APPENDIX D

GEOLOGY AND HYDROGEOLOGY

- BORING, MONITORING WELL, AND GROUNDWATER ELEVATION SUMMARIES
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  - Monitoring Well and Soil Boring Construction Details
  - 2003 Groundwater Elevation Summary
  - Previous Groundwater Elevation Summaries
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- HYDRAULIC CONDUCTIVITY DATA
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  - Single Well Pump Tests 1999
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- AQUIFER TEST DATA AND ANALYSIS
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SUMMARY WELL CONSTRUCTION DETAILS AND GROUNDWATER ELEVATIONS

Direct-Push Technology Borings - 1997
Raymark OU2 - Groundwater
Remedial Investigation Report

BORING	SAMPLE ID	ELEVATION	TOP	BOTTOM	MID-POINT DEPTH	MID-POINT ELEVATION
AA-DPA1-2	AA-DPA1-2-1015	14.17	10	15	17.5	1.67
	AA-DPA1-2-1520	14.17	15	20	22.5	-3.33
AA-DPA1-5	AA-DPA1-5-0914	15.21	9	14	16.5	3.71
	AA-DPA1-5-1924	15.21	19	24	26.5	-6.29
AA-DPA3-2	AA-DPA3-2-1015-AVG	14.55	10	15	17.5	2.05
	AA-DPA3-2-2025	14.55	20	25	27.5	-7.95
	AA-DPA3-2-3136	14.55	31	36	38.5	-18.95
AA-DPA3-5	AA-DPA3-5-0712-AVG	13.44	7	12	14.5	3.94
DP1-1	OU2-DP1-1-1214	11.58	12	14	15	-1.42
	OU2-DP1-1-2224	11.58	22	24	25	-11.42
	OU2-DP1-1-3234	11.58	32	34	35	-21.42
	OU2-DP1-1-4345	11.58	43	45	46	-32.42
	OU2-DP1-1-5456	11.58	54	56	57	-43.42
	OU2-DP1-1-6769	11.58	67	69	70	-56.42
DP1-2	OU2-DP1-2-0810	12.42	8	10	11	3.42
	OU2-DP1-2-1921	12.42	19	21	22	-7.58
	OU2-DP1-2-2931	12.42	29	31	32	-17.58
DP1-3	OU2-DP1-3-0813	12.82	8	13	15.5	2.32
	OU2-DP1-3-1621	12.82	16	21	23.5	-5.68
DP1-6	OU2-DP1-6-0914	11.03	9	14	16.5	-0.47
	OU2-DP1-6-2025	11.03	20	25	27.5	-11.47
DP1-6A	OU2-DP1-6A-2530-AVG	11.03	25	30	32.5	-16.47
DP1-7	OU2-DP1-7-0611	13	6	11	13.5	4.5
DP1-8	OU2-DP1-8-1217-AVG	16.67	12	17	19.5	2.17
	OU2-DP1-8-2328	16.67	23	28	30.5	-8.83
DP1-9	OU2-DP1-9-1318	18.96	13	18	20.5	3.46
	OU2-DP1-9-2328-AVG	18.96	23	28	30.5	-6.54
DP1-9A	OU2-DP1-9A-3338	6.283	33	38	40.5	-29.217
	OU2-DP1-9A-4348	6.283	43	48	50.5	-39.217
	OU2-DP1-9A-5358	6.283	53	58	60.5	-49.217
DP1-11	OU2-DP1-11-2227	24.19	22	27	29.5	-0.31
	OU2-DP1-11-3439	24.19	34	39	41.5	-12.31
	OU2-DP1-11-4550	24.19	45	50	52.5	-23.31
	OU2-DP1-11-5358	24.19	53	58	60.5	-31.31
DP1-12	OU2-DP1-12-1419	21.46	14	19	21.5	4.96
	OU2-DP1-12-2429	21.46	24	29	31.5	-5.04
	OU2-DP1-12-3035	21.46	30	35	37.5	-11.04
DP2-1	OU2-DP2-1-1116	15.27	11	16	18.5	1.77
	OU2-DP2-1-2328	15.27	23	28	30.5	-10.23
	OU2-DP2-1-3237	15.27	32	37	39.5	-19.23
	OU2-DP2-1-4348	15.27	43	48	50.5	-30.23
	OU2-DP2-1-5459	15.27	54	59	61.5	-41.23
	OU2-DP2-1-6469	15.27	64	69	71.5	-51.23
	OU2-DP2-1-7479	15.27	74	79	81.5	-61.23
DP2-2	OU2-DP2-2-1116	14.23	11	16	18.5	0.73
	OU2-DP2-2-2227	14.23	22	27	29.5	-10.27
	OU2-DP2-2-3237	14.23	32	37	39.5	-20.27
	OU2-DP2-2-4348	14.23	43	48	50.5	-31.27
DP3-1	OU2-DP3-1-0611	11.07	6	11	13.5	2.57
	OU2-DP3-1-1621	11.07	16	21	23.5	-7.43
	OU2-DP3-1-2631	11.07	26	31	33.5	-17.43
	OU2-DP3-1-3641-AVG	11.07	36	41	43.5	-27.43
	OU2-DP3-1-4651	11.07	46	51	53.5	-37.43
	OU2-DP3-1-5156	11.07	51	56	58.5	-42.43

Note: Elevations measured in feet NGVD.

