started: 8/20/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



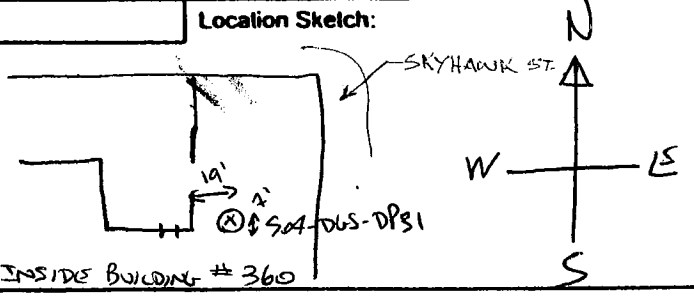
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLES			
						HYDROPUNCH GW 385-S04-212 FROM 14.0-16.0' BGS			
						DO 0.61 TMP 20.10 CND 6763			
	12					ORP -55.3 PH 7.06 TRB 27.4			
1200				385-S04-212					
						HYDROPUNCH GW 385-S04-213 FROM 20.0-22.0' BGS			
1320				385-S04-213		DO 2.75 TMP 19.51 CND 5943			
	24					ORP -53.4 PH 7.12 TRB 14.1			
						HYDROPUNCH GW 385-S04-214 FROM 35.0-37.0' BGS			
						DO TMP 19.90 CND 64566			
						ORP -51.8 PH 6.49 TRB 6.8			
1410	36			385-S04-214		HYDROPUNCH GW 385-S04-215 FROM 45.0-47.0' BGS			
						DO 11.4 mg/L TMP 19°C PH 6.8 ORP -158.5			
						CND 5.3 TRB 99.0			
1455	48			385-S04-215					
						BORING ENDED @ 57.0' BGS			
						BACKFILLED W/ CEMENT GROUT			
1555				385-S04-216					
	60								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 360/4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS- DP 31	Date Started: 9/6/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					HYDROPUNCH GROUNDWATER SAMPLE			
					HYDROPUNCH GW 385-S04-247 FROM 60.0-62.0'			
					DO 3.80 mg/L TRB 1108.9 NTU PH 7.17			
12					TMP 21.15°C ORP 98.0 mV CND 19320 MS/CM			
24					GW - LIGHT BROWN, NO ODOR, NO SHINE			
					BORING COMPLETED @ 62.0' BGS, GROUTED W/ CEMENT.			
36								
48								
60			385-S04-247					

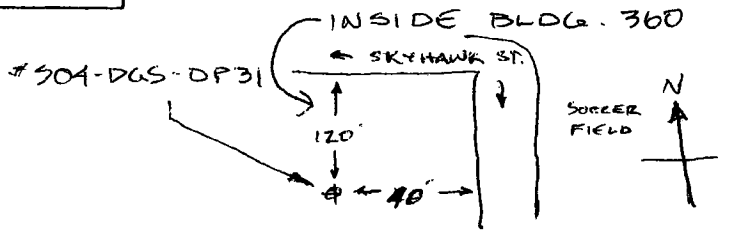
B50

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: BLDG. 360/SITE 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP31	Date Started: 8/31/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/31/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: — 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: —	Driller: JOSE AMBRIZ, MARCO RODRIGUEZ
Depth to Water (ft./bgs.) —	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID *	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	3' 33 36 39 42 45 48 51 54	3' drive intervals: surface to BOH; screen 49'-51' BOH	385-S04-244A			HYDROPUNCH GW SAMPLE # 385-S04-244A COLLECTED @ 49'-51' BTOC (4' elevated slab) Temp - 21.35°C ORP - -171.8 mV very silty sandy brown. odorless COND. 8078 MS/cm PH - 7.20 D.O. - 0.29 mg/L TURB - 170.4 NTU	—	—	Ø
1245						(2 - VOA/HCL VOC-8260 ONSITE MOBILE LAB)			

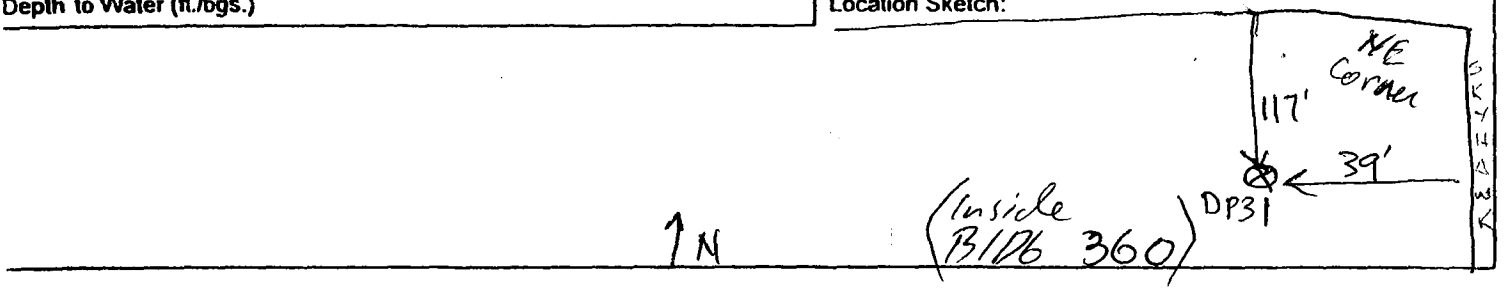
TOTAL DEPTH = 51'
BORING BACKFILLED W/ CEMENT GROUT

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-D6S-DP31	Date Started: 8/21/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/21/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: VAC
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Hydropunch GW Sampler — Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch 385-S04-214 (2'-12') PVC screen PH: 7.66 ORP: 142.6 mV CND: 1035.0 DO: 7.73 TRB: 1372.7 GW:			
1000	8			385-S04-214	1000	Temp: 18.65			
						Hydropunch 385-S04-215 (15'-17') PH: 7.45 ORP: -60.6 mV CND: 1141 ms/cm DO: 7.84 mg/L TRB: 1376.4 NTU GW: brown; turbid; no sheen Temp: 18.27°C			
1020	16			1020 385-S04-215					
						Hydropunch 385-S04-216 (25'-27') PH: 7.21 Temp: 18.59°C CND: 1329 ms/cm ORP: 83.6 mV TRB: 1055.7 DO: 8.62 mg/L GW: lt. brown; turbid; no sheen			
035	24			1035 385-S04-216					
						Hydropunch 385-S04-217 (35'-37') PH: 7.50 Temp: 19.62°C CND: 2797 ms/cm ORP: -160.2 mV TRB: 1376.6 NTU DO: 11.65 mg/L GW:			
	32			1115 385-S04-217					
	40								

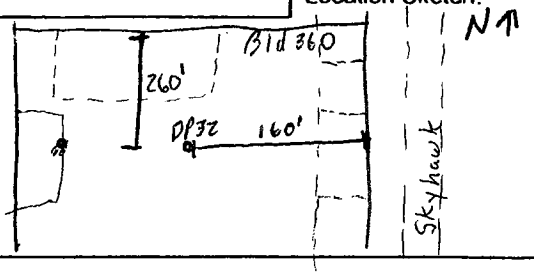
TOTAL DEPTH = 37'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Bld 360
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP32	Date Started: 8/21
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/21
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Grain
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	5								
0900				385 S04 222	6-8'	6-8' PH 6.98 Temp 19.1°C CND 7.54 mS/cm ORP 36mV Turb 7999 NTU Water: No sheen, No odor, DO 0.51mg/L DK grey color.			
	10								
0930				385 S04 223	10-12'	10-12' pH 6.69 Temp 19.4°C CND 7.15 mS/cm ORP 44mV Turb 7999NTU water light Brn DO 1.67mg/L No sheen, No odor			
	15								
	20					20-22' pH 6.87 Temp 18.9°C CND 1.79mS/cm ORP 105mV Turb 468 NTU water gray light brown, DO 1.32 mg/L No odor, No sheen.			
1000				385 S04 224	20-22'				
	25								

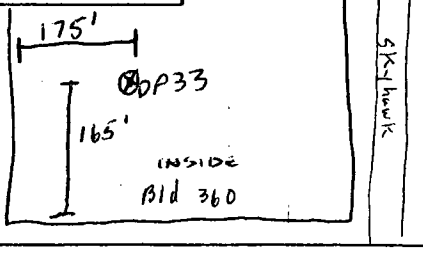
TOTAL DEPTH = 22'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 365
Bldg./Site: Bld 360
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP33	Date Started: 8/21/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/21/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



