

**U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA**



00434

19



FINAL

**REMEDIAL INVESTIGATION REPORT
AT THE OPEN BURNING (OB) GROUNDS
APPENDICES VOLUME I**

SEPTEMBER 1994

APPENDIX A
HISTORICAL GROUNDWATER MONITORING DATA

**MONITORING WELL MW-1
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
		METALS									
ALUMINUM	mg/l	-	-	-	-	-	-	-	129	-	3.41
ANTIMONY	mg/l	-	-	-	-	-	-	-	0.0537	-	ND
ARSENIC	mg/l	ND	-	-	-	-	-	-	0.0044	-	0.001
BARIUM	mg/l	0.09	-	-	-	-	-	-	1.05	-	0.0867
BERYLLIUM	mg/l	-	-	-	-	-	-	-	0.011	-	0.0005
CADMIUM	mg/l	0.002	-	-	-	-	-	-	0.0089	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	600	-	138
CHROMIUM	mg/l	ND	-	-	-	-	-	-	0.161	-	ND
COBALT	mg/l	-	-	-	-	-	-	-	0.181	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.792	-	0.0056
IRON	mg/l	0.022	1.5	-	ND	-	0.26	-	167	-	3.12
LEAD	mg/l	ND	-	-	-	-	-	-	0.495	-	0.0047
MAGNESIUM	mg/l	-	-	-	-	-	-	-	119	-	29.9
MANGANESE	mg/l	-	0.015	-	ND	-	ND	-	6.71	-	0.0355
MERCURY	mg/l	0.002	-	-	-	-	-	-	0.0035	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.356	-	0.0111
POTASSIUM	mg/l	2.7	-	-	-	-	-	-	18.4	-	2.66
SELENIUM	mg/l	ND	-	-	-	-	-	-	0.0126	-	ND
SILVER	mg/l	ND	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	6.7	8.6	-	12.5	-	17.6	-	14	-	13
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.167	-	0.0084
ZINC	mg/l	-	-	-	-	-	-	-	6.66	-	0.0346
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	4.3
CHLORIDE	mg/l	8.6	3.4	-	4.3	-	8.86	-	3.7	3	4
SULFATE	mg/l	220	280	-	292	-	217	-	260	190	200
NITRATE	mg/l	-	-	-	-	-	-	-	1.33	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	ND	0.04	ND	0.007	-	ND	-	-	0.86	1
CONDUCTANCE(LAB)	umhos/cm	-	860	1400	845	-	-	-	839	750	860
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	-	773	747	470	500	625
PHENOL	mg/l	ND	ND	-	ND	-	ND	-	-	-	-
pH (LAB)	Standard	-	-	-	6.60	-	-	-	6.98	7.07	6.99
pH (FLD)	Standard	-	-	-	-	-	7.20	7.10	6.98	6.70	7.17
TOC	mg/l	6.1	5	4.7	8.9	-	3.8	-	3.9	1	2
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	14.5	58
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
RDX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
DNT 2,4	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-2
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
		METALS									
ALUMINUM	mg/l	-	-	-	-	-	-	-	42	-	1.14
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	ND	-	-	-	-	-	-	0.0035	-	ND
BARIUM	mg/l	0.078	-	-	-	-	-	-	0.51	-	0.0808
BERYLLIUM	mg/l	-	-	-	-	-	-	-	0.0032	-	ND
CADMIUM	mg/l	ND	-	-	-	-	-	-	0.0034	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	201	-	122
CHROMIUM	mg/l	ND	-	-	-	-	-	-	0.0609	-	ND
COBALT	mg/l	-	-	-	-	-	-	-	0.0449	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.233	-	0.0101
IRON	mg/l	0.032	1.4	-	ND	-	0.19	-	67.8	-	1.34
LEAD	mg/l	ND	-	-	-	-	-	-	0.116	-	0.0018
MAGNESIUM	mg/l	-	-	-	-	-	-	-	34.2	-	20.4
MANGANESE	mg/l	-	0.011	-	ND	-	0.01	-	1.95	-	0.0862
MERCURY	mg/l	0.002	-	-	-	-	-	-	0.00099	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.146	-	ND
POTASSIUM	mg/l	0.8	-	-	-	-	-	-	7.65	-	1.88
SELENIUM	mg/l	ND	-	-	-	-	-	-	0.0041	-	ND
SILVER	mg/l	ND	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	6.8	3.5	-	14.4	-	21.3	-	14.9	-	16.9
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.068	-	0.0031
ZINC	mg/l	-	-	-	-	-	-	-	0.45	-	0.012
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	ND
CHLORIDE	mg/l	6.2	2.6	-	2.6	-	7.09	-	2	1	2
SULFATE	mg/l	140	73	-	103	-	176	-	97	41	130
NITRATE	mg/l	-	-	-	-	-	-	-	0.03	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	ND	0.05	ND	0.012	-	0.013	-	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	-	520	1700	585	-	-	-	626	530	750
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	-	461	484	363	345	550
PHENOL	mg/l	ND	ND	-	0.003	-	0.004	-	-	-	-
pH (LAB)	Standard	-	-	-	6.80	-	-	-	7.29	7.30	7.33
pH (FLD)	Standard	-	-	-	-	-	7.60	7.40	6.99	6.80	7.00
TOC	mg/l	4.5	6.4	7.1	250	-	ND	-	2.2	ND	2
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	96.5	18
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
RDX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
DNT 2,4	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-3
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
		METALS									
ALUMINUM	mg/l	--	--	--	--	--	--	--	0.367	--	0.348
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	ND	--	--	--	--	--	--	ND	--	ND
BARIIUM	mg/l	0.058	--	--	--	--	--	--	0.0468	--	0.0371
BERYLLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CADMIUM	mg/l	ND	--	--	--	--	--	--	ND	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	128	--	112
CHROMIUM	mg/l	ND	--	--	--	--	--	--	ND	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	ND	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0022	--	0.003
IRON	mg/l	0.043	0.67	--	ND	--	0.07	--	0.462	--	0.399
LEAD	mg/l	ND	--	--	--	--	--	--	0.0017	--	0.0015
MAGNESIUM	mg/l	--	--	--	--	--	--	--	25.4	--	29.6
MANGANESE	mg/l	--	ND	--	ND	--	ND	--	0.0248	--	0.0101
MERCURY	mg/l	ND	--	--	--	--	--	--	0.00015	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	ND	--	ND
POTASSIUM	mg/l	0.9	--	--	--	--	--	--	0.958	--	1.1
SELENIUM	mg/l	ND	--	--	--	--	--	--	0.0012	--	ND
SILVER	mg/l	ND	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	3.7	3.4	--	3.5	--	5.9	--	3.99	--	7.62
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
ZINC	mg/l	--	--	--	--	--	--	--	0.0062	--	0.0043
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	ND
CHLORIDE	mg/l	13	4	--	4.3	--	8.86	--	3.2	3	4
SULFATE	mg/l	210	100	--	60	--	168	--	96	110	140
NITRATE	mg/l	--	--	--	--	--	--	--	0.03	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	ND	--	--
NITRATE&NITRITE	mg/l	--	--	--	--	--	--	--	--	ND	0.05
TOX	mg/l	ND	0.06	ND	9.2	ND	0.021	--	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	--	650	1400	575	--	--	--	742	770	880
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	838	674	673	445	500	675
PHENOL	mg/l	ND	ND	--	ND	--	0.005	--	--	--	--
pH (LAB)	Standard	--	--	--	6.80	--	--	--	7.27	7.10	6.99
pH (FLD)	Standard	--	--	--	--	7.10	7.10	7.10	6.34	7.30	6.99
TOC	mg/l	5.6	6.2	5.9	7.3	15.6	4	--	3	2	3
TURBIDITY	NTU	--	--	--	--	--	--	--	99	33.5	12
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
RDX	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 2,4	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-4
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
		METALS									
ALUMINUM	mg/l	--	--	--	--	--	--	--	71.3	--	2.13
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	ND	--	--	--	--	--	--	0.004	--	0.0016
BARIUM	mg/l	0.072	--	--	--	--	--	--	0.721	--	0.0534
BERYLLIUM	mg/l	--	--	--	--	--	--	--	0.0048	--	ND
CADMIUM	mg/l	0.001	--	--	--	--	--	--	0.0196	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	429	--	151
CHROMIUM	mg/l	ND	--	--	--	--	--	--	0.104	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	0.0617	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.505	--	0.0064
IRON	mg/l	0.042	4.1	--	ND	--	0.11	--	113	--	2.64
LEAD	mg/l	ND	--	--	--	--	--	--	0.12	--	0.0029
MAGNESIUM	mg/l	--	--	--	--	--	--	--	70.5	--	35.2
MANGANESE	mg/l	--	0.064	--	0.03	--	0.02	--	2.7	--	0.162
MERCURY	mg/l	ND	--	--	--	--	--	--	0.0111	--	0.00013
NICKEL	mg/l	--	--	--	--	--	--	--	0.186	--	ND
POTASSIUM	mg/l	4.1	--	--	--	--	--	--	13.5	--	3.09
SELENIUM	mg/l	ND	--	--	--	--	--	--	0.0039	--	0.0012
SILVER	mg/l	ND	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	9	16	--	22.3	--	17.6	--	23.3	--	25.5
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	0.0985	--	0.0055
ZINC	mg/l	--	--	--	--	--	--	--	0.817	--	0.021
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	2.4
CHLORIDE	mg/l	6.4	3.5	--	4.3	--	10.6	--	2.8	1	3
SULFATE	mg/l	130	220	--	232	--	92.8	--	240	110	230
NITRATE	mg/l	--	--	--	--	--	--	--	0.04	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	ND	--	--
NITRATE&NITRITE	mg/l	--	--	--	--	--	--	--	--	ND	ND
TOX	mg/l	0.02	0.02	ND	0.005	--	0.021	--	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	--	890	1400	900	--	--	--	875	680	940
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	--	600	395	540	445	700
PHENOL	mg/l	ND	ND	--	ND	--	0.006	--	--	--	--
pH (LAB)	Standard	--	--	--	6.60	--	--	--	7.17	7.27	7.17
pH (FLD)	Standard	--	--	--	--	--	7.30	7.40	7.25	6.30	7.00
TOC	mg/l	11.3	5	9	3.6	--	7.7	--	3.4	2	1
TURBIDITY	NTU	--	--	--	--	--	--	--	>200	>200	27.5
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	--	--	ND	ND	--	ND
RDX	ug/l	ND	ND	ND	ND	--	--	1.19	ND	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	ND	ND	ND	ND	--	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	ND	ND	ND	ND	--	--	ND	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	ND	ND	ND	ND	--	--	ND	ND	--	ND
DNT 2,4	ug/l	ND	ND	ND	ND	--	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-5
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	2.39	-	-
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	-
ARSENIC	mg/l	ND	-	-	-	-	-	-	ND	-	-
BARIIUM	mg/l	0.06	-	-	-	-	-	-	0.0729	-	-
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
CADMIUM	mg/l	ND	-	-	-	-	-	-	ND	-	-
CALCIUM	mg/l	-	-	-	-	-	-	-	112	-	-
CHROMIUM	mg/l	ND	-	-	-	-	-	-	0.0023	-	-
COBALT	mg/l	-	-	-	-	-	-	-	ND	-	-
COPPER	mg/l	-	-	-	-	-	-	-	0.0022	-	-
IRON	mg/l	0.024	0.79	-	ND	-	0.09	-	2.83	-	-
LEAD	mg/l	ND	-	-	-	-	-	-	0.0013	-	-
MAGNESIUM	mg/l	-	-	-	-	-	-	-	27	-	-
MANGANESE	mg/l	-	0.028	-	0.02	-	ND	-	0.0622	-	-
MERCURY	mg/l	ND	-	-	-	-	-	-	ND	-	-
NICKEL	mg/l	-	-	-	-	-	-	-	ND	-	-
POTASSIUM	mg/l	0.8	-	-	-	-	-	-	1.1	-	-
SELENIUM	mg/l	ND	-	-	-	-	-	-	0.0016	-	-
SILVER	mg/l	ND	-	-	-	-	-	-	ND	-	-
SODIUM	mg/l	6.9	5.3	-	15.9	-	17.6	-	16.6	-	-
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0031	-	-
ZINC	mg/l	-	-	-	-	-	-	-	0.0085	-	-
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	-
CHLORIDE	mg/l	6.2	2.8	-	3.5	-	10.6	-	2.5	3	-
SULFATE	mg/l	100	70	-	94	-	86	-	107	100	-
NITRATE	mg/l	-	-	-	-	-	-	-	5	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	ND	0.03	0.02	ND	-	0.0082	-	ND	5.1	0.02
CONDUCTANCE(LAB)	umhos/cm	-	3500	1700	730	-	-	-	767	800	-
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	-	552	727	471	500	700
PHENOL	mg/l	ND	ND	-	ND	-	0.005	-	-	-	-
pH (LAB)	Standard	-	-	-	6.90	-	-	-	7.23	7.12	-
pH (FLD)	Standard	-	-	-	-	-	7.70	7.30	7.08	7.31	7.30
TOC	mg/l	3.5	6.2	4.3	6	-	3.3	-	1.7	2	-
TURBIDITY	NTU	-	-	-	-	-	-	-	89	1400	4.5
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
RDX	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	-
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	-
TETRYL	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	-
TNT 2,4,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2,6	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
DNT 2,4	ug/l	ND	ND	ND	ND	-	-	ND	ND	-	-
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-

**MONITORING WELL MW-6
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	--	--	--	--	--	--	--	1.36	--	2.05
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	ND	--	--	--	--	--	--	ND	--	0.001
BARIUM	mg/l	0.018	--	--	--	--	--	--	0.104	--	0.0869
BERYLLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CADMIUM	mg/l	ND	--	--	--	--	--	--	0.0031	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	130	--	110
CHROMIUM	mg/l	ND	--	--	--	--	--	--	0.002	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	ND	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0039	--	0.0034
IRON	mg/l	0.12	0.97	--	ND	--	0.08	--	1.54	--	2.37
LEAD	mg/l	ND	--	--	--	--	--	--	0.0041	--	0.0018
MAGNESIUM	mg/l	--	--	--	--	--	--	--	38.5	--	31.7
MANGANESE	mg/l	--	0.019	--	ND	--	ND	--	0.184	--	0.0372
MERCURY	mg/l	ND	--	--	--	--	--	--	ND	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	0.005	--	ND
POTASSIUM	mg/l	0.8	--	--	--	--	--	--	1.63	--	2.11
SELENIUM	mg/l	ND	--	--	--	--	--	--	0.0014	--	0.002
SILVER	mg/l	ND	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	9.4	8	--	13.1	--	21	--	12.3	--	10.3
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	ND	--	0.0052
ZINC	mg/l	--	--	--	--	--	--	--	0.0129	--	0.0103
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	3.3
CHLORIDE	mg/l	6	4	--	3.5	--	8.86	--	8.3	2	4
SULFATE	mg/l	69	93	--	88	--	71	--	114	110	110
NITRATE	mg/l	--	--	--	--	--	--	--	0.96	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	ND	--	--
NITRATE&NITRITE	mg/l	--	--	--	--	--	--	--	--	0.78	1.2
TOX	mg/l	0.04	0.05	ND	ND	0.052	0.015	--	ND	0.03	0.03
CONDUCTANCE(LAB)	umhos/cm	--	680	1700	688	--	--	--	719	710	680
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	718	547	689	460	440	500
PHENOL	mg/l	ND	ND	--	ND	--	0.002	--	--	--	--
pH (LAB)	Standard	--	--	--	6.70	--	--	--	7.30	7.25	7.14
pH (FLD)	Standard	--	--	--	--	7.20	7.40	7.30	7.43	8.25	7.52
TOC	mg/l	7.2	8.7	1.5	5.4	389	7.3	--	1	ND	2
TURBIDITY	NTU	--	--	--	--	--	--	--	>200	>100	14.9
EXPLOSIVES											
HMX	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
RDX	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	ND	ND	ND	ND	ND	--	2.27	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 2,4	ug/l	ND	ND	ND	ND	ND	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-7
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	2.77	-	-
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	-
ARSENIC	mg/l	ND	-	-	-	-	-	-	ND	-	-
BARIIUM	mg/l	0.036	-	-	-	-	-	-	0.138	-	-
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
CADMIUM	mg/l	ND	-	-	-	-	-	-	ND	-	-
CALCIUM	mg/l	-	-	-	-	-	-	-	102	-	-
CHROMIUM	mg/l	ND	-	-	-	-	-	-	0.0033	-	-
COBALT	mg/l	-	-	-	-	-	-	-	0.0065	-	-
COPPER	mg/l	-	-	-	-	-	-	-	0.0141	-	-
IRON	mg/l	2	1.6	-	ND	-	0.29	-	3.01	-	-
LEAD	mg/l	ND	-	-	-	-	-	-	0.0183	-	-
MAGNESIUM	mg/l	-	-	-	-	-	-	-	21.9	-	-
MANGANESE	mg/l	-	0.019	-	0.01	-	0.04	-	0.376	-	-
MERCURY	mg/l	ND	-	-	-	-	-	-	0.00011	-	-
NICKEL	mg/l	-	-	-	-	-	-	-	0.0105	-	-
POTASSIUM	mg/l	4.2	-	-	-	-	-	-	0.702	-	-
SELENIUM	mg/l	ND	-	-	-	-	-	-	ND	-	-
SILVER	mg/l	ND	-	-	-	-	-	-	ND	-	-
SODIUM	mg/l	1.4	1.6	-	8.85	-	7.7	-	3.27	-	-
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0057	-	-
ZINC	mg/l	-	-	-	-	-	-	-	0.0295	-	-
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	-
CHLORIDE	mg/l	1.8	1.2	-	1.7	-	8.86	-	1.6	ND	-
SULFATE	mg/l	29	24	-	40	-	32.8	-	41	52	-
NITRATE	mg/l	-	-	-	-	-	-	-	0.08	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	0.02	0.08	-	ND	-	0.012	-	ND	ND	-
CONDUCTANCE(LAB)	umhos/cm	-	400	-	524	-	-	-	475	510	-
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	-	449	432	310	330	500
PHENOL	mg/l	ND	ND	-	ND	-	0.004	-	-	-	-
pH (LAB)	Standard	-	-	-	7.00	-	-	-	7.22	7.43	-
pH (FLD)	Standard	-	-	-	-	-	7.30	7.20	8.18	7.40	7.52
TOC	mg/l	18.3	6	-	9	-	8	-	1.4	ND	-
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	17.5	14.9
EXPLOSIVES											
HMX	ug/l	ND	ND	-	ND	-	-	ND	ND	-	-
RDX	ug/l	ND	ND	-	ND	-	-	ND	0.16	-	-
TNB 1,3,5	ug/l	-	-	-	-	-	-	-	ND	-	-
DNB 1,3	ug/l	-	-	-	-	-	-	-	ND	-	-
TETRYL	ug/l	ND	ND	-	ND	-	-	ND	ND	-	-
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	-
TNT 2,4,6	ug/l	ND	ND	-	ND	-	-	ND	ND	-	-
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2,6	ug/l	ND	ND	-	ND	-	-	ND	ND	-	-
DNT 2,4	ug/l	ND	ND	-	ND	-	-	ND	ND	-	-
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-

**MONITORING WELL MW-8
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	--	--	--	--	--	--	--	13.1	--	0.487
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	--	--	--	--	--	--	--	0.0058	--	0.001
BARIUM	mg/l	--	--	--	--	--	--	--	0.176	--	0.0271
BERYLLIUM	mg/l	--	--	--	--	--	--	--	0.0008	--	ND
CADMIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	381	--	302
CHROMIUM	mg/l	--	--	--	--	--	--	--	0.0194	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	0.0306	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0274	--	ND
IRON	mg/l	--	0.68	--	ND	--	0.09	--	23.2	--	0.855
LEAD	mg/l	--	--	--	--	--	--	--	0.0466	--	0.001
MAGNESIUM	mg/l	--	--	--	--	--	--	--	78.4	--	61.8
MANGANESE	mg/l	--	0.029	--	0.02	--	ND	--	0.825	--	0.0176
MERCURY	mg/l	--	--	--	--	--	--	--	ND	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	0.0559	--	ND
POTASSIUM	mg/l	--	--	--	--	--	--	--	5.03	--	2.59
SELENIUM	mg/l	--	--	--	--	--	--	--	0.0041	--	ND
SILVER	mg/l	--	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	--	32	--	17.7	--	16.5	--	21.7	--	15.1
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	0.0219	--	ND
ZINC	mg/l	--	--	--	--	--	--	--	0.0586	--	0.0029
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	3
CHLORIDE	mg/l	--	26	--	19.9	--	23	--	18	25	24
SULFATE	mg/l	--	640	--	807	--	710	--	990	660	700
NITRATE	mg/l	--	--	--	--	--	--	--	1.43	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	ND	--	--
NITRATE&NITRITE TOX	mg/l	--	0.07	ND	ND	ND	ND	--	ND	0.82	0.61
CONDUCTANCE(LAB)	umhos/cm	--	1500	1100	1753	--	--	--	1760	1600	1600
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	1402	1710	1604	1200	1000	1300
PHENOL	mg/l	--	ND	--	ND	--	0.001	--	--	--	--
pH (LAB)	Standard	--	--	--	6.50	--	--	--	6.99	6.98	7.06
pH (FLD)	Standard	--	--	--	--	7.10	7.00	7.10	6.68	7.29	6.75
TOC	mg/l	--	10	1.6	ND	ND	6.6	--	1.3	1	1
TURBIDITY	NTU	--	--	--	--	--	--	--	>200	5	17.3
EXPLOSIVES											
HMX	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
RDX	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 2,4	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	0.2
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-9
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	--	--	--	--	--	--	--	6.67	--	0.551
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	--	--	--	--	--	--	--	ND	--	0.001
BARIUM	mg/l	--	--	--	--	--	--	--	0.134	--	0.0805
BERYLLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CADMIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	134	--	192
CHROMIUM	mg/l	--	--	--	--	--	--	--	0.009	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	ND	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0108	--	ND
IRON	mg/l	--	0.8	--	ND	--	0.09	--	9.15	--	1.23
LEAD	mg/l	--	--	--	--	--	--	--	0.0076	--	0.0058
MAGNESIUM	mg/l	--	--	--	--	--	--	--	33.9	--	42.4
MANGANESE	mg/l	--	0.035	--	0.03	--	0.05	--	0.198	--	0.0967
MERCURY	mg/l	--	--	--	--	--	--	--	ND	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	0.0178	--	ND
POTASSIUM	mg/l	--	--	--	--	--	--	--	3.77	--	3.47
SELENIUM	mg/l	--	--	--	--	--	--	--	0.0031	--	0.0023
SILVER	mg/l	--	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	--	10	--	10.1	--	12.2	--	8.66	--	13.1
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	0.0096	--	ND
ZINC	mg/l	--	--	--	--	--	--	--	0.0211	--	0.0115
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	6.2
CHLORIDE	mg/l	--	6.8	--	3.5	--	10.6	--	3.8	3	25
SULFATE	mg/l	--	210	--	228	--	273	--	250	180	210
NITRATE	mg/l	--	--	--	--	--	--	--	3.7	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	0.005	--	--
NITRATE&NITRITE TOX	mg/l	--	--	--	--	--	--	--	--	6.2	10
CONDUCTANCE(LAB)	umhos/cm	--	860	1500	901	--	--	--	829	750	1100
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	1102	905	891	510	525	950
PHENOL	mg/l	--	ND	--	ND	--	ND	--	--	--	--
pH (LAB)	Standard	--	--	--	6.60	--	--	--	7.17	7.30	7.03
pH (FLD)	Standard	--	--	--	--	7.10	7.10	7.40	7.01	7.39	6.90
TOC	mg/l	--	4.6	1.5	ND	7.9	6	--	1	2	2
TURBIDITY	NTU	--	--	--	--	--	--	--	>200	15	31.9
EXPLOSIVES											
HMX	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	0.4
RDX	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	1.3
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	1.3
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	1
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	1
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 2,4	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-10
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	25.7	-	-
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	-
ARSENIC	mg/l	-	-	-	-	-	-	-	0.0039	-	-
BARIUM	mg/l	-	-	-	-	-	-	-	0.282	-	-
BERYLLIUM	mg/l	-	-	-	-	-	-	-	0.0017	-	-
CADMIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
CALCIUM	mg/l	-	-	-	-	-	-	-	243	-	-
CHROMIUM	mg/l	-	-	-	-	-	-	-	0.0365	-	-
COBALT	mg/l	-	-	-	-	-	-	-	0.0731	-	-
COPPER	mg/l	-	-	-	-	-	-	-	0.0404	-	-
IRON	mg/l	-	0.14	-	ND	-	0.08	-	39.1	-	-
LEAD	mg/l	-	-	-	-	-	-	-	0.0425	-	-
MAGNESIUM	mg/l	-	-	-	-	-	-	-	28	-	-
MANGANESE	mg/l	-	0.02	-	0.02	-	0.01	-	2.74	-	-
MERCURY	mg/l	-	-	-	-	-	-	-	0.00015	-	-
NICKEL	mg/l	-	-	-	-	-	-	-	0.0746	-	-
POTASSIUM	mg/l	-	-	-	-	-	-	-	6.17	-	-
SELENIUM	mg/l	-	-	-	-	-	-	-	0.0029	-	-
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	-
SODIUM	mg/l	-	10	-	11.1	-	12	-	11.4	-	-
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	-
VANADIUM	mg/l	-	-	-	-	-	-	-	0.037	-	-
ZINC	mg/l	-	-	-	-	-	-	-	0.122	-	-
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	-
CHLORIDE	mg/l	-	13	-	10.4	-	16	-	11.1	9	-
SULFATE	mg/l	-	270	-	252	-	213	-	280	240	-
NITRATE	mg/l	-	-	-	-	-	-	-	0.04	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	-	-	-	-	-	-	-	-	0.05	-
CONDUCTANCE(LAB)	umhos/cm	-	0.03	ND	ND	0.025	ND	-	ND	ND	-
CONDUCTANCE(FLD)	umhos/cm	-	940	1400	972	-	-	-	906	910	-
PHENOL	mg/l	-	ND	-	ND	-	0.002	-	-	-	725
pH (LAB)	Standard	-	-	-	6.60	-	-	-	7.20	7.11	-
pH (FLD)	Standard	-	-	-	-	7.40	7.40	7.00	7.22	7.71	7.30
TOC	mg/l	-	5.2	ND	ND	6.5	4	-	1.1	ND	-
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	-	72.2
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	-
RDX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	-
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	-
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	-
TETRYL	ug/l	-	ND	ND	ND	ND	-	0.84	ND	-	-
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	-
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	-
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	-
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	-
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	-
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	-

**MONITORING WELL MW-11
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	0.267	-	0.0226
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	-	-	-	-	-	-	-	ND	-	0.00098
BARIUM	mg/l	-	-	-	-	-	-	-	0.105	-	0.103
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CADMIUM	mg/l	-	-	-	-	-	-	-	0.0039	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	194	-	201
CHROMIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
COBALT	mg/l	-	-	-	-	-	-	-	ND	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	ND	-	ND
IRON	mg/l	-	0.5	-	ND	-	ND	-	0.437	-	0.0533
LEAD	mg/l	-	-	-	-	-	-	-	0.0015	-	0.0073
MAGNESIUM	mg/l	-	-	-	-	-	-	-	31.4	-	29.6
MANGANESE	mg/l	-	0.022	-	ND	-	ND	-	0.063	-	0.069
MERCURY	mg/l	-	-	-	-	-	-	-	ND	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	ND	-	ND
POTASSIUM	mg/l	-	-	-	-	-	-	-	1.44	-	2.08
SELENIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	-	17	-	15.6	-	14.2	-	31.7	-	33.2
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
ZINC	mg/l	-	-	-	-	-	-	-	0.0037	-	0.0066
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	2
CHLORIDE	mg/l	-	41	-	15.6	-	12.4	-	38	12	41
SULFATE	mg/l	-	250	-	189	-	163	-	329	160	260
NITRATE	mg/l	-	-	-	-	-	-	-	0.38	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE	mg/l	-	-	-	-	-	-	-	-	ND	0.19
TOX	mg/l	-	0.02	ND	ND	ND	0.0059	-	ND	ND	0.03
CONDUCTANCE(LAB)	umhos/cm	-	1000	1200	789	-	-	-	1060	710	1100
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	1257	880	-	710	775	925
PHENOL	mg/l	-	ND	-	ND	-	0.007	-	-	-	-
pH (LAB)	Standard	-	-	-	6.60	-	-	-	7.08	7.17	6.89
pH (FLD)	Standard	-	-	-	-	6.80	7.10	7.00	7.01	7.00	7.10
TOC	mg/l	-	5.5	ND	12.4	ND	3.8	-	1.4	1	4
TURBIDITY	NTU	-	-	-	-	-	-	-	50	4.1	1.3
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
RDX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	1.52	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-12
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	3.94	-	0.547
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	-	-	-	-	-	-	-	0.0019	-	ND
BARIUM	mg/l	-	-	-	-	-	-	-	0.135	-	0.116
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CADMIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	98	-	101
CHROMIUM	mg/l	-	-	-	-	-	-	-	0.0063	-	ND
COBALT	mg/l	-	-	-	-	-	-	-	0.0055	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.0093	-	0.0031
IRON	mg/l	-	0.89	-	ND	-	ND	-	5.69	-	0.876
LEAD	mg/l	-	-	-	-	-	-	-	0.0069	-	0.0022
MAGNESIUM	mg/l	-	-	-	-	-	-	-	69.7	-	69.1
MANGANESE	mg/l	-	0.019	-	0.01	-	ND	-	0.147	-	0.0504
MERCURY	mg/l	-	-	-	-	-	-	-	ND	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.0101	-	ND
POTASSIUM	mg/l	-	-	-	-	-	-	-	8.03	-	10
SELENIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	-	20	-	19.2	-	16.3	-	18.1	-	19.8
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0051	-	ND
ZINC	mg/l	-	-	-	-	-	-	-	0.0309	-	0.0054
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	ND
CHLORIDE	mg/l	-	11	-	6.9	-	12.4	-	8.7	7	11
SULFATE	mg/l	-	110	-	106	-	79.7	-	84	82	100
NITRATE	mg/l	-	-	-	-	-	-	-	0.68	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	-	0.05	ND	ND	0.01	0.014	-	ND	0.57	1.7
CONDUCTANCE(LAB)	umhos/cm	-	9900	1400	926	-	-	-	943	870	1000
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	910	755	907	610	600	825
PHENOL	mg/l	-	ND	-	ND	-	0.004	-	-	-	-
pH (LAB)	Standard	-	-	-	6.70	-	-	-	7.30	7.42	7.36
pH (FLD)	Standard	-	-	-	-	7.30	7.40	7.30	7.42	7.66	7.25
TOC	mg/l	-	5	1.9	25.8	6.6	4.3	-	1.3	ND	2
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	3.8	56.3
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
RDX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-13
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar--89	Mar--90	Sept--90	Mar--91	Sept--91	April 92	Sep 92	Jan--93	Apr--93	July--93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	2.49	-	0.542
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	-	-	-	-	-	-	-	ND	-	0.00089
BARIUM	mg/l	-	-	-	-	-	-	-	0.103	-	0.104
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CADMIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	162	-	186
CHROMIUM	mg/l	-	-	-	-	-	-	-	0.0025	-	ND
COBALT	mg/l	-	-	-	-	-	-	-	ND	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.0043	-	ND
IRON	mg/l	-	0.14	-	ND	-	ND	-	2.65	-	0.66
LEAD	mg/l	-	-	-	-	-	-	-	0.0053	-	0.0033
MAGNESIUM	mg/l	-	-	-	-	-	-	-	31.5	-	33.9
MANGANESE	mg/l	-	ND	-	ND	-	ND	-	0.0543	-	0.0462
MERCURY	mg/l	-	-	-	-	-	-	-	ND	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.0058	-	ND
POTASSIUM	mg/l	-	-	-	-	-	-	-	2.03	-	1.94
SELENIUM	mg/l	-	-	-	-	-	-	-	0.0034	-	0.0017
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	-	14	-	13.1	-	20	-	17.3	-	19.4
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0031	-	ND
ZINC	mg/l	-	-	-	-	-	-	-	0.0192	-	0.0106
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	3
CHLORIDE	mg/l	-	11	-	7.8	-	16	-	10.7	9	13
SULFATE	mg/l	-	250	-	181	-	212	-	230	20	250
NITRATE	mg/l	-	-	-	-	-	-	-	5.8	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	0.018	-	-
NITRATE&NITRITE TOX	mg/l	-	0.06	ND	ND	ND	0.0093	-	ND	ND	4.1
CONDUCTANCE(LAB)	umhos/cm	-	820	1400	865	-	-	-	986	1000	1000
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	892	890	857	610	700	825
PHENOL	mg/l	-	ND	-	ND	-	ND	-	-	-	-
pH (LAB)	Standard	-	-	-	6.50	-	-	-	6.99	7.00	6.99
pH (FLD)	Standard	-	-	-	-	7.00	7.10	7.00	6.90	7.40	6.74
TOC	mg/l	-	7.1	2.3	12.6	7.8	9.3	-	1.4	ND	2
TURBIDITY	NTU	-	-	-	-	-	-	-	117	8.4	2.7
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
RDX	ug/l	-	ND	ND	ND	ND	-	ND	0.29	-	0.8
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-14
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	5.38	-	1.58
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	-	-	-	-	-	-	-	0.0035	-	ND
BARIUM	mg/l	-	-	-	-	-	-	-	0.126	-	0.0808
BERYLLIUM	mg/l	-	-	-	-	-	-	-	0.00086	-	0.0005
CADMIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	176	-	198
CHROMIUM	mg/l	-	-	-	-	-	-	-	0.0087	-	0.0041
COBALT	mg/l	-	-	-	-	-	-	-	0.0102	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.0205	-	0.0052
IRON	mg/l	-	0.29	-	ND	-	ND	-	8.36	-	2.58
LEAD	mg/l	-	-	-	-	-	-	-	0.0258	-	0.0132
MAGNESIUM	mg/l	-	-	-	-	-	-	-	34.8	-	38.2
MANGANESE	mg/l	-	ND	-	ND	-	ND	-	0.347	-	0.041
MERCURY	mg/l	-	-	-	-	-	-	-	0.00008	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.0184	-	ND
POTASSIUM	mg/l	-	-	-	-	-	-	-	2.47	-	2.16
SELENIUM	mg/l	-	-	-	-	-	-	-	0.0017	-	0.0023
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	-	34	-	34.9	-	32.8	-	35.6	-	37.5
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0103	-	0.0043
ZINC	mg/l	-	-	-	-	-	-	-	0.0452	-	0.0164
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	4.8
CHLORIDE	mg/l	-	16	-	23.3	-	26.6	-	20	23	23
SULFATE	mg/l	-	140	-	282	-	228	-	354	27	270
NITRATE	mg/l	-	-	-	-	-	-	-	12.2	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	0.004	-	-
NITRATE&NITRITE	mg/l	-	-	-	-	-	-	-	-	19	21
TOX	mg/l	-	0.04	ND	0.005	ND	0.0086	-	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	-	1100	1200	1174	-	-	-	1110	1200	1300
CONDUCTANCE(FLD)	umhos/cm	-	-	-	ND	1176	1079	1062	710	750	1050
PHENOL	mg/l	-	ND	-	ND	-	ND	-	-	-	-
pH (LAB)	Standard	-	-	-	6.60	-	-	-	7.15	7.06	7.16
pH (FLD)	Standard	-	-	-	-	6.90	7.20	7.10	7.21	6.89	7.00
TOC	mg/l	-	3	3.6	14.6	6.9	8.6	-	1	1	ND
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	18.3	53.3
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
RDX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	ND
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	ND
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-15
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	--	--	--	--	--	--	--	2.99	--	0.821
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	--	--	--	--	--	--	--	ND	--	0.00086
BARIUM	mg/l	--	--	--	--	--	--	--	0.0833	--	0.118
BERYLLIUM	mg/l	--	--	--	--	--	--	--	0.0005	--	0.0003
CADMIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	272	--	261
CHROMIUM	mg/l	--	--	--	--	--	--	--	0.008	--	ND
COBALT	mg/l	--	--	--	--	--	--	--	0.0096	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0254	--	0.0044
IRON	mg/l	--	1.1	--	ND	--	ND	--	5.61	--	1.25
LEAD	mg/l	--	--	--	--	--	--	--	0.0339	--	0.01
MAGNESIUM	mg/l	--	--	--	--	--	--	--	50.6	--	49.7
MANGANESE	mg/l	--	0.044	--	0.02	--	ND	--	0.198	--	0.0449
MERCURY	mg/l	--	--	--	--	--	--	--	0.00011	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	0.0171	--	ND
POTASSIUM	mg/l	--	--	--	--	--	--	--	1.99	--	2.34
SELENIUM	mg/l	--	--	--	--	--	--	--	ND	--	0.0012
SILVER	mg/l	--	--	--	--	--	--	--	0.0036	--	ND
SODIUM	mg/l	--	22	--	35.6	--	23.9	--	26.9	--	26.6
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	0.0084	--	ND
ZINC	mg/l	--	--	--	--	--	--	--	0.0617	--	0.0221
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	2.4
CHLORIDE	mg/l	--	11	--	7.8	--	17.7	--	7.7	7	8
SULFATE	mg/l	--	420	--	389	--	415	--	435	32	300
NITRATE	mg/l	--	--	--	--	--	--	--	2.58	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	0.015	--	--
NITRATE&NITRITE TOX	mg/l	--	0.05	ND	0.015	0.019	0.023	--	ND	ND	0.03
CONDUCTANCE(LAB)	umhos/cm	--	1400	940	1506	--	--	--	1390	1400	1500
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	1175	1415	1279	910	875	1250
PHENOL	mg/l	--	ND	--	ND	--	0.005	--	--	--	--
pH (LAB)	Standard	--	--	--	6.60	--	--	--	7.02	7.04	6.97
pH (FLD)	Standard	--	--	--	--	6.70	7.10	7.00	7.74	6.73	6.72
TOC	mg/l	--	9.8	5.9	20.5	ND	7.3	--	2	2	3
TURBIDITY	NTU	--	--	--	--	--	--	--	141	16.5	41.4
EXPLOSIVES											
HMX	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
RDX	ug/l	--	ND	ND	ND	ND	--	ND	0.21	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
DNT 2,4	ug/l	--	ND	ND	ND	ND	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-16
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar-89	Mar-90	Sept-90	Mar-91	Sept-91	April 92	Sep 92	Jan-93	Apr-93	July-93
METALS											
ALUMINUM	mg/l	--	--	--	--	--	--	--	1.46	--	0.736
ANTIMONY	mg/l	--	--	--	--	--	--	--	ND	--	ND
ARSENIC	mg/l	--	--	--	--	--	--	--	ND	--	ND
BARIIUM	mg/l	--	--	--	--	--	--	--	0.059	--	0.0486
BERYLLIUM	mg/l	--	--	--	--	--	--	--	ND	--	0.0003
CADMIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
CALCIUM	mg/l	--	--	--	--	--	--	--	130	--	177
CHROMIUM	mg/l	--	--	--	--	--	--	--	0.0023	--	0.0048
COBALT	mg/l	--	--	--	--	--	--	--	ND	--	ND
COPPER	mg/l	--	--	--	--	--	--	--	0.0074	--	0.0028
IRON	mg/l	--	1.5	--	ND	--	ND	--	2.41	--	1.12
LEAD	mg/l	--	--	--	--	--	--	--	0.0083	--	0.0032
MAGNESIUM	mg/l	--	--	--	--	--	--	--	23.7	--	31.2
MANGANESE	mg/l	--	0.02	--	ND	--	ND	--	0.102	--	0.0647
MERCURY	mg/l	--	--	--	--	--	--	--	0.0001	--	ND
NICKEL	mg/l	--	--	--	--	--	--	--	0.0083	--	0.0137
POTASSIUM	mg/l	--	--	--	--	--	--	--	0.678	--	1.53
SELENIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
SILVER	mg/l	--	--	--	--	--	--	--	ND	--	ND
SODIUM	mg/l	--	4.9	--	8.2	--	3.8	--	3.54	--	6.01
THALLIUM	mg/l	--	--	--	--	--	--	--	ND	--	ND
VANADIUM	mg/l	--	--	--	--	--	--	--	0.0029	--	0.0032
ZINC	mg/l	--	--	--	--	--	--	--	0.0248	--	0.0121
MISCELLANEOUS											
CYANIDE	ug/l	--	--	--	--	--	--	--	ND	--	ND
CHLORIDE	mg/l	--	1.9	--	1.7	--	5.32	--	1.7	3	4
SULFATE	mg/l	--	190	--	187	--	179	--	173	180	260
NITRATE	mg/l	--	--	--	--	--	--	--	0.08	--	--
NITRITE	mg/l	--	--	--	--	--	--	--	ND	--	--
NITRATE&NITRITE TOX	mg/l	--	0.03	ND	ND	--	0.017	--	--	0.13	0.84
CONDUCTANCE(LAB)	umhos/cm	--	730	840	764	--	--	--	736	740	990
CONDUCTANCE(FLD)	umhos/cm	--	--	--	--	--	712	716	470	495	800
PHENOL	mg/l	--	ND	--	ND	--	0.002	--	--	--	--
pH (LAB)	Standard	--	--	--	6.70	--	--	--	7.23	7.46	7.15
pH (FLD)	Standard	--	--	--	--	--	7.30	7.10	7.64	7.27	6.75
TOC	mg/l	--	4	1	19.9	--	17	--	1.3	2	1
TURBIDITY	NTU	--	--	--	--	--	--	--	117	3.9	19
EXPLOSIVES											
HMX	ug/l	--	ND	ND	ND	--	--	ND	ND	--	ND
RDX	ug/l	--	ND	ND	ND	--	--	ND	0.19	--	ND
TNB 1,3,5	ug/l	--	--	ND	--	--	--	--	ND	--	ND
DNB 1,3	ug/l	--	--	ND	--	--	--	--	ND	--	ND
TETRYL	ug/l	--	ND	ND	ND	--	--	ND	ND	--	ND
NITROBENZENE	ug/l	--	--	--	--	--	--	--	--	--	ND
TNT 2,4,6	ug/l	--	ND	ND	ND	--	--	ND	ND	--	ND
DNT 4-AMINO-2,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2-AMINO-4,6	ug/l	--	--	--	--	--	--	--	ND	--	ND
DNT 2,6	ug/l	--	ND	ND	ND	--	--	2.89	ND	--	ND
DNT 2,4	ug/l	--	ND	ND	ND	--	--	ND	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
3-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND
4-NITROTOLUENE	ug/l	--	--	--	--	--	--	--	--	--	ND

**MONITORING WELL MW-17
OB GROUNDS**

PARAMETER	DATE/ UNITS	Mar -89	Mar -90	Sept -90	Mar -91	Sept -91	April 92	Sep 92	Jan -93	Apr -93	July -93
METALS											
ALUMINUM	mg/l	-	-	-	-	-	-	-	4.06	-	0.053
ANTIMONY	mg/l	-	-	-	-	-	-	-	ND	-	ND
ARSENIC	mg/l	-	-	-	-	-	-	-	0.0017	-	ND
BARIUM	mg/l	-	-	-	-	-	-	-	0.143	-	0.094
BERYLLIUM	mg/l	-	-	-	-	-	-	-	ND	-	0.0003
CADMIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
CALCIUM	mg/l	-	-	-	-	-	-	-	86	-	93.8
CHROMIUM	mg/l	-	-	-	-	-	-	-	0.0059	-	0.0039
COBALT	mg/l	-	-	-	-	-	-	-	0.0106	-	ND
COPPER	mg/l	-	-	-	-	-	-	-	0.0095	-	0.0024
IRON	mg/l	-	4	-	ND	-	ND	-	5.24	-	0.14
LEAD	mg/l	-	-	-	-	-	-	-	0.0087	-	0.0072
MAGNESIUM	mg/l	-	-	-	-	-	-	-	14	-	13.9
MANGANESE	mg/l	-	0.2	-	ND	-	ND	-	0.466	-	0.0094
MERCURY	mg/l	-	-	-	-	-	-	-	ND	-	ND
NICKEL	mg/l	-	-	-	-	-	-	-	0.0201	-	ND
POTASSIUM	mg/l	-	-	-	-	-	-	-	1.73	-	1.27
SELENIUM	mg/l	-	-	-	-	-	-	-	ND	-	0.0013
SILVER	mg/l	-	-	-	-	-	-	-	ND	-	ND
SODIUM	mg/l	-	4.8	-	5.4	-	4.8	-	4.11	-	5.1
THALLIUM	mg/l	-	-	-	-	-	-	-	ND	-	ND
VANADIUM	mg/l	-	-	-	-	-	-	-	0.0057	-	0.0047
ZINC	mg/l	-	-	-	-	-	-	-	0.0221	-	0.0092
MISCELLANEOUS											
CYANIDE	ug/l	-	-	-	-	-	-	-	ND	-	ND
CHLORIDE	mg/l	-	2.5	-	3.5	-	8.86	-	2	2	2
SULFATE	mg/l	-	59	-	44	-	59	-	49	44	59
NITRATE	mg/l	-	-	-	-	-	-	-	0.16	-	-
NITRITE	mg/l	-	-	-	-	-	-	-	ND	-	-
NITRATE&NITRITE TOX	mg/l	-	0.03	ND	ND	0.01	0.0064	-	-	0.14	0.1
CONDUCTANCE(LAB)	umhos/cm	-	560	580	497	-	-	-	501	450	570
CONDUCTANCE(FLD)	umhos/cm	-	-	-	-	616	521	501	330	330	455
PHENOL	mg/l	-	ND	-	ND	-	0.004	-	-	-	-
pH (LAB)	Standard	-	-	-	6.70	-	-	-	7.34	7.51	7.32
pH (FLD)	Standard	-	-	-	-	7.20	7.30	7.30	7.50	7.73	7.13
TOC	mg/l	-	2.1	2	8.5	5.3	7.6	-	0.9	ND	ND
TURBIDITY	NTU	-	-	-	-	-	-	-	>200	9	3.9
EXPLOSIVES											
HMX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	0.3
RDX	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	0.4
TNB 1,3,5	ug/l	-	-	ND	-	-	-	-	ND	-	0.3
DNB 1,3	ug/l	-	-	ND	-	-	-	-	ND	-	ND
TETRYL	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
NITROBENZENE	ug/l	-	-	-	-	-	-	-	-	-	0.7
TNT 2,4,6	ug/l	-	ND	ND	ND	ND	-	1.76	ND	-	0.3
DNT 4-AMINO-2,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2-AMINO-4,6	ug/l	-	-	-	-	-	-	-	ND	-	ND
DNT 2,6	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
DNT 2,4	ug/l	-	ND	ND	ND	ND	-	ND	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
3-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND
4-NITROTOLUENE	ug/l	-	-	-	-	-	-	-	-	-	ND

**MONITORING WELL MW-18
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	3.36	--	ND
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIUM	mg/l	0.0822	--	0.0305
BERYLLIUM	mg/l	ND	--	ND
CADIUM	mg/l	ND	--	ND
CALCIUM	mg/l	118	--	123
CHROMIUM	mg/l	0.006	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	0.0062	--	ND
IRON	mg/l	3.82	--	0.0328
LEAD	mg/l	0.0064	--	0.0027
MAGNESIUM	mg/l	22.2	--	23.1
MANGANESE	mg/l	0.299	--	0.177
MERCURY	mg/l	ND	--	ND
NICKEL	mg/l	0.0083	--	ND
POTASSIUM	mg/l	1.99	--	1.4
SELENIUM	mg/l	0.0012	--	0.0011
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	19.5	--	21.3
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.0057	--	ND
ZINC	mg/l	0.0199	--	0.0212
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	8.8	7	10
SULFATE	mg/l	143	110	140
NITRATE	mg/l	0.128	--	--
NITRITE	mg/l	0.002	--	--
NITRATE & NITRITE	mg/l	--	0.16	0.22
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	786	660	810
CONDUCTANCE(FLD)	umhos/cm	500	480	632
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.25	7.20	7.22
pH (FLD)	Standard	6.96	7.72	7.14
TOC	mg/l	0.8	ND	ND
TURBIDITY	NTU	185	3.6	2.2
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	ND	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	ND	--	ND

**MONITORING WELL MW-19
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	40.2	--	--
ANTIMONY	mg/l	ND	--	--
ARSENIC	mg/l	0.0069	--	--
BARIUM	mg/l	0.353	--	--
BERYLLIUM	mg/l	0.0031	--	--
CADMIUM	mg/l	ND	--	--
CALCIUM	mg/l	401	--	--
CHROMIUM	mg/l	0.0689	--	--
COBALT	mg/l	0.0509	--	--
COPPER	mg/l	0.0812	--	--
IRON	mg/l	63.8	--	--
LEAD	mg/l	0.0639	--	--
MAGNESIUM	mg/l	93.5	--	--
MANGANESE	mg/l	1.84	--	--
MERCURY	mg/l	0.00025	--	--
NICKEL	mg/l	0.136	--	--
POTASSIUM	mg/l	8.5	--	--
SELENIUM	mg/l	0.0044	--	--
SILVER	mg/l	ND	--	--
SODIUM	mg/l	50.9	--	--
THALLIUM	mg/l	ND	--	--
VANADIUM	mg/l	0.0566	--	--
ZINC	mg/l	0.628	--	--
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	--
CHLORIDE	mg/l	11.9	11	--
SULFATE	mg/l	580	500	--
NITRATE	mg/l	2.2	--	--
NITRITE	mg/l	0.002	--	--
NITRATE & NITRITE	mg/l	--	3.3	--
TOX	mg/l	ND	ND	--
CONDUCTANCE(LAB)	umhos/cm	1400	1200	--
CONDUCTANCE(FLD)	umhos/cm	900	1000	--
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.25	7.05	--
pH (FLD)	Standard	7.19	7.26	--
TOC	mg/l	1.8	ND	--
TURBIDITY	NTU	>200	84	--
EXPLOSIVES				
HMX	ug/l	ND	--	--
RDX	ug/l	ND	--	--
TNB 1,3,5	ug/l	ND	--	--
DNB 1,3	ug/l	ND	--	--
TETRYL	ug/l	ND	--	--
NITROBENZENE	ug/l	--	--	--
TNT 2,4,6	ug/l	ND	--	--
DNT 4-AMINO-2,6	ug/l	ND	--	--
DNT 2-AMINO-4,6	ug/l	ND	--	--
DNT 2,6	ug/l	ND	--	--
DNT 2,4	ug/l	ND	--	--
2-NITROTOLUENE	ug/l	--	--	--
3-NITROTOLUENE	ug/l	--	--	--
4-NITROTOLUENE	ug/l	--	--	--

**MONITORING WELL MW-21
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMNIUM	mg/l	1.16	--	--
ANTIMONY	mg/l	ND	--	--
ARSENIC	mg/l	ND	--	--
BARIUM	mg/l	0.0409	--	--
BERYLLIUM	mg/l	ND	--	--
CADMIUM	mg/l	ND	--	--
CALCIUM	mg/l	82.9	--	--
CHROMIUM	mg/l	ND	--	--
COBALT	mg/l	ND	--	--
COPPER	mg/l	ND	--	--
IRON	mg/l	1.57	--	--
LEAD	mg/l	0.0015	--	--
MAGNESIUM	mg/l	13.1	--	--
MANGANESE	mg/l	0.218	--	--
MERCURY	mg/l	ND	--	--
NICKEL	mg/l	ND	--	--
POTASSIUM	mg/l	2.26	--	--
SELENIUM	mg/l	0.0016	--	--
SILVER	mg/l	ND	--	--
SODIUM	mg/l	40	--	--
THALLIUM	mg/l	ND	--	--
VANADIUM	mg/l	ND	--	--
ZINC	mg/l	0.0156	--	--
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	--
CHLORIDE	mg/l	2	89	--
SULFATE	mg/l	107	570	--
NITRATE	mg/l	0.64	--	--
NITRITE	mg/l	0.014	--	--
NITRATE & NITRITE	mg/l	--	0.57	--
TOX	mg/l	ND	ND	--
CONDUCTANCE(LAB)	umhos/cm	636	570	--
CONDUCTANCE(FLD)	umhos/cm	500	410	--
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.49	7.46	--
pH (FLD)	Standard	7.65	7.20	--
TOC	mg/l	0.7	ND	--
TURBIDITY	NTU	49	16	--
EXPLOSIVES				
HMX	ug/l	ND	--	--
RDX	ug/l	ND	--	--
TNB 1,3,5	ug/l	ND	--	--
DNB 1,3	ug/l	ND	--	--
TETRYL	ug/l	ND	--	--
NITROBENZENE	ug/l	--	--	--
TNT 2,4,6	ug/l	ND	--	--
DNT 4-AMINO-2,6	ug/l	ND	--	--
DNT 2-AMINO-4,6	ug/l	ND	--	--
DNT 2,6	ug/l	ND	--	--
DNT 2,4	ug/l	ND	--	--
2-NITROTOLUENE	ug/l	--	--	--
3-NITROTOLUENE	ug/l	--	--	--
4-NITROTOLUENE	ug/l	--	--	--

**MONITORING WELL MW-22
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	0.539	--	0.138
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIUM	mg/l	0.0388	--	0.0412
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	101	--	141
CHROMIUM	mg/l	0.0033	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	0.0033	--	ND
IRON	mg/l	0.709	--	0.222
LEAD	mg/l	0.002	--	0.0013
MAGNESIUM	mg/l	14.7	--	19.7
MANGANESE	mg/l	0.0413	--	0.124
MERCURY	mg/l	0.00007	--	ND
NICKEL	mg/l	0.0036	--	ND
POTASSIUM	mg/l	0.821	--	1.45
SELENIUM	mg/l	ND	--	ND
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	4.35	--	6.88
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.0032	--	ND
ZINC	mg/l	0.0094	--	0.0122
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	2.4	3	2
SULFATE	mg/l	134	120	190
NITRATE	mg/l	0.073	--	--
NITRITE	mg/l	0.007	--	--
NITRATE & NITRITE	mg/l	--	0.13	ND
TOX	mg/l	ND	--	ND
CONDUCTANCE(LAB)	umhos/cm	560	620	810
CONDUCTANCE(FLD)	umhos/cm	400	450	625
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.36	7.61	7.23
pH (FLD)	Standard	7.16	7.34	7.23
TOC	mg/l	1	3	1
TURBIDITY	NTU	33	1.4	19
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	ND	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-23
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	0.0674	--	ND
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIIUM	mg/l	0.0385	--	0.0419
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	0.0026
CALCIUM	mg/l	136	--	129
CHROMIUM	mg/l	ND	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	ND	--	0.0024
IRON	mg/l	0.247	--	0.191
LEAD	mg/l	ND	--	0.0072
MAGNESIUM	mg/l	25.9	--	30.1
MANGANESE	mg/l	0.0717	--	0.0652
MERCURY	mg/l	0.00007	--	ND
NICKEL	mg/l	ND	--	ND
POTASSIUM	mg/l	1.46	--	1.53
SELENIUM	mg/l	ND	--	ND
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	12.4	--	15.4
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	ND	--	ND
ZINC	mg/l	0.0042	--	0.0123
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	10.1	19	22
SULFATE	mg/l	250	180	260
NITRATE	mg/l	0.024	--	--
NITRITE	mg/l	0.006	--	--
NITRATE & NITRITE	mg/l	--	0.34	ND
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	837	860	990
CONDUCTANCE(FLD)	umhos/cm	600	600	775
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.3	7.44	7.25
pH (FLD)	Standard	7.1	6.66	6.85
TOC	mg/l	0.8	1	ND
TURBIDITY	NTU	8	8.1	1.6
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	ND	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-24
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINIUM	mg/l	4.6	--	1.01
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIUM	mg/l	0.138	--	0.113
BERYLLIUM	mg/l	0.00075	--	0.0004
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	142	--	170
CHROMIUM	mg/l	0.0071	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	0.0371	--	0.0078
IRON	mg/l	6.22	--	1.39
LEAD	mg/l	0.0351	--	0.0125
MAGNESIUM	mg/l	56	--	53.6
MANGANESE	mg/l	0.116	--	0.0203
MERCURY	mg/l	ND	--	ND
NICKEL	mg/l	0.0107	--	ND
POTASSIUM	mg/l	4.53	--	4.69
SELENIUM	mg/l	0.0049	--	0.0017
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	37.8	--	48.5
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.006	--	0.0033
ZINC	mg/l	0.0625	--	0.0251
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	33	35	38
SULFATE	mg/l	165	200	240
NITRATE	mg/l	11.2	--	--
NITRITE	mg/l	ND	--	--
NITRATE & NITRITE	mg/l	--	13	16
TOX	mg/l	ND	0.04	ND
CONDUCTANCE(LAB)	umhos/cm	1150	1200	1300
CONDUCTANCE(FLD)	umhos/cm	730	750	1050
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.20	7.22	7.22
pH (FLD)	Standard	7.22	7.39	6.78
TOC	mg/l	1.7	ND	2
TURBIDITY	NTU	>200	8.6	42
EXPLOSIVES				
HMX	ug/l	ND	--	3.1
RDX	ug/l	ND	--	2.7
TNB 1,3,5	ug/l	ND	--	2.2
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	2.1
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	1.2
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	0.2
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-25
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	0.649	--	0.333
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIIUM	mg/l	0.0896	--	0.0605
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	110	--	92.8
CHROMIUM	mg/l	ND	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	ND	--	0.0057
IRON	mg/l	1.1	--	0.508
LEAD	mg/l	0.004	--	0.0026
MAGNESIUM	mg/l	19.7	--	16.6
MANGANESE	mg/l	0.0578	--	0.0445
MERCURY	mg/l	0.00006	--	ND
NICKEL	mg/l	ND	--	ND
POTASSIUM	mg/l	1.48	--	1.16
SELENIUM	mg/l	ND	--	ND
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	2.7	--	3.72
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	ND	--	ND
ZINC	mg/l	0.0057	--	0.0164
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	1.9	3	2
SULFATE	mg/l	38	39	41
NITRATE	mg/l	ND	--	--
NITRITE	mg/l	ND	--	--
NITRATE & NITRITE	mg/l	--	ND	ND
TOX	mg/l	ND	ND	0.03
CONDUCTANCE(LAB)	umhos/cm	583	530	550
CONDUCTANCE(FLD)	umhos/cm	403	380	400
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.19	7.23	7.36
pH (FLD)	Standard	7.89	7.60	7.34
TOC	mg/l	1.1	2	2
TURBIDITY	NTU	114.5	5.4	20.4
EXPLOSIVES				
HMX	ug/l	ND	--	6.7
RDX	ug/l	0.21	--	5.6
TNB 1,3,5	ug/l	ND	--	3
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	5
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	2
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-26
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	1.66	--	--
ANTIMONY	mg/l	ND	--	--
ARSENIC	mg/l	0.0041	--	--
BARIUM	mg/l	0.0631	--	--
BERYLLIUM	mg/l	ND	--	--
CADMIUM	mg/l	ND	--	--
CALCIUM	mg/l	135	--	--
CHROMIUM	mg/l	0.0054	--	--
COBALT	mg/l	ND	--	--
COPPER	mg/l	0.0481	--	--
IRON	mg/l	0.308	--	--
LEAD	mg/l	0.0031	--	--
MAGNESIUM	mg/l	0.262	--	--
MANGANESE	mg/l	0.0105	--	--
MERCURY	mg/l	0.00007	--	--
NICKEL	mg/l	0.0093	--	--
POTASSIUM	mg/l	24.7	--	--
SELENIUM	mg/l	ND	--	--
SILVER	mg/l	ND	--	--
SODIUM	mg/l	91.8	--	--
THALLIUM	mg/l	ND	--	--
VANADIUM	mg/l	0.0074	--	--
ZINC	mg/l	0.0177	--	--
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	--
CHLORIDE	mg/l	2.2	2	--
SULFATE	mg/l	20	9	--
NITRATE	mg/l	ND	--	--
NITRITE	mg/l	0.06	--	--
NITRATE & NITRITE	mg/l	--	0.09	--
TOX	mg/l	ND	ND	--
CONDUCTANCE(LAB)	umhos/cm	2190	4400	--
CONDUCTANCE(FLD)	umhos/cm	1530	3000	--
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	12.29	12.09	--
pH (FLD)	Standard	12.89	12.14	--
TOC	mg/l	9.1	16	--
TURBIDITY	NTU	22.3	13	--
EXPLOSIVES				
HMX	ug/l	ND	--	--
RDX	ug/l	ND	--	--
TNB 1,3,5	ug/l	ND	--	--
DNB 1,3	ug/l	ND	--	--
TETRYL	ug/l	ND	--	--
NITROBENZENE	ug/l	--	--	--
TNT 2,4,6	ug/l	ND	--	--
DNT 4-AMINO-2,6	ug/l	ND	--	--
DNT 2-AMINO-4,6	ug/l	ND	--	--
DNT 2,6	ug/l	ND	--	--
DNT 2,4	ug/l	ND	--	--
2-NITROTOLUENE	ug/l	--	--	--
3-NITROTOLUENE	ug/l	--	--	--
4-NITROTOLUENE	ug/l	--	--	--

**MONITORING WELL MW-27
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	1.38	--	0.0176
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	ND
BARIUM	mg/l	0.132	--	0.082
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	127	--	107
CHROMIUM	mg/l	0.0035	--	ND
COBALT	mg/l	0.0052	--	ND
COPPER	mg/l	0.007	--	ND
IRON	mg/l	2.38	--	0.0627
LEAD	mg/l	0.0109	--	0.0058
MAGNESIUM	mg/l	63.2	--	56.1
MANGANESE	mg/l	0.228	--	0.165
MERCURY	mg/l	ND	--	ND
NICKEL	mg/l	0.0091	--	ND
POTASSIUM	mg/l	7.33	--	7.97
SELENIUM	mg/l	ND	--	ND
SILVER	mg/l	0.0033	--	ND
SODIUM	mg/l	17.6	--	18.5
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.0033	--	ND
ZINC	mg/l	0.0156	--	0.0147
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	ND
CHLORIDE	mg/l	9.6	13	11
SULFATE	mg/l	98	73	110
NITRATE	mg/l	0.276	--	--
NITRITE	mg/l	0.004	--	--
NITRATE & NITRITE	mg/l	--	ND	2.1
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	969	830	990
CONDUCTANCE(FLD)	umhos/cm	630	550	750
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.37	7.26	7.43
pH (FLD)	Standard	7.32	7.74	7.22
TOC	mg/l	1.2	1	ND
TURBIDITY	NTU	146	5.8	1.4
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	ND	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-28
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMNIUM	mg/l	0.654	--	0.338
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	0.0014
BARIUM	mg/l	0.0686	--	0.0589
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	69.7	--	50.8
CHROMIUM	mg/l	0.0026	--	ND
COBALT	mg/l	ND	--	ND
COPPER	mg/l	0.0025	--	ND
IRON	mg/l	0.132	--	ND
LEAD	mg/l	ND	--	ND
MAGNESIUM	mg/l	3.47	--	2.89
MANGANESE	mg/l	0.0037	--	ND
MERCURY	mg/l	ND	--	ND
NICKEL	mg/l	ND	--	ND
POTASSIUM	mg/l	10.8	--	8.82
SELENIUM	mg/l	0.0013	--	0.0019
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	62.3	--	46.6
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.0045	--	0.003
ZINC	mg/l	0.0029	--	0.0037
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	2
CHLORIDE	mg/l	4.8	3	5
SULFATE	mg/l	94	80	100
NITRATE	mg/l	1.92	--	--
NITRITE	mg/l	0.014	--	--
NITRATE & NITRITE	mg/l	--	1.7	0.73
TOX	mg/l	ND	ND	0.02
CONDUCTANCE(LAB)	umhos/cm	811	650	470
CONDUCTANCE(FLD)	umhos/cm	550	800	775
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	11.62	11.17	11.18
pH (FLD)	Standard	10.77	11.75	11.30
TOC	mg/l	1.9	ND	1
TURBIDITY	NTU	86	48.8	1.5
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	ND	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-29
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	1.67	--	3.94
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	0.0011
BARIUM	mg/l	0.103	--	0.112
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	113	--	135
CHROMIUM	mg/l	0.0037	--	0.0037
COBALT	mg/l	0.0099	--	0.0041
COPPER	mg/l	0.0038	--	0.0076
IRON	mg/l	2.41	--	4.71
LEAD	mg/l	0.0056	--	0.003
MAGNESIUM	mg/l	27.7	--	32.9
MANGANESE	mg/l	0.185	--	0.113
MERCURY	mg/l	ND	--	ND
NICKEL	mg/l	0.0082	--	ND
POTASSIUM	mg/l	1.13	--	2.86
SELENIUM	mg/l	0.0013	--	0.0013
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	11.2	--	13.2
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	ND	--	0.007
ZINC	mg/l	0.0214	--	0.0226
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	3.2
CHLORIDE	mg/l	3.9	4	6
SULFATE	mg/l	103	99	120
NITRATE	mg/l	2.2	--	--
NITRITE	mg/l	ND	--	--
NITRATE & NITRITE	mg/l	--	2.3	1.2
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	674	700	760
CONDUCTANCE(FLD)	umhos/cm	490	440	625
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.66	7.16	7.08
pH (FLD)	Standard	6.95	7.88	7.65
TOC	mg/l	1	2	1
TURBIDITY	NTU	>200	--	11.3
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	0.063	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

**MONITORING WELL MW-30
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	0.45	-	ND
ANTIMONY	mg/l	ND	-	ND
ARSENIC	mg/l	ND	-	ND
BARIUM	mg/l	0.0902	-	0.0923
BERYLLIUM	mg/l	0.00053	-	ND
CADMIUM	mg/l	0.0083	-	ND
CALCIUM	mg/l	157	-	180
CHROMIUM	mg/l	ND	-	ND
COBALT	mg/l	ND	-	ND
COPPER	mg/l	ND	-	ND
IRON	mg/l	0.608	-	ND
LEAD	mg/l	ND	-	0.0018
MAGNESIUM	mg/l	24.2	-	26
MANGANESE	mg/l	0.0249	-	0.0084
MERCURY	mg/l	0.00007	-	ND
NICKEL	mg/l	0.0041	-	ND
POTASSIUM	mg/l	1.98	-	1.28
SELENIUM	mg/l	0.0012	-	ND
SILVER	mg/l	ND	-	ND
SODIUM	mg/l	20.3	-	20.3
THALLIUM	mg/l	ND	-	ND
VANADIUM	mg/l	ND	-	ND
ZINC	mg/l	0.0112	-	0.0065
MISCELLANEOUS				
CYANIDE	ug/l	ND	-	ND
CHLORIDE	mg/l	19.9	25	30
SULFATE	mg/l	305	250	250
NITRATE	mg/l	0.64	-	-
NITRITE	mg/l	0.003	-	-
NITRATE & NITRITE	mg/l	-	0.68	0.54
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	926	980	1000
CONDUCTANCE(FLD)	umhos/cm	610	625	775
PHENOL	mg/l	-	-	-
pH (LAB)	Standard	6.93	7.00	7.00
pH (FLD)	Standard	7.03	7.44	6.61
TOC	mg/l	1.2	2	1
TURBIDITY	NTU	30	3.5	1.2
EXPLOSIVES				
HMX	ug/l	ND	-	ND
RDX	ug/l	ND	-	ND
TNB 1,3,5	ug/l	ND	-	ND
DNB 1,3	ug/l	ND	-	ND
TETRYL	ug/l	ND	-	ND
NITROBENZENE	ug/l	-	-	ND
TNT 2,4,6	ug/l	ND	-	ND
DNT 4-AMINO-2,6	ug/l	ND	-	ND
DNT 2-AMINO-4,6	ug/l	ND	-	ND
DNT 2,6	ug/l	ND	-	ND
DNT 2,4	ug/l	ND	-	ND
2-NITROTOLUENE	ug/l	-	-	ND
3-NITROTOLUENE	ug/l	-	-	ND
4-NITROTOLUENE	ug/l	-	-	ND

**MONITORING WELL MW-31
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	27.3	—	1.46
ANTIMONY	mg/l	ND	—	ND
ARSENIC	mg/l	0.0094	—	0.0018
BARIUM	mg/l	0.328	—	0.0571
BERYLLIUM	mg/l	0.0025	—	ND
CADMIUM	mg/l	ND	—	ND
CALCIUM	mg/l	269	—	131
CHROMIUM	mg/l	0.0499	—	ND
COBALT	mg/l	0.0312	—	ND
COPPER	mg/l	0.0645	—	0.0025
IRON	mg/l	40.7	—	2.29
LEAD	mg/l	0.0816	—	0.0027
MAGNESIUM	mg/l	46.7	—	31.9
MANGANESE	mg/l	1.14	—	0.0866
MERCURY	mg/l	0.00007	—	ND
NICKEL	mg/l	0.0821	—	ND
POTASSIUM	mg/l	7.91	—	3.65
SELENIUM	mg/l	0.0035	—	ND
SILVER	mg/l	ND	—	ND
SODIUM	mg/l	36	—	24.5
THALLIUM	mg/l	ND	—	ND
VANADIUM	mg/l	0.0407	—	ND
ZINC	mg/l	0.186	—	0.0142
MISCELLANEOUS				
CYANIDE	ug/l	ND	—	3.8
CHLORIDE	mg/l	4.1	4	6
SULFATE	mg/l	290	230	210
NITRATE	mg/l	4.2	—	—
NITRITE	mg/l	0.019	—	—
NITRATE & NITRITE	mg/l	—	3.6	4.1
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	928	910	860
CONDUCTANCE(FLD)	umhos/cm	600	600	700
PHENOL	mg/l	—	—	—
pH (LAB)	Standard	7.26	7.23	7.37
pH (FLD)	Standard	7.26	7.40	7.22
TOC	mg/l	1.2	ND	3
TURBIDITY	NTU	>200	15	67.2
EXPLOSIVES				
HMX	ug/l	ND	—	ND
RDX	ug/l	ND	—	ND
TNB 1,3,5	ug/l	ND	—	ND
DNB 1,3	ug/l	ND	—	ND
TETRYL	ug/l	ND	—	ND
NITROBENZENE	ug/l	—	—	ND
TNT 2,4,6	ug/l	ND	—	ND
DNT 4-AMINO-2,6	ug/l	ND	—	ND
DNT 2-AMINO-4,6	ug/l	ND	—	ND
DNT 2,6	ug/l	ND	—	ND
DNT 2,4	ug/l	ND	—	ND
2-NITROTOLUENE	ug/l	—	—	ND
3-NITROTOLUENE	ug/l	—	—	ND
4-NITROTOLUENE	ug/l	—	—	ND

**MONITORING WELL MW-32
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMNUM	mg/l	16.3	--	--
ANTIMONY	mg/l	ND	--	--
ARSENIC	mg/l	0.0028	--	--
BARIUM	mg/l	0.212	--	--
BERYLLIUM	mg/l	0.0015	--	--
CADMIUM	mg/l	ND	--	--
CALCIUM	mg/l	131	--	--
CHROMIUM	mg/l	0.0278	--	--
COBALT	mg/l	0.017	--	--
COPPER	mg/l	0.033	--	--
IRON	mg/l	26.7	--	--
LEAD	mg/l	0.0243	--	--
MAGNESIUM	mg/l	30.1	--	--
MANGANESE	mg/l	0.587	--	--
MERCURY	mg/l	0.00007	--	--
NICKEL	mg/l	0.0472	--	--
POTASSIUM	mg/l	5.29	--	--
SELENIUM	mg/l	0.0023	--	--
SILVER	mg/l	ND	--	--
SODIUM	mg/l	9.73	--	--
THALLIUM	mg/l	ND	--	--
VANADIUM	mg/l	0.0243	--	--
ZINC	mg/l	0.0857	--	--
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	--
CHLORIDE	mg/l	3.2	2	--
SULFATE	mg/l	81	82	--
NITRATE	mg/l	0.05	--	--
NITRITE	mg/l	ND	--	--
NITRATE & NITRITE	mg/l	--	0.05	--
TOX	mg/l	ND	ND	--
CONDUCTANCE(LAB)	umhos/cm	621	610	--
CONDUCTANCE(FLD)	umhos/cm	392	360	525
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.25	7.24	--
pH (FLD)	Standard	7.29	8.36	7.23
TOC	mg/l	1.1	ND	--
TURBIDITY	NTU	174	--	15.7
EXPLOSIVES				
HMX	ug/l	ND	--	--
RDX	ug/l	ND	--	--
TNB 1,3,5	ug/l	ND	--	--
DNB 1,3	ug/l	ND	--	--
TETRYL	ug/l	ND	--	--
NITROBENZENE	ug/l	--	--	--
TNT 2,4,6	ug/l	ND	--	--
DNT 4-AMINO-2,6	ug/l	ND	--	--
DNT 2-AMINO-4,6	ug/l	ND	--	--
DNT 2,6	ug/l	ND	--	--
DNT 2,4	ug/l	ND	--	--
2-NITROTOLUENE	ug/l	--	--	--
3-NITROTOLUENE	ug/l	--	--	--
4-NITROTOLUENE	ug/l	--	--	--

**MONITORING WELL MW-34
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	4.31	-	-
ANTIMONY	mg/l	ND	-	-
ARSENIC	mg/l	ND	-	-
BARIUM	mg/l	0.359	-	-
BERYLLIUM	mg/l	0.001	-	-
CADMIUM	mg/l	ND	-	-
CALCIUM	mg/l	457	-	-
CHROMIUM	mg/l	0.005	-	-
COBALT	mg/l	0.0486	-	-
COPPER	mg/l	0.0077	-	-
IRON	mg/l	3.1	-	-
LEAD	mg/l	0.0035	-	-
MAGNESIUM	mg/l	27.7	-	-
MANGANESE	mg/l	2.92	-	-
MERCURY	mg/l	0.00032	-	-
NICKEL	mg/l	0.0414	-	-
POTASSIUM	mg/l	1.83	-	-
SELENIUM	mg/l	ND	-	-
SILVER	mg/l	ND	-	-
SODIUM	mg/l	5.78	-	-
THALLIUM	mg/l	ND	-	-
VANADIUM	mg/l	0.0034	-	-
ZINC	mg/l	0.0327	-	-
MISCELLANEOUS				
CYANIDE	ug/l	ND	-	-
CHLORIDE	mg/l	4.6	3	-
SULFATE	mg/l	41	29	-
NITRATE	mg/l	0.16	-	-
NITRITE	mg/l	ND	-	-
NITRATE & NITRITE	mg/l	-	0.16	-
TOX	mg/l	ND	ND	-
CONDUCTANCE(LAB)	umhos/cm	499	490	-
CONDUCTANCE(FLD)	umhos/cm	370	300	-
PHENOL	mg/l	-	-	-
pH (LAB)	Standard	7.79	7.21	-
pH (FLD)	Standard	8.20	6.90	-
TOC	mg/l	2.2	1	-
TURBIDITY	NTU	101.1	102.7	-
EXPLOSIVES				
HMX	ug/l	ND	-	-
RDX	ug/l	0.19	-	-
TNB 1,3,5	ug/l	ND	-	-
DNB 1,3	ug/l	ND	-	-
TETRYL	ug/l	ND	-	-
NITROBENZENE	ug/l	-	-	-
TNT 2,4,6	ug/l	ND	-	-
DNT 4-AMINO-2,6	ug/l	ND	-	-
DNT 2-AMINO-4,6	ug/l	ND	-	-
DNT 2,6	ug/l	ND	-	-
DNT 2,4	ug/l	ND	-	-
2-NITROTOLUENE	ug/l	-	-	-
3-NITROTOLUENE	ug/l	-	-	-
4-NITROTOLUENE	ug/l	-	-	-

**MONITORING WELL MW-35
OB GROUNDS**

PARAMETER	DATE/ UNITS	Jan-93	Apr-93	July-93
METALS				
ALUMINUM	mg/l	2.42	--	0.207
ANTIMONY	mg/l	ND	--	ND
ARSENIC	mg/l	ND	--	0.001
BARIUM	mg/l	0.137	--	0.0973
BERYLLIUM	mg/l	ND	--	ND
CADMIUM	mg/l	ND	--	ND
CALCIUM	mg/l	105	--	108
CHROMIUM	mg/l	0.0041	--	ND
COBALT	mg/l	0.0052	--	ND
COPPER	mg/l	0.0078	--	ND
IRON	mg/l	3.78	--	0.321
LEAD	mg/l	0.0034	--	0.0028
MAGNESIUM	mg/l	15	--	15.6
MANGANESE	mg/l	0.403	--	0.0234
MERCURY	mg/l	0.00007	--	ND
NICKEL	mg/l	0.0077	--	ND
POTASSIUM	mg/l	1.41	--	1.4
SELENIUM	mg/l	ND	--	0.0012
SILVER	mg/l	ND	--	ND
SODIUM	mg/l	14.9	--	13.4
THALLIUM	mg/l	ND	--	ND
VANADIUM	mg/l	0.0032	--	ND
ZINC	mg/l	0.0715	--	0.0727
MISCELLANEOUS				
CYANIDE	ug/l	ND	--	2.8
CHLORIDE	mg/l	2.3	2	2
SULFATE	mg/l	44	36	41
NITRATE	mg/l	0.24	--	--
NITRITE	mg/l	ND	--	--
NITRATE & NITRITE	mg/l	--	0.18	0.18
TOX	mg/l	ND	ND	ND
CONDUCTANCE(LAB)	umhos/cm	549	550	580
CONDUCTANCE(FLD)	umhos/cm	390	330	465
PHENOL	mg/l	--	--	--
pH (LAB)	Standard	7.82	7.32	7.21
pH (FLD)	Standard	8.08	6.90	7.30
TOC	mg/l	1.5	ND	1
TURBIDITY	NTU	>200	7.2	1.5
EXPLOSIVES				
HMX	ug/l	ND	--	ND
RDX	ug/l	0.17	--	ND
TNB 1,3,5	ug/l	ND	--	ND
DNB 1,3	ug/l	ND	--	ND
TETRYL	ug/l	ND	--	ND
NITROBENZENE	ug/l	--	--	ND
TNT 2,4,6	ug/l	ND	--	ND
DNT 4-AMINO-2,6	ug/l	ND	--	ND
DNT 2-AMINO-4,6	ug/l	ND	--	ND
DNT 2,6	ug/l	ND	--	ND
DNT 2,4	ug/l	ND	--	ND
2-NITROTOLUENE	ug/l	--	--	ND
3-NITROTOLUENE	ug/l	--	--	ND
4-NITROTOLUENE	ug/l	--	--	ND

APPENDIX B
GEOPHYSICAL REPORT

**HUMAN FACTORS APPLICATIONS, INC.
EXPLOSIVE ORDNANCE DISPOSAL DIVISION**

UXO OPERATIONS REPORT

CONTRACT NO. DACA 87-90-D-0019

SENECA ARMY DEPOT OB GROUND UXO SURVEY

14 FEBRUARY 1992

PREPARED FOR CHARLES T. MAIN, INC.