Direct-Push Technology Borings - 1997
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BORING	SAMPLE ID	ELEVATION	TOP	BOTTOM	MID-POINT DEPTH	MID-POINT ELEVATION
DP3-2	OU2-DP3-2-0712	12.09	7	12	14.5	2.59
	OU2-DP3-2-1722	12.09	17	22	24.5	-7.41
	OU2-DP3-2-2732	12.09	27	32	34.5	-17.41
	OU2-DP3-2-3742	12.09	37	42	44.5	-27.41
	OU2-DP3-2-4752	12.09	47	52	54.5	-37.41
	OU2-DP2-2-5762	12.09	57	62	64.5	-47.41
DP3-3	OU2-DP3-3-0712	12.88	7	12	14.5	3.38
	OU2-DP3-3-1722	12.88	17	22	24.5	-6.62
	OU2-DP3-3-2732-AVG	12.88	27	32	34.5	-16.62
	OU2-DP3-3-3742	12.88	37	42	44.5	-26.62
	OU2-DP3-3-4752	12.88	47	52	54.5	-36.62
DP4-1	OU2-DP4-1-1217	17.44	12	17	19.5	2.94
	OU2-DP4-1-2530	17.44	25	30	32.5	-10.06
DP4-3A	OU2-DP4-3A-1217	13.47	12	17	19.5	-1.03
	OU2-DP4-3A-1823	13.47	18	23	25.5	-7.03
DP4-4	OU2-DP4-4-0510	10.24	5	10	12.5	2.74
DP4-4A	OU2-DP4-4A-1520	13	15	20	22.5	-4.5
	OU2-DP4-4A-2530	13	25	30	32.5	-14.5
	OU2-DP4-4A-3439	13	34	39	41.5	-23.5
	OU2-DP4-4A-4550	13	45	50	52.5	-34.5
DP4-5C	OU2-DP4-5C-1419	18.89	14	19	21.5	2.39
	OU2-DP4-5C-2429	18.89	24	29	31.5	-7.61
	OU2-DP4-5C-3439	18.89	34	39	41.5	-17.61
	OU2-DP4-5C-4449-AVG	18.89	44	49	51.5	-27.61
	OU2-DP4-5C-5459	18.89	54	59	61.5	-37.61
DP4-7	OU2-DP4-7-1823	22.86	18	23	25.5	2.36
DP4-9	OU2-DP4-9-2126	19.02	21	26	28.5	-4.48
DP5-1	OU2-DP5-1-1419	20.67	14	19	21.5	4.17
	OU2-DP5-1-2429	20.67	24	29	31.5	-5.83
	OU2-DP5-1-2833	20.67	28	33	35.5	-9.83
DP5-2	OU2-DP5-2-1419	19.54	14	19	21.5	3.04
	OU2-DP5-2-2429	19.54	24	29	31.5	-6.96
	OU2-DP5-2-3439-AVG	19.54	34	39	41.5	-16.96
	OU2-DP5-2-5459	19.54	54	59	61.5	-36.96
	OU2-DP5-2-6469	19.54	64	69	71.5	-46.96
	OU2-DP5-2-7479	19.54	74	79	81.5	-56.96
	OU2-DP5-2-8489	19.54	84	89	91.5	-66.96
	OU2-DP5-2-9499	19.54	94	99	101.5	-76.96
	OU2-DP5-2-104109	19.54	104	109	111.5	-86.96
	OU2-DP5-2-114119	19.54	114	119	121.5	-96.96
	OU2-DP5-2-124129	19.54	124	129	131.5	-106.96
	OU2-DP5-2-134139	19.54	134	139	141.5	-116.96
DP5-4	OU2-DP5-4-0914	13.07	9	14	16.5	1.57
	OU2-DP5-4-2025	13.07	20	25	27.5	-9.43
	OU2-DP5-4-3035	13.07	30	35	37.5	-19.43
	OU2-DP5-4-4045	13.07	40	45	47.5	-29.43
DP5-5	OU2-DP5-5-1520	18.74	15	20	22.5	1.24
	OU2-DP5-5-2530	18.74	25	30	32.5	-8.76
	OU2-DP5-5-3439	18.74	34	39	41.5	-17.76
	OU2-DP5-5-4550	18.74	45	50	52.5	-28.76
	OU2-DP5-5-5560	18.74	55	60	62.5	-38.76
	OU2-DP5-5-6671	18.74	66	71	73.5	-49.76
	OU2-DP5-5-7580	18.74	75	80	82.5	-58.76
	OU2-DP5-5-8590	18.74	85	90	92.5	-68.76

Note: Elevations measured in feet NGVD.

Direct-Push Technology Borings - 1997
Raymark OU2 - Groundwater
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BORING	SAMPLE ID	ELEVATION	TOP	BOTTOM	MID-POINT DEPTH	MID-POINT ELEVATION
DP5-6	OU2-DP5-6-1520	19.85	15	20	22.5	2.35
	OU2-DP5-6-2530	19.85	25	30	32.5	-7.65
	OU2-DP5-6-3338	19.85	33	38	40.5	-15.65
DP5A-1	OU2-DP5A-1-0510	8.96	5	10	12.5	1.46
	OU2-DP5A-1-1520	8.96	15	20	22.5	-8.54
	OU2-DP5A-1-2631	8.96	26	31	33.5	-19.54
	OU2-DP5A-1-3540	8.96	35	40	42.5	-28.54
DP5A-2	OU2-DP5A-2-0510	9.91	5	10	12.5	2.41
	OU2-DP5A-2-1520	9.91	15	20	22.5	-7.59
	OU2-DP5A-2-2025	9.91	20	25	27.5	-12.59
DP5A-2A	OU2-DP5A-2A-2530	1.21	25	30	32.5	-26.29
DP5A-3A	OU2-DP5A-3A-1419	11.79	14	19	21.5	-4.71
	OU2-DP5A-3A-2530	11.79	25	30	32.5	-15.71
	OU2-DP5A-3A-3439	11.79	34	39	41.5	-24.71
	OU2-DP5A-3A-4550	11.79	45	50	52.5	-35.71
DP5A-4A	OU2-DP5A-4A-0914	15.88	9	14	16.5	4.38
DP6-1	OU2-DP6-1-1116	12.5	11	16	18.5	-1
	OU2-DP6-1-2429	12.5	24	29	31.5	-14
	OU2-DP6-1-3540	12.5	35	40	42.5	-25
DP6-2B	OU2-DP6-2B-0409	11.48	4	9	11.5	4.98
	OU2-DP6-2B-1520	11.48	15	20	22.5	-6.02
	OU2-DP6-2B-2530	11.48	25	30	32.5	-16.02
DP6-3	OU2-DP6-3-0813	12.14	8	13	15.5	1.64
	OU2-DP6-3-2025	12.14	20	25	27.5	-10.36
	OU2-DP6-3-3035	12.14	30	35	37.5	-20.36
	OU2-DP6-3-3843	12.14	38	43	45.5	-28.36
DP6-5A	OU2-DP6-5A-1621	17.22	16	21	23.5	-1.28
	OU2-DP6-5A-2631	17.22	26	31	33.5	-11.28
	OU2-DP6-5A-3944	17.22	39	44	46.5	-24.28
DP6-6	OU2-DP6-6-1419	20.29	14	19	21.5	3.79
DP6-6A	OU2-DP6-6A-2025	20.28	20	25	27.5	-2.22
	OU2-DP6-6A-2934	20.28	29	34	36.5	-11.22
DP6-7B	OU2-DP6-7B-1722	21.4	17	22	24.5	1.9
	OU2-DP6-7B-2732	21.4	27	32	34.5	-8.1
	OU2-DP6-7B-3742	21.4	37	42	44.5	-18.1
	OU2-DP6-7B-4449	21.4	44	49	51.5	-25.1
DP6-8B	OU2-DP6-8B-1217	14	12	17	19.5	-0.5
	OU2-DP6-8B-2227	14	22	27	29.5	-10.5
DP6-9	OU2-DP6-9-0813	12.91	8	13	15.5	2.41
DP7-2A	OU2-DP7-2A-0611	11.31	6	11	13.5	2.81
DP7-4	OU2-DP7-4-0712	10.81	7	12	14.5	1.31
	OU2-DP7-4-1722-AVG	10.81	17	22	24.5	-8.69
	OU2-DP7-4-2732	10.81	27	32	34.5	-18.69
	OU2-DP7-4-3742	10.81	37	42	44.5	-28.69
	OU2-DP7-4-4752	10.81	47	52	54.5	-38.69
	OU2-DP7-4-5762	10.81	57	62	64.5	-48.69
DP7-5	OU2-DP7-5-0813	11.8	8	13	15.5	1.3
DP7-5A	OU2-DP7-5A-1823	11.8	18	23	25.5	-8.7
	OU2-DP7-5A-2833	11.8	28	33	35.5	-18.7
	OU2-DP7-5A-3843-AVG	11.8	38	43	45.5	-28.7
DP7-9A	OU2-DP7-9A-2227	25.52	22	27	29.5	1.02
	OU2-DP7-9A-3439	25.52	34	39	41.5	-10.98

Note: Elevations measured in feet NGVD.