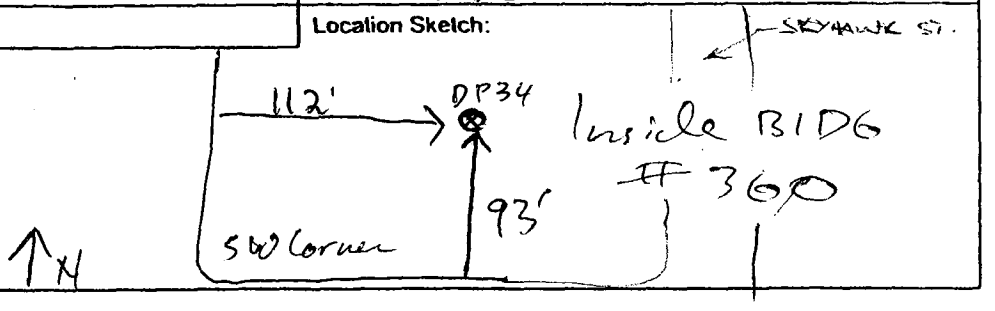
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
0945	5			385 S04 225	5-7'	5-7' pH 7.40 Temp 19.0°C CND 3.09 mS/cm ORP 15 mV Turb >999 NTU water Turbid, Gray Brown, DO 2.83 mg/L No odor, No Sheen			0
1115	10			385 S04 226/A	10-12'	10-12' pH 6.48 Temp 19.7°C CND 5.20 mS/cm ORP 43 mV Turb >999 NTU water orange Brown DO 1.64 mg/L No odor, No sheen			
	15					20-22' pH 6.80 Temp 19.5°C CND 2.09 mS/cm ORP 51 mV Tub >999 NTU water orange Brown, DO 1.36 mg/L No odor, No Sheen			0
1145	20			385 S04 227	20-22'	30-32' pH 6.87 Temp 21.4°C CND 4.10 mS/cm ORP 93 MV Turb 7999 NTU DO 0.80 mg/L			
	25								
1315	30			385 S04 [illegible]	30-32	water grey tan color, No odor, No sheen, TOTAL DEPTH = 32' BORING BACKFILLED w/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 504-DGS-DP34	Date Started: 8/21/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/21/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sampler			
1300	8			1300	385-504-218	Hydropunch 385-504-218 (~~5'-7'~~) (6'-8') PH: Temp: ORP: CND: DO: TRB: GW: Weeping @ 5'-7'			
1400	16			1400	385-504-219	Hydropunch 385-504-219 (12'-14') PH: 6.73 ORP: -57 mV CND: 3192 Onslum DO: 7.28 mg/L TRB: 1379.5 NTU GW: orange-brown; no odor; no sheen Temp: 20.09°C			
1435	24			1435	385-504-220	Hydropunch 385-504-220 (20'-22') PH: 6.92 ORP: -81 mV CND: 1509 ms/cm DO: 6.38 mg/L TRB: 1359.8 NTU GW: orange-brown; no odor; no sheen ~~no~~ turbid Temp: 20.76			
	32			1500	385-504-221	Hydropunch 385-504-221 (30'-32') PH: 6.89 ORP: -41.3 mV CND: 2548.0 ms/cm DO: 6.11 mg/L TRB: 1150.7 NTU GW: Temp: 20.05°C			
	40								

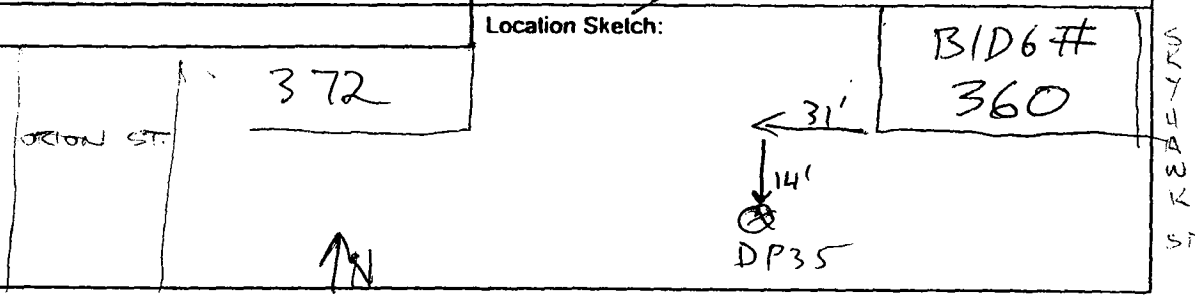
TOTAL DEPTH = 32'
BORING BACKFILLED W/ CEMENT GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 504-D6S-DP35	Date Started: 8/22/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/22/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Kirk S. Martin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						Hydropunch GW Sample			
0745	8			385-228	Soil Hand Drilling	385-504-229 (15'-17') PH: 6.60 ORP: 218mV CND: 2.45mS/cm DO: 1.58mg/L TRB: 7999NTU GW: orange brown Noodor, Nosheen. Temp:			
1000	16			1000 385-504-229		385-504-230 (25'-27') PH: 6.69 ORP: 202mV CND: 4.23mS/cm DO: 9.26mg/L TRB: >999 NTU GW: lt. yellowish brown; turbid; odorless; no sheen Temp: 21.3°C			
1100	24			1100 385-504-230		385-504-231 *( ) PH: CND: TRB: Temp: ORP: DO: GW: see attached sheet			
	32								

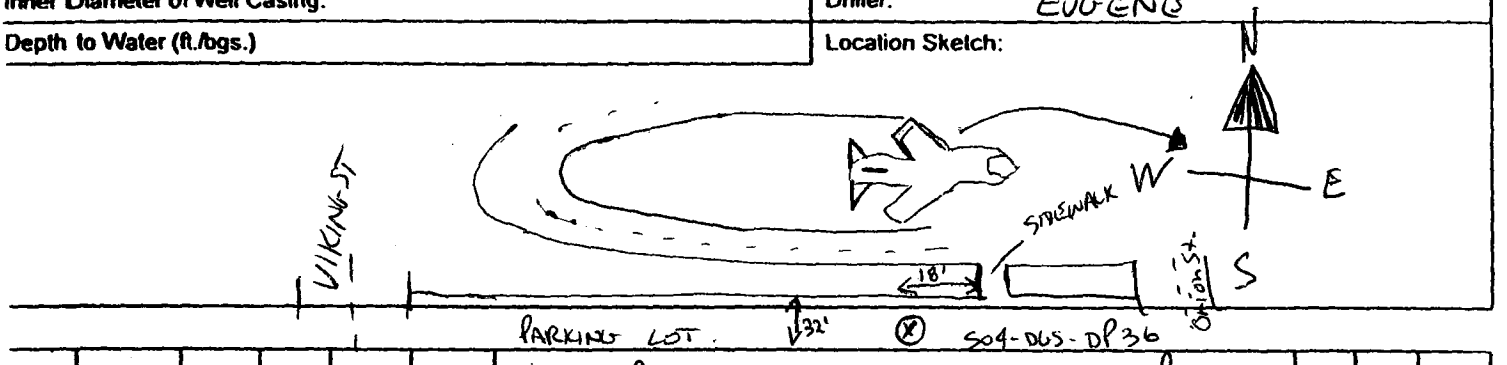
TOTAL DEPTH = 27'
BORING BACK FILLED W/ CEMENT GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP36	Date Started: 8/28/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/28/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUND WATER SAMPLE			
						HYDROPUNCH GW SAMPLE 385-S04-232 FROM 20.0-22.0'			
						DO 3.54 mg/L ORP -24 mV COND 10.1 mS/cm			
	8					TMP 23.0°C PH 6.88 TRB 999 NTU.			
						HYDROPUNCH GW SAMPLE 385-S04-233 FROM 35-37.0'			
	16					DO 6.84 mg/L ORP 26 mV COND 70.3 mS/cm			
1545				385-S04-232		TMP 22.1°C PH 6.35 TRB 999 NTU			
	24					BORING COMPLETED @ 37.0' BGS,			
						BACKFILLED W/ CONCRETE GROUT			
	32								
1640				385-S04-233					
	40								