FINAL SITE SURVEY REPORT

The Explosive Ordnance Disposal (EOD) Division of Human Factors Applications, Inc. (HFA) was contracted by C. T. Main to perform an unexploded ordnance (UXO) search of selected areas of the Open Burning/Demolition Grounds at Seneca Army Depot, Seneca, New York. Since the scope of this project was not to conduct a range clearance per se, but to provide access to specified points for C.T. Main to collect environmental data, no attempt was made to collect and remove ordnance related materials. Whenever HFA EOD personnel located an item of ordnance or ordnance related material it was simply moved to an area clear of the work areas, items deemed to be potentially hazardous were flagged and their location reported to the range supervisor for later disposition. Figure 1 depicts the overall site and the specific areas surveyed by HFA. A copy of the HFA Daily Operations Journal is contained in Annex 1, the original Daily Journal was provided to the C. T. Main on site supervisor.

The project was originally scheduled to be completed on 2 December 1991, however, due to laboratory back logs and equipment scheduling, the berm and anomaly excavations and sampling were delayed until 2 December 1991. Three HFA personnel demobilized on 20 November 1991, leaving HFA EOD Technician/Safety Officer, Larry Koppe to provide ordnance safety and avoidance escort to the remaining C. T. Main personnel. The HFA team returned on 1 December 1991 to complete the remaining areas. The project was completed 11 December 1991 and the HFA Team demobilized 12 December 1991. HFA EOD Technician/Safety Officer John Miles remained on site to provide continuous ordnance safety and ordnance avoidance for C. T. Main until the completion of Phase I soil sampling.

GENERAL COMMENTS - The entire area of the project site was heavily contaminated with surface/subsurface metallic objects. The contamination was the residue of decades of ordnance destruction by open burning and detonation. Some areas such as burn pads J and G were nearly covered with metallic litter making it virtually impossible to conduct standard magnetometry surveys of those areas, it was determined to clear a work area of 10' X 10' for each pad boring and an access lane 25' wide to each site. During the thirty three (33) days of EOD operations, a total of 4,037 subsurface objects were located and excavated. Due to the large volume of metallic objects located and excavated only the UXO or significant and/or potentially hazardous items will be discussed here. A large quantity of the metallic material located consisted of hinges, nails, banding material and other hardware associated with ammunition packaging. (No attempt was made to account for this material) The following is a breakdown of the items located:

- **Hazardous Items**

- | | |
|-----------|---|
| Three (3) | U.S. 20 lb fragmentation bombs containing a yellow crystalline material |
| One (1) | U.S. bomb fuze, M120 series with booster intact |

FINAL SITE SURVEY REPORT - (Continued)

One (1) U.S. 75mm recoilless projectile which appears to be a low order detonation

One (1) U.S. 37mm projectile

• **UXO Related Items**

3.2 in rocket heads several hundred were located (all were functioned or burned out)

75/76mm projectiles five were located, all were armor piercing (w/o fuzes or tracers)

4.2 in. mortar two were located, both appeared to be base ejection type (functioned/no hazardous components)

105mm projectiles two were located, both were base ejection type (functioned/no hazard)

106mm HEP projectile one located, it appeared to have been burned out (no hazard)

37mm projectile two were located, one was w/o fuse and burned out, the other, described above, was thought to be live.

Small arms ammo all calibers up to 50 caliber including bullets and cartridges (no hazard/too numerous to count, some areas were nearly saturated)

Flash tubes all types and sizes were encountered, too numerous to count (all appeared to be expended, no hazard)

20mm projectiles these projectiles were located in nearly every area surveyed, some areas were more heavily contaminated than others, ie; Burn Pad G and the surrounding area. These munitions are difficult to classify due to their advanced deterioration, it is felt they present no overt threat but they should be avoided if possible and if they must be handled then it should be done only by the HFA EOD Technician/Safety

FINAL SITE SURVEY REPORT - (Continued)

Person on site.

SEARCH OPERATION COMMENTS - With the exception of the small wooded and brush covered areas located behind the long berm at the southern end of the open burn and demolition grounds, the site was relatively open and easily searched with magnetometers. There were several areas of the site which were obstructed or where there was interference produced by metallic objects. These areas are identified below:

- **Burn Pads A thru J** - All of the burn pads were heavily contaminated with the metallic debris of several decades of burning. The contamination consisted of small arms (bullets and cartridge cases) of all calibers, flash tubes, and other metal debris associated with ammunition packaging.

Burn pads G and J were the most heavily contaminated areas, both had large amounts of surface and sub - surface contamination, which interfered significantly with the Mk 26 Mod 0 Ordnance Locator (Forster Ferex 4.021) and the Whites Eagle II All Metals Detector. A 10' X 10' work area was laid out at each of the points designated for soil sampling, each area was raked to remove as much surface debris as possible and the soil was removed by hand until there was no longer an appreciable signal from the Mk 26 Ordnance Locator. After checking the loose soil to insure it held no hazardous material it was placed back into the hole. Each 10' X 10' site was flagged and the ground marked with florescent paint. Two sites on J pad were moved to avoid an area which was completely covered with metal debris, one site was eliminated on G pad because of a large metal structure that prevented access. The average depth dug for each site was approximately 16 inches, with some isolated deeper excavations to investigate larger metallic contacts.

- **Well sites and Access lanes** - A work area 50' X 50' was cleared for each of fifteen proposed well sites. An access lane 25' wide was cleared to each work site. The terrain to each site was generally clear and presented little or no obstacle for sweeping or clearing, with the exception of a small area behind the long berm at the southern end of the OB/OD grounds, this area was cleared using a back hoe and when possible the access route was modified to minimize damage to the brush and or small trees. Some access lanes were widened or their course slightly modified to facilitate entry and egress of the well drilling rig. Additional lanes were cleared for access to existing wells, wetlands, and to provide work areas for the grid borings, some additional walkways were cleared to allow easier access to some wells for purging and collecting water samples. All in all approximately 37,500 square feet was

FINAL SITE SURVEY REPORT - (Continued)

cleared for work areas and 173,750 square feet for access to work areas and well sites.

- **Berm and Anomaly Excavations** - Berm excavations began on 2 Dec. 1991. Each berm was excavated to the mid depth of the berm and soil samples collected at the points preselected in the work plan. The excavation of berms B, F, and H was reserved until Alliance Corp. was on site to observe the operation. Berm excavations were essentially uneventful and were completed on 10 Dec. 1991.

On 10 Dec., C. T. Main determined three anomalies would be investigated, two on G pad and one on J pad. A back hoe was used to dig a trench to the anticipated depth of each anomaly. The trench was dug perpendicular to the reported heading of the anomaly to cut across the area of interest. Samples of unusual or discolored soil were collected. The excavation of the anomaly on J pad appeared to be undisturbed soil, however soil samples were collected for analysis.

- **Safety Briefings** - The HFA Safety Officer conducted ordnance awareness and safety briefings for eleven (11) personnel from C. T. Main as well as various state, federal and local agencies.

RECOMMENDATIONS - With the exception of the areas amended on site, the access routes, work areas, and sampling sites as indicated in the work plans and site drawings have received an UXO site survey to a depth of eighteen (18) inches. Based on the current state-of-the-art technologies, HFA does not guarantee on the Seneca Depot site nor any other project site that 100% of the UXO will be located. The following recommendation is based on the limitations of the current state-of-the-art technologies used to locate UXO:

- **Soil Entry Activities** - Any task requiring excavation, soil boring or other intrusions into the soil below two (2) feet should not be performed with out on-site EOD technicians to monitor and/or perform these services.

NOTES

1) ELEVATIONS BASED UPON AN ASSUMED ELEVATION OF 100.00 FEET. LOCATED ON THE SILL OF THE CONCRETE ENTRANCE TO DUCOUT AT NORTH END PAVED ACCESS ROAD.

2) AREA SHADED IS BOMB DISPOSAL AREA. SUBJECT FREQUENT CONTOUR ALTERATION DUE TO BULLDOZING, FILLING AND EXPLOSION.

LEGEND

Access path to be cleared using geophysical. Access paths & burn pads will be cleared in Phase I & II boring/sampling during the geophysical investigation. Access paths will be cleared with ferrous & non-ferrous magnetometry. Burn pads will be cleared with magnetometry & GPR.

Soil Sampling

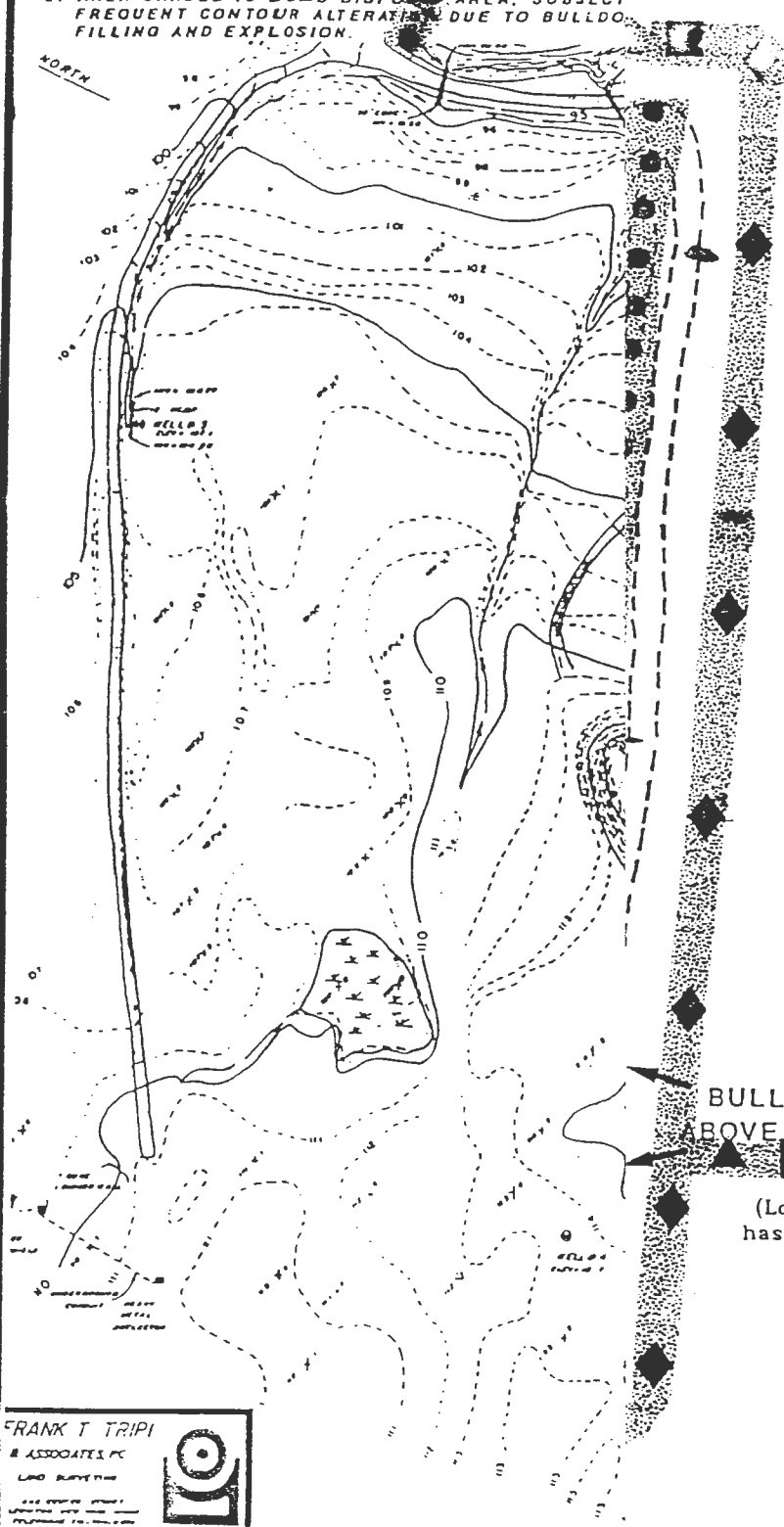
- ◆ - Grid borings (50) continuous spoon (Phase I & II)
- ★ - Pad borings (40) continuous spoon (Phase I & II)
- - Berm excavation (60) (Mid-Depth only) (Phase I & II)
- - Low lying hill excavation (28) (Mid-depth only) (Phase II)

Surface Water & Sediment Sampling

- ★ Reeder Creek, Drainage Channel or wetland

Proposed Monitoring Well Locations

- ▲ Proposed over burden monitoring well (Phase I)
- Proposed weathered bedrock monitoring well (Phase I)



BULLDOZED HILLS APPROX. 5ft ABOVE GRADE, WIDTH (W) VARIES MAXIMUM 100ft

(Location is approximated and has not been verified by survey)

FRANK T. TRIPI
 & ASSOCIATES, PC
 LAND SURVEYING
 222 CENTER STREET
 WASHINGTON, DC 20004
 (301) 424-1100

SCALE IN FEET



LEGEND

- ROAD ASPHALT
- ROAD ASPHALT PAVEMENT
- SMALL BASE ROAD
- 5 FOOT INTERVAL CONTOUR
- 1 FOOT INTERVAL CONTOUR
- DIRECTION OF FLOW
- SPOT ELEVATIONS
- BELL NUMBER & GROUND ELEVATION
- CULVERT PIPE

SENECA ARMY DEPOT
 EXTENT OF GEOPHYSICAL INVESTIGATION

AUGUST 1991





HUMAN FACTORS APPLICATIONS, INC.

Explosive Ordnance Disposal Division

1018A North Strauss Avenue
Indian Head, Maryland 20640-1894
(301) 743-2377 Fax (301) 743-7512

DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-16-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>0</u>		Total UXO Located <u>6</u> Total Excavations <u>0</u>	
Comments: MET WITH PAUL MORENO OF C.T. MAIN, TOURED AREAS WHERE ^{DMT} WHERE WELLS WILL BE DRILLED. LOCATED AND RECOVERED VARIOUS UXO ITEMS TO BE USED AS DISPLAY ITEMS FOR OTHER PERSONNEL TO VIEW AND TO BE USED IN SAFETY BRIEFS.			
<i>No Further Entries</i>			
HFA EOD Supervisor: <i>R.T. Thiel</i>		Signature: <i>R.T. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



HUMAN FACTORS APPLICATIONS, INC.

Explosive Ordnance Disposal Division

1018A North Strauss Avenue
 Indian Head, Maryland 20640-1894
 (301) 743-2377 Fax (301) 743-7512

DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-17-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>1</u>		Total UXO Located <u>25</u> Total Excavations <u>125</u>	
Comments: BEGAN CLEARING WELL SITE #1 (SEE MAP) AT BURN PAD "A" AT 0800. COMPLETE SITE #1 AT APPROX 0915. SITE #1 WAS MODERATELY CONTAMINATED WITH NORMAL RESIDUE FROM ORD-BURNING OPERATIONS. 0915 BEGAN CLEARING SITE #2 AREA WAS FOUND TO BE GROSSLY CONTAMINATED. SITE #2 WAS APPROX. 60% AT THE END OF WORK DAY, ITEMS OF SIGNIFICANCE LOCATED 3.2 IN. ROCKET HEADS, CARTRIDGE FLASH TUBES, 2 75/76 mm PROJECTILES AND 1 37mm PROJECTILE AND NUMEROUS SMALL ARMS, 30 TO 50 CAL. (TOTAL EXCAVATIONS TO DATE AT SITE #2 IS 100) SITE #2 WILL BE COMPLETED 10-18-91.			
HFA EOD Supervisor: R.J. THIEL		Signature: R.J. Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



HUMAN FACTORS APPLICATIONS, INC.

Explosive Ordnance Disposal Division

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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-18-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>3</u>		Total UXO Located <u>15</u> Total Excavations <u>300</u>	
Comments: Completed sites 2, 3, 4, AND THE ACCESS LANE TO SITE #5. SITES WERE MODERATELY CONTAMINATED. SEVERAL MISCELLANEOUS PROSO FUSES, LARGE FRAG, SMALL ARMS AND GENERAL DEBRIS FROM BURNS. NO UXO'S OF SIGNIFICANCE WERE LOCATED. TO DATE HFA HAS NOT LOCATED ANY LIVE OR EXPLOSIVE LOADED UXO'S.			
NO FURTHER BURNIES			
HFA EOD Supervisor: R.I. Thiel		Signature: R.I. Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-21-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>2</u>		Total UXO Located <u>10</u>	Total Excavations <u>150</u>
Comments: COMPLETED GRID SITE 5 & 6. LOCATED 4 U.S M103 Bomb NOSE FUZES, 1 U.S M165 SERIES V.T FUZE, 1 57MM PROJECTILE AND SEVERAL MESSINER PROJ. FUZES. ALL ITEMS LOCATED APPEAR TO BE EXPENDED. BEGAN SITE # 7 AT APPROX 1000 SITE IS GROSSLY CONTAMINATED WITH TRASH AND DEBRIS FROM NUMEROUS BURNS. USING THE MK26 AND EAGLE 2 MAY NOT BE THE BEST METHOD OF SURVEYING THIS SITE, OR POSSIBLY MOVING SITE TO MORE DESIRED SITE. HFA SECURE AT 1445 BECAUSE OF RANGE OPERATIONS			
HFA EOD Supervisor: R.T. THIEL		Signature: <i>R.T. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-22-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed	1	Total UXO Located	2
		Total Excavations	295
Comments:			
<p>CONTINUED WITH WELL SITE #7, AREA GROSSLY CONTAMINATED, LOCATED 175 MIN PROJ. AND 1105 B.C. PROJ. (EXTENDED), LAY OUT 400' OF ACCESS LANE BEHIND "J" BURN PAD. DISCUSSED WITH PAUL MORENO LOCATION OF WELL AT PAD "C" AND THE TECHNIQUE WE WILL USE FOR CLEARING SOIL BORING POINTS ON BURN PADS, WE WERE NOT ALLOWED TO RETURN TO WORK SITE UNTIL 1445 DUE TO DEMO OPS. WORK SITE FOR WELL #7 COMPLETED.</p> <p>* A WORK SITE 10'x10' WILL BE THOROUGHLY CLEARED USING MAGNETOMETERS, THE REMAINDER OF THE AREA WILL BE SURFACE SEARCHED AND ANY UXO'S LOCATED WILL BE REMOVED. THIS WILL PROVIDE A 100 SQ FT WORK AREA FOR DRILLING AND AN ACCESS FOR PERS AND EQUIPMENT.</p>			
HFA EOD Supervisor: R.T. THIEL		Signature: R.J. Shil	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-23-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>1</u>		Total UXO Located <u>2</u>	Total Excavations <u>340</u>
Comments: COMMENCED CLEARING WORK SITE FOR WELL #8 AT BURN PAD "C", COMPLETED LAYOUT OF AREA BEHIND "J" PAD. 1130 COMPLETED WELL SITE 8, WORKED THROUGH LUNCH TO ACCOMMODATE RANGE OPS. LEFT WORK SITE AT 1400 DUE TO DEMO OPS. COMPLETED 500' OF ACCESS AREA BEHIND "J" PAD. LOCATED 1 75mm RECONESS ROUND AND 1 US BURNING FUEL BOTH POSSIBLY BLUE FLAGGED SAME WITH YELLOW FLAGS AND NOTIFIED RANGE SUPERVISOR.			
HFA EOD Supervisor: R.T. THIEL		Signature: <i>[Signature]</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-24-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>1</u>	Total UXO Located <u>0</u>	Total Excavations <u>290</u>	
Comments: CONTINUED WITH ACCESS LANE AND WORK SITE BEHIND "J" PAD (WELL #9), LEFT SITE AT 1130, DEMO SHOT SCHEDULED FOR 1230, RETURNED TO AREA AT 1300 1430 COMPLETED ACCESS LANE AND WORK SITE AT AREA BEHIND "J" PAD, HFA SWEEP AND CLEARED TOTAL OF 1650' X 25' AREA. AREA WAS GENERALLY LIGHTLY CONTAMINATED WITH EXCEPTION OF ITEMS NOTED IN YESTERDAY'S REPORT. SURVEYED AND PLANNED NEXT AREA LOCATED AT WEST END OF "C" PAD.			
HFA EOD Supervisor: R. T. THIEL		Signature: <i>R. T. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-25-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed _____		Total UXO Located <u>0</u>	
		Total Excavations <u>245</u>	
Comments: COMMENCED CLEARING ACCESS TO WORK SITE FOR WELL #10, LOCATED BEHIND LONG BELM. AREA AT WEST END OF PAD "6" LIGHTLY CONTAMINATED NO ITEMS OF SIGNIFICANCE LOCATED. 1200 DEPARTED AREA FOR DEMO SHOT RETURNED AT 1300 CONTINUED CLEARING ACCESS ROUTE, COMPLETED APPROX 400 NO ORDNANCE LOCATED			
HFA EOD Supervisor: R.T. Thiel		Signature: R. J. Shu	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-28-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed _____	Total UXO Located <u>5</u>	Total Excavations <u>430</u>	
Comments: CONTINUED SWEEPING ACCESS LANE TO WELL #10 CONDUCTED SAFETY BRIEFS FOR C.T.MAIN GEOLOGIST, WELL DRILLERS, AND BIOLOGIST SIX PERS TOTAL HFA TEAM LEADER AND SAFETY OFFICER CONDUCTED A SITE TOUR FOR ALL PERSONNEL. TEAM MEMBERS STACEY AND WEST COMPLETED ACCESS LANE TO WELL #10. UXOS LOCATED WERE: 1 1/2" STIKES MORTAR, 3, 20" US FRAG BOMBS, AND 1 125MM BE ROUND. FRAG BOMB CONTAIN POSSIBLE HE. HFA TEAM LEADER AND SAFETY OFFICER ESCORTED C.T.MAIN BIOLOGIST TO WETLANDS AND REIDEN CREEK. SECURED AT 1600.			
HFA EOD Supervisor: R. Thiel		Signature: R. J. Jh	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-29-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed	Total UXO Located	Total Excavations	
	1	190	
Comments: LAID OUT AND BEGAN SEARCHING ACCESS LANE FOR WELL #11. AREA IS GROSSLY CONTAMINATED WITH SMALL AND OTHER RESIDUE OF BURNING OPS. HFA SAFETY OFFICER CONDUCTED SAFETY BRIEF N.Y STATE EPA REPRESENTATIVE AND U.S. EPA REPRESENTATIVE. 1050 SECURED OPS FOR DEMO OPS, RETURNED TO AREA AT 1230 AND CONTINUED SWEEPING. 1400 SECURED FOR DAY. DUE TO CONTINUED DEMOLITION OPERATIONS. UXO LOCATED WAS 175MM AP Round w/ FUZE.			
HFA EOD Supervisor: R.T. Thiel		Signature: R. J. Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 10-30-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed _____		Total UXO Located <u>2</u> Total Excavations <u>320</u>	
Comments: CONTINUED SWEEPING AND CLEARING ACCESS LANE TO WELL SITE #11. 0900 HFA SAFETY OFFICER CONDUCTED SAFETY BRIEF FOR JIM MILLER OF "DEH" AND TWO GPR PERSONNEL. HFA TEAM LEADER / SAFETY OFFICER VISITED PADS THAT WILL BE SWEEP WITH GPR. 1340 DEPARTED WORK AREA FOR DEMOLITION SHOT. 1430 RETURNED TO WORK AREA. 1530 SECURED FOR DAY; COMPLETED APPROXIMATELY 700' OF ACCESS LANE. LOCATED 1 106mm HEP ROUND AND 1 TRIP FLARE (ALL ROUNDS APPEARED TO BE EMPTY)			
HFA EOD Supervisor: R.T. Thiel		Signature: <i>R.T. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN	Contract Number: DACA 87-90-D-0019
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Date: 10-31-91	Project: Seneca Army Depot Open Burning Ground UXO Survey
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Search Grids Completed _____	Total UXO Located <u>1</u>	Total Excavations <u>410</u>
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Comments: CONTINUED SWEEPING ACCESS LANE TO WELL SITE #11. HFA TEAM LEADER CONDUCTED A VISUAL SWEEP OF ALL PADS (EXCEPT GAT) TO ALLOW CPR PERSONNEL TO COMPLETE THEIR WORK. (NO ORDNANCE LOCATED IN PADS), 1045 COMPLETED ACCESS ROUTE AND WORK SITE FOR WELL #11, UXO LOCATED 1 37^{MM} ROUND POSSIBLY LIVE. (TOTAL DIGS 920) WIDEN ACCESS ROUTE TO WELL #9, AND CLEARED A TURNABOUT FOR WELL RIG. 1230 BEGAN CLEARING LANES TO EXISTING WELLS. 1315 DEPARTED AREA FOR THE DAY DUE TO DEMO OPS.

HFA EOD Supervisor: R.I.T. THIEL	Signature: R. J. [Signature]
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FORECASTED OPERATIONAL SCHEDULE

Type of Operation Scheduled:	Date of Operation:
Scheduling Comments	

Site Superintendent:	Signature:
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Position (Title):	Date:	Time:
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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-1-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed _____	Total UXO Located <u>0</u>	Total Excavations <u>152</u>	
Comments: CONTINUED CLEARING ACCESS LANES TO EXISTING WELLS, 1500 COMPLETED CLEARING ACCESS LANES TO EXISTING WELLS. FLAGGED SAME WITH RED FLAGS, PROVIDE ACCESS TO AND WORK SPACE AROUND WELL HEAD TO ALLOW WATER SAMPLES TO BE TAKEN. Dug 152 CONTACTS, LOCATED NO ORDNANCE OR UXOs OF SIGNIFICANCE.			
HFA EOD Supervisor: <i>R.T. Thiel</i>		Signature: <i>R.J. Hill</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-4-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed	4	Total UXO Located	0
		Total Excavations	220
Comments: BEGAN CLEARING ACCESS LANES TO OTHER SOIL BORING SITES, COMPLETED FOUR (4) AREAS ON NORTH SIDE OF MAIN ROAD. NO UXOS OR ORDNANCE LOCATED. 1130 BROKE FOR LUNCH - UPON RETURN FROM LUNCH HFA WAS DENIED ACCESS TO BURN DEMMO AREA DUE TO BURNING OPS. 1445 BURN COMPLETE, ACCESS AUTHORIZED HOWEVER RANGE WILL BE SECURED UNTIL 1500 BECAUSE RANGE PERSONNEL ONLY WORK UNTIL 1500 THIS DAY			
HFA EOD Supervisor: R. J. [Signature]		Signature: R. J. [Signature]	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-5-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>5</u>		Total UXO Located <u>0</u>	
		Total Excavations <u>175</u>	
Comments: Completed clearing soil boring sites. No UXO's located. All soil boring sites have been cleared and flagged with red flags. 1130 Range personnel cleared area for burn ops. 1415 returned to site. Laid out soil boring points for "J" pad. Area is completely saturated with debris of all types. I will try raking the surface prior to sweeping however I don't think it will prove effective.			
HFA EOD Supervisor: R.T. Thiel		Signature: <i>R.T. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-6-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed _____		Total UXO Located _____ Total Excavations _____	
Comments: BEGAN LAYING OUT SOIL BORING POINTS ON BURN PADS. COMPLETED ALL BUT D.E+G. "D+E" CONTAIN EQUIPMENT USED BY RANGE PERS AS SOON AS THEY MOVE IT OUT, WE WILL LAYOUT AREA AND CLEAR SAME. PROVIDE ESCORTS TO C.T.MAIN BIOLOGIST COLLECTING SOIL SAMPLES. KEPT 2 TEAM MEMBERS WITH BIOLOGIST WHILE I WENT TO R. LUNCH. 1300: ALL PERSONNEL OUT OF AREA DUE TO EXPLOSIVE OPS. 1525 RETAINED TO AREA ESCORTED C.T.MAIN BIOLOGIST FOR WET LAND SAMPLES 1625 SECURED.			
HFA EOD Supervisor: R.J.Thiel		Signature: R.J.Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-7-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>2</u>		Total UXO Located <u>0</u> Total Excavations <u>50</u>	
Comments: BEGAN GLENNING BURN PADS, LIGHT SNOW FALLING. (FIRST BAD WEATHER WE HAVE HAD) 1130 BOOKED FOR LUNCH. RANGE FELLOWELL PREPARING FOR DEMO SHOT. ARRIVED 1400 RETURNED TO WORKSITE CONTINUED WORKING ON BURN PADS. PADS HALF COMPLETE. TWO HFA EOD TECHS ESCORTING C.T.MAIN BIOLOGISTS. 1600 SECURED FOR DAY.			
HFA EOD Supervisor: R.T. Thiel		Signature: <i>[Signature]</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-8-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>1</u>		Total UXO Located <u>0</u> Total Excavations <u>55</u>	
Comments: CONTINUED WITH PAD CLEARING COMPLETED LAYOUT FOR "C" PAD, ESCORTED BIOLOGIST AGAIN TAKING SAMPLES OF WETLANDS. 1445 DEPARTED AREA DUE TO DEMO OPS. 1515 SECURED FOR DM/			
HFA EOD Supervisor: R. T. Threl		Signature: <i>R. T. Threl</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-12-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed	5	Total UXO Located	0
		Total Excavations	28
Comments: Completed Clearing Pads A B C D + E PAD "A" WAS GROSSLY CONTAMINATED WITH RESIDUE OF PREVIOUS BURNS, (FLASH TUBES, SMALL ARMS ETC) NO DEMO OPS DUE TO WEATHER, 1130 LUNCH. 1230 BEGAN CLEARING PAD "G", ONE HFA TECH ESCORTING C.T.MAIN DIALOGIST. 1530 SECURE FOR DAY. 1/4 OF "G" PAD COMPLETED. DRILL POINTS ARE COMPLETELY SATURATED WITH METAL OF ALL TYPES. IT IS NOT POSSIBLE TO ISOLATE ONE SINGLE CONTACT WITH EITHER THE 26 OR THE WHITES 1530 SECURED FOR DAY.			
HFA EOD Supervisor: R. Thiel		Signature: R. J. Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: <u>11-13-91</u>		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>2</u>		Total UXO Located <u>52</u>	Total Excavations <u>2</u>
Comments: CONTINUED WITH "G" PAD AS BEFORE ALL AREAS ARE COMPLETELY SATURATED WITH METAL SO 10' X 10' AREA MUST BE COMPLETELY DUG. LOCATED APPROX 30 20 ^{MM} PROJES, AND REMOVED SAME. MOST OF CONTACTS ARE TRASH, NAILS HINGES DEBRIS FROM BURNS. ESCORTING BIOLOGIST THIS AFTERNOON 1530 SECURED FOR DAY.			
<hr style="border: 1px solid black; width: 100%;"/>			
HFA EOD Supervisor: <u>R. T. Threl</u>		Signature: <u>R. J. Hill</u>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-14-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>4</u>		Total UXO Located <u>250+</u> Total Excavations <u>4</u>	
Comments: CONTINUED WITH "G" PAD, AS BEFORE AREAS ARE GROSSLY CONTAMINATED. ENTIRE 10'X10' AREA MUST BE DUG. REMOVED 250+ 20" PROGS FROM ONE "DIG". 1130 BROKE FOR LUNCH ATTEMPTED TO MEET WITH MIKE DUCHESNEAU UNABLE TO DO SO. 1230 RETURNED TO WORK SITE AND CONTINUED WITH "G" PAD. 1530 "G" PAD COMPLETE WITH EXCEPTION OF ONE AREA WHICH IS UNDERWATER NOTIFIED BY RANGE SUPER. THAT AREA WILL BE USED BY HUNTERS BEGINNING 18+19 NOV. I WILL TRY TO CLARIFY.			
HFA EOD Supervisor: R.T. The L		Signature: <i>R.J. [Signature]</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:



HUMAN FACTORS APPLICATIONS, INC.

Explosive Ordnance Disposal Division

1018A North Strauss Avenue
 Indian Head, Maryland 20640-1894
 (301) 743-2377 Fax: (301) 743-7512

DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-15-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>2</u>		Total UXO Located <u>0</u> Total Excavations <u>2</u>	
Comments: BEGAN CLEARING DRILL POINTS ON "J" PAD FLAGGED LINES AND DRILL POINTS ON "G" PAD AND COMPLETED SURFACE SEARCH OF "G" PAD. 1400 SECURED DUE TO WEATHER (RAIN)			
HFA EOD Supervisor: R.T. Threlk		Signature: R.J. Hill	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-18-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>3</u>		Total UXO Located <u>0</u> Total Excavations <u>3</u>	
Comments: 0830 ARRIVED AT SITE TOOK 1 HR TO GET ESCORTED TO AREA BECAUSE OF CONFUSION WITH SECURITY PERSONNEL. NORMALLY CONTRACTORS DON'T WALK IN AREA WHEN HUNTING IS ONGOING. ALL HFA PERSONNEL ARE WEARING ORANGE SAFETY VESTS. 1315 LEFT WORK AREA DUE TO BURN OPS. 1435 RETURNED TO WORK SITE. COMPLETED 3 "DIGS" IN J PAD. "J" PAD IS MORE CONTAMINATED THAN "G". WE ARE CONTINUING WITH SAME TECHNIQUE.			
HFA EOD Supervisor: R.T. Thiel		Signature: R. Thiel	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-19-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed	5	Total UXO Located	52
Total Excavations		5	
Comments: Continued with "J" PAD I MOVED 2 DRILL POINTS CLOSER TO BERM (WEST) TO CLEAR THEM FROM HIGHLY CONTAMINATED AREAS. (DID NOT DO MUCH GOOD) COMPLETED ALL POINTS ON J PAD AND CLEARED FINAL POINT ON "G" PAD, REMOVED APPROX 50' FROM "G" PAD. LARRY KOPPE WILL FLAG LANES ON J PAD ALL OTHER PERSONNEL WILL DEPART FOR HOME OFFICE 11-20-91. TO RETURN 12-1-91.			
HFA EOD Supervisor:		Signature:	
R. T. Thiel		R. J. Sil	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-20-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>0</u>		Total UXO Located <u>0</u>	
		Total Excavations <u>0</u>	
Comments: ASSISTED CT MAIN BIOLOGIST (BOB OLSEN) IN OUTLINDING WETLAND AREAS AS UXO ESCORT. PLACED GREEN, BLUE, AND ORANGE RIBBON FLAGS OUTSIDE OF WETLANDS.			
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):		Date:	Time:

HFA EOD Supervisor: L.K. KOPPE

Signature: [Handwritten Signature]



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-21-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed ϕ	Total UXO Located ϕ	Total Excavations ϕ	
Comments: GAVE SAFETY BRIEFING TO THREE NEW PERSONNEL ON SITE (2 SURVEYORS AND 1 DRILLER). CONTINUED UXO ESCORT FOR WETLAND AREAS - TOTAL OF 39 WETLAND AREAS.			
11-22-91 - IS A DESIGNATED "HUNTING" DAY - RELIEVED PERSONNEL. EXAMINED DRILL SITE NORTH OF 143RD EOD DEMOLITION RANGE - NO PROBLEM ENCOUNTERED - LIAISONED WITH 143RD EOD.			

HFA EOD Supervisor: L.W. KOPPE		Signature: <i>L.W. Koppe</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-22-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>0</u>	Total UXO Located <u>0</u>	Total Excavations <u>0</u>	
Comments: COMPLETE SURFACE SWEEP OF "J" PDD AND ESTABLISHMENT OF DRIVING LAYERS FOR DRILL RIG.			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
 			
HFA EOD Supervisor: <u>LARRY KOPPE</u>		Signature: <u>[Signature]</u>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-25-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>2</u>	Total UXO Located <u>33</u>	Total Excavations <u>0</u>	
Comments: BRIDES AND SEARCHED W/ EAGLE II 200' x 25' AREA BEHIND LARGE BERM. DESIGNATED 33 CONTACTS. ESTABLISHED BERM DIG POINTS FOR PHASE I & II ON BERMS A, B, C, D, E, & F. PHASE I POINTS HAVE RED FLAG WITH GRASS/BLACK STRIPED STREAMERS. PHASE II DIGS HAVE RED FLAG ONLY.			
HFA EOD Supervisor: <u>L. N. KOPPE</u>		Signature: <u>[Signature]</u>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 11-26-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>0</u>	Total UXO Located <u>0</u>	Total Excavations <u>0</u>	
Comments: COMPLETED FLAGGING OF BERTS ON "G" AND "J" PAD DISCUSSED REQUIREMENTS FOR OPERATION TO BEGIN ON 2 DEC 91. REQUIREMENTS ARE: BACKHOE W/ FRONT BUCKET, PLASTIC SHEETING, STEAM GENERATOR W/ WATER SUPPLY, PROCEDURES FOR SAMPLING.			
HFA EOD Supervisor: L.H. Koppe		Signature: <i>Lauren H Koppe</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 27 Nov 91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>0</u>	Total UXO Located <u>0</u>	Total Excavations <u>0</u>	
Comments: PROVIDED ASSISTANCE TO SUPERIOR TEAM IN LOCATING, MARKING, AND RECORDING WELL POSITIONS. PROVIDED ORDNANCE AVOIDANCE FOR TEAM FOR ACCESS TO WELL LOCATED NORTH OF PAD "F"			
HFA EOD Supervisor: L.W. KOPPE		Signature: <i>L.W. Koppe</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



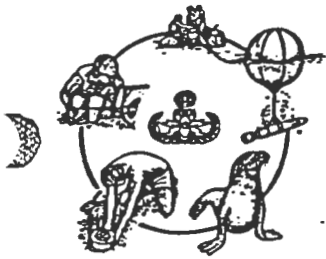
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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 2 DEC 91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed _____	Total UXO Located _____	Total Excavations _____	
Comments: RETURNED TO OPEN BURNING AND DEAD GROUNDS. L. KOPPE CONDUCTED SAFETY BRIEF FOR ONE C.T.MAIN PERSONNEL. BACK HOE ARRIVED ON SITE AT 0930. CLEARED BRUSH FROM ACCESS LANES BEHIND LONG BEAM. ACCESS LINE MODIFIED TO CONFORM TO ACTUAL SHAPE OF BEAM. ACCESS TO AREA DENIED DUE TO DEMO OPS UNTIL 1440, CAREER TO CLOSE AT 1500			
HFA EOD Supervisor: RT Thrice		Signature: [Signature]	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-3-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>4</u>	Total UXO Located <u>2</u>	Total Excavations <u>121</u>	
Comments: CONTINUED SWEEPING ACCESS CANE BEHIND LONG BERM. BEGAN BERM EXCAVATIONS. COMPLETED 400' OF ACCESS CANE. LOCATED 1 TRIP FLARE AND 1 PRESS FUZE, MISC. FRAG. ALL ORD. LOCATED WAS FUNCTIONAL OR INERT. COMPLETED 5 EXCAVATIONS ON BERM A-C. NO ORD OR SIGNIFICANT MUNITIONS LOCATED IN BERMS.			
HFA EOD Supervisor: R.T. THIEL		Signature: R.J.L.	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



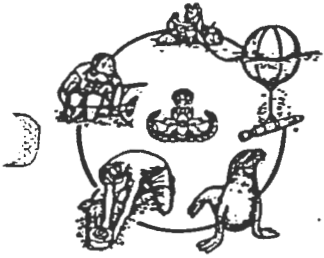
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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-4-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>3</u>		Total UXO Located <u>0</u>	Total Excavations <u>27</u>
Comments: CONTINUED WITH SWEEPING LANE BEHIND LONG BERM AND EXCAVATING BERMS. WEATHER IS EXTREMELY ADVERSE. TRAP 19° WINDS 25-30 MPH AND SOME WATER IS FREEZING IN HOSES AND TANK NARROWS. SECURED BERM EXCAVATIONS AT 1415 DUE TO FREEZING CONDITIONS. 1530 SECURED FROM SWEEP OPS. NO ORDNANCE LOCATED			
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-5-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed _____		Total UXO Located <u>0</u>	Total Excavations _____
Comments: CONTINUED SWEEPING LANB BEHIND LONG BERM AND BERM EXCAVATIONS. COMPLETED EXCAVATIONS IN PAD "D" & "G" AND 2 EXCAVATIONS IN PAD "J". 1445 ACCESS LANB'S BEHIND LONG BERM IS COMPLETE. NO ORDNANCE LOCATED.			
HFA EOD Supervisor: <i>R. T. Thiel</i>		Signature: <i>R. Thiel</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-6-91	Project: Seneca Army Depot Open Burning Ground UXO Survey		
Search Grids Completed <u>0</u>	Total UXO Located <u>0</u>	Total Excavations <u>4</u>	
Comments: CONTINUED WITH BEEM EXCAVATION AT "J" PAD. LAY OUT ACCESS LANE TO REAR OF LONG BEEM, TO ALLOW EASIER ACCESS TO GRID BORINGS BEHIND LONG BEEM. THIS LANE IS FOR ACCESS ONLY, 1200 COMPLETED "J" PAD BEEM EXCAVATIONS, SECURED AT 1200 DUE TO C.T.MAIN PERSONNEL DEPARTING FOR WEEKEND. PADS B, F, H ARE ONLY BEEM EXCAVATIONS REMAINING. THESE EXCAVATIONS WERE RESERVED FOR OBSERVATION BY ALLIANCE CO. (EPA REP). WILL RETURN 12-9-91.			
HFA EOD Supervisor: R.T. INC		Signature: R. T. INC	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-10-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed <u>4</u>		Total UXO Located <u>0</u>	Total Excavations <u>0</u>
Comments: Completed Access Lane to Rear of Long Beam. Completed all beam excavations. No additional or significant munition items located. Discussed with Mike Dulsheld. The location of excavations of 3 anomalies located on "G" and "J" pads. HFA will excavate and collect samples at selected points as anomalies determined by Mike D. Swept & cleaned 1 30x50 grid bearing work site conducted by US.			
HFA EOD Supervisor: <u>R. T. Thel</u>		Signature: <u>[Signature]</u>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	



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DAILY OPERATIONS JOURNAL

Prime Contractor: C.T.MAIN		Contract Number: DACA 87-90-D-0019	
Date: 12-11-91		Project: Seneca Army Depot Open Burning Ground UXO Survey	
Search Grids Completed _____		Total UXO Located _____	
Total Excavations _____			
Comments: KOPPE CAVE 5 MILES N.W. OF SITE. FOUND OUT WETLANDS. THREE STATIONS EXCAVATED AND ALL IN PAD. J 4' 6" PAD 2 TRENCHES AND 6 PAD AND ONE ON J PAD. NO ORDNANCE LOCATED. SEE DETAILS IN DAILY JOURNAL 5 MILES S.W. OF B. FOR PAD BULGERS AT B & F PAD. CHECKED SAMPLES. 6 SOCIAL BALL REMOVED FROM 2' 4" SAMPLE. B. TAKEN PACKED EQUIPMENT IN PREPARATION FOR DEMOB. COMPLETED B PAD, 1415 BEGAN TRENCHES ON F PAD. 1 SOCIAL BALL IN SAMPLE FROM 1' 4" COMPLETED BRING TO 4' CALIB 1515 SECURED FOR DAY DUE TO RAIN OPS.			
HFA EOD Supervisor: R. T. Thiel		Signature: <i>[Signature]</i>	
FORECASTED OPERATIONAL SCHEDULE			
Type of Operation Scheduled:		Date of Operation:	
Scheduling Comments			
Site Superintendent:		Signature:	
Position (Title):	Date:	Time:	

APPENDIX C

SOIL BORING LOGS

Note: Boring logs for monitoring wells MW-1 through MW-7 are unavaible.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-A-1	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV. (GS): 623.4	
CONTRACTOR: EMPIRE DRILLING				ELEV. (TOC): -				DATE START: 12-12-91	
				DATE FINISH: 12-12-91				DRILLER: JW/LB	
				INSPECTOR: PFM					
				GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
				SAMPLE		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Weathered Shale Fragments, some SILT and CLAY, some Spent Ammunition, Slugs		Fill	
2		7	2'	0-2'	0.0	Olive - gray SILT, some +CLAY, trace - GRAVEL, trace fine to medium SAND		Till (ML)	
		8							
3		28	2'	2-4'	0.0				
		26							
4		33	2'	2-4'	0.0				
		45							
5		37	2'	2-4'	0.0				
		41							
6		40	1.4'	4-5.8'	0.0	Gray weathered shale, fissile, some SILT		Weathered Shale	
		100/3							
7						Refusal @ 5.8'		Competent Shale	
8						Gray Shale			
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-B-1	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(OS): 624.1	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 12-11-91	
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						DRILLER: JW/LB
SIZE ID/OD:	6.24/9.63	3" O.D.	-						INSPECTOR: PFM
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		10				Black Weathered Shale Fragments, some SILT and CLAY, with Spent Ammunition, Slugs Sbrapnel	Fill		
		10							
2		10							
		12	2'	0-2'	0.0				
3		60							
		100/4							
4			0.8'	2-4'	0.0	Dark Gray Weathered Shale, Fissile, some SILT	Weathered Shale		
5		13							
		23							
6		31							
		41	1.5'	4-6'	0.0				
7		57				Gray Shale	Competent Shale		
		100							
8			2'	6-8'	0.0				
9									
10									
11									
12									
13									

GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:	ORGANIC VAPOR METER		
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"
4-10	LOOSE	2-4	SOFT	SLOT SIZE: 0.010"			
10-30	M.DENSE	4-8	M.STIFF	REMARKS: No Equipment Installed			
30-50	DENSE	8-15	STIFF				
>50	V.DENSE	15-30	V.STIFF				
		>30	HARD				

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-C-1	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 626.3	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-7-92	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 1-7-92	DRILLER: JW/LB
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		9				Dark Gray Weathered Shale Fragments, some SILT and CLAY, some sand and wood fragments	Fill		
		12							
2		27				Olive Gray	Till (ML)		
		32	1.7	0-2'	0.0				
3		28				7.5'	Weathered Shale		
		27							
4		47				Refusal @ 8.0	Competent Shale		
		43	1.3	2-4'	0.0				
5		17				Gray Weathered Shale, Fissile, some SILT	Weathered Shale		
		23							
6		43				Gray Shale	Competent Shale		
		46	1.7	4-6'	0.0				
7		63				Refusal @ 8.0	Competent Shale		
		67							
8		57				Gray Weathered Shale, Fissile, some SILT	Weathered Shale		
		100/4	1.7	6-8'	0.0				
9						Refusal @ 8.0	Competent Shale		
10						Refusal @ 8.0	Competent Shale		
11						Refusal @ 8.0	Competent Shale		
12						Refusal @ 8.0	Competent Shale		
13						Refusal @ 8.0	Competent Shale		
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-C-2		
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446				
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:				
						ELEV.(GS): 625.9				
						ELEV.(TOC):				
						DATE START: 3-11-93				
						DATE FINISH: 3-11-93				
						DRILLER: Warner				
						INSPECTOR: ES				
				GROUNDWATER READINGS						
	CASING	SAMPLER	CORE BARREL	DATE	TIME	DEPTH TO WATER	STABILIZATION TIME			
TYPE:		SPLIT SPOON	-							
SIZE ID/OD:		3" O.D.	-							
HAMMER WEIGHT:	-	140 LB	-							
HAMMER FALL:	-	30 INCH	-							
SAMPLE				SAMPLE DESCRIPTION				STRATUM DESCRIPTION		
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)							SAMPLE DEPTH RANGE
1		1				gray SHALE fill	Fill (GP)			
		2								
		20								
2		30	1.2	0-2'	0.0	Radiation reading: Background				
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY			VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT			WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT			REMARKS: VOC Reading: Rig Radiation Reading taken				
10-30	M.DENSE	4-8	M.STIFF							
30-50	DENSE	8-15	STIFF							
>50	V.DENSE	15-30	V.STIFF							
		>30	HARD							

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-C-3			
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446					
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1					
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:					
						ELEV.(GS): 626.54					
						ELEV.(TOC):					
						DATE START: 3-11-93					
						DATE FINISH: 3-11-93					
						DRILLER: Warner					
						INSPECTOR: ES					
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
		SPLIT SPOON	-								
SIZE ID/OD:		3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		1				gray SHALE fill	Fill (GP)				
		2									
2		13									
		22	1.5	0-2'	0.0	Radiation reading: Background					
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"				
4-10	LOOSE	2-4	SOFT	SLOT SIZE: 0.010"							
10-30	M.DENSE	4-8	M.STIFF	REMARKS:							
30-50	DENSE	8-15	STIFF	VOC Reading: Rig							
>50	V.DENSE	15-30	V.STIFF	Radiation Reading taken							
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-C-4	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 72046			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 625.64			
						ELEV.(TOC):			
						DATE START: 3-11-93			
						DATE FINISH: 3-11-93			
						DRILLER: Warner			
						INSPECTOR: ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				gray SHALE fill	Fill (GP)		
2		13	1.6	0-2'	0.0	Radiation reading: Background			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-C-5			
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446				
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:				
							ELEV.(GS): 626.34				
							ELEV.(TOC):				
							DATE START: 3-11-93				
							DATE FINISH: 3-11-93				
							DRILLER: Warner				
							INSPECTOR: ES				
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:		SPLIT SPOON	-								
SIZE ID/OD:		3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		1				gray SHALE fill bottom 4" dry	Fill (GP)				
		2									
2		6				Radiation reading: Background					
		11	1.5	0-2'	0.0						
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC		DIAM. 2" SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig Radiation Reading taken						
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-D-1	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 627.0	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 1-7-92	
				GROUNDWATER READINGS				DATE FINISH: 1-7-92	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
TYPE: AUGER				SPLIT SPOON				INSPECTOR: ZK/LB	
SIZE ID/OD: 6.24/9.63				3" O.D.					
HAMMER WEIGHT: -				140 LB					
HAMMER FALL: -				30 INCH					
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		7				Dark Gray Weathered Shale Fragments, some SILT CLAY and SAND	Fill		
2		10							
		12							
3		17	1	0-2'	0.0				
		45							
4		30							
		35							
5		28	1.3	2-4'	0.0	Olive Gray SILT, some +CLAY, trace -GRAVEL trace fine to medium SAND	Till (ML)		
		18							
6		28							
		34							
7		55	1.5	4-6'	0.0				
		93							
8		100/2							
		-							
9		-	0.5	6-8'	0.0	Gray Weathered SHale, Fissile, some SILT	Weathered Shale		
		55							
10		95							
		100/2							
11			1	8-9.2	0.0	Refusal @ 9.2' Gray Shale	Competent Shale		
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"		
4-10	LOOSE	2-4	SOFT	SLOT SIZE: 0.010"					
10-30	M.DENSE	4-8	M.STIFF	REMARKS: No Equipment Installed					
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-E-1	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 629.7	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-8-92	
				DATE FINISH: 1-8-92				DRILLER: JW/LB	
								INSPECTOR: ZK/LB	
				GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		14				Dark Gray Weathered Shale Fragments, some SILT CLAY and SAND		Fill	
2		24	1.5	0-2'	0.0				
3		64				Brown-gray SILT, some +CLAY, trace - GRAVEL trace fine to medium SAND		Till (ML)	
4		21							
5		28							
6		29	1.5	2-4'	0.0				
7		16							
8		26							
9		33							
10		25	1.5	4-6'	0.0				
11		35							
12		50							
13		51	1.7	6-8'	0.0				
14		69							
15		16							
16		13							
17		12							
18		24	1.5	8-10	0.0	Gray Wethered Shale, Fissile, Some SILT		Weathered Shale	
19		27				Refusal @11.3'		Competent Shale	
20		33				Gray Shale			
21		100/3							
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-E-2	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 629.16		
							ELEV.(TOC):		
							DATE START: 3-11-93		
							DATE FINISH: 3-11-93		
							DRILLER: Warner		
							INSPECTOR: ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				gray SHALE fill bottom 4" dry	Fill (GP)		
2		4	1.4	0-2'	0.0	Radiation reading: Background			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST:		GAL. DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:	ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-E-3	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM:		ELEV.(GS): 629.89	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC):		DATE START: 3-11-93	
						DATE FINISH: 3-11-93		DRILLER: Warner	
						INSPECTOR: ES			
				GROUNDWATER READINGS					
		CASING	SAMPLER	CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:			SPLIT SPOON	-					
SIZE ID/OD:			3" O.D.	-					
HAMMER WEIGHT:		-	140 LB	-					
HAMMER FALL:		-	30 INCH	-					
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				gray SHALE fill	Fill (GP)		
2		2	0.75	0-2'	0.0	Radiation reading: Background			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:	ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-E-4	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: _____			
						ELEV.(GS): 629.47			
						ELEV.(TOC): _____			
						DATE START: 3-11-93		DATE FINISH: 3-11-93	
						DRILLER: Warner			
						INSPECTOR: ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				gray SHALE fill bottom 3" dry	Fill (GP)		
2		1	0.75	0-2'	0.0				
3						Radiation reading: Background			
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-E-5	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 630.02			
						ELEV.(TOC):			
						DATE START: 3-11-93			
						DATE FINISH: 3-11-93			
						DRILLER: Warner			
						INSPECTOR: ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3 8				gray SHALE fill bottom 1" dry	Fill (GP)		
2		13 15	1.5	0-2'	0.0	Radiation reading: Background			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig				
>50	V.DENSE	15-30	V.STIFF		Radiation Reading taken				
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-F-1	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(GS):			
						ELEV.(TOC):			
						DATE START:			
						DATE FINISH:			
						DRILLER:			
						INSPECTOR:			
				GROUNDWATER READINGS					
CASING		SAMPLER		CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON		-					
SIZE ID/OD:	6.24/9.63	3" O.D.		-					
HAMMER WEIGHT:	-	140 LB		-					
HAMMER FALL:	-	30 INCH		-					
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		9				Dark Gray Weathered Shale Fragments, some SILT CLAY with Spent Ammunition		Fill	
2		11	1.2						
		9							
3		12	1.2		0.0				
		16				Olive-gray SILT, some +CLAY, trace -GRAVEL trace fine to medium SAND		Till (ML)	
4		20	0.7						
		37							
5		61	0.7		0.0				
		29							
6		42	2.0						
		53							
7		53	2.0		0.0				
		38							
8		28	1.5			6.9'			
		25							
9		41	1.5		0.0	Gray Weathered Shale, Fissile, Some SILT		Weathered Shale	
		100/3							
10			0.3		0.0	Refusal @ 8.3'		Competent Shale	
						Gray Shale			
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY			VOC DETECTOR: ORGANIC VAPOR METER			
0-4	V. LOOSE	<2	V.SOFT			WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF			REMARKS: No Equipment Installed			
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO:	PB-F-2
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 632.0		
							ELEV.(TOC):		
							DATE START: 1-13-93		
							DATE FINISH: 1-13-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				dark gray SHALE fill	Fill (GP)		
		4							
2		7	1.1	0-2'	0/0	drk. brn. CLAY, some SILT, little SHALE frags, fill matls (wood, glass, misc. debris) Dust Readings: .01/.40 and .04/.45	Fill (GP)		
		9							
3		11	1.1	2-4'	0/0	olive gray CLAY, some SILT, several pebbles, quartz, micaceous pebbles Dust Readings: .04/.42	Fill (CL)		
		10							
4		11	1.1	2-4'	0/0				
		12							
5		8	1.8	4-6'	0/0	med. brn. to rusty CLAY, some SILT, mottled, trace fine SAND Dust Readings: .06/.41	Orig. Ground (CL)		
		13							
6		16	1.4	6-8'	34 * /0	mottled brown to pinkish brown CLAY, little SILT Dust Readings: .08/.46 * Hnu reading: 0; head space reading: 24	Till (CL)		
		17							
7		6	1.6	8-10'	20 * /0	As Above, few pebbles, some fine SAND Dust Readings: .01/.39 * Hnu reading: 0; head space reading: 29	Till (SC)		
		21							
8		23	1.2	10-12'	1.8/	olive gray to dark brown CLAY and SHALE fragments Dust Readings: .08/	weath. Shale (WR BRK)		
		29							
9		16	1.2	10-12'	1.8/				
		19							
10		29	1.2	10-12'	1.8/				
		29							
11		15	1.2	10-12'	1.8/				
		20							
12		25	1.2	10-12'	1.8/				
		25							
13		50/1		12-12.1'		Split spoon refusal @ 12.1'			
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-F-3	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 632.80			
						ELEV.(TOC):			
						DATE START: 3-12-93			
						DATE FINISH: 3-12-93			
						DRILLER: Warner			
						INSPECTOR: ES			
				GROUNDWATER READINGS					
CASING		SAMPLER		CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:		SPLIT SPOON		-					
SIZE ID/OD:		3" O.D.		-					
HAMMER WEIGHT:		140 LB		-					
HAMMER FALL:		30 INCH		-					
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC				
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)				
1		3				gray SHALE fill		Fill (GP)	
		2				Radiation reading: Background			
2		5	1.2	0-2'	0.0	olive gray, spotty rusty CLAY and SILT, little SHALE frags.		Till (CL)	
		10				(to 1" dia.)			
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Reading: Rig					
>50	V.DENSE	15-30	V.STIFF	Radiation Reading taken					
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-F-4	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 72046			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 630.49			
						ELEV.(TOC):			
						DATE START: 3-12-93			
						DATE FINISH: 3-12-93			
						DRILLER: Warner			
						INSPECTOR: ES			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		7 6				gray SHALE fill Radiation reading: Background	Fill (GP)		
2		4 7	0.8	0-2'	0.0	olive gray CLAY and SHALE frags, dry	Till (CL)		
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig Radiation Reading taken				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30 >30	V.STIFF HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-F-5	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 629.43			
						ELEV.(TOC):			
						DATE START: 3-12-93			
						DATE FINISH: 3-12-93			
						DRILLER: Warner			
						INSPECTOR: ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START:	DATE FINISH:
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		10				gray SHALE fill	Fill (GP)		
		12				Radiation reading: Background			
2		14	1.8	0-2'	0.0	olive gray CLAY, some SILT, little SHALE frags (to 1/2" dia.)	Till (CL)		
		14				bottom 2" - rusty brown CLAY and SILT			
3						NOTE: Debris at 1-2' depth consists of wire and 50 calib. bullet			
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig				
>50	V.DENSE	15-30	V.STIFF		Radiation Reading taken				
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-F-6	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 628.94		
							ELEV.(TOC):		
							DATE START: 3-12-93		
							DATE FINISH: 3-12-93		
							DRILLER: Warner		
							INSPECTOR: ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				gray SHALE fill Radiation reading: Background	Fill (GP)		
2		13	1.3	0-2'	0.0	olive gray CLAY, some SILT, little SHALE frags (to 1/4" dia.) bottom 2" - rusty brown CLAY and SILT	Till (CL)		
3						NOTE: Debris consists of nail and 50 calib. projectile (bullet)			
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig				
>50	V.DENSE	15-30	V.STIFF		Radiation Reading taken				
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-1	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(OS): 631.9	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-8-92	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 1-8-92	DRILLER: JW/LB
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				Dark Gray Loose CLAY and Shale, some SILT	Fill		
		6	1.2			Brown-gray SILT, some +CLAY, trace - GRAVEL	Till (CL)		
2		14		0.2	0.0	trace fine to medium SAND			
		14	1.2						
3		47							
		16							
4		29		2-4	0.0				
		50	1.3						
5		25							
		42	2.0						
6		50		4-6	0.0				
		50	2.0						
7		43				Dark Gray SILT, some +CLAY, trace - GRAVEL,	Till (ML)		
		40				trace fine to medium SAND			
8		45		6-8	0.0				
		45	1.5						
9		34							
		62	0.3		0.0				
10		100/3		8-9.3	0.0	Gray Weathered Shale, Fissile, some SILT		Weathered Shale	
			1.2			Gray Shale		Competent Shale	
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-2	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 632.7	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-9-92	
				DATE FINISH: 1-9-92				DRILLER: JW/LB	
				INSPECTOR: ZK/LB					
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Dark gray shale fragments, with some SILT and CLAY, Rust Staining	Fill Till (CL)		
2		9							
		12							
3		17	1.3	0.2	0.0				
		29							
4		33							
		26							
5		26	1.5	2-4	0.0				
		12				Brown-Gray SILT, some +CLAY, trace - GRAVEL			
6		15				trace fine to medium SAND	Till (ML)		
		19							
7		21	2.0	4-6	0.0				
		14							
8		22							
		28				Gray Weathered Shale, Fissile, some SILT	Weathered Shale		
9		33	1.0	6-8	0.0				
		1000							
10			0	8-9	0.0				
						Refusal @ 9' Gray Shale	Competent Shale		
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-3	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 633.3	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-9-92	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START: 1-9-92	DATE FINISH: 1-9-92
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-					DRILLER: JW/LB	
SIZE ID/OD:	6.24/9.63	3" O.D.	-					INSPECTOR: ZK/LB	
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Dark - gray shale fragments, some SILT and CLAY, one spent round	Fill		
		9							
2		15	1.2	0-2	0.0				
3		28				Brown - Gray SILT, some +CLAY, trace - GRAVEL trace fine to medium SAND	Till (ML)		
		38							
4		49	1.0	2.4	0.0				
5		63							
		27							
6		17							
		19							
7		100	2.0	4-6	0.0				
		95							
8		100/3	0.7	6-6.8	0.0	Refusal @6.8' Gray Shale	Competent Shale		
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.				DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS: No Equipment Installed					
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-4		
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1		
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 634.1		
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 1-9-92		
				GROUNDWATER READINGS				DATE FINISH: 1-9-92		
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB		
								INSPECTOR: ZK/LB		
TYPE:	AUGER	SPLIT SPOON	-							
SIZE ID/OD:	6.24/9.63	3" O.D.	-							
HAMMER WEIGHT:	-	140 LB	-							
HAMMER FALL:	-	30 INCH	-							
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION		
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)					
1		2				Dark - gray shale fragments, some SILT and CLAY,		Fill		
		8				Brown - Gray SILT, some + CLAY, trace - GRAVEL,		Till (ML)		
2		11				trace fine to medium SAND				
		14	1.2	0-2	0.0					
3		25								
		22								
4		20								
		27	0	2.4	0.0					
5		60								
		40	1.5	4-5.4	0.0					
6		100/4								
7						Gray Shale		Competent Shale		
8										
9										
10										
11										
12										
13										
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"	
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed						
10-30	M.DENSE	4-8	M.STIFF							
30-50	DENSE	8-15	STIFF							
>50	V.DENSE	15-30	V.STIFF							
		>30	HARD							

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-5	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(OS): 635.1	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-10-92	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 1-10-92	DRILLER: JW/LB
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Gray Brown SILT and +CLAY, trace rock fragments, some rust staining	Fill		
		11							
2		14							
		16	1.5	0-2	0.0				
3		20				Brown-gray SILT, some +CLAY, trace - GRAVEL, trace fine to medium SAND	Till (ML)		
		26							
4		26							
		26	1,1	2.4	0.0				
5		10				Refusal @ 7.6'	Competent Shale		
		15							
6		9							
		20	1.5	4-6	0.0				
7		66				Gray Shale			
		52							
8		54							
		100/1	1.5	6-7.6	0.0				
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-6	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 635.7	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 1-13-92	
				GROUNDWATER READINGS				DATE FINISH: 1-13-92	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: Empire	
								INSPECTOR: CTM	
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				Gray Shale Fragments	Fill		
		16				Olive-gray SILT, Some +CLAY, Trace - GRAVEL, trace fine to medium SAND	Fill (ML)		
2		11							
		12	1.3	0.2					
3		21							
		22							
4		34							
		28	1.1	2-4					
5		22							
		33							
6		35							
		50	1.5	4-6					
7		100/4				Gray Weathered Shale, Fissile Some SILT	Weathered Shale		
		52	0.4	6-6.4		Refusal @ 6.4'	Competent Shale		
8		54				Gray Shale			
		100/1	1.5	6-7.6	0.0				
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT		REMARKS: No Equipment Installed				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-7	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELBV. DATUM: 929, NGD		ELBV.(GS): 636.4	
CONTRACTOR: EMPIRE DRILLING						ELBV.(TOC): -		DATE START: 1-13-92	
				GROUNDWATER READINGS				DATE FINISH: 1-13-92	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: Empire	
								INSPECTOR: CTM	
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
				SAMPLE		SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				Shale fragments with some SILT and CLAY		Fill	
		16							
2		11							
		12	1.3	0.2					
3		21				Olive-gray SILT, Some +CLAY, Trace - GRAVEL, trace fine to medium SAND		Till (ML)	
		22							
4		34							
		28	1.1	2-4					
5		22							
		33							
6		35							
		50	1.5	4-6					
7		100/4							
		52	0.4	6-6.4					
8		54				Refusal @ 7.3'			
		100/1	1.5	6-7.6	0.0	Gray Shale		Competent Shale	
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS: No Equipment Installed					
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-8	
PROJECT: SEAD, OB GROUND PAD BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 636.0			
						ELEV.(TOC):			
						DATE START: 1-14-93			
						DATE FINISH: 1-14-93			
						DRILLER: Warner			
						INSPECTOR: CL/BH/ES			
				GROUNDWATER READINGS					
		CASING	SAMPLER	CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				SHALE fill	Fill (GP)		
		3							
2		7	1.1	0-2'	0/0	med. brown to rusty brown CLAY, some SILT, few cobbles	Oxidized Till (CL)		
		10				Dust Readings: .05/08			
3		30				olive gray CLAY, some SHALE cobbles, trace fine SAND	Till (CL)		
		44							
4		58	0.5	2-4'	0/0	Dust Readings: .07/08			
		100							
5		27				olive brown to olive gray CLAY, little SILT, spotty rusty brown	Till (CL)		
		27				+ trace SHALE fragments, dry, hard			
6		36	1.7	4-6'	0/0	Dust Readings: .07/10			
		100				weathered SHALE	WR/BRK		
7						Split spoon refusal @ 6.0'			
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-G-9	
PROJECT: SEAD, OB GROUND PAD BORINGS								JOB NO: 720446	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: _____	
								ELEV.(GS): 631.0	
								ELEV.(TOC): _____	
								DATE START: 1-12-93	
								DATE FINISH: 1-12-93	
								DRILLER: Warner	
								INSPECTOR: CL/BH/ES	
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				gray SHALE fill	Fill (GP)		
		4				rusty brown CLAY and SILT	Oxidized Till (CL)		
2		8	0.7	0-2'	0/0	Dust Readings: .68/.26			
		12							
3		9							
		24							
4		42	0.3	2-4'	0/0	olive green CLAY and SILT Dust Readings: .64/.26	Till (CL)		
		34							
5		16				med. brown CLAY and SILT, some GRAVEL,	Till (CL)		
		36				limestone fragments to 1" dia., dry			
6		28	1.4	4-6'	0/0	Dust Readings: .64/.24			
		32							
7		22				olive green SILT, little CLAY, little fine SAND,	Till (GC)		
		22				little SHALE fragments to 2" dia.			
8		24	1.9	6-8'	0/0	Dust Readings: .72/.26			
		25							
9		13				weathered SHALE	BRK		
		80							
10		100/2	1.2	8-9.2'	0/0	Dust Readings: .75/.26			
						Split spoon refusal @ 9.2'			
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Readings: Rig/Downwind					
>50	V.DENSE	15-30	V.STIFF	Dust Readings: Rig/Downwind					
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-H-1	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 637.0	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 12-12-91	
				GROUNDWATER READINGS				DATE FINISH: 12-12-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
								INSPECTOR: PFM	
TYPE:	AUGER	SPLIT SPOON							
SIZE ID/OD:	6.24/6.63	3" O.D.							
HAMMER WEIGHT:	-	140 LB							
HAMMER FALL:	-	30 INCH							
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				Weathered Shale Fragments, Some SILT and CLAY	Fill		
		16							
2		11				Olive-gray SILT, Some +CLAY, Trace - GRAVEL, trace fine to medium SAND	Till (ML)		
		12	1.2	0-2	0.0				
3		21							
		22							
4		34				Refusal @ 5.9'	Competent Shale		
		28	1.8	2-4	0.0				
5		22							
		33				Gray Shale			
6		35							
		100/4	1.5	4-5.9	0.0				
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT		REMARKS: No Equipment Installed				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-H-2	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 639.0		
							ELEV.(TOC):		
							DATE START: 1-14-93		
							DATE FINISH: 1-14-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START:	DATE FINISH:
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				SHALE fill	Fill (GP/GC)		
		3							
2		4				Dust Readings: .05/.14 and .05/.12			
		6	0.9	0-2'	0/0				
3		9							
		10							
4		16				med. brown to rusty CLAY, some SILT, few pebbles	CL		
		17	1.5	2-4'	0/0				
5		8				rusty brown to olive green CLAY and SILT, little SHALE fragments (in vertical plane)	Till (CL)		
		11							
6		12				Dust Readings: .07/.14			
		16	1.3	4-6'	0/0				
7		30							
		41							
8		66				olive green CLAY and SILT, little SHALE and LIMESTONE fragments/cobbles	Till (CL)		
		103	1.7	6-8'	0/0				
9		24				Dust Readings: .11/.10			
		50/3	0.8	8-8.8'	0/0				
10						Split spoon refusal @ 8.8'	BRK (L?)		
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST:		GAL.		DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:		ORGANIC VAPOR METER			
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO:	PB-H-3
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(OS): 638.26		
							ELEV.(TOC):		
							DATE START: 3-12-93		
							DATE FINISH: 3-12-93		
							DRILLER: Warner		
							INSPECTOR: ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				gray SHALE fill (fragments to 1-1/2" dia.) Radiation reading: Background	Fill (GP)		
		2							
2		5							
		6	1.5	0-2'	0.0				
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig Radiation Reading taken				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-H-4	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 637.23		
							ELEV.(TOC):		
							DATE START: 3-12-93		
							DATE FINISH: 3-12-93		
							DRILLER: Warner		
							INSPECTOR: ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		8				gray SHALE fill (fragments to 1" dia.) Radiation reading: Background	Fill (GP)		
		14							
2		16	1.5	0-2'	0.0				
		16							
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO:	PB-H-5		
PROJECT: SEAD, OB GROUND PAD BORINGS								JOB NO:	720446		
CLIENT: SENECA ARMY DEPOT								SHEET NO:	1 OF 1		
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM:			
								ELEV.(GS):	637.03		
								ELEV.(TOC):			
								DATE START:	3-12-93		
								DATE FINISH:	3-12-93		
								DRILLER:	Warner		
								INSPECTOR:	ES		
				GROUNDWATER READINGS							
	CASING	SAMPLER	CORE BARREL	DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:		SPLIT SPOON	-								
SIZE ID/OD:		3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
SAMPLE						SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC						
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)						
1		1				1.0	0-2'	0.0	0.0	gray SHALE fill Radiation reading: Background	Fill (GP)
2		2								bottom .5' dry	
3		3									
4		7									
5											
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY			VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT			WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT			REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30 >30	V.STIFF HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-H-6	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 637.07		
							ELEV.(TOC):		
							DATE START: 3-12-93		
							DATE FINISH: 3-12-93		
							DRILLER: Warner		
							INSPECTOR: ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START:	DATE FINISH:
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:		3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				gray SHALE fill (fragments to 1.5" dia.) Radiation reading: Background	Fill (GP)		
2		3	0.75	0-2'	0.0				
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Radiation Reading taken					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-1	
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NOD	
								ELEV.(OS): 637.1	
								ELEV.(TOC): --	
								DATE START: 1-13-92	
								DATE FINISH: 1-13-92	
								DRILLER: Empire	
								INSPECTOR: CTM	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
AUGER		SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				Shale Fragments	Fill		
		16				Brown-gray SILT, some +CLAY, trace - GRAVEL, trace fine to medium SAND	Till (ML)		
2		11	1.2	0-2	0.0				
		12							
3		21							
		22				Refusal @ 3.9'			
4		34	1.8	2-4	0.0				
		28				Gray Shale	Competent Shale		
5		22							
		33							
		35							
6		100/4	1.5	4-5.9	0.0				
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.				DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS: No Equipment Installed					
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-2	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(OS): 637.1	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 1-14-92	
						DATE FINISH: 1-14-92		DRILLER: Empire	
						INSPECTOR: CTM			
						GROUNDWATER READINGS			
		CASING	SAMPLER	CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:		AUGER	SPLIT SPOON	-					
SIZE ID/OD:		6.24/9.63	3" O.D.	-					
HAMMER WEIGHT:		-	140 LB	-					
HAMMER FALL:		-	30 INCH	-					
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC				
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)				
1		6				Shale Fragments, SILT, CLAY and ROOTS		Fill	
		9				0.7'			
2		11				Olive-gray SILT, Some +CLAY, trace - GRAVEL		Till (ML)	
		12	1.3	0-2		trace fine to medium SAND			
3		24							
		67							
4		49							
		51	1.7	2-4					
5		20							
		51							
6		55							
		100/4	24	4-7.2		5.9'			
7		50/2				Gray Weathered Shale, Friable, Some SILT		Weathered Shale	
			0						
8						Refusal @ 7.2'		Competent Shale	
9									
10									
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-3			
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1			
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 636.7			
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-15-92			
				DATE FINISH: 1-15-92				DRILLER: Empire			
				INSPECTOR: CTM							
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.24/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (PT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		1				Shale Fragments, SILT and CLAY	Fill				
		12				0.7'					
2		11				Olive-gray SILT, Some +CLAY, trace - GRAVEL	Till (ML)				
		10	1.3	0-2		trace fine to medium SAND					
3		27									
		34									
4		46									
		35	1.7	2-4							
5		17									
		37									
6		69				Refusal @ 5.7'	Competent Shale				
		100/3	1.8	4-5.7		Gray Shale					
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2"		SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF		REMARKS: No Equipment installed						
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-4	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(GS): 636.6			
						ELEV.(TOC): -			
						DATE START: 1-15-92			
						DATE FINISH: 1-15-92			
						DRILLER: Empire			
						INSPECTOR: CTM			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		13				Shale Fragments, SILT and CLAY	Fill		
		10							
2		18							
		10	1.0	0-2					
3		30				Olive-gray SILT, Some +CLAY, trace -- GRAVEL	Till (ML)		
		35				trace fine to medium SAND			
4		30							
		33	2.0	2-4					
5		27							
		47							
6		47				Refusal @ 5.8'			
		100/3	1.9	4-5.8					
7						Gray Shale	Competent Shale		
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS: No Equipment Installed				
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-5	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(OS): 637.1			
						ELEV.(TOC): -			
						DATE START: 1-15-92			
						DATE FINISH: 1-15-92			
						DRILLER: Empire			
						INSPECTOR: CTM			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Shale Fragments some fine SAND and SILT	Fill		
		9							
2		17				Olive-gray SILT, Some +CLAY, trace -GRAVEL trace fine to medium SAND	Till (ML)		
		12	1	0-2					
3		19				Refusal @ 5.9'	Competent Shale		
		27							
4		36				Gray Shale			
		46	0	2-4					
5		30							
		49							
6		56							
		100/4	1.5	4-5.9					
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2"		SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-6	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NOD				ELEV.(GS): 636.3	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-15-92	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 1-15-92	DRILLER: Empire
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		8				Shale Fragments some SILT	Fill		
		16							
2		11	1.4	0-2		Olive-gray SILT, Some +CLAY, trace -GRAVEL trace fine to medium SAND	Till (ML)		
		8							
3		17	1.9	2-4		Refusal @ 5.7	Competent Shale		
		25							
4		43				Gray Shale			
		47							
5		15							
		38							
6		53	1.0	4-5.7					
		100/2							
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	
4-10	LOOSE	2-4	SOFT		SLOT SIZE: 0.010"				
10-30	M.DENSE	4-8	M.STIFF		REMARKS: No Equipment Installed				
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-7	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 636.8	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 1-17-92	
				GROUNDWATER READINGS				DATE FINISH: 1-17-92	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: Empire	
								INSPECTOR: CTM	
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.249.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCRIBEN (PPM)				
1						Shale Fragments, some SILT	Fill		
2									
3						Brown - gray SILT, Some +CLAY, trace - GRAVEL trace fine to medium SAND	Till (ML)		
4									
5									
6									
7									
8						Refusal @ 7.4'			
9						Gray Shale	Competent Shale		
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:		ORGANIC VAPOR METER			
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-8	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 635.1	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 1-17-92	
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 1-17-92	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: Empire	
TYPE:	AUGER	SPLIT SPOON	-					INSPECTOR: CTM	
SIZE ID/OD:	6.249.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				Shale Fragments, some SILT, ROOTS	Fill		
		5							
2		7	1.5	0-2					
3		31				Olive - gray SILT, Some +CLAY, trace - GRAVEL trace fine to medium SAND	Till (ML)		
		35							
4		39	1.3	2-4		Refusal @ 4.7	Competent Shale		
5		92	0.5	2-4.7					
6		100/2							
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-9	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 636.0		
							ELEV.(TOC):		
							DATE START: 1-13-93		
							DATE FINISH: 1-13-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		5				gray SHALE fill	Fill (GF)		
		12							
2		12	1.3	0-2'	0	medium brown CLAY, some SILT Dust Readings: .06	Till (CL)		
		12							
3		16							
		29							
4		34	1.3	2-4'	0	olive gray CLAY, little SILT, trace SAND, some rock fragments, few cobbles Dust Reading: .08	Till (CL/WR BRK)		
		45							
5		19							
		33							
6		100/4		4-5.4'	0	Split spoon refusal @ 5.4'	Bedrock		
						AUGER REFUSAL @ 6.0'			
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig				
>50	V.DENSE	15-30	V.STIFF		Dust Reading: Rig				
		>30	HARD		NOTE: No downwind readings taken due to rain.				