Direct-Push Technology Borings - 1997
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BORING	SAMPLE ID	ELEVATION	TOP	BOTTOM	MID-POINT DEPTH	MID-POINT ELEVATION
DP8-1A	OU2-DP8-1A-0914	14.36	9	14	16.5	2.86
	OU2-DP8-1A-1924	14.36	19	24	26.5	-7.14
	OU2-DP8-1A-2934	14.36	29	34	36.5	-17.14
	OU2-DP8-1A-3944	14.36	39	44	46.5	-27.14
	OU2-DP8-1A-4954	14.36	49	54	56.5	-37.14
	OU2-DP8-1A-5964	14.36	59	64	66.5	-47.14
	OU2-DP8-1A-6974-AVG	14.36	69	74	76.5	-57.14
	OU2-DP8-1A-7883	14.36	78	83	85.5	-66.14
DP8-3A	OU2-DP8-3A-0914	10.03	9	14	16.5	-1.47
DP8-5	OU2-DP8-5-0914	5.6	9	14	16.5	-5.9
	OU2-DP8-5-2025	5.6	20	25	27.5	-16.9
	OU2-DP8-5-3035	5.6	30	35	37.5	-26.9
	OU2-DP8-5-4045	5.6	40	45	47.5	-36.9
	OU2-DP8-5-5055	5.6	50	55	57.5	-46.9
	OU2-DP8-5-6065	5.6	60	65	67.5	-56.9
	OU2-DP8-5-7378-AVG	5.6	73	78	80.5	-69.9
	OU2-DP8-5-8287	5.6	82	87	89.5	-78.9
DP8-6	OU2-DP8-6-1116	15.7	11	16	18.5	2.2
	OU2-DP8-6-2227	15.7	22	27	29.5	-8.8
	OU2-DP8-6-3237	15.7	32	37	39.5	-18.8
DP9-1	OU2-DP9-1-0813	11.81	8	13	15.5	1.31
	OU2-DP9-1-1823	11.81	18	23	25.5	-8.69
	OU2-DP9-1-2833	11.81	28	33	35.5	-18.69
	OU2-DP9-1-3843	11.81	38	43	45.5	-28.69
DP10-3	OU2-DP10-3-0813	11.67	8	13	15.5	1.17
DP10-3A	OU2-DP10-3A-1823	11.67	18	23	25.5	-8.83
DP10-4	OU2-DP10-4-0510	10.06	5	10	12.5	2.56
	OU2-DP10-4-1520	10.06	15	20	22.5	-7.44
DP10-5	OU2-DP10-5-1419	13.9	14	19	21.5	-2.6
	OU2-DP10-5-2429	13.9	24	29	31.5	-12.6
DP13-1	OU2-DP13-1-1520	19.65	15	20	22.5	2.15
	OU2-DP13-1-2530	19.65	25	30	32.5	-7.85
	OU2-DP13-1-3641	19.65	36	41	43.5	-18.85
	OU2-DP13-1-4550	19.65	45	50	52.5	-27.85
DP13-3	OU2-DP13-3-1318	15.5	13	18	20.5	0
	OU2-DP13-3-2328	15.5	23	28	30.5	-10
	OU2-DP13-3-3237	15.5	32	37	39.5	-19

Note: Elevations measured in feet NGVD.

Soil Gas and Groundwater
Geoprobe Profiling Locations 2002
Raymark OU2 - Groundwater
Appendix D

Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
1	Groundwater	RM-GW01-0017	21-Feb-02	17	133165.1555	498655.2934	17.46	
		RM-GW01-0022	21-Feb-02	22	133165.1555	498655.2934	17.46	
		RM-GW01-0032	21-Feb-02	32	133165.1555	498655.2934	17.46	
		RM-GW01-0043	21-Feb-02	43	133165.1555	498655.2934	17.46	
		RM-GW01-0049	21-Feb-02	49	133165.1555	498655.2934	17.46	
	Soil Gas	SG01-0003	19-Feb-02	3	133165.1555	498655.2934	17.46	
		SG01-0008	19-Feb-02	8	133165.1555	498655.2934	17.46	
2	Groundwater	RM-GW02-0024	19-Feb-02	24	132528.6846	498382.8706	27.00	
	Soil Gas	SG02-0003	20-Feb-02	3	132528.6846	498382.8706	27.00	
		SG02-0008	20-Feb-02	8	132528.6846	498382.8706	27.00	
		SG02-0013	20-Feb-02	13	132528.6846	498382.8706	27.00	
		SG02-0018	20-Feb-02	18	132528.6846	498382.8706	27.00	
3	Groundwater	RM-GW03-0022	19-Feb-02	22	132466.4733	498445.9029	16.54	
		RM-GW03-0027	19-Feb-02	27	132466.4733	498445.9029	16.54	
		RM-GW03-0032	19-Feb-02	32	132466.4733	498445.9029	16.54	
	Soil Gas	SG03-0003	20-Feb-02	3	132466.4733	498445.9029	16.54	
		SG03-0008	20-Feb-02	8	132466.4733	498445.9029	16.54	
		SG03-0013	20-Feb-02	13	132466.4733	498445.9029	16.54	
		SG03-0018	20-Feb-02	18	132466.4733	498445.9029	16.54	
4	Groundwater	RM-GW04-0018	21-Feb-02	18	133273.8638	498796.1103	15.31	
		RM-GW04-0023	21-Feb-02	23	133273.8638	498796.1103	15.31	
		RM-GW04-0028	21-Feb-02	28	133273.8638	498796.1103	15.31	
		RM-GW04-0038	21-Feb-02	38	133273.8638	498796.1103	15.31	
		RM-GW04-0047	21-Feb-02	47	133273.8638	498796.1103	15.31	
	Soil Gas	SG04-0003	19-Feb-02	3	133273.8638	498796.1103	15.31	
		SG04-0008	19-Feb-02	8	133273.8638	498796.1103	15.31	
		SG04-0013	19-Feb-02	13	133273.8638	498796.1103	15.31	
5	Groundwater	RM-GW05-0024	20-Feb-02	24	132529.1088	498283.7966	23.41	
	Soil Gas	SG05-0003	20-Feb-02	3	132529.1088	498283.7966	23.41	
		SG05-0008	20-Feb-02	8	132529.1088	498283.7966	23.41	
		SG05-0013	20-Feb-02	13	132529.1088	498283.7966	23.41	
		SG05-0018	20-Feb-02	18	132529.1088	498283.7966	23.41	
6	Groundwater	RM-GW06-0018	20-Feb-02	18	132614.1679	498842.8363	11.76	1
		RM-GW06-0022	20-Feb-02	22	132614.1679	498842.8363	11.76	1
		RM-GW06-0033	20-Feb-02	33	132614.1679	498842.8363	11.76	1
		RM-GW06-0043	20-Feb-02	43	132614.1679	498842.8363	11.76	1
		RM-GW06-0050	20-Feb-02	50	132614.1679	498842.8363	11.76	1
	Soil Gas	SG06-0003	21-Feb-02	3	132614.1679	498842.8363	11.76	1
		SG06-0003CT	21-Feb-02	3	132614.1679	498842.8363	11.76	1
		SG06-0008	21-Feb-02	8	132614.1679	498842.8363	11.76	1
		SG06-0016	21-Feb-02	16	132614.1679	498842.8363	11.76	1
7	Groundwater	RM-GW07-0018	21-Feb-02	18	132695.5002	498567.9742	22.38	
		RM-GW07-0023	21-Feb-02	23	132695.5002	498567.9742	22.38	
		RM-GW07-0028	21-Feb-02	28	132695.5002	498567.9742	22.38	
		RM-GW07-0038	21-Feb-02	38	132695.5002	498567.9742	22.38	
	Soil Gas	SG07-0003	19-Feb-02	3	132695.5002	498567.9742	22.38	
		SG07-0008	19-Feb-02	8	132695.5002	498567.9742	22.38	
		SG07-0013	20-Feb-02	13	132695.5002	498567.9742	22.38	