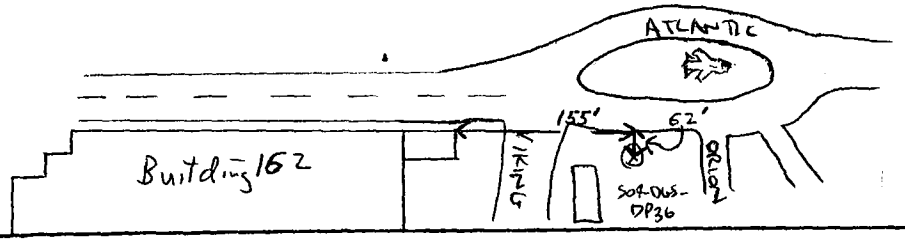
Sheet 2 of 4

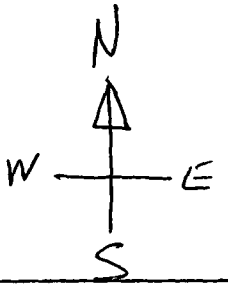
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-DGS-DP36	Date Started: 9/7/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/7/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:





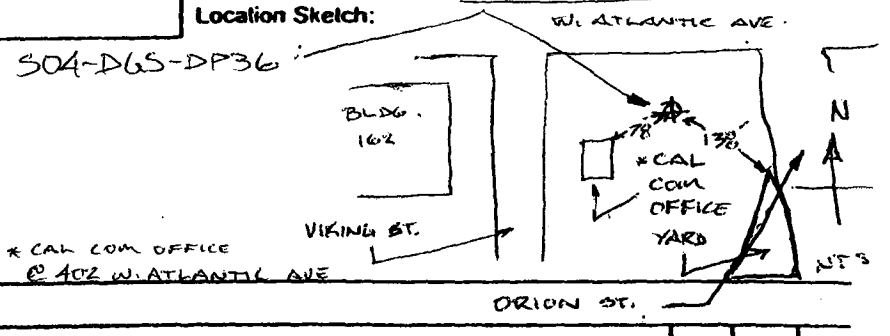
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE.			
						HYDROPUNCH SAMPLE 385-S04-251 FROM 48.0-50.0'			
						DO 6.09 mg/L PH 6.70 ORP 64.4 mV			
	12					TMP 21.78°C TRB 946.7NTU CND 59633µS/cm			
						HYDROPUNCH SAMPLE 385-S04-252 FROM			
	24					DO 5.37 mg/L PH 6.96 ORP -286.6 mV			
	36					TMP 22.13°C TRB 1389.4NTU CND 63050µS/cm			
1325	48			385-S04-251		TOTAL DEPTH = 62'			
						BORING BACKFILLED W/ CEMENT GROUT.			
1450	60			385-S04-252					

CTO-385
Bldg./Site: SITE 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

TRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

g Number: 504-DGS-DP-36	Date Started: 9/20/01
g Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/20/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
r Diameter of Boring: NA 2"	Drilling Subcontractor: PRECISION
Diameter of Well Casing: NA	Driller: VAL
h to Water (ft./bgs.) ~6	Location Sketch:



Depth (ft) bgs	Drive Interval	Recovered Interval SCREENED	Sample ID	SAMPLE METHOD	Description	USCS soil symbol	Well construction	OVM (ppm)
5	3' RODS							
10					GROUNDWATER HYDROPUNCH SAMPLE			
15					#385-504-263			
20					CET LAB 8260/VOC · LOW LEVEL			
25					48-HR TAT 3-VOA/HCL			
30								
35					ALSO, COLLECTED QC, FIELD DUPLICATE			
40					#385-504-___			
45								
50					TEMP - 22.03 °C			
55					CND - 67,224 µS/cm WATER IS VERY SANDY,			
60					LIGHT BROWN, ODORLESS			
65				DISP. TEFLON BAILER	D.O. - 2.11 mg/L MUCH SEDIMENT.			
70			385		ORP - -259.4 mV SAMPLED USING TEFLON			
75		75'	504		DISPOSABLE BAILER			
80		77'	263		SpC - 71,288			Ø
					pH - 6.76			
					TURB - 1,389.1 NTU			
					TOTAL DEPTH = 77'			
					BORING BACKFILLED W/ CEMENT GROUT			

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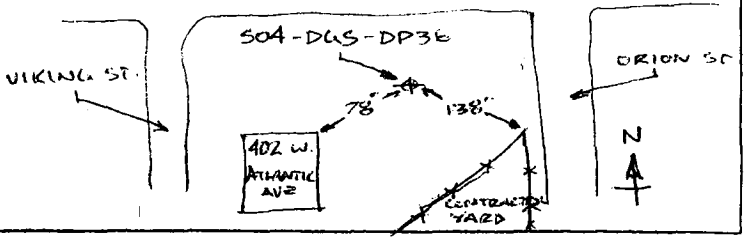
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: S04 - DGS - DP36	Date Started: 9/26/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/26/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" STEEL DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: ~ 1/2" S.S. SCREEN	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~6'	Location Sketch: ← W. ATLANTIC AVE →



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4								
	8								
	12					GROUNDWATER HYDROPUNCH SAMPLE # 385-S04-264 W/ FIELD DUPLICATE # 385-S04-928. COLLECTED W/ DISPOSABLE TEFLON BAILER. 3-VOA/HCL, LOW LEVEL VOC/8260 C&T LAB, 48-HR TAT			
0840				385 S04 264					Ø
	14	BOH @ 14'				TEMP- 21.65 °C SPC - 6,085 COND - 5,690 mS/cm pH - 7.45 D.O. - 0.67 mg/L TURB - 1,385 NTU ORP - -203.9 mV VERY TURBID SILTY, SANDY GRAY WATER SLIGHT ORGANIC (H_2S) ODOR			
	16								

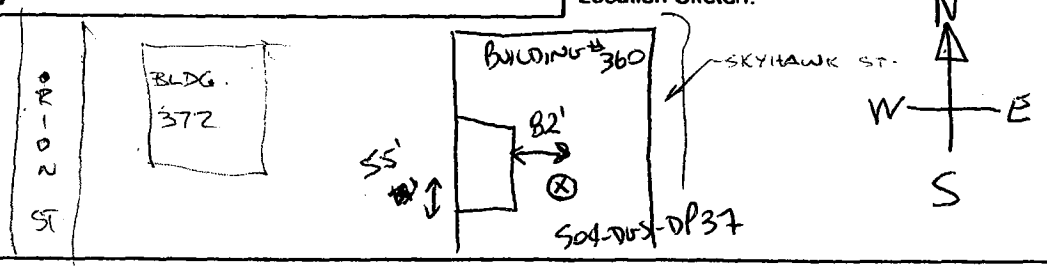
TOTAL DEPTH = 14'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP37	Date Started: 8/29/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/29/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	0								
	4								
1115				385-S04-237		No enough water in the 6-8 ft sample to get parameter reading, except for ORP will is -110 mV			
	8								
				385 S04 238		Depth = 10-12 ft bgs HYDROPUNCH GW SAMPLE 385-S04-238 FROM DO 7.98 mg/L PH 6.86 TRB >999 NTUs TMP 20.4°C CND 8.37 mS/cm ORP 26 mV			
	12								
	16					@12 Bottom of Borehole At 12 Feet Borehole Backfilled with Bentonite cement grout			
	20								

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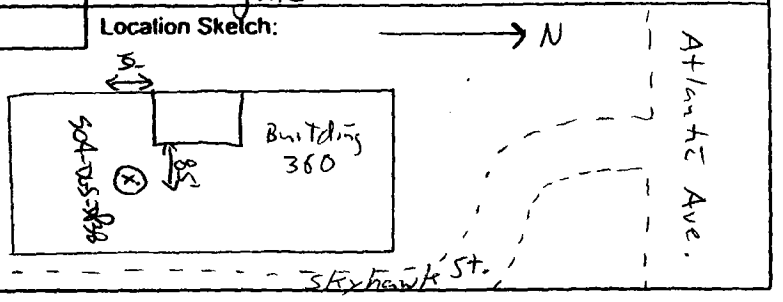
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Site 4/Building 360
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP ~~SAMPLING~~