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: PB-J-10	
PROJECT: SEAD, OB GROUND PAD BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 636.0		
							ELEV.(TOC):		
							DATE START: 1-12-93		
							DATE FINISH: 1-12-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				SHALE fragments	Fill		
		3				rusty brown CLAY and SILT,	Oxidized Till (CL)		
2		4				trace SHALE fragments			
		12	0.7	0-2'	0/0	Dust Readings: .48/.76			
3		26				olive green CLAY, some SHALE			
		33				(pushed a limestone cobble)	Till (CL)		
4		43							
		45	0.6	2-4'	0/0	Dust Readings: .48/.79			
5		25				Olive green CLAY and SHALE fragments, dry	Till (GC)		
		70/5		4-5'	0/0	Dust Readings: .48/.78			
6						Split spoon refusal @ 5.0'			
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST:		GAL. DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:		ORGANIC VAPOR METER			
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"		
4-10	LOOSE	2-4	SOFT	SLOT SIZE: 0.010"					
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Readings: Rig/Downwind					
>50	V.DENSE	15-30	V.STIFF	Dust Readings: Rig/Downwind					
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: GB-01	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(OS): 622.8	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 12-3-91	
				GROUNDWATER READINGS				DATE FINISH: 12-3-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
TYPE: AUOER SPLIT SPOON -								INSPECTOR: BODO/GRIFFITHS	
SIZE ID/OD: 6.25/9.63" 3" O.D. -									
HAMMER WEIGHT: - 140 LB -									
HAMMER FALL: - 30 INCH -									
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2 6			0.0	Brown Gray SILT, Some +CLAY, Trace - GRAVEL and Trace Fine to Medium SAND	TILL (ML)		
2		10 14	1.3	0-2'	0.0				
3		19 23			0.0				
4		30 33	1.2	2-4'	0.0				
5		31 28			0.0	Gray Weathered Shale, Friable, Some SILT	WEATHERED SHALE		
6		33 100/0.4	1.8	4-5.9	0.0				
7						Gray Shale	COMPETENT SHALE		
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM. SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: GB-02	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 622.1	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 12-3-91	
				DATE FINISH: 12-3-91				DRILLER: JW/LB	
				INSPECTOR: R. GRIFFITHS					
				GROUNDWATER READINGS					
		CASING	SAMPLER	CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:		AUGER	SPLIT SPOON	-				NONE	
SIZE ID/OD:		6.25/9.63"	3" O.D.	-					
HAMMER WEIGHT:		-	140 LB	-					
HAMMER FALL:		-	30 INCH	-					
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC				
	BLOWS	BLOWS PER		DEPTH	SCREEN				
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)				
1		3			0.0	Brown Gray SILT, Some +CLAY, Trace +GRAVEL and Trace Fine to Medium SAND		TILL (ML)	
2		7			0.0				
		10		0-2'	0.0				
3		14			0.0				
		24			0.0				
4		24			0.0				
		30		2-4'	0.0				
5		90			0.0	Gray Weathered Shale, Pisalle, Some SILT		WEATHERED SHALE	
		27			0.0	Refusal @ 5.8'			
6		51			0.0				
		90		4-5.8	0.0	GRAY SHALE		COMPETENT SHALE	
7		100/0.3			0.0				
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS				VOL. WATER LOST: GAL. DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V. SOFT		WELL PIPE: DIAM. SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: No Equipment Installed				
10-30	M.DENSE	4-8	M. STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V. STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: GB-03	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NOD		ELEV.(OS): 635.6	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 12-4-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 12-5-91 <th rowspan="2">DRILLER: JW/LB </th>	DRILLER: JW/LB
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-					INSPECTOR: R. GRIFFITHS	
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4			0.0	Brown Gray SILT, Some +CLAY, Trace +GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
		6							
2		9							
		7	1'	0-2'	0.0				
3		10							
		11			0.0				
4		51							
		84	1.5'	2-4'	0.0				
5		21							
		28			0.0				
6		29							
		29	1.5'	4-6'	0.0				
7		51							
		62			0.0				
8		100/3'	1.3'	6-7.3	0.0	5.8' GRAY WEATHERED SHALE, FISSILE, SOME SILT Refusal @ 7.3'	WEATHERED SHALE		
9						GRAY SHALE	COMPETENT SHALE		
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM.		SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-04		
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NGD			
								ELEV.(OS): 631.1			
								ELEV.(TOC): -			
								DATE START: 12-5-91			
								DATE FINISH: -			
								DRILLER: JW/LB			
								INSPECTOR: R. GRIFFITHS			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
AUGER		SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		6				Brown Gray SILT, Some +CLAY, Trace Fine to Medium SAND	TILL (ML)				
		8									
2		12				Brown - Gray SILT, Some +CLAY, Little +GRAVEL, Trace Fine to Medium SAND					
		16	1.5'	0-2'							
3		32									
		236									
4		37									
		38	1.6'	2-4'							
5		28									
		14									
6		12									
		10	1.5'	4-6'							
7		12									
		20									
8		60				Refusal @ 7.9'					
		100/4	1'	6-7.9'							
9						GRAY SHALE	COMPETENT SHALE				
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.				DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER				WELL PIPE: DIAM. SLOT SIZE: 0.010"			
0-4	V. LOOSE	<2	V.SOFT	REMARKS: No Equipment Installed							
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-05
PROJECT: SEAD, OB GROUND RIFS							JOB NO: 720229-0600		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM: 1929, NGD		
							ELEV.(GS): 634.6		
							ELEV.(TOC): -		
				GROUNDWATER READINGS				DATE START: 12-5-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 12-6-91	
								DRILLER: JW/LB	
								INSPECTOR: R. GRIFFITHS	
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
SAMPLE									
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
1		6			0.0	Gray SILT, Some +CLAY, Little - GRAVEL, Trace Fine to Medium SAND		TILL (ML)	
2		10			0.0				
3		17	1.7'	0-2'	0.0				
4		27			0.0	Refusal @ 3.2'			
5		31			0.0	GRAY SHALE		COMPETENT SHALE	
6		40			0.0				
7		-			0.0				
8		100/2	1.1'	2-3.2'	0.0				
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM. SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N°	GB-06		
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NGD			
								ELEV.(OS): 636.2			
								ELEV.(TOC): -			
								DATE START: 12-6-91			
								DATE FINISH: 12-6-91			
								DRILLER: JW/LB			
								INSPECTOR: R. GRIFFITHS			
				GROUNDWATER READINGS							
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
SAMPLE						SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC						
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)						
1		4				Brown Gray SILT, Some +CLAY, Trace GRAVEL, Trace Fine to Medium SAND	TILL (ML)				
		8									
2		20									
		25	0-2'		1.6						
3		19				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		32									
4		35									
		76	2-4'								
5		24				Refusal @ 6.9'	COMPETENT SHALE				
		44									
6		45									
		40	4-6'								
7		39				GRAY SHALE	COMPETENT SHALE				
		100/4	6-6.9'								
8											
9											
10						GRAY SHALE	COMPETENT SHALE				
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE: DIAM.		SLOT SIZE: 0.010"			
0-4	V. LOOSE	<2	V. SOFT								
4-10	LOOSE	2-4	SOFT								
10-30	M. DENSE	4-8	M. STIFF								
30-50	DENSE	8-15	STIFF								
>50	V. DENSE	15-30	V. STIFF								
		>30	HARD								
				REMARKS:		No Equipment Installed					

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-07		
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1			
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 620.2			
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): -				DATE START: 12-9-91			
				DATE FINISH: 12-9-91				DRILLER: JW/LB			
				INSPECTOR: R. GRIFFITHS							
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		3				Brown Gray SILT, Some +CLAY, Trace GRAVEL, Trace Fine to Medium SAND	TILL (ML)				
		6			0.0						
2		12									
		14	1.8	0-2'	0.0						
3		17				GRAY WEATHERED SHALE, FISSILE, SOME SILT Refusal 4.8'	WEATHERED SHALE				
		33			0.0						
4		50									
		55	1.9'	2-4'	0.0						
5		50				GRAY SHALE	COMPETENT SHALE				
		100/3	.7	4-4.8	0.0						
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:		ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM.		SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-08
PROJECT: SEAD, OB GROUND RIFS							JOB NO: 720229-0600		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM: 1929, NGD		
							ELEV.(GS): 626.0		
							ELEV.(TOC): -		
				GROUNDWATER READINGS				DATE START: 12-9-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 12-9-91	
TYPE: AUGER SPLIT SPOON -							DRILLER: JW/LB		
SIZE ID/OD: 6.25/9.63" 3" O.D. -							INSPECTOR: R. GRIFFITHS		
HAMMER WEIGHT: - 140 LB -									
HAMMER FALL: - 30 INCH -									
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Gray SILT, Some +CLAY, Trace GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
		7			0.0				
2		12							
		17	1.5'	0-2'	0.0				
3		24							
		25			0.0				
4		27							
		28	1.7'	2-4'	0.0				
5		20							
		24			0.0				
6		35							
		36	1.8'	4-6'	0.0				
7		25				5.5'			
		100/3	0.3	6-6.8'	0.0	GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
8						6.8'			
						GRAY SHALE	COMPETENT SHALE		
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE: DIAM. SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: No Equipment Installed				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-09
PROJECT: SEAD, OB GROUND RIFS							JOB NO: 720229-0600		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM: 1929, NGD		
							ELEV.(OS): 625.4		
							ELEV.(TOC): -		
				GROUNDWATER READINGS				DATE START: 12-10-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 12-10-91	
TYPE: AUGER				SPLIT SPOON				DRILLER: JW/LB	
SIZE ID/OD: 6.25/9.63"				3" O.D.				INSPECTOR: R. GRIFFITHS	
HAMMER WEIGHT: -				140 LB					
HAMMER FALL: -				30 INCH					
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive - Gray SILT, Some +CLAY, Trace +GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
2		6			0.0				
		12							
3		12	1.5'	0-2'	0.0				
		16							
4		16			0.0				
		17							
5		17	1.5'	2-4'	0.0				
		19							
6		28			0.0	GRAY WEATHERED SHALE FILLILE, SOME SILT	WEATHERED SHALE		
		-				5.4'			
7		100/4	1	4-5.4'		GRAY SHALE	COMPETENT SHALE		
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM.		SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N° GB-10	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(GS): 635.1	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): -		DATE START: 12-10-91	
				GROUNDWATER READINGS				DATE FINISH: 12-10-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
TYPE: AUGER SPLIT SPOON -								INSPECTOR: R. GRIFFITHS	
SIZE ID/OD: 6.25/9.63" 3" O.D. -									
HAMMER WEIGHT: - 140 LB -									
HAMMER FALL: - 30 INCH -									
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive - Gray SILT, Some +CLAY, Trace +GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
		7			0.0				
2		10							
		13	1.4'	0-2'	0.0				
3		15				3.2'			
		45			0.0				
4		100/4	1.5'	2-3.6'	0.0	GRAY WEATHERED SHALE FILLILE, SOME SILT	WEATHERED SHALE		
						GRAY SHALE	COMPETENT SHALE		
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM.		SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-11		
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NGD			
								ELEV.(GS): 637.8			
								ELEV.(TOC): -			
								DATE START: 12-11-91			
								DATE FINISH: 12-11-91			
								DRILLER: JW/LB			
								INSPECTOR: R. GRIFFITHS			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
AUGER		SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		3 7			0.0	Olive - Gray SILT, Some +CLAY, Trace +GRAVEL, Trace Fine to Medium SAND	TILL (ML)				
2		10 13	1.5'	0-2'	0.0						
3		15 45			0.0	GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
4			1.25	2-4'	0.02						
5					0.04						
6				4-6'	0.04	SPOON REFUSAL, 6'					
7						GRAY SHALE	COMPETENT SHALE				
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE: DIAM. SLOT SIZE: 0.010"					
0-4	V. LOOSE	<2	V.SOFT	REMARKS: No Equipment Installed							
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30 >30	V.STIFF HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-12
PROJECT: SEAD, OB GROUND RIFS							JOB NO: 720229-0600		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM: 1929, NGD		
							ELEV.(GS): 622.6		
							ELEV.(TOC): -		
				GROUNDWATER READINGS				DATE START: 12-16-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 12-16-91	
							DRILLER: JW/LB		
							INSPECTOR: R. GRIFFITHS		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASINO BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive-Gray SILT, Some +CLAY, Trace +GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
		10			0.0				
2		14		0-2'					
		17							
3		14							
		17							
4		21		2-4'		GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
		21							
5		15							
		29							
6		67		4-5.7'					
		100/3							
7		63		6-6.7'		REFUSAL 6.7			
		100/2				GRAY SHALE	COMPETENT SHALE		
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM.		SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: GB-13	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(OS): 622.3			
						ELEV.(TOC): -			
						DATE START: 1-21-92			
						DATE FINISH: 1-21-92			
						DRILLER: JW/LB			
						INSPECTOR: R. GRIFFITHS			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		8				Brown - Gray SILT, Some +CLAY, Trace + GRAVEL, Trace Fine to Medium SAND	TILL (ML)		
		16			0.0				
2		11							
		16	1.5	0-2'	0.0				
3		30							
		35			0.0				
4		40							
		40	2.0	2-4'	0.0				
5		27							
		24			0.0				
6		25							
		100/3	1.8	4-5.8'	0.0			REFUSAL 5.8'	
7								GRAY SHALE	COMPETENT SHALE
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE: DIAM. SLOT SIZE: 0.010"			
0-4	V. LOOSE	<2	V.SOFT	REMARKS: No Equipment Installed					
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-14
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 929, NOD	
								ELEV.(OS): 627.9	
								ELEV.(TOC): -	
				GROUNDWATER READINGS				DATE START: 12-16-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 12-16-91	
								DRILLER: JW/LB	
								INSPECTOR: J. PETERS	
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
SAMPLE									
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC	SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
	BLOWS	BLOWS PER	DEPTH	DEPTH	SCREEN				
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)				
1		0			0.0	Brown - Gray SILT, Some +CLAY, Little + GRAVEL, Little + Fine to Medium SAND		FILL (ML)	
		6							
2		9		0-2'	0.0				
		12							
3		7			0.0				
		11							
4		17		2-4'	0.0	Yellow - Brown Fine SAND. Some +SILT, Some + GRAVELS		TILL (GM)	
		39							
5		22			0.0				
		25							
6		29		4-6'	0.0				
		47							
7		38			0.0	GRAY, WEATHERED SHALE, FISSILE, SOME SILT		WEATHERED SHALE	
		50							
8		55		6-8'	0.0				
		54							
9		14			0.0				
		15							
10		28		8-10'	0.0	REFUSAL, 11.7		COMPETENT SHALE	
		49							
11		97		10-11.6'	0.0				
		100/1				GRAY SHALE			
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE: DIAM.		SLOT SIZE: 0.010"	
0-4	V. LOOSE	<2	V.SOFT						
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						
REMARKS: No Equipment Installed									

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-15		
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NGD			
								ELEV.(GS): 628.4			
								ELEV.(TOC): -			
								DATE START: 1-22-92			
								DATE FINISH: -			
								DRILLER: JW/LB			
								INSPECTOR: R. GRIFFITHS			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		7				Brown - Gray SILT, Some +CLAY, Little +GRAVEL, Little + Fine to Medium SAND	TILL (ML)				
		10									
2		11									
		16	2'								
3		20									
		24									
4		105				REFUSAL 5.9'	COMPETENT SHALE				
		30	1.5'								
5		16									
		36									
6		42									
		100/4	2'								
7						GRAY SHALE	COMPETENT SHALE				
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:							
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE: DIAM. SLOT SIZE: 0.010"							
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	GB-16		
PROJECT: SEAD, OB GROUND RIFS							JOB NO: 720229-0600				
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM: 1929, NGD				
							ELEV.(GS): 633.9				
							ELEV.(TOC): -				
							DATE START: 1-21-92				
							DATE FINISH: 1-21-92				
							DRILLER: JW/LB				
							INSPECTOR: R. GRIFFITHS				
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
AUGER		SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63"	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		3				Brown-Gray SILT, Some +CLAY, Little +GRAVEL, Little +FINE to Medium SAND	TILL (ML)				
		5			0.0						
2		10									
		15	1.1	0-2'	0.0						
3		16									
		16			0.0						
4		19									
		20	1.9	2-4'	0.0						
5		11									
		15			0.0						
6		22									
		22	1.3	4-6'	0.0						
7		27									
		100/3'	.7	6-6.8'	0.0	REFUSAL 6.8'					
8						GRAY SHALE	COMPETENT SHALE				
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR:		ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE:		DIAM.	SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT	REMARKS: No Equipment Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO:	GB-23	
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO:			720446
CLIENT: SENECA ARMY DEPOT							SHEET NO:			1 OF 1
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:			
							ELEV.(GS):			621.0
							ELEV.(TOC):			
							DATE START:			1-18-93
							DATE FINISH:			1-18-93
							DRILLER:			Warner
							INSPECTOR:			CL/BH/ES
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START:	DATE FINISH:	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME			
TYPE:		SPLIT SPOON	-							
SIZE ID/OD:	6.24/9.63	3" O.D.	-							
HAMMER WEIGHT:	-	140 LB	-							
HAMMER FALL:	-	30 INCH	-							
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION			
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)					
1		1 4				dark brown CLAY, some SHALE	THI (CL)			
2		7 12	1.6	0-2'	0	medium to rusty brown CLAY, trace SILT Dust Readings: .07	THI (CL)			
3		20 25								
4		38 51	1.6	2-4'	0	weathered SHALE (dry?) Dust Readings: .11	BRK			
5										
6										
7										
8										
9										
10										
11										
12										
13										
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig Dust Reading: Rig NOTE: No Downwind Readings taken due to weather.					
10-30	M.DENSE	4-8	M.STIFF							
30-50	DENSE	8-15	STIFF							
>50	V.DENSE	15-30 >30	V.STIFF HARD							

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-24	
PROJECT: SEAD, OB GROUND GRID BORINGS								JOB NO: 720446	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: _____	
								ELEV.(GS): 620.0	
								ELEV.(TOC): _____	
								DATE START: 1-18-93	
								DATE FINISH: 1-18-93	
								DRILLER: Warner	
								INSPECTOR: CL/BH/ES	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
		SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				olive gray CLAY, some SILT, little SHALE fragments			
		7							
2		10							
		19	1.2	0-2'	0	Dust Readings: .05			
3		18							
		36				weathered SHALE, dry (wet to 3.2')			
4		100/3		2-3.3	0	Dust Reading: .05			
5						Split spoon refusal @ 3.3'			
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Reading: Rig					
>50	V.DENSE	15-30	V.STIFF	Dust Reading: Rig					
NOTE: No Downwind Readings taken due to weather.									

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-25		
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:			
							ELEV.(GS): 623.0			
							ELEV.(TOC):			
							DATE START: 1-18-93			
							DATE FINISH: 1-18-93			
							DRILLER: Warner			
							INSPECTOR: CL/BH/ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME			
TYPE:		SPLIT SPOON	-							
SIZE ID/OD:	6.24/9.63	3" O.D.	-							
HAMMER WEIGHT:	-	140 LB	-							
HAMMER FALL:	-	30 INCH	-							
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION			
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)					
1		1				olive gray CLAY, little SILT	Oxidized Till (CL)			
		5								
2		9				olive gray CLAY, some SILT, dry	Till			
		13	1.6	0-2'	0					
3		26				olive gray CLAY, some SILT, little SHALE fragments	Till (CL/GC)			
		54								
4		100/4	1.4	2-3.4	0	weathered SHALE fragments (1" dia.) - .4'	BRK			
5						Split spoon refusal @ 3.4'	BRK			
6										
7										
8										
9										
10										
11										
12										
13										
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig Dust Reading: Rig NOTE: No Downwind or Dust Readings taken due to weather.					
10-30	M.DENSE	4-8	M.STIFF							
30-50	DENSE	8-15	STIFF							
>50	V.DENSE	15-30	V.STIFF							
		>30	HARD							

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-26	
PROJECT: SEAD, OB GROUND GRID BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 627.0			
						ELEV.(TOC):			
						DATE START: 1-19-93			
						DATE FINISH: 1-19-93			
						DRILLER: Warner			
						INSPECTOR: CL/BH/ES			
				GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC				
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)				
1		1				medium brown CLAY, some SILT, wet		Oxidized Till (CL)	
		4							
2		8							
		12	1.6	0-2'	0	Dust Reading: .03		Till	
3		13				medium brown CLAY, som SILT, dry		Till (CL)	
		12							
4		13							
		11	1.6	2-4'	0	medium brown CLAY and SAND, few SHALE fragments, wet		Till (CL/GC)	
5		4				Dust Reading: .05			
		5							
6		7				Dust Reading: .05			
		100/4	1.9	4-5.9'	0	weathered SHALE @ 5.8'		weathered Bedrock	
7						Split spoon refusal @ 5.9'			
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Reading: Rig					
>50	V.DENSE	15-30	V.STIFF	Dust Reading: Rig					
		>30	HARD	NOTE: No Downwind or Dust Readings taken due to weather.					
				NOTE: Water at 5.3' below ground surface.					

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-27	
PROJECT: SEAD, OB GROUND GRID BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:			
						ELEV.(GS): 626.0			
						ELEV.(TOC):			
						DATE START: 1-19-93			
						DATE FINISH: 1-19-93			
						DRILLER: Warner			
						INSPECTOR: CL/BH/ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:		SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				medium brown CLAY, some SILT, few cobbles (limestone) Dust Reading: .03	Till (CL)		
		4							
2		8	0.8	0-2'	0				
		18				weathered SHALE and CLAY, wet Dust Reading: .03	WR BRK (GC)		
3		12							
		14							
4		17	1.8	2-4'	0	weathered friable SHALE, dry Dust Reading: .03	WR BRK		
		12							
5		20							
		26				Split spoon refusal @ 5.9'			
6		48	1.9	4-5.9'	0				
		100/33							
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Dust Reading: Rig NOTE: No Downwind or Dust Readings taken due to weather. NOTE: Water at 5.3' below ground surface.					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-28			
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446				
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:				
							ELEV.(GS): 629.0				
							ELEV.(TOC):				
							DATE START: 1-14-93				
							DATE FINISH: 1-14-93				
							DRILLER: Warner				
							INSPECTOR: CL/BH/ES				
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.24/6.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		1 5				medium brown CLAY, little SILT	Till (CL)				
2		16 22		0-2'		medium brown CLAY, some SILT, trace SHALE fragments Dust Reading: .12/07	Till (CL)				
3		22 36									
4		46 40		2-4'		4" weathered SHALE Dust Reading: .08/09	weathered BRK (BRK)				
5		100/4		4-4.4'		Split spoon refusal @ 4.4'					
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"						
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind						
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30 >30	V.STIFF HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-29	
PROJECT: SEAD, OB GROUND GRID BORINGS						JOB NO: 720446		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM:		ELEV.(GS): 633.0	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC):		DATE START: 1-19-93	
				GROUNDWATER READINGS				DATE FINISH: 1-19-93	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: Warner	
								INSPECTOR: CL/BH/ES	
TYPE: AUGER				SAMPLER: SPLIT SPOON				-	
SIZE ID/OD: 6.249.63				3" O.D.				-	
HAMMER WEIGHT: -				140 LB				-	
HAMMER FALL: -				30 INCH				-	
SAMPLE						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				medium brown CLAY, some SILT, few pebbles		TIII (CL)	
		10				Dust Reading: .07			
2		11							
		13	1.8	0-2'	0				
		14							
3		42				weathered SHALE (dry?)		WR BRK (BRK)	
		52							
4		60	1.7	2-4'	0	Dust Readings: .07			
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC		DIAM. 2"		SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig Dust Reading: Rig NOTE: No Downwind readings taken due to weather.					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-30			
PROJECT: SEAD, OB GROUND GRID BORINGS						JOB NO: 720446		SHEET NO: 1 OF 1			
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM:		ELEV.(GS): 633.0			
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC):		DATE START: 1-18-93			
						DATE FINISH: 1-18-93		DRILLER: Warner			
						INSPECTOR: CL/BH/ES					
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.24/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		2				light brown to rusty brown CLAY, some SILT	CL				
2		7				olive gray CLAY, some SILT, spotty rusty brown	Oxidized Till (CL)				
		16	1.7	0-2'	0	Dust Reading: .07					
3		43				olive gray CLAY, some SILT, spotty rusty brown,	Till (CL/GC)				
		28				little SHALE fragments					
4		20									
		70	0.7	2-4'	0	Dust Reading: .07					
5		50									
		100/25		4-4.75'	0	.4' weathered SHALE Dust Readings: .09	WR. BRK.				
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR:		ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT		REMARKS:						
10-30	M.DENSE	4-8	M.STIFF		VOC Reading: Rig						
30-50	DENSE	8-15	STIFF		Dust Reading: Rig						
>50	V.DENSE	15-30	V.STIFF		NOTE: No Downwind readings taken due to weather.						
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-31	
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(OS): 634.0		
							ELEV.(TOC):		
							DATE START: 1-15-93		
							DATE FINISH: 1-15-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				olive brown CLAY, some SILT	Till (CL)		
		3							
2		8	1.5	0-2'	0/0	olive brown CLAY, some SILT, trace rusty brown SAND (wet?)	Till (CL)		
		11							
3		11				weathered SHALE and CLAY	WR BRK (GC)		
		46							
4		30	1.8	2-4'	0/0	Dust Readings: .10/.10	WR BRK		
		22							
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-32	
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 632.0		
							ELEV.(TOC):		
							DATE START: 1-15-93		
							DATE FINISH: 1-15-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START:	DATE FINISH:
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
AUGER		SPLIT SPOON	-						
SIZE ID/OD:	6.249.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				medium brown SILT and CLAY	Oxidized Till/Fill (CL)		
		8							
2		9	1.2	0-2'	0/0	olive green CLAY, some SILT, trace ROCK fragments (Shale and Limestone) Dust Readings: .12/10	Till (CL)		
		19							
3		32				light to medium brown CLAY, some SILT, little SHALE fragments, dense, dry	Till (CL)		
		45							
4		58	1.2	2-4'	0/0	Dust Readings: .14/12			
		70							
5		36	1.0	4-5'	0/0	Dust Readings: .10/08			
		40							
6		50/0				Split spoon refusal @ 5.0'	BRK		
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig/Downwind				
>50	V.DENSE	15-30	V.STIFF		Dust Reading: Rig/Downwind				
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-33			
PROJECT: SEAD, OB GROUND GRID BORINGS						JOB NO: 720446					
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1					
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:					
						ELEV.(GS): 633.0					
						ELEV.(TOC):					
						DATE START: 1-18-93					
						DATE FINISH: 1-18-93					
						DRILLER: Warner					
						INSPECTOR: CL/BH/ES					
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
		SPLIT SPOON	-								
SIZE ID/OD:	6.24/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		2 4				medium brown CLAY, some SILT, + trace SHALE fragments	Oxidized Till/Fill (CL)				
2		14 18	1.6	0-2'	0	olive gray CLAY, some SILT, little SHALE and LIMESTONE fragments (1" dia.), compact, dry	Till (CL/GC)				
3		28 38				Dust Reading: .06					
4		62 75	1.9	2-4'	0	Dust Readings: .05					
5		36 100/33	0.3	4-4.83'	0	weathered SHALE (no sample) Dust Reading: .05	WR/BRK				
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"			
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF		REMARKS:						
30-50	DENSE	8-15	STIFF		VOC Reading: Rig						
>50	V.DENSE	15-30	V.STIFF		Dust Reading: Rig						
NOTE: No Downwind reading taken due to weather.											

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-34			
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446				
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:				
							ELEV.(GS): 634.0				
							ELEV.(TOC):				
							DATE START: 1-19-93				
							DATE FINISH: 1-19-93				
							DRILLER: Warner				
							INSPECTOR: CL/BH/ES				
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.24/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (PT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		4				medium brown CLAY, some SILT, little ROCK fragments (LIMESTONE and SHALE)	Till (CL)				
		7									
2		7				Dust Reading: .07					
		11	1.3	0-2'	0						
3		20				olive brown to olive gray CLAY and SILT, little ROCK fragments, dry	Till (CL)				
		27									
4		37				Dust Readings: .05					
		45	1.7	2-4'	0						
5		25									
		45									
6		60				olive brown to olive gray CLAY and SILT, little ROCK fragments, dry (shale fragments in tip)	Till (CL/GC)				
		88	1.6	4-6'	0						
7		17				Dust Reading: .05					
		34									
8		75	0.9	6-7.5	0	Split spoon refusal @ 7.5'	WR. BRK. BRK.				
		500									
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
0-4	V. LOOSE	<2	V.SOFT	REMARKS: VOC Reading: Rig Dust Reading: Rig NOTE: No Downwind reading taken due to weather.							
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-35	
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): NA 636.		
							ELEV.(TOC):		
							DATE START: 1-20-93		
							DATE FINISH: 1-20-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
		SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		1				medium brown CLAY and SILT, wet	Oxidized Till (CL)		
2		4				light brown and rusty brown CLAY and SILT, trace ROCK fragments (weath. Shale), moist Dust Reading: .08/05	WR/BRK (CL/GC)		
		7	1.7	0-2'	0/0				
3		26				weathered spotty rusty brown SHALE, dry Dust Readings: .08/07	WR. BRK.		
		26							
4		41							
		70	1.9	2-4'	0/0				
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: GB-36			
PROJECT: SEAD, OB GROUND GRID BORINGS							JOB NO: 72046				
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1				
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:				
							ELEV.(GS): NA 636				
							ELEV.(TOC):				
							DATE START: 1-20-93				
							DATE FINISH: 1-20-93				
							DRILLER: Warner				
							INSPECTOR: CL/BH/ES				
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
		SPLIT SPOON	-								
SIZE ID/OD:	6.24/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		1 3				medium brown CLAY, some SILT	Till (CL)				
2		6 10	1.7	0-2'	0/0	Dust Readings: .04/03					
3		41 50				weathered SHALE	WR BRK (GC)				
4		90 100/4	1.9	2-3.9'	0/0	Dust Readings: .04/03					
5						Split spoon refusal @ 3.9' Wet at weathered SHALE and bedrock interface	BRK.				
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER						
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE PVC DIAM. 2"		SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF		REMARKS:						
30-50	DENSE	8-15	STIFF		VOC Reading: Rig/Downwind						
>50	V.DENSE	15-30	V.STIFF		Dust Reading: Rig/Downwind						
		>30	HARD		NOTE: Water at 3.0' below ground surface.						

PROJECT: <i>Seneca Army Depot</i>		COE	SHEET	BORING NO.
SITE LOCATION: <i>Romulus NY</i>		JOB NO. <i>3101</i>	1 OF 1	<i>MW8</i>
<i>Burning Pads</i>		LOCATION: <i>00326</i>	GROUND ELEV.	TOTAL DEPTH
			<i>119.74</i>	<i>18.5'</i>

H₆=G
H₄=C
H₂=G
H₁=20
H₁=0

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR PAD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
0		0'				<i>f. SAND and SHALE</i>			_____
2		2'				<i>dk. brown w/ SAND some silt trace clay few gravel</i>			
4		4'				<i>1/4" - 1/2" shell gravel</i>			
5		5'				<i>dk brown w/ SAND some silt little clay few gravel</i>			
6		6'				<i>v.f. gray to brown dry SAND and SILT</i>			
8		8'				<i>trace gravel < 1"</i>			<i>Till</i>
						<i>v.f. gray dry SAND and silt some gravel (weathered shale) angular</i>			<i>12'</i>
10-12		4"		50/4"	*	<i>flat pebbles < 1" spoon-gray black fine material surrounding flat thin layers of shale</i>			<i>Weathered Bedrock</i>
12		3"		55 7/8"		<i>1st 3" calc. wet clay last 3" dry weathered bedrock - very fractured</i>			<i>16'</i>
						<i>flat pebbles 1/4 - 1/2" diam</i>			<i>Competent Bedrock</i>
13.5		5"				<i>gray black shale few fractures</i>			
						<i>7 min</i>			
						<i>6 min</i>			
						<i>6 min</i>			
						<i>5 min</i>			
						<i>18.5'</i>			

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.: <i>MW8</i>
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Project Abbrev. Seneca COE
 Project No. 0032883101

Date 10-6-88
 Logged by S. Giesler

LOG OF ROCK CORE

Boring No. MW8
 Depth of Boring 18.5 ft.
 Size of Core 2"
 Type of Core Barrel NV

Location ~~1/2 mi~~ NE of road J
 Boring Elev. 120.06
 Elev. Top of Bedrock 106.56
 Elev. Groundwater 115.12

METCALF & EDDY, INC.

Depth	Run No.	Recovery % 100%	RQD % 0%	Graphic Log	Fractures	Lithology
13.5						gray-black sandy SHALE parting along bedding approx. 5° from horizontal consistent and competent with cleavage 3-30°. Partings producing beds 1-6" thick.
	R-1	100%	6%		cleavage 30°	
18.5						

PROJECT: <i>Serpa Army Depot COE</i>		SHEET	BORING NO.
SITE LOCATION: <i>Romulus NY</i>		1 OF	<i>MW9</i>
<i>Demo Grounds</i>		LOCATION: <i>E. of Pad #</i>	GROUND ELEV. TOTAL DEPTH <i>115.48 15'</i>
DRILL CONTRACTOR: <i>Parrott-Wolfe</i>		ENG/GEO: <i>S. Girsler</i>	BEGUN: <i>10-6-88</i>
DRILL RIG: <i>850 CME</i>		DRILLER: <i>G. Lansing</i>	FINISHED: <i>10-7-88</i>
HOLE SIZE: <i>6"</i>	WEATHER:	GROUND WATER (DEPTH/ELEV.): <i>113.59 14.3'</i>	
DRILLING METHOD: <i>HSA - CORE</i>		DRILLING FLUID/SOURCE: <i>Water</i>	TOP OF ROCK (DEPTH/ELEV.): <i>7.5</i>

14' 11" = 6
 14' 11" = 0
 14' 11" = 0
 14' 11" = 0
 14' 11" = 0

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 3 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR RFD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
0	0			grab		<i>vb</i> brown SAND and SILT trace clay			<i>till</i>
		2'		grab		brown v. SAND and SILT some clay			
		4'		grab		5% 1/2" gravel			
		6'		grab		brown v. SAND and SILT some clay 10% gravel 1/2-3/4" d.			<i>10'</i>
		8'				90% gravel angular to subangular 1/2-1 1/2" some sand silt + clay			
		10'	SS	50/05"		1/2-1 1/2" subangular gravel + fine material fractured bedrock			<i>15'</i>
		10'				thinly bedded sandy shale - cleaved along bedding planes 2"-4" beds			

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.:
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Project Abbrev. Seneca Coe
 Project No. 0032883/61

Date 10-6-88
 Logged by S. Graser

LOG OF ROCK CORE

Boring No. MW9
 Depth of Boring 15 ft.
 Size of Core 2"
 Type of Core Barrel UX

Location NE of road H
 Boring Elev. 115.74
 Elev. Top of Bedrock 105.74
 Elev. Groundwater 113.59

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
10 ft		100%	0%			gray black sandy SHALE fissile, parting along bedding 0-5' from horizontal. beds 1"-3" thick fractured area @ 6" no stain or silt within
	R-1	100%	0%		fractured area cleavage 30° cleavage	
15 ft						

Project Abbrev. INCO COE
 Project No. 023288-3161

Date 11-4-88
 Logged by S. Giesler

LOG OF ROCK CORE

Boring No. MW10
 Depth of Boring 18.5 ft
 Size of Core 2"
 Type of Core Barrel NX

Location SW of road G
 Boring Elev. 120.09
 Elev. Top of Bedrock 106.59
 Elev. Groundwater 115.84

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
13.5'		100%	0%			
	R-1				30% fracture	gray-black sandy shale fissile, parting along bedding - few fractures
18.5'		100%	0%			

PROJECT: <i>Seneca Army Depot COE</i>		SHEET	BORING NO.
SITE LOCATION: <i>Demo Grounds</i>		1 OF 1	MW11
<i>Romulus NY</i>		LOCATION: <i>N. of burning road G</i>	GROUND ELEV. TOTAL DEPTH <i>111.46 17.5'</i>
DRILL CONTRACTOR: <i>Parrott-Wolff</i>	ENG/GEOL: <i>Sandra Grester</i>	BEGUN: <i>10-11-88</i>	
DRILL RIG: <i>8500mc track</i>	DRILLER: <i>Glen Lansing</i>	FINISHED: <i>10-11-88</i>	
HOLE SIZE: <i>10"</i>	WEATHER: <i>Cold 40° windy Rainy Dark</i>	GROUND WATER (DEPTH/ELEV.): <i>approx 6-6.5' 107.85</i>	
DRILLING METHOD: <i>6" HSA level C</i>	DRILLING FLUID/SOURCE: <i>DRY</i>	TOP OF ROCK (DEPTH/ELEV.): <i>weathered - 9' competent - 10'</i>	

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 8 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR PRO	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
		0'				<i>brown</i> v. SAND and SILT little clay - wet			
		2'				<i>brown</i> v. SAND and SILT little clay 5% 1/2" d. gravel.			<i>Till</i>
		4'				<i>brn</i> v. SAND and SILT some clay 2% 1/4" - 1/2" d. gravel			
		6'				<i>br.</i> v. SAND SILT and CLAY 5% 1/2" d. rounded gravel	<i>6 1/2'</i>		
		8'				<i>brn-gray</i> v. SAND SILT and CLAY 15% angular gravel 1/2-1" d.		<i>9</i>	<i>weathered bedrock (SHALE)</i>
		10' 4" 59/4"				<i>gray black</i> fractured SHALE and CLAY rock thin laminae weathered pieces 1/8" thick			<i>SHALE</i>
		12' 5"				<i>2"-4" beds</i> cleaving, along bedding planes 5-10° off horizontal @ 3' some cleavage oriented 10°-20° off vertical after 3' beds 6" thick.			
			5 min						
			4 min						
			4 min						
			5 min						
			6 min						
		17.5'							
						<i>17.5' EOB</i>			

nu=0

nu=0

core nu=0

SAMPLE TYPES SS-SPLIT SPOON, ST-SHELBY TUBE R-ROCK CORE, O-OTHER	NOTES:	BORING NO.: <i>MW11</i>
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Project Abbrev. Seneca COE
 Project No. 003288 3161


Date 10-11-88
 Logged by S. Griesler

LOG OF ROCK CORE

Boring No. MW11
 Depth of Boring 17.5 ft
 Size of Core 2"
 Type of Core Barrel NK

Location NE of pad G
 Boring Elev. 111.4
 Elev. Top of Bedrock 98.9
 Elev. Groundwater 107.65

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
12.5'		100%	37%			gray black sandy SHALE fissile, parting along bedding 0°-5° beds 1"-6"
	R-1	100%	37%		vertical 25°	
17.5'						

PROJECT: <i>Genoa Army Depot COF</i>		SHEET	BORING NO.
SITE LOCATION: <i>Demo Grounds</i>		1 OF 1	MW12
<i>Romulus NY</i>		LOCATION: <i>N/E of Burning pad E</i>	GROUND ELEV. TOTAL DEPTH
			105.46 15'
DRILL CONTRACTOR: <i>Parrott Wolff</i>	ENG/GEOL: <i>Sandra Greiner</i>	BEGUN: <i>10-11-88</i>	
DRILL RIG: <i>850ame Track</i>	DRILLER: <i>Glen Lansing</i>	FINISHED: <i>10-12-88</i>	
HOLE SIZE: <i>6"</i>	WEATHER: <i>cool 35-46"</i>	GROUND WATER (DEPTH/ELEV.):	
	<i>Rainy - windy</i>	<i>45ft 1103.24</i>	
DRILLING METHOD: <i>4" ASA & core level C</i>	DRILLING FLUID/SOURCE: <i>DRY</i>	TOP OF ROCK (DEPTH/ELEV.):	
		<i>weathered 7' competent 9'</i>	

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches)	OR DRILLING TIME (min/ft)	% RECOVERY OR ROD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
0'							BRN v/s SAND and SILT trace clay			
2'							BRN v/s SAND and SILT some clay 5% 1/4"-1/2" gravel rounded			
4'							BRN v/s SAND and SILT some clay 10% angular gravel 1/2"-1"			TILL
6'							90% gravel 1/2"-1 1/2" d. Little trace clay + silt			
7.5'							7.5' drilling gets harder			7.5' weathered SHALE
8'							weathered bedrock drilling slow			8' SHALE
10'							CORE			
				5 min			cleaved along bedding planes beds 1"-2"			
				4 min			@ 11' very fractured			
				5 min			12' fractures @ 45°			
				4 min			12.5' vertical fractures			
				4 min			13' beds thick 4"			
							15' weathered silty ground up here where water has run through. silt + clay			

H₁₀₀=0
 H₁₁₀=0
 H₁₂₀=0
 H₁₃₀=0

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.: MW12
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Project Abbrev. Penica
 Project No. 0032883161

Date 10-12-88
 Logged by S. Giesler

LOG OF ROCK CORE

Boring No. MW12
 Depth of Boring 15 ft
 Size of Core 2"
 Type of Core Barrel NX

Location NE of Pad E
 Boring Elev. 105.57
 Elev. Top of Bedrock 95.57
 Elev. Groundwater 103.70

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
10'	R-1	100%	0%		uncven fractures 70' 70' Vertical fracture contains no deposits	gray black sandy SHALE fissile, parting along bedding 0-5° beds 2-6" - first foot broken up. 70° fractures around a vertical fracture through bedding 2ft long contains no deposits
15'						

PROJECT: <i>Genoa Army Depot</i>		JOB NO. <i>COE</i>		SHEET	BORING NO.
SITE LOCATION: <i>Geno Grounds</i>		LOCATION: <i>W. of burning Pad F</i>		1 OF	<i>MW-13</i>
DRILL CONTRACTOR: <i>Parrott-Wolfe</i>		ENG/ GEO: <i>Sandra Giesler</i>		GROUND ELEV.	TOTAL DEPTH
DRILL RIG: <i>950 CME track</i>		DRILLER:		<i>111.57</i>	<i>17'</i>
HOLE SIZE: <i>8" 10"</i>		WEATHER:		BEGUN : <i>10-7-88</i>	
DRILLING METHOD: <i>4" ASA + Core barrel</i>		DRILLING FLUID/SOURCE: <i>water</i>		FINISHED: <i>10-8-88</i>	
				GROUND WATER (DEPTH/ELEV.):	
				<i>5.1 ft 108.9</i>	
				TOP OF ROCK (DEPTH/ELEV.):	
				<i>8'</i>	

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR PRO	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
		0'				m. brown SAND and SILT + trace clay 5% rounded 1/4-1/2" d gravel			
		2'				brown v.f. SAND and SILT some clay 5% rounded gravel 1/4-1/2" d			Till
		4'				brown v.f. SAND and SILT some clay 10% subangular 1/2"-1" d gravel			
		6'				GRAVEL 1/4"-2" d. subangular 10% silt sand and clay		6.5'	Till
		8'				Wet brown v.f. SAND silt and clay 40-50% gravel			Weathered Bedrock
		10' 1"		50/1"		fractured shale			SHALE
		12'				Competent gray-black shale			
		17'							

HNK=0
HNW=0
HPO=0
HNU=0

SAMPLE TYPES SS-SPLIT SPOON, ST-SHELBY TUBE R-ROCK CORE, O-OTHER	NOTES:	BORING NO.: <i>MW13</i>
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Project Abbrev. Penica Cot
 Project No. 003288-3161

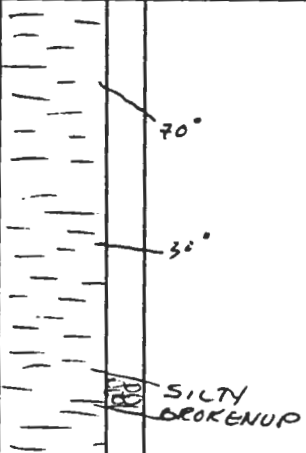
Date 10-8-88
 Logged by S. Giesler

LOG OF ROCK CORE

Boring No. MW13
 Depth of Boring 17 ft
 Size of Core 2"
 Type of Core Barrel NY

Location NE of road F
 Boring Elev. 111.83
 Elev. Top of Bedrock 99.73
 Elev. Groundwater 109.1

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
12'		100%	17%			gray black sandy SHALE fissile, parting along bedding 1"-8" thick cleavage + fractures 30°-70° at 4' broken up layer 2" thick contains silt
	R1	100%	17%			
17'						

PROJECT: <i>Seneca Army Depot COE</i>		SHEET	BORING NO.
SITE LOCATION: <i>Demolition Grounds Romeulus NY</i>		1 OF	<i>MW114</i>
JOB NO. <i>003288</i>		LOCATION:	GROUND ELEV. TOTAL DEPTH
		<i>NE. of Burning pad</i>	<i>105.25 16.5'</i>
DRILL CONTRACTOR: <i>Parrott-wolff</i>	ENG/GEOL: <i>J. Giesler</i>	BEGUN: <i>10-13-88</i>	
DRILL RIG: <i>850cmr</i>	DRILLER: <i>G. Lansing</i>	FINISHED: <i>10-13-88</i>	
HOLE SIZE: <i>7"</i>	WEATHER: <i>Cold - snowing 35°</i>	GROUND WATER (DEPTH/ELEV.):	
		<i>5.5 ft 1101.93</i>	
DRILLING METHOD: <i>Rock - HSA Level C CORE</i>		DRILLING FLUID/SOURCE:	TOP OF ROCK (DEPTH/ELEV.):
		<i>Dry - water</i>	<i>9' weathered 11cm contact</i>

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR PAD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
		0		<i>gravel</i>		<i>brown v. SAND and SILT trace clay 2% 1" gravel</i>			
		2'				<i>brn. v. SAND and SILT little clay 5-7% gravel 1/2"-1" d.</i>			
		4'				<i>brn. v. SANDY SILT some clay 7% gravel 1/2"-1" d.</i>			
		6'				<i>75% gravel 1/4"-1" d. angular to subang. some silty clay</i>			<i>TILL</i>
		8'				<i>80% gravel 1/4"-1" d. angular some black silty clay</i>			
		10'		<i>50 blows / 2"</i>		<i>1" drilling harder weathered rock</i>			<i>9' weathered SHALE</i>
		11.5'				<i>flat 1/8" thin fractured SHALE some clay dust</i>			<i>11' SHALE</i>
		11.5'	<i>5'</i>	<i>4 min</i>		<i>gray-black SHALE first few inches fractured cleaved along bedding about 1-2" thick 2 1/2" vertical fracture filled with silt layer 1mm thick</i>			
			<i>100%</i>	<i>5 min</i>					
				<i>4 min</i>					
				<i>4 min</i>					
		16.5'		<i>4 min</i>					

HNU=0
 HNU=0
 HNU=0
 HNU=0
 HNU=0
 HNU=0

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.: <i>MW114</i>
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Project Abbrev. Seneca
 Project No. 00328851101

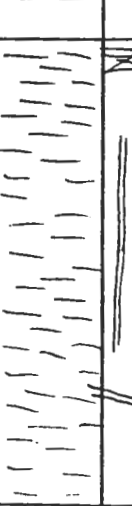
Date 10-13-88
 Logged by S. Griskler

LOG OF ROCK CORE

Boring No. MW14
 Depth of Boring 16.5 ft.
 Size of Core 2"
 Type of Core Barrel NK

Location NE. of pad D
 Boring Elev. 105.47
 Elev. Top of Bedrock 93.97
 Elev. Groundwater 101.96

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
11.5'	R-1	100%	0%		uncover fractures Vertical fracture containing 1/4" silt layer	gray black sandy SHALE fissile parting along bedding planes 0-5° beds 1-4" thick - Vertical fracture containing 1/4" silt layer 12.5-14.5'
16.5'						



PROJECT: <i>Pinetree Army Depot COE</i>		SHEET	BORING NO.
SITE LOCATION: <i>Demolition Grounds</i>		1 OF 1	<i>MW15</i>
JOB NO. <i>003288</i>		LOCATION:	GROUND ELEV. TOTAL DEPTH
<i>Romulus, NY</i>		<i>NE of Burning Pad</i>	<i>99.67 13.5'</i>
DRILL CONTRACTOR: <i>Parrott-wolff</i>		ENG/GEO: <i>S. Griesler</i>	BEGUN: <i>10-14-88</i>
DRILL RIG: <i>8500ME</i>		DRILLER: <i>G. Lansing</i>	FINISHED: <i>10-14-88</i>
HOLE SIZE: <i>7"</i>	WEATHER: <i>Sunny 55°</i>	GROUND WATER (DEPTH/ELEV.):	
	<i>Windy</i>	<i>4 ft 1101.0'</i>	
DRILLING METHOD: <i>HSA - core (water)</i>		DRILLING FLUID/SOURCE: <i>Dry</i>	TOP OF ROCK (DEPTH/ELEV.):
			<i>6.5' weathered</i>

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR PAD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
		0'		grab		brown w/ SAND and SILT trace gravel			
		2'		grab		brown w/ SAND and silty CLAY trace 2% 1/4" - 1/2" gravel			
		4'				90% 1/2 - 3/4" gravel 10% brown silty clay			TILL
		6'				98% 1/2 - 3" gravel angular 2% SILTY CLAY			
						6 1/2' drilling harder weathered bedrock	6.5		WEATHERED SHALE
	R	8.5				broken up gray-black SHALE - no orientation + fractures in first			
		9.5		5 min				8.5	SHALE
		10.5		4 min					
		11.5		4 min		horizontal fractures begins @ 11.5'			
		12.5		5 min		filled with silt layer			
		13.5		5 min					

HAW-20
 HAW-20
 HAW-20
 HAW-20
 HAW-20

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.: <i>MW15</i>
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Project Abbrev. Seneca
 Project No. 003883161


Date 10-14-88
 Logged by S. Giesler

LOG OF ROCK CORE

Boring No. MW15
 Depth of Boring 13.5 ft.
 Size of Core 2"
 Type of Core Barrel NK

Location NE of pad B
 Boring Elev. 102.95
 Elev. Top of Bedrock 94.45
 Elev. Groundwater 101.83

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
8.5'	R-1	100%	0%		unevenly fractured 0-5'	gray-black sandy SHALE fissile, parting along bedding 0°-5° beds 1-4" thick 1st foot very fractured 3/4" sandy layer @ 9.5 ft. long vertical fracture 2 1/2-3' long exists through beds and contains a 1/4" silt layer along fracture
13.5'						



PROJECT: <i>Ineca Army Depot</i> (05)		SHEET	BORING NO.
SITE LOCATION: <i>Demo grounds</i>		JOB NO. <i>00328863</i> 1 of 1	<i>MW16</i>
<i>Kromulus 114</i>		LOCATION: <i>NE of burning pad A</i>	GROUND ELEV. <i>103.5</i> TOTAL DEPTH <i>13.5'</i>
DRILL CONTRACTOR: <i>Pacott-Walsh</i>	ENG/GEO: <i>S. Girsler</i>	BEGUN: <i>10-14-88</i>	
DRILL RIG: <i>8500ME</i>	DRILLER: <i>G. Lansing</i>	FINISHED: <i>10-15-88</i>	
HOLE SIZE: <i>11"</i>	WEATHER: <i>Sunny 65-70°</i>	GROUND WATER (DEPTH/ELEV.): <i>6.4 ft 101 99.33 ft</i>	
DRILLING METHOD: <i>level c HSA - core/water</i>	DRILLING FLUID/SOURCE: <i>Water</i>	TOP OF ROCK (DEPTH/ELEV.): <i>6.5'</i>	

HNU=0
 HNU=8
 HNU=0
 HNU=0

DEPTH	SAMPLE TYPE/NO.	SAMPLE DEPTH	SAMPLE RECOVERY	BLOW COUNT (per 6 inches) OR DRILLING TIME (min/ft)	% RECOVERY OR RFD	SAMPLE DESCRIPTION	ELEVATION	GRAPHIC LOG	STRATIGRAPHIC DESCRIPTION
		0'		grab		brown v/sand and silty clay			TILL
		2'		"		brown v/sand and silty clay			
		4'		"		brown/gray v/sand and silty clay			
		6'		"		5% 1/4"-2" angular gravel			
						gray brown - v/sand and silty clay			WEATHERED SHALE
						10% angular gravel < 1" d.			
						6.5' drilling shows weathered bedrock	6.5		SHALE
		8.5'		4 min		SHALE-SANDY	8.5		
				5 min					
		13.5'		4 min					
				6 min					

SAMPLE TYPES SS=SPLIT SPOON, ST=SHELBY TUBE R=ROCK CORE, O=OTHER	NOTES:	BORING NO.:
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Project Abbrev. Seneca
 Project No. 003288-3/61

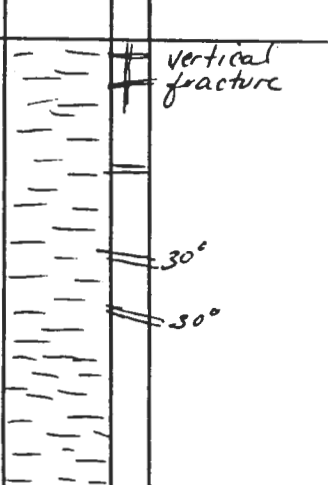
Date 10-11-88
 Logged by J. Giesler

LOG OF ROCK CORE

Boring No. MW16
 Depth of Boring 13.5 ft.
 Size of Core 2"
 Type of Core Barrel NY

Location NE of pad A
 Boring Elev. 103.7
 Elev. Top of Bedrock 95.2
 Elev. Groundwater 100.41

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
8.5'	R-1	100%	0%		vertical fracture	gray black sandy SHALE fissile, parting along bedding planes 0-5" beds 1-4" thick competent
13.5'						

Project Abbrev. Seneca
 Project No. 0032883161

Date 10-12-87
 Logged by S. Griesler

LOG OF ROCK CORE

Boring No. MW17
 Depth of Boring 19 ft.
 Size of Core 2"
 Type of Core Barrel NX

Location SE of pad C
 Boring Elev. 105.81
 Elev. Top of Bedrock 91.81
 Elev. Groundwater 103.77

METCALF & EDDY, INC.

Depth	Run No.	Recovery %	RQD %	Graphic Log	Fractures	Lithology
14'	R1	100%	0%		30° vertical fracture 2" cemented by silt 30°	gray black sandy SHALE fossiliferous, parting along bedding 0-5" beds 2-4" thick. Vertical fracture to 5'-19' thin silty deposit inside
19'						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N°	MW - 18		
PROJECT:		SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT:		SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR:		EMPIRE DRILLING						ELEV. DATUM: 1929, NOD			
								ELEV.(GS): 621.5			
								ELEV.(TOC): 623.95			
								DATE START: 10-29-91			
								DATE FINISH: 10-30-91			
								DRILLER: JW/LB			
								INSPECTOR: BILL THOMAS			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
	AUGER	SPLIT SPOON	-	10-30-91	0840	6.8'	10 MIN				
SIZE ID/OD:	6.219.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		3				Olive gray SILT, some CLAY trace GRAVEL and fine to medium SAND	Till (ML)				
		8			0.0						
2		12				0-2'	0.0				
		20									
3		33				GRAY, WEATHERED SHALE, FISSLE, SOME SILT	WEATHERED SHALE				
		31			0-0						
4		40				2-4'	0-0				
		35									
5											
6											
7											
8											
9											
10											
11						AUGER REFUSAL 11'					
12						GRAY SHALE	COMPETENT SHALE				
13											
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2"		SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-19	
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NGD	
								ELEV.(GS): 634.1	
								ELEV.(TOC): 636.85	
								DATE START: 10-30-91	
								DATE FINISH: 10-30-91	
								DRILLER: JW/LB	
								INSPECTOR: BILL THOMAS	
DEPTH (FT.)	CASING	SAMPLER	CORE BARREL			GROUNDWATER READINGS			
	BLOWS PER FOOT	BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		8			0.0	Olive Gray SILT, some CLAY, trace GRAVEL and trace fine to medium SAND	TILL (ML)		
		9							
2		13							
		18	2'	0-2'	0.0				
3		24			0-0				
		33							
4		42				GRAY, WEATHERED SHALE, FISSLE, SOME SILT	WEATHERED SHALE		
		42	2'	2-4'	0-0				
5		60							
		105			0.0				
6		100/0.4'	1'	4-5'	0.0				
7		100/1'				AUGER REFUSAL, 7.1'			
8						GRAY SHALE	COMPETENT SHALE		
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD		REMARKS: Overburden Monitoring Well Installed				

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-21	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(GS): 635.1			
						ELEV.(TOC): 637.92			
						DATE START: 11-1-91			
						DATE FINISH: 11-1-91			
						DRILLER: JW/LB			
						INSPECTOR: BILL THOMAS			
				GROUNDWATER READINGS					
CASING		SAMPLER		CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
						SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				OLIVE GRAY SILT, SOME +CLAY, TRACE - 3"			
		8				GRAVEL AND TRACE FINE TO MEDIUM SAND			TILL, (ML)
2		4							
		18	2'	0-2					
3		25							
		40							
4		50							
		110/2'	1.6'	2-3.7		GRAY WEATHERED SHALE, FISSILE, SOME SILT			WEATHERED SHALE
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS: Weathered Bedrock Monitoring Well Installed					
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.