8	Groundwater	RM-GW08-0018	20-Feb-02	18	132411.2083	498588.7768	17.72	
		RM-GW08-0023	20-Feb-02	23	132411.2083	498588.7768	17.72	
		RM-GW08-0028	20-Feb-02	28	132411.2083	498588.7768	17.72	
		RM-GW08-0038	20-Feb-02	38	132411.2083	498588.7768	17.72	
	Soil Gas	SG08-0003	20-Feb-02	3	132411.2083	498588.7768	17.72	
		SG08-0008	20-Feb-02	8	132411.2083	498588.7768	17.72	
		SG08-0015	20-Feb-02	15	132411.2083	498588.7768	17.72	
9	Groundwater	RM-GW09-0016	22-Feb-02	16	132334.5760	498615.9708	15.87	
		RM-GW09-0021	22-Feb-02	21	132334.5760	498615.9708	15.87	
		RM-GW09-0026	22-Feb-02	26	132334.5760	498615.9708	15.87	
		RM-GW09-0036	22-Feb-02	36	132334.5760	498615.9708	15.87	
		RM-GW09-0046	22-Feb-02	46	132334.5760	498615.9708	15.87	
	Soil Gas	SG09-0003	20-Feb-02	3	132334.5760	498615.9708	15.87	
		SG09-0008	20-Feb-02	8	132334.5760	498615.9708	15.87	
		SG09-0013	20-Feb-02	13	132334.5760	498615.9708	15.87	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
10	Groundwater	RM-GW10-0015	20-Feb-02	15	132334.3880	498660.0040	16.37	
		RM-GW10-0020	21-Feb-02	20	132334.3880	498660.0040	16.37	
		RM-GW10-0025	21-Feb-02	25	132334.3880	498660.0040	16.37	
		RM-GW10-0035	22-Feb-02	35	132334.3880	498660.0040	16.37	
		RM-GW10-0045	22-Feb-02	45	132334.3880	498660.0040	16.37	
	Soil Gas	SG10-0003	20-Feb-02	3	132334.3880	498660.0040	16.37	
		SG10-0008	20-Feb-02	8	132334.3880	498660.0040	16.37	
		SG10-0013	20-Feb-02	13	132334.3880	498660.0040	16.37	
12	Soil Gas	SG12-0008	21-Feb-02	8	132318.8208	498040.7084	23.12	3
		SG12-0013	21-Feb-02	13	132318.8208	498040.7084	23.12	3
		SG12-0018	21-Feb-02	18	132318.8208	498040.7084	23.12	3
13	Groundwater	RM-GW13-0023	22-Feb-02	23	132835.2505	498265.8435	26.87	4
		RM-GW13-0028	22-Feb-02	28	132835.2505	498265.8435	26.87	4
		RM-GW13-0035	01-Mar-02	35	132835.2505	498265.8435	26.87	4
	Soil Gas	SG13-0003	21-Feb-02	3	132835.2505	498265.8435	26.87	4
		SG13-0008	21-Feb-02	8	132835.2505	498265.8435	26.87	4
		SG13-0014	22-Feb-02	14	132835.2505	498265.8435	26.87	4
15	Groundwater	RM-GW15-0022.5	25-Feb-02	22.5	131775.0094	498253.0445	21.87	4
		RM-GW15-0027.5	25-Feb-02	27.5	131775.0094	498253.0445	21.87	4
		RM-GW15-0032.5	25-Feb-02	32.5	131775.0094	498253.0445	21.87	4
		RM-GW15-0043	25-Feb-02	43	131775.0094	498253.0445	21.87	4
	Soil Gas	SG15-0003	22-Feb-02	3	131775.0094	498253.0445	21.87	4
		SG15-0008	22-Feb-02	8	131775.0094	498253.0445	21.87	4
		SG15-0014	22-Feb-02	14	131775.0094	498253.0445	21.87	4
16	Groundwater	RM-GW16-0024	25-Feb-02	24	131880.2366	498355.3260	21.61	
		RM-GW16-0029	25-Feb-02	29	131880.2366	498355.3260	21.61	
		RM-GW16-0044	26-Feb-02	44	131880.2366	498355.3260	21.61	
		RM-GW16-0034	25-Feb-02	34	131880.2366	498355.3260	21.61	
	Soil Gas	SG16-0003	22-Feb-02	3	131880.2366	498355.3260	21.61	
		SG16-0008	22-Feb-02	8	131880.2366	498355.3260	21.61	
		SG16-0014	22-Feb-02	14	131880.2366	498355.3260	21.61	
17	Soil Gas	SG17-0003	22-Feb-02	3	131651.3406	498202.9749	-2.91	
		SG17-0008	22-Feb-02	8	131651.3406	498202.9749	-2.91	
		SG17-0014	25-Feb-02	14	131651.3406	498202.9749	-2.91	
18	Groundwater	RM-GW18-0021	25-Feb-02	21	131520.7036	498078.5648	23.75	4
		RM-GW18-0026	25-Feb-02	26	131520.7036	498078.5648	23.75	4
		RM-GW18-0031	26-Feb-02	31	131520.7036	498078.5648	23.75	4
		RM-GW18-0041	26-Feb-02	41	131520.7036	498078.5648	23.75	4
	Soil Gas	SG18-0003	25-Feb-02	3	131520.7036	498078.5648	23.75	4
		SG18-0008	25-Feb-02	8	131520.7036	498078.5648	23.75	4
		SG18-0014	25-Feb-02	14	131520.7036	498078.5648	23.75	4
19	Soil Gas	SG19-0003	26-Feb-02	3	131834.9604	497867.9953	22.13	1
		SG19-0008	26-Feb-02	8	131834.9604	497867.9953	22.13	1
		SG19-0013	26-Feb-02	13	131834.9604	497867.9953	22.13	1
		SG19-0019	26-Feb-02	19	131834.9604	497867.9953	22.13	1
20	Groundwater	RM-GW20-0022	26-Feb-02	22	131418.9793	498009.3224	20.27	4
		RM-GW20-0027	26-Feb-02	27	131418.9793	498009.3224	20.27	4
	Soil Gas	SG20-0003	25-Feb-02	3	131418.9793	498009.3224	20.27	4
		SG20-0008	25-Feb-02	8	131418.9793	498009.3224	20.27	4
		SG20-0014	25-Feb-02	14	131418.9793	498009.3224	20.27	4
		SG20-0019	25-Feb-02	19	131418.9793	498009.3224	20.27	4
21	Groundwater	RM-GW21-0020	26-Feb-02	20	131397.0352	498028.4938	18.67	
		RM-GW21-0025	26-Feb-02	25	131397.0352	498028.4938	18.67	
		RM-GW21-0030	26-Feb-02	30	131397.0352	498028.4938	18.67	
		RM-GW21-0040	27-Feb-02	40	131397.0352	498028.4938	18.67	
	Soil Gas	SG21-0003	25-Feb-02	3	131397.0352	498028.4938	18.67	
		SG21-0008	25-Feb-02	8	131397.0352	498028.4938	18.67	
		SG21-0014	25-Feb-02	14	131397.0352	498028.4938	18.67	
22	Groundwater	RM-GW22-0018	27-Feb-02	18	132258.5377	497655.1504	16.39	
		RM-GW22-0023	27-Feb-02	23	132258.5377	497655.1504	16.39	
		RM-GW22-0028	27-Feb-02	28	132258.5377	497655.1504	16.39	
		RM-GW22-0038	27-Feb-02	38	132258.5377	497655.1504	16.39	