Boring Number: S04-DGS-DP38	Date Started: 8/29/01 @ 0945
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed:
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Gary Thomas
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision Sampling
Inner Diameter of Well Casing:	Driller: Eugene
Depth to Water (ft./bgs.)	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	0					HYDROPUNCH GROUNDWATER SAMPLE			
						5-7 ft sample (sample ID = 385-S04-234) pH = 7.00, Conductivity = 4.07 mS/cm, Turbid = >1000 NTUs DO = 3.51 mg/L, 19.0°C, Salinity = 0.20% ORP - 9mV			
0915	5			385-S04-234					
						HYDROPUNCH GW 385-S04-235, FROM 10-12 o' BGS			
	10					DO 2.69 mg/L PH 6.59 TRB 999 NTU			
0955				385-S04-235 235A		TMP 19.6°C CND 6.67 mS/cm ORP 40 mV			
	15								
						HYDROPUNCH GW 385-S04-236 FROM 20-22			
	20					DO 4.54 mg/L PH 7.14 TRB >1000 NTUs			
040				385-S04-236		TMP 20.0°C CND 1.01 mS/cm ORP 48 mV			
	25								

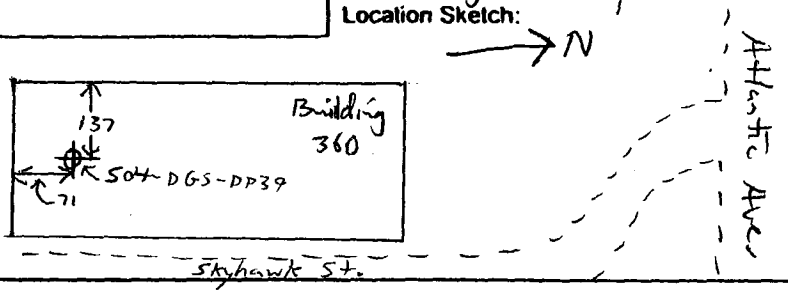
@22 Bottom of borehole at 22 feet.
Borehole backfilled with BENTONITE CEMENT grout

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: Building 360/Site 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: 504-DGS-DP39	Date Started: 8/29/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/29/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum (Direct-push)	Logged By: Greg Thomas
Outer Diameter of Boring: 1 3/4"	Drilling Subcontractor: Precision Sampling
Inner Diameter of Well Casing:	Driller: Eugene Tapalla
Depth to Water (ft./bgs.)	Location Sketch:



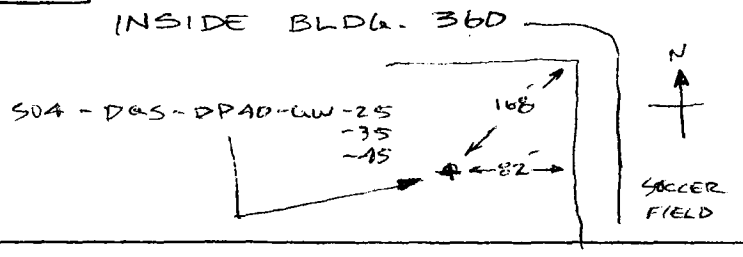
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	0					Readings for the 6-8 ft bgs sample frl			
						Ph 7.87 CON 2.24 mS/cm			
	1					Temp 20.7°C DO 3.29 mg/L			
						TURB >1000 NTUs			
	2								
	3								
	4								
	5								
	6			385-504-289 @1305					
	7								
	8					Bottom of borehole at 8 feet. Borehole backfilled with bentonite cement grout.			
	9								
	10								

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: BLDG. 360/SITE 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DPAO	Date Started: 8/31/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 8/31/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: — 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: —	Driller: JOSE AMBRIZ, MARCO RODRIGUEZ
Depth to Water (ft./bgs.) —	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID *	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
	3	GROUND SURFACE 4" below concrete				2 - VOA/HCL → 8260/VOC (*) ONSITE MOBILE LAB			
	6								
	9								
	12								
	15								
	18								
	21								
	24					HYDROPUNCH GW SAMPLE: 385-S04-241A 29' BGS - 31' BGS			Ø
	27	SCREEN 27-41				Temp = 19.62 °C ORP = -101.7 mV brownish-gray			
1110	30			385 S04 241A		COND = 1,975 µS/cm pH = 7.17 silty water w/			
	33					D.O. = 1.18 mg/L TURB - 481.4 NTU black organic mat'l floating, slight organic odor			
	36	SCREEN 39-41				HYDROPUNCH GW SAMPLE: 385-S04-242A			
	39			385-S04 242A		39' BGS - 41' BGS			Ø
000	42					TEMP = 20.61 ORP = -135.5 mV silty brnish-gray			
	45	SCREEN 45-51				Cond = 3053 pH = 7.54 organic mat'l			
	48					D.O. = 0.63 TURB = 1381 NTU slt org. odor			
	51	SCREEN				HYDROPUNCH GW SAMPLE = 385-S04-243A			
0557	54	49-51'		BOH @ 51'		49' - 51'			Ø
	57					T = 19.43°C D.O. = 1.92 mg/L pH = 7.09			
	60					C = 7524 µS/cm ORP = 8.6 mV TURB = 1376 NTU			

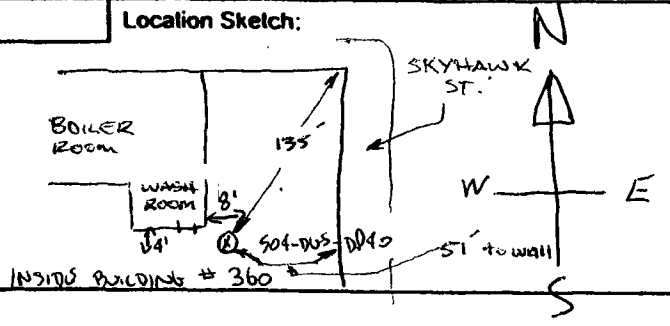
TOTAL DEPTH = 51'
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 4
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP40	Date Started: 9/6/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/6/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTR
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: VAL
Depth to Water (ft./bgs.)	Location Sketch:



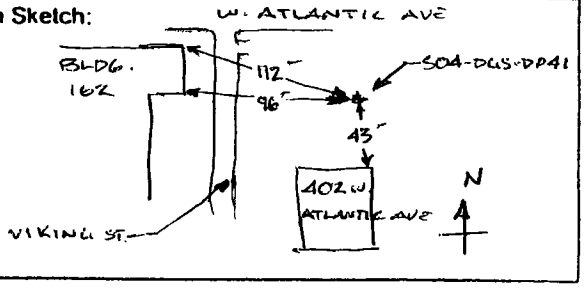
	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE			
						HYDROPUNCH GW 385-S04-248 FROM 60.0-62.0' BGS			
						DO 6.12 mg/L ORP 13.6 mV TRB 20.94 NTU			
	20					TMP 20.86°C CND 19844 mS/cm PH 7.21			
						GW LIGHT BROWN, SLIGHT FILM.			
	40					TOTAL DEPTH = 62'			
						BORING BACKFILLED W/ CEMENT GROUT			
1540	60			385-S04-248					

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: S04-DGS-DP41	Date Started: 9/26/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/26/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: ~ 1/2" S.S. SCREEN	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~ 6"	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4								
	8								
	12					GROUND WATER HYDROPUNCH SAMPLE # 385-S04-265. 3-VOA/HCL, LOW LEVEL VOC/8260 C&T LAB, 48-HR TAT. COLLECTED W/ TEFLON DISPOSABLE BAILER. DRIVE CASING TO 14' bgs PULL TO 12' bgs			
0930				385 S04 265					Ø
	14	BOH @ 14'				TEMP - 23.49°C SPC - 23,062 COND - 22,418 uS/cm PH - 7.31 D.O. - 0.89 mg/L TURB - 1,340 NTU ORP - -157.2 MV			
	16					TOTAL DEPTH = 14' BORING BACKFILLED W/ CEMENT GROUT			

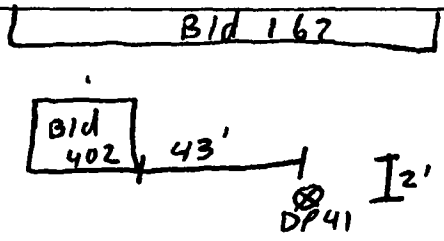
Sheet 1 of 1

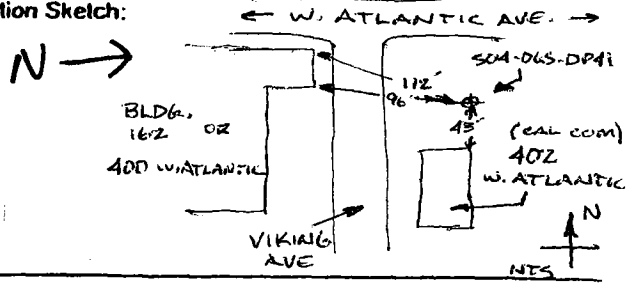
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: Site 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-DGS-DP41	Date Started: 9/17/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/17/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Israel Ramirez
Depth to Water (ft./bgs.)	Location Sketch:





Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	10					20-22 385-S04-256 Temp 21.77 22.77°C ORP -136.9 mV PH ~~6.6~~ 6.86 Turb 13913 NTU CND 16811 µS/cm Water: Brown tan, Turbid, DO 2.75 mg/L No odor, No sheen			
1320 ~~935~~	20			385 S04 256		35-37 385-S04-257 Temp 18.71°C ORP -75.2 mV PH 6.04 Turb 1372.3 NTU CND 25671 µS/cm water tan brown, v. sandy DO 1.09 mg/L No odor No sheen			
	30					49-50 385-S04-258			
935	40			385 S04 257		Temp 20.24°C PH 6.54 CND 56764 µS/cm DO 0.51 mg/L TRB 321.4 NTU ORP -131.8 mV water tan brown, No odor, No sheen			
1100	50			385 S04 258		60-62 385-S04-259 Temp 21.72°C ORP -141.2 mV water: CND 66004 µS/cm PH 6.69 Tan, No odor, DO 0.33 mg/L Turb 310.1 NTU No sheen			
1200	60			259					

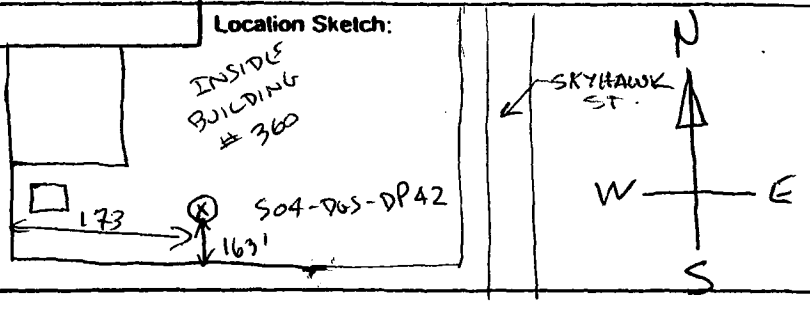
TOTAL DEPTH = 62'
BORING BACKFILLED W/ CEMENT GROUT.

CTO-385
Bldg./Site:
Project Name: SUPPLEMEN REMEDIAL INVESTIGA- DATA GAP SAMPLIN

.TRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

g Number: S04-DGS-DP42	Date Started: 9/11/01
ıg Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/11/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
r Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Diameter of Well Casing:	Driller: VAL
h to Water (ft./bgs.)	Location Sketch:



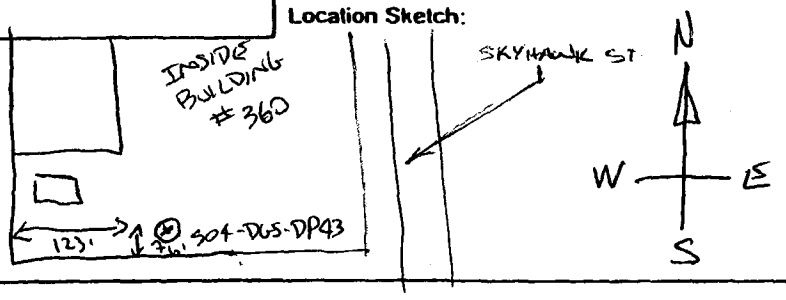
Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.E. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
					HYDROPUNCH GROUNDWATER SAMPLE			
4					HYDROPUNCH GW 385-S04-253 FROM			
					DO: 4.99 mg/L TRB: 1373.9 NTU PH: 6.97			
0845			385-S04-253		TMP: 19.12 °C ORP: 190.2 mV CND 27.62 mS/cm			
					WATER - STRONG ODOR, BROWN.			
8					HYDROPUNCH GW 385-S04-254 FROM			
			385-S04-254		DO TRB PH			
0930 12					TMP ORP CND			
					NOT ENOUGH H_2O			
					TOTAL DEPTH = 12'			
					BORING BACKFILLED W/ CEMENT GROUT			

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site:
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

Boring Number: S04-DGS-DP43	Date Started: 9/11/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/11/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MTC
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.)	Location Sketch:



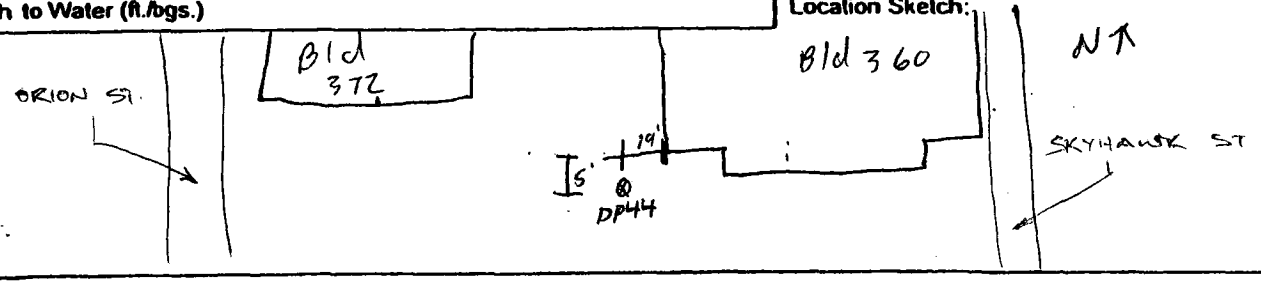
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dis.	Description	USCS soil symbol	Well construction	OVM (ppm)
						HYDROPUNCH GROUNDWATER SAMPLE			
						HYDROPUNCH GW 385-S04-255 FROM NOT ENOUGH SAMPLE VOLUME			
	4								
1025	8			385-S04-255		TOTAL DEPTH = 8' BORING BACKFILLED W/ CEMENT GROUT			

CTO-385
Bldg./Site: Site 4
Project Name: SUPPLEMEN REMEDIAL INVESTIGA DATA GAP SAMPLIN

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

Boring Number: S04-DGS-~~DP44~~ DP44	Date Started: 9/17/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/17
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: Laura Genin
Outer Diameter of Boring: 2"	Drilling Subcontractor: Precision
Inner Diameter of Well Casing:	Driller: Israel Ramirez
Depth to Water (ft./bgs.)	Location Sketch:



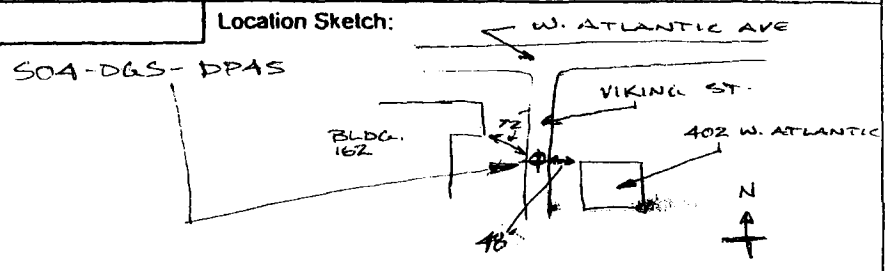
Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.O. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
						25-27' 385-S04-260			
	8 ~~8~~					Temp 23.17°C			
						CND 4736.0 MS/cm water: tan color, No odor			
						DO 4.89 mg/L No sheen			
						ORP -124.3 mV			
	10 16					pH 6.66			
						Turb 1394.1 NTU			
						Duplicate ID 385-S04-924			
	15 24				Dupl	@ 1500			
1445 1500				385 S04 260	385 S04 924				
	20 32					TOTAL DEPTH = 27'			
						BORING BACKFILLED W/ CEMENT GROUT.			
	25 41								
1445				~~385 S04 260~~	~~S04 924~~ Duplicate				