TEST BORING REPORT

BORING NC MW-21

DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)		
	14						
15						GRAY SHALE	COMPETENT SHALE
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-22	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 2	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(OS): 620.5	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 623.23				DATE START: 11-1-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-	11-4-91	0845	9'	15 MIN		DRILLER: JW/LB
SIZE ID/OD:	6.24/9.63	3" O.D.	-						INSPECTOR: BILL THOMAS
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive Gray SILT, Some +CLAY Trace + GRAVEL AND TRACE FINE TO MEDIUM SAND	TILL (ML)		
		6			0.0				
2		9							
		16	2	0.2'	0.0				
3		50				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
		50			0.0				
4		42							
		100/5'	1.9	2-3.9'	0.0				
5									
6									
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT		REMARKS: Weathered Bedrock Monitoring Well Installed				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	PAGE 2 OF 2
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)		STRATUM DESCRIPTION
	14						
15							
16							
17'						GRAY SHALE	COMPETENT SHALE
18							
19							
20							
21							
22							
23							
24							
26							
27							

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-23	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 620.2	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 622.87				DATE START: 11-4-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 11-5-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
	AUGER	SPLIT SPOON	-	11-5-91	1000	8.8'	15 MIN	INSPECTOR: BILL THOMAS	
SIZE ID/OD:	6.25/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3			0.0				
2		5			0.0				
		12							
3		15	2	0.2'	0.0	Olive Gray SILT, Some +CLAY Trace	TILL (ML)		
		25				- GRAVEL and Trace Fine to Medium SAND			
4		35			0.0				
		38				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
5		40		2-4'	0.0				
		100/0.4'	0.4'	4-6'	0.0				
6									
7									
8									
9									
10									
11									
12									
13						AUGER REFUSAL, 12.5'			
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 11-5-91			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-24	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(OS): 625.0	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 627.34				DATE START: 11-5-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START: 11-5-91	DATE FINISH: 11-5-91
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-					DRILLER: JW/LB	
SIZE ID/OD:	6.25/9.63	3" O.D.	-					INSPECTOR: BILL THOMAS	
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Olive Gray SILT, Some +CLAY with Pieces of Metal and Metal Corrosion Product	FILL		
		17			0.0				
2		19	2	0.2'	0.0				
		21							
3		29							
		31							
		36				Olive-Gray SILT, some +CLAY, trace - GRAVEL, and Trace Fine to Medium SAND	TILL (ML)		
4		33		2'					
		19							
5		50							
		21							
6		19	2'	4-6'					
		25							
7		25							
		37				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED BEDROCK		
8		100/2	1.7'	6-8'					
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED: 12-17-91			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: Overburden Monitoring Well Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	MW-25
PROJECT: SEAD, OB GROUND RIFS								JOB NO: 720229-0600	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM: 1929, NOD	
								ELEV.(OS): 621.3	
								ELEV.(TOC): 623.68	
				GROUNDWATER READINGS				DATE START: 11-6-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH: 11-6-91	
TYPE: AUGER				SPLIT SPOON				-	
SIZE ID/OD: 6.25/9.63				3" O.D.				-	
HAMMER WEIGHT: -				140 LB				-	
HAMMER FALL: -				30 INCH				-	
								DRILLER: JW/LB	
								INSPECTOR: BILL THOMAS	
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASINO BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive Gray SILT, Some +CLAY, Trace - GRAVEL, and Trace Fine to Medium SAND	TILL (ML)		
		7			0.0				
2		12							
		19	1.5'	0.2'	0.0				
3		29							
		42			0.0				
4		52							
		50	2'	2-4'	0.0				
5		100							
		-	1.3'	4-5.5'	0.0				
6		19							
		-			5.5'				
7		20							
		31	1.5'	6.5-8.5'	0.0				
8									
					0.0				
9		50							
		100/3'	0.6'	9-9.3'	0.0				
10									
11									
12									
13									
AUGER REPUSAL, 11.5'									
GRAY SHALE							GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE	
COMPETENT SHALE									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 12-17-91					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-26	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 621.4	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 624.34				DATE START: 11-7-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPOON	-						DRILLER: JW/LB
SIZE ID/OD:	6.25/9.63	3" O.D.	-						INSPECTOR: BILL THOMAS
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive Gray SILT, Some +CLAY, Trace - GRAVEL, and Trace Fine to Medium SAND	TILL (ML)		
		4							
2		13	1.5'	0.2'	0.0				
		21							
3		35							
		77							
4		63	1.7'	2-4'	0.0				
		61							
5		16							
		42							
6		55	2'	4-6'	0.0			GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE
		70							
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT		REMARKS: Overburden Monitoring Well Installed				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-27	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(OS): 623.5	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 625.84				DATE START: 11-7-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
	AUGER	SPLIT SPGON	-						DRILLER: JW/LB
SIZE ID/OD:	6.25/9.63	3" O.D.	-						INSPECTOR: BILL THOMAS
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				Olive Gray SILT, Some +CLAY, Trace -GRAVEL, and Trace Fine to Medium SAND	TILL (ML)		
		11			0.0				
2		16							
		22	1.75'		0.0				
3		43				4.5' GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
		63			0.0				
4		60							
		73	2'		0.0				
5		19							
		20			0.0				
6		25							
		55	2'		0.0				
7									
8									
9									
10									
11									
12									
13						AUGER REFUSAL, 12.7'	COMPETENT SHALE		
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED: 12-17-91		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER		WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"			
0-4	V. LOOSE	<2	V.SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed					
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N°	MW-29		
PROJECT: SEAD, OB GROUND RIFS								JOB NO:	720229-0600		
CLIENT: SENECA ARMY DEPOT								SHEET NO:	1 OF 1		
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM:	1929, NGD		
								ELEV.(GS):	629.4		
								ELEV.(TOC):	632.13		
								DATE START:	11-13-91		
								DATE FINISH:	11-13-91		
								DRILLER:	JW/LB		
								INSPECTOR:	BILL THOMAS		
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
AUGER		SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		2				Olive Gray SILT, Some +CLAY, Trace	TILL (ML)				
		4			0.0	Fine to Medium SAND					
2		7									
		17	2	0-2'	0.0						
3		18									
		22			0.0						
4		31									
		-	1.7'	2-3.7'	0.0						
5											
6		37									
		49			0.0						
7		48									
		45	2'	5.5-7.5'	0.0						
8		57				7.75					
		39		7.75-9.5'	0.0	GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
9		20									
		39			0.0						
10		50									
		100/1"		9.5-10.6'	0.0						
11						10.5					
						GRAY SHALE	COMPETENT SHALE				
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 12-18-91							
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"							
4-10	LOOSE	2-4	SOFT	REMARKS: Overburden Monitoring Well Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N:	MW-30
PROJECT: SEAD, OB GROUND RIFS								JOB NO:	720229-0600
CLIENT: SENECA ARMY DEPOT								SHEET NO:	1 OF 1
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM:	1929, NGD
								ELEV.(GS):	625.6
								ELEV.(TOC):	627.96
				GROUNDWATER READINGS				DATE START:	11-14-91
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DATE FINISH:	11-15-91
								DRILLER:	JW/LB
								INSPECTOR:	BILL THOMAS
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.25/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
				SAMPLE					
DEPTH (FT.)	CASING	SAMPLE	RECOVERY	SAMPLE	VOC	SAMPLE DESCRIPTION		STRATUM DESCRIPTION	
	BLOWS PER FOOT	BLOWS PER 6 INCHES	(FT.)	DEPTH RANGE	SCREEN (PPM)				
1		1			0.0	Olive Gray SILT, Some +CLAY, Trace +GRAVELS		FILL	
2		3				2.25'			
		5							
3		7	2	0-2'		PARTIALLY DECOMPOSED VEGETATION			
		5				2.75'			
4		7				Olive Gray SILT, Some +CLAY, Trace +GRAVEL and Trace Fine to Medium SAND		TILL (ML)	
		8	2'	2-4'					
5		8							
		6							
6		5							
		8							
7		8	2'	4-6					
		6							
8		6							
		6							
9		14	2'	6-8'		8.0'			
		48							
10		100/0.2	0.7	8-8.7		GRAY WEATHERED SHALE, FISSILE, SOME SILT		WEATHERED SHALE	
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 12-17-91			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N° MW-31			
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600					
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1					
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD					
						ELEV.(GS): 632.1					
						ELEV.(TOC): 634.66					
						DATE START: 11-15-91					
						DATE FINISH: 11-18-91					
						DRILLER: JW/LB					
						INSPECTOR: BILL THOMAS					
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
AUGER		SPLIT SPOON	-								
SIZE ID/OD:	6.25/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		2				Olive Gray SILT, Some +CLAY, Trace - GRAVELS and Trace Fine to Medium SAND	TILL (ML)				
		4			0.0						
2		10				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		17	2	0-2'	0.0						
3		23				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		32			0.0						
4		47				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		50	2'	2-4'	0.0						
5		64				GRAY SHALE	COMPETENT SHALE				
		100/0.2		4-4.5'	0.0						
6											
7											
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 12-18-91							
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"				
4-10	LOOSE	2-4	SOFT	REMARKS: Weathered Bedrock Monitoring Well Installed							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-32			
PROJECT: SEAD, OB GROUND RIFS		CLIENT: SENECA ARMY DEPOT		CONTRACTOR: EMPIRE DRILLING		JOB NO: 720229-0600		SHEET NO: 1 OF 1			
						ELEV. DATUM: 1929, NGD		ELEV.(OS): 632.6			
						ELEV.(TOC): 634.83		DATE START: 11-19-91			
						ELEV.(TOC): 634.83		DATE FINISH: 11-19-91			
						ELEV.(TOC): 634.83		DRILLER: JW/LB			
						ELEV.(TOC): 634.83		INSPECTOR: BILL THOMAS			
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
	AUGER	SPLIT SPOON	-	11-19-91	1106	NO WATER	10 MIN				
SIZE ID/OD:	6.25/9.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		4				Olive Gray SILT, Some +Clay, Little +GRAVELS and Trace Fine to Medium Sand	TILL (ML)				
		6			0.0						
2		8				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		13	2	0-2'	0.0						
3		13				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		50			0.0						
4		56				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
		83	2'	2-4'	0.0						
5		100/0.5	0.5'	5-5.5'	0.0	GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE				
6						5.5'	GRAY SHALE	COMPETENT SHALE			
7							GRAY SHALE	COMPETENT SHALE			
8							GRAY SHALE	COMPETENT SHALE			
9							GRAY SHALE	COMPETENT SHALE			
10							GRAY SHALE	COMPETENT SHALE			
11							GRAY SHALE	COMPETENT SHALE			
12							GRAY SHALE	COMPETENT SHALE			
13							GRAY SHALE	COMPETENT SHALE			
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED: 12-18-91					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"							
4-10	LOOSE	2-4	SOFT								
10-30	M.DENSE	4-8	M.STIFF	REMARKS: Weathered Bedrock Monitoring Well Installed							
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N° MW-33	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: 1929, NGD			
						ELEV.(GS):			
						ELEV.(TOC):			
						DATE START: 11-19-91			
						DATE FINISH: 11-19-91			
						DRILLER: JW/LB			
						INSPECTOR: RICH GRIFFIN			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				STABILIZATION TIME	
				DATE	TIME	DEPTH TO WATER			
TYPE:	-	SPLIT SPOON	-			NONE			
SIZE ID/OD:	-	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2			0.0	Olive Gray SILT, Some +CLAY, Trace +GRAVELS and Trace Fine to Medium SAND	TILL (ML)		
2		4	2	0-2'	0.0				
3		8				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
4		8							
5		9							
6		24			0.0				
7		40							
8		60	2'	2-4'	0.0				
9		100/0.5	0.5'	5-5.5'	0.0				
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.				DATE WELL DEVELOPED:	
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"		
4-10	LOOSE	2-4	SOFT	REMARKS: BORING TOO SHALLOW TO INSTALL OVERBURDEN WELL. GROUTED AND ABANDONED.					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-34	
PROJECT: SEAD, OB GROUND RIFS						JOB NO: 720229-0600		SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT						ELEV. DATUM: 1929, NGD		ELEV.(OS): 638.2	
CONTRACTOR: EMPIRE DRILLING						ELEV.(TOC): 640.33		DATE START: 11-20-91	
TYPE:	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE FINISH: 11-22-91	
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME	DRILLER: JW/LB	
						NONE		INSPECTOR: RICH GRIFFIN	
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		4				Olive Brown Gray SILT, Some +CLAY, Trace +GRAVELS and Trace Fine to Medium SAND	TILL (ML)		
		5			0.0				
2		8							
		12	1.5	0-2'	0.0				
3		25				GRAY WEATHERED SHALE, FISSILE, SOME SILT	WEATHERED SHALE		
		36			0.0				
4		56							
		86	2'	2-4'	0.0				
5		9				GRAY SHALE	COMPETENT SHALE		
		56			0.0				
6		100/0.5							
			1.0'	4-5.5	0.0				
7									
8									
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED: DRY					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: Background Overburden Monitoring Well installed					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING N: MW-35	
PROJECT: SEAD, OB GROUND RIFS				JOB NO: 720229-0600				SHEET NO: 1 OF 1	
CLIENT: SENECA ARMY DEPOT				ELEV. DATUM: 1929, NGD				ELEV.(GS): 638.5	
CONTRACTOR: EMPIRE DRILLING				ELEV.(TOC): 641.15				DATE START: 12-20-91	
				DATE FINISH: 12-20-91				DRILLER: JW/LB	
				INSPECTOR: RICH GRIFFIN					
				GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-			DRY			
SIZE ID/OD:	6.25/9.63"	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
				SAMPLE				STRATUM DESCRIPTION	
DEPTH (FT.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION			
1									
2									
3						Brown-Gray SILT, Some +CLAY, Little +GRAVELS, and Trace Fine to Medium SAND		TILL (ML)	
4									
5		40							
		43			0.0				
		34				Dark Gray SILT, Some +CLAY, and -GRAVEL, Trace Fine to Medium SAND			
6		65	2'	4-6	0.0				
		50				GRAY WEATHERED SHALE, FISSILE, SOME SILT		WEATHERED SHALE	
7		100/5	.9'	6-6.5'	0.0	GRAY SHALE		COMPETENT SHALE	
8									
9									
10									
11									
12									
13									
GRANULAR SOILS			COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED: 12-21-91			
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE:	0.010"
4-10	LOOSE	2-4	SOFT	REMARKS: AUGERED TO 4' BEFORE DRIVING FIRST SPLIT SPOON BACKGROUND WEATHERED BEDROCK MONITORING WELL INSTALLED					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: MW-36	
PROJECT: SEAD, OB GROUND MONITORING WELL BORINGS						JOB NO: 720446			
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1			
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM: _____			
						ELEV.(GS): 638.3			
						ELEV.(TOC): _____			
						DATE START: 1-11-93			
						DATE FINISH: 1-11-93			
						DRILLER: Warner			
						INSPECTOR: CL/BH/ES			
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				medium brown to rusty brown CLAY and SILT	Till (CL)		
		5							
2		7				Dust Readings: .03/.40			
		9	1.2	0-2'	0/0				
3		16							
		16							
4		20				olive gray CLAY and SILT, some SHALE fragments, trace fine to coarse SAND			
		46	1.4	2-4'	0/0				
5		42				weathered SHALE	Weathered Bedrock (WR BRK-Shale)		
		75							
6		100/5	1.1	4-5.5'	0/0	Split spoon refusal @ 5.5'			
7									
8						AUGER to 8.0'			
9							Competent Bedrock (BRK shale)		
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2" SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind NOTE: Water table just above weathered bedrock.					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

FIGURE NO.

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO:	MW-37
PROJECT: SEAD, OB GROUND MONITORING WELL BORINGS								JOB NO:	720446
CLIENT: SENECA ARMY DEPOT								SHEET NO:	1 OF 1
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM:	
								ELEV.(GS):	638.1
								ELEV.(TOC):	
								DATE START:	1-11-93
								DATE FINISH:	1-11-93
								DRILLER:	Warner
								INSPECTOR:	CL/BH/ES
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE START	DATE FINISH
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		3				shaly GRAVEL, some CLAY	Fill ? (CL)		
		4							
2		5	1.7	0-2'	00	rusty brown CLAY and SILT, some SHALE fragments Dust Readings: .09/38	Till (CL)		
		8							
3		14				olive gray CLAY, some SILT, little GRAVEL fragments Dust Readings: .09/40			
		18							
4		27	1.2	2-4'	00	weathered SHALE Dust Readings: .11/40	weathered bedrock (WR BRK)		
		40							
5		25	1.0	4-5'	00				
		67							
6									
7									
8						AUGER to 8.0'			
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM. 2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT		REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind NOTE: Water table just above weathered bedrock.				
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: MW-38	
PROJECT: SEAD, OB GROUND MONITORING WELL BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 618.6		
							ELEV.(TOC):		
							DATE START: 1-8-93		
							DATE FINISH: 1-8-93		
							DRILLER: Warner		
							INSPECTOR: CL/BH/ES		
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				medium brown CLAY, - trace SHALE fragments, spotty rust brown	CL		
		5							
2		5	1.5	0-2'	0/0	Dust Readings: .14/.12			
		14							
3		36				gray weathered SHALE, 1/2" to sand size fragments	Till (GC)		
		65							
4		52	2.0	2-4'	0/0	Dust Readings: .12/.12			
		45							
5		17				gray weathered SHALE and CLAY	Till (GC/WR BRK)		
		37							
6		40	2.0	4-6'	0/0	Dust Readings: .12/.14	weathered Bedrock		
		100							
7						Split spoon refusal @ 6.0'			
8						AUGERED to 6.75'	Competent Bedrock		
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL. DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind NOTE: Water table @ 5.1' below ground surface.					
10-30	M.DENSE	4-8	M.STIFF						
30-50	DENSE	8-15	STIFF						
>50	V.DENSE	15-30	V.STIFF						
		>30	HARD						

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: MW-39	
PROJECT: SEAD, OB GROUND MONITORING WELLS BORINGS							JOB NO: 720446		
CLIENT: SENECA ARMY DEPOT							SHEET NO: 1 OF 1		
CONTRACTOR: EMPIRE DRILLING							ELEV. DATUM:		
							ELEV.(GS): 617.9		
							ELEV.(TOC):		
							DATE START: 1-7-93		
							DATE FINISH: 1-7-93		
							DRILLER: Warner		
							INSPECTOR: CLBH/ES		
				GROUNDWATER READINGS					
CASING		SAMPLER		CORE BARREL		DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
TYPE:	AUGER	SPLIT SPOON		-					
SIZE ID/OD:	6.24/9.63	3" O.D.		-					
HAMMER WEIGHT:	-	140 LB		-					
HAMMER FALL:	-	30 INCH		-					
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				olive gray CLAY, - trace SHALE fragments, spotty rust brown, moist	Till (CL)		
		4							
2		7	1.2	0-2'	0/0	Dust Readings: 0.0/0.0			
		9							
3		17				med. brown CLAY, - trace SHALE fragments, moist	weathered Bedrock (WR BRK)		
		22				olive gray and brown CLAY and SHALE fragments to 1 dia., moist			
4		18	1.6	2-4'	0/0	Dust Readings: 0.0/0.0			
		26							
5		21							
		33							
6		33	2.0	4-6'	0/0	weathered gray SHALE Dust Readings: 0.0/0.1			
		65							
7									
8									
9									
10									
11									
12						AUGERED to 11.5'	Competent Bedrock		
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL. DATE WELL DEVELOPED:				
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY		VOC DETECTOR: ORGANIC VAPOR METER				
0-4	V. LOOSE	<2	V.SOFT		WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF		REMARKS:				
30-50	DENSE	8-15	STIFF		VOC Reading: Rig/Downwind				
>50	V.DENSE	15-30	V.STIFF		Dust Reading: Rig/Downwind				
		>30	HARD		NOTE: Water table @ 3.0' below ground surface.				

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: MW-40			
PROJECT: SEAD, OB GROUND MONITORING WELL BORINGS						JOB NO: 720446					
CLIENT: SENECA ARMY DEPOT						SHEET NO: 1 OF 1					
CONTRACTOR: EMPIRE DRILLING						ELEV. DATUM:					
						ELEV.(GS): 617.8					
						ELEV.(TOC):					
						DATE START: 1-7-93					
						DATE FINISH: 1-7-93					
						DRILLER: Warner					
						INSPECTOR: CL/BH/ES					
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME				
TYPE:	AUGER	SPLIT SPOON	-								
SIZE ID/OD:	6.24/6.63	3" O.D.	-								
HAMMER WEIGHT:	-	140 LB	-								
HAMMER FALL:	-	30 INCH	-								
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION				
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)						
1		2				brown CLAY and SILT, SHALE fragments at 1.5'	Till (CL)				
		3									
		8									
2		10	1.5	0-2'	0/0	Dust Readings: 0.0/0.0					
3		23				gray CLAY and SHALE fragments	Till (GC)				
		25									
4		31									
		42	1.7	2-4'	0/0	Dust Readings: 0.0/0.01					
5		24									
		53				weathered gray SHALE	weathered broken Shale (BRK)				
6		100/5	1.5	4-5.5'	0/0	Dust Readings: 0.0/0.0					
7						Split spoon refusal @ 5.5'					
8											
9											
10											
11											
12											
13											
GRANULAR SOILS		COHESIVE SOILS		VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:					
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER							
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE PVC DIAM. 2"		SLOT SIZE: 0.010"					
4-10	LOOSE	2-4	SOFT	REMARKS: VOC Reading: Rig/Downwind Dust Reading: Rig/Downwind							
10-30	M.DENSE	4-8	M.STIFF								
30-50	DENSE	8-15	STIFF								
>50	V.DENSE	15-30	V.STIFF								
		>30	HARD								

CHAS. T. MAIN, INC.				TEST BORING REPORT				BORING NO: MW-41	
PROJECT: SEAD, OB GROUND PAD BORINGS								JOB NO: 720446	
CLIENT: SENECA ARMY DEPOT								SHEET NO: 1 OF 1	
CONTRACTOR: EMPIRE DRILLING								ELEV. DATUM:	
								ELEV.(GS): 626.4	
								ELEV.(TOC):	
								DATE START: 1-12-93	
								DATE FINISH: 1-12-93	
								DRILLER: Warner	
								INSPECTOR: CL/BH/ES	
	CASING	SAMPLER	CORE BARREL	GROUNDWATER READINGS					
				DATE	TIME	DEPTH TO WATER	STABILIZATION TIME		
TYPE:	AUGER	SPLIT SPOON	-						
SIZE ID/OD:	6.24/9.63	3" O.D.	-						
HAMMER WEIGHT:	-	140 LB	-						
HAMMER FALL:	-	30 INCH	-						
DEPTH (FT.)	SAMPLE					SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)				
1		2				dark brown CLAY and SILT	Till (CL)		
		3				medium brown and rusty CLAY, some SILT	Till (CL)		
2		4				Dust Readings: .51/.17			
		7	1.2	0-2'	0/0				
3		10				medium brown CLAY and weathered SHALE fragments	Till (GC)		
		14							
4		20				Dust Readings: .51/.17	weathered Bedrock (WR/BRK)		
		22	1.5	2-4'	0/0				
5		16				dark brown weathered SHALE	competent Bedrock		
		20							
6		80				Dust Readings: .54/.22			
		100/2		4-5.7'	0/0				
7						Split spoon refusal @ 5.7'			
8						AUGERED to 6.0'			
9									
10									
11									
12									
13									
GRANULAR SOILS		COHESIVE SOILS			VOL. WATER LOST: GAL.		DATE WELL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	CONSISTENCY	VOC DETECTOR: ORGANIC VAPOR METER					
0-4	V. LOOSE	<2	V.SOFT	WELL PIPE	PVC	DIAM.	2"	SLOT SIZE: 0.010"	
4-10	LOOSE	2-4	SOFT						
10-30	M.DENSE	4-8	M.STIFF	REMARKS:					
30-50	DENSE	8-15	STIFF	VOC Reading: Rig/Downwind					
>50	V.DENSE	15-30	V.STIFF	Dust Reading: Rig/Downwind					
		>30	HARD						

APPENDIX D
GEOPHYSICAL ANOMALY EXCAVATION LOGS
AND
TEST PIT REPORT

CHAS. T. MAIN, INC.	TEST PIT REPORT	TEST PIT NO. GAE-J-1
PROJECT: <u>Seneca Army Depot OB Grounds</u>		JOB NO. <u>--</u>
CLIENT: <u>U.S. Army Corp of Engineers</u>		ELEVATION: <u>--</u>
CONTRACTOR: <u>HFA</u>		EXPLORATION DATE: <u>12-2-91</u>
EQUIPMENT USED: <u>Case 480 Backhoe</u>		INSPECTOR: <u>AG</u>

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
0.8'	--	--	--	Broken Shale (Fill)	
2	GAE-J-1	1.0'		Gray Silty Clay Loam (Till) 10" Cobble at 1' No Ordnance Encountered	
3'				3' Bottom of Exploration	
4					
6					
8					
10					
12					

GROUNDWATER			TEST PIT DIMENSIONS <u>10'</u> (L) <u>5'</u> (W) <u>3'</u> (D)	SUMMARY
DATE	TIME	DEPTH/FT,		DEPTH: <u>3'</u>
				NO. SAMPLES: <u>1'</u>
				GROUNDWATER: <u>--</u>
NOT ENCOUNTERED				TEST PIT NO.

CHAS. T. MAIN, INC.	TEST PIT REPORT	TEST PIT NO. GAE-G-1
PROJECT: <u>Seneca Army Depot OB Grounds</u>		JOB NO. _____
CLIENT: <u>U.S. Army Corp of Engineer</u>		ELEVATION: <u> -- </u>
CONTRACTOR: <u>HFA</u>		EXPLORATION DATE: <u>12-3-91</u>
EQUIPMENT USED: <u>Case 480 Backhoe</u>		INSPECTOR: <u>AG</u>

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
1.5'	--	--	--	Broken Shale (Fill)	Water at 3' Depth
2	GAE-G-1	2'		Gray Silty Clay Loam (Till), No Ordnance Encountered	
4					
5'					
6				5' Bottom of Exploration	
8					
10					
12					

GROUNDWATER			TEST PIT DIMENSIONS	SUMMARY
DATE	TIME	DEPTH/FT.		DEPTH: <u>5'</u>
				NO. SAMPLES: <u>1</u>
				GROUNDWATER: <u>--</u>
				TEST PIT NO. _____
NOT ENCOUNTERED				

CHAS. T. MAIN, INC.	TEST PIT REPORT	TEST PIT NO. GAE-G-2
PROJECT: <u>Seneca Army Depot OB Grounds</u>		JOB NO. _____
CLIENT: <u>U.S. Army Corps of Engineers</u>		ELEVATION: <u> -- </u>
CONTRACTOR: <u>HFA</u>		EXPLORATION DATE: <u>12-2-91</u>
EQUIPMENT USED: <u>Case 480 Backhoe</u>		INSPECTOR: <u>AG</u>

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
1.5	--	--	--	Broken Shale (Fill)	
2				Metal Hinges, Nails, Etc.	
4	GAE-G-2	2.0'		Gray, Silty Clay Loam (Till) 6" Cobbles Observed at 3' No ordnance Encountered	
5					
6				5' Bottom of Exploration	
8					
10					
12					

GROUNDWATER			TEST PIT DIMENSIONS <u>20'</u> (L) <u>5'</u> (W) <u>5'</u> (D)	SUMMARY
DATE	TIME	DEPTH/FT.		DEPTH: <u>5</u>
				NO. SAMPLES: <u>1</u>
				GROUNDWATER: <u>--</u>
NOT ENCOUNTERED				TEST PIT NO. _____

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: BKTL-01	
PROJECT: <u>OB Grounds - Seneca Army Depot</u>				JOB NUMBER: <u>720446</u>		
LOCATION: <u>Burn Kettle</u>				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: <u>ES</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	6"	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	10:00	3-10-93	
Victoreen		Rad	8-14 mR/h	10:00	3-10-93	
				TOTAL SAMPLES: <u>4</u>		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEJSTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
	0.0/ BG	BKTL-01	6"		medium brown to rusty brown CLAY and SHALE fragments (to 1" dia.)	
1						
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: BKTL-02		
PROJECT: OB Grounds — Seneca Army Depot					JOB NUMBER: 720446		
LOCATION: Burn Kettle					EST. GROUND ELEV. _____		
TEST PIT DATA					INSPECTOR: ES		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD				
2'	2'	6"	open excavation with backhoe				
					CONTRACTOR: UXB		
					START DATE: 3-10-93		
					COMPLETION DATE: 3-10-93		
					CHECKED BY: _____		
					DATE CHECKED: _____		
MONITORING DATA					COMMENTS: Partly cloudy, 20's Test pit located southwest of the bunker See original field notes for diagram of location. TOTAL SAMPLES: 4		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE			
OVM		PID	0.0	10:40			3-10-93
Victoreen		Rad	9-11 mR/h	10:40			3-10-93
SCALE (FT)	VOC./RAD.	SAMPLE NUMBER DEPTH RANGE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS	
	0.0/ BG	BKTL-02	6"		medium brown to rusty brown CLAY, some SILT, trace SHALE fragments (1.4" dia.)		
1							
2							
3							
4							
5							

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: BKTL-03
PROJECT: OB Grounds - Seneca Army Depot		JOB NUMBER: 720446
LOCATION: Burn Kettle		EST. GROUND ELEV.: _____
		INSPECTOR: ES
		CONTRACTOR: UXB
		START DATE: 3-10-93
		COMPLETION DATE: 3-10-93
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	6"	open excavation with backhoe

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0	11:30 3-10-93	Partly cloudy, 20's Test pit located northeast of the burn kettle Duplicate sample taken (BKTL-05) See original field notes for diagram of location. TOTAL SAMPLES: 8
Victoreen	Rad	9-20 mR/h	11:30 3-10-93	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0/ BG	BKTL-03	6"		medium brown to rusty brown CLAY, some SILT, trace SHALE fragments (1/4" dia.)	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: BKTL-04	
PROJECT: <u>OB Grounds – Seneca Army Depot</u>				JOB NUMBER: <u>720446</u>		
LOCATION: <u>Burn Kettle</u>				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: <u>ES</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	10"	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	12:08	3-10-93	
Victoreen		Rad	9-20 mR/h	12:08	3-10-93	
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
	0.0/ BG	BKTL-04	10"		gray SHALE fill to 8" depth	
					med. brown to rusty brown CLAY, some SILT, little SHALE fragments (to 1-1/2" dia.)	
1						
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-01		
PROJECT: OB GROUNDS				JOB NUMBER: 720446		
LOCATION: LOW HILLS				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA				CONTRACTOR: UXB		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1220			
VICTOREEN	RAD	18.0 uR/h	1220			
				START DATE: 12-10-92		
				COMPLETION DATE: 12-10-92		
				CHECKED BY: _____		
				DATE CHECKED: _____		
				COMMENTS:		
				SNOW, SLEET, 10 MPH SW		
				BERM HEIGHT: LEVEL GROUND		
				BACKHOE WAS DECONNED BEFORE		
				SAMPLING USING A STEAM CLEANER.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-01	2.0'		BROWN, MOIST, LOOSE, SOME DEBRIS, SHALE, WORMS PRESENT	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-02		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-10-92			
			COMPLETION DATE: 12-10-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: RAIN, SNOW, SLEET, 10 MPH SW BERM HEIGHT: 1' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1158			
VICTOREEN	RAD	18.0 uR/h	1158			
SCALE (FT)	VOC./RAD.	SAMPLE NUMBER DEPTH RANGE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	LH-02	2.0'		BROWN, MOIST, SOME CLAY, LOOSE, SOME METALLIC DEBRIS, BROKEN SHALE.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-03
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV.: _____
		INSPECTOR: AG
		CONTRACTOR: UXB
		START DATE: 12-10-92
		COMPLETION DATE: 12-10-92
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: RAIN, SNOW, SLEET, 10 MPH SW BERM HEIGHT: 1' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1140	
VICTOREEN	RAD	18.0 uR/h	1140	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-03	2.0'		MEDIUM DARK BROWN, MOIST, SOME CLAY, LOOSE NO DEBRIS, WORMS PRESENT	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-04		
PROJECT: OB GROUNDS				JOB NUMBER: 720446		
LOCATION: LOW HILLS				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA				CONTRACTOR: UXB		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1120			
VICTOREEN	RAD	18.0 uR/h	1120			
				START DATE: 12-10-92		
				COMPLETION DATE: 12-10-92		
				CHECKED BY: _____		
				DATE CHECKED: _____		
				COMMENTS:		
				RAIN, SNOW, SLEET, 10 MPH SW		
				BERM HEIGHT: 1.5'		
				BACKHOE WAS DECONNED BEFORE		
				SAMPLING USING A STEAM CLEANER.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-04	2.0'		BROWN, MOIST, SOME CLAY, LOOSE, SOME METALLIC DEBRIS, IRON OXIDE.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-05
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV. _____
		INSPECTOR: MB

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

CONTRACTOR: UXB
START DATE: 12-10-92
COMPLETION DATE: 12-10-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1050
VICTOREEN	RAD	18.0 uR/h	1050

COMMENTS:
 SLEET RETURNED, WIND 10-20 MPH
 BERM HEIGHT: 2'
 BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-05	2.0'		BROWN SOIL, MOIST, SOME CLAY, LOOSE, SOME METALLIC DEBRIS	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-06
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV. _____
		INSPECTOR: MB
		CONTRACTOR: UXB

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: SLEET STOPPED, WIND 10 MPH BERM HEIGHT: 2' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1025	
VICTOREEN	RAD	18.0 uR/h	1025	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-06	2.0'		BROWN VIRGIN SOIL, MOIST, SOME CLAY, LOOSE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-07		
PROJECT: <u>OB GROUNDS</u>		JOB NUMBER: <u>720446</u>		
LOCATION: <u>LOW HILLS</u>		EST. GROUND ELEV. _____		
TEST PIT DATA		INSPECTOR: <u>MB</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD	CONTRACTOR: <u>UXB</u>
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE	START DATE: <u>12-10-92</u>
				COMPLETION DATE: <u>12-10-92</u>
				CHECKED BY: _____
				DATE CHECKED: _____

MONITORING DATA				COMMENTS: SLEET STOPPED, WIND 10 MPH BERM HEIGHT: 3' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1005	
VICTOREEN	RAD	18.0 uR/h	1005	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-07	2.0'		DARK BROWN, MOIST, LOOSE CLAYEY, CLEAN SOIL.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-08
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV.: _____
		INSPECTOR: MB
		CONTRACTOR: UXB

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA	COMMENTS:																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">INSTRUMENT</th> <th style="width: 25%;">DETECTOR</th> <th style="width: 25%;">BACKGROUND</th> <th style="width: 25%;">TIME/DATE</th> </tr> <tr> <td>OVM</td> <td>PID</td> <td>0.0 ppm</td> <td>0945</td> </tr> <tr> <td>VICTOREEN</td> <td>RAD</td> <td>18.0 uR/h</td> <td>0945</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	OVM	PID	0.0 ppm	0945	VICTOREEN	RAD	18.0 uR/h	0945									30 DEG F, 10-20 MPH WIND SW, SLEET & RAIN BERM HEIGHT: 8' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 4 EACH 40 mL VIALS 4 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 8
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE																		
OVM	PID	0.0 ppm	0945																		
VICTOREEN	RAD	18.0 uR/h	0945																		

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-08	2.0'		DARK BROWN, VERY MOIST, LUMPY CLAY, SOME RUST, SOME METALLIC DEBRIS.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING--SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-09
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV.: _____
		INSPECTOR: MB
		CONTRACTOR: UXB
		START DATE: 12-10-92
		COMPLETION DATE: 12-10-92
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: 30 DEG F, 10-20 MPH WIND SW, SLEET & RAIN BERM HEIGHT: 4' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	0930	
VICTOREEN	RAD	0.0 uR/h	0930	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-09	2.0'		DARK BROWN, MOIST CLAY, LOOSE, CLEAN, WORMS PRESENT	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING--SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-10		
PROJECT: <u>OB GROUNDS</u>			JOB NUMBER: <u>720446</u>			
LOCATION: <u>LOW HILLS</u>			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: <u>MB</u>			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA				COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1430			
VICTOREEN	RAD	17.2 uR/h	1430			
				PARTLY CLOUDY, COOL, CALM		
				BERM HEIGHT: 3' TO 4'		
				BACKHOE WAS DECONNED BEFORE		
				SAMPLING USING A STEAM CLEANER.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-10	2.0'		MEDIUM DARK BROWN, CLAYEY SOIL, MOSTLY DRY, NO FILL, NO DEBRIS.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-11		
PROJECT: <u>OB GROUNDS</u>			JOB NUMBER: <u>720446</u>			
LOCATION: <u>LOW HILLS</u>			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: <u>MB</u>			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA			CONTRACTOR: <u>UXB</u>			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1410			
VICTOREEN	RAD	14.2 uR/h	1410			
			START DATE: <u>12-9-92</u>			
			COMPLETION DATE: <u>12-9-92</u>			
			CHECKED BY: _____			
			DATE CHECKED: _____			
			COMMENTS:			
			PARTLY CLOUDY, COOL, CALM			
			BERM HEIGHT: 4' TO 5'			
			BACKHOE WAS DECONNED BEFORE			
			SAMPLING USING A STEAM CLEANER.			
			SAMPLES: 2 EACH 40 mL VIALS			
			2 EACH 500 mL AMBER BOTTLES			
			TOTAL SAMPLES: 4			
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-11	2.0'		MEDIUM DARK BROWN, CLAYEY SOIL, NO FILL NO ROCKS, NO DEBRIS	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-13		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: MB			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-9-92			
			COMPLETION DATE: 12-9-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: PARTLY CLOUDY, COOL, CALM BERM HEIGHT: 6' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1325			
VICTOREEN	RAD	12.2 uR/h	1325			
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-13	2.0'		MEDIUM DARK BROWN CLAYEY AND MOIST SOIL. VERY LITTLE FILL. PROJECTILE FOUND ADJACENT TO TEST PIT.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-14		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-9-92			
			COMPLETION DATE: 12-9-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: CLOUDY, SLIGHT BREEZE (EAST TO WEST) BERM HEIGHT: 4' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1135			
VICTOREEN	RAD	20.0 uR/h	1135			
SCALE (FT)	VOC./RAD.	SAMPLE NUMBER DEPTH RANGE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	LH-14	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-15		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-9-92			
			COMPLETION DATE: 12-9-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1110			
VICTOREEN	RAD	20.0 uR/h	1110			
				CLOUDY, NO WIND, AND TEMP DROPPING RAPIDLY.		
				BERM HEIGHT: 4'		
				BACKHOE WAS DECONNED BEFORE		
				SAMPLING USING A STEAM CLEANER.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-15	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-16		
PROJECT: OB GROUNDS		JOB NUMBER: 720446		
LOCATION: LOW HILLS		EST. GROUND ELEV. _____		
TEST PIT DATA		INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION / SHORING METHOD	CONTRACTOR: UXB
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE	START DATE: 12-9-92
				COMPLETION DATE: 12-9-92
				CHECKED BY: _____
				DATE CHECKED: _____

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1040	SUNNY, 5 DEG. DUSTING OF SNOW FROM LAST NITE. BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
VICTOREEN	RAD	20.0 uR/h	1040	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-16	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-17
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV. _____
		INSPECTOR: AG
		CONTRACTOR: UXB
		START DATE: 12-9-92
		COMPLETION DATE: 12-9-92
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1010	SUNNY, NO WIND. BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
VICTOREEN	RAD	20.0 uR/h	1010	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-17	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-18		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-9-92			
			COMPLETION DATE: 12-9-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: SUNNY, 5 DEG. DUSTING OF SNOW FROM LAST NITE. BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	0945			
VICTOREEN	RAD	19.0 uR/h	0945			
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-18	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-19
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-8-92
		COMPLETION DATE: 12-8-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	SUNNY, COLD, TEMP DROPPING FAST. BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
OVM	PID	0.0 ppm	1525	
VICTOREEN	RAD	19.2 uR/h	1525	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-19	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: LH-21
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: LOW HILLS		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA				EXCAVATION/SHORING METHOD	
LENGTH	WIDTH	DEPTH			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE		

CONTRACTOR: UXB
START DATE: 12-8-92
COMPLETION DATE: 12-8-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1435
VICTOREEN	RAD	19.8 uR/h	1435

COMMENTS:
 CLOUDY, FLURRIES
 BERM HEIGHT: 4'
 BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER.
 SAMPLES: 6 EACH 40 mL VIALS
 6 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 12

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-21	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-22		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: LOW HILLS			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-8-92			
			COMPLETION DATE: 12-8-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: PARTLY CLOUDY, COLD BERM HEIGHT: 5' BACKHOE WAS DECONNED BEFORE SAMPLING USING A STEAM CLEANER. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1400			
VICTOREEN	RAD	18.7 uR/h	1400			
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	LH-22	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: LH-23		
PROJECT: <u>OB GROUNDS</u>			JOB NUMBER: <u>720446</u>			
LOCATION: <u>LOW HILLS</u>			EST. GROUND ELEV. _____			
TEST PIT DATA			CONTRACTOR: <u>UXB</u>			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA			COMMENTS:			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1340			
VICTOREEN	RAD	20.4 uR/h	1340			
			BERM HEIGHT: 5' TO 6'			
			SAMPLES: 2 EACH 40 mL VIALS			
			2 EACH 500 mL AMBER BOTTLES			
			TOTAL SAMPLES:			
SCALE (FT)	VOC/RAD.	SAMPLE NUMBER	DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	LH-23	2.0'		NO DEBRIS, MEDIUM DARK BROWN SOIL WITH SOME CLAY	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE		TEST PIT #: LH-24		
PROJECT: <u>OB Grounds</u>		LOCATION: <u>Low Hill</u>		JOB NUMBER: <u>720446</u>		
				EST. GROUND ELEV. <u>632.35</u>		
				INSPECTOR: <u>ES</u>		
TEST PIT DATA				CONTRACTOR: <u>UXB</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	12:19 3-8-93		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-24	2'		medium brown CLAY, some SILT	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-25	
PROJECT: <u>OB Grounds</u>				JOB NUMBER: <u>720446</u>		
LOCATION: <u>Low Hill</u>				EST. GROUND ELEV. <u>615.99</u>		
TEST PIT DATA				INSPECTOR: <u>ES</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA				CONTRACTOR: <u>UXB</u>		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	12:50	3-8-93	
COMMENTS:				TOTAL SAMPLES: <u>4</u>		
Raining, 30's						
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-25	2'		medium brown CLAY, some SILT	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-26														
PROJECT: OB Grounds		JOB NUMBER: 720446			EST. GROUND ELEV. 631.07														
LOCATION: Low Hill		INSPECTOR: ES			CONTRACTOR: UXB														
TEST PIT DATA																			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD																
2'	2'	2'	open excavation with backhoe																
MONITORING DATA																			
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE															
OVM		PID	0.0	1:25	3-8-93														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="6" style="width: 60%;">COMMENTS:</td> <td rowspan="2" style="width: 40%; vertical-align: top;">TOTAL SAMPLES: 4</td> </tr> <tr> <td colspan="6">Raining, 30's</td> </tr> </table>							COMMENTS:						TOTAL SAMPLES: 4	Raining, 30's					
COMMENTS:						TOTAL SAMPLES: 4													
Raining, 30's																			
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS													
		NUMBER	DEPTH RANGE																
1	0.0	LH-26	2'		medium brown CLAY, some SILT debris: piece of aluminum fuse section														
2																			
3																			
4																			
5																			

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-27		
PROJECT: OB Grounds		LOCATION: Low Hill			JOB NUMBER: 720446		
					EST. GROUND ELEV. 630.13		
					INSPECTOR: ES		
					CONTRACTOR: UXB		
					START DATE: 3-8-93		
					COMPLETION DATE: 3-8-93		
					CHECKED BY: _____		
					DATE CHECKED: _____		
TEST PIT DATA							
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD				
2'	2'	2'	open excavation with backhoe				
MONITORING DATA					COMMENTS: Raining, 30's TOTAL SAMPLES: 4		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE			
OVM		PID	0.0	1:58			3-8-93
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS	
		NUMBER	DEPTH RANGE				
1	0.0	LH-27	2'		medium brown CLAY, some SILT, little SHALE fragments (1" dia.)		
2							
3							
4							
5							

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-28	
PROJECT: OB Grounds		LOCATION: Low Hill			JOB NUMBER: 720446	
					EST. GROUND ELEV. 628.36	
					INSPECTOR: ES	
					CONTRACTOR: UXB	
					START DATE: 3-8-93	
					COMPLETION DATE: 3-8-93	
					CHECKED BY: _____	
					DATE CHECKED: _____	
TEST PIT DATA						
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0	2:30	3-8-93	Raining, 30's	
					TOTAL SAMPLES: 4	
SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-28	2'		medium brown CLAY, some SILT, little SHALE fragments (1" dia.)	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-29	
PROJECT: OB Grounds – Seneca Army Depot				JOB NUMBER: 720446		
LOCATION: Low Hill				EST. GROUND ELEV.: 626.22		
TEST PIT DATA				INSPECTOR: ES		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	3:00 3-8-93		
				Raining, 30's		
				Located in low area between hills.		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-29	2'		medium brown CLAY, some SILT, little SHALE fragments (1" dia.)	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-30
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV.: 625.42
		INSPECTOR: ES
		CONTRACTOR: UXB
		START DATE: 3-8-93
		COMPLETION DATE: 3-8-93
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	open excavation with backhoe

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0	3:25 3-8-93	Raining, 30's Located in low area between hills TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-30	2'		medium brown CLAY, some SILT, little SHALE fragments (1/2" dia.)	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-31	
PROJECT: OB Grounds		JOB NUMBER: 720446			EST. GROUND ELEV. 629.74	
LOCATION: Low Hill		INSPECTOR: ES			CONTRACTOR: UXB	
TEST PIT DATA				START DATE: 3-9-93		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
				COMPLETION DATE: 3-9-93		
				CHECKED BY: _____		
				DATE CHECKED: _____		
MONITORING DATA				COMMENTS: Windy, 30's TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0	9:08			3-9-93
SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-31	2'		medium brown CLAY, some SILT, little SHALE fragments (1/4" dia.) debris: 20 mm projectile heads (1/2" - 3/4" long) and 50 caliber heads	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-32	
PROJECT: OB Grounds		LOCATION: Low Hill			JOB NUMBER: 720446	
					EST. GROUND ELEV. 629.87	
					INSPECTOR: ES	
					CONTRACTOR: UXB	
					START DATE: 3-9-93	
					COMPLETION DATE: 3-9-93	
					CHECKED BY: _____	
					DATE CHECKED: _____	
TEST PIT DATA						
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA					COMMENTS: Windy, 30's TOTAL SAMPLES: 4	
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0	9:32	3-9-93		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-32	2'		medium brown CLAY, some SILT, little SHALE fragments (1/2" dia.) debris: 20 mm projectile heads (1/2" - 3/4" long) and 50 caliber heads	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-34	
PROJECT: <u>OB Grounds</u>		JOB NUMBER: <u>720446</u>			EST. GROUND ELEV. <u>629.46</u>	
LOCATION: <u>Low Hill</u>		INSPECTOR: <u>ES</u>			CONTRACTOR: <u>UXB</u>	
TEST PIT DATA						
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA						
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	10:32 3-9-93		
COMMENTS:						
Windy, 30's						
TOTAL SAMPLES: 4						
SCALE (FT)	VOC./ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-34	2'		medium brown CLAY, some SILT, little SHALE fragments (1/4" dia.) debris: 20 mm projectile heads (1/2" - 3/4" long) and 50 caliber heads	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-36	
PROJECT: OB Grounds		LOCATION: Low Hill			JOB NUMBER: 720446	
EST. GROUND ELEV. 626.52		INSPECTOR: ES			CONTRACTOR: UXB	
START DATE: 3-9-93		COMPLETION DATE: 3-9-93			CHECKED BY: _____	
DATE CHECKED: _____						
TEST PIT DATA						
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA					COMMENTS: Windy, 30's No OVM readings taken at this test pit; OVM not functioning. TOTAL SAMPLES: 4	
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID					
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-36	2'		medium brown CLAY, some SILT, little SHALE fragments	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-37
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV. 627.71
		INSPECTOR: ES
		CONTRACTOR: UXB
		START DATE: 3-9-93
		COMPLETION DATE: 3-9-93
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	open excavation with backhoe

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0	1:40 3-9-93	Windy, 30's

TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-37	2'		medium brown CLAY, little to trace SILT, no SHALE fragments, no debris	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-38
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV.: 626.32
		INSPECTOR: ES

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	open excavation with backhoe

CONTRACTOR: UXB
START DATE: 3-9-93
COMPLETION DATE: 3-9-93
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA				
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0	2:10	3-9-93

COMMENTS:
Windy, 30's

TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-38	2'		medium brown CLAY, some SILT, little SHALE fragments (1/4" to 1-1/2" dia.), no debris	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-39
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV.: 627.79
		INSPECTOR: ES

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION / SHORING METHOD
2'	2'	2'	open excavation with backhoe

CONTRACTOR: UXB
START DATE: 3-9-93
COMPLETION DATE: 3-9-93
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME / DATE
OVM	PID	0.0	2:30 3-9-93

COMMENTS:

Windy, 30's

TOTAL SAMPLES: 4

SCALE (FT)	VOC./ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-39	2'		medium brown CLAY, some SILT, no rock fragments, no debris	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-40	
PROJECT: <u>OB Grounds</u>				JOB NUMBER: <u>720446</u>		
LOCATION: <u>Low Hill</u>				EST. GROUND ELEV. <u>627.04</u>		
TEST PIT DATA				INSPECTOR: <u>ES</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
				CONTRACTOR: <u>UXB</u>		
				START DATE: <u>3-9-93</u>		
				COMPLETION DATE: <u>3-9-93</u>		
				CHECKED BY: _____		
				DATE CHECKED: _____		
MONITORING DATA					COMMENTS: Windy, 30's TOTAL SAMPLES: 4	
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	3:00 3-9-93		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-40	2'		medium brown CLAY, little SILT, trace SHALE fragments, no debris	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-41
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV.: 627.01
		INSPECTOR: ES

TEST PIT DATA				EXCAVATION/SHORING METHOD	
LENGTH	WIDTH	DEPTH			
2'	2'	2'	open excavation with backhoe		

CONTRACTOR:	UXB
START DATE:	3-9-93
COMPLETION DATE:	3-9-93
CHECKED BY:	
DATE CHECKED:	

MONITORING DATA				
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0	3:30	3-9-93

COMMENTS:

Windy, 30's

TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0	LH-41	2'		medium brown CLAY, little SILT, trace SHALE fragments (1/2" dia.), no debris.	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: ACOE			TEST PIT #: LH-42	
PROJECT: <u>OB Grounds</u>				JOB NUMBER: <u>720446</u>		
LOCATION: <u>Low Hill</u>				EST. GROUND ELEV. <u>625.91</u>		
TEST PIT DATA				INSPECTOR: <u>ES</u>		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	open excavation with backhoe			
MONITORING DATA				COMMENTS:		
INSTRUMENT		DETECTOR	BACKGROUND	TIME/DATE		
OVM		PID	0.0	8:46	3-10-93	
Victoreen		Rad	7-10 mR/h	8:46	3-10-93	
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0/ BG	LH-42	2'		medium brown CLAY, little SILT, trace SHALE fragments, no debris.	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: ACOE	TEST PIT #: LH-43
PROJECT: OB Grounds		JOB NUMBER: 720446
LOCATION: Low Hill		EST. GROUND ELEV.: 626.38
		INSPECTOR: ES

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	open excavation with backhoe

CONTRACTOR: UXB
START DATE: 3-10-93
COMPLETION DATE: 3-10-93
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0	9:10 3-10-93
Victoreen	Rad	7-10 mR/h	9:10 3-10-93

COMMENTS:

Partly cloudy, 20's from LH-43, 200' more of low hill, paralleling the paved access road.

TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	0.0/ BG	LH-43	2'		medium brown to olive gray CLAY, little SILT, trace SHALE fragments, no debris.	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-A-3
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD A		EST. GROUND ELEV.: _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA				COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	0955	WEATHER: SUNNY, COLD, WIND 5-10 MPH BERM HEIGHT: 4' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
VICTOREEN	RAD	20 uR/h	0955	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-A-3	2.0'		CLAYEY, DRY, SHALE, SOME BURN RESIDUE SEVERAL NITE CRAWLERS IN MOIST SECTION SEVERAL SMALL PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-A-4
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD A		EST. GROUND ELEV.: _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION / SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1014
VICTOREEN	RAD	20 uR/h	1014

WEATHER: SUNNY, COLD, WIND 5-10 MPH
 BERM HEIGHT: 6'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC / RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-A-4	2.0'		CLAYEY, DARK BROWN, SHALE, BURN RESIDUE 10 % PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-B-3
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD B		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA				
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD	
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE	CONTRACTOR: UXB
				START DATE: 12-3-92
				COMPLETION DATE: 12-3-92
				CHECKED BY: _____
				DATE CHECKED: _____

MONITORING DATA	COMMENTS:
INSTRUMENT	WEATHER: SNOW/RAIN/GUSTS
DETECTOR	BERM HEIGHT: 3'
BACKGROUND	BACKHOE WAS DECONNED BY STEAM-CLEANING.
TIME/DATE	SAMPLES: 2 EACH 40 mL VIALS
OVM	2 EACH 500 mL AMBER BOTTLES
PID	0.1 ppm
10:10	
VICTOREEN	20 uR/h
10:10	
	TOTAL SAMPLES: 4

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-B-3	2.0'		CLAYEY BROWN AND MOIST	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: BE-B-4		
PROJECT: OB GROUNDS				JOB NUMBER: 720446		
LOCATION: BURN PAD B				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
				START DATE: 12-3-92		
				COMPLETION DATE: 12-3-92		
				CHECKED BY: _____		
				DATE CHECKED: _____		
MONITORING DATA				COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	10:25			
VICTOREEN	RAD	20 uR/h	10:25			
				WEATHER: SNOW/RAIN/GUSTS		
				BERM HEIGHT: 6'		
				BACKHOE WAS DECONNED BY STEAM-CLEANING.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC/ RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-B-4	2.0'		LIGHT BROWN, CLAYEY	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-C-5
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD C		EST. GROUND ELEV.: _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-3-92
		COMPLETION DATE: 12-3-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	10:45
VICTOREEN	RAD	20 uR/h	10:45

WEATHER: SNOW FLURRIES, 20-30 MPH GUSTS
BERM HEIGHT: 4.5'
BACKHOE WAS DECONNED BY STEAM-CLEANING.
SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-C-5	2.0'		BROKEN GRAY SHALE, CLAY, SOME SMALL MISC. PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-C-6
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD C		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2'	2'	2'	OPEN EXCAVATION WITH BACKHOE

CONTRACTOR: UXB
START DATE: 12-3-92
COMPLETION DATE: 12-3-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	11:07
VICTOREEN	RAD	20 uR/h	11:07

COMMENTS:
 WEATHER: SNOW FLURRIES, 20-30 MPH GUSTS
 BERM HEIGHT: 4.5'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-C-6	2.0'		SOME BROKEN SHALE, CLAYEY SOIL, DK BROWN, SOME SMALL MISC. PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING - SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT			TEST PIT #: BE-D-3	
PROJECT: OB GROUNDS				JOB NUMBER: 720446		
LOCATION: BURN PAD D				EST. GROUND ELEV. _____		
TEST PIT DATA				INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION / SHORING METHOD			
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
MONITORING DATA				COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME / DATE			
OVM	PID	0.0 ppm	0810			
VICTOREEN	RAD	20 uR/h	0810			
				WEATHER: PARTLY SUNNY, 30 DEG., NO WIND		
				BERM HEIGHT: 4'		
				BACKHOE WAS DECONNED BY STEAM-CLEANING.		
				SAMPLES: 2 EACH 40 mL VIALS		
				2 EACH 500 mL AMBER BOTTLES		
				TOTAL SAMPLES: 4		
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-D-3	2.0'		BLACKISH TOP LAYER, GOING DOWN TO CLAY AND SHALE. 40% BURN RESIDUE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-D-4
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD D		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

CONTRACTOR: UXB
START DATE: 12-4-92
COMPLETION DATE: 12-4-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	0825
VICTOREEN	RAD	85 uR/h	0825

COMMENTS:
 WEATHER: PARTLY SUNNY, 30 DEG., NO WIND
 BERM HEIGHT: 5'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-D-4	2.0'		DARK BROWN, BITS OF SHALE, SOME BURN RESIDUE AND 4 SMALL PROJECTILES.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING--SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-E-3
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD E		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

CONTRACTOR: UXB
START DATE: 12-3-92
COMPLETION DATE: 12-3-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1305
VICTOREEN	RAD	20 uR/h	1305

COMMENTS:
 WEATHER: PARTLY SUNNY, WIND AT 20-30 MPH
 BERM HEIGHT: 6'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-E-4	2.0'		CLAY, SOME SHALE, A LUMP OF DETERIATED ALUMINUM OR BURN RESIDUE. ONE LARGE PROJECTILE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-E-4
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD E		EST. GROUND ELEV.: _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
1.5'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-3-92
		COMPLETION DATE: 12-3-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1245
VICTOREEN	RAD	20 uR/h	1245

WEATHER: PARTLY SUNNY, WIND AT 20-30 MPH
 BERM HEIGHT: 3'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1	NC	BE-E-4	1.5'		CLAYEY LIGHT BROWN SOIL, DRIER THAN PREVIOUS EXCAV., NO BURN RESIDUE, SOME BROKEN SHALE, TOP SOIL CONTAINED SOME NIGHT CRAWLERS	
2						
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-F-4
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD F		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-3-92
		COMPLETION DATE: 12-3-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1430
VICTOREEN	RAD	130 uR/h	1430

WEATHER: COLD, WINDY 15-30 MPH, FLURRIES
 BERM HEIGHT: 6' TO 7'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-F-4	2.0'		MOIST CLAYEY DARK BROWN	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-F-5
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD F		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: WEATHER: CLOUDY, CONSTANT WIND AT 20-30 MPH BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1415	
VICTOREEN	RAD	15 uR/h	1415	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-F-5	2.0'		MOIST CLAYEY DARK BROWN	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: BE-F-6		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: BURN PAD F			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-3-92			
			COMPLETION DATE: 12-3-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: WEATHER: CLOUDY, CONSTANT WIND AT 20-30 MPH BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1355			
VICTOREEN	RAD	20 uR/h	1355			
SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-F-6	2.0'		CLAYEY, MOIST, DARK BROWN, LESS THAN 10 % BURN RESIDUE,SOME SMALLMISC. PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: BE-F-7		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: BURN PAD F			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			START DATE: 12-3-92			
			COMPLETION DATE: 12-3-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: WEATHER: CLOUDY, CONSTANT WIND AT 20-30 MPH BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1327			
VICTOREEN	RAD	20 uR/h	1327			
SCALE (FT)	VOC./RAD.	SAMPLE NUMBER	DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	BE-F-7	2.0'		CLAYEY, MOIST, LESS THAN 10% SMALL PROJECTILES, DEBRIS CONSISTED OF ELECTRICAL COPPER WIRE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-8
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA				TIME/DATE	COMMENTS:
INSTRUMENT	DETECTOR	BACKGROUND			
OVM	PID	0.0 ppm	1050		WEATHER: SUNNY, COLD, WIND 5-10 MPH BERM HEIGHT: 6' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
VICTOREEN	RAD	20 uR/h	1050		

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-8	2.0'		DARK BROWN MOIST, IRON OXIDE, SOME BURN RESIDUE AND LITTLE PIECES OF PROJECTILES.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-9
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV.: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: WEATHER: CLOUDY, COLD 30 DEG F. BERM HEIGHT: 6' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1108	
VICTOREEN	RAD	20 uR/h	1108	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-9	2.0'		BURN RESIDUE 20%, DARK CLAYEY SOIL, METAL PARTS LEFT OVER FROM BURN AND FROM PROJECTILES.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-10
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION / SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

CONTRACTOR: UXB
START DATE: 12-4-92
COMPLETION DATE: 12-4-92
CHECKED BY: _____
DATE CHECKED: _____

MONITORING DATA				COMMENTS: WEATHER: CLOUDY, COLD 30 DEG F. BERM HEIGHT: 6' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1129	
VICTOREEN	RAD	20 uR/h	1129	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-10	2.0'		BURN RESIDUE, METAL PARTS, IRON OXIDE AND ALUMINUM OXIDE COMPRISING 30 TO 40 % MOIST, DARK CLAYEY SOIL.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-11
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1148
VICTOREEN	RAD	80 uR/h	1148

WEATHER: CLOUDY, COLD 30 DEG F.
 BERM HEIGHT: 6'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-11	2.0'		BURN RESIDUE, ALUMINUM AND IRON OXIDE, METAL PARTS COMPRISING 40 %, MOSTLY DARK CLAYEY SOIL	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-12
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-7-92
		COMPLETION DATE: 12-7-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	0910
VICTOREEN	RAD	160 uR/h	0910

WEATHER: CLOUDY, SNOW, WIND 10-15 MPH, 30 DEG F
 BERM HEIGHT: 6'
 BACKHOE WAS DECORNNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-12	2.0'		MOIST CLAYEY MEDIUM BROWN, BROKEN SHALE, SOME SMALL PROJECTILES	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-G-13
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD G		EST. GROUND ELEV.: _____
		INSPECTOR: AG

TEST PIT DATA				
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD	
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE	CONTRACTOR: UXB
				START DATE: 12-7-92
				COMPLETION DATE: 12-7-92
				CHECKED BY: _____
				DATE CHECKED: _____

MONITORING DATA	COMMENTS:																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">INSTRUMENT</th> <th style="width: 25%;">DETECTOR</th> <th style="width: 25%;">BACKGROUND</th> <th style="width: 25%;">TIME/DATE</th> </tr> <tr> <td>OVM</td> <td>PID</td> <td>0.0 ppm</td> <td>1010</td> </tr> <tr> <td>VICTOREEN</td> <td>RAD</td> <td>20 uR/h</td> <td>1010</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	OVM	PID	0.0 ppm	1010	VICTOREEN	RAD	20 uR/h	1010									WEATHER: CLOUDY, SNOW, WIND 10-15 MPH, 30 DEG F BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 8
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE																		
OVM	PID	0.0 ppm	1010																		
VICTOREEN	RAD	20 uR/h	1010																		

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-G-13	2.0'		MOIST CLAYEY MEDIUM BROWN, BROKEN SHALE, SOME SMALL PROJECTILES NOTE: A DUPLICATE WAS TAKEN FROM THIS LOCUS AND WAS LABELED AS SAMPLE # BE-G-14.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-H-5
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD H		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	WEATHER: PARTLY SUNNY, 30 DEG., NO WIND BERM HEIGHT: 6' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
OVM	PID	0.0 ppm	0848	
VICTOREEN	RAD	20 uR/h	0848	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-H-5	2.0'		CLAYEY, IRON OXIDE, BURN RESIDUE, DARK BROWN SOIL, SOME SMALL PROJECTILES.	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-H-6
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD H		EST. GROUND ELEV. _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-4-92
		COMPLETION DATE: 12-4-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA				COMMENTS: WEATHER: PARTLY SUNNY, 30 DEG., NO WIND BERM HEIGHT: 3' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	0905	
VICTOREEN	RAD	20 uR/h	0905	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-H-6	2.0'		CLAYEY, DARK BROWN, SOME IRON OXIDE SOME SHALE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING – SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-J-8		
PROJECT: OB GROUNDS		JOB NUMBER: 720446		
LOCATION: BURN PAD J		EST. GROUND ELEV. _____		
TEST PIT DATA		INSPECTOR: AG		
LENGTH	WIDTH	DEPTH	EXCAVATION / SHORING METHOD	CONTRACTOR: UXB
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE	START DATE: 12-7-92
				COMPLETION DATE: 12-7-92
				CHECKED BY: _____
				DATE CHECKED: _____

MONITORING DATA	COMMENTS:			
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1035	WEATHER: CLOUDY, SNOW, WIND 10-15 MPH, 30 DEG F BERM HEIGHT: 6' TO 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
VICTOREEN	RAD	20 uR/h	1035	

SCALE (FT)	VOC./RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-J-8	2.0'		TOP 6 INCHES BLACK BURN RESIDUE (90%), LIGHT MEDIUM BROWN CLAYEY SOIL BENEATH, SOME BROKEN SHALE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-J-9
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD J		EST. GROUND ELEV. _____
		INSPECTOR: AG
		CONTRACTOR: UXB
		START DATE: 12-7-92
		COMPLETION DATE: 12-7-92
		CHECKED BY: _____
		DATE CHECKED: _____

TEST PIT DATA			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE

MONITORING DATA				COMMENTS: WEATHER: CLOUDY, SNOW, WIND 10-15 MPH, 30 DEG F BERM HEIGHT: 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE	
OVM	PID	0.0 ppm	1050	
VICTOREEN	RAD	60 uR/h	1050	

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-J-9	2.0'		TOP 2 INCHES BURN RESIDUE BLACK, THEN LIGHT BROWN LOOSE SOIL, (10%) CLAY, BROKEN SHALE	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #:

TEST PIT REPORT

ENGINEERING—SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: BE-J-11		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: BURN PAD J			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-7-92			
			COMPLETION DATE: 12-7-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: WEATHER: CLOUDY, WIND 10 MPH BERM HEIGHT: 7' BACKHOE WAS DECONNED BY STEAM—CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1210			
VICTOREEN	RAD	16 uR/h	1210			
SCALE (FT)	VOC./RAD.	SAMPLE NUMBER	DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	BE-J-11	2.0'		BLACK BURN RESIDUE TOP 2–3 INCH LAYER, LOOSE BROWN SOIL, SOME CLAY	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.		CLIENT: SENECA ARMY DEPOT		TEST PIT #: BE-J-12		
PROJECT: OB GROUNDS			JOB NUMBER: 720446			
LOCATION: BURN PAD J			EST. GROUND ELEV. _____			
TEST PIT DATA			INSPECTOR: AG			
LENGTH	WIDTH	DEPTH	EXCAVATION/SHORING METHOD			
2.0'	2'	2'	OPEN EXCAVATION WITH BACKHOE			
			CONTRACTOR: UXB			
			START DATE: 12-7-92			
			COMPLETION DATE: 12-7-92			
			CHECKED BY: _____			
			DATE CHECKED: _____			
MONITORING DATA				COMMENTS: WEATHER: CLOUDY, WIND 10 MPH BERM HEIGHT: 7' BACKHOE WAS DECONNED BY STEAM-CLEANING. SAMPLES: 2 EACH 40 mL VIALS 2 EACH 500 mL AMBER BOTTLES TOTAL SAMPLES: 4		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE			
OVM	PID	0.0 ppm	1245			
VICTOREEN	RAD	18 uR/h	1245			
SCALE (FT)	VOC/RAD.	SAMPLE NUMBER DEPTH RANGE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
1						
2	NC	BE-J-12	2.0'		SOME BURN RESIDUE, AND MOSTLY LIGHT BROWN LOOSE SOIL	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT

ENGINEERING-SCIENCE, INC.	CLIENT: SENECA ARMY DEPOT	TEST PIT #: BE-J-13
PROJECT: OB GROUNDS		JOB NUMBER: 720446
LOCATION: BURN PAD J		EST. GROUND ELEV.: _____
TEST PIT DATA		INSPECTOR: AG
LENGTH	WIDTH	DEPTH
2.0'	2'	2'
EXCAVATION/SHORING METHOD		
OPEN EXCAVATION WITH BACKHOE		
		CONTRACTOR: UXB
		START DATE: 12-7-92
		COMPLETION DATE: 12-7-92
		CHECKED BY: _____
		DATE CHECKED: _____

MONITORING DATA	COMMENTS:		
INSTRUMENT	DETECTOR	BACKGROUND	TIME/DATE
OVM	PID	0.0 ppm	1305
VICTOREEN	RAD	18 uR/h	1305

WEATHER: CLOUDY, WIND 10 TO 20 MPH, GUST TO 30 MPH
 BERM HEIGHT: 3'
 BACKHOE WAS DECONNED BY STEAM-CLEANING.
 SAMPLES: 2 EACH 40 mL VIALS
 2 EACH 500 mL AMBER BOTTLES
 TOTAL SAMPLES: 4

SCALE (FT)	VOC/RAD.	SAMPLE		STRATA SCHEMATIC	DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY)	REMARKS
		NUMBER	DEPTH RANGE			
1						
2	NC	BE-J-13	2.0'		DEBRIS (WOOD, METAL PARTS, CERAMIC, PROJECTILE PIECES) CLAY	
3						
4						
5						

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

SAMPLING RECORD – SOIL

ENGINEERING – SCIENCE, INC.	CLIENT: ACOE	DATE: 12/10/92
PROJECT: Phase II Field Investigation – Downwind		INSPECTOR: PFM/MEL
LOCATION: SEAD – OB Grounds		LABORATORY: Aquatec
		SAMPLING STAFF: PFM/UXB
		CHAIN OF CUSTODY #: MB

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)							MONITORING	
TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND		GROUND / SITE SURFACE CONDITIONS	INSTRUMENT	DETECTOR
				VELOCITY (APPRX)	DIRECTION (0 – 360)		OVM	PID
all day	20 deg.	snowy		20–30 mph	west	snow covered;		
		(blizzard conditions)				(3–4 ")		

SAMPLE #	DEPTH RANGE	TIME	TYPE (GRAB / COMP.)	COLOR	GRAIN SIZE	USCS CLASS	FORIEGN MAT. (Y/N)	SAMPLE DEVICE	CLEANING PROCEDURE	CONTAINER SIZE/TYPE	MON. VOC	QC SPL (Y/N)
DW-01	0-2"	9:30	Grab	br-blk	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-02	0-2"	9:30	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-03	0-2"	10:00	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-04	0-2"	10:30	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-05	0-2"	11:00	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-06	0-2"	11:30	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-07	0-2"	12:00	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-08	0-2"	13:00	Grab	brn-blk	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-09	0-2"	13:30	Grab	brn-blk	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-10	0-2"	14:00	Grab	brn-blk	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-11	0-2"	14:30	Grab	brn-blk	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	N
DW-12 *	0-2"	15:00	Grab	brn	clay-org		some roots	trowel,bowl	See Work Plan		0 ppm	dup of
												DW-04

* duplicate of DW-04

APPENDIX E
MONITORING WELL INSTALLATION DIAGRAMS

**FINISHED SPECIFICATIONS FOR PREVIOUSLY EXISTING MONITORING WELLS (1981)
SENECA ARMY DEPOT
OB GROUNDS**

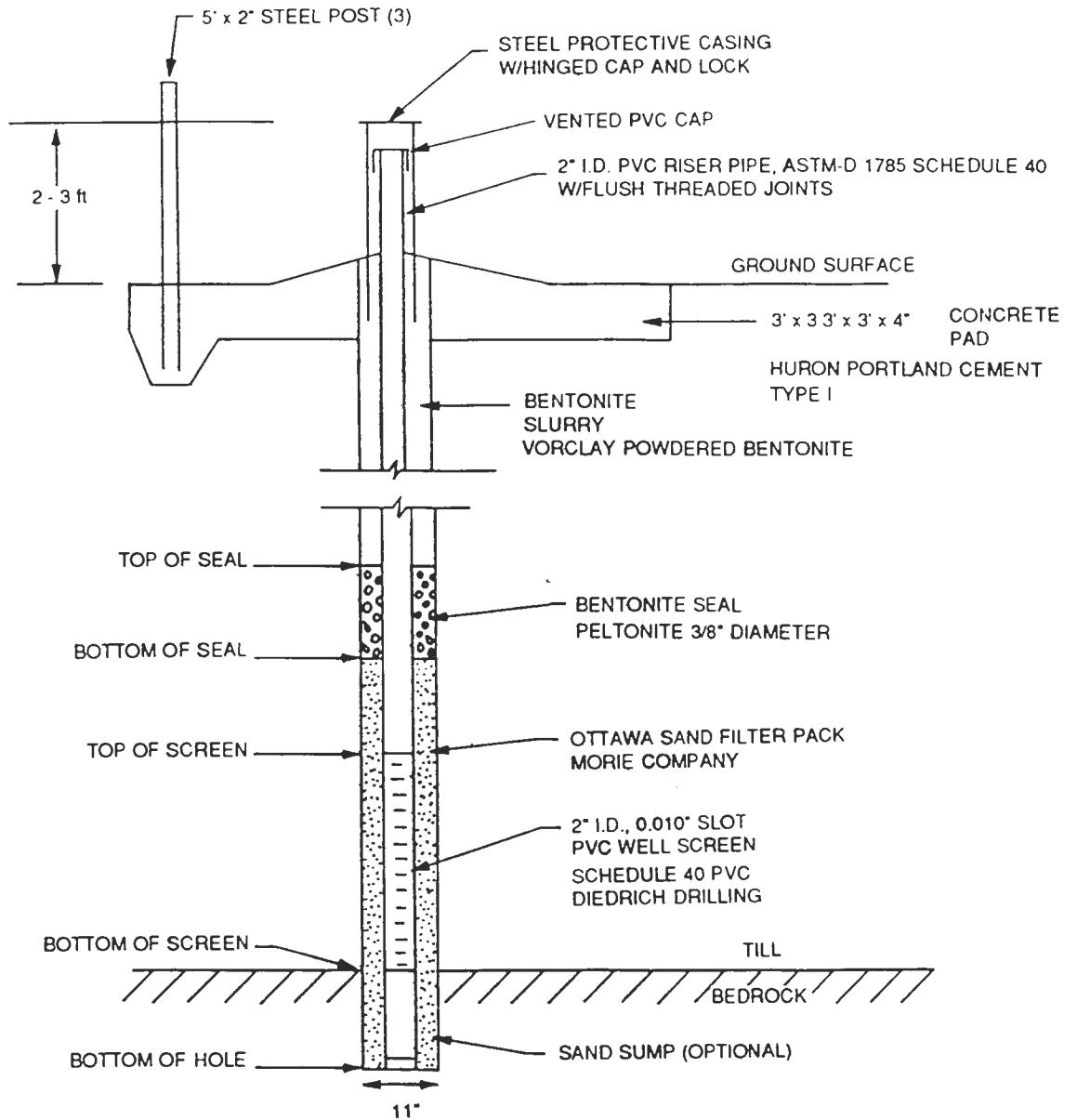
MW Number	Boring Depth (ft)	Well Depth (ft)	Depth to Bedrock (ft)	Screen Length (ft)	Screened Depth Interval (ft)
MW-1	13.0	13.0	12.0	5	7-12
MW-2	7.0	7.0	6.0	5	1-6
MW-3	11.0	10.5	9.5	5	4.5-9.5
MW-4	10.0	10.0	9.5	5	4.5-9.5
MW-5	10.0	10.0	9.0	5	4.0-9.0
MW-6	9.0	9.0	9.0	5	4.0-9.0
MW-7	6.5	6.5	6.0	5	1.0-6.0

Notes:

1. Source: O'Brien & Gere, 1985
2. Wells were constructed of 4-inch ID, Schedule 40 PVC. Each well screen is 5 feet in length are installed at the top of bedrock.