		RM-GW22-0043	27-Feb-02	43	132258.5377	497655.1504	16.39	
	Soil Gas	SG22-0003	25-Feb-02	3	132258.5377	497655.1504	16.39	
		SG22-0008	25-Feb-02	8	132258.5377	497655.1504	16.39	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
23	Soil Gas	SG23-0003	25-Feb-02	3	132459.8132	498693.7760		3
		SG23-0008	26-Feb-02	8	132459.8132	498693.7760		3
39	Soil Gas	SG39-0003	27-Feb-02	3	131988.8430	497670.5010	-10.89	
		SG39-0008	27-Feb-02	8	131988.8430	497670.5010	-10.89	
		SG39-0015	27-Feb-02	15	131988.8430	497670.5010	-10.89	
40	Groundwater	RM-GW40-0016	27-Feb-02	16	134449.0842	499189.1345	0.46	
		RM-GW40-0021	28-Feb-02	21	134449.0842	499189.1345	0.46	
		RM-GW40-0026	28-Feb-02	26	134449.0842	499189.1345	0.46	
		RM-GW40-0036	28-Feb-02	36	134449.0842	499189.1345	0.46	
		RM-GW40-0046	28-Feb-02	46	134449.0842	499189.1345	0.46	
	Soil Gas	SG40-0003	27-Feb-02	3	134449.0842	499189.1345	0.46	
		SG40-0008	27-Feb-02	8	134449.0842	499189.1345	0.46	
		SG40-0011	27-Feb-02	11	134449.0842	499189.1345	0.46	
		SG40-0014	27-Feb-02	14	134449.0842	499189.1345	0.46	
41	Groundwater	RM-GW41-0018	27-Feb-02	18	132229.9826	497517.4203	13.94	
		RM-GW41-0033	27-Feb-02	33	132229.9826	497517.4203	13.94	
		RM-GW41-0043	28-Feb-02	43	132229.9826	497517.4203	13.94	
	Soil Gas	SG41-0003	26-Feb-02	3	132229.9826	497517.4203	13.94	
		SG41-0006	26-Feb-02	6	132229.9826	497517.4203	13.94	
		SG41-0008	26-Feb-02	8	132229.9826	497517.4203	13.94	
42	Groundwater	RM-GW42-0024	27-Feb-02	24	131933.7865	497763.8377	26.55	
	Soil Gas	SG42-0003	26-Feb-02	3	131933.7865	497763.8377	26.55	
		SG42-0008	26-Feb-02	8	131933.7865	497763.8377	26.55	
		SG42-0013	26-Feb-02	13	131933.7865	497763.8377	26.55	
43	Groundwater	RM-GW43-0018	28-Feb-02	18	132085.0010	497340.6564	16.55	4
		RM-GW43-0023	28-Feb-02	23	132085.0010	497340.6564	16.55	4
		RM-GW43-0028	28-Feb-02	28	132085.0010	497340.6564	16.55	4
		RM-GW43-0038	01-Mar-02	38	132085.0010	497340.6564	16.55	4
		RM-GW43-0048	01-Mar-02	48	132085.0010	497340.6564	16.55	4
		RM-GW43-0052	01-Mar-02	52	132085.0010	497340.6564	16.55	4
	Soil Gas	SG43-0003	26-Feb-02	3	132085.0010	497340.6564	16.55	4
		SG43-0008	26-Feb-02	8	132085.0010	497340.6564	16.55	4
		SG43-0011	27-Feb-02	11	132085.0010	497340.6564	16.55	4
65	Groundwater	RM-GW65-0017	28-Feb-02	17	134322.2845	499017.9785	7.78	4
		RM-GW65-0022	28-Feb-02	22	134322.2845	499017.9785	7.78	4
		RM-GW65-0027	28-Feb-02	27	134322.2845	499017.9785	7.78	4
		RM-GW65-0037	28-Feb-02	37	134322.2845	499017.9785	7.78	4
		RM-GW65-0045	28-Feb-02	45	134322.2845	499017.9785	7.78	4
	Soil Gas	SG65-0003	27-Feb-02	3	134322.2845	499017.9785	7.78	4
		SG65-0008	27-Feb-02	8	134322.2845	499017.9785	7.78	4
		SG65-0014	27-Feb-02	14	134322.2845	499017.9785	7.78	4
66	Groundwater	RM-GW66-0021	01-Mar-02	21	132083.6875	498493.8047	19.63	1
		RM-GW66-0026	01-Mar-02	26	132083.6875	498493.8047	19.63	1
		RM-GW66-0031	01-Mar-02	31	132083.6875	498493.8047	19.63	1
		RM-GW66-0041	01-Mar-02	41	132083.6875	498493.8047	19.63	1
	Soil Gas	SG66-0003	28-Feb-02	3	132083.6875	498493.8047	19.63	1
		SG66-0008	28-Feb-02	8	132083.6875	498493.8047	19.63	1
		SG66-0015	28-Feb-02	15	132083.6875	498493.8047	19.63	1
81	Soil Gas	SG81-0003	06-Mar-02	3	131533.9599	496683.0401	12.91	Adjacent to MW-102
82	Soil Gas	SG82-0004	06-Mar-02	4	131798.5397	497779.7706	15.36	
		SG82-0008	06-Mar-02	8	131798.5397	497779.7706	15.36	
		SG82-0013	06-Mar-02	13	131798.5397	497779.7706	15.36	
83	Soil Gas	SG83-0003	06-Mar-02	3	131552.1457	497000.9949	17.67	Adjacent to MW-101
85	Soil Gas	SG85-0004	06-Mar-02	4	131702.7986	498033.6898	21.94	2
		SG85-0008	06-Mar-02	8	131702.7986	498033.6898	21.94	2
		SG85-0013	06-Mar-02	13	131702.7986	498033.6898	21.94	2
86	Soil Gas	SG86-0004	06-Mar-02	4	132015.1294	497720.9601	33.10	
		SG86-0008	06-Mar-02	8	132015.1294	497720.9601	33.10	
		SG86-0013	06-Mar-02	13	132015.1294	497720.9601	33.10	
87	Soil Gas	SG87-0004	06-Mar-02	4	131718.9237	497994.4873	27.40	2
		SG87-0008	06-Mar-02	8	131718.9237	497994.4873	27.40	2
		SG87-0013	06-Mar-02	13	131718.9237	497994.4873	27.40	2
		SG87-0013	06-Mar-02	13	131718.9237	497994.4873	27.40	2

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
88	Soil Gas	SG88-0004	28-Feb-02	4	131966.4956	497783.2437	28.57	4.Same Location as SG62.
		SG88-0008	28-Feb-02	8	131966.4956	497783.2437	28.57	4.Same Location as SG62.
		SG88-0012	28-Feb-02	12	131966.4956	497783.2437	28.57	4.Same Location as SG62.
		SG88-0018	28-Feb-02	18	131966.4956	497783.2437	28.57	4.Same Location as SG62.
		SG88-0018	28-Feb-02	18	131966.4956	497783.2437	28.57	4.Same Location as SG62.
89	Soil Gas	SG89-0004	28-Feb-02	4	131955.3755	497827.2306	21.85	4. Same hole as RMSG64.
		SG89-0008	28-Feb-02	8	131955.3755	497827.2306	21.85	4. Same hole as RMSG64.
		SG89-0010	28-Feb-02	10	131955.3755	497827.2306	21.85	4. Same hole as RMSG64.