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-385
Bldg./Site: 4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: S04-DGS-45 (DP45)	Date Started: 9/26/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 9/26/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" DRIVE CAS.	Drilling Subcontractor: PSI
Inner Diameter of Well Casing: 1/2" S.S. SCREEN	Driller: JOSE AMBRIZ
Depth to Water (ft./bgs.) ~6'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	2, 4, 6, 8					GROUNDWATER HYDROPUNCH SAMPLES COLLECTED W/ TEFLON DISPOSABLE BAILER 3-VOA/HCL, 8260/VOC C&T LAB 48 HR TAT			
	10, 12								
1030	14			385 S04 266		#385-S04-266 14'-12' bgs S.S. SCREEN TEMP 22.95°C ORP -197.3mV TURB 1,394 COND 23,313 µS/cm SPC 24,360 D.O. 1.11 mg/L pH 6.71 VERY TURBID SANDY BROWNISH-GRAY H2S ODOR			0
	16, 18								
1115	20, 22			385 S04 267		#385-S04-267 22'-20' TEMP 23.60°C SPC 24,791 COND. 24,113 µS/cm pH 6.67 D.O. 1.10 mg/L TURB 1397.4 NTU ORP -152.6 mV VERY SANDY BROWN ODORLESS MUCH SEDIMENT			0
	24, 26, 28, 30, 32								
1200	34, 36			385 S04 268		#385-S04-268 37-35' VERY SANDY BROWN MUCH SEDIMENT TEMP 24.20°C ORP -182.8mV pH 6.46 ODORLESS COND. 53,140 µS/cm SPC 54,071 TURB 1,399.5 NTU D.O. 3.21 mg/L			0
	38	BOH @ 37'							
	40								

TOTAL DEPTH = 37'
BORING BACKFILLED W/ CEMENT GROUT

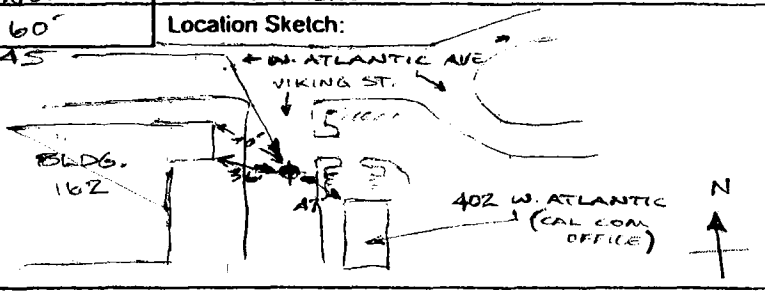
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 055
Bldg./Site: 162 / 4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: S04-DGS-DP45	Date Started: 10/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" I.D. DRIVE CASING	Driller: SERGIO
Depth to Water (ft./bgs.) 1/2" ϕ S.S. SCREEN @ 48' & 60'	Location Sketch:

S04-DGS-DP45



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4, 8, 12, 16	3' DRIVE CASING				GROUNDWATER HYDROPUNCH SAMPLES: STAINLESS STEEL SCREEN SET 2' BELOW TARGET DEPTH, DRIVE CASING PULLED TO EXPOSE SCREEN. VOCs SAMPLED WITH DISPOSABLE TEFLON BAILER LOW LEVEL VOC/8260, C&T LAB, 48-HR RUSH TAT 3-VOA/HCL PROVIDED FOR EACH DEPTH			
	20, 24, 28, 32, 36, 40, 44								
0950	48, 52		48' / 50'	385, 404, 269		TEMP - 21.99°C ORP - -258.9mV TURB - 1389.6; COND - 59,693µS/cm SPC - 63,484; D.O. - 7.93mg/L PH - 6.99; - VERY TURBID BROWN; - MUCH SEDIMENT; - SOME BLACK ORGANIC MAT'L; - ODORLESS			0
1100	56, 60, 64		60' / 62'	385, 404, 270		TEMP - 20.53°C SPC - 70,877; COND - 64,712µS/cm PH - 6.88; D.O. 7.37mg/L TURB 1380.5NTU; ORP - -347.0mV; VERY SANDY BROWN, MUCH SEDIMENT, ODORLESS			0
	68, 72, 76, 80	BOH @ 62'				TOTAL DEPTH = 62'; BORING BACKFILLED W/ CEMENT GROUT			

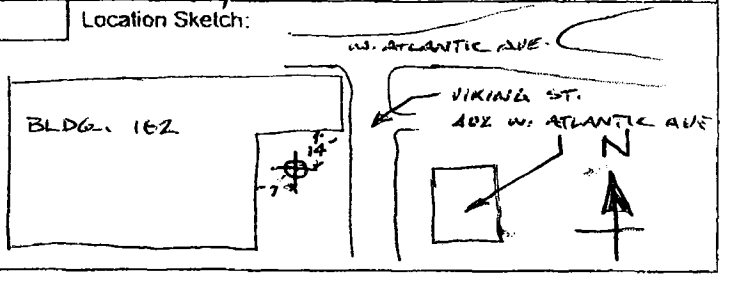
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 162/4
Project Name: ALAMEDA POINT SUPLEMENTAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP46	Date Started: 10/17/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/17/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" Φ DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" Φ "	Driller: VAL, MARCO
Depth to Water (ft./bgs.) 1/2" Φ G.S. SCREEN @ 12' BGS	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	1		STAINLESS STEEL (.010) SCREEN			GROUNDWATER HYDROPUNCH SAMPLE COLLECTED USING TEFLON DISPOSABLE BAILER. ANALYSIS REQUESTED: LOW LEVEL VOC/8260. 3-VOA/HCL TO CURTIS & TOMPKINS LAB ON 48-HR RUSH TAT. WATER QUALITY MEASUREMENTS USING YSI-6920			
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11								
	12			385 S04 291		TEMP - 20.24°C . VERY TURBID GRAY			Ø
0830	13					COND - 5,526 MS/CM - SLIGHT SHEEN			
	14					D.O. - 40.26 mg/L - SLIGHT H_2S ODOR (ORGANIC)			
	15	BOH @ 14'	14'-12'			ORP - -119.5 mV - NO OVM HIT			
	16					SPC - 6,083 - MUCH SEDIMENT IN CUP			
		BACKFILLED W/ NEAT CEMENT				pH - 7.32			
						TURB. 1,378 NTU			

TOTAL DEPTH = 14'

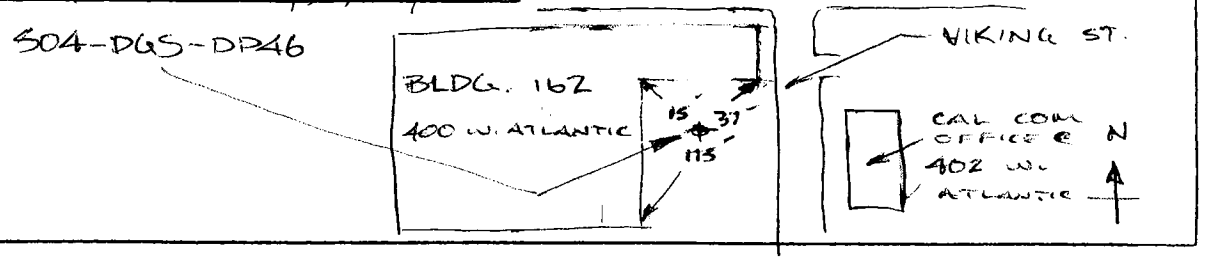
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 365
Bldg./Site: 162/4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: 504-DGS-DP46	Date Started: 10/5/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" O.D. DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8" I.D. "	Driller: SERGIO
Depth to Water (ft./bgs.) 1/2" Φ SCREEN @ 20', 35', 48', 60'	Location Sketch: ← W. ATLANTIC AVE. →



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	V.B. utility type, dia. / Blow count (per 6 inches)	Description	USCS soil symbol	Well construction	OVM (ppm)
12	4					GROUNDWATER HYDROPUNCH SAMPLES COLLECTED WITH TEFLON DISPOSABLE BAILERS THROUGH 2' STAINLESS STEEL SCREENS FOR LOW LEVEL VOC/8260 3-VOA/HCL, CKT LAB ON 48 HR RUSH TAT			
	8								
	12								
	16								
1300	20			385 504 271		TEMP 21.60°C SPC - 30,355 VERY SILTY, SANDY BROWN COND 28,369 µS/cm PH - 6.63 MUCH SEDIMENT D.O. - 15.61 mg/L TURB - 1,335.6 NTU ODORLESS ORP - -678.2 mV			Ø
	24								
	28								
	32								
1335	36			385 504 272 *930		TEMP 20.70°C SPC 54,941 VERY SANDY BROWN COND 50,423 PH 6.32 ODORLESS D.O. 6.17 mg/L TURB 1,389.1 NTU * FIELD DUPLICATE # 385 504 930 ORP -647.1 mV			Ø
	40								
	44								
1430	48			385 504 273		TEMP 21.20°C SPC 42,639 VERY SANDY DARK BROWN COND 39,668 PH 6.76 MUCH SEDIMENT D.O. 4.68 mg/L TURB 1,384.9 NTU ODORLESS ORP -702.4 mV			Ø
	52								
	56								
1530	60			385 504 274		TEMP 21.08°C SPC 70,241 VERY SILTY, SANDY OL. BRN COND 64,962 PH 6.59 MUCH SEDIMENT D.O. 5.56 mg/L TURB 1,060.9 NTU ODORLESS ORP -680.4 mV			Ø
	64								
		BOH @ 62'				TOTAL DEPTH = 62'			