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot JOB NO. 0032883161	WELL NO. MW8
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4864 E 8323	
BEGUN: 10-5-88	SUPERVISOR: S. Giesler	WELL SITE: NW of pad H	WATER LEVEL DEPTH ELEV. 6.3' 115.78
FINISHED: 10-6-88	DRILLER: G. Lansing		

DEPTH IN.	ELEV. IN.
	122.08
0 ft	120.06
1.5 ft	118.56
3 ft	117.06
4.5 ft	115.56
9.5 ft	110.56
10 ft	110.06

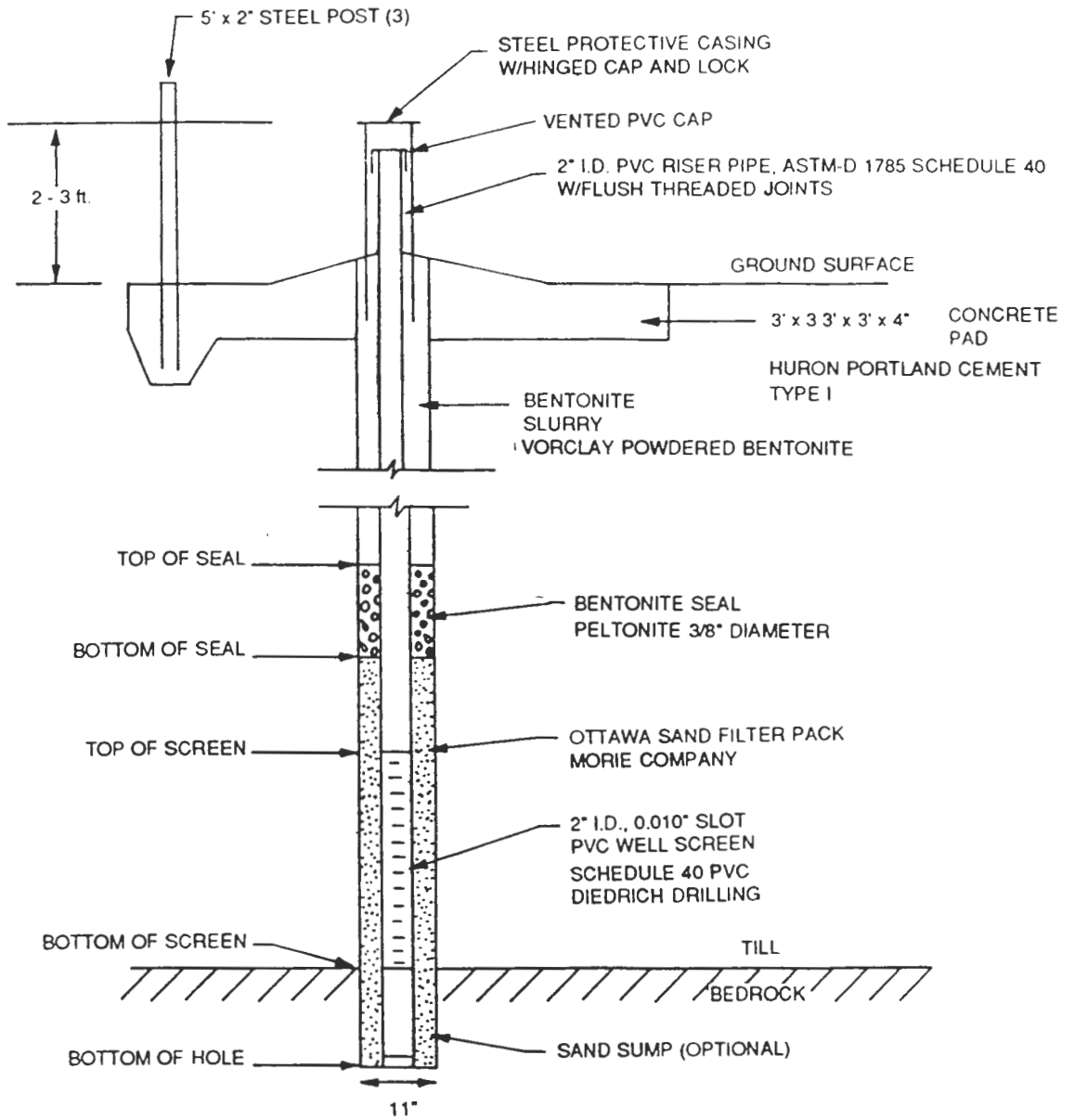


TIME DEVELOPED: 5 hrs

GALLONS EXTRACTED: 9.5 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW9
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4990 E 8547		
BEGUN: 10-6-88	SUPERVISOR: S. Giesler	WELL SITE:	WATER LEVEL	DEPTH ELEV.
FINISHED: 10-7-88	DRILLER: G. Lansing	E. of pad H	4.3'	113.59

DEPTH IN.	ELEV. IN.
	117.89
0	115.74
1.0 ft	114.74
2.0 ft	113.74
3.0 ft	112.74
7.0 ft	108.74
7.5 ft	108.24

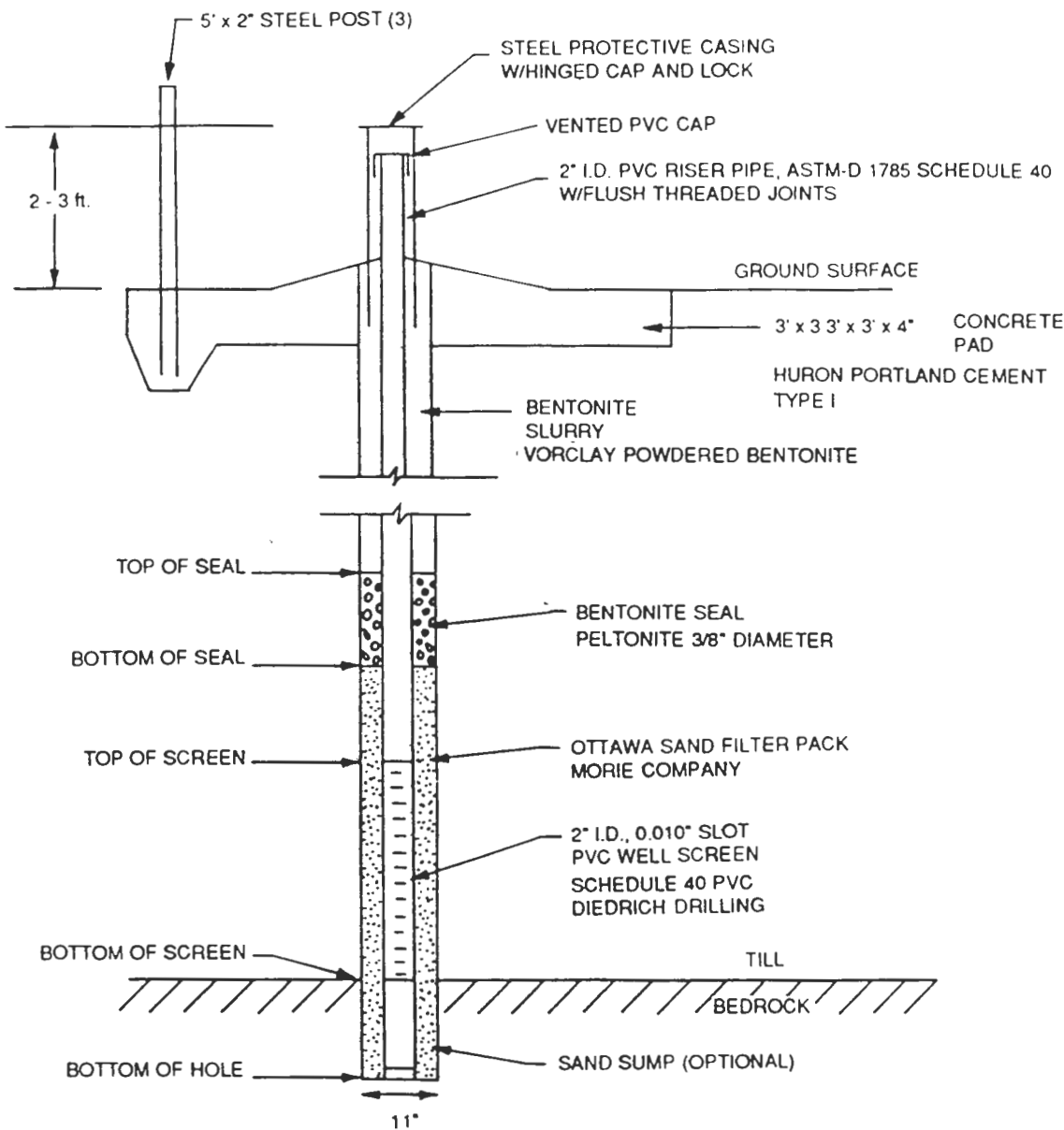


TIME DEVELOPED: 4 hours

GALLONS EXTRACTED: 16 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW10
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4347 E 8397		
BEGUN: 10-4-88	SUPERVISOR: S. Giesler	WELL SITE: SW of pad G	WATER LEVEL	DEPTH ELEV
FINISHED: 10-4-88	DRILLER: G. Lansing		5.7'	116.54

DEPTH IN.	ELEV. IN.
	122.24
0 ft	120.09
1.0 ft	119.09
2.5 ft	117.59
4.0 ft	116.09
9.0 ft	111.09
9.5 ft	110.59

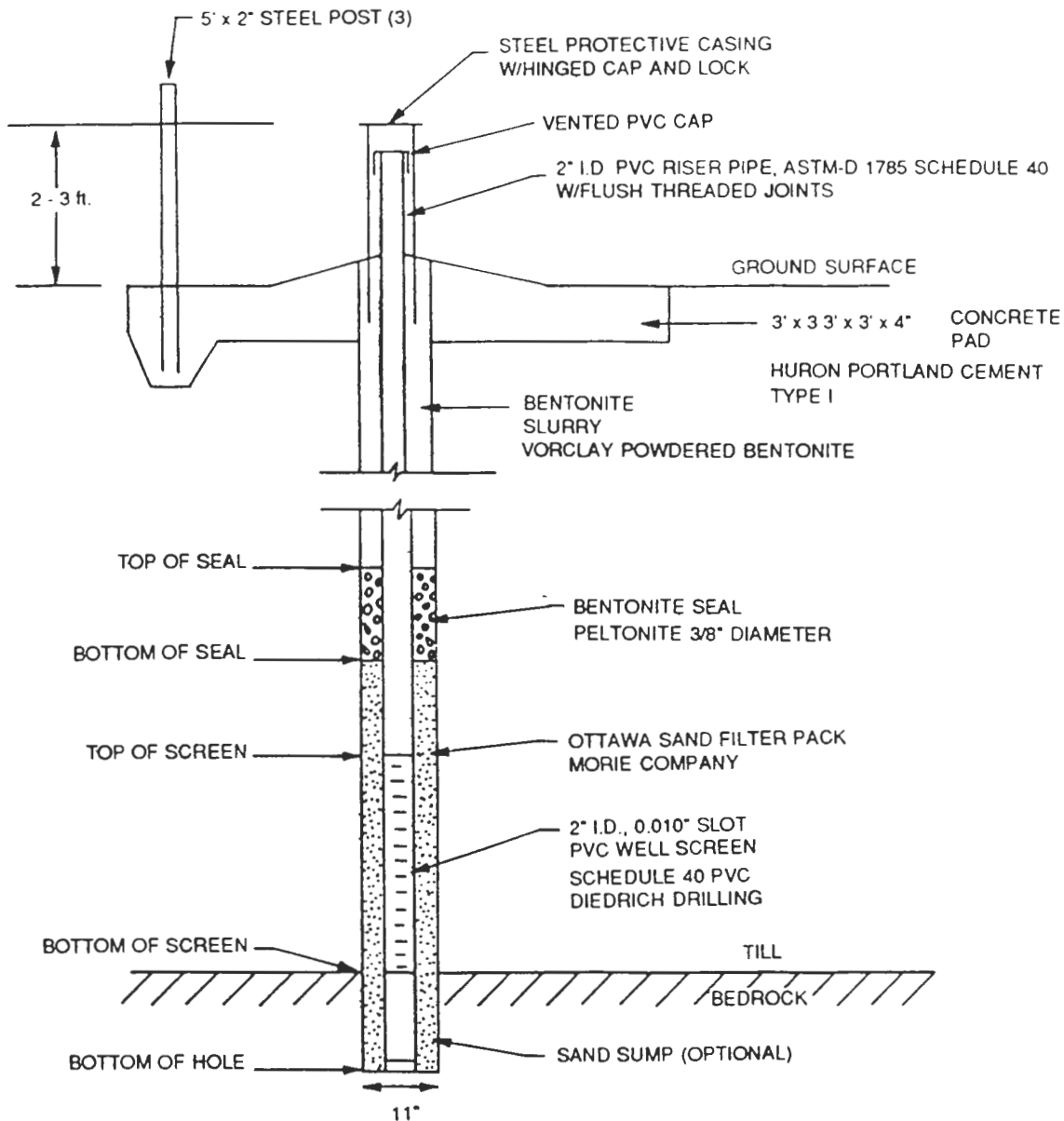


TIME DEVELOPED: 7.5 hours

GALLONS EXTRACTED: 14.5 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot JOB NO. 0032883161	WELL NO. MW11
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4728 E 8864	
BEGUN: 10-11-88	SUPERVISOR: S. Giesler	WELL SITE: NE of pad G	WATER LEVEL DEPTH ELEV 6.1 ft 107.85
FINISHED: 10-11-88	DRILLER: G. Lansing		

DEPTH IN.	ELEV. IN.
	113.95
0 ft	111.40
1.0 ft	110.40
2.5 ft	108.90
4 ft	107.40
9.0 ft	102.40
9.5 ft	101.90

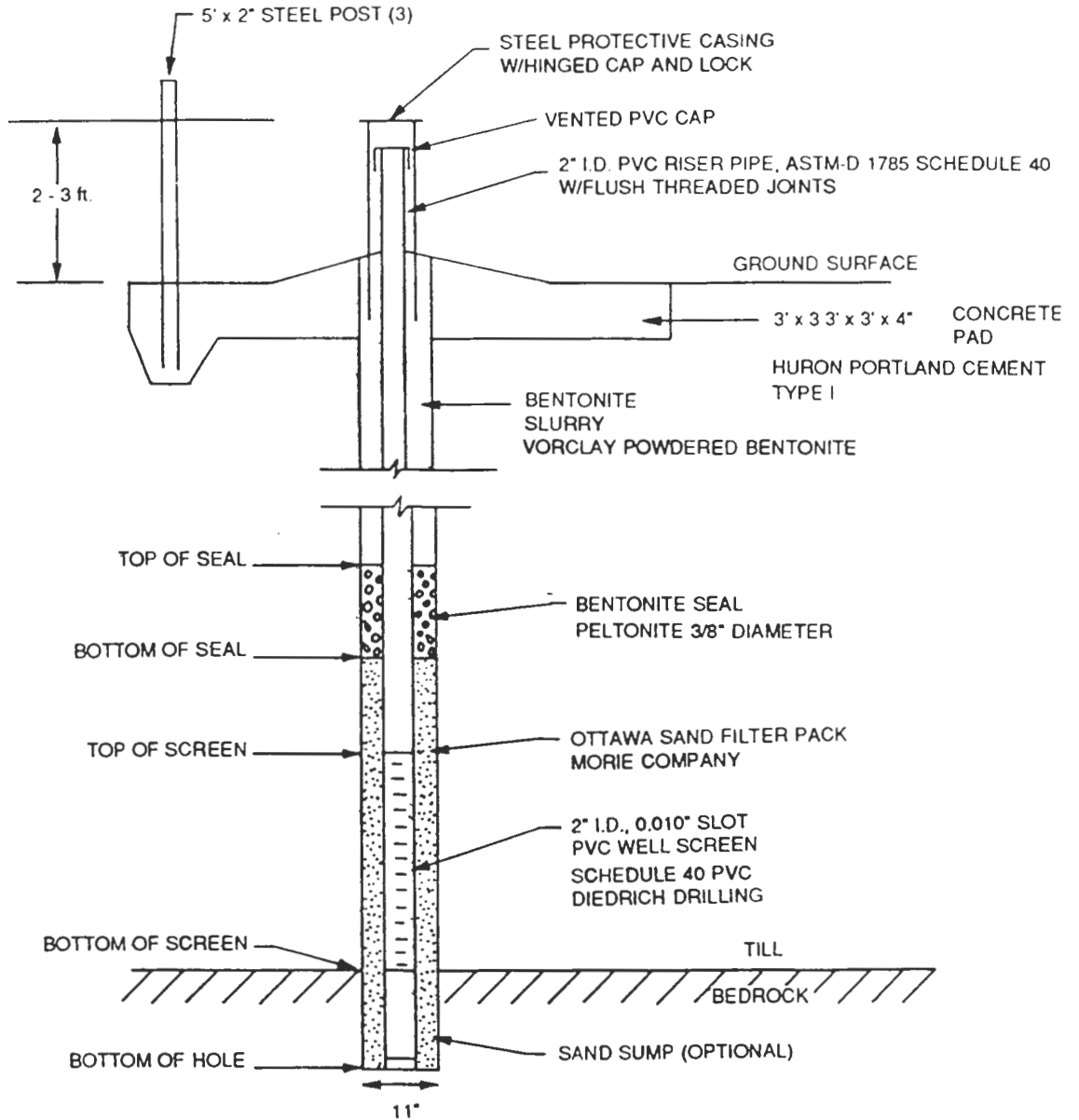


TIME DEVELOPED: 4 hours

GALLONS EXTRACTED: 52 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW12
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4910 E 9322		
BEGUN: 10-11-88	SUPERVISOR: S. Giesler	WELL SITE: NE of pad E		WATER LEVEL DEPTH ELEV.
FINISHED: 10-12-88	DRILLER: G. Lansing			4.5 ft 103.24

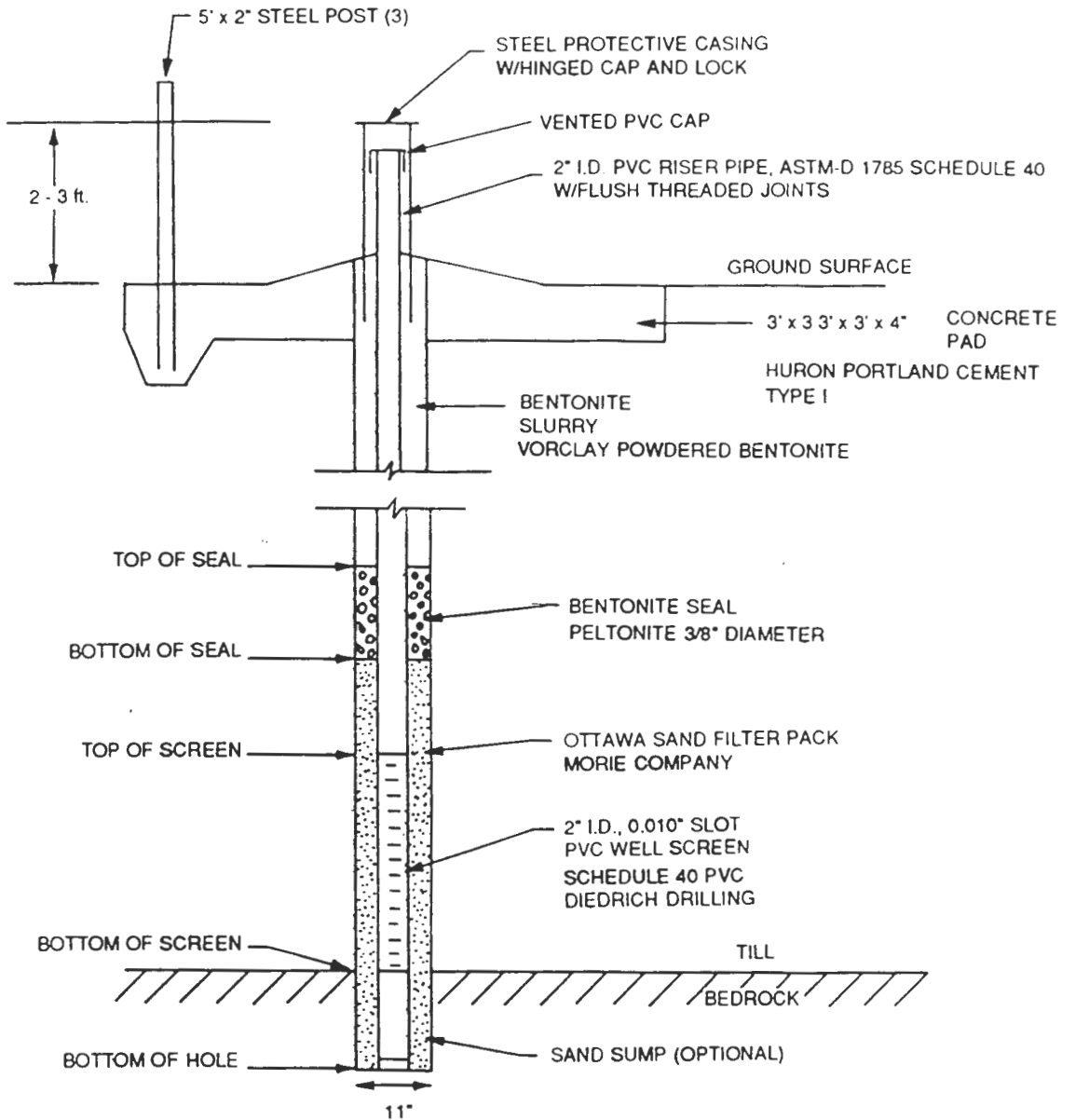
DEPTH IN.	ELEV. IN.
	107.74
0 ft	105.57
1.0 ft	104.57
2.0 ft	103.57
3.0 ft	102.57
7.0 ft	98.57
7.5 ft	98.07



TIME DEVELOPED: 4.5 hrs
 GALLONS EXTRACTED: 18 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW13
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 5018 E 8913		
BEGUN: 10-7-88	SUPERVISOR: S. Giesler	WELL SITE: E. of pad F	WATER LEVEL	DEPTH ELEV
FINISHED: 10-7-88	DRILLER: G. Lansing		5.1'	108.9

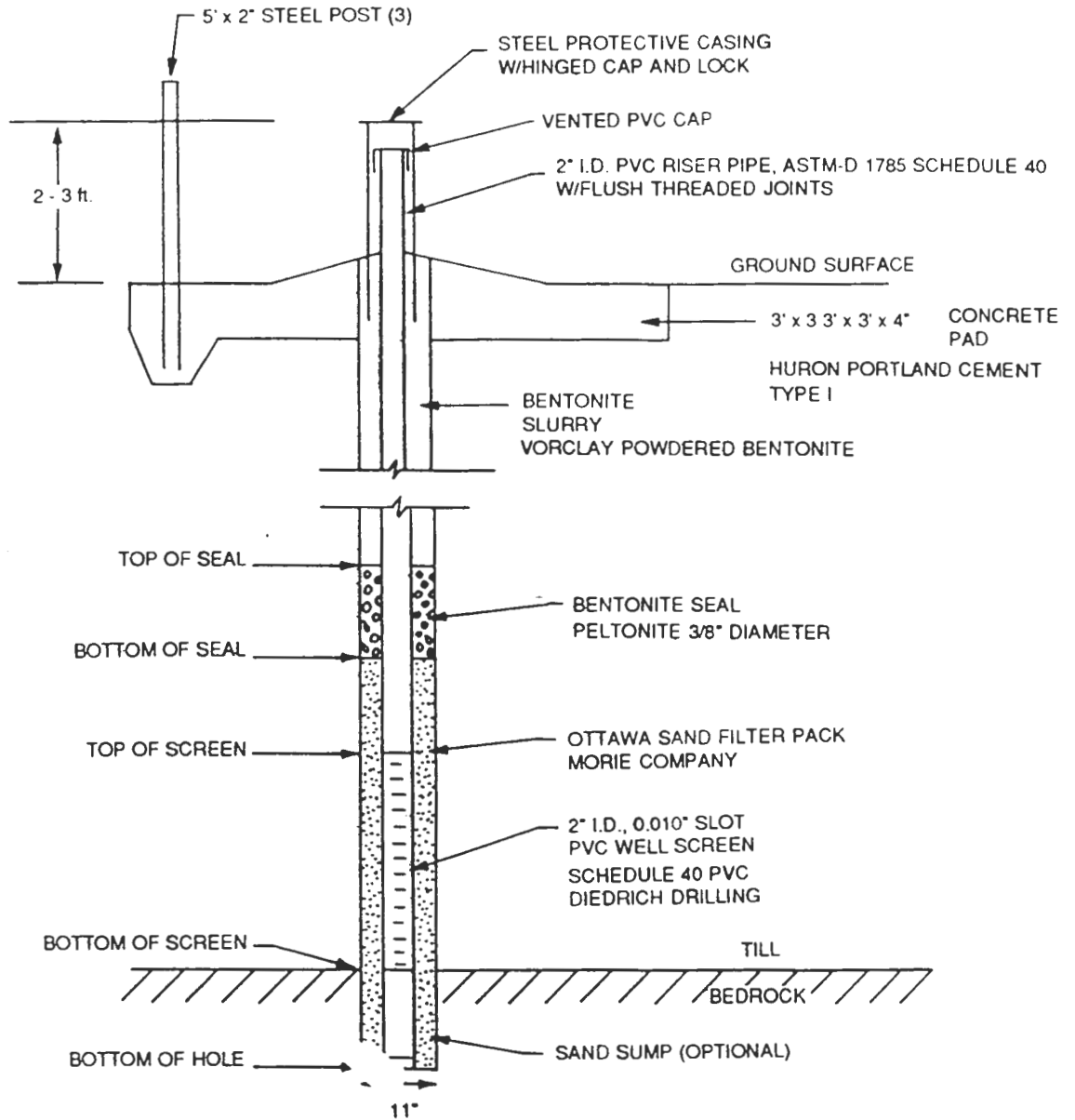
DEPTH IN.	ELEV. IN.
	114.0
0 ft	111.83
1 ft	110.83
2 ft	109.83
3 ft	108.83
8.0 ft	103.83
8.5 ft	103.33



TIME DEVELOPED: 4 hours
 GALLONS EXTRACTED: 20 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW14
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 5076 E 9212		
BEGUN: 10-13-88	SUPERVISOR: S. Giesler	WELL SITE: NE of pad D		WATER LEVEL DEPTH ELEV. 5.5 ft 101.93
FINISHED: 10-13-88	DRILLER: G. Lansing			

DEPTH IN.	ELEV. IN.
	107.43
0 ft	105.47
	105.47
1 ft	104.47
2.5 ft	102.97
3.5 ft	101.97
8.5 ft	96.97
9.0 ft	96.47

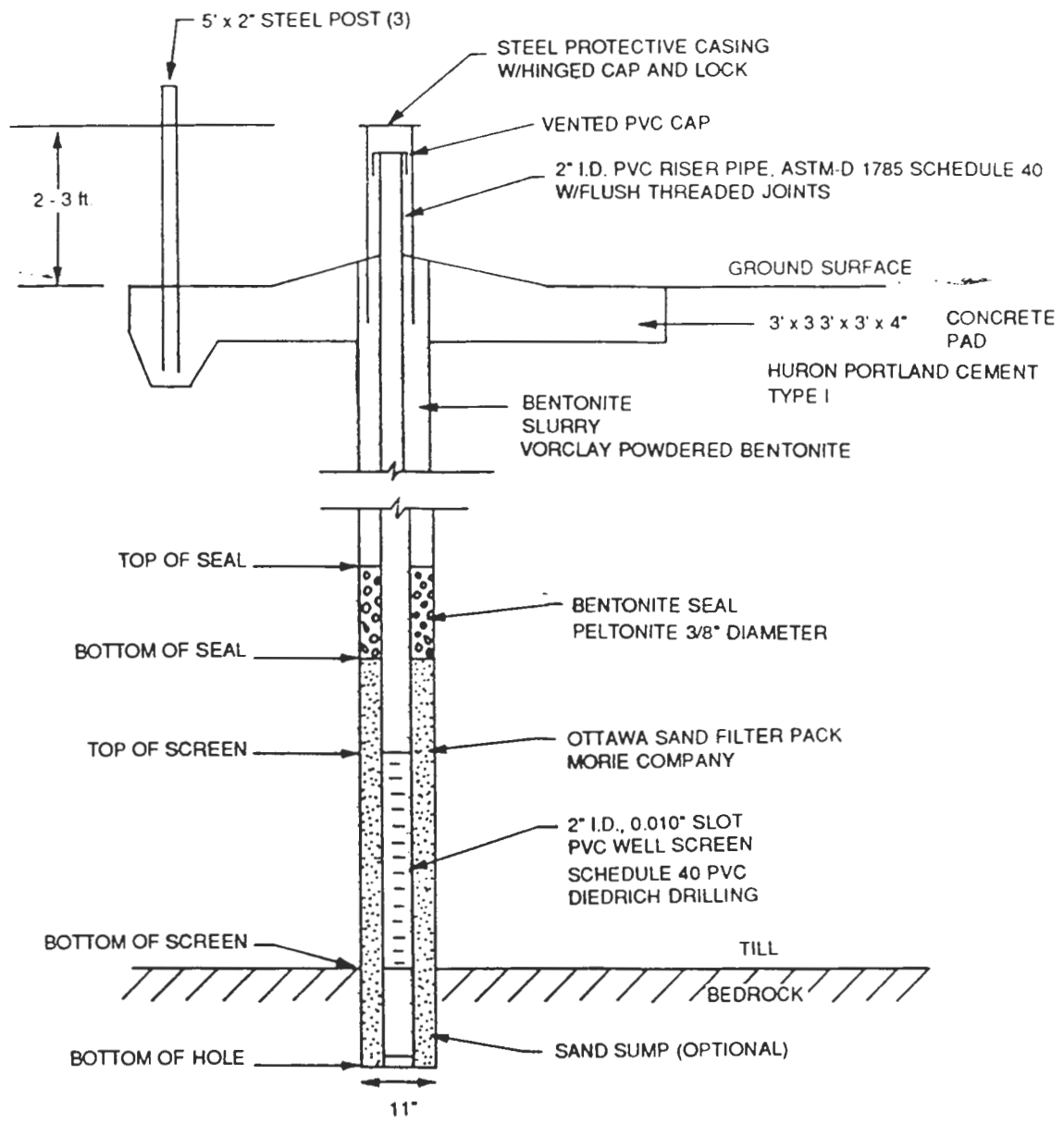


TIME DEVELOPED: 4 hrs

GALLONS EXTRACTED: 14 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW15
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 5073 E 9548		
BEGUN: 10-14-88	SUPERVISOR: S. Giesler	WELL SITE: NE of pad B	WATER LEVEL	DEPTH ELEV
FINISHED: 10-14-88	DRILLER: G. Lansing		4 ft	101.01

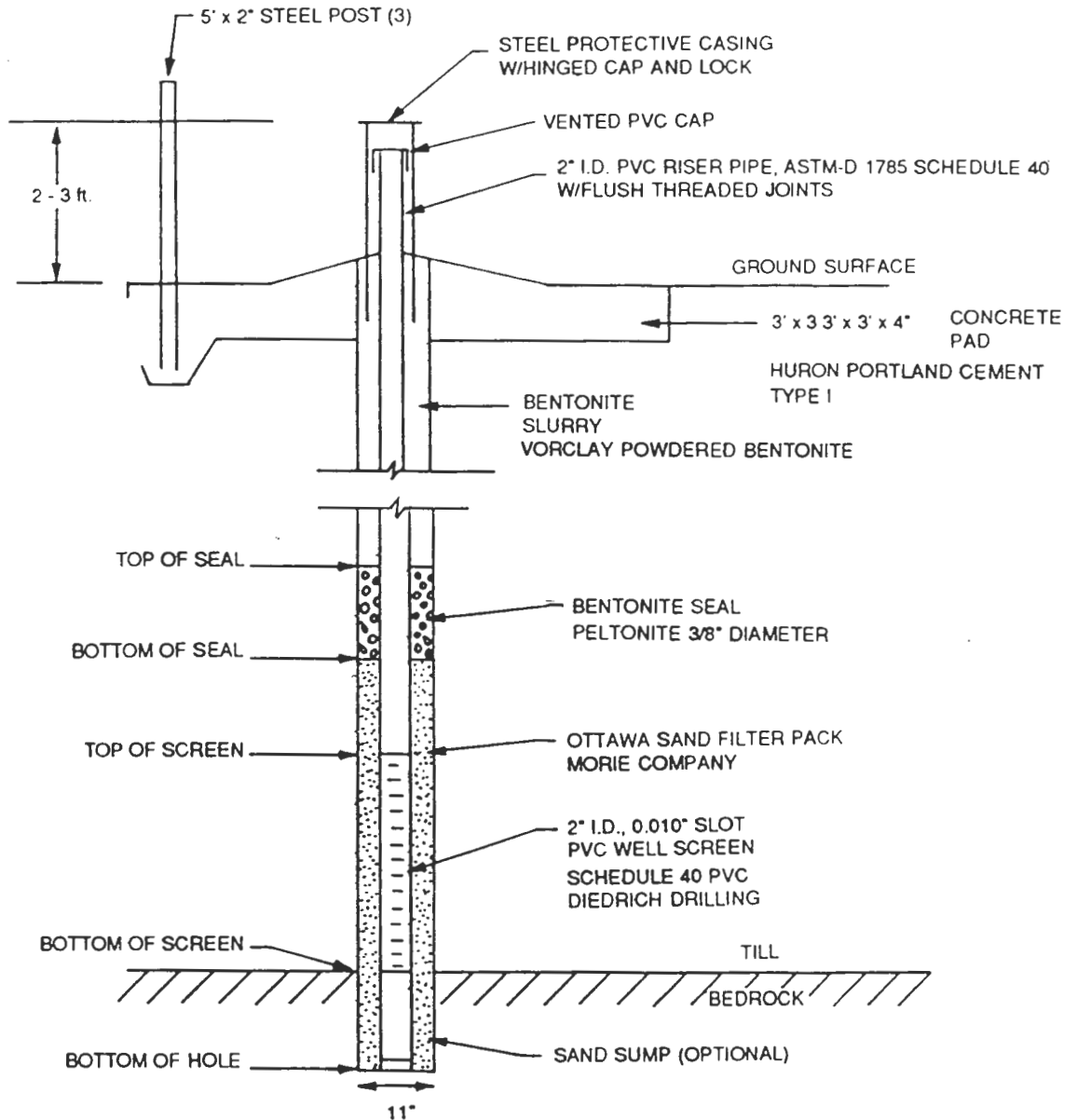
DEPTH IN.	ELEV. IN.
	105.01
0 ft	102.95
1.0 ft	101.95
2.0 ft	100.95
3.0 ft	99.95
6.5 ft	96.45
7.0 ft	95.95



TIME DEVELOPED: 6.5 hrs
 GALLONS EXTRACTED: 9.6 gals

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW16
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 5036 E 9847		
BEGUN: 10-15-88	SUPERVISOR: S. Giesler	WELL SITE: NE. of pad A		WATER LEVEL DEPTH ELEV.
FINISHED: 10-15-88	DRILLER: G. Lansing			6.4 ft 99.33

DEPTH IN.	ELEV. IN.
	105.73
0 ft	103.7
1.0 ft	102.7
2.0 ft	101.7
3.0 ft	100.7
6.5 ft	97.3
7.0 ft	96.8

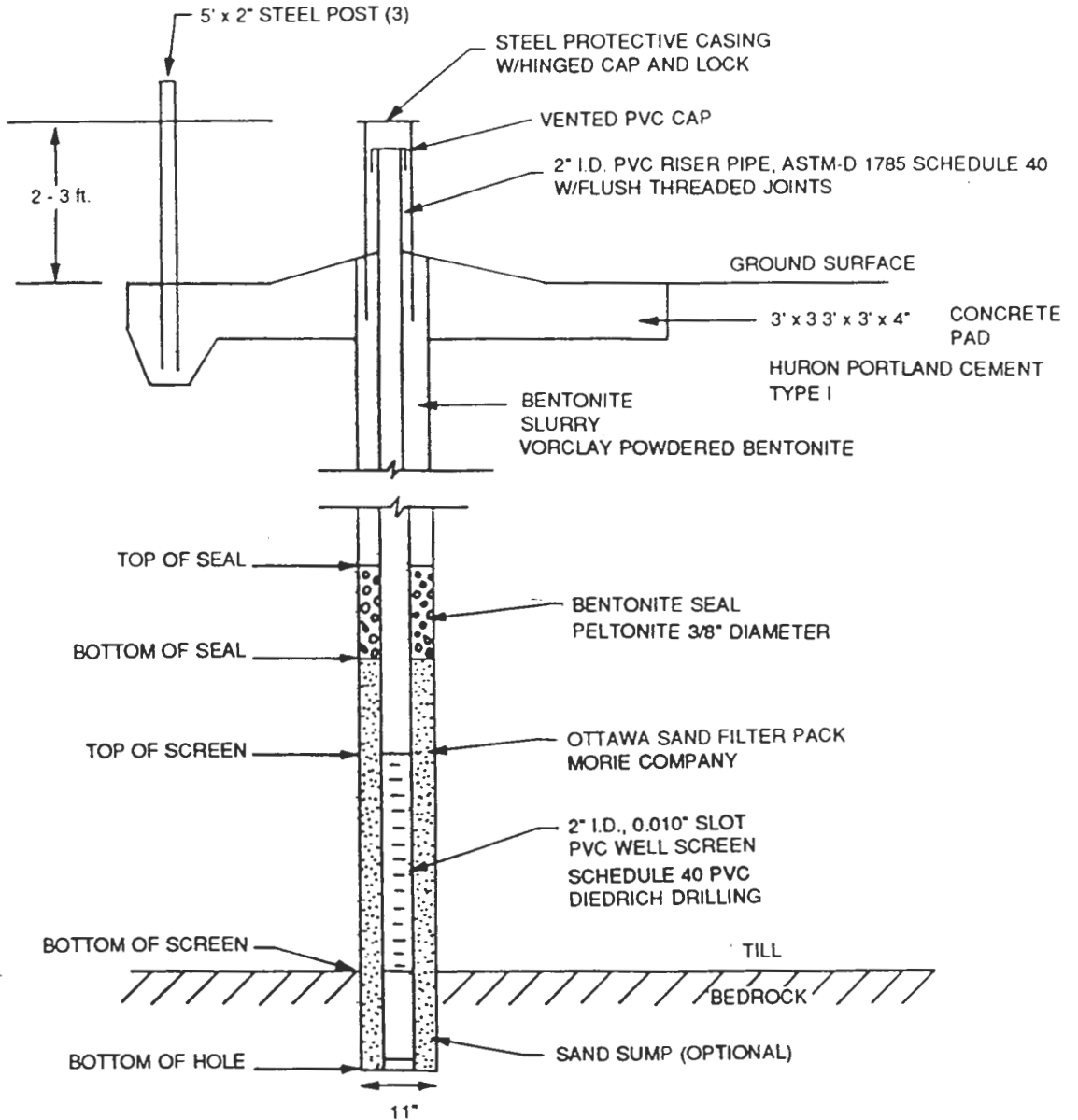


TIME DEVELOPED: 4.5 hrs

GALLONS EXTRACTED: 0.1 gal

GROUNDWATER INSTALLATION		PROJECT: Seneca Army Depot	JOB NO. 0032883161	WELL NO. MW17
DRILLING CONTRACTOR: Parratt-Wolff		COORDINATES: N 4707 E 9472		
BEGUN: 10-12-88	SUPERVISOR: S. Giesler	WELL SITE: SE of pad C		WATER LEVEL DEPTH ELEV.
FINISHED: 10-12-88	DRILLER: G. Lansing			4.55 ft 103.34

DEPTH IN.	ELEV. IN.
	107.89
0 ft	105.81
1.5 ft	104.31
3.0 ft	102.81
4.5 ft	101.31
9.5 ft	96.31
10.0 ft	95.81

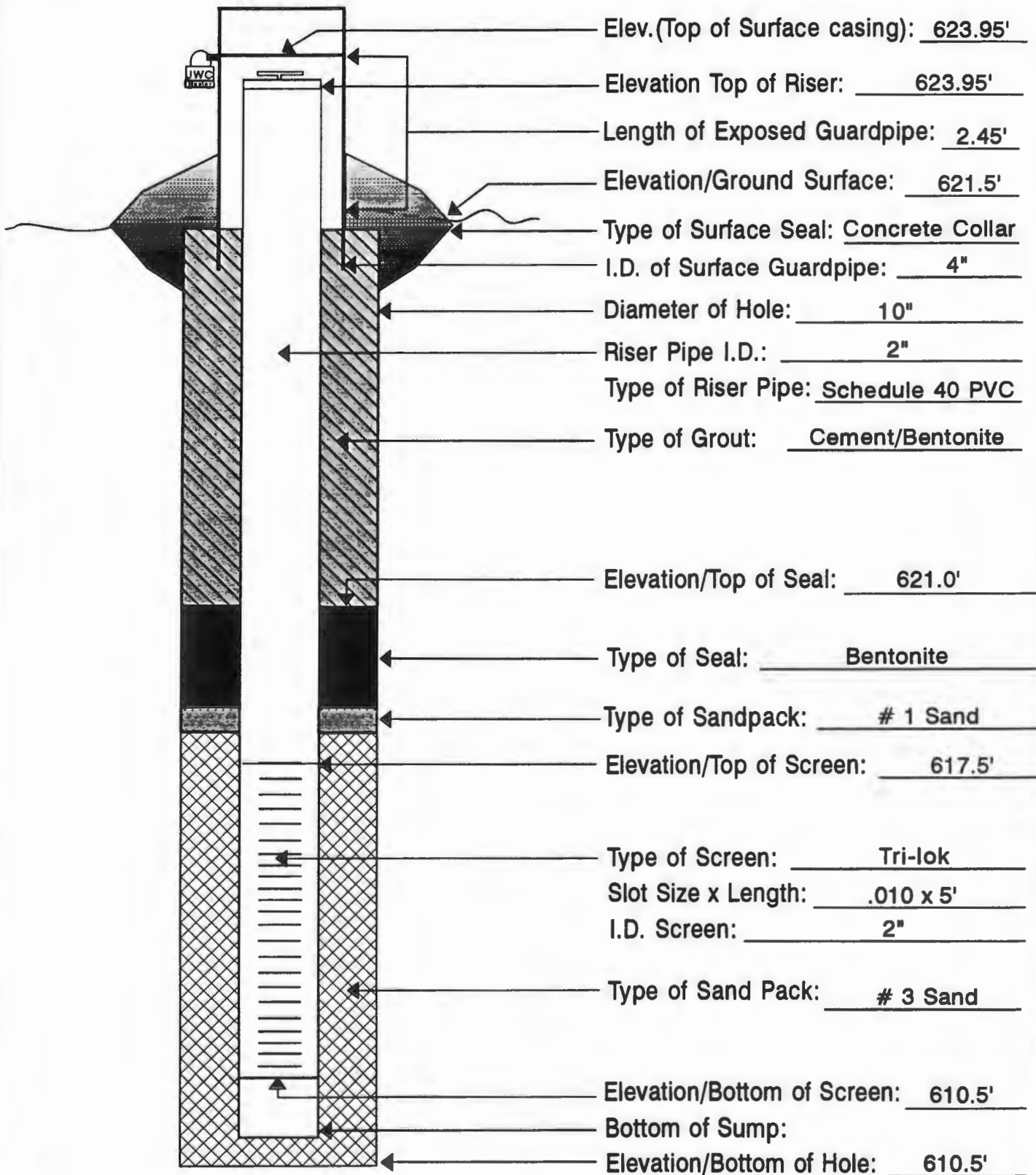


TIME DEVELOPED: 2 hrs

GALLONS EXTRACTED: 35 gals

WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-18)	Drilling Method	Hollow Stem Auger
Date	October 30, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 623.95'

Elevation Top of Riser: 623.95'

Length of Exposed Guardpipe: 2.45'

Elevation/Ground Surface: 621.5'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 621.0'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 617.5'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 5'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

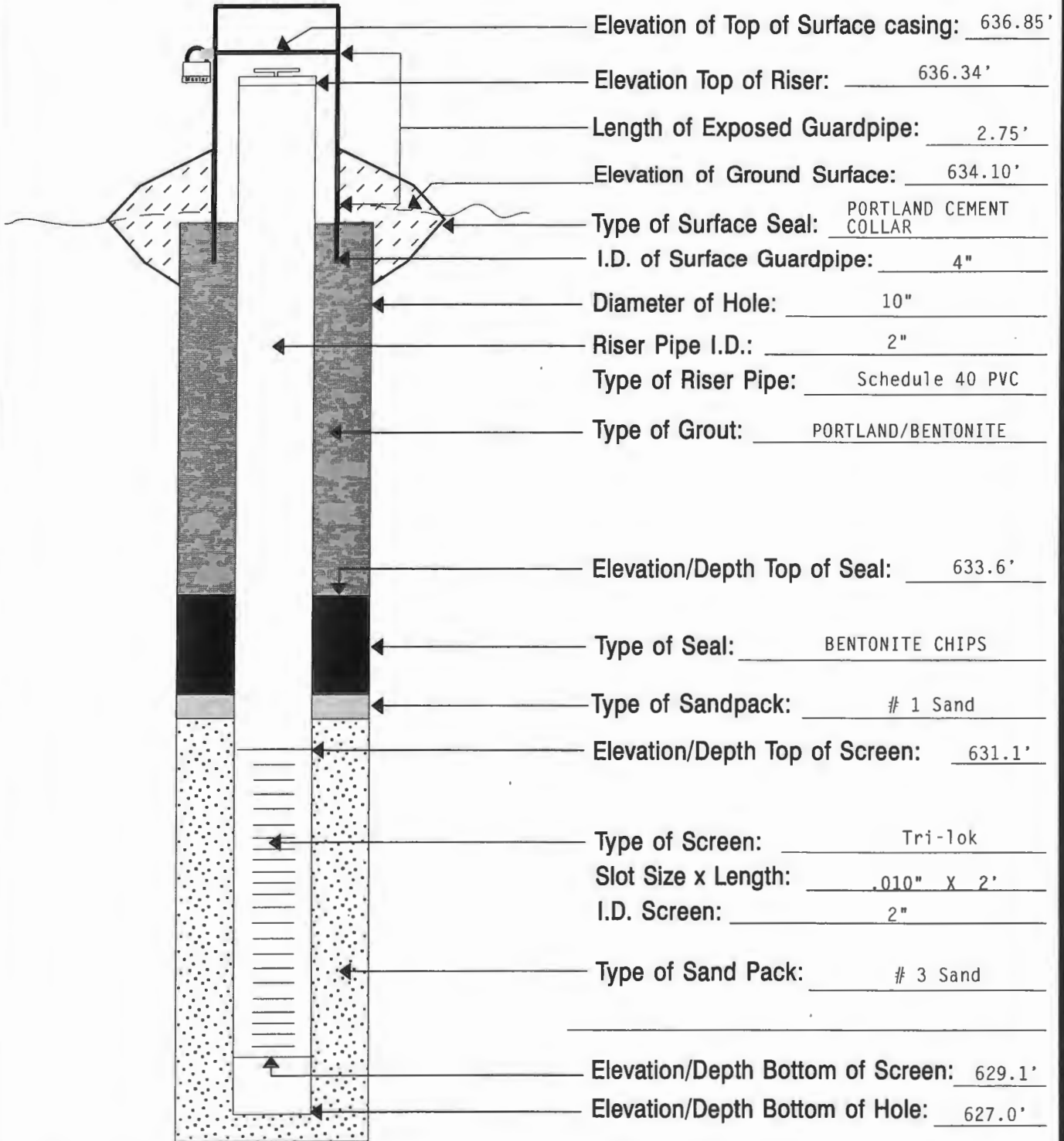
Elevation/Bottom of Screen: 610.5'

Bottom of Sump:

Elevation/Bottom of Hole: 610.5'

OVERBURDEN MONITORING WELL

PROJECT	SENECA ARMY DEPOT	DRILLER	Empire Soils, Inc.
LOCATION	OB/OD Grounds (MW-19)	DRILLING METHOD	HSA
DATE	October 31, 1991	DEVELOPMENT METHOD	Teflon Bailer



Elevation of Top of Surface casing: 636.85'

Elevation Top of Riser: 636.34'

Length of Exposed Guardpipe: 2.75'

Elevation of Ground Surface: 634.10'

Type of Surface Seal: PORTLAND CEMENT COLLAR

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: PORTLAND/BENTONITE

Elevation/Depth Top of Seal: 633.6'

Type of Seal: BENTONITE CHIPS

Type of Sandpack: # 1 Sand

Elevation/Depth Top of Screen: 631.1'

Type of Screen: Tri-lok

Slot Size x Length: .010" X 2'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

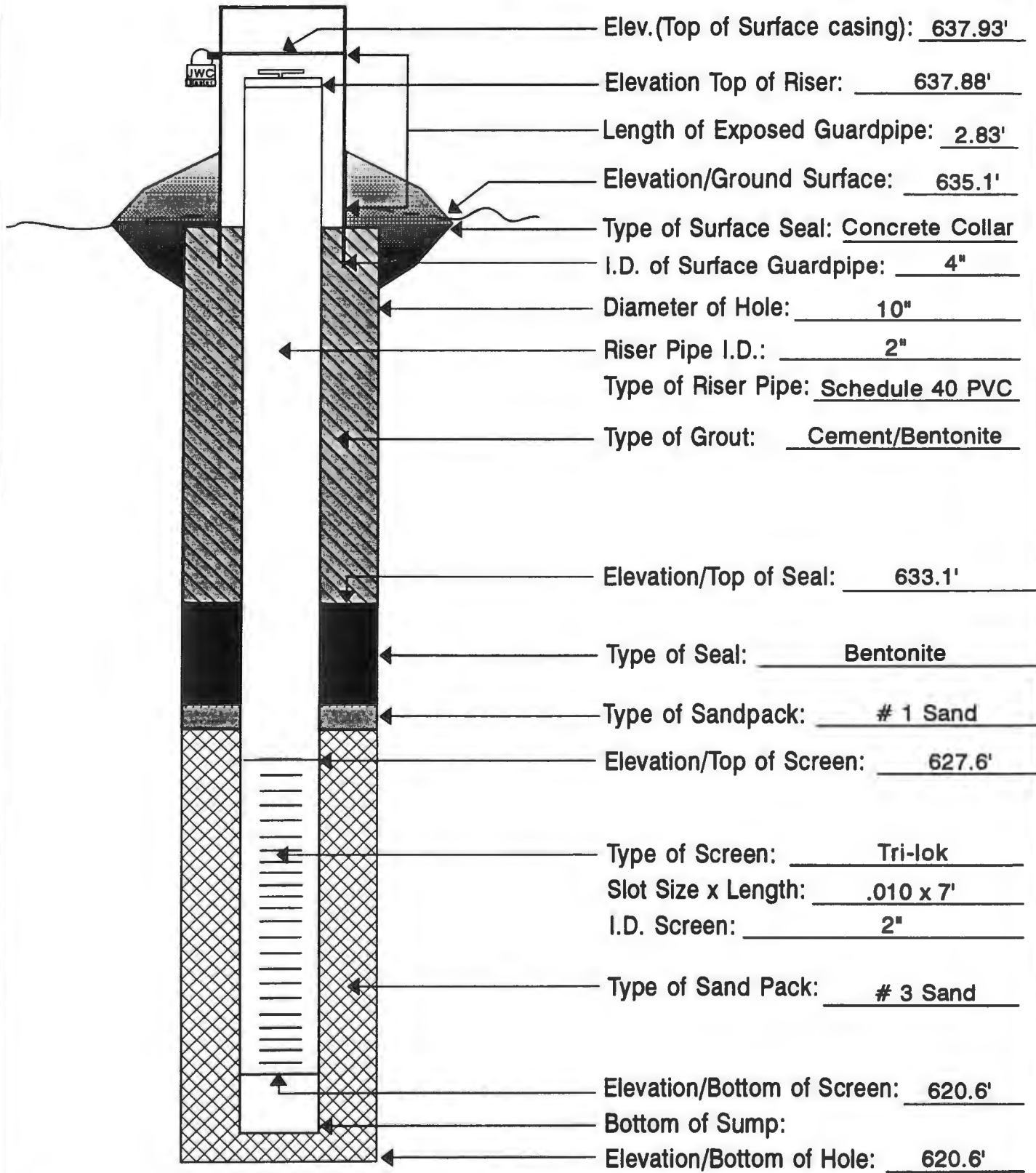
Elevation/Depth Bottom of Screen: 629.1'

Elevation/Depth Bottom of Hole: 627.0'

ALL ELEVATIONS RELATIVE TO MSL

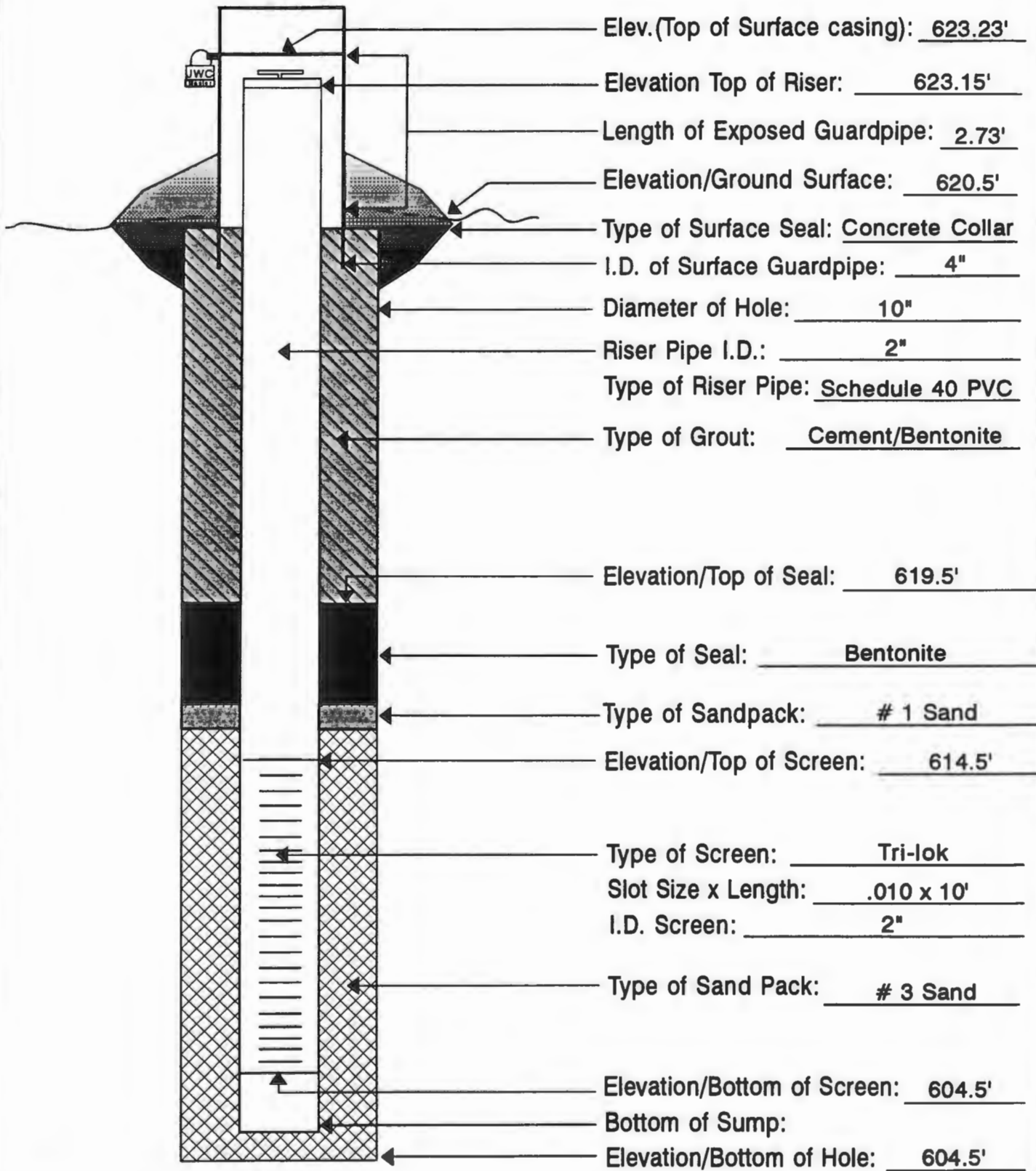
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-21)	Drilling Method	Hollow Stem Auger
Date	December 14, 1991	Development Method	Teflon Bailer



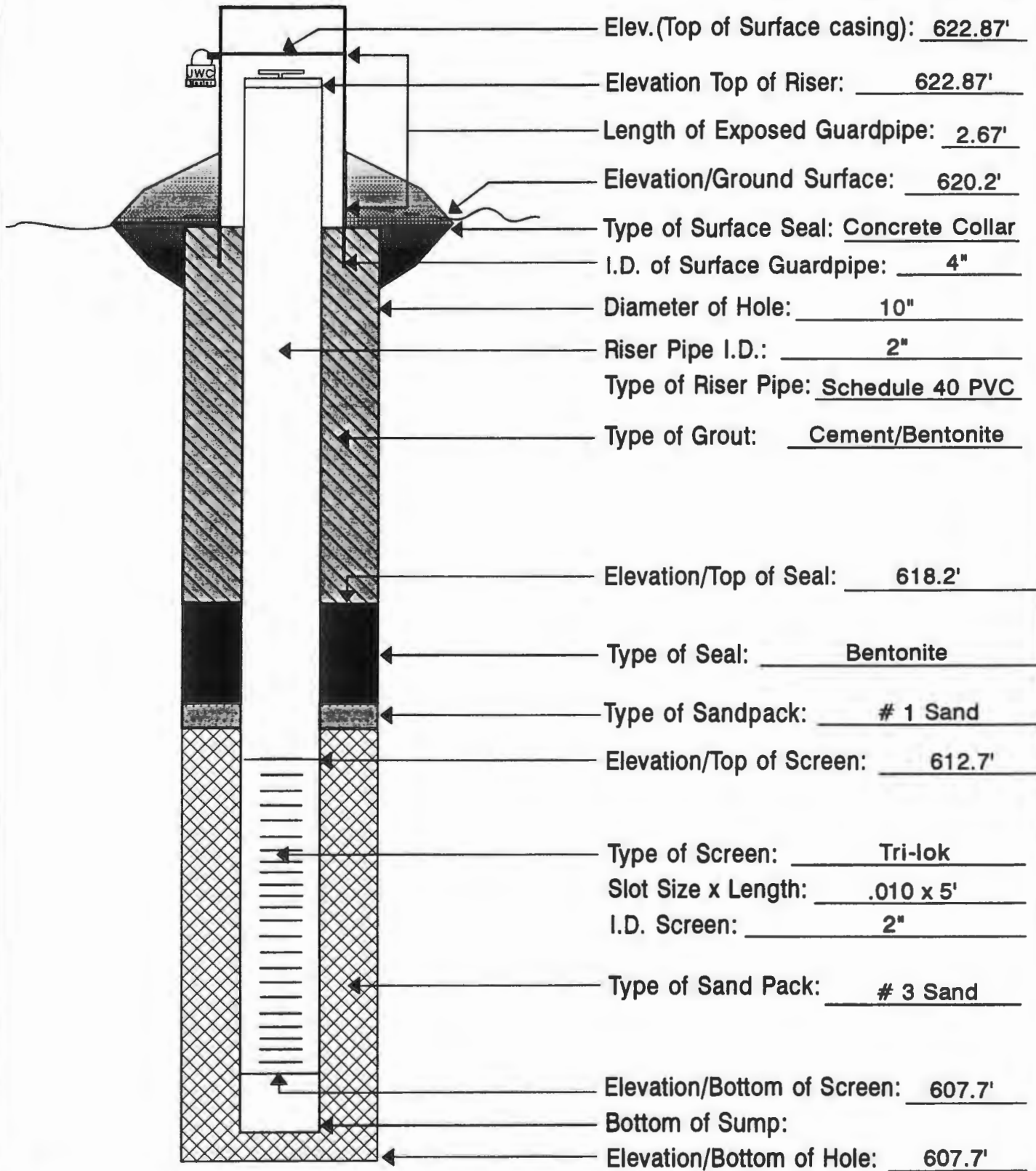
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-22)	Drilling Method	Hollow Stem Auger
Date	November 4, 1991	Development Method	Teflon Bailer



WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-23)	Drilling Method	Hollow Stem Auger
Date	November 5, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 622.87'

Elevation Top of Riser: 622.87'

Length of Exposed Guardpipe: 2.67'

Elevation/Ground Surface: 620.2'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 618.2'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 612.7'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 5'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

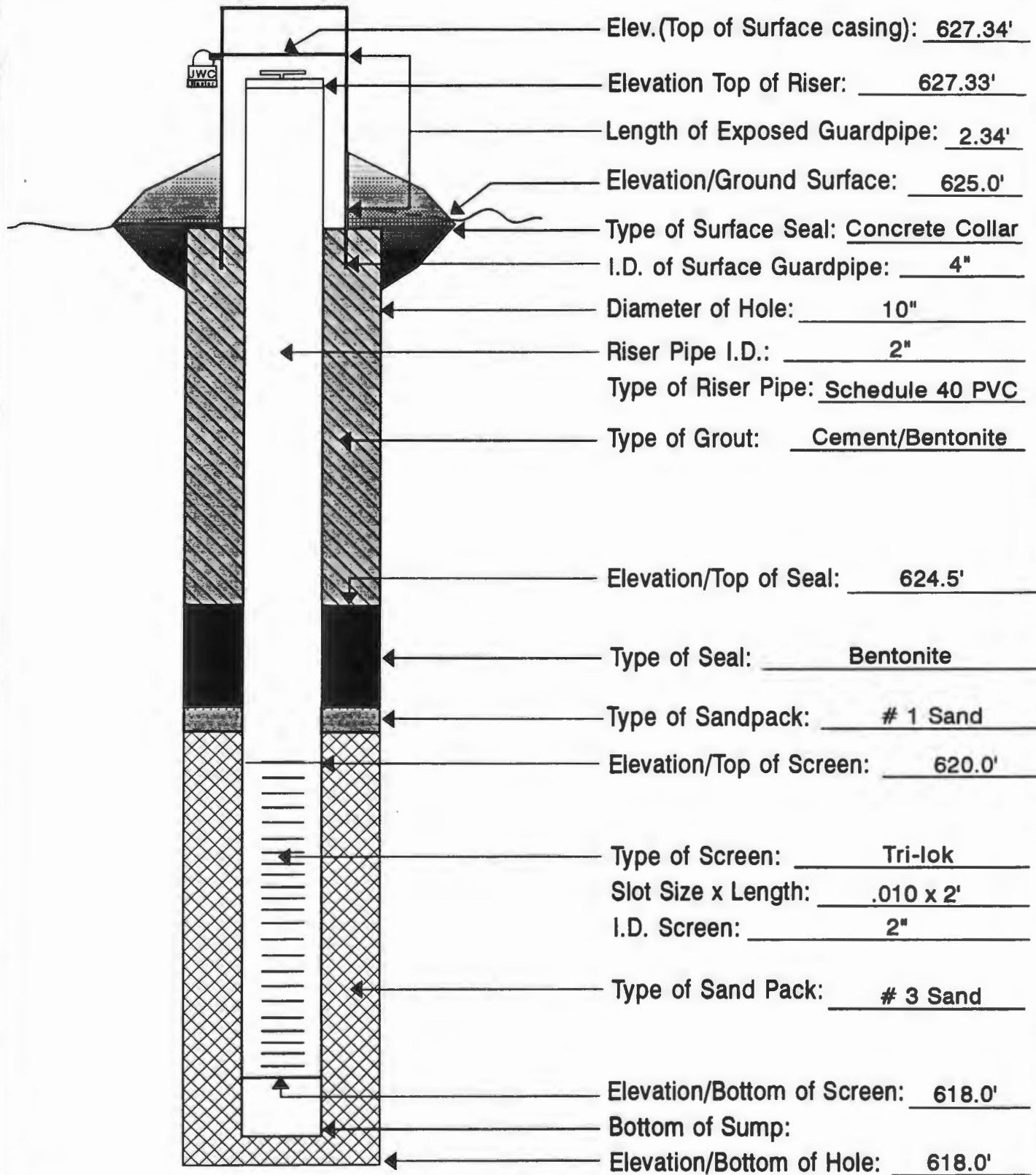
Elevation/Bottom of Screen: 607.7'

Bottom of Sump:

Elevation/Bottom of Hole: 607.7'

OVERBURDEN MONITORING WELL

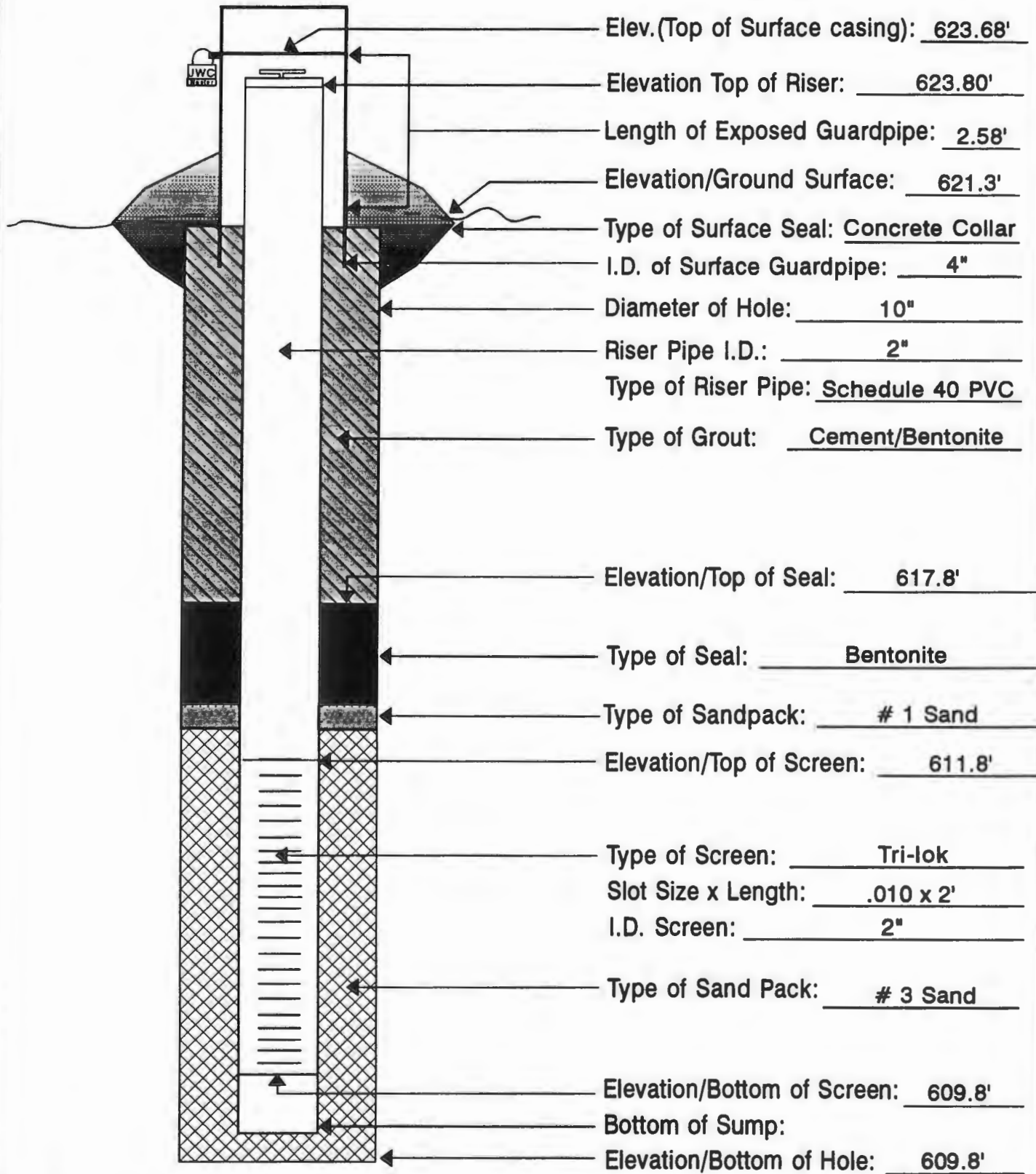
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-24)	Drilling Method	Hollow Stem Auger
Date	November 6, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 627.34'
- Elevation Top of Riser: 627.33'
- Length of Exposed Guardpipe: 2.34'
- Elevation/Ground Surface: 625.0'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- Elevation/Top of Seal: 624.5'
- Type of Seal: Bentonite
- Type of Sandpack: # 1 Sand
- Elevation/Top of Screen: 620.0'
- Type of Screen: Tri-lok
- Slot Size x Length: .010 x 2'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 618.0'
- Bottom of Sump:
- Elevation/Bottom of Hole: 618.0'

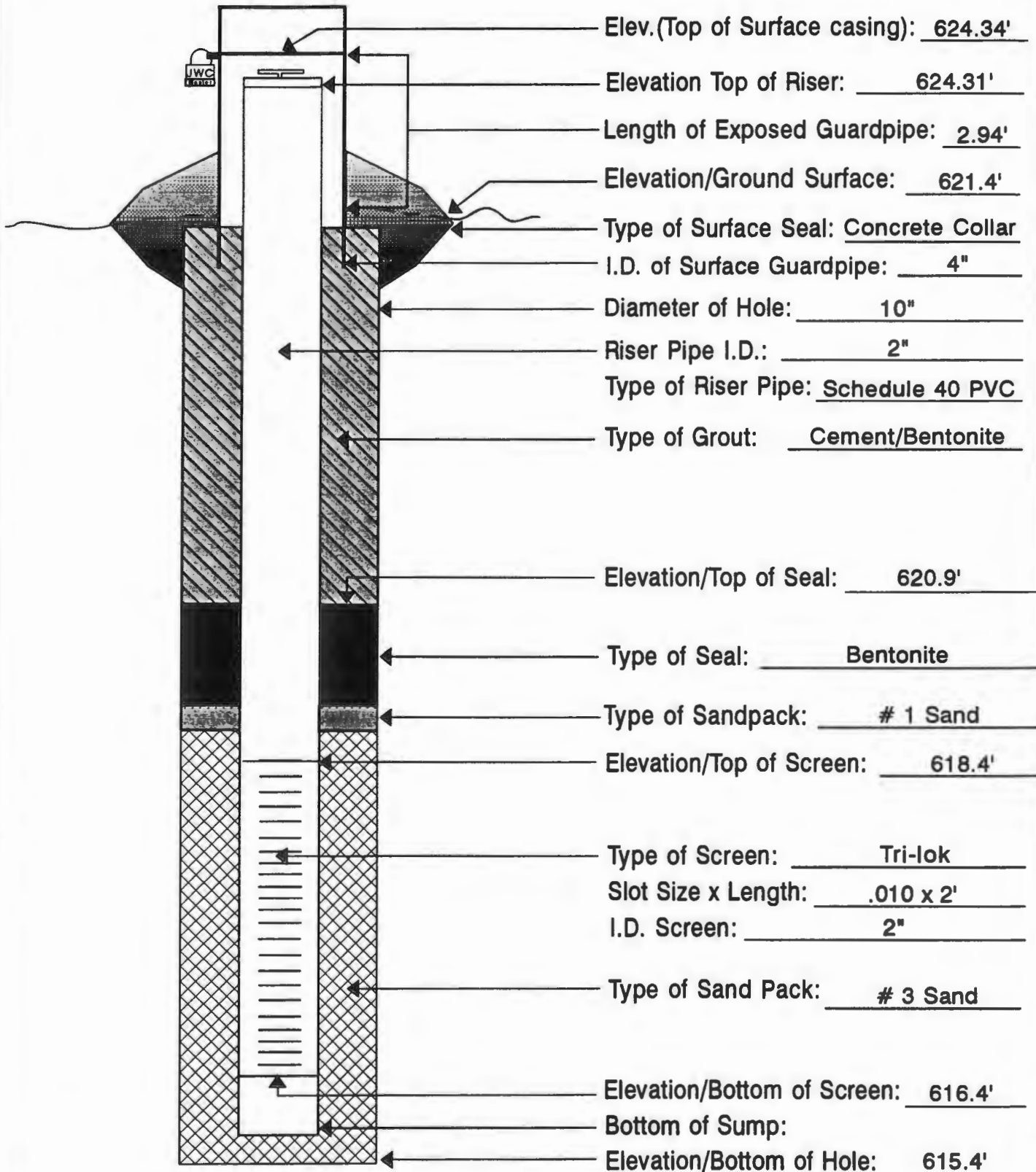
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-25)	Drilling Method	Hollow Stem Auger
Date	November 6, 1991	Development Method	Teflon Bailer



OVERBURDEN MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-26)	Drilling Method	Hollow Stem Auger
Date	November 6, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 624.34'

Elevation Top of Riser: 624.31'

Length of Exposed Guardpipe: 2.94'

Elevation/Ground Surface: 621.4'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 620.9'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 618.4'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 2'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

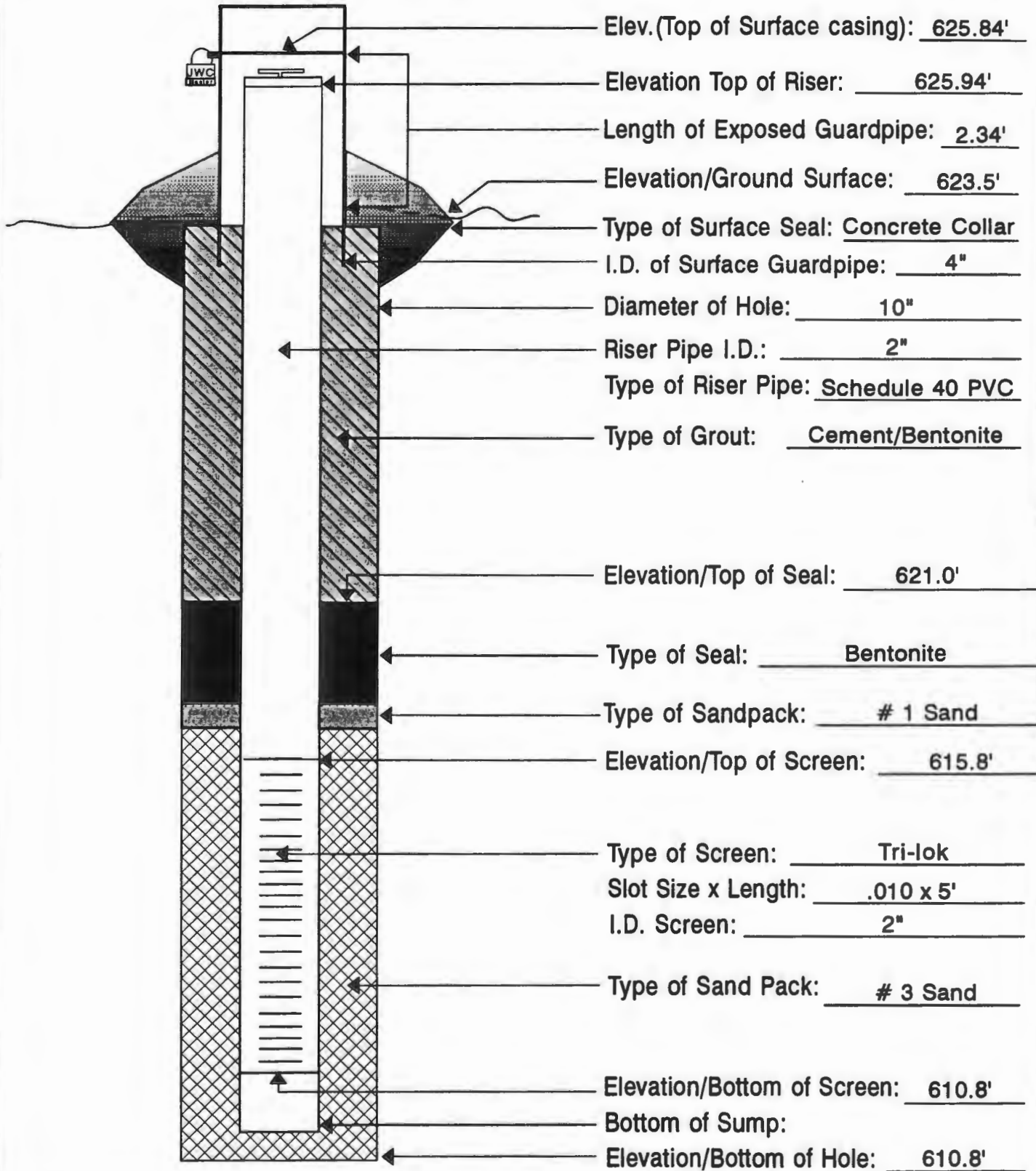
Elevation/Bottom of Screen: 616.4'

Bottom of Sump:

Elevation/Bottom of Hole: 615.4'