90	Groundwater	RM-GW90-0015	04-Mar-02	15	133118.4657	497647.8485	12.83	
	Soil Gas	SG90-0003	01-Mar-02	3	133118.4657	497647.8485	12.83	
		SG90-0008	01-Mar-02	8	133118.4657	497647.8485	12.83	
		SG90-0011	01-Mar-02	11	133118.4657	497647.8485	12.83	
91	Groundwater	RM-GW91-0014	04-Mar-02	14	133253.5504	497585.1342	7.43	
		RM-GW91-0019	04-Mar-02	19	133253.5504	497585.1342	7.43	
		RM-GW91-0024	04-Mar-02	24	133253.5504	497585.1342	7.43	
	Soil Gas	SG91-0003	01-Mar-02	3	133253.5504	497585.1342	7.43	
		SG91-0008	01-Mar-02	8	133253.5504	497585.1342	7.43	
		SG91-0011	01-Mar-02	11	133253.5504	497585.1342	7.43	
92	Groundwater	RM-GW92-0015	04-Mar-02	15	132748.8859	498865.4268	13.74	
		RM-GW92-0020	04-Mar-02	20	132748.8859	498865.4268	13.74	
		RM-GW92-0025	04-Mar-02	25	132748.8859	498865.4268	13.74	
		RM-GW92-0035	04-Mar-02	35	132748.8859	498865.4268	13.74	
		RM-GW92-0045	05-Mar-02	45	132748.8859	498865.4268	13.74	
	Soil Gas	SG92-0003	01-Mar-02	3	132748.8859	498865.4268	13.74	
		SG92-0008	01-Mar-02	8	132748.8859	498865.4268	13.74	
93	Groundwater	RM-GW93-0018	04-Mar-02	18	132908.0945	498533.2930	43.15	
		RM-GW93-0023	04-Mar-02	23	132908.0945	498533.2930	43.15	
		RM-GW93-0028	04-Mar-02	28	132908.0945	498533.2930	43.15	
		RM-GW93-0033	05-Mar-02	33	132908.0945	498533.2930	43.15	
	Soil Gas	SG93-0003	04-Mar-02	3	132908.0945	498533.2930	43.15	
		SG93-0008	04-Mar-02	8	132908.0945	498533.2930	43.15	
		SG93-0011	04-Mar-02	11	132908.0945	498533.2930	43.15	
94	Groundwater	RM-GW94-0017	05-Mar-02	17	131211.8812	497878.0149	21.23	
		RM-GW94-0022	06-Mar-02	22	131211.8812	497878.0149	21.23	
		RM-GW94-0027	06-Mar-02	27	131211.8812	497878.0149	21.23	
		RM-GW94-0037	06-Mar-02	37	131211.8812	497878.0149	21.23	
		RM-GW94-0047	06-Mar-02	47	131211.8812	497878.0149	21.23	
	Soil Gas	SG94-0003	04-Mar-02	3	131211.8812	497878.0149	21.23	
		SG94-0008	04-Mar-02	8	131211.8812	497878.0149	21.23	
		SG94-0011	04-Mar-02	11	131211.8812	497878.0149	21.23	
95	Groundwater	RM-GW95-0021	04-Mar-02	21	131026.3073	497752.8918	19.33	
		RM-GW95-0026	05-Mar-02	26	131026.3073	497752.8918	19.33	
		RM-GW95-0031	05-Mar-02	31	131026.3073	497752.8918	19.33	
	Soil Gas	SG95-0003	04-Mar-02	3	131026.3073	497752.8918	19.33	
		SG95-0008	04-Mar-02	8	131026.3073	497752.8918	19.33	
		SG95-0012	04-Mar-02	12	131026.3073	497752.8918	19.33	
96	Groundwater	RM-GW96-0018	05-Mar-02	18	132412.5621	497895.0560	19.81	
		RM-GW96-0023	05-Mar-02	23	132412.5621	497895.0560	19.81	
		RM-GW96-0028	05-Mar-02	28	132412.5621	497895.0560	19.81	
	Soil Gas	SG96-0003	04-Mar-02	3	132412.5621	497895.0560	19.81	
		SG96-0008	04-Mar-02	8	132412.5621	497895.0560	19.81	
		SG96-0013	04-Mar-02	13	132412.5621	497895.0560	19.81	
97	Groundwater	RM-GW97-0022	06-Mar-02	22	131716.1831	498113.6356	37.09	
		RM-GW97-0027	06-Mar-02	27	131716.1831	498113.6356	37.09	
		RM-GW97-0032	06-Mar-02	32	131716.1831	498113.6356	37.09	
		RM-GW97-0042	06-Mar-02	42	131716.1831	498113.6356	37.09	
	Soil Gas	SG97-0003	05-Mar-02	3	131716.1831	498113.6356	37.09	
		SG97-0008	05-Mar-02	8	131716.1831	498113.6356	37.09	
		SG97-0013	05-Mar-02	13	131716.1831	498113.6356	37.09	
98	Groundwater	RM-GW98-0024	05-Mar-02	24	132102.8879	498303.0887	33.89	
		RM-GW98-0029	05-Mar-02	29	132102.8879	498303.0887	33.89	
		RM-GW98-0034	05-Mar-02	34	132102.8879	498303.0887	33.89	
	Soil Gas	SG98-0003	05-Mar-02	3	132102.8879	498303.0887	33.89	
		SG98-0008	05-Mar-02	8	132102.8879	498303.0887	33.89	
		SG98-0015	05-Mar-02	15	132102.8879	498303.0887	33.89	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
99	Groundwater	RM-GW99-0017	06-Mar-02	17	130588.9588	497536.2294	12.42	3
		RM-GW99-0022	06-Mar-02	22	130588.9588	497536.2294	12.42	3
		RM-GW99-0027	06-Mar-02	27	130588.9588	497536.2294	12.42	3
		RM-GW99-0037	06-Mar-02	37	130588.9588	497536.2294	12.42	3
		RM-GW99-0042	06-Mar-02	42	130588.9588	497536.2294	12.42	3
	Soil Gas	SG99-0003	05-Mar-02	3	130588.9588	497536.2294	12.42	3
		SG99-0008	05-Mar-02	8	130588.9588	497536.2294	12.42	3
		SG99-0013	05-Mar-02	13	130588.9588	497536.2294	12.42	3
100	Soil Gas	SG100-0003	05-Mar-02	3	132094.4093	497020.8940	2.46	Adjacent to MW-104
101	Soil Gas	SG101-0004	05-Mar-02	4	131904.7267	497702.3521	25.07	
		SG101-0008	05-Mar-02	8	131904.7267	497702.3521	25.07	
		SG101-0013	05-Mar-02	13	131904.7267	497702.3521	25.07	
102	Soil Gas	SG102-0004	05-Mar-02	4	131836.6562	497815.4263	23.62	
		SG102-0008	05-Mar-02	8	131836.6562	497815.4263	23.62	
		SG102-0013	05-Mar-02	13	131836.6562	497815.4263	23.62	
103	Soil Gas	SG103-0004	06-Mar-02	4	131909.1961	497655.8182	13.03	
		SG103-0008	06-Mar-02	8	131909.1961	497655.8182	13.03	
		SG103-0011	06-Mar-02	11	131909.1961	497655.8182	13.03	
104	Soil Gas	SG104-0004	06-Mar-02	4	131878.3052	497979.2217	13.84	
		SG104-0008	06-Mar-02	8	131878.3052	497979.2217	13.84	
		SG104-0012	06-Mar-02	12	131878.3052	497979.2217	13.84	
		SG104-0013	06-Mar-02	13	131878.3052	497979.2217	13.84	