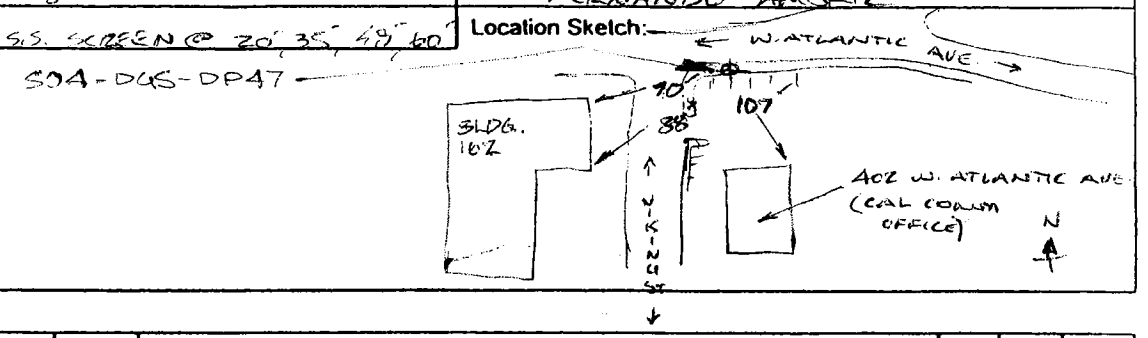
BORING BACKFILLED W/ CEMENT GROUT

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 355
Bldg./Site: 162/4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: S04-DGS-DP47	Date Started: 10/8/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/8/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1 1/8"	Driller: FERNANDO AMBRIZ
Depth to Water (ft./bgs.) 1/2" S.S. SCREEN @ 20', 35', 49', 60'	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	4, 8, 12, 16					GROUNDWATER HYDROPUNCH SAMPLES COLLECTED THROUGH S.S. SCREEN W/TEFLON DISPOSABLE BAILER. 3-VOA/HCL, LOW LEVEL VOC/8260, CTT LAB 48 HR TAT			
0840	20, 24, 28, 32			385 S04 275		TEMP - 19.24°C SPC - 31,345 COND 27,80 mS/cm pH 6.35 D.O. 5.06 mg/L TURB - 1373.1 NTU ORP - -32.0 mV · VERY SANDY BROWN · MUCH SEDIMENT · ODORLESS			
0930	36, 40, 44			385 S04 276		TEMP 19.43°C SPC 79,412 COND 70,81 mS/cm pH 6.56 D.O. 4.02 mg/L ORP (-262.6) mV TRB - 1,374.5 NTU · VERY SANDY GRAY · MUCH SEDIMENT · H_2S ODOR			
1015	48, 52, 56, 60			385 S04 277		TEMP 20.11°C SPC - 79,933 COND 72,938 pH - 6.59 D.O. 2.62 mg/L TRB - 1,378.7 NTU ORP. (-259.3) mV · VERY SANDY BRNISH GRAY · MUCH SEDIMENT · SLIGHT H_2S ODOR			
1135	64, 68, 72, 76, 80	304 C 62 BACKFILLED		385 S04 278 w/ GROUT		TEMP 20.36°C SPC - 76,052 COND - 69,077 mS/cm pH 6.73 D.O. 2.36 mg/L TURB - 1,380.1 NTU ORP - -610.1 mV · VERY SANDY BRN · MUCH SEDIMENT · ODORLESS			

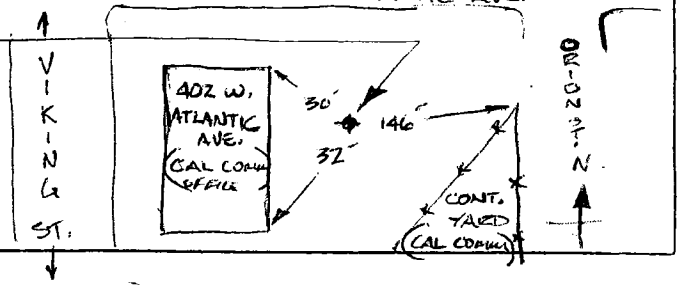
TOTAL DEPTH = 62'
BORING BACKFILLED W/ CEMENT GROUT.

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 355
Bldg./Site: 162/4
Project Name: ALAMEDA SUPPLEMENTAL REME. INVESTIGATION DATA SAMPLING

Boring Number: 504-DGS-DP48	Date Started: 10/8/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/8/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 3/4" DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1/8" "	Driller: FERNANDO AMBRIZ
Depth to Water (ft./bgs.) 1/2" @ S.S. SCREEN @ 20', 35', 48', 60'	Location Sketch: ← W. ATLANTIC AVE. →



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
20	4					GROUNDWATER HYDROPUNCH SAMPLES COLLECTED WITH TEFLON DISPOSABLE BAILER THROUGH STAINLESS STEEL 100 SCREEN FOR LOW LEVEL VOC/8260. 3-VOA/HCL, CTT LAB 48 HR RUSH TAT			
	8								
	12								
	16								
	20			385 504 219		TEMP - 21.44°C SPC - 4023 VERY SANDY BROWN COND. - 3759 mS/cm pH - 7.36 MUCH SEDIMENT D.O. - 2.55 mg/L TRB. 1,386.0 NTU SLIGHT H_2S ODOR ORP - (-113.5) mV			
1350	24								
	28								
	32			*		TEMP 21.53°C SPC - VERY SANDY BRN/GRAY COND 54,827 mS/cm pH 6.66 MUCH SEDIMENT D.O. 2.14 mg/L TRB - 1,385.3 NTU NO ODOR ORP. (-564.4) mV * FIELD DUPLICATE OF 280 # 385-504-933			
1430	36			385 504 280					
	40								
	44								
	48			385 504 281		TEMP 21.04°C SPC 46,615 COND 42,997 mS/cm pH 6.74 VERY SANDY BRN/GRAY D.O. 35.41 mg/L TRB 1,382.6 NTU MUCH SEDIMENT ORP (-275.6) mV NO ODOR			
1515	52								
	56								
	60			385 504 282		TEMP 20.72°C ~~TEMP~~ SPC 70,416 COND 64,690 mS/cm ~~COND~~ pH 6.76 D.O. 5.26 mg/L ~~D.O.~~ TRB 1,381.9 NTU ORP (-604.8) mV			
1615	64								
	68	BOH @ 62'				TOTAL DEPTH = 62'			
	72								
	76	BACKFILLED W/ GROUT							
	80								