WEATHERED BEDROCK MONITORING WELL

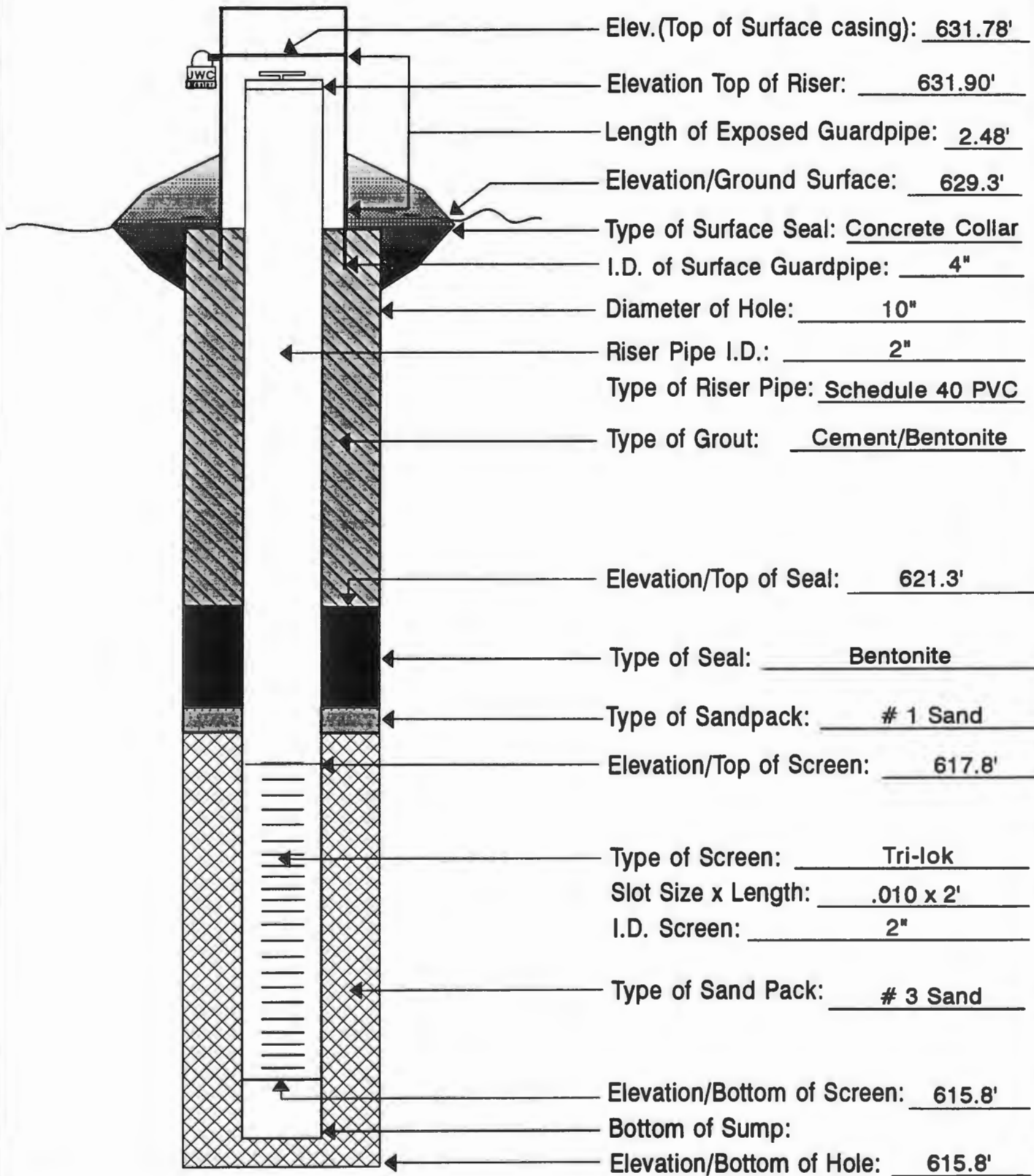
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-27)	Drilling Method	Hollow Stem Auger
Date	November 8, 1991	Development Method	Teflon Bailer



- Elev. (Top of Surface casing): 625.84'
- Elevation Top of Riser: 625.94'
- Length of Exposed Guardpipe: 2.34'
- Elevation/Ground Surface: 623.5'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- Elevation/Top of Seal: 621.0'
- Type of Seal: Bentonite
- Type of Sandpack: # 1 Sand
- Elevation/Top of Screen: 615.8'
- Type of Screen: Tri-lok
- Slot Size x Length: .010 x 5'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 610.8'
- Bottom of Sump:
- Elevation/Bottom of Hole: 610.8'

WEATHERED BEDROCK MONITORING WELL

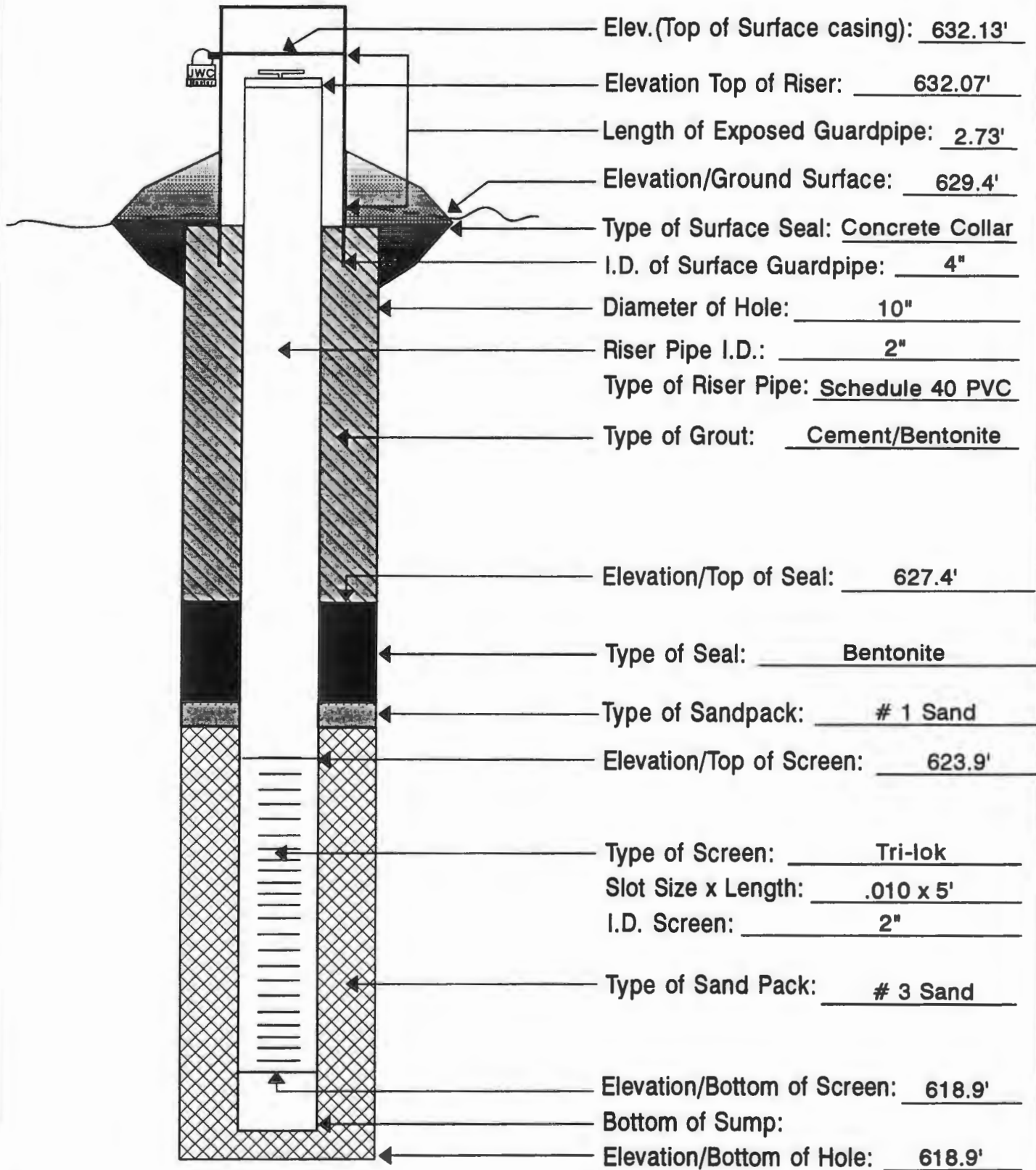
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-28)	Drilling Method	Hollow Stem Auger
Date	November 12, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 631.78'
- Elevation Top of Riser: 631.90'
- Length of Exposed Guardpipe: 2.48'
- Elevation/Ground Surface: 629.3'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- Elevation/Top of Seal: 621.3'
- Type of Seal: Bentonite
- Type of Sandpack: # 1 Sand
- Elevation/Top of Screen: 617.8'
- Type of Screen: Tri-lok
- Slot Size x Length: .010 x 2'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 615.8'
- Bottom of Sump:
- Elevation/Bottom of Hole: 615.8'

OVERBURDEN MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-29)	Drilling Method	Hollow Stem Auger
Date	November 13, 1991	Development Method	Teflon Bailer



Elev. (Top of Surface casing): 632.13'

Elevation Top of Riser: 632.07'

Length of Exposed Guardpipe: 2.73'

Elevation/Ground Surface: 629.4'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 627.4'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 623.9'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 5'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

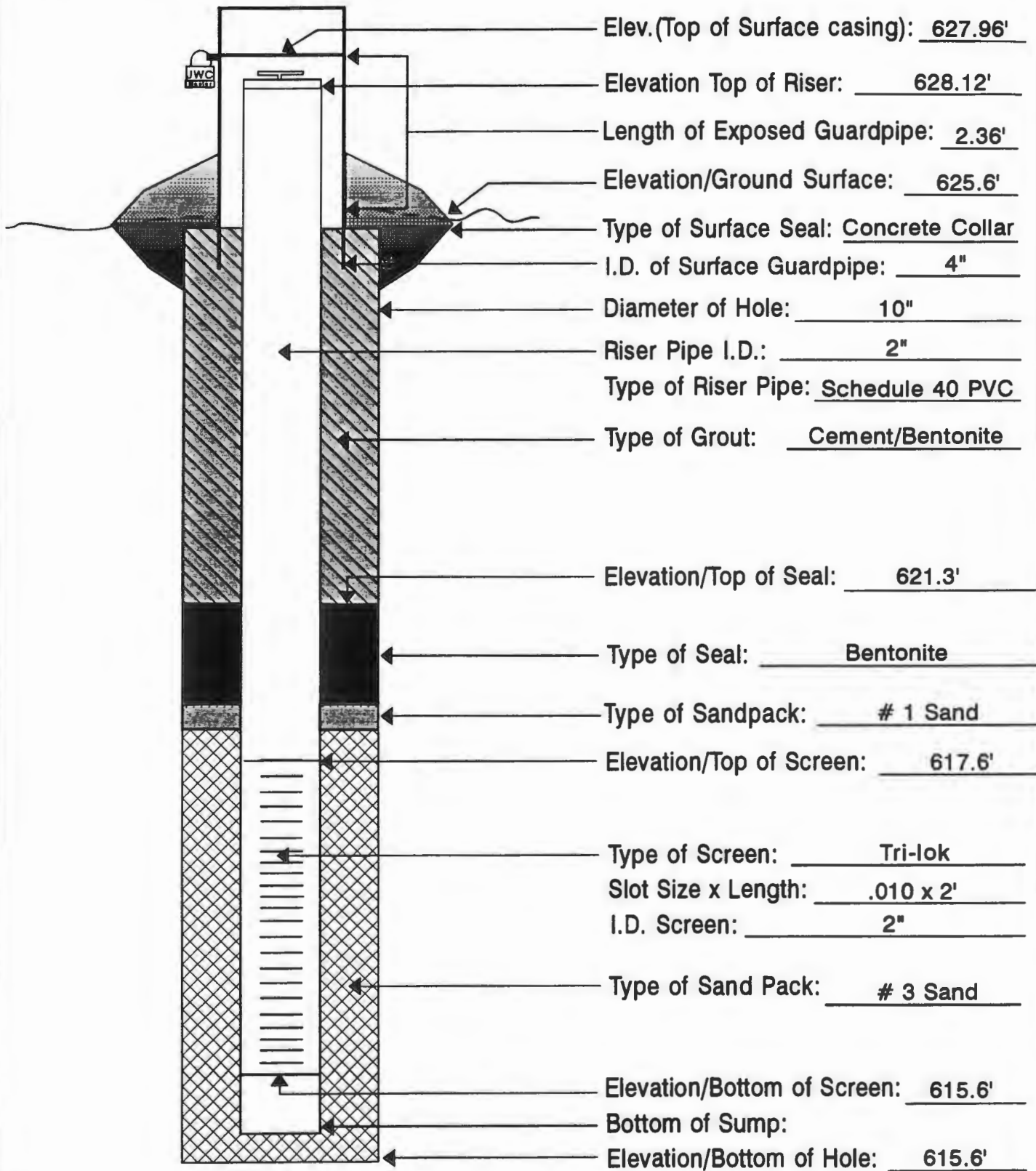
Elevation/Bottom of Screen: 618.9'

Bottom of Sump:

Elevation/Bottom of Hole: 618.9'

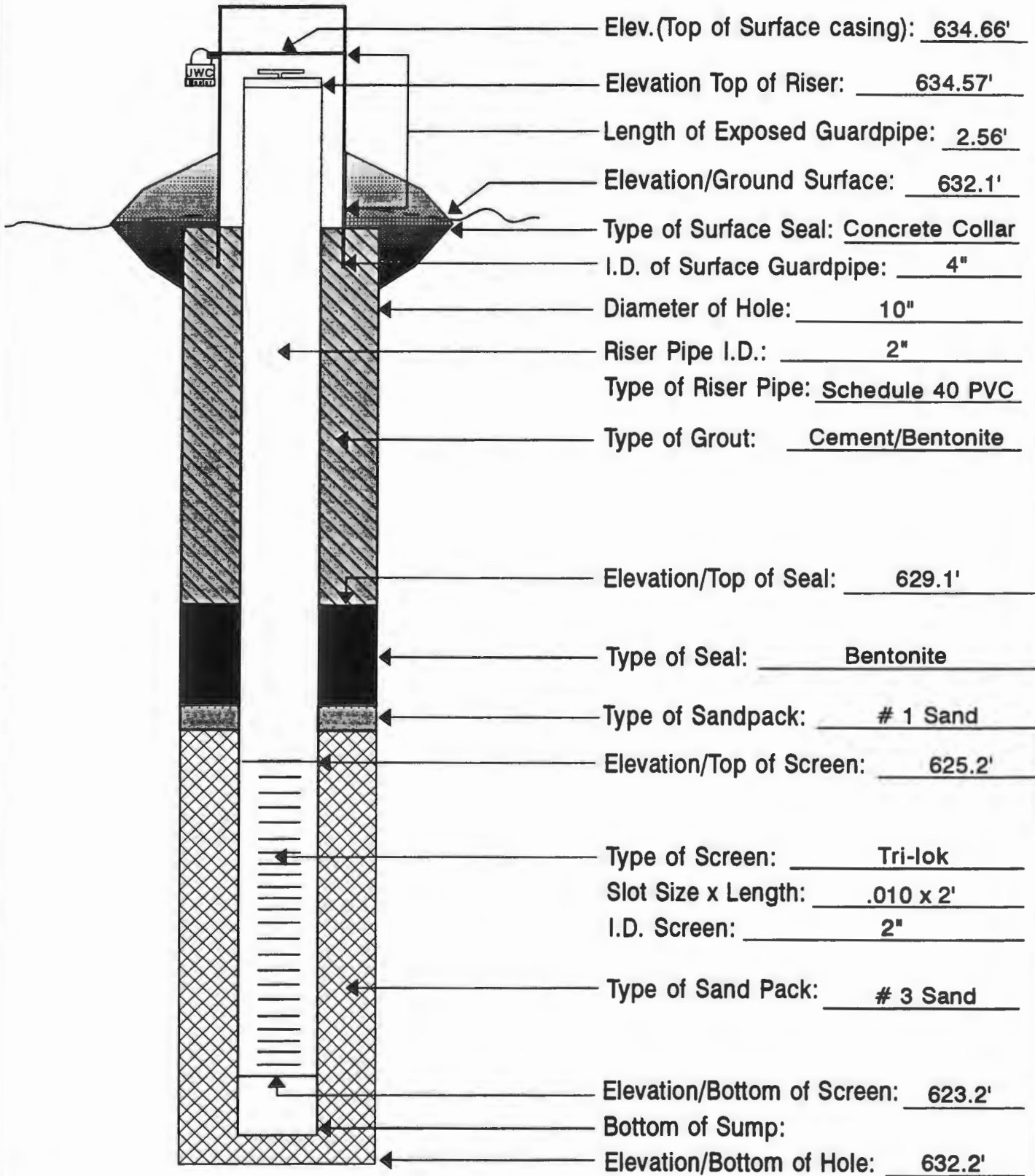
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-30)	Drilling Method	Hollow Stem Auger
Date	November 14, 1991	Development Method	Teflon Bailer



WEATHERED BEDROCK MONITORING WELL

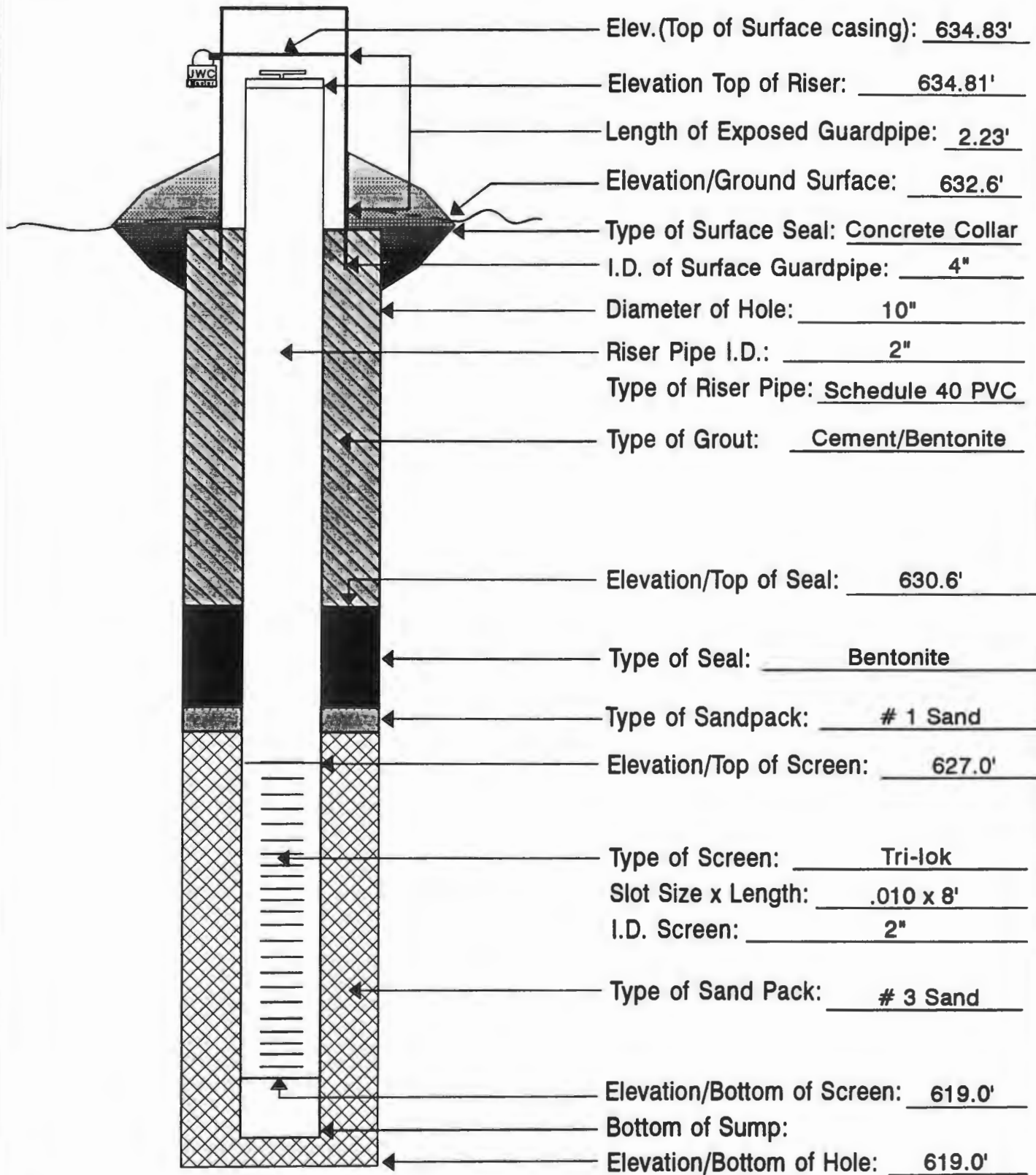
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-31)	Drilling Method	Hollow Stem Auger
Date	November 18, 1991	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 634.66'
- Elevation Top of Riser: 634.57'
- Length of Exposed Guardpipe: 2.56'
- Elevation/Ground Surface: 632.1'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- Elevation/Top of Seal: 629.1'
- Type of Seal: Bentonite
- Type of Sandpack: # 1 Sand
- Elevation/Top of Screen: 625.2'
- Type of Screen: Tri-lok
- Slot Size x Length: .010 x 2'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 623.2'
- Bottom of Sump:
- Elevation/Bottom of Hole: 632.2'

WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-32)	Drilling Method	Hollow Stem Auger
Date	November 19, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 634.83'

Elevation Top of Riser: 634.81'

Length of Exposed Guardpipe: 2.23'

Elevation/Ground Surface: 632.6'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 630.6'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 627.0'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 8'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

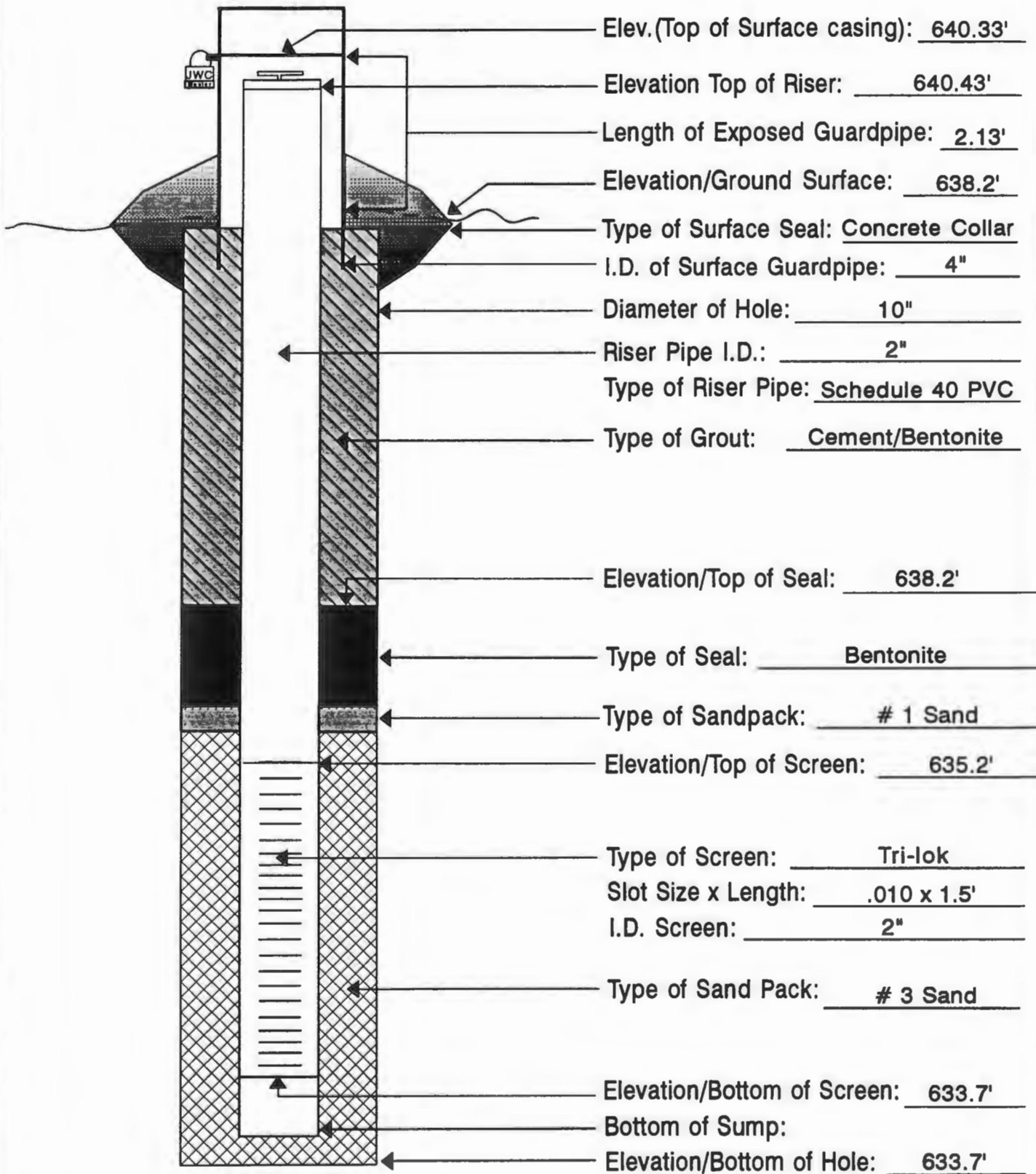
Elevation/Bottom of Screen: 619.0'

Bottom of Sump:

Elevation/Bottom of Hole: 619.0'

OVERBURDEN MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-34)	Drilling Method	Hollow Stem Auger
Date	November 21, 1991	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 640.33'

Elevation Top of Riser: 640.43'

Length of Exposed Guardpipe: 2.13'

Elevation/Ground Surface: 638.2'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 638.2'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 635.2'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 1.5'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

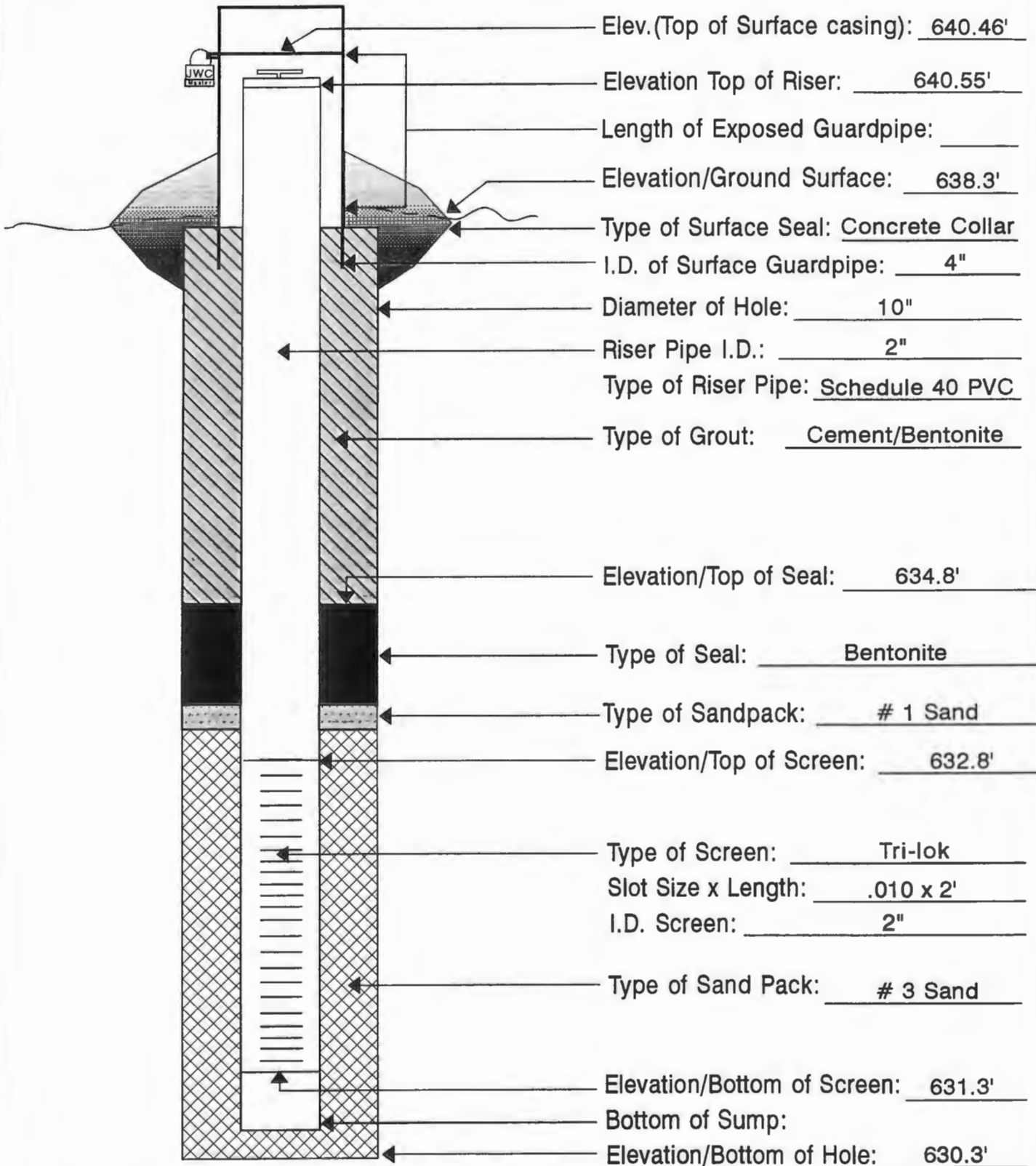
Elevation/Bottom of Screen: 633.7'

Bottom of Sump:

Elevation/Bottom of Hole: 633.7'

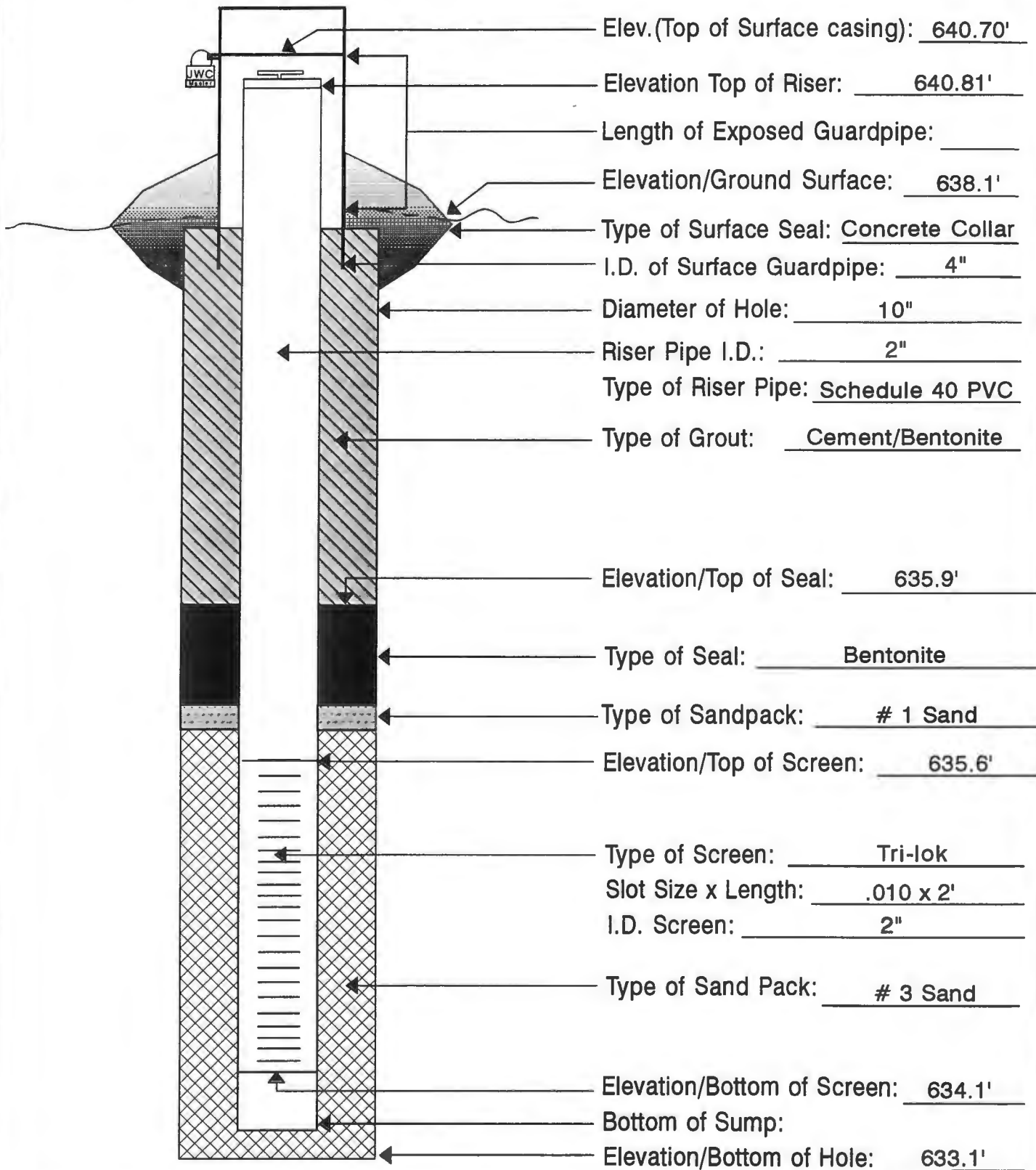
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-36)	Drilling Method	Hollow Stem Auger
Date	February 22, 1993	Development Method	Teflon Bailer



WEATHERED BEDROCK MONITORING WELL

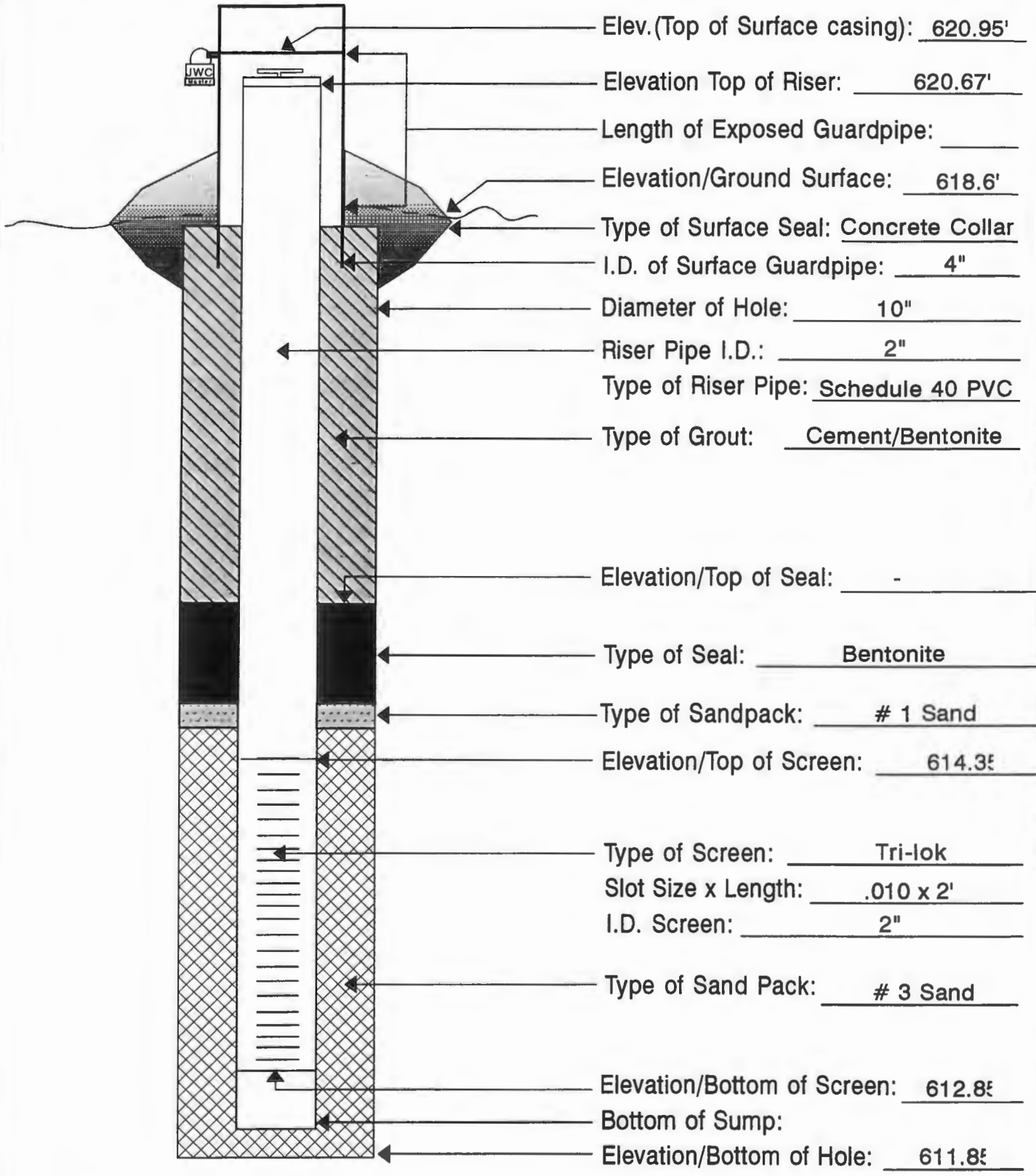
Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-37)	Drilling Method	Hollow Stem Auger
Date	February 22, 1993	Development Method	Teflon Bailer



- Elev.(Top of Surface casing): 640.70'
- Elevation Top of Riser: 640.81'
- Length of Exposed Guardpipe: _____
- Elevation/Ground Surface: 638.1'
- Type of Surface Seal: Concrete Collar
- I.D. of Surface Guardpipe: 4"
- Diameter of Hole: 10"
- Riser Pipe I.D.: 2"
- Type of Riser Pipe: Schedule 40 PVC
- Type of Grout: Cement/Bentonite
- Elevation/Top of Seal: 635.9'
- Type of Seal: Bentonite
- Type of Sandpack: # 1 Sand
- Elevation/Top of Screen: 635.6'
- Type of Screen: Tri-lok
- Slot Size x Length: .010 x 2'
- I.D. Screen: 2"
- Type of Sand Pack: # 3 Sand
- Elevation/Bottom of Screen: 634.1'
- Bottom of Sump: _____
- Elevation/Bottom of Hole: 633.1'

WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-38)	Drilling Method	Hollow Stem Auger
Date	February 22, 1993	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 620.95'

Elevation Top of Riser: 620.67'

Length of Exposed Guardpipe: _____

Elevation/Ground Surface: 618.6'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: -

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 614.35'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 2'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

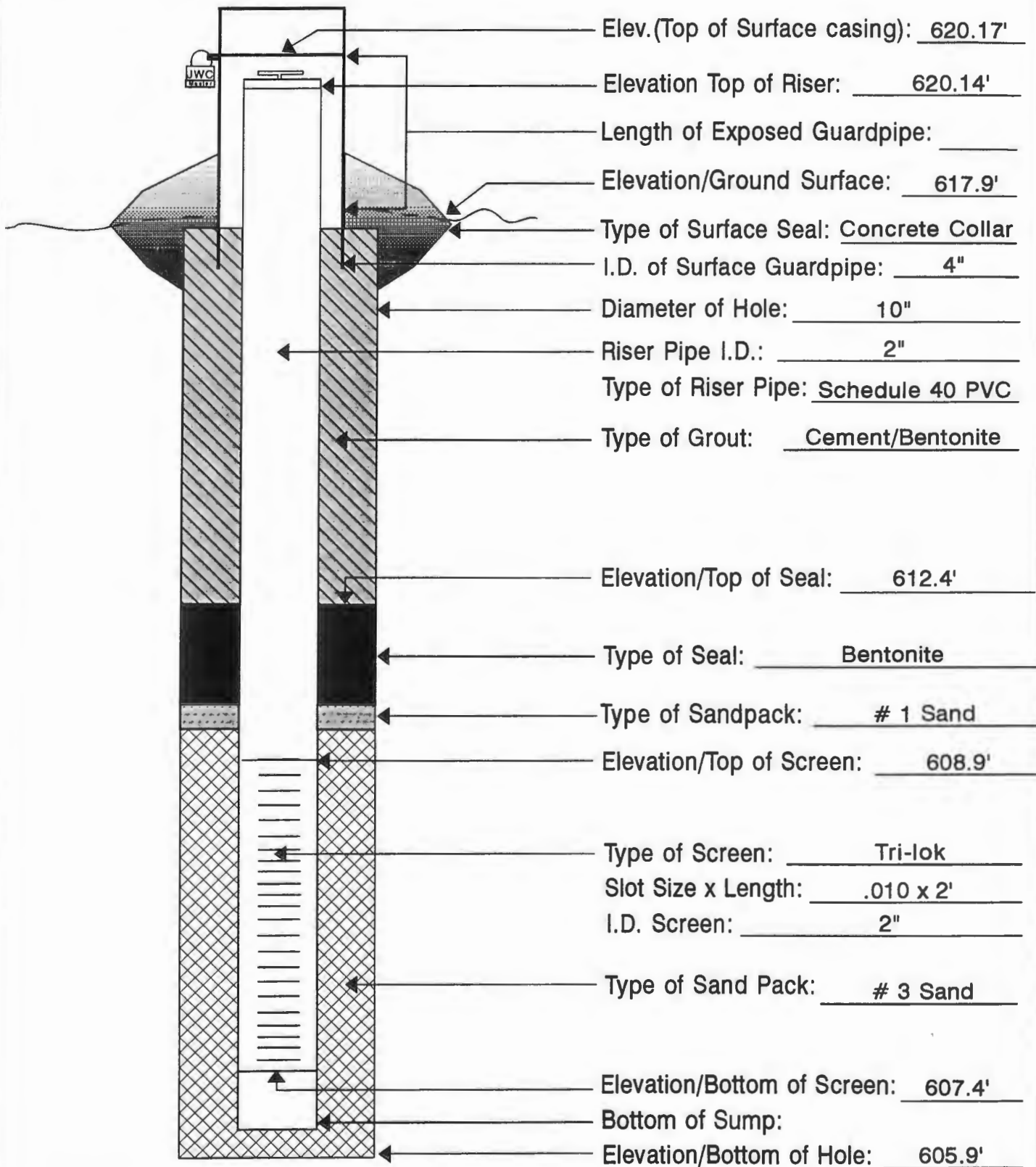
Elevation/Bottom of Screen: 612.85'

Bottom of Sump: _____

Elevation/Bottom of Hole: 611.85'

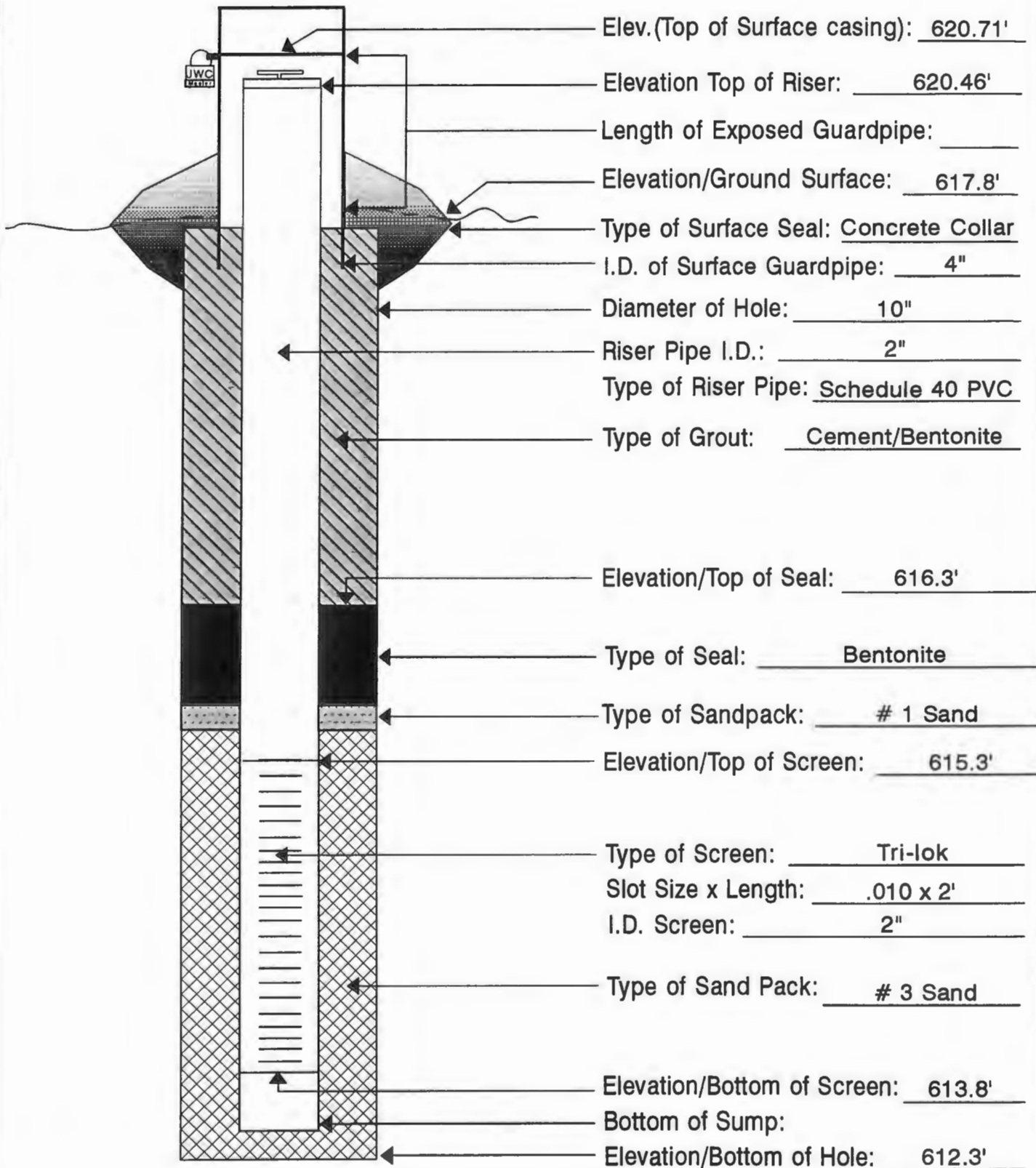
WEATHERED BEDROCK MONITORING WELL

Project	<u>Seneca Army Depot</u>	Driller	<u>Empire Soils, Inc.</u>
Location	<u>OB/OD Grounds (MW-39)</u>	Drilling Method	<u>Hollow Stem Auger</u>
Date	<u>February 22, 1993</u>	Development Method	<u>Teflon Bailer</u>



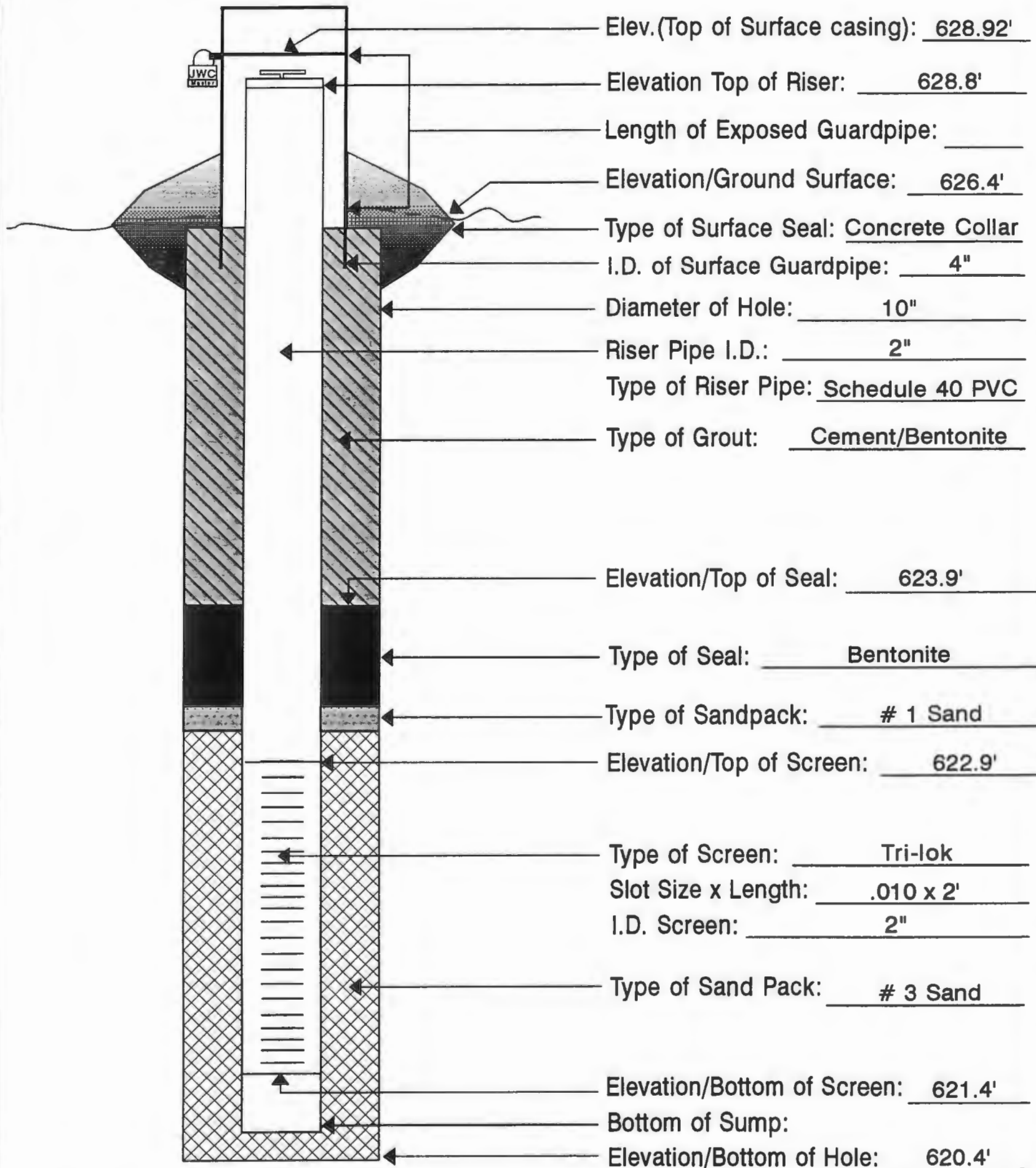
WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-40)	Drilling Method	Hollow Stem Auger
Date	February 22, 1993	Development Method	Teflon Bailer



WEATHERED BEDROCK MONITORING WELL

Project	Seneca Army Depot	Driller	Empire Soils, Inc.
Location	OB/OD Grounds (MW-41)	Drilling Method	Hollow Stem Auger
Date	February 22, 1993	Development Method	Teflon Bailer



Elev.(Top of Surface casing): 628.92'

Elevation Top of Riser: 628.8'

Length of Exposed Guardpipe: _____

Elevation/Ground Surface: 626.4'

Type of Surface Seal: Concrete Collar

I.D. of Surface Guardpipe: 4"

Diameter of Hole: 10"

Riser Pipe I.D.: 2"

Type of Riser Pipe: Schedule 40 PVC

Type of Grout: Cement/Bentonite

Elevation/Top of Seal: 623.9'

Type of Seal: Bentonite

Type of Sandpack: # 1 Sand

Elevation/Top of Screen: 622.9'

Type of Screen: Tri-lok

Slot Size x Length: .010 x 2'

I.D. Screen: 2"

Type of Sand Pack: # 3 Sand

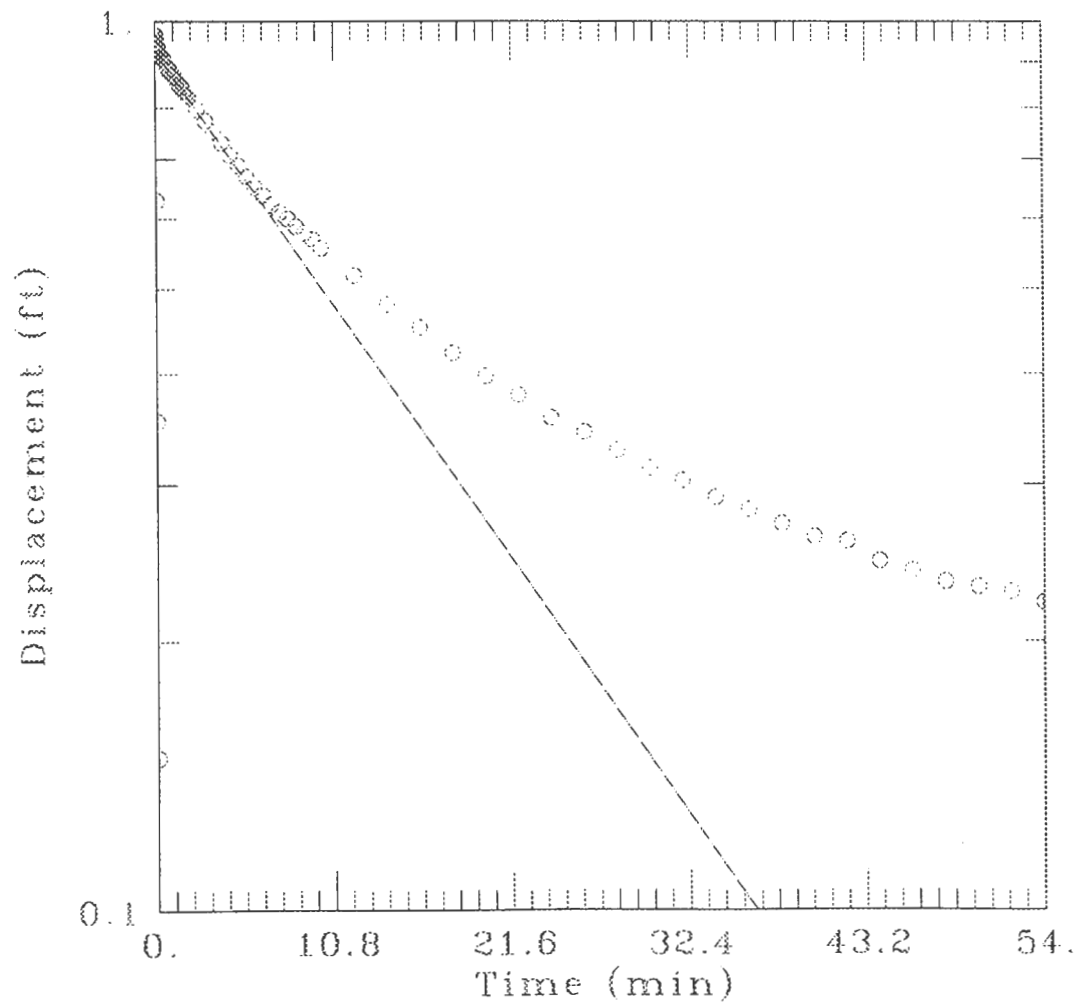
Elevation/Bottom of Screen: 621.4'

Bottom of Sump: _____

Elevation/Bottom of Hole: 620.4'

APPENDIX F
HYDRAULIC CONDUCTIVITY RESULTS

RISING HEAD SLUG TEST – MW-05



DATASET:

0805R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bower-Rice

ESTIMATEDPARAMETERS:

$K=0.0003384\text{ft/min}$

$y_0=0.9263\text{ft}$

TESTDATA:

$H_0=0.964\text{ft}$

$r_c=0.166\text{ft}$

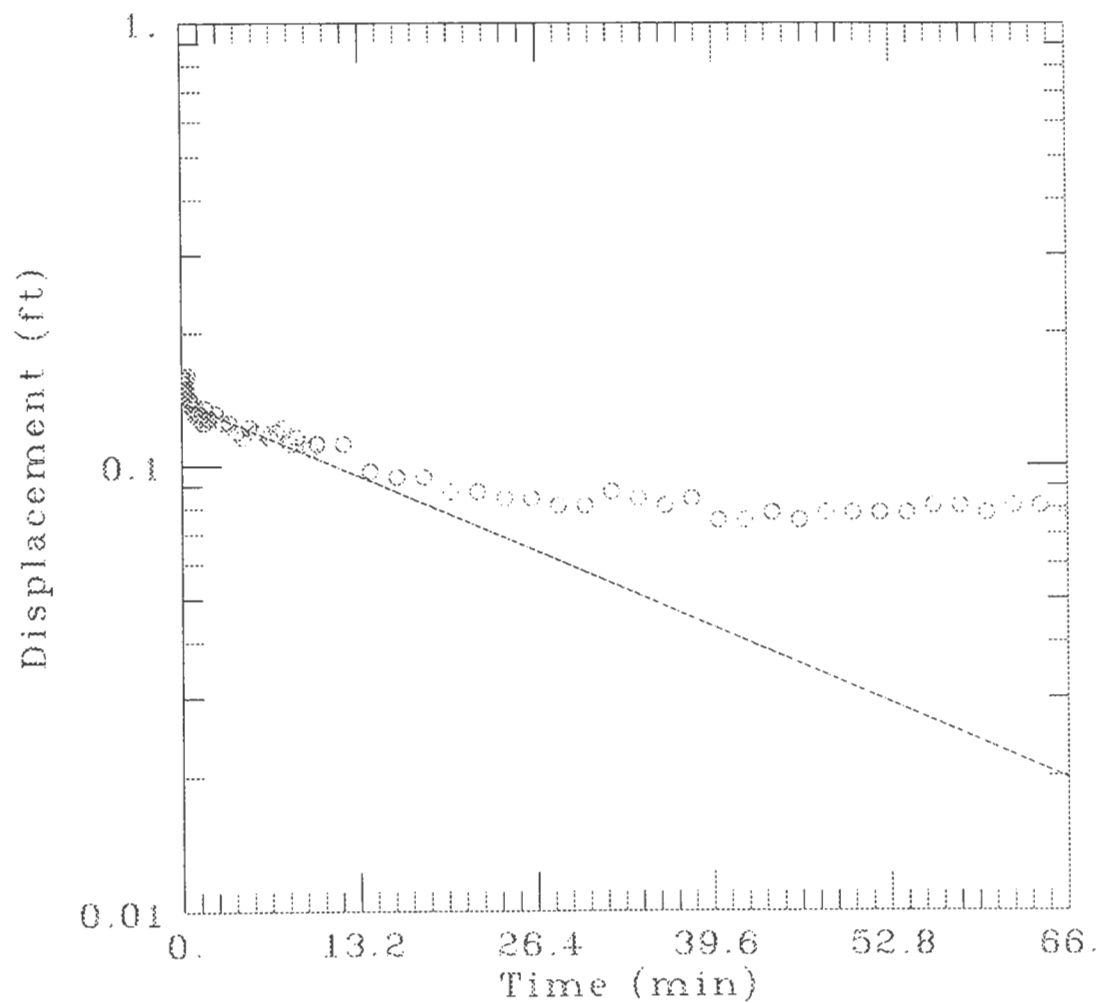
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=7.97\text{ft}$

$H=7.97\text{ft}$

RISING HEAD SLUG TEST - MW-06



DATASET:

0806R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0001647$ ft/min

$y_0=0.1396$ ft

TESTDATA:

$H_0=0.154$ ft

$r_c=0.166$ ft

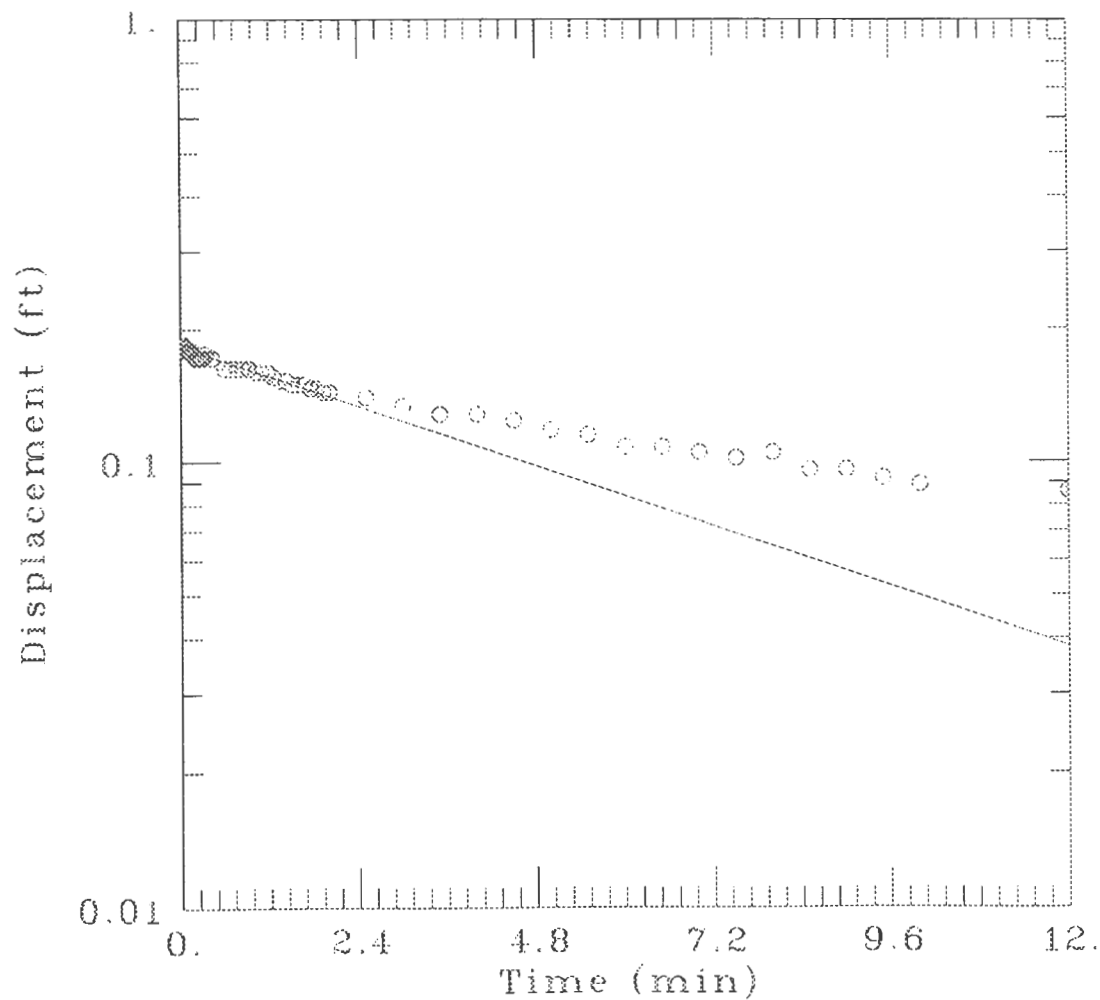
$r_w=0.437$ ft

$L=5$.ft

$b=8.07$ ft

$H=8.07$ ft

RISING HEAD SLUG TEST – MW-07



DATASET:

0807R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bower-Rice

ESTIMATEDPARAMETERS:

$K=0.000501\text{ft/min}$

$y_0=0.1829\text{ft}$

TESTDATA:

$H_0=0.185\text{ft}$

$r_c=0.166\text{ft}$

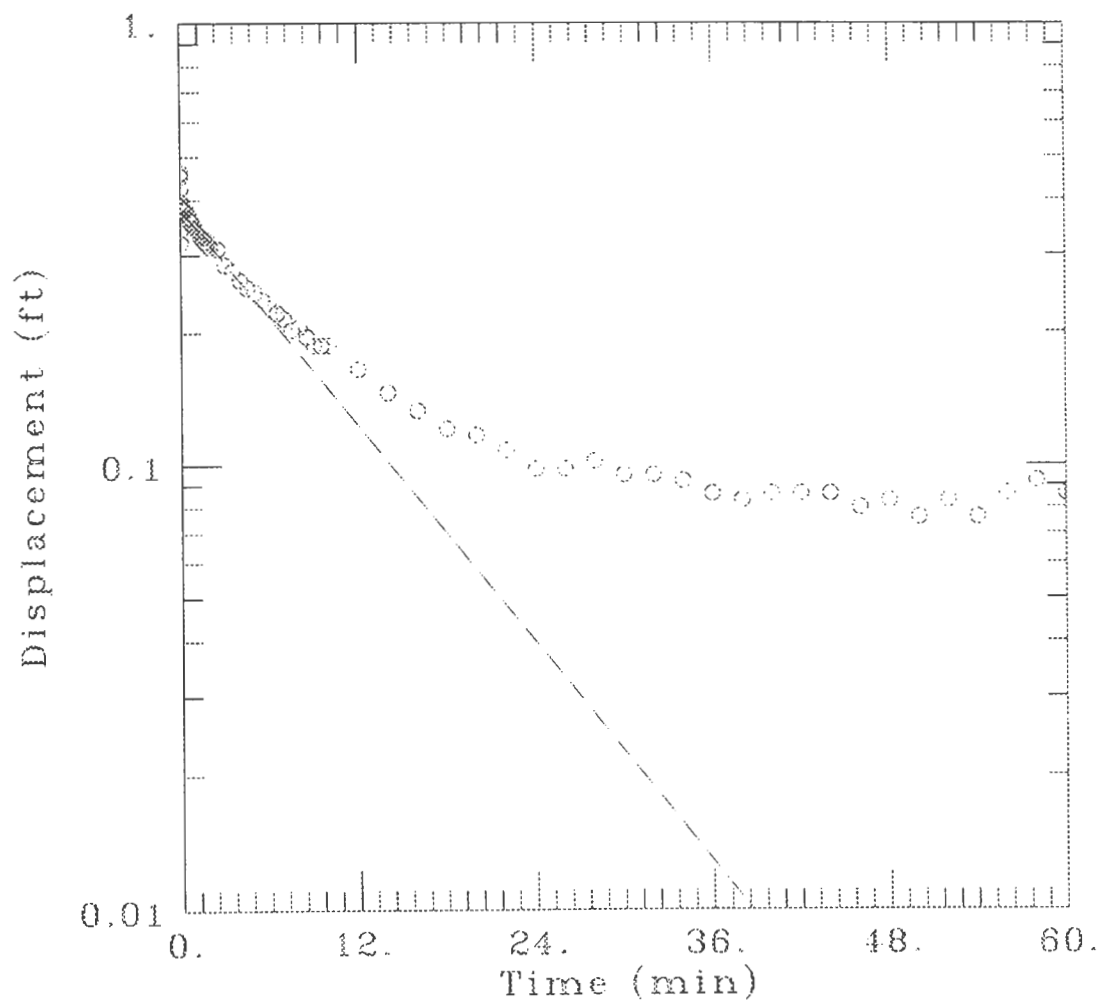
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=4.27\text{ft}$

$H=3.47\text{ft}$

RISING HEAD SLUG TEST - MW-08



DATASET:

0808R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bower-Rice

ESTIMATEDPARAMETERS:

$K=0.0001109 \text{ ft/min}$

$y_0=0.3824 \text{ ft}$

TESTDATA:

$H_0=0.453 \text{ ft}$

$r_c=0.084 \text{ ft}$

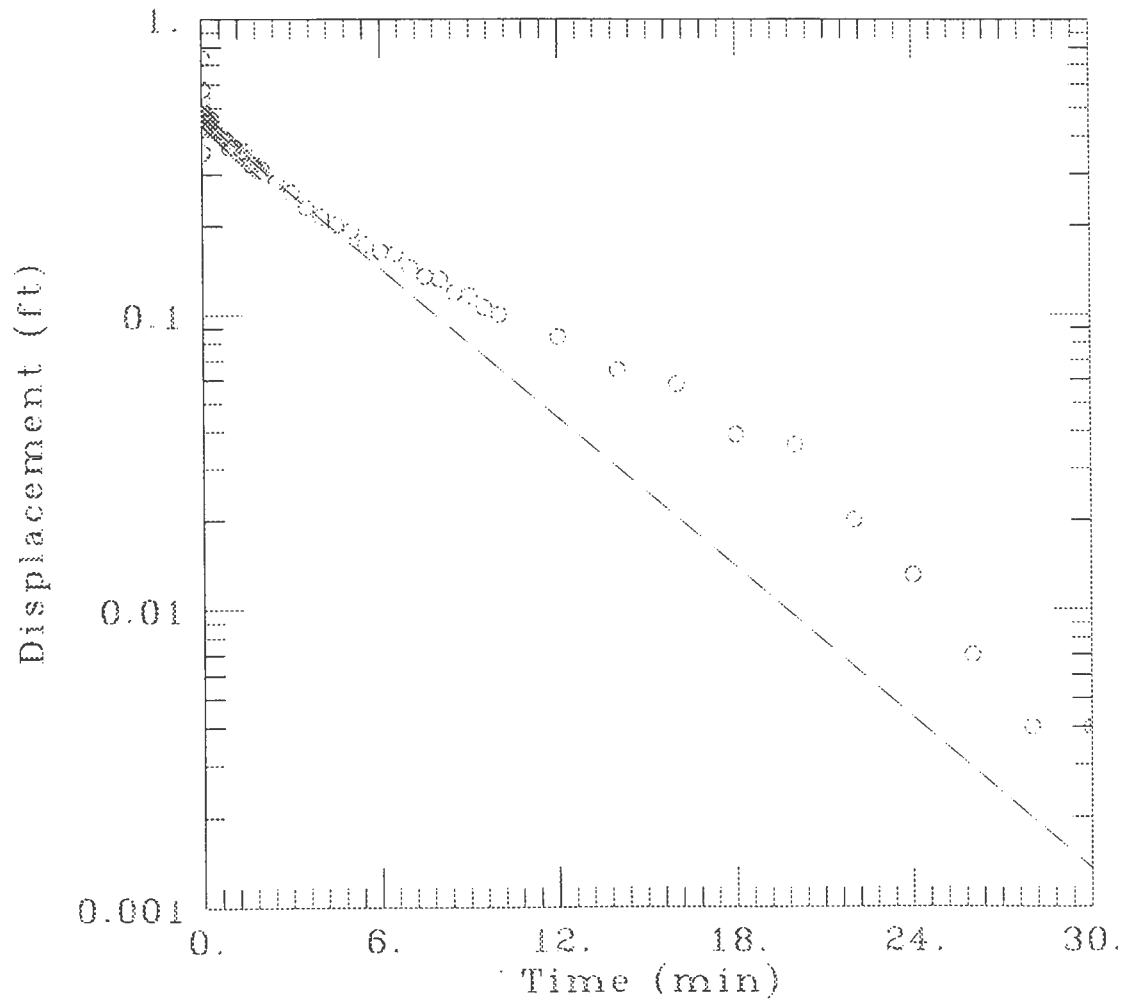
$r_w=0.437 \text{ ft}$

$L=5. \text{ ft}$

$b=11.31 \text{ ft}$

$H=7.81 \text{ ft}$

RISING HEAD SLUG TEST - MW-10



DATASET:

0810R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0002259\text{ft/min}$

$y_0=0.4502\text{ft}$

TESTDATA:

$H_0=0.737\text{ft}$

$r_c=0.084\text{ft}$

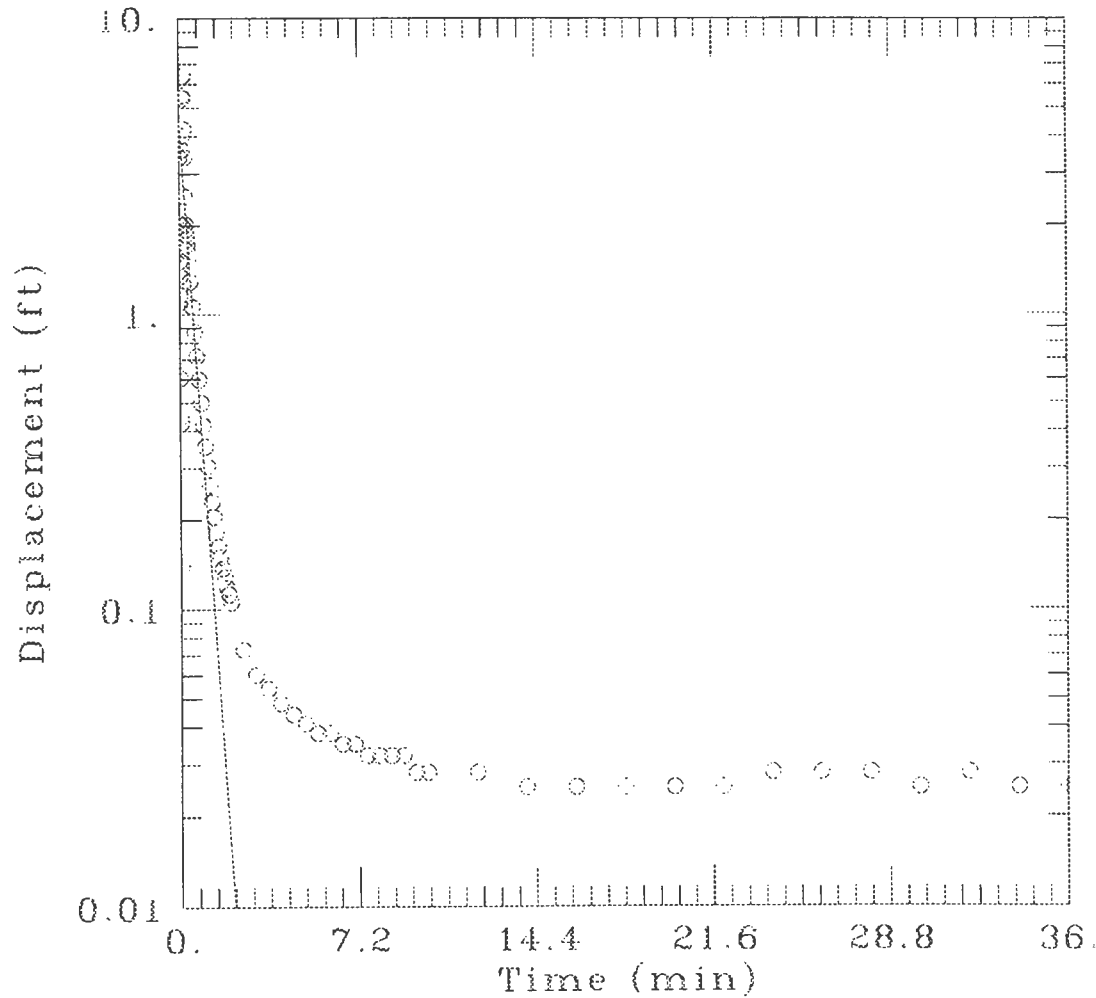
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=11.6\text{ft}$