105	Soil Gas	SG105-0004	06-Mar-02	4	132246.1339	498619.0035	9.08	
		SG105-0008	06-Mar-02	8	132246.1339	498619.0035	9.08	
		SG105-0013	06-Mar-02	13	132246.1339	498619.0035	9.08	
106	Soil Gas	SG106-0004	06-Mar-02	4	132368.5423	498606.4318	23.76	
		SG106-0008	06-Mar-02	8	132368.5423	498606.4318	23.76	
		SG106-0013	06-Mar-02	13	132368.5423	498606.4318	23.76	
107	Soil Gas	SG107-0004	07-Mar-02	4	131589.7112	498109.5035	28.65	3
		SG107-0008	07-Mar-02	8	131589.7112	498109.5035	28.65	3
		SG107-0012	07-Mar-02	12	131589.7112	498109.5035	28.65	3
108	Soil Gas	SG108-0004	07-Mar-02	4	131729.5791	498148.2850	24.17	1
		SG108-0008	07-Mar-02	8	131729.5791	498148.2850	24.17	1
		SG108-0013	07-Mar-02	13	131729.5791	498148.2850	24.17	1
109	Soil Gas	SG109-0004	07-Mar-02	4	132228.3574	498531.7744	23.84	2
		SG109-0008	07-Mar-02	8	132228.3574	498531.7744	23.84	2
		SG109-0013	07-Mar-02	13	132228.3574	498531.7744	23.84	2
		SG109-0016	07-Mar-02	16	132228.3574	498531.7744	23.84	2
110	Soil Gas	SG110-0004	07-Mar-02	4	131736.0196	498291.7819	24.95	
		SG110-0008	07-Mar-02	8	131736.0196	498291.7819	24.95	
		SG110-0013	07-Mar-02	13	131736.0196	498291.7819	24.95	
111	Soil Gas	SG111-0004	07-Mar-02	4	131793.9266	498220.2752	31.63	
		SG111-0008	07-Mar-02	8	131793.9266	498220.2752	31.63	
		SG111-0013	07-Mar-02	13	131793.9266	498220.2752	31.63	
112	Soil Gas	SG112-0004	07-Mar-02	4	132269.2086	498640.2701	15.40	2
		SG112-0008	07-Mar-02	8	132269.2086	498640.2701	15.40	2
		SG112-0013	07-Mar-02	13	132269.2086	498640.2701	15.40	2
113	Soil Gas	SG113-0004	07-Mar-02	4	131849.0549	498258.1393	18.78	
		SG113-0008	07-Mar-02	8	131849.0549	498258.1393	18.78	
		SG113-0013	07-Mar-02	13	131849.0549	498258.1393	18.78	
114	Soil Gas	SG114-0004	07-Mar-02	4	131898.0870	498285.5687	24.50	
		SG114-0008	07-Mar-02	8	131898.0870	498285.5687	24.50	
		SG114-0013	07-Mar-02	13	131898.0870	498285.5687	24.50	
115	Soil Gas	SG115-0008	07-Mar-02	8	132226.8713	498681.1825	15.85	2
		SG115-0011	07-Mar-02	11	132226.8713	498681.1825	15.85	2
116	Soil Gas	SG116-0004	07-Mar-02	4	132319.7659	498572.7362	21.81	
		SG116-0008	07-Mar-02	8	132319.7659	498572.7362	21.81	
		SG116-0013	07-Mar-02	13	132319.7659	498572.7362	21.81	
117	Soil Gas	SG117-0004	07-Mar-02	4	132274.7062	498554.8554	16.39	2
		SG117-0008	07-Mar-02	8	132274.7062	498554.8554	16.39	2
		SG117-0013	07-Mar-02	13	132274.7062	498554.8554	16.39	2
		SG117-0016	07-Mar-02	16	132274.7062	498554.8554	16.39	2
118	Soil Gas	SG118-0004	07-Mar-02	4	132325.5532	498682.0026	15.72	
		SG118-0008	07-Mar-02	8	132325.5532	498682.0026	15.72	
		SG118-0013	07-Mar-02	13	132325.5532	498682.0026	15.72	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
119	Soil Gas	SG119-0004	08-Mar-02	4	131593.7283	498059.6085	19.50	1
		SG119-0008	08-Mar-02	8	131593.7283	498059.6085	19.50	1
		SG119-0013	08-Mar-02	13	131593.7283	498059.6085	19.50	1
120	Soil Gas	SG120-0004	08-Mar-02	4	131174.3672	496880.1995	10.68	3. Adjacent to MW-310S.
		SG120-0008	08-Mar-02	8	131174.3672	496880.1995	10.68	3. Adjacent to MW-310S.
		SG120-0012	08-Mar-02	12	131174.3672	496880.1995	10.68	3. Adjacent to MW-310S.
121	Soil Gas	SG121-0004	08-Mar-02	4	132362.1924	498761.6251	16.60	2
		SG121-0008	08-Mar-02	8	132362.1924	498761.6251	16.60	2
122	Soil Gas	SG122-0004	08-Mar-02	4	132340.7100	498789.3847	12.34	2
		SG122-0008	08-Mar-02	8	132340.7100	498789.3847	12.34	2
123	Soil Gas	SG123-0004	08-Mar-02	4	132318.8831	498575.8965	17.89	4. Approx. 5 ft. from SG116.
124	Soil Gas	SG124-0004	08-Mar-02	4	132268.7500	498738.6974	12.10	
		SG124-0008	08-Mar-02	8	132268.7500	498738.6974	12.10	
		SG124-0011	08-Mar-02	11	132268.7500	498738.6974	12.10	
125	Soil Gas	SG125-0004	08-Mar-02	4	132348.6481	498531.2612	16.34	
		SG125-0006	08-Mar-02	6	132348.6481	498531.2612	16.34	
201	Groundwater	RM-GW201-0020	30-May-02	20	131406.8392	496446.9522	NR	
		RM-GW201-0025	30-May-02	25	131406.8392	496446.9522	NR	
		RM-GW201-0030	30-May-02	30	131406.8392	496446.9522	NR	
		RM-GW201-0040	30-May-02	40	131406.8392	496446.9522	NR	
	Soil Gas	SG-201-0003	29-May-02	3	131406.8392	496446.9522	NR	
		SG-201-0008	29-May-02	8	131406.8392	496446.9522	NR	
		SG-201-0014	29-May-02	14	131406.8392	496446.9522	NR	
202	Groundwater	RM-GW202-0020	29-May-02	20	131773.1983	496469.6919	NR	
		RM-GW202-0025	29-May-02	25	131773.1983	496469.6919	NR	
		RM-GW202-0030	29-May-02	30	131773.1983	496469.6919	NR	
		RM-GW202-0040	29-May-02	40	131773.1983	496469.6919	NR	
		RM-GW202-0050	29-May-02	50	131773.1983	496469.6919	NR	
	Soil Gas	SG-202-0003	29-May-02	3	131773.1983	496469.6919	NR	
		SG-202-0008	29-May-02	8	131773.1983	496469.6919	NR	
		SG-202-0014	29-May-02	14	131773.1983	496469.6919	NR	
203	Groundwater	RM-GW203-0020	29-May-02	20	130766.6355	496732.5557	NR	
		RM-GW203-0030	29-May-02	30	130766.6355	496732.5557	NR	
		RM-GW203-0040	29-May-02	40	130766.6355	496732.5557	NR	
		RM-GW203-0045	29-May-02	45	130766.6355	496732.5557	NR	
	Soil Gas	SG-203-0003	30-May-02	3	130766.6355	496732.5557	NR	