BORING BACKFILLED W/ CEMENT GROUT

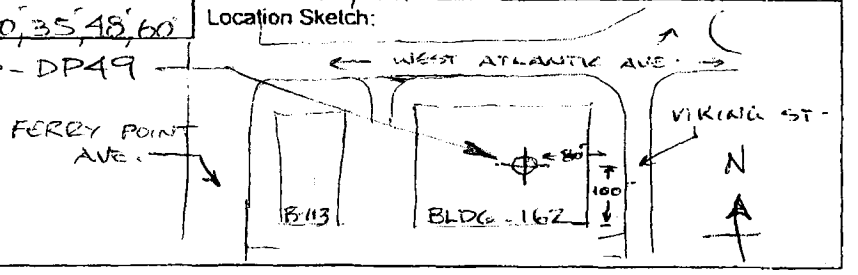
Sheet 1 of 1

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO-
Bldg./Site: 162/4
Project Name: ALAMEDA POINT SUPPLEMENTAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04 - DGS - DP49 (INSIDE BLDG. 162)	Date Started: 10/16/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/16/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" ϕ DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1/8" ϕ "	Driller: VAL, MARCO
Depth to Water (ft./bgs.) 1/2" ϕ S.S. SCREEN @ 12, 20, 35, 48, 60	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
1250	3, 6, 9	3' DRIVE CASING				GROUNDWATER HYDROPUNCH SAMPLES, ANALIZED FOR LOW LEVEL VOC/8260, 3-VOA/HCL C&T LAB 48-HR RUSH TAT. COLLECTED WITH TEFLON DISPOSABLE BAILERS.			
1305	12, 15, 18		S.S. SCREEN 14-12'	3885 S04 286		TEMP - 18.93 °C SpC - 20,717 COND - 18,372 mS/cm pH - 7.09 D.O - 38.12 mg/L TURB - 275.9 NTU ORP - -127.1 mV	TURBID GRAY ODORLESS		Ø
1325	21, 24, 27, 30, 33		22-20	3885 S04 287		TEMP - 19.31 °C SpC - 24,297 COND - 21,603 mS/cm pH - 6.73 D.O. - 32.54 mg/L ORP - -102.9 mV TRB - 1,376 NTU	VERY TURBID BROWN MUCH SEDIMENT ODORLESS		Ø
1405	36, 39, 42, 45, 48		37-35	3885 S04 288		TEMP - 19.54 °C SpC - 65,112 COND - 58,308 mS/cm pH - 6.29 D.O - 13.69 mg/L TRB - 1,378 NTU ORP - -445.1 mV	VERY SILTY, SANDY BROWN MUCH SEDIMENT ODORLESS		Ø
1500	51, 54, 57, 60		50-48	3885 S04 289		TEMP - 19.60 °C SpC - 69,807 COND - 62,839 mS/cm pH - 6.33 D.O. - 6.84 mg/L TRB - 1,379 NTU ORP - -470.1 mV	VERY TURBID BROWN MUCH SEDIMENT ODORLESS ORGANIC MAT'L. FLOATING		Ø
1505	63		62-60	3885 S04 290		TEMP - 19.28 °C SpC - 67,305 COND - 58,039 mS/cm pH - 6.45 D.O. - 12.67 mg/L TRB - 1,376 NTU ORP - -449.7 mV	VERY SANDY BROWN MUCH SEDIMENT ODORLESS WHITE & BLACK ORGANICS FLOATING		Ø

BOH @ 62'

BACKFILLED W/ NEAT CEMENT

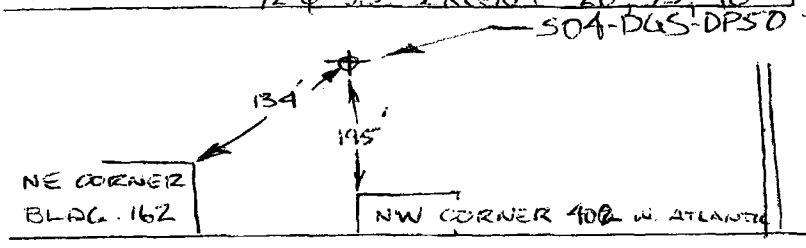
Sheet 1 of 1

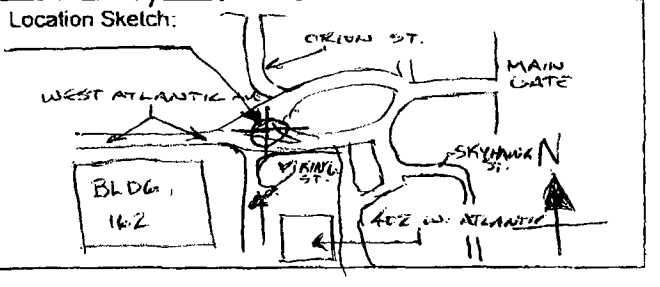
TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site: 360-162/SITE 4
Project Name: ALAMEDA PT. SUPPLEMENTAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS-DP50	Date Started: 10/16/01
Drilling Method: (Circle one) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 10/16/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: RE
Outer Diameter of Boring: 1 3/4" S.S. DRIVE CASING	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing: 1/8" "	Driller: VAL, MARCOS
Depth to Water (ft./bgs.) 1/2" ϕ S.S. SCREEN @ 20', 35', 48'	Location Sketch:





Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	QC Sample ID / Type	Description	USCS soil symbol	Well construction	OVM (ppm)
0830		3' DRIVE CASING			TB 385 S04 935	GROUNDWATER HYDROPUNCH SAMPLES COLLECTED WITH TEFLON DISPOSABLE BAILERS. 3-VOA/HCL, LOW LEVEL VOC (8260) CIT LAB, 48-HR RUSH TAT			
	10								
0915	20		SCREEN 22-20	385 S04 283		TEMP - 20.09 °C SPC - 13,583 - VERY SILTY, SANDY BROWN COND - 12,298 µS/cm PH - 6.64 - MUCH SEDIMENT D.O. - 46.1 mg/L TURB - 1,377 NTU - ODORLESS ORP - 26.3 mV			ϕ
	30								
1000			SCREEN 37-35	385 S04 284	FD 385 S04 936	TEMP - 20.37 °C SPC - 82,739 - VERY SILTY, SANDY BROWN COND - 75,393 µS/cm PH - 6.13 - SLIGHT FUEL ODOR ON WATER, STRONG FUEL ODOR ON RODS REMOVED FROM BORING D.O. - 5.61 mg/L TURB - 1,371.9 NTU ORP - -21.0 mV			ϕ
	40								
05	50			385 S04 285		TEMP - 20.77 °C SPC - 60,086 - VERY SILTY, SANDY BROWN COND - 55,218 µS/cm PH - 6.40 - ORGANIC MAT'L FLOATING ON WATER D.O. - 11.29 mg/L TURB - 1,381 NTU ORP - -515.3 mV - NO ODOR ON WATER			778 @ BOREHOLE THROUGH DRIVE CASING

BOH @ 50'

1130 BACKFILLED WITH NEAT CEMENT

2738 ppm FROM OPEN BOREHOLE

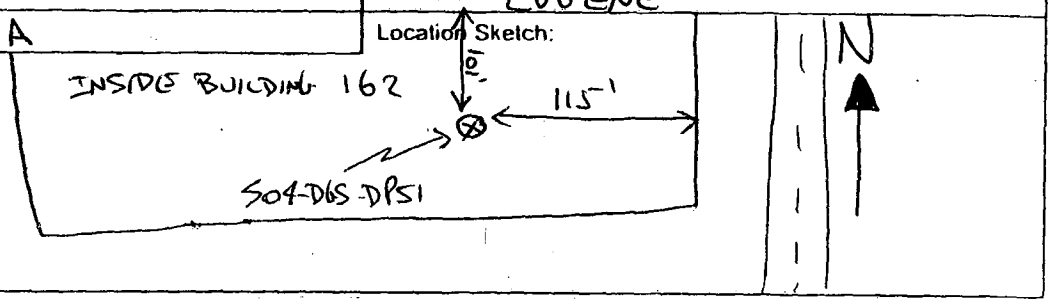
Continue

TETRA TECH EM INC.

SOIL BORING AND WELL INSTALLATION AND VISUAL CLASSIFICATION LOG

CTO- 385
Bldg./Site:
Project Name: ALAMEDA POINT SUPPLEMENTAL REMEDIAL INVESTIGATION DATA GAP SAMPLING

Boring Number: S04-DGS- DP51	Date Started: 11/5/01
Drilling Method: (*Circle one*) HSA Continuous Core/GeoProbe/Hand Auger	Date Completed: 11/5/01
Air Rotary/Mud Rotary/Dual Tube Percussion/Sonic/Vacuum	Logged By: MARK CRUICKSHANK
Outer Diameter of Boring: 2"	Drilling Subcontractor: PRECISION
Inner Diameter of Well Casing:	Driller: EUGENE
Depth to Water (ft./bgs.) NA	Location Sketch:



Time	Depth (ft) bgs	Drive Interval	Recovered Interval	Sample ID	Blow count (per 6 inches) / V.B. utility type, dia.	Description	USCS soil symbol	Well construction	OVM (ppm)
	0					HYDROPUNCH SAMPLE FROM 12.0-14.0' BGS DO - 5.10mg/L CND 22.1 mS/cm TRB 110NTU TMP 18.5°C ORP - -89 mV PH 7.14			
1125				385-S04-293 940					
	16					HYDROPUNCH SAMPLE FROM 20.0 - 22.0'BGS DO - 7.78mg/L CND - 30.9 mS/cm TRB > 999 NTU TMP - 19.2°C ORP - 56 mV PH 6.51			
1200				385-S04 293					
	24								
1250	32			385-S04-294		HYDROPUNCH SAMPLE FROM 30.0 - 32.0'BGS DO CND PH TRB NOT ENOUGH WATER VOLUME ORP TMP			

TOTAL DEPTH = 32'
BORING BACKFILLED W/ CONCRETE GROUT.