$H=7.6\text{ft}$

RISING HEAD SLUG TEST – MW-11



DATASET:

obl1r.dat

08/31/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.003298\text{ft/min}$

$y_0=4.427\text{ft}$

TESTDATA:

$H_0=3.401\text{ft}$

$r_c=0.084\text{ft}$

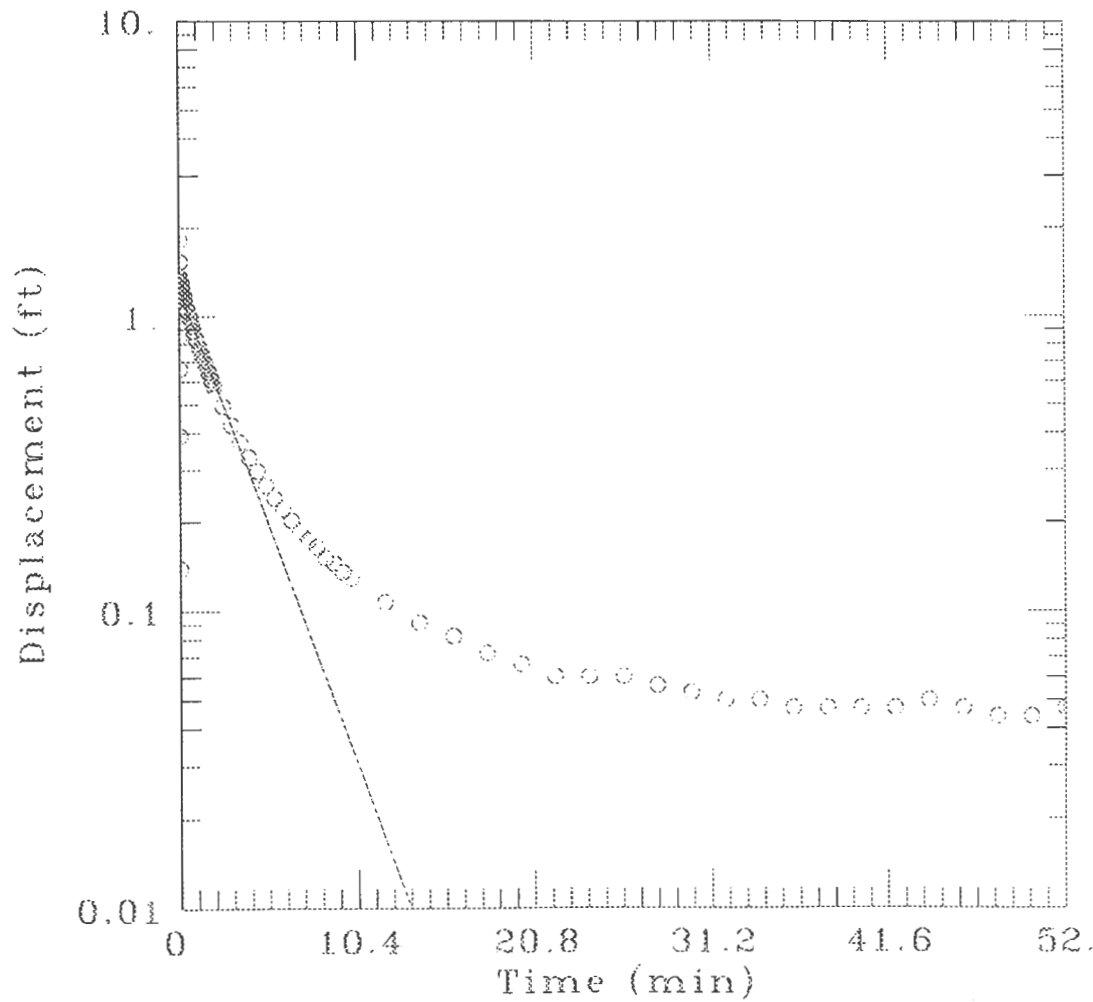
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=10.12\text{ft}$

$H=7.12\text{ft}$

RISING HEAD SLUG TEST – MW-14



DATASET:

0814R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0004088\text{ft}/\text{min}$

$y_0=1.237\text{ft}$

TESTDATA:

$H_0=1.824\text{ft}$

$r_c=0.084\text{ft}$

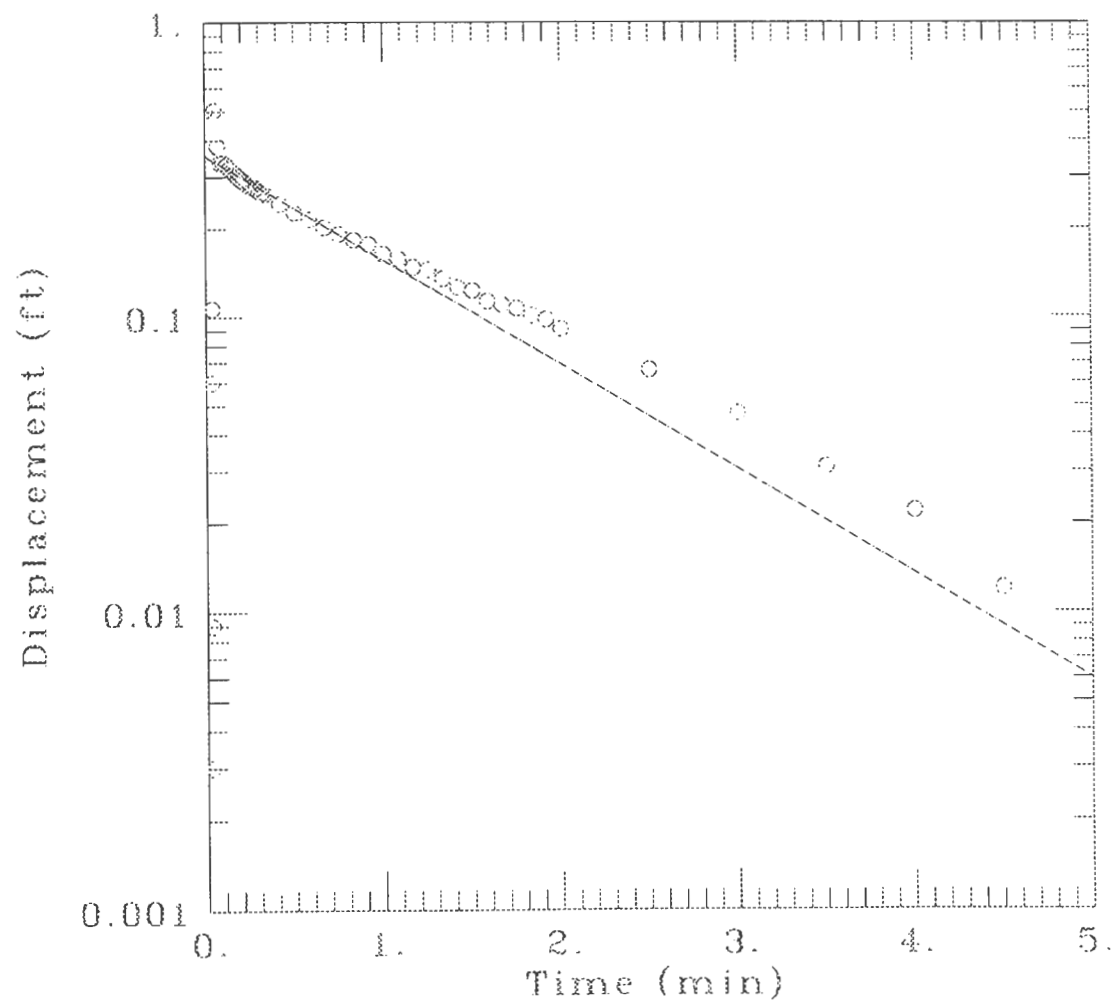
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=9.07\text{ft}$

$H=5.57\text{ft}$

RISING HEAD SLUG TEST – MW-18



DATASET:

0818R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bower-Rice

ESTIMATEDPARAMETERS:

$K=0.0009392 \text{ ft/min}$

$y_0=0.3534 \text{ ft}$

TESTDATA:

$H_0=0.505 \text{ ft}$

$r_c=0.084 \text{ ft}$

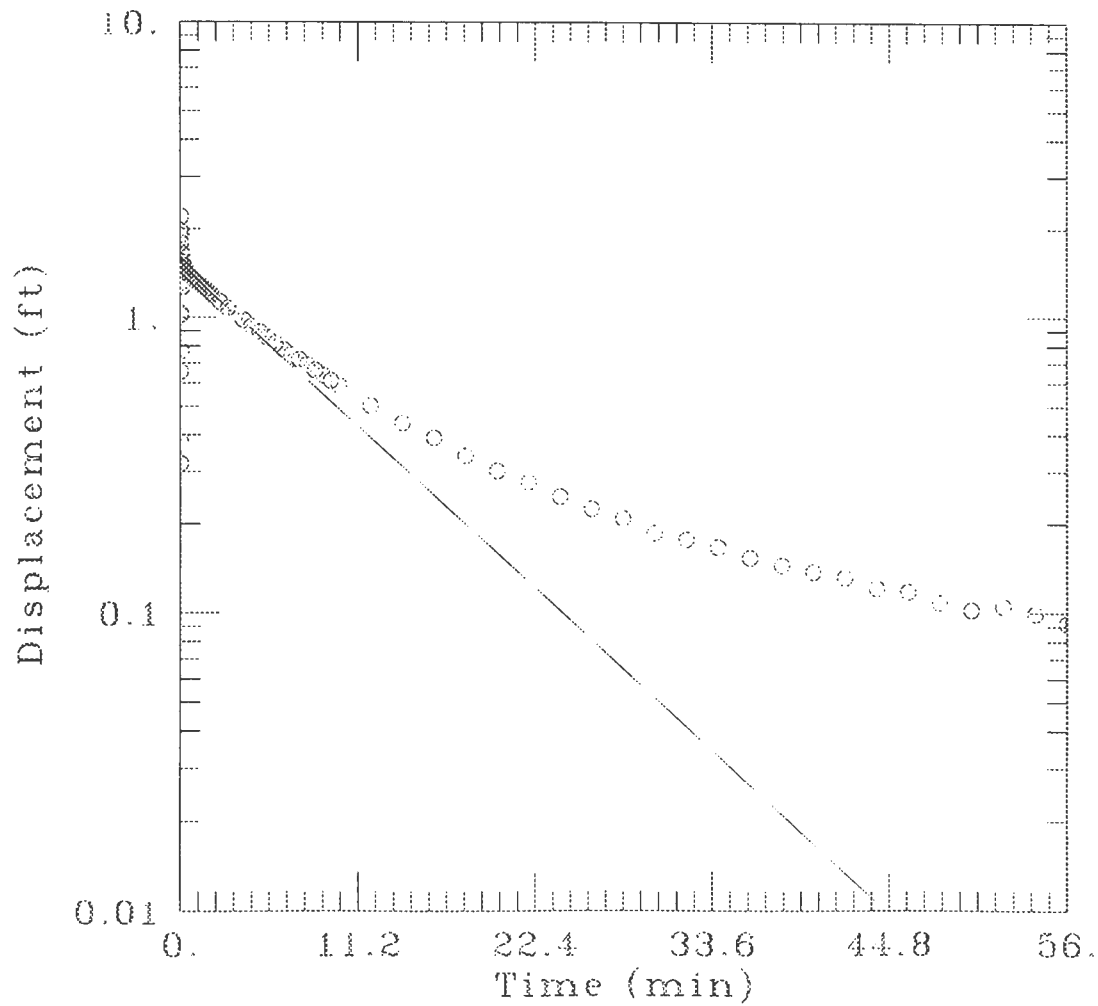
$r_w=0.437 \text{ ft}$

$L=7. \text{ ft}$

$b=10.88 \text{ ft}$

$H=10.88 \text{ ft}$

RISING HEAD SLUG TEST - MW-21



DATASET:

0821R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0001355\text{ft}/\text{min}$

$y_0=1.513\text{ft}$

TESTDATA:

$H_0=1.905\text{ft}$

$r_c=0.084\text{ft}$

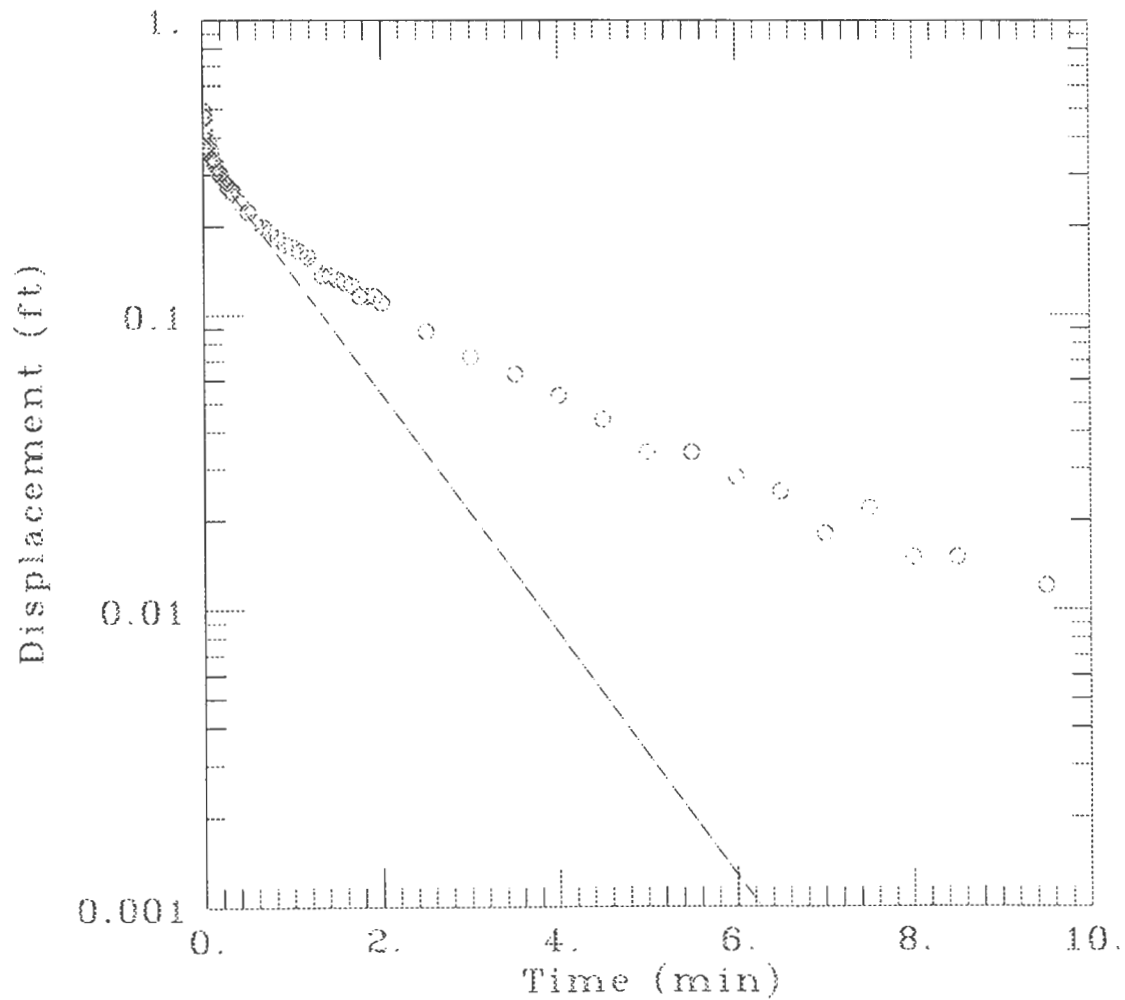
$r_w=0.437\text{ft}$

$L=7.\text{ft}$

$b=13.19\text{ft}$

$H=13.19\text{ft}$

RISING HEAD SLUG TEST - MW-22



DATASET:

0B22R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bower-Rice

ESTIMATEDPARAMETERS:

$K=0.0008477 \text{ ft/min}$

$y_0=0.3487 \text{ ft}$

TESTDATA:

$H_0=0.493 \text{ ft}$

$r_c=0.084 \text{ ft}$

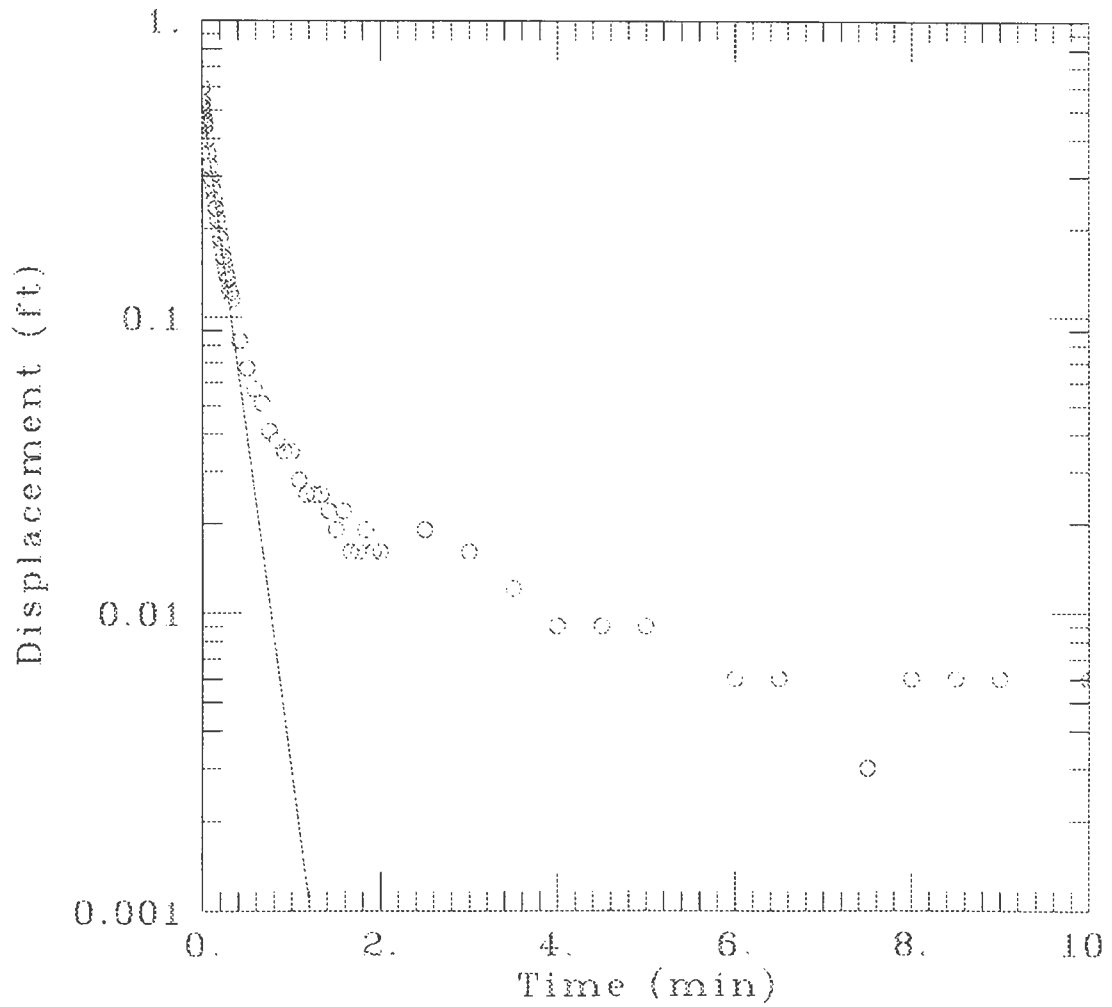
$r_w=0.437 \text{ ft}$

$L=10. \text{ ft}$

$b=14.74 \text{ ft}$

$H=14.74 \text{ ft}$

RISING HEAD SLUG TEST - MW-23



DATASET:

0523R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0081$ ft/min

$y_0=0.534$ ft

TESTDATA:

$H_0=0.595$ ft

$r_c=0.084$ ft

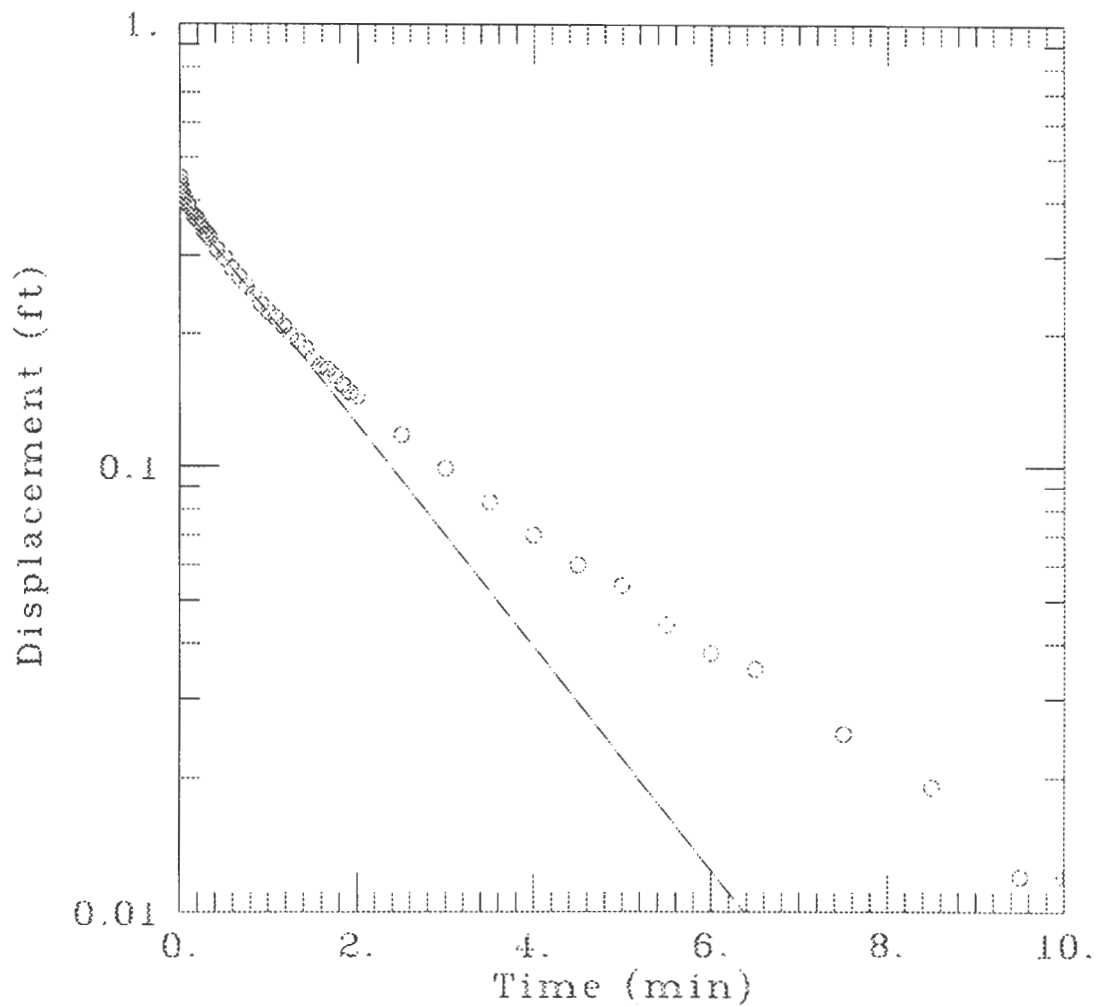
$r_w=0.437$ ft

$L=5$.ft

$b=11.93$ ft

$H=11.93$ ft

RISING HEAD SLUG TEST - MW-24



DATASET:

0824R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.001222$ ft/min

$y_0=0.3958$ ft

TESTDATA:

$H_0=0.451$ ft

$r_c=0.084$ ft

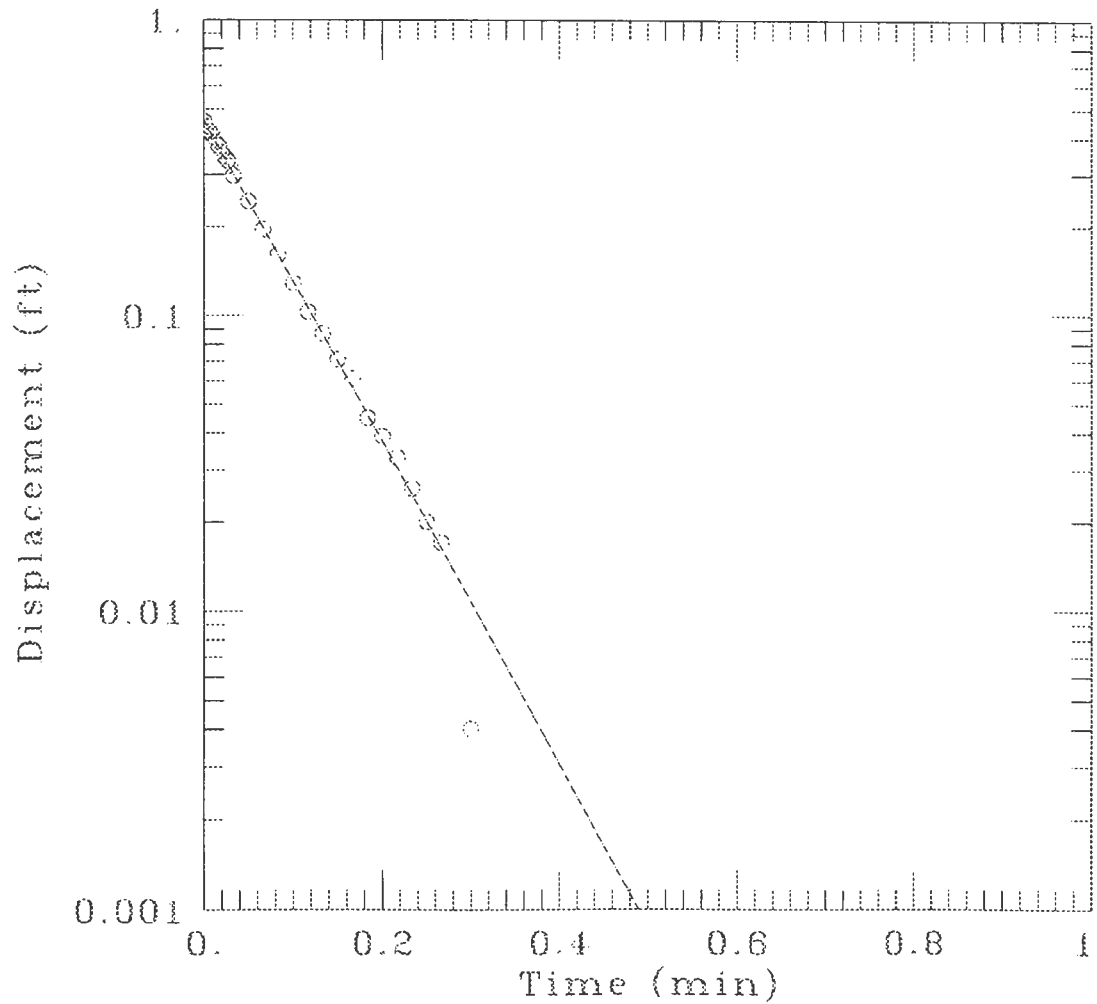
$r_w=0.437$ ft

$L=2$.ft

$b=6.13$ ft

$H=5.45$ ft

RISING HEAD SLUG TEST - MW-25



DATASET:

9825R.DAT

08/31/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.03859\text{ft/min}$

$y_0=0.4588\text{ft}$

TESTDATA:

$H_0=0.455\text{ft}$

$r_c=0.084\text{ft}$

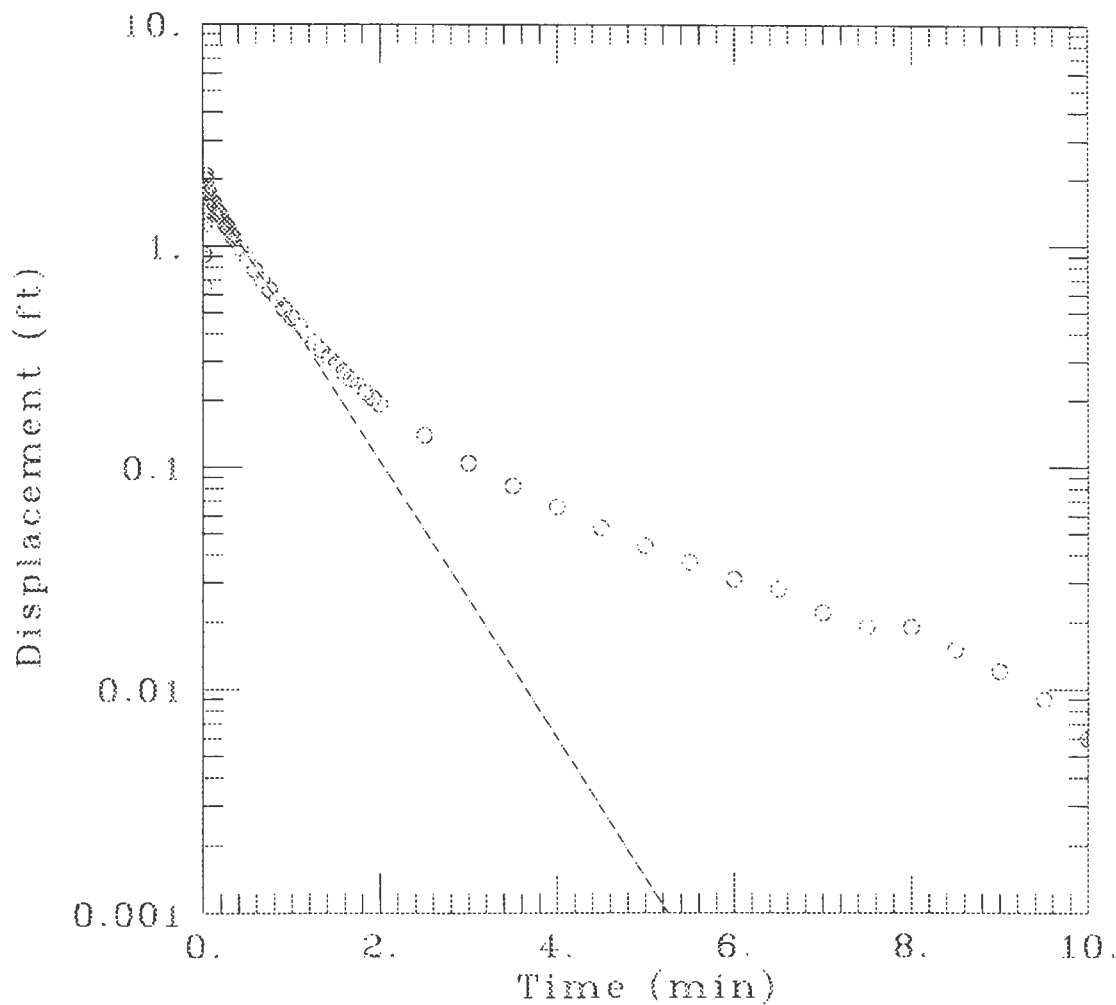
$r_w=0.437\text{ft}$

$L=2.\text{ft}$

$b=7.24\text{ft}$

$H=7.24\text{ft}$

RISING HEAD SLUG TEST - MW-27



DATASET:

0827R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.002243\text{ft/min}$

$y_0=1.882\text{ft}$

TESTDATA:

$H_0=2.089\text{ft}$

$r_c=0.084\text{ft}$

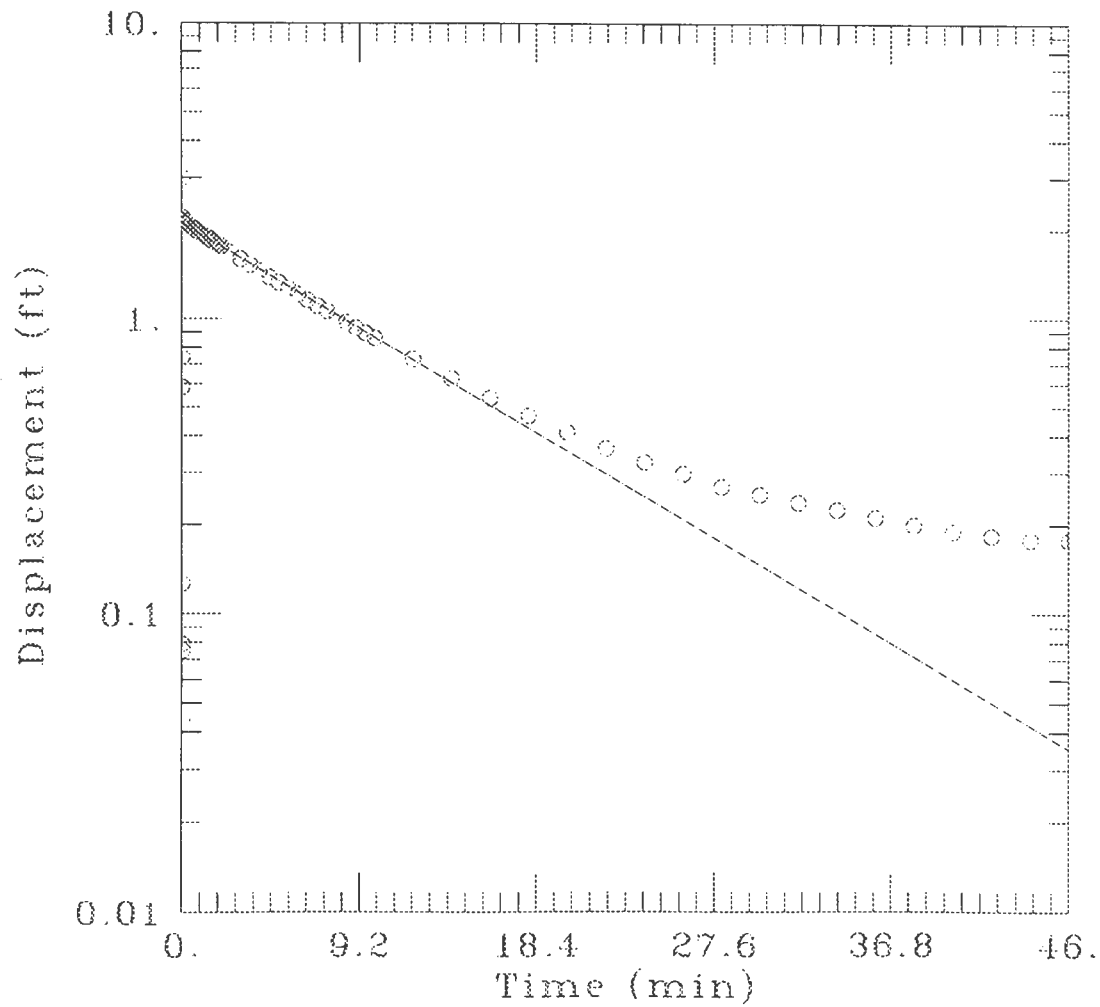
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=11.91\text{ft}$

$H=11.91\text{ft}$

RISING HEAD SLUG TEST - MW-28



DATASET:

0828R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.000303\text{ft/min}$

$y_0=2.194\text{ft}$

TESTDATA:

$H_0=2.19\text{ft}$

$r_c=0.084\text{ft}$

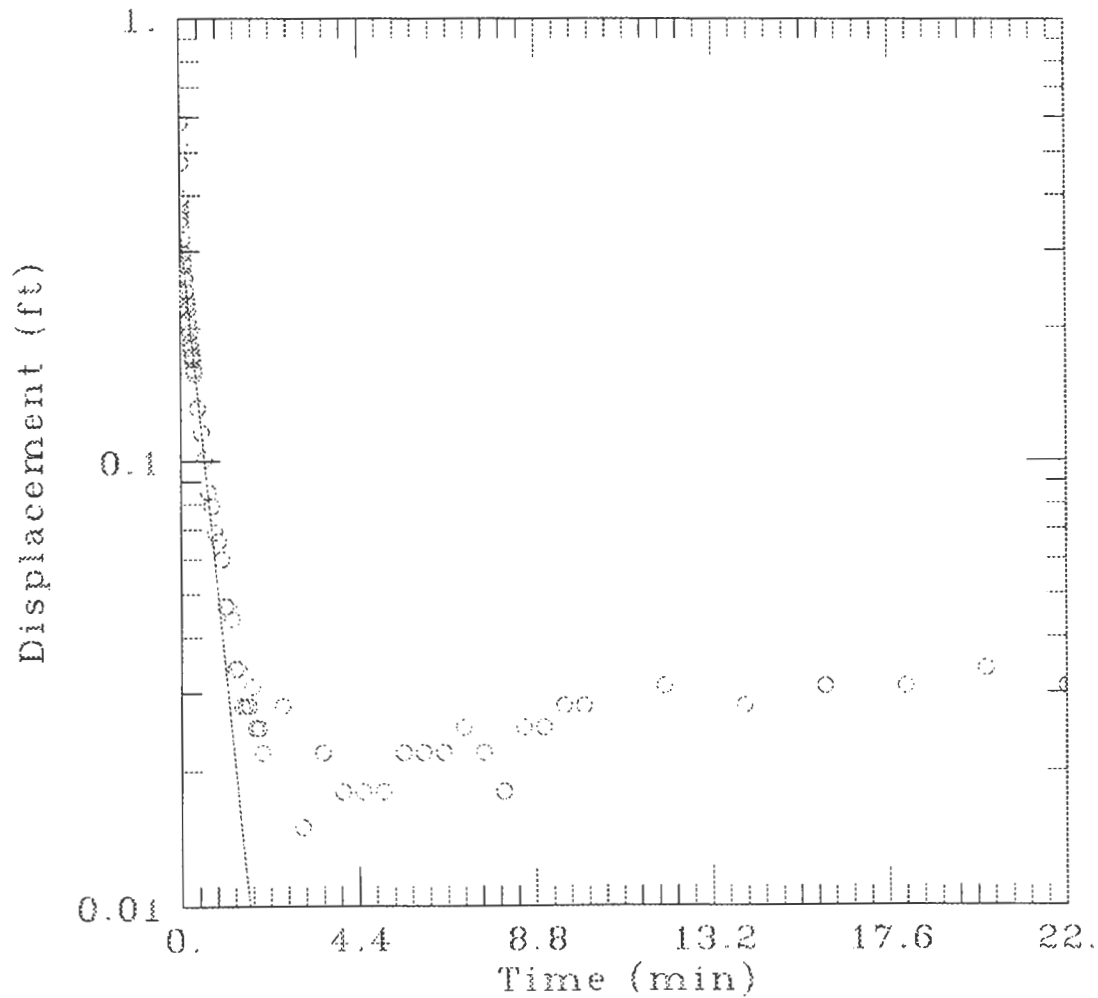
$r_w=0.437\text{ft}$

$L=2.\text{ft}$

$b=11.38\text{ft}$

$H=11.38\text{ft}$

RISING HEAD SLUG TEST - MW-29



DATASET:

0829R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.003041\text{ft/min}$

$y_0=0.3388\text{ft}$

TESTDATA:

$H_0=0.584\text{ft}$

$r_c=0.084\text{ft}$

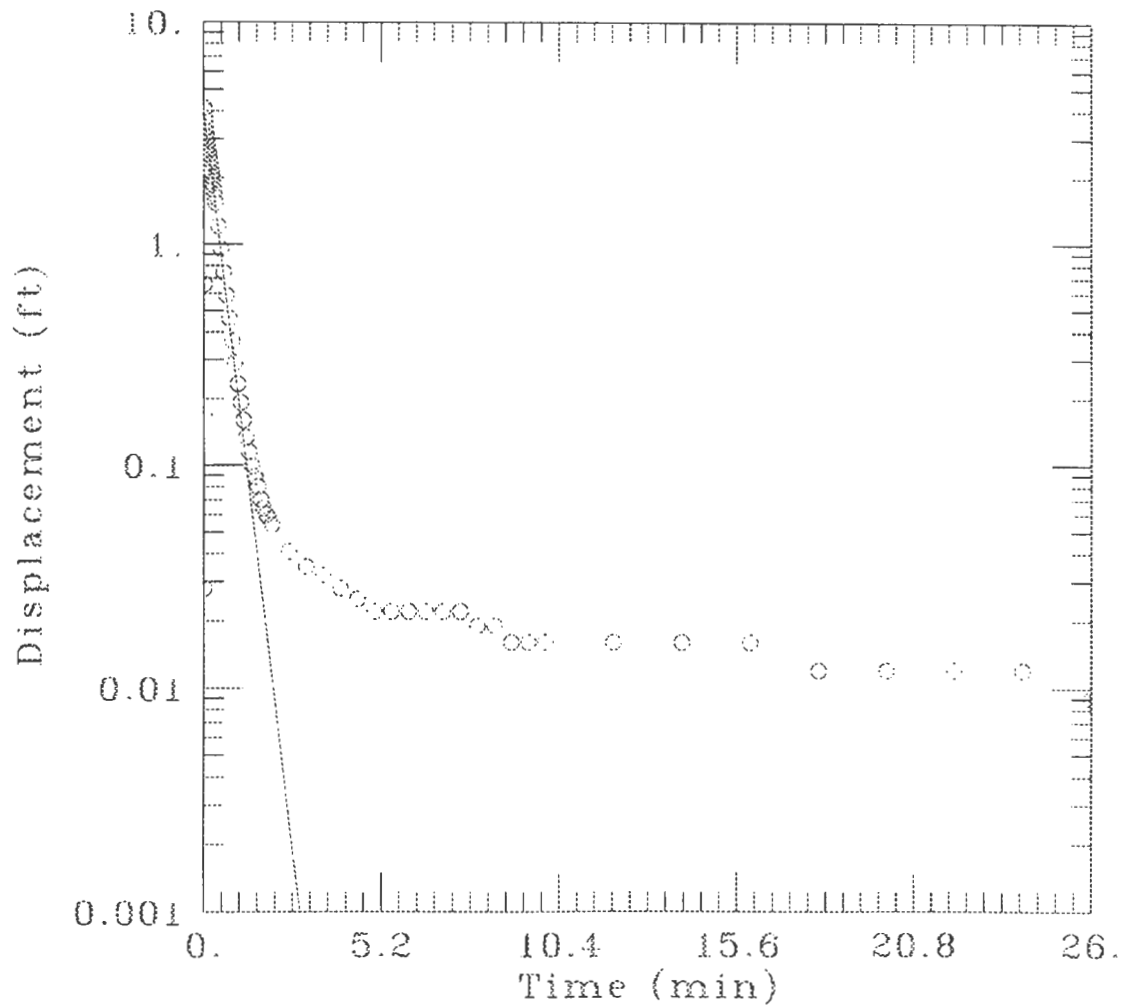
$r_w=0.437\text{ft}$

$L=5.\text{ft}$

$b=8.56\text{ft}$

$H=8.56\text{ft}$

RISING HEAD SLUG TEST - MW-30



DATASET:

0830R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.00923\text{ft/min}$

$y_0=4.001\text{ft}$

TESTDATA:

$H_0=4.112\text{ft}$

$r_c=0.084\text{ft}$

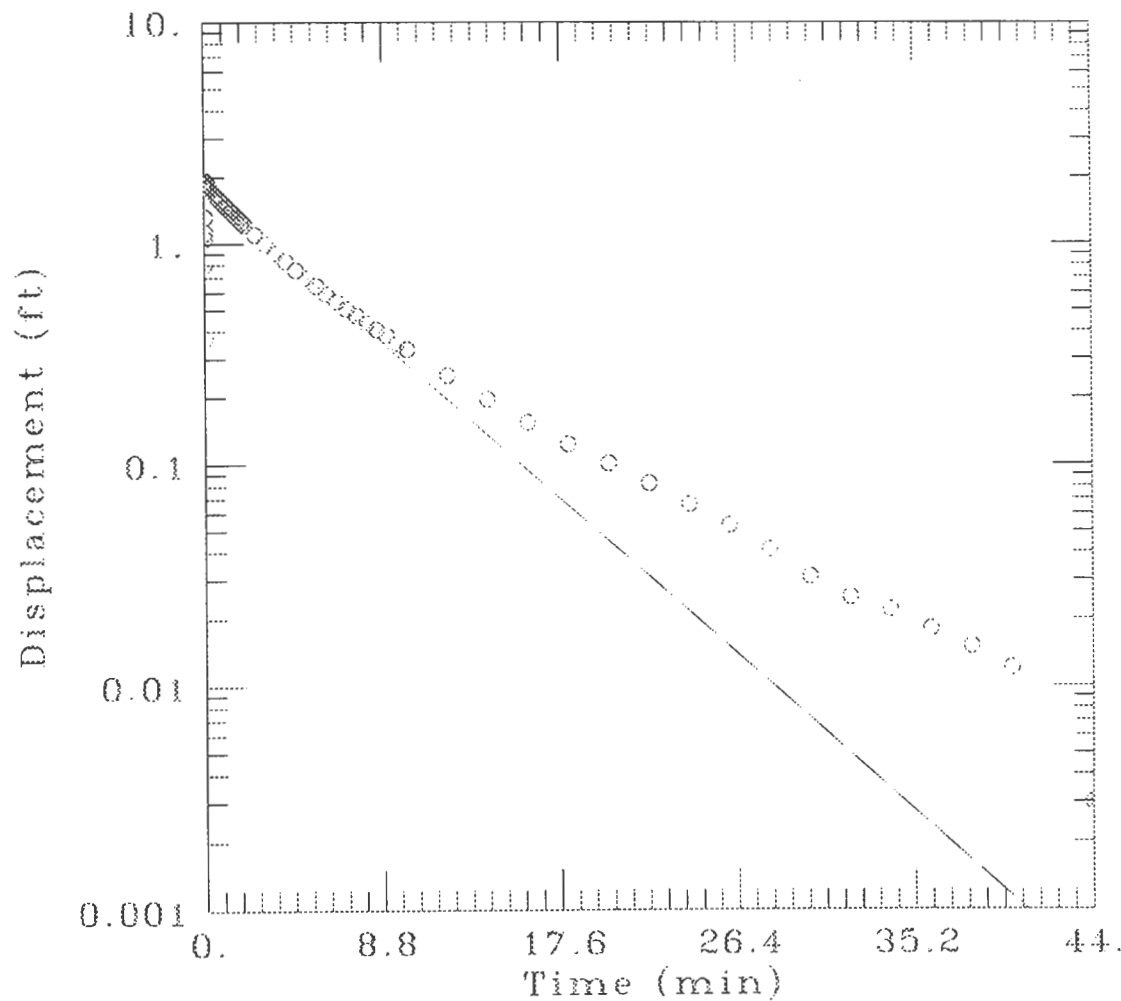
$r_w=0.437\text{ft}$

$L=2.\text{ft}$

$b=7.82\text{ft}$

$H=7.82\text{ft}$

RISING HEAD SLUG TEST - MW-31



DATASET:

0B31R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0005771\text{ft/min}$

$y_0=1.782\text{ft}$

TESTDATA:

$H_0=1.925\text{ft}$

$r_c=0.084\text{ft}$

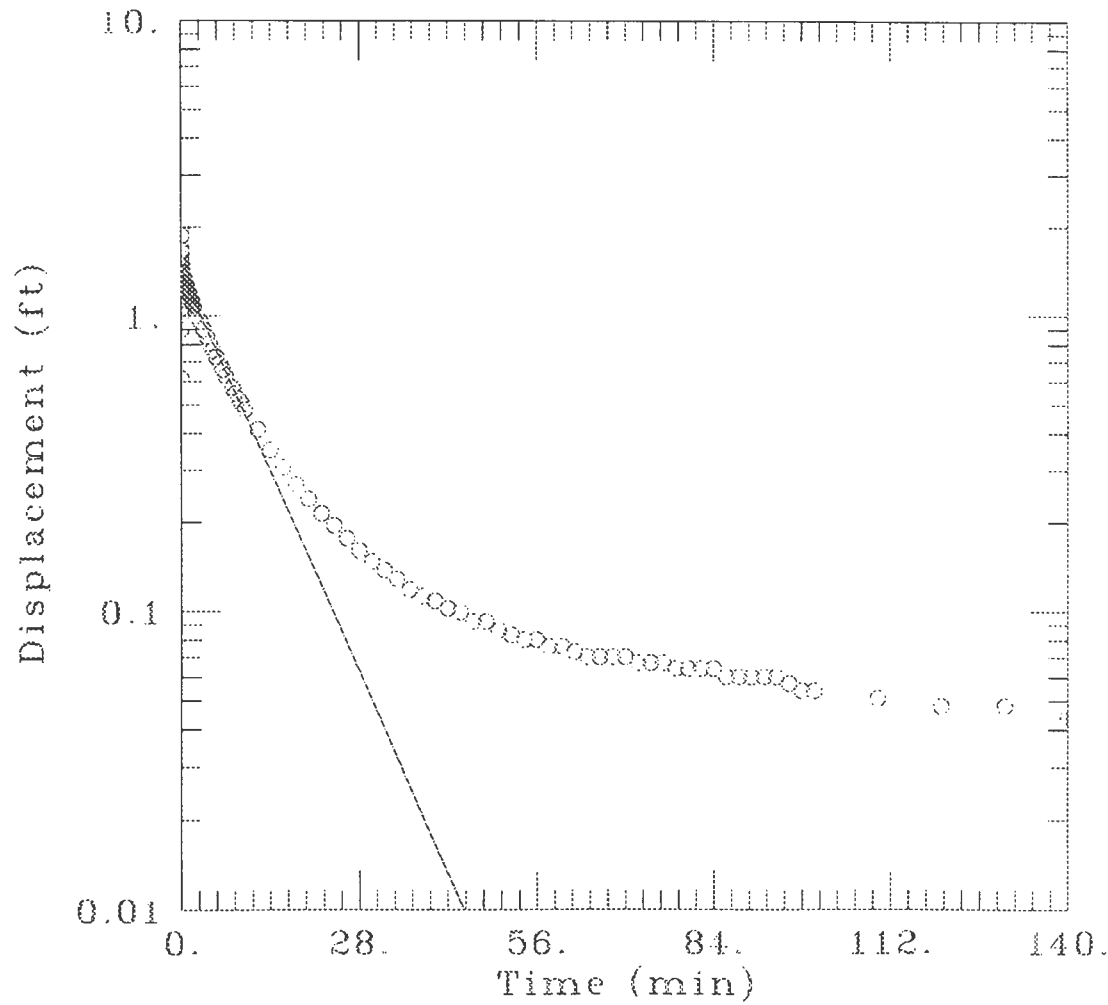
$r_w=0.437\text{ft}$

$L=2.\text{ft}$

$b=7.8\text{ft}$

$H=7.8\text{ft}$

RISING HEAD SLUG TEST - MW-32



DATASET:

0832R.OAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.0001183\text{ft/min}$

$y_0=1.418\text{ft}$

TESTDATA:

$H_0=1.87\text{ft}$

$r_c=0.084\text{ft}$

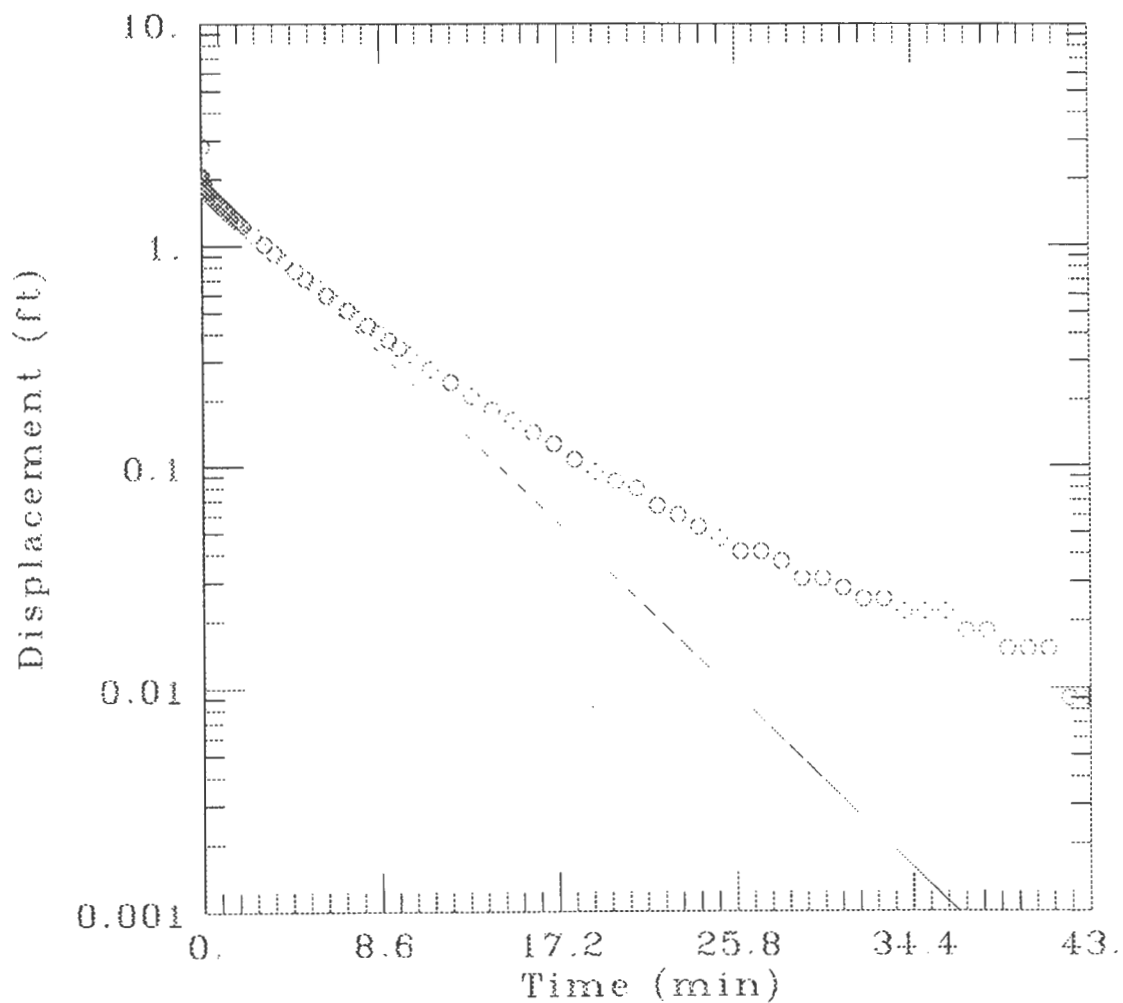
$r_w=0.437\text{ft}$

$L=8.\text{ft}$

$b=12.67\text{ft}$

$H=12.67\text{ft}$

RISING HEAD SLUG TEST - MW-39



DATASET:

0839R.DAT

08/30/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

$K=0.000805 \text{ ft/min}$

$y_0=1.935 \text{ ft}$

TESTDATA:

$H_0=2.824 \text{ ft}$

$r_c=0.084 \text{ ft}$

$r_w=0.437 \text{ ft}$

$L=1.5 \text{ ft}$

$b=6.72 \text{ ft}$

$H=6.72 \text{ ft}$

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-5
TEST TYPE: RISING HEAD
DTW (TOC): 3.46

UNIT#: 1	TEST#: 0
<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/29/92 12:01

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.448	3.908
0.0033	-0.992	4.452
0.0066	-0.148	3.608
0.01	0.139	3.321
0.0133	-0.354	3.814
0.0166	-0.629	4.089
0.02	-0.869	4.329
0.0233	-0.923	4.383
0.0266	-0.964	4.424
0.03	-0.964	4.424
0.0333	-0.954	4.414
0.05	-0.957	4.417
0.0666	-0.954	4.414
0.0833	-0.948	4.408
0.1	-0.945	4.405
0.1166	-0.942	4.402
0.1333	-0.939	4.399
0.15	-0.935	4.395
0.1666	-0.932	4.392
0.1833	-0.932	4.392
0.2	-0.929	4.389
0.2166	-0.929	4.389
0.2333	-0.926	4.386
0.25	-0.926	4.386
0.2666	-0.926	4.386
0.2833	-0.923	4.383
0.3	-0.923	4.383
0.3166	-0.92	4.380
0.3333	-0.92	4.380
0.4166	-0.913	4.373
0.5	-0.907	4.367
0.5833	-0.901	4.361
0.6666	-0.894	4.354
0.75	-0.888	4.348

0.8333	-0.885	4.345
0.9166	-0.878	4.338
1	-0.872	4.332
1.0833	-0.869	4.329
1.1666	-0.866	4.326
1.25	-0.859	4.319
1.3333	-0.856	4.316
1.4166	-0.85	4.310
1.5	-0.847	4.307
1.5833	-0.844	4.304
1.6666	-0.837	4.297
1.75	-0.834	4.294
1.8333	-0.828	4.288
1.9166	-0.825	4.285
2	-0.822	4.282
2.5	-0.796	4.256
3	-0.774	4.234
3.5	-0.752	4.212
4	-0.73	4.190
4.5	-0.708	4.168
5	-0.689	4.149
5.5	-0.67	4.130
6	-0.651	4.111
6.5	-0.638	4.098
7	-0.622	4.082
7.5	-0.61	4.070
8	-0.6	4.060
8.5	-0.588	4.048
9	-0.578	4.038
9.5	-0.569	4.029
10	-0.556	4.016
12	-0.518	3.978
14	-0.48	3.940
16	-0.452	3.912
18	-0.423	3.883
20	-0.398	3.858
22	-0.379	3.839
24	-0.357	3.817
26	-0.344	3.804
28	-0.328	3.788
30	-0.313	3.773
32	-0.303	3.763
34	-0.29	3.750
36	-0.281	3.741
38	-0.271	3.731
40	-0.262	3.722
42	-0.259	3.719
44	-0.246	3.706
46	-0.24	3.700
48	-0.233	3.693
50	-0.23	3.690
52	-0.227	3.687
54	-0.221	3.681

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-6
TEST TYPE: RISING HEAD
DTW (TOC): 3.75

UNIT#: 1	TEST#: 1
<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50
STEP 0	1/24/92
	NA

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.147	3.897
0.0033	-0.154	3.904
0.0066	-0.160	3.910
0.01	-0.154	3.904
0.0133	-0.160	3.910
0.0166	-0.157	3.907
0.02	-0.147	3.897
0.0233	-0.160	3.910
0.0266	-0.157	3.907
0.03	-0.160	3.910
0.0333	-0.157	3.907
0.05	-0.154	3.904
0.0666	-0.154	3.904
0.0833	-0.154	3.904
0.1	-0.150	3.900
0.1166	-0.154	3.904
0.1333	-0.150	3.900
0.15	-0.147	3.897
0.1666	-0.150	3.900
0.1833	-0.147	3.897
0.2	-0.147	3.897
0.2166	-0.147	3.897
0.2333	-0.154	3.904
0.25	-0.150	3.900
0.2666	-0.150	3.900
0.2833	-0.157	3.907
0.3	-0.150	3.900
0.3166	-0.150	3.900
0.3333	-0.147	3.897
0.4166	-0.160	3.910
0.5	-0.141	3.891
0.5833	-0.141	3.891
0.6666	-0.138	3.888
0.75	-0.135	3.885

0.8333	-0.141	3.891
0.9166	-0.131	3.881
1	-0.131	3.881
1.0833	-0.135	3.885
1.1666	-0.131	3.881
1.25	-0.131	3.881
1.3333	-0.128	3.878
1.4166	-0.125	3.875
1.5	-0.131	3.881
1.5833	-0.125	3.875
1.6666	-0.135	3.885
1.75	-0.128	3.878
1.8333	-0.125	3.875
1.9166	-0.128	3.878
2	-0.128	3.878
2.5	-0.131	3.881
3	-0.125	3.875
3.5	-0.125	3.875
4	-0.119	3.869
4.5	-0.116	3.866
5	-0.122	3.872
5.5	-0.119	3.869
6	-0.119	3.869
6.5	-0.116	3.866
7	-0.119	3.869
7.5	-0.122	3.872
8	-0.112	3.862
8.5	-0.116	3.866
9	-0.112	3.862
9.5	-0.109	3.859
10	-0.112	3.862
12	-0.112	3.862
14	-0.097	3.847
16	-0.094	3.844
18	-0.094	3.844
20	-0.087	3.837
22	-0.087	3.837
24	-0.084	3.834
26	-0.084	3.834
28	-0.081	3.831
30	-0.081	3.831
32	-0.087	3.837
34	-0.084	3.834
36	-0.081	3.831
38	-0.084	3.834
40	-0.075	3.825
42	-0.075	3.825
44	-0.078	3.828
46	-0.075	3.825
48	-0.078	3.828
50	-0.078	3.828
52	-0.078	3.828
54	-0.078	3.828
56	-0.081	3.831
58	-0.081	3.831
60	-0.078	3.828
62	-0.081	3.831
64	-0.081	3.831
66	-0.078	3.828

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-7
TEST TYPE: RISING HEAD
DTW (TOC): 4.35

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.000
LINEARITY	0.000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 10:35

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.185	4.535
0.0033	-0.185	4.535
0.0066	-0.185	4.535
0.01	-0.185	4.535
0.0133	-0.185	4.535
0.0166	-0.185	4.535
0.02	-0.182	4.532
0.0233	-0.185	4.535
0.0266	-0.185	4.535
0.03	-0.185	4.535
0.0333	-0.185	4.535
0.05	-0.182	4.532
0.0666	-0.179	4.529
0.0833	-0.182	4.532
0.1	-0.179	4.529
0.1166	-0.179	4.529
0.1333	-0.179	4.529
0.15	-0.179	4.529
0.1666	-0.176	4.526
0.1833	-0.176	4.526
0.2	-0.172	4.522
0.2166	-0.172	4.522
0.2333	-0.172	4.522
0.25	-0.172	4.522
0.2666	-0.172	4.522
0.2833	-0.172	4.522
0.3	-0.172	4.522
0.3166	-0.176	4.526
0.3333	-0.176	4.526
0.4166	-0.172	4.522
0.5	-0.169	4.519
0.5833	-0.163	4.513
0.6666	-0.163	4.513
0.75	-0.163	4.513

0.8333	-0.163	4.513
0.9166	-0.163	4.513
1	-0.16	4.510
1.0833	-0.16	4.510
1.1666	-0.16	4.510
1.25	-0.156	4.506
1.3333	-0.153	4.503
1.4166	-0.153	4.503
1.5	-0.15	4.500
1.5833	-0.15	4.500
1.6666	-0.15	4.500
1.75	-0.147	4.497
1.8333	-0.147	4.497
1.9166	-0.144	4.494
2	-0.144	4.494
2.5	-0.14	4.490
3	-0.134	4.484
3.5	-0.128	4.478
4	-0.128	4.478
4.5	-0.124	4.474
5	-0.118	4.468
5.5	-0.115	4.465
6	-0.108	4.458
6.5	-0.108	4.458
7	-0.105	4.455
7.5	-0.102	4.452
8	-0.105	4.455
8.5	-0.096	4.446
9	-0.096	4.446
9.5	-0.092	4.442
10	-0.089	4.439
12	-0.086	4.436

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-8
TEST TYPE: RISING HEAD
DTW (TOC): 3.50

UNIT#: 1	TEST#: 2
<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50
STEP 0	1/24/92
	NA

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.573	4.073
0.0033	-0.459	3.959
0.0066	-0.342	3.842
0.01	-0.320	3.820
0.0133	-0.383	3.883
0.0166	-0.453	3.953
0.02	-0.462	3.962
0.0233	-0.424	3.924
0.0266	-0.383	3.883
0.03	-0.370	3.870
0.0333	-0.396	3.896
0.05	-0.389	3.889
0.0666	-0.389	3.889
0.0833	-0.389	3.889
0.1	-0.389	3.889
0.1166	-0.389	3.889
0.1333	-0.386	3.886
0.15	-0.386	3.886
0.1666	-0.386	3.886
0.1833	-0.383	3.883
0.2	-0.383	3.883
0.2166	-0.383	3.883
0.2333	-0.383	3.883
0.25	-0.380	3.880
0.2666	-0.380	3.880
0.2833	-0.380	3.880
0.3	-0.383	3.883
0.3166	-0.377	3.877
0.3333	-0.377	3.877
0.4166	-0.380	3.880
0.5	-0.367	3.867
0.5833	-0.367	3.867
0.6666	-0.358	3.858
0.75	-0.358	3.858

0.8333	-0.348	3.848
0.9166	-0.345	3.845
1	-0.345	3.845
1.0833	-0.342	3.842
1.1666	-0.339	3.839
1.25	-0.336	3.836
1.3333	-0.332	3.832
1.4166	-0.329	3.829
1.5	-0.329	3.829
1.5833	-0.329	3.829
1.6666	-0.323	3.823
1.75	-0.317	3.817
1.8333	-0.323	3.823
1.9166	-0.313	3.813
2	-0.313	3.813
2.5	-0.310	3.810
3	-0.285	3.785
3.5	-0.276	3.776
4	-0.263	3.763
4.5	-0.253	3.753
5	-0.247	3.747
5.5	-0.238	3.738
6	-0.228	3.728
6.5	-0.222	3.722
7	-0.215	3.715
7.5	-0.203	3.703
8	-0.206	3.706
8.5	-0.196	3.696
9	-0.187	3.687
9.5	-0.187	3.687
10	-0.187	3.687
12	-0.165	3.665
14	-0.146	3.646
16	-0.133	3.633
18	-0.121	3.621
20	-0.117	3.617
22	-0.108	3.608
24	-0.098	3.598
26	-0.098	3.598
28	-0.102	3.602
30	-0.095	3.595
32	-0.095	3.595
34	-0.092	3.592
36	-0.086	3.586
38	-0.083	3.583
40	-0.086	3.586
42	-0.086	3.586
44	-0.086	3.586
46	-0.080	3.580
48	-0.083	3.583
50	-0.076	3.576
52	-0.083	3.583
54	-0.076	3.576
56	-0.086	3.586
58	-0.092	3.592
60	-0.086	3.586

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-10
TEST TYPE: RISING HEAD
DTW (TOC): 3.60

UNIT#: 2 TEST#: 2

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/24/92 NA

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.449	4.049
0.0033	-0.737	4.337
0.0066	-0.744	4.344
0.01	-0.542	4.142
0.0133	-0.362	3.962
0.0166	-0.353	3.953
0.02	-0.471	4.071
0.0233	-0.577	4.177
0.0266	-0.577	4.177
0.03	-0.500	4.100
0.0333	-0.433	4.033
0.05	-0.468	4.068
0.0666	-0.484	4.084
0.0833	-0.478	4.078
0.1	-0.471	4.071
0.1166	-0.465	4.065
0.1333	-0.462	4.062
0.15	-0.455	4.055
0.1666	-0.452	4.052
0.1833	-0.449	4.049
0.2	-0.452	4.052
0.2166	-0.446	4.046
0.2333	-0.446	4.046
0.25	-0.446	4.046
0.2666	-0.443	4.043
0.2833	-0.436	4.036
0.3	-0.459	4.059
0.3166	-0.446	4.046
0.3333	-0.430	4.030
0.4166	-0.420	4.020
0.5	-0.414	4.014
0.5833	-0.404	4.004
0.6666	-0.398	3.998
0.75	-0.394	3.994

0.8333	-0.388	3.988
0.9166	-0.369	3.969
1	-0.369	3.969
1.0833	-0.369	3.969
1.1666	-0.356	3.956
1.25	-0.350	3.950
1.3333	-0.356	3.956
1.4166	-0.359	3.959
1.5	-0.340	3.940
1.5833	-0.324	3.924
1.6666	-0.324	3.924
1.75	-0.324	3.924
1.8333	-0.314	3.914
1.9166	-0.308	3.908
2	-0.311	3.911
2.5	-0.282	3.882
3	-0.260	3.860
3.5	-0.231	3.831
4	-0.215	3.815
4.5	-0.202	3.802
5	-0.193	3.793
5.5	-0.173	3.773
6	-0.164	3.764
6.5	-0.161	3.761
7	-0.145	3.745
7.5	-0.135	3.735
8	-0.132	3.732
8.5	-0.119	3.719
9	-0.116	3.716
9.5	-0.106	3.706
10	-0.100	3.700
12	-0.084	3.684
14	-0.065	3.665
16	-0.058	3.658
18	-0.039	3.639
20	-0.036	3.636
22	-0.020	3.620
24	-0.013	3.613
26	-0.007	3.607
28	-0.004	3.604
30	-0.004	3.604
32	0.003	3.597
34	0.012	3.588
36	0.016	3.584
38	0.019	3.581
40	0.025	3.575
42	0.022	3.578
44	0.032	3.568
46	0.032	3.568

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-11
TEST TYPE: RISING HEAD
DTW (TOC): 4.00

UNIT#: 2 TEST#: 3

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/28/92 13:55

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.003	4.003
0.0033	-0.605	4.605
0.0066	-1.095	5.095
0.01	-1.165	5.165
0.0133	-1.226	5.226
0.0166	-1.521	5.521
0.02	-1.348	5.348
0.0233	-0.448	4.448
0.0266	0.307	3.693
0.03	0.352	3.648
0.0333	-0.14	4.140
0.05	-0.429	4.429
0.0666	-2.024	6.024
0.0833	-2.005	6.005
0.1	-3.613	7.613
0.1166	-4.019	8.019
0.1333	-5.496	9.496
0.15	-5.387	9.387
0.1666	-6.422	10.422
0.1833	-4.234	8.234
0.2	-3.401	7.401
0.2166	-2.511	6.511
0.2333	-2.021	6.021
0.25	-1.937	5.937
0.2666	-1.867	5.867
0.2833	-1.8	5.800
0.3	-1.732	5.732
0.3166	-1.643	5.643
0.3333	-1.531	5.531
0.4166	-1.294	5.294
0.5	-1.063	5.063
0.5833	-0.874	4.874
0.6666	-0.72	4.720
0.75	-0.598	4.598

0.8333	-0.499	4.499
0.9166	-0.419	4.419
1	-0.355	4.355
1.0833	-0.304	4.304
1.1666	-0.262	4.262
1.25	-0.23	4.230
1.3333	-0.205	4.205
1.4166	-0.182	4.182
1.5	-0.163	4.163
1.5833	-0.15	4.150
1.6666	-0.137	4.137
1.75	-0.128	4.128
1.8333	-0.118	4.118
1.9166	-0.112	4.112
2	-0.105	4.105
2.5	-0.073	4.073
3	-0.06	4.060
3.5	-0.054	4.054
4	-0.048	4.048
4.5	-0.044	4.044
5	-0.041	4.041
5.5	-0.038	4.038
6	-0.038	4.038
6.5	-0.035	4.035
7	-0.035	4.035
7.5	-0.032	4.032
8	-0.032	4.032
8.5	-0.032	4.032
9	-0.032	4.032
9.5	-0.028	4.028
10	-0.028	4.028
12	-0.028	4.028
14	-0.025	4.025
16	-0.025	4.025
18	-0.025	4.025
20	-0.025	4.025
22	-0.025	4.025
24	-0.028	4.028
26	-0.028	4.028
28	-0.028	4.028
30	-0.025	4.025
32	-0.028	4.028
34	-0.025	4.025
36	-0.025	4.025

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-14
TEST TYPE: RISING HEAD
DTW (TOC): 4.00

UNIT#: 1 TEST#: 2

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/28/92 12:46

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.003	4.003
0.0033	0	4.000
0.0066	-0.139	4.139
0.01	-0.392	4.392
0.0133	-0.663	4.663
0.0166	-1.049	5.049
0.02	-1.014	5.014
0.0233	-0.856	4.856
0.0266	-1.251	5.251
0.03	-1.824	5.824
0.0333	-1.533	5.533
0.05	-1.324	5.324
0.0666	-1.346	5.346
0.0833	-1.331	5.331
0.1	-1.308	5.308
0.1166	-1.293	5.293
0.1333	-1.277	5.277
0.15	-1.264	5.264
0.1666	-1.248	5.248
0.1833	-1.236	5.236
0.2	-1.223	5.223
0.2166	-1.21	5.210
0.2333	-1.198	5.198
0.25	-1.188	5.188
0.2666	-1.176	5.176
0.2833	-1.166	5.166
0.3	-1.153	5.153
0.3166	-1.144	5.144
0.3333	-1.131	5.131
0.4166	-1.084	5.084
0.5	-1.04	5.040
0.5833	-0.999	4.999
0.6666	-0.961	4.961
0.75	-0.926	4.926

0.8333	-0.891	4.891
0.9166	-0.859	4.859
1	-0.831	4.831
1.0833	-0.803	4.803
1.1666	-0.777	4.777
1.25	-0.752	4.752
1.3333	-0.727	4.727
1.4166	-0.708	4.708
1.5	-0.686	4.686
1.5833	-0.667	4.667
1.6666	-0.648	4.648
1.75	-0.629	4.629
1.8333	-0.61	4.610
1.9166	-0.594	4.594
2	-0.578	4.578
2.5	-0.493	4.493
3	-0.426	4.426
3.5	-0.373	4.373
4	-0.331	4.331
4.5	-0.297	4.297
5	-0.265	4.265
5.5	-0.24	4.240
6	-0.221	4.221
6.5	-0.202	4.202
7	-0.186	4.186
7.5	-0.173	4.173
8	-0.164	4.164
8.5	-0.151	4.151
9	-0.145	4.145
9.5	-0.135	4.135
10	-0.129	4.129
12	-0.107	4.107
14	-0.091	4.091
16	-0.082	4.082
18	-0.072	4.072
20	-0.066	4.066
22	-0.06	4.060
24	-0.06	4.060
26	-0.06	4.060
28	-0.056	4.056
30	-0.053	4.053
32	-0.05	4.050
34	-0.05	4.050
36	-0.047	4.047
38	-0.047	4.047
40	-0.047	4.047
42	-0.047	4.047
44	-0.05	4.050
46	-0.047	4.047
48	-0.044	4.044
50	-0.044	4.044
52	-0.047	4.047