		SG-203-0008	30-May-02	8	130766.6355	496732.5557	NR	
		SG-203-0013	30-May-02	13	130766.6355	496732.5557	NR	
		SG-203-0016	30-May-02	16	130766.6355	496732.5557	NR	
204	Groundwater	RM-GW204-0019	29-May-02	19	130987.9381	496744.8088	NR	
		RM-GW204-0025	29-May-02	25	130987.9381	496744.8088	NR	
		RM-GW204-0034	29-May-02	34	130987.9381	496744.8088	NR	
		RM-GW204-0044	30-May-02	44	130987.9381	496744.8088	NR	
		RM-GW204-0052	30-May-02	52	130987.9381	496744.8088	NR	
	Soil Gas	SG-204-0003	29-May-02	3	130987.9381	496744.8088	NR	
		SG-204-0008	29-May-02	8	130987.9381	496744.8088	NR	
		SG-204-0013	29-May-02	13	130987.9381	496744.8088	NR	
		SG-204-0016	29-May-02	16	130987.9381	496744.8088	NR	
205	Groundwater	RM-GW205-0017	30-May-02	17	130854.6916	497680.0543	NR	
		RM-GW205-0022	30-May-02	22	130854.6916	497680.0543	NR	
		RM-GW205-0027	30-May-02	27	130854.6916	497680.0543	NR	
		RM-GW205-0037	30-May-02	37	130854.6916	497680.0543	NR	
		RM-GW205-0043	30-May-02	43	130854.6916	497680.0543	NR	
	Soil Gas	SG-205-0003	29-May-02	3	130854.6916	497680.0543	NR	
		SG-205-0008	29-May-02	8	130854.6916	497680.0543	NR	
		SG-205-0013	29-May-02	13	130854.6916	497680.0543	NR	
		SG-205-0016	29-May-02	16	130854.6916	497680.0543	NR	
206	Soil Gas	SG-206-0003	30-May-02	3	132907.9525	497752.9306	NR	
		SG-206-0006	30-May-02	6	132907.9525	497752.9306	NR	
207	Groundwater	RM-GW207-0010	31-May-02	10	130919.4937	497029.4255	NR	
		RM-GW207-0015	31-May-02	15	130919.4937	497029.4255	NR	
		RM-GW207-0025	03-Jun-02	20	130919.4937	497029.4255	NR	
		RM-GW207-0030	03-Jun-02	30	130919.4937	497029.4255	NR	
		RM-GW207-0035	03-Jun-02	35	130919.4937	497029.4255	NR	
	Soil Gas	SG-207-0003	30-May-02	3	130919.4937	497029.4255	NR	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
208	Groundwater	RM-GW208-0031	31-May-02	31	130675.6224	496977.8272	NR	
		RM-GW208-0039	03-Jun-02	39	130675.6224	496977.8272	NR	
	Soil Gas	SG-208-002.5	30-May-02	2.5	130675.6224	496977.8272	NR	
209	Groundwater	RM-GW209-0023	05-Jun-02	23	132201.9677	496909.9855	NR	
		RM-GW209-0028	05-Jun-02	28	132201.9677	496909.9855	NR	
		RM-GW209-0033	05-Jun-02	33	132201.9677	496909.9855	NR	
		RM-GW209-0043	05-Jun-02	43	132201.9677	496909.9855	NR	
		RM-GW209-0048	05-Jun-02	48	132201.9677	496909.9855	NR	
	Soil Gas	SG-209-0003	30-May-02	3	132201.9677	496909.9855	NR	
		SG-209-0008	30-May-02	8	132201.9677	496909.9855	NR	
		SG-209-0013	30-May-02	13	132201.9677	496909.9855	NR	
		SG-209-0018	31-May-02	18	132201.9677	496909.9855	NR	
210	Groundwater	RM-GW210-0023	31-May-02	23	131983.8112	498091.2047	NR	
		RM-GW210-0028	31-May-02	28	131983.8112	498091.2047	NR	
		RM-GW210-0033	31-May-02	33	131983.8112	498091.2047	NR	
	Soil Gas	SG-210-0003	30-May-02	3	131983.8112	498091.2047	NR	
		SG-210-0008	30-May-02	8	131983.8112	498091.2047	NR	
		SG-210-0013	30-May-02	13	131983.8112	498091.2047	NR	
		SG-210-0018	31-May-02	18	131983.8112	498091.2047	NR	
211	Groundwater	RM-GW211-0013	04-Jun-02	13	131299.7833	497185.1489	NR	
		RM-GW211-0018	04-Jun-02	18	131299.7833	497185.1489	NR	
		RM-GW211-0028	04-Jun-02	28	131299.7833	497185.1489	NR	
		RM-GW211-0038	04-Jun-02	38	131299.7833	497185.1489	NR	
		RM-GW211-0047	05-Jun-02	47	131299.7833	497185.1489	NR	
		RM-GW211-008	04-Jun-02	0	131299.7833	497185.1489	NR	
	Soil Gas	SG-211-002.5	31-May-02	2.5	131299.7833	497185.1489	NR	
212	Soil Gas	SG-212-0003	31-May-02	3	132097.1728	496303.0340	NR	
		SG-212-0008	31-May-02	8	132097.1728	496303.0340	NR	
		SG-212-0013	31-May-02	13	132097.1728	496303.0340	NR	
213	Groundwater	RM-GW213-0019	04-Jun-02	19	131644.6199	497181.3900	NR	
		RM-GW213-0024	04-Jun-02	24	131644.6199	497181.3900	NR	
		RM-GW213-0029	04-Jun-02	29	131644.6199	497181.3900	NR	
		RM-GW213-0039	04-Jun-02	39	131644.6199	497181.3900	NR	
		RM-GW213-0047	04-Jun-02	47	131644.6199	497181.3900	NR	
	Soil Gas	SG-213-0003	31-May-02	3	131644.6199	497181.3900	NR	
		SG-213-0008	31-May-02	8	131644.6199	497181.3900	NR	
		SG-213-0013	31-May-02	13	131644.6199	497181.3900	NR	
		SG-213-0016	31-May-02	16	131644.6199	497181.3900	NR	
214	Groundwater	RM-GW214-0012	05-Jun-02	12	132458.7317	497554.9094	NR	
		RM-GW214-0017	05-Jun-02	17	132458.7317	497554.9094	NR	
		RM-GW214-0022	06-Jun-02	22	132458.7317	497554.9094	NR	
		RM-GW214-0032	06-Jun-02	32	132458.7317	497554.9094	NR	
		RM-GW214-0040	06-Jun-02	40	132458.7317	497554.9094	NR	
	Soil Gas	SG-214-0003	31-May-02	3	132458.7317	497554.9094	NR	
		SG-214-0008	31-May-02	8	132458.7317	497554.9094	NR	
215	Groundwater	RM-GW215-0011	06-Jun-02	11	NR	NR	NR	
		RM-GW215-0016	06-Jun-02	16	NR	NR	NR	
		RM-GW215-0021	06-Jun-02	21	NR	NR	NR	
		RM-GW215-0031	06-Jun-02	31	NR	NR	NR	
		RM-GW215-0041	06-Jun-02	41	NR	NR	NR	
216	Soil Gas	SG-216-0003	09-Jul-02	3	132105.3849	497886.7477	NR	
		SG-216-0008	09-Jul-02	8	132105.3849	497886.7477	NR	
217	Groundwater	OU2-GW217-10	08-Jul-02	10	131727.9647	497582.4589	NR	
		OU2-GW217-20	08-Jul-02	20	131727.9647	497582.4589	NR	