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-18
TEST TYPE: RISING HEAD
DTW (TOC): 2.70

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 13:30

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	0.047	2.653
0.0033	0.098	2.602
0.0066	0.11	2.590
0.01	0.063	2.637
0.0133	0.022	2.678
0.0166	-0.003	2.703
0.02	-0.003	2.703
0.0233	0.006	2.694
0.0266	-0.009	2.709
0.03	-0.06	2.760
0.0333	-0.107	2.807
0.05	-0.505	3.205
0.0666	-0.382	3.082
0.0833	-0.335	3.035
0.1	-0.335	3.035
0.1166	-0.328	3.028
0.1333	-0.319	3.019
0.15	-0.313	3.013
0.1666	-0.306	3.006
0.1833	-0.3	3.000
0.2	-0.294	2.994
0.2166	-0.29	2.990
0.2333	-0.284	2.984
0.25	-0.278	2.978
0.2666	-0.275	2.975
0.2833	-0.275	2.975
0.3	-0.268	2.968
0.3166	-0.265	2.965
0.3333	-0.262	2.962
0.4166	-0.243	2.943
0.5	-0.227	2.927
0.5833	-0.215	2.915
0.6666	-0.202	2.902
0.75	-0.192	2.892

0.8333	-0.183	2.883
0.9166	-0.177	2.877
1	-0.164	2.864
1.0833	-0.158	2.858
1.1666	-0.148	2.848
1.25	-0.145	2.845
1.3333	-0.135	2.835
1.4166	-0.126	2.826
1.5	-0.123	2.823
1.5833	-0.113	2.813
1.6666	-0.11	2.810
1.75	-0.107	2.807
1.8333	-0.101	2.801
1.9166	-0.098	2.798
2	-0.091	2.791
2.5	-0.066	2.766
3	-0.047	2.747
3.5	-0.031	2.731
4	-0.022	2.722
4.5	-0.012	2.712
5	0.003	2.697
5.5	0.009	2.691
6	0.018	2.682
6.5	0.022	2.678
7	0.025	2.675
7.5	0.028	2.672
8	0.034	2.666
8.5	0.037	2.663
9	0.037	2.663
9.5	0.041	2.659
10	0.044	2.656
12	0.053	2.647
14	0.056	2.644
16	0.063	2.637
18	0.063	2.637
20	0.069	2.631
22	0.069	2.631
24	0.072	2.628
26	0.075	2.625
28	0.082	2.618
30	0.085	2.615
32	0.088	2.612
34	0.088	2.612
36	0.091	2.609
38	0.091	2.609
40	0.094	2.606
42	0.098	2.602
44	0.098	2.602
46	0.101	2.599

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-21
TEST TYPE: RISING HEAD
DTW (TOC): 4.28

UNIT#: 2 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/29/92 12:01

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.112	4.392
0.0033	-0.656	4.936
0.0066	-1.313	5.593
0.01	-1.982	6.262
0.0133	-2.2	6.480
0.0166	-1.79	6.070
0.02	-1.021	5.301
0.0233	-0.381	4.661
0.0266	-0.32	4.600
0.03	-1.037	5.317
0.0333	-1.957	6.237
0.05	-0.768	5.048
0.0666	-1.905	6.185
0.0833	-1.665	5.945
0.1	-1.268	5.548
0.1166	-1.636	5.916
0.1333	-1.553	5.833
0.15	-1.422	5.702
0.1666	-1.54	5.820
0.1833	-1.505	5.785
0.2	-1.463	5.743
0.2166	-1.499	5.779
0.2333	-1.483	5.763
0.25	-1.467	5.747
0.2666	-1.476	5.756
0.2833	-1.47	5.750
0.3	-1.46	5.740
0.3166	-1.46	5.740
0.3333	-1.457	5.737
0.4166	-1.438	5.718
0.5	-1.419	5.699
0.5833	-1.402	5.682
0.6666	-1.386	5.666
0.75	-1.37	5.650

0.8333	-1.358	5.638
0.9166	-1.342	5.622
1	-1.329	5.609
1.0833	-1.316	5.596
1.1666	-1.303	5.583
1.25	-1.294	5.574
1.3333	-1.278	5.558
1.4166	-1.268	5.548
1.5	-1.255	5.535
1.5833	-1.246	5.526
1.6666	-1.233	5.513
1.75	-1.223	5.503
1.8333	-1.21	5.490
1.9166	-1.201	5.481
2	-1.191	5.471
2.5	-1.13	5.410
3	-1.076	5.356
3.5	-1.025	5.305
4	-0.98	5.260
4.5	-0.932	5.212
5	-0.893	5.173
5.5	-0.855	5.135
6	-0.816	5.096
6.5	-0.778	5.058
7	-0.749	5.029
7.5	-0.72	5.000
8	-0.691	4.971
8.5	-0.663	4.943
9	-0.637	4.917
9.5	-0.611	4.891
10	-0.589	4.869
12	-0.502	4.782
14	-0.438	4.718
16	-0.39	4.670
18	-0.339	4.619
20	-0.301	4.581
22	-0.275	4.555
24	-0.246	4.526
26	-0.224	4.504
28	-0.208	4.488
30	-0.185	4.465
32	-0.176	4.456
34	-0.166	4.446
36	-0.153	4.433
38	-0.144	4.424
40	-0.137	4.417
42	-0.131	4.411
44	-0.121	4.401
46	-0.118	4.398
48	-0.108	4.388
50	-0.102	4.382
52	-0.105	4.385
54	-0.099	4.379
56	-0.092	4.372

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-22
TEST TYPE: RISING HEAD
DTW (TOC): 4.00

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 10:25

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.382	4.382
0.0033	-0.363	4.363
0.0066	-0.369	4.369
0.01	-0.42	4.420
0.0133	-0.474	4.474
0.0166	-0.493	4.493
0.02	-0.467	4.467
0.0233	-0.42	4.420
0.0266	-0.376	4.376
0.03	-0.36	4.360
0.0333	-0.376	4.376
0.05	-0.369	4.369
0.0666	-0.392	4.392
0.0833	-0.363	4.363
0.1	-0.338	4.338
0.1166	-0.338	4.338
0.1333	-0.331	4.331
0.15	-0.316	4.316
0.1666	-0.309	4.309
0.1833	-0.303	4.303
0.2	-0.297	4.297
0.2166	-0.29	4.290
0.2333	-0.287	4.287
0.25	-0.281	4.281
0.2666	-0.275	4.275
0.2833	-0.271	4.271
0.3	-0.262	4.262
0.3166	-0.262	4.262
0.3333	-0.262	4.262
0.4166	-0.24	4.240
0.5	-0.224	4.224
0.5833	-0.208	4.208
0.6666	-0.199	4.199
0.75	-0.192	4.192

0.8333	-0.183	4.183
0.9166	-0.173	4.173
1	-0.17	4.170
1.0833	-0.164	4.164
1.1666	-0.158	4.158
1.25	-0.148	4.148
1.3333	-0.136	4.136
1.4166	-0.136	4.136
1.5	-0.132	4.132
1.5833	-0.129	4.129
1.6666	-0.126	4.126
1.75	-0.116	4.116
1.8333	-0.116	4.116
1.9166	-0.116	4.116
2	-0.11	4.110
2.5	-0.088	4.088
3	-0.072	4.072
3.5	-0.063	4.063
4	-0.053	4.053
4.5	-0.044	4.044
5	-0.034	4.034
5.5	-0.034	4.034
6	-0.028	4.028
6.5	-0.025	4.025
7	-0.018	4.018
7.5	-0.022	4.022
8	-0.015	4.015
8.5	-0.015	4.015
9	-0.012	4.012
9.5	-0.012	4.012
10	-0.009	4.009
12	0.003	3.997
14	0.006	3.994

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-23
TEST TYPE: RISING HEAD
DTW (TOC): 3.55

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 13:35

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.566	4.116
0.0033	-0.595	4.145
0.0066	-0.528	4.078
0.01	-0.509	4.059
0.0133	-0.502	4.052
0.0166	-0.493	4.043
0.02	-0.48	4.030
0.0233	-0.47	4.020
0.0266	-0.461	4.011
0.03	-0.451	4.001
0.0333	-0.442	3.992
0.05	-0.397	3.947
0.0666	-0.358	3.908
0.0833	-0.323	3.873
0.1	-0.294	3.844
0.1166	-0.272	3.822
0.1333	-0.249	3.799
0.15	-0.233	3.783
0.1666	-0.214	3.764
0.1833	-0.198	3.748
0.2	-0.185	3.735
0.2166	-0.172	3.722
0.2333	-0.16	3.710
0.25	-0.15	3.700
0.2666	-0.14	3.690
0.2833	-0.134	3.684
0.3	-0.124	3.674
0.3166	-0.121	3.671
0.3333	-0.115	3.665
0.4166	-0.083	3.633
0.5	-0.067	3.617
0.5833	-0.057	3.607
0.6666	-0.051	3.601
0.75	-0.041	3.591

0.8333	-0.038	3.588
0.9166	-0.035	3.585
1	-0.035	3.585
1.0833	-0.028	3.578
1.1666	-0.025	3.575
1.25	-0.025	3.575
1.3333	-0.025	3.575
1.4166	-0.022	3.572
1.5	-0.019	3.569
1.5833	-0.022	3.572
1.6666	-0.016	3.566
1.75	-0.016	3.566
1.8333	-0.019	3.569
1.9166	-0.016	3.566
2	-0.016	3.566
2.5	-0.019	3.569
3	-0.016	3.566
3.5	-0.012	3.562
4	-0.009	3.559
4.5	-0.009	3.559
5	-0.009	3.559
5.5	-0.006	3.556
6	-0.006	3.556
6.5	-0.006	3.556
7	-0.003	3.553
7.5	-0.003	3.553
8	-0.006	3.556
8.5	-0.006	3.556
9	-0.006	3.556
9.5	0	3.550
10	-0.006	3.556
12	0.003	3.547
14	0.003	3.547
16	0.003	3.547
18	0.006	3.544
20	0.009	3.541
22	0.009	3.541
24	0.012	3.538
26	0.019	3.531
28	0.019	3.531
30	0.019	3.531
32	0.022	3.528
34	0.025	3.525
36	0.025	3.525
38	0.028	3.522
40	0.028	3.522
42	0.028	3.522
44	0.025	3.525
46	0.028	3.522
48	0.025	3.525
50	0.032	3.518
52	0.032	3.518

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-24
TEST TYPE: RISING HEAD
DTW (TOC): 4.20

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 14:40

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.451	4.651
0.0033	-0.438	4.638
0.0066	-0.429	4.629
0.01	-0.432	4.632
0.0133	-0.429	4.629
0.0166	-0.422	4.622
0.02	-0.422	4.622
0.0233	-0.419	4.619
0.0266	-0.419	4.619
0.03	-0.416	4.616
0.0333	-0.413	4.613
0.05	-0.406	4.606
0.0666	-0.4	4.600
0.0833	-0.393	4.593
0.1	-0.387	4.587
0.1166	-0.381	4.581
0.1333	-0.377	4.577
0.15	-0.371	4.571
0.1666	-0.368	4.568
0.1833	-0.365	4.565
0.2	-0.358	4.558
0.2166	-0.355	4.555
0.2333	-0.352	4.552
0.25	-0.349	4.549
0.2666	-0.342	4.542
0.2833	-0.342	4.542
0.3	-0.336	4.536
0.3166	-0.333	4.533
0.3333	-0.329	4.529
0.4166	-0.31	4.510
0.5	-0.297	4.497
0.5833	-0.281	4.481
0.6666	-0.269	4.469
0.75	-0.256	4.456

0.8333	-0.246	4.446
0.9166	-0.233	4.433
1	-0.224	4.424
1.0833	-0.217	4.417
1.1666	-0.208	4.408
1.25	-0.198	4.398
1.3333	-0.192	4.392
1.4166	-0.185	4.385
1.5	-0.176	4.376
1.5833	-0.169	4.369
1.6666	-0.166	4.366
1.75	-0.16	4.360
1.8333	-0.153	4.353
1.9166	-0.147	4.347
2	-0.144	4.344
2.5	-0.118	4.318
3	-0.099	4.299
3.5	-0.083	4.283
4	-0.07	4.270
4.5	-0.06	4.260
5	-0.054	4.254
5.5	-0.044	4.244
6	-0.038	4.238
6.5	-0.035	4.235
7	-0.028	4.228
7.5	-0.025	4.225
8	-0.022	4.222
8.5	-0.019	4.219
9	-0.016	4.216
9.5	-0.012	4.212
10	-0.012	4.212
12	0.003	4.197
14	0.016	4.184
16	0.028	4.172
18	0.038	4.162
20	0.044	4.156
22	0.054	4.146
24	0.064	4.136

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-25
TEST TYPE: RISING HEAD
DTW (TOC): 7.00

UNIT#: 2 TEST#: 1

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/24/92 NA

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.455	7.455
0.0033	-0.436	7.436
0.0066	-0.420	7.420
0.01	-0.404	7.404
0.0133	-0.388	7.388
0.0166	-0.375	7.375
0.02	-0.359	7.359
0.0233	-0.346	7.346
0.0266	-0.334	7.334
0.03	-0.321	7.321
0.0333	-0.298	7.298
0.05	-0.244	7.244
0.0666	-0.196	7.196
0.0833	-0.161	7.161
0.1	-0.129	7.129
0.1166	-0.103	7.103
0.1333	-0.087	7.087
0.15	-0.071	7.071
0.1666	-0.061	7.061
0.1833	-0.045	7.045
0.2	-0.039	7.039
0.2166	-0.033	7.033
0.2333	-0.026	7.026
0.25	-0.020	7.020
0.2666	-0.017	7.017
0.2833	0.003	6.997
0.3	-0.004	7.004
0.3166	0.000	7.000
0.3333	0.000	7.000
0.4166	0.006	6.994
0.5	0.012	6.988
0.5833	0.016	6.984
0.6666	0.016	6.984
0.75	0.016	6.984

0.8333	0.019	6.981
0.9166	0.016	6.984
1	0.019	6.981
1.0833	0.019	6.981
1.1666	0.019	6.981
1.25	0.019	6.981
1.3333	0.019	6.981
1.4166	0.016	6.984
1.5	0.016	6.984
1.5833	0.019	6.981
1.6666	0.019	6.981
1.75	0.022	6.978
1.8333	0.019	6.981
1.9166	0.019	6.981
2	0.019	6.981
2.5	0.025	6.975
3	0.028	6.972
3.5	0.028	6.972
4	0.025	6.975
4.5	0.028	6.972
5	0.035	6.965
5.5	0.028	6.972
6	0.028	6.972
6.5	0.028	6.972
7	0.028	6.972
7.5	0.025	6.975
8	0.025	6.975
8.5	0.025	6.975
9	0.025	6.975
9.5	0.028	6.972
10	0.028	6.972
12	0.032	6.968
14	0.009	6.991
16	0.028	6.972
18	0.035	6.965
20	0.028	6.972
22	0.025	6.975
24	0.025	6.975
26	0.019	6.981
28	0.028	6.972
30	0.028	6.972
32	0.028	6.972
34	0.028	6.972
36	0.032	6.968
38	0.035	6.965
40	0.032	6.968
42	0.032	6.968
44	0.032	6.968
46	0.032	6.968

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-27
TEST TYPE: RISING HEAD
DTW (TOC): 3.55

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/23/92 14:45

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.752	4.302
0.0033	-0.878	4.428
0.0066	-0.654	4.204
0.01	-0.916	4.466
0.0133	-1.369	4.919
0.0166	-1.252	4.802
0.02	-1.296	4.846
0.0233	-1.425	4.975
0.0266	-1.745	5.295
0.03	-2.089	5.639
0.0333	-1.988	5.538
0.05	-1.811	5.361
0.0666	-1.738	5.288
0.0833	-1.672	5.222
0.1	-1.618	5.168
0.1166	-1.568	5.118
0.1333	-1.52	5.070
0.15	-1.476	5.026
0.1666	-1.435	4.985
0.1833	-1.394	4.944
0.2	-1.356	4.906
0.2166	-1.318	4.868
0.2333	-1.286	4.836
0.25	-1.252	4.802
0.2666	-1.22	4.770
0.2833	-1.188	4.738
0.3	-1.16	4.710
0.3166	-1.131	4.681
0.3333	-1.103	4.653
0.4166	-0.976	4.526
0.5	-0.869	4.419
0.5833	-0.777	4.327
0.6666	-0.698	4.248
0.75	-0.632	4.182

0.8333	-0.572	4.122
0.9166	-0.518	4.068
1	-0.474	4.024
1.0833	-0.433	3.983
1.1666	-0.398	3.948
1.25	-0.366	3.916
1.3333	-0.338	3.888
1.4166	-0.313	3.863
1.5	-0.29	3.840
1.5833	-0.268	3.818
1.6666	-0.249	3.799
1.75	-0.234	3.784
1.8333	-0.218	3.768
1.9166	-0.205	3.755
2	-0.192	3.742
2.5	-0.139	3.689
3	-0.104	3.654
3.5	-0.082	3.632
4	-0.066	3.616
4.5	-0.053	3.603
5	-0.044	3.594
5.5	-0.037	3.587
6	-0.031	3.581
6.5	-0.028	3.578
7	-0.022	3.572
7.5	-0.019	3.569
8	-0.019	3.569
8.5	-0.015	3.565
9	-0.012	3.562
9.5	-0.009	3.559
10	-0.006	3.556
12	0	3.550
14	0.012	3.538
16	0.022	3.528
18	0.031	3.519
20	0.041	3.509
22	0.044	3.506
24	0.056	3.494
26	0.063	3.487
28	0.063	3.487
30	0.066	3.484
32	0.072	3.478

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-28
TEST TYPE: RISING HEAD
DTW (TOC): 4.86

UNIT#: 1 TEST#: 3

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/28/92 14:44

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.003	4.863
0.0033	-0.079	4.939
0.0066	-0.584	5.444
0.01	2.181	2.679
0.0133	-0.736	5.596
0.0166	-0.126	4.986
0.02	0.436	4.424
0.0233	0.145	4.715
0.0266	-0.044	4.904
0.03	-2.99	7.850
0.0333	-0.075	4.935
0.05	-2.19	7.050
0.0666	-2.156	7.016
0.0833	-2.14	7.000
0.1	-2.134	6.994
0.1166	-2.127	6.987
0.1333	-2.121	6.981
0.15	-2.115	6.975
0.1666	-2.111	6.971
0.1833	-2.108	6.968
0.2	-2.105	6.965
0.2166	-2.099	6.959
0.2333	-2.096	6.956
0.25	-2.092	6.952
0.2666	-2.086	6.946
0.2833	-2.083	6.943
0.3	-2.08	6.940
0.3166	-2.077	6.937
0.3333	-2.074	6.934
0.4166	-2.055	6.915
0.5	-2.036	6.896
0.5833	-2.02	6.880
0.6666	-2.001	6.861
0.75	-1.985	6.845

0.8333	-1.969	6.829
0.9166	-1.953	6.813
1	-1.938	6.798
1.0833	-1.919	6.779
1.1666	-1.903	6.763
1.25	-1.887	6.747
1.3333	-1.874	6.734
1.4166	-1.859	6.719
1.5	-1.843	6.703
1.5833	-1.827	6.687
1.6666	-1.811	6.671
1.75	-1.798	6.658
1.8333	-1.783	6.643
1.9166	-1.77	6.630
2	-1.757	6.617
2.5	-1.672	6.532
3	-1.593	6.453
3.5	-1.52	6.380
4	-1.451	6.311
4.5	-1.384	6.244
5	-1.324	6.184
5.5	-1.264	6.124
6	-1.21	6.070
6.5	-1.157	6.017
7	-1.106	5.966
7.5	-1.062	5.922
8	-1.014	5.874
8.5	-0.973	5.833
9	-0.932	5.792
9.5	-0.894	5.754
10	-0.859	5.719
12	-0.73	5.590
14	-0.626	5.486
16	-0.537	5.397
18	-0.467	5.327
20	-0.411	5.271
22	-0.363	5.223
24	-0.325	5.185
26	-0.297	5.157
28	-0.268	5.128
30	-0.252	5.112
32	-0.237	5.097
34	-0.224	5.084
36	-0.211	5.071
38	-0.199	5.059
40	-0.189	5.049
42	-0.183	5.043
44	-0.177	5.037
46	-0.177	5.037

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-29
TEST TYPE: RISING HEAD
DTW (TOC): 4.60

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000
REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/24/92 NA

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.006	4.606
0.0033	-0.224	4.824
0.0066	-0.521	5.121
0.01	-0.584	5.184
0.0133	-0.474	5.074
0.0166	-0.36	4.960
0.02	-0.354	4.954
0.0233	-0.388	4.988
0.0266	-0.395	4.995
0.03	-0.369	4.969
0.0333	-0.344	4.944
0.05	-0.319	4.919
0.0666	-0.297	4.897
0.0833	-0.281	4.881
0.1	-0.265	4.865
0.1166	-0.259	4.859
0.1333	-0.243	4.843
0.15	-0.233	4.833
0.1666	-0.227	4.827
0.1833	-0.221	4.821
0.2	-0.208	4.808
0.2166	-0.202	4.802
0.2333	-0.196	4.796
0.25	-0.186	4.786
0.2666	-0.18	4.780
0.2833	-0.173	4.773
0.3	-0.17	4.770
0.3166	-0.161	4.761
0.3333	-0.158	4.758
0.4166	-0.132	4.732
0.5	-0.116	4.716
0.5833	-0.101	4.701
0.6666	-0.085	4.685
0.75	-0.079	4.679

0.8333	-0.069	4.669
0.9166	-0.066	4.666
1	-0.06	4.660
1.0833	-0.047	4.647
1.1666	-0.047	4.647
1.25	-0.044	4.644
1.3333	-0.034	4.634
1.4166	-0.034	4.634
1.5	-0.028	4.628
1.5833	-0.028	4.628
1.6666	-0.028	4.628
1.75	-0.031	4.631
1.8333	-0.025	4.625
1.9166	-0.025	4.625
2	-0.022	4.622
2.5	-0.028	4.628
3	-0.015	4.615
3.5	-0.022	4.622
4	-0.018	4.618
4.5	-0.018	4.618
5	-0.018	4.618
5.5	-0.022	4.622
6	-0.022	4.622
6.5	-0.022	4.622
7	-0.025	4.625
7.5	-0.022	4.622
8	-0.018	4.618
8.5	-0.025	4.625
9	-0.025	4.625
9.5	-0.028	4.628
10	-0.028	4.628
12	-0.031	4.631
14	-0.028	4.628
16	-0.031	4.631
18	-0.031	4.631
20	-0.034	4.634
22	-0.031	4.631

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-30
TEST TYPE: RISING HEAD
DTW (TOC): 4.80

UNIT#: 2 TEST#: 2

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/28/92 12:01

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.003	4.803
0.0033	-0.028	4.828
0.0066	-0.169	4.969
0.01	-1.515	6.315
0.0133	-0.659	5.459
0.0166	-2.453	7.253
0.02	-4.112	8.912
0.0233	-4	8.800
0.0266	-3.712	8.512
0.03	-3.574	8.374
0.0333	-3.539	8.339
0.05	-3.347	8.147
0.0666	-3.177	7.977
0.0833	-3.02	7.820
0.1	-2.892	7.692
0.1166	-2.767	7.567
0.1333	-2.645	7.445
0.15	-2.53	7.330
0.1666	-2.415	7.215
0.1833	-2.312	7.112
0.2	-2.21	7.010
0.2166	-2.11	6.910
0.2333	-2.017	6.817
0.25	-1.928	6.728
0.2666	-1.841	6.641
0.2833	-1.761	6.561
0.3	-1.681	6.481
0.3166	-1.607	6.407
0.3333	-1.534	6.334
0.4166	-1.207	6.007
0.5	-0.951	5.751
0.5833	-0.746	5.546
0.6666	-0.586	5.386
0.75	-0.461	5.261

0.8333	-0.365	5.165
0.9166	-0.291	5.091
1	-0.233	5.033
1.0833	-0.192	4.992
1.1666	-0.16	4.960
1.25	-0.134	4.934
1.3333	-0.115	4.915
1.4166	-0.099	4.899
1.5	-0.089	4.889
1.5833	-0.08	4.880
1.6666	-0.07	4.870
1.75	-0.064	4.864
1.8333	-0.06	4.860
1.9166	-0.057	4.857
2	-0.054	4.854
2.5	-0.041	4.841
3	-0.035	4.835
3.5	-0.032	4.832
4	-0.028	4.828
4.5	-0.025	4.825
5	-0.022	4.822
5.5	-0.022	4.822
6	-0.022	4.822
6.5	-0.022	4.822
7	-0.022	4.822
7.5	-0.022	4.822
8	-0.019	4.819
8.5	-0.019	4.819
9	-0.016	4.816
9.5	-0.016	4.816
10	-0.016	4.816
12	-0.016	4.816
14	-0.016	4.816
16	-0.016	4.816
18	-0.012	4.812
20	-0.012	4.812
22	-0.012	4.812
24	-0.012	4.812
26	-0.009	4.809

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-31
TEST TYPE: RISING HEAD
DTW (TOC): 3.60

UNIT#: 1 TEST#: 0

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.01
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/28/92 10:48

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	0.009	3.591
0.0033	-0.803	4.403
0.0066	0.098	3.502
0.01	0.765	2.835
0.0133	0.148	3.452
0.0166	-1.312	4.912
0.02	0.309	3.291
0.0233	-0.373	3.973
0.0266	-1.321	4.921
0.03	-1.055	4.655
0.0333	-1.119	4.719
0.05	-1.925	5.525
0.0666	-1.909	5.509
0.0833	-1.9	5.500
0.1	-1.89	5.490
0.1166	-1.871	5.471
0.1333	-1.877	5.477
0.15	-1.849	5.449
0.1666	-1.84	5.440
0.1833	-1.833	5.433
0.2	-1.824	5.424
0.2166	-1.814	5.414
0.2333	-1.805	5.405
0.25	-1.798	5.398
0.2666	-1.789	5.389
0.2833	-1.779	5.379
0.3	-1.773	5.373
0.3166	-1.767	5.367
0.3333	-1.757	5.357
0.4166	-1.723	5.323
0.5	-1.685	5.285
0.5833	-1.653	5.253
0.6666	-1.618	5.218
0.75	-1.587	5.187

0.8333	-1.555	5.155
0.9166	-1.527	5.127
1	-1.498	5.098
1.0833	-1.47	5.070
1.1666	-1.444	5.044
1.25	-1.416	5.016
1.3333	-1.394	4.994
1.4166	-1.368	4.968
1.5	-1.343	4.943
1.5833	-1.318	4.918
1.6666	-1.296	4.896
1.75	-1.277	4.877
1.8333	-1.255	4.855
1.9166	-1.233	4.833
2	-1.21	4.810
2.5	-1.097	4.697
3	-0.999	4.599
3.5	-0.907	4.507
4	-0.831	4.431
4.5	-0.758	4.358
5	-0.698	4.298
5.5	-0.644	4.244
6	-0.591	4.191
6.5	-0.546	4.146
7	-0.505	4.105
7.5	-0.471	4.071
8	-0.436	4.036
8.5	-0.407	4.007
9	-0.382	3.982
9.5	-0.354	3.954
10	-0.331	3.931
12	-0.252	3.852
14	-0.196	3.796
16	-0.154	3.754
18	-0.123	3.723
20	-0.101	3.701
22	-0.082	3.682
24	-0.066	3.666
26	-0.053	3.653
28	-0.041	3.641
30	-0.031	3.631
32	-0.025	3.625
34	-0.022	3.622
36	-0.018	3.618
38	-0.015	3.615
40	-0.012	3.612
42	-0.006	3.606
44	-0.003	3.603

SE1000C
ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-32
TEST TYPE: RISING HEAD
DTW (TOC): 3.12

UNIT#: 2 TEST#: 7

<u>SETUPS:</u>	<u>INPUT#</u>
TYPE	LEVEL F
MODE	SURFACE
I.D.	00000

REFERENCE	0.0000
LINEARITY	0.0000
SCALE FACTOR	10.15
OFFSET	-0.03
DELAY (mSec)	50

STEP 0 1/30/92 11:06

Elapsed time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-0.352	3.472
0.0033	-0.615	3.735
0.0066	-1.06	4.180
0.01	-1.524	4.644
0.0133	-1.87	4.990
0.0166	-1.569	4.689
0.02	-1.008	4.128
0.0233	-0.896	4.016
0.0266	-1.229	4.349
0.03	-1.675	4.795
0.0333	-1.992	5.112
0.05	-1.169	4.289
0.0666	-1.492	4.612
0.0833	-1.643	4.763
0.1	-1.351	4.471
0.1166	-1.457	4.577
0.1333	-1.508	4.628
0.15	-1.402	4.522
0.1666	-1.435	4.555
0.1833	-1.447	4.567
0.2	-1.409	4.529
0.2166	-1.415	4.535
0.2333	-1.418	4.538
0.25	-1.402	4.522
0.2666	-1.402	4.522
0.2833	-1.399	4.519
0.3	-1.39	4.510
0.3166	-1.386	4.506
0.3333	-1.383	4.503
0.4166	-1.361	4.481
0.5	-1.338	4.458
0.5833	-1.319	4.439
0.6666	-1.3	4.420
0.75	-1.281	4.401

0.8333	-1.265	4.385
0.9166	-1.249	4.369
1	-1.233	4.353
1.0833	-1.217	4.337
1.1666	-1.204	4.324
1.25	-1.191	4.311
1.3333	-1.175	4.295
1.4166	-1.162	4.282
1.5	-1.149	4.269
1.5833	-1.137	4.257
1.6666	-1.124	4.244
1.75	-1.114	4.234
1.8333	-1.101	4.221
1.9166	-1.089	4.209
2	-1.079	4.199
2.5	-1.012	4.132
3	-0.954	4.074
3.5	-0.9	4.020
4	-0.852	3.972
4.5	-0.807	3.927
5	-0.765	3.885
5.5	-0.727	3.847
6	-0.691	3.811
6.5	-0.659	3.779
7	-0.627	3.747
7.5	-0.598	3.718
8	-0.573	3.693
8.5	-0.547	3.667
9	-0.525	3.645
9.5	-0.502	3.622
10	-0.483	3.603
12	-0.413	3.533
14	-0.352	3.472
16	-0.307	3.427
18	-0.269	3.389
20	-0.24	3.360
22	-0.214	3.334
24	-0.195	3.315
26	-0.176	3.296
28	-0.16	3.280
30	-0.147	3.267
32	-0.137	3.257
34	-0.128	3.248
36	-0.118	3.238
38	-0.112	3.232
40	-0.108	3.228
42	-0.102	3.222
44	-0.099	3.219
46	-0.092	3.212
48	-0.092	3.212
50	-0.086	3.206
52	-0.083	3.203
54	-0.08	3.200
56	-0.08	3.200
58	-0.076	3.196
60	-0.076	3.196
62	-0.073	3.193
64	-0.07	3.190
66	-0.07	3.190
68	-0.07	3.190

70	-0.07	3.190
72	-0.067	3.187
74	-0.067	3.187
76	-0.067	3.187
78	-0.064	3.184
80	-0.064	3.184
82	-0.064	3.184
84	-0.064	3.184
86	-0.06	3.180
88	-0.06	3.180
90	-0.06	3.180
92	-0.06	3.180
94	-0.06	3.180
96	-0.057	3.177
98	-0.054	3.174
100	-0.054	3.174
110	-0.051	3.171
120	-0.048	3.168
130	-0.048	3.168
140	-0.044	3.164

SE1000C
 Environmental Logger
 07/22 21:46

MONITORING WELL: MW-39
 TEST TYPE: RISING HEAD
 DTW (TOC): 7.52

Unit# 01000 Test 0

<u>SETUPS:</u>	<u>INPUT:</u>
Type	Level (F)
Mode	Surface
I.D.	00000
Reference	0.000
Linearity	0.000
Scale factor	10.020
Offset	-0.010
Delay mSEC	50.000

Step 0 07/21 10:35:06

Elapsed Time (min)	Input 1 Relative Change (feet)	Water Level Change from Static (feet)
0	-5.585	13.105
0.0033	-2.824	10.344
0.0066	-2.03	9.55
0.01	-2.078	9.598
0.0133	-2.065	9.585
0.0166	-1.999	9.519
0.02	-1.983	9.503
0.0233	-1.973	9.493
0.0266	-1.967	9.487
0.03	-1.957	9.477
0.0333	-1.954	9.474
0.05	-1.926	9.446
0.0666	-1.916	9.436
0.0833	-1.9	9.42
0.1	-1.885	9.405
0.1166	-1.866	9.386
0.1333	-1.872	9.392
0.15	-1.853	9.373
0.1666	-1.828	9.348
0.1833	-1.818	9.338
0.2	-1.809	9.329
0.2166	-1.802	9.322
0.2333	-1.793	9.313
0.25	-1.783	9.303
0.2666	-1.774	9.294
0.2833	-1.768	9.288
0.3	-1.761	9.281
0.3166	-1.752	9.272
0.3333	-1.745	9.265
0.4166	-1.708	9.228
0.5	-1.673	9.193
0.5833	-1.641	9.161
0.6666	-1.613	9.133
0.75	-1.584	9.104
0.8333	-1.556	9.076
0.9166	-1.527	9.047
1	-1.499	9.019

1.0833	-1.473	8.993
1.1666	-1.451	8.971
1.25	-1.426	8.946
1.3333	-1.398	8.918
1.4166	-1.379	8.899
1.5	-1.356	8.876
1.5833	-1.331	8.851
1.6666	-1.309	8.829
1.75	-1.287	8.807
1.8333	-1.268	8.788
1.9166	-1.246	8.766
2	-1.227	8.747
2.5	-1.113	8.633
3	-1.015	8.535
3.5	-0.923	8.443
4	-0.844	8.364
4.5	-0.771	8.291
5	-0.708	8.228
5.5	-0.651	8.171
6	-0.6	8.12
6.5	-0.553	8.073
7	-0.512	8.032
7.5	-0.468	7.988
8	-0.436	7.956
8.5	-0.401	7.921
9	-0.373	7.893
9.5	-0.344	7.864
10	-0.322	7.842
11	-0.275	7.795
12	-0.24	7.76
13	-0.208	7.728
14	-0.18	7.7
15	-0.161	7.681
16	-0.142	7.662
17	-0.126	7.646
18	-0.107	7.627
19	-0.094	7.614
20	-0.085	7.605
21	-0.079	7.599
22	-0.066	7.586
23	-0.06	7.58
24	-0.053	7.573
25	-0.047	7.567
26	-0.041	7.561
27	-0.041	7.561
28	-0.037	7.557
29	-0.031	7.551
30	-0.031	7.551
31	-0.028	7.548
32	-0.025	7.545
33	-0.025	7.545
34	-0.022	7.542
35	-0.022	7.542
36	-0.022	7.542
37	-0.018	7.538
38	-0.018	7.538
39	-0.015	7.535
40	-0.015	7.535
41	-0.015	7.535
42	-0.009	7.529
43	-0.009	7.529

RIISING HEAD SLUG TEST - MW-05

slugt1

0.964

0.166

0.437

slugt2

7.97

5

7.97

tsdata

0.0033 0.992 0

0.0066 0.148 0

0.0133 0.354 0

0.0166 0.629 0

0.02 0.869 0

0.0233 0.923 0

0.0266 0.964 1

0.03 0.964 1

0.0333 0.954 1

0.05 0.957 1

0.0666 0.954 1

0.0833 0.948 1

0.1 0.945 1

0.1166 0.942 1

0.1333 0.939 1

0.15 0.935 1

0.1666 0.932 1

0.1833 0.932 1

0.2 0.929 1

0.2166 0.929 1

0.2333 0.926 1

0.25 0.926 1

0.2666 0.926 1

0.2833 0.923 1

0.3 0.923 1

0.3166 0.92 1

0.3333 0.92 1

0.4166 0.913 1

0.5 0.907 1

0.5833 0.901 1

0.6666 0.894 1

0.75 0.888 1

0.8333 0.885 1

0.9166 0.878 1

1 0.872 1

1.0833 0.869 1

1.1666 0.866 1

1.25 0.859 1

1.3333 0.856 1

1.4166 0.85 1

1.5 0.847 1

1.5833 0.844 1

1.6666 0.837 1

1.75 0.834 1

1.8333 0.828 1

1.9166 0.825 1

2 0.822 1

2.5 0.796 1

3 0.774 1

3.5 0.752 1

4	0.73	1
4.5	0.708	1
5	0.689	1
5.5	0.67	1
6	0.651	1
6.5	0.638	1
7	0.622	1
7.5	0.61	1
8	0.6	1
8.5	0.588	1
9	0.578	1
9.5	0.569	1
10	0.556	1
12	0.518	1
14	0.48	1
16	0.452	1
18	0.423	1
20	0.398	1
22	0.379	1
24	0.357	1
26	0.344	1
28	0.328	1
30	0.313	1
32	0.303	1
34	0.29	1
36	0.281	1
38	0.271	1
40	0.262	1
42	0.259	1
44	0.246	1
46	0.24	1
48	0.233	1
50	0.23	1
52	0.227	1
54	0.221	1

RISING HEAD SLUG TEST - MW-06

slugt1

0.154

0.166

0.437

slugt2

8.07

5

8.07

tsdata

0.0033 0.154 1

0.0066 0.16 1

0.01 0.154 1

0.0133 0.16 1

0.0166 0.157 1

0.02 0.147 1

0.0233 0.16 1

0.0266 0.157 1

0.03 0.16 1

0.0333 0.157 1

0.05 0.154 1

0.0666 0.154 1

0.0833 0.154 1

0.1 0.15 1

0.1166 0.154 1

0.1333 0.15 1

0.15 0.147 1

0.1666 0.15 1

0.1833 0.147 1

0.2 0.147 1

0.2166 0.147 1

0.2333 0.154 1

0.25 0.15 1

0.2666 0.15 1

0.2833 0.157 1

0.3 0.15 1

0.3166 0.15 1

0.3333 0.147 1

0.4166 0.16 1

0.5 0.141 1

0.5833 0.141 1

0.6666 0.138 1

0.75 0.135 1

0.8333 0.141 1

0.9166 0.131 1

1 0.131 1

1.0833 0.135 1

1.1666 0.131 1

1.25 0.131 1

1.3333 0.128 1

1.4166 0.125 1

1.5 0.131 1

1.5833 0.125 1

1.6666 0.135 1

1.75 0.128 1

1.8333 0.125 1

1.9166 0.128 1

2 0.128 1

2.5 0.131 1

3 0.125 1

3.5	0.125	1
4	0.119	1
4.5	0.116	1
5	0.122	1
5.5	0.119	1
6	0.119	1
6.5	0.116	1
7	0.119	1
7.5	0.122	1
8	0.112	1
8.5	0.116	1
9	0.112	1
9.5	0.109	1
10	0.112	1
12	0.112	1
14	0.097	1
16	0.094	1
18	0.094	1
20	0.087	1
22	0.087	1
24	0.084	1
26	0.084	1
28	0.081	1
30	0.081	1
32	0.087	1
34	0.084	1
36	0.081	1
38	0.084	1
40	0.075	1
42	0.075	1
44	0.078	1
46	0.075	1
48	0.078	1
50	0.078	1
52	0.078	1
54	0.078	1
56	0.081	1
58	0.081	1
60	0.078	1
62	0.081	1
64	0.081	1
66	0.078	1

RISING HEAD SLUG TEST - MW-07

slugt1

0.185

0.166

0.437

slugt2

4.27

5

3.47

tsdata

0.0033	0.185	1
0.0066	0.185	1
0.01	0.185	1
0.0133	0.185	1
0.0166	0.185	1
0.02	0.182	1
0.0233	0.185	1
0.0266	0.185	1
0.03	0.185	1
0.0333	0.185	1
0.05	0.182	1
0.0666	0.179	1
0.0833	0.182	1
0.1	0.179	1
0.1166	0.179	1
0.1333	0.179	1
0.15	0.179	1
0.1666	0.176	1
0.1833	0.176	1
0.2	0.172	1
0.2166	0.172	1
0.2333	0.172	1
0.25	0.172	1
0.2666	0.172	1
0.2833	0.172	1
0.3	0.172	1
0.3166	0.176	1
0.3333	0.176	1
0.4166	0.172	1
0.5	0.169	1
0.5833	0.163	1
0.6666	0.163	1
0.75	0.163	1
0.8333	0.163	1
0.9166	0.163	1
1	0.16	1
1.0833	0.16	1
1.1666	0.16	1
1.25	0.156	1
1.3333	0.153	1
1.4166	0.153	1
1.5	0.15	1
1.5833	0.15	1
1.6666	0.15	1
1.75	0.147	1
1.8333	0.147	1
1.9166	0.144	1
2	0.144	1
2.5	0.14	1
3	0.134	1

3.5	0.128	1
4	0.128	1
4.5	0.124	1
5	0.118	1
5.5	0.115	1
6	0.108	1
6.5	0.108	1
7	0.105	1
7.5	0.102	1
8	0.105	1
8.5	0.096	1
9	0.096	1
9.5	0.092	1
10	0.089	1
12	0.086	1

RISING HEAD SLUG TEST - MW-08

slugt1

0.453

0.084

0.437

slugt2

11.31

5

7.81

tsdata

0.0033 0.459 0

0.0066 0.342 0

0.01 0.32 0

0.0133 0.383 0

0.0166 0.453 1

0.02 0.462 1

0.0233 0.424 1

0.0266 0.383 1

0.03 0.37 1

0.0333 0.396 1

0.05 0.389 1

0.0666 0.389 1

0.0833 0.389 1

0.1 0.389 1

0.1166 0.389 1

0.1333 0.386 1

0.15 0.386 1

0.1666 0.386 1

0.1833 0.383 1

0.2 0.383 1

0.2166 0.383 1

0.2333 0.383 1

0.25 0.38 1

0.2666 0.38 1

0.2833 0.38 1

0.3 0.383 1

0.3166 0.377 1

0.3333 0.377 1

0.4166 0.38 1

0.5 0.367 1

0.5833 0.367 1

0.6666 0.358 1

0.75 0.358 1

0.8333 0.348 1

0.9166 0.345 1

1 0.345 1

1.0833 0.342 1

1.1666 0.339 1

1.25 0.336 1

1.3333 0.332 1

1.4166 0.329 1

1.5 0.329 1

1.5833 0.329 1

1.6666 0.323 1

1.75 0.317 1

1.8333 0.323 1

1.9166 0.313 1

2 0.313 1

2.5 0.31 1

3 0.285 1

3.5	0.276	1
4	0.263	1
4.5	0.253	1
5	0.247	1
5.5	0.238	1
6	0.228	1
6.5	0.222	1
7	0.215	1
7.5	0.203	1
8	0.206	1
8.5	0.196	1
9	0.187	1
9.5	0.187	1
10	0.187	1
12	0.165	1
14	0.146	1
16	0.133	1
18	0.121	1
20	0.117	1
22	0.108	1
24	0.098	1
26	0.098	1
28	0.102	1
30	0.095	1
32	0.095	1
34	0.092	1
36	0.086	1
38	0.083	1
40	0.086	1
42	0.086	1
44	0.086	1
46	0.08	1
48	0.083	1
50	0.076	1
52	0.083	1
54	0.076	1
56	0.086	1
58	0.092	1
60	0.086	1

RISING HEAD SLUG TEST - MW-10

slugt1

0.737

0.084

0.437

slugt2

11.6

5

7.6

tsdata

0.0033	0.737	1
0.0066	0.744	1
0.01	0.542	1
0.0133	0.362	1
0.0166	0.353	1
0.02	0.471	1
0.0233	0.577	1
0.0266	0.577	1
0.03	0.5	1
0.0333	0.433	1
0.05	0.468	1
0.0666	0.484	1
0.0833	0.478	1
0.1	0.471	1
0.1166	0.465	1
0.1333	0.462	1
0.15	0.455	1
0.1666	0.452	1
0.1833	0.449	1
0.2	0.452	1
0.2166	0.446	1
0.2333	0.446	1
0.25	0.446	1
0.2666	0.443	1
0.2833	0.436	1
0.3	0.459	1
0.3166	0.446	1
0.3333	0.43	1
0.4166	0.42	1
0.5	0.414	1
0.5833	0.404	1
0.6666	0.398	1
0.75	0.394	1
0.8333	0.388	1
0.9166	0.369	1
1	0.369	1
1.0833	0.369	1
1.1666	0.356	1
1.25	0.35	1
1.3333	0.356	1
1.4166	0.359	1
1.5	0.34	1
1.5833	0.324	1
1.6666	0.324	1
1.75	0.324	1
1.8333	0.314	1
1.9166	0.308	1
2	0.311	1
2.5	0.282	1
3	0.26	1

3.5	0.231	1
4	0.215	1
4.5	0.202	1
5	0.193	1
5.5	0.173	1
6	0.164	1
6.5	0.161	1
7	0.145	1
7.5	0.135	1
8	0.132	1
8.5	0.119	1
9	0.116	1
9.5	0.106	1
10	0.1	1
12	0.084	1
14	0.065	1
16	0.058	1
18	0.039	1
20	0.036	1
22	0.02	1
24	0.013	1
26	0.007	1
28	0.004	1
30	0.004	1

RISING HEAD SLUG TEST - MW-11

slugt1

3.401

0.084

0.437

slugt2

10.12

5

7.12

tsdata

0.0033	0.605	0
0.0066	1.095	0
0.01	1.165	0
0.0133	1.226	0
0.0166	1.521	0
0.02	1.348	0
0.0233	0.448	0
0.0333	0.14	0
0.05	0.429	0
0.0666	2.024	0
0.0833	2.005	0
0.1	3.613	0
0.1166	4.019	0
0.1333	5.496	0
0.15	5.387	0
0.1666	6.422	0
0.1833	4.234	0
0.2	3.401	1
0.2166	2.511	1
0.2333	2.021	1
0.25	1.937	1
0.2666	1.867	1
0.2833	1.8	1
0.3	1.732	1
0.3166	1.643	1
0.3333	1.531	1
0.4166	1.294	1
0.5	1.063	1
0.5833	0.874	1
0.6666	0.72	1
0.75	0.598	1
0.8333	0.499	1
0.9166	0.419	1
1	0.355	1
1.0833	0.304	1
1.1666	0.262	1
1.25	0.23	1
1.3333	0.205	1
1.4166	0.182	1
1.5	0.163	1
1.5833	0.15	1
1.6666	0.137	1
1.75	0.128	1
1.8333	0.118	1
1.9166	0.112	1
2	0.105	1
2.5	0.073	1
3	0.06	1
3.5	0.054	1
4	0.048	1

4.5	0.044	1
5	0.041	1
5.5	0.038	1
6	0.038	1
6.5	0.035	1
7	0.035	1
7.5	0.032	1
8	0.032	1
8.5	0.032	1
9	0.032	1
9.5	0.028	1
10	0.028	1
12	0.028	1
14	0.025	1
16	0.025	1
18	0.025	1
20	0.025	1
22	0.025	1
24	0.028	1
26	0.028	1
28	0.028	1
30	0.025	1
32	0.028	1
34	0.025	1
36	0.025	1

RISING HEAD SLUG TEST - MW-14

slugt1

1.824

0.084

0.437

slugt2

9.07

5

6.57

tsdata

0.0066 0.139 0

0.01 0.392 0

0.0133 0.663 0

0.0166 1.049 0

0.02 1.014 0

0.0233 0.856 0

0.0266 1.251 0

0.03 1.824 1

0.0333 1.533 1

0.05 1.324 1

0.0666 1.346 1

0.0833 1.331 1

0.1 1.308 1

0.1166 1.293 1

0.1333 1.277 1

0.15 1.264 1

0.1666 1.248 1

0.1833 1.236 1

0.2 1.223 1

0.2166 1.21 1

0.2333 1.198 1

0.25 1.188 1

0.2666 1.176 1

0.2833 1.166 1

0.3 1.153 1

0.3166 1.144 1

0.3333 1.131 1

0.4166 1.084 1

0.5 1.04 1

0.5833 0.999 1

0.6666 0.961 1

0.75 0.926 1

0.8333 0.891 1

0.9166 0.859 1

1 0.831 1

1.0833 0.803 1

1.1666 0.777 1

1.25 0.752 1

1.3333 0.727 1

1.4166 0.708 1

1.5 0.686 1

1.5833 0.667 1

1.6666 0.648 1

1.75 0.629 1

1.8333 0.61 1

1.9166 0.594 1

2 0.578 1

2.5 0.493 1

3 0.426 1

3.5 0.373 1

4	0.331	1
4.5	0.297	1
5	0.265	1
5.5	0.24	1
6	0.221	1
6.5	0.202	1
7	0.186	1
7.5	0.173	1
8	0.164	1
8.5	0.151	1
9	0.145	1
9.5	0.135	1
10	0.129	1
12	0.107	1
14	0.091	1
16	0.082	1
18	0.072	1
20	0.066	1
22	0.06	1
24	0.06	1
26	0.06	1
28	0.056	1
30	0.053	1
32	0.05	1
34	0.05	1
36	0.047	1
38	0.047	1
40	0.047	1
42	0.047	1
44	0.05	1
46	0.047	1
48	0.044	1
50	0.044	1
52	0.047	1

RISING HEAD SLUG TEST - MW-18

slugt1

0.505

0.084

0.437

slugt2

10.88

7

10.88

tsdata

0.0166 0.003 0

0.02 0.003 0

0.0266 0.009 0

0.03 0.06 0

0.0333 0.107 0

0.05 0.505 1

0.0666 0.382 1

0.0833 0.335 1

0.1 0.335 1

0.1166 0.328 1

0.1333 0.319 1

0.15 0.313 1

0.1666 0.306 1

0.1833 0.3 1

0.2 0.294 1

0.2166 0.29 1

0.2333 0.284 1

0.25 0.278 1

0.2666 0.275 1

0.2833 0.275 1

0.3 0.268 1

0.3166 0.265 1

0.3333 0.262 1

0.4166 0.243 1

0.5 0.227 1

0.5833 0.215 1

0.6666 0.202 1

0.75 0.192 1

0.8333 0.183 1

0.9166 0.177 1

1 0.164 1

1.0833 0.158 1

1.1666 0.148 1

1.25 0.145 1

1.3333 0.135 1

1.4166 0.126 1

1.5 0.123 1

1.5833 0.113 1

1.6666 0.11 1

1.75 0.107 1

1.8333 0.101 1

1.9166 0.098 1

2 0.091 1

2.5 0.066 1

3 0.047 1

3.5 0.031 1

4 0.022 1

4.5 0.012 1

RISING HEAD SLUG TEST - MW-21

slugt1

1.905

0.084

0.437

slugt2

13.19

7

13.19

tsdata

0.0033 0.656 0

0.0066 1.313 0

0.01 1.982 0

0.0133 2.2 0

0.0166 1.79 0

0.02 1.021 0

0.0233 0.381 0

0.0266 0.32 0

0.03 1.037 0

0.0333 1.957 0

0.05 0.768 0

0.0666 1.905 1

0.0833 1.665 1

0.1 1.268 1

0.1166 1.636 1

0.1333 1.553 1

0.15 1.422 1

0.1666 1.54 1

0.1833 1.505 1

0.2 1.463 1

0.2166 1.499 1

0.2333 1.483 1

0.25 1.467 1

0.2666 1.476 1

0.2833 1.47 1

0.3 1.46 1

0.3166 1.46 1

0.3333 1.457 1

0.4166 1.438 1

0.5 1.419 1

0.5833 1.402 1

0.6666 1.386 1

0.75 1.37 1

0.8333 1.358 1

0.9166 1.342 1

1 1.329 1

1.0833 1.316 1

1.1666 1.303 1

1.25 1.294 1

1.3333 1.278 1

1.4166 1.268 1

1.5 1.255 1

1.5833 1.246 1

1.6666 1.233 1

1.75 1.223 1

1.8333 1.21 1

1.9166 1.201 1

2 1.191 1

2.5 1.13 1

3 1.076 1

3.5	1.025	1
4	0.98	1
4.5	0.932	1
5	0.893	1
5.5	0.855	1
6	0.816	1
6.5	0.778	1
7	0.749	1
7.5	0.72	1
8	0.691	1
8.5	0.663	1
9	0.637	1
9.5	0.611	1
10	0.589	1
12	0.502	1
14	0.438	1
16	0.39	1
18	0.339	1
20	0.301	1
22	0.275	1
24	0.246	1
26	0.224	1
28	0.208	1
30	0.185	1
32	0.176	1
34	0.166	1
36	0.153	1
38	0.144	1
40	0.137	1
42	0.131	1
44	0.121	1
46	0.118	1
48	0.108	1
50	0.102	1
52	0.105	1
54	0.099	1
56	0.092	1

RISING HEAD SLUG TEST - MW-22

slugt1

0.493

0.084

0.437

slugt2

14.74

10

14.74

tsdata

0.0033 0.363 0

0.0066 0.369 0

0.01 0.42 0

0.0133 0.474 0

0.0166 0.493 1

0.02 0.467 1

0.0233 0.42 1

0.0266 0.376 1

0.03 0.36 1

0.0333 0.376 1

0.05 0.369 1

0.0666 0.392 1

0.0833 0.363 1

0.1 0.338 1

0.1166 0.338 1

0.1333 0.331 1

0.15 0.316 1

0.1666 0.309 1

0.1833 0.303 1

0.2 0.297 1

0.2166 0.29 1

0.2333 0.287 1

0.25 0.281 1

0.2666 0.275 1

0.2833 0.271 1

0.3 0.262 1

0.3166 0.262 1

0.3333 0.262 1

0.4166 0.24 1

0.5 0.224 1

0.5833 0.208 1

0.6666 0.199 1

0.75 0.192 1

0.8333 0.183 1

0.9166 0.173 1

1 0.17 1

1.0833 0.164 1

1.1666 0.158 1

1.25 0.148 1

1.3333 0.136 1

1.4166 0.136 1

1.5 0.132 1

1.5833 0.129 1

1.6666 0.126 1

1.75 0.116 1

1.8333 0.116 1

1.9166 0.116 1

2 0.11 1

2.5 0.088 1

3 0.072 1

3.5	0.063	1
4	0.053	1
4.5	0.044	1
5	0.034	1
5.5	0.034	1
6	0.028	1
6.5	0.025	1
7	0.018	1
7.5	0.022	1
8	0.015	1
8.5	0.015	1
9	0.012	1
9.5	0.012	1
10	0.009	1

RISING HEAD SLUG TEST - MW-23

slugt1

0.595

0.084

0.437

slugt2

11.93

5

11.93

tsdata

0.0033	0.595	1
0.0066	0.528	1
0.01	0.509	1
0.0133	0.502	1
0.0166	0.493	1
0.02	0.48	1
0.0233	0.47	1
0.0266	0.461	1
0.03	0.451	1
0.0333	0.442	1
0.05	0.397	1
0.0666	0.358	1
0.0833	0.323	1
0.1	0.294	1
0.1166	0.272	1
0.1333	0.249	1
0.15	0.233	1
0.1666	0.214	1
0.1833	0.198	1
0.2	0.185	1
0.2166	0.172	1
0.2333	0.16	1
0.25	0.15	1
0.2666	0.14	1
0.2833	0.134	1
0.3	0.124	1
0.3166	0.121	1
0.3333	0.115	1
0.4166	0.083	1
0.5	0.067	1
0.5833	0.057	1
0.6666	0.051	1
0.75	0.041	1
0.8333	0.038	1
0.9166	0.035	1
1	0.035	1
1.0833	0.028	1
1.1666	0.025	1
1.25	0.025	1
1.3333	0.025	1
1.4166	0.022	1
1.5	0.019	1
1.5833	0.022	1
1.6666	0.016	1
1.75	0.016	1
1.8333	0.019	1
1.9166	0.016	1
2	0.016	1
2.5	0.019	1
3	0.016	1

3.5	0.012	1
4	0.009	1
4.5	0.009	1
5	0.009	1
5.5	0.006	1
6	0.006	1
6.5	0.006	1
7	0.003	1
7.5	0.003	1
8	0.006	1
8.5	0.006	1
9	0.006	1
10	0.006	1

RISING HEAD SLUG TEST - MW-24

slugt1

0.451

0.084

0.437

slugt2

6.13

2

5.46

tsdata

0.0033 0.438 1

0.0066 0.429 1

0.01 0.432 1

0.0133 0.429 1

0.0166 0.422 1

0.02 0.422 1

0.0233 0.419 1

0.0266 0.419 1

0.03 0.416 1

0.0333 0.413 1

0.05 0.406 1

0.0666 0.4 1

0.0833 0.393 1

0.1 0.387 1

0.1166 0.381 1

0.1333 0.377 1

0.15 0.371 1

0.1666 0.368 1

0.1833 0.365 1

0.2 0.358 1

0.2166 0.355 1

0.2333 0.352 1

0.25 0.349 1

0.2666 0.342 1

0.2833 0.342 1

0.3 0.336 1

0.3166 0.333 1

0.3333 0.329 1

0.4166 0.31 1

0.5 0.297 1

0.5833 0.281 1

0.6666 0.269 1

0.75 0.256 1

0.8333 0.246 1

0.9166 0.233 1

1 0.224 1

1.0833 0.217 1

1.1666 0.208 1

1.25 0.198 1

1.3333 0.192 1

1.4166 0.185 1

1.5 0.176 1

1.5833 0.169 1

1.6666 0.166 1

1.75 0.16 1

1.8333 0.153 1

1.9166 0.147 1

2 0.144 1

2.5 0.118 1

3 0.099 1

3.5	0.083	1
4	0.07	1
4.5	0.06	1
5	0.054	1
5.5	0.044	1
6	0.038	1
6.5	0.035	1
7	0.028	1
7.5	0.025	1
8	0.022	1
8.5	0.019	1
9	0.016	1
9.5	0.012	1
10	0.012	1

RISING HEAD SLUG TEST - MW-25

slugt1

0.455

0.084

0.437

slugt2

7.24

2

7.24

tsdata

0.0033 0.436 1

0.0066 0.42 1

0.01 0.404 1

0.0133 0.388 1

0.0166 0.375 1

0.02 0.359 1

0.0233 0.346 1

0.0266 0.334 1

0.03 0.321 1

0.0333 0.298 1

0.05 0.244 1

0.0666 0.196 1

0.0833 0.161 1

0.1 0.129 1

0.1166 0.103 1

0.1333 0.087 1

0.15 0.071 1

0.1666 0.061 1

0.1833 0.045 1

0.2 0.039 1

0.2166 0.033 1

0.2333 0.026 1

0.25 0.02 1

0.2666 0.017 1

0.3 0.004 1

RISING HEAD SLUG TEST - MW-27

slugt1
 2.089
 0.084
 0.437
 slugt2
 11.91
 5
 11.91
 tsdata
 0.0033 0.878 0
 0.0066 0.654 0
 0.01 0.916 0
 0.0133 1.369 0
 0.0166 1.252 0
 0.02 1.296 0
 0.0233 1.425 0
 0.0266 1.745 0
 0.03 2.089 1
 0.0333 1.988 1
 0.05 1.811 1
 0.0666 1.738 1
 0.0833 1.672 1
 0.1 1.618 1
 0.1166 1.568 1
 0.1333 1.52 1
 0.15 1.476 1
 0.1666 1.435 1
 0.1833 1.394 1
 0.2 1.356 1
 0.2166 1.318 1
 0.2333 1.286 1
 0.25 1.252 1
 0.2666 1.22 1
 0.2833 1.188 1
 0.3 1.16 1
 0.3166 1.131 1
 0.3333 1.103 1
 0.4166 0.976 1
 0.5 0.869 1
 0.5833 0.777 1
 0.6666 0.698 1
 0.75 0.632 1
 0.8333 0.572 1
 0.9166 0.518 1
 1 0.474 1
 1.0833 0.433 1
 1.1666 0.398 1
 1.25 0.366 1
 1.3333 0.338 1
 1.4166 0.313 1
 1.5 0.29 1
 1.5833 0.268 1
 1.6666 0.249 1
 1.75 0.234 1
 1.8333 0.218 1
 1.9166 0.205 1
 2 0.192 1
 2.5 0.139 1
 3 0.104 1

3.5	0.082	1
4	0.066	1
4.5	0.053	1
5	0.044	1
5.5	0.037	1
6	0.031	1
6.5	0.028	1
7	0.022	1
7.5	0.019	1
8	0.019	1
8.5	0.015	1
9	0.012	1
9.5	0.009	1
10	0.006	1

RISING HEAD SLUG TEST - MW-28

slugt1

2.19

0.084

0.437

slugt2

11.38

2

11.38

tsdata

0.0033	0.079	0
0.0066	0.584	0
0.0133	0.736	0
0.0166	0.126	0
0.0266	0.044	0
0.03	2.99	0
0.0333	0.075	0
0.05	2.19	1
0.0666	2.156	1
0.0833	2.14	1
0.1	2.134	1
0.1166	2.127	1
0.1333	2.121	1
0.15	2.115	1
0.1666	2.111	1
0.1833	2.108	1
0.2	2.105	1
0.2166	2.099	1
0.2333	2.096	1
0.25	2.092	1
0.2666	2.086	1
0.2833	2.083	1
0.3	2.08	1
0.3166	2.077	1
0.3333	2.074	1
0.4166	2.055	1
0.5	2.036	1
0.5833	2.02	1
0.6666	2.001	1
0.75	1.985	1
0.8333	1.969	1
0.9166	1.953	1
1	1.938	1
1.0833	1.919	1
1.1666	1.903	1
1.25	1.887	1
1.3333	1.874	1
1.4166	1.859	1
1.5	1.843	1
1.5833	1.827	1
1.6666	1.811	1
1.75	1.798	1
1.8333	1.783	1
1.9166	1.77	1
2	1.757	1
2.5	1.672	1
3	1.593	1
3.5	1.52	1
4	1.451	1
4.5	1.384	1

5	1.324	1
5.5	1.264	1
6	1.21	1
6.5	1.157	1
7	1.106	1
7.5	1.062	1
8	1.014	1
8.5	0.973	1
9	0.932	1
9.5	0.894	1
10	0.859	1
12	0.73	1
14	0.626	1
16	0.537	1
18	0.467	1
20	0.411	1
22	0.363	1
24	0.325	1
26	0.297	1
28	0.268	1
30	0.252	1
32	0.237	1
34	0.224	1
36	0.211	1
38	0.199	1
40	0.189	1
42	0.183	1
44	0.177	1
46	0.177	1

RIISING HEAD SLUG TEST - MW-29

slugt1

0.584

0.084

0.437

slugt2

8.56

5

8.56

tsdata

0.0033 0.224 0

0.0066 0.521 0

0.01 0.584 1

0.0133 0.474 1

0.0166 0.36 1

0.02 0.354 1

0.0233 0.388 1

0.0266 0.395 1

0.03 0.369 1

0.0333 0.344 1

0.05 0.319 1

0.0666 0.297 1

0.0833 0.281 1

0.1 0.265 1

0.1166 0.259 1

0.1333 0.243 1

0.15 0.233 1

0.1666 0.227 1

0.1833 0.221 1

0.2 0.208 1

0.2166 0.202 1

0.2333 0.196 1

0.25 0.186 1

0.2666 0.18 1

0.2833 0.173 1

0.3 0.17 1

0.3166 0.161 1

0.3333 0.158 1

0.4166 0.132 1

0.5 0.116 1

0.5833 0.101 1

0.6666 0.085 1

0.75 0.079 1

0.8333 0.069 1

0.9166 0.066 1

1 0.06 1

1.0833 0.047 1

1.1666 0.047 1

1.25 0.044 1

1.3333 0.034 1

1.4166 0.034 1

1.5 0.028 1

1.5833 0.028 1

1.6666 0.028 1

1.75 0.031 1

1.8333 0.025 1

1.9166 0.025 1

2 0.022 1

2.5 0.028 1

3 0.015 1

3.5	0.022	1
4	0.018	1
4.5	0.018	1
5	0.018	1
5.5	0.022	1
6	0.022	1
6.5	0.022	1
7	0.025	1
7.5	0.022	1
8	0.018	1
8.5	0.025	1
9	0.025	1
9.5	0.028	1
10	0.028	1
12	0.031	1
14	0.028	1
16	0.031	1
18	0.031	1
20	0.034	1
22	0.031	1

RISING HEAD SLUG TEST - MW-30

slugt1

4.112

0.084

0.437

slugt2

7.82

2

7.82

tsdata

0.0033	0.028	0
0.0066	0.169	0
0.01	1.515	0
0.0133	0.659	0
0.0166	2.453	0
0.02	4.112	1
0.0233	4	1
0.0266	3.712	1
0.03	3.574	1
0.0333	3.539	1
0.05	3.347	1
0.0666	3.177	1
0.0833	3.02	1
0.1	2.892	1
0.1166	2.767	1
0.1333	2.645	1
0.15	2.53	1
0.1666	2.415	1
0.1833	2.312	1
0.2	2.21	1
0.2166	2.11	1
0.2333	2.017	1
0.25	1.928	1
0.2666	1.841	1
0.2833	1.761	1
0.3	1.681	1
0.3166	1.607	1
0.3333	1.534	1
0.4166	1.207	1
0.5	0.951	1
0.5833	0.746	1
0.6666	0.586	1
0.75	0.461	1
0.8333	0.365	1
0.9166	0.291	1
1	0.233	1
1.0833	0.192	1
1.1666	0.16	1
1.25	0.134	1
1.3333	0.115	1
1.4166	0.099	1
1.5	0.089	1
1.5833	0.08	1
1.6666	0.07	1
1.75	0.064	1
1.8333	0.06	1
1.9166	0.057	1
2	0.054	1
2.5	0.041	1
3	0.035	1

3.5	0.032	1
4	0.028	1
4.5	0.025	1
5	0.022	1
5.5	0.022	1
6	0.022	1
6.5	0.022	1
7	0.022	1
7.5	0.022	1
8	0.019	1
8.5	0.019	1
9	0.016	1
9.5	0.016	1
10	0.016	1
12	0.016	1
14	0.016	1
16	0.016	1
18	0.012	1
20	0.012	1
22	0.012	1
24	0.012	1
26	0.009	1

RISING HEAD SLUG TEST - MW-31

slugt1

1.925

0.084

0.437

slugt2

7.8

2

7.8

tsdata

0.0033 0.803 0

0.0166 1.312 0

0.0233 0.373 0

0.0266 1.321 0

0.03 1.055 0

0.0333 1.119 0

0.05 1.925 1

0.0666 1.909 1

0.0833 1.9 1

0.1 1.89 1

0.1166 1.871 1

0.1333 1.877 1

0.15 1.849 1

0.1666 1.84 1

0.1833 1.833 1

0.2 1.824 1

0.2166 1.814 1

0.2333 1.805 1

0.25 1.798 1

0.2666 1.789 1

0.2833 1.779 1

0.3 1.773 1

0.3166 1.767 1

0.3333 1.757 1

0.4166 1.723 1

0.5 1.685 1

0.5833 1.653 1

0.6666 1.618 1

0.75 1.587 1

0.8333 1.555 1

0.9166 1.527 1

1 1.498 1

1.0833 1.47 1

1.1666 1.444 1

1.25 1.416 1

1.3333 1.394 1

1.4166 1.368 1

1.5 1.343 1

1.5833 1.318 1

1.6666 1.296 1

1.75 1.277 1

1.8333 1.255 1

1.9166 1.233 1

2 1.21 1

2.5 1.097 1

3 0.999 1

3.5 0.907 1

4 0.831 1

4.5 0.758 1

5 0.698 1

5.5	0.644	1
6	0.591	1
6.5	0.546	1
7	0.505	1
7.5	0.471	1
8	0.436	1
8.5	0.407	1
9	0.382	1
9.5	0.354	1
10	0.331	1
12	0.252	1
14	0.196	1
16	0.154	1
18	0.123	1
20	0.101	1
22	0.082	1
24	0.066	1
26	0.053	1
28	0.041	1
30	0.031	1
32	0.025	1
34	0.022	1
36	0.018	1
38	0.015	1
40	0.012	1
42	0.006	1
44	0.003	1

RISING HEAD SLUG TEST - MW-32

slugt1

1.87

0.084

0.437

slugt2

12.67

8

12.67

tsdata

0.0033 0.615 0

0.0066 1.06 0

0.01 1.524 0

0.0133 1.87 1

0.0166 1.569 1

0.02 1.008 1

0.0233 0.896 1

0.0266 1.229 1

0.03 1.675 1

0.0333 1.992 1

0.05 1.169 1

0.0666 1.492 1

0.0833 1.643 1

0.1 1.351 1

0.1166 1.457 1

0.1333 1.508 1

0.15 1.402 1

0.1666 1.435 1

0.1833 1.447 1

0.2 1.409 1

0.2166 1.415 1

0.2333 1.418 1

0.25 1.402 1

0.2666 1.402 1

0.2833 1.399 1

0.3 1.39 1

0.3166 1.386 1

0.3333 1.383 1

0.4166 1.361 1

0.5 1.338 1

0.5833 1.319 1

0.6666 1.3 1

0.75 1.281 1

0.8333 1.265 1

0.9166 1.249 1

1 1.233 1

1.0833 1.217 1

1.1666 1.204 1

1.25 1.191 1

1.3333 1.175 1

1.4166 1.162 1

1.5 1.149 1

1.5833 1.137 1

1.6666 1.124 1

1.75 1.114 1

1.8333 1.101 1

1.9166 1.089 1

2 1.079 1

2.5 1.012 1

3 0.954 1

3.5	0.9	1
4	0.852	1
4.5	0.807	1
5	0.765	1
5.5	0.727	1
6	0.691	1
6.5	0.659	1
7	0.627	1
7.5	0.598	1
8	0.573	1
8.5	0.547	1
9	0.525	1
9.5	0.502	1
10	0.483	1
12	0.413	1
14	0.352	1
16	0.307	1
18	0.269	1
20	0.24	1
22	0.214	1
24	0.195	1
26	0.176	1
28	0.16	1
30	0.147	1
32	0.137	1
34	0.128	1
36	0.118	1
38	0.112	1
40	0.108	1
42	0.102	1
44	0.099	1
46	0.092	1
48	0.092	1
50	0.086	1
52	0.083	1
54	0.08	1
56	0.08	1
58	0.076	1
60	0.076	1
62	0.073	1
64	0.07	1
66	0.07	1
68	0.07	1
70	0.07	1
72	0.067	1
74	0.067	1
76	0.067	1
78	0.064	1
80	0.064	1
82	0.064	1
84	0.064	1
86	0.06	1
88	0.06	1
90	0.06	1
92	0.06	1
94	0.06	1
96	0.057	1
98	0.054	1
100	0.054	1
110	0.051	1

120	0.048	1
130	0.048	1
140	0.044	1

RISING HEAD SLUG TEST - MW-39

slugt1

2.824

0.084

0.437

slugt2

6.72

1.5

6.72

tsdata

0.0033	2.824	1
0.0066	2.03	1
0.01	2.078	1
0.0133	2.065	1
0.0166	1.999	1
0.02	1.983	1
0.0233	1.973	1
0.0266	1.967	1
0.03	1.957	1
0.0333	1.954	1
0.05	1.926	1
0.0666	1.916	1
0.0833	1.9	1
0.1	1.885	1
0.1166	1.866	1
0.1333	1.872	1
0.15	1.853	1
0.1666	1.828	1
0.1833	1.818	1
0.2	1.809	1
0.2166	1.802	1
0.2333	1.793	1
0.25	1.783	1
0.2666	1.774	1
0.2833	1.768	1
0.3	1.761	1
0.3166	1.752	1
0.3333	1.745	1
0.4166	1.708	1
0.5	1.673	1
0.5833	1.641	1
0.6666	1.613	1
0.75	1.584	1
0.8333	1.556	1
0.9166	1.527	1
1	1.499	1
1.0833	1.473	1
1.1666	1.451	1
1.25	1.426	1
1.3333	1.398	1
1.4166	1.379	1
1.5	1.356	1
1.5833	1.331	1
1.6666	1.309	1
1.75	1.287	1
1.8333	1.268	1
1.9166	1.246	1
2	1.227	1
2.5	1.113	1
3	1.015	1

3.5	0.923	1
4	0.844	1
4.5	0.771	1
5	0.708	1
5.5	0.651	1
6	0.6	1
6.5	0.553	1
7	0.512	1
7.5	0.468	1
8	0.436	1
8.5	0.401	1
9	0.373	1
9.5	0.344	1
10	0.322	1
11	0.275	1
12	0.24	1
13	0.208	1
14	0.18	1
15	0.161	1
16	0.142	1
17	0.126	1
18	0.107	1
19	0.094	1
20	0.085	1
21	0.079	1
22	0.066	1
23	0.06	1
24	0.053	1
25	0.047	1
26	0.041	1
27	0.041	1
28	0.037	1
29	0.031	1
30	0.031	1
31	0.028	1
32	0.025	1
33	0.025	1
34	0.022	1
35	0.022	1
36	0.022	1
37	0.018	1
38	0.018	1
39	0.015	1
40	0.015	1
41	0.015	1
42	0.009	1
43	0.009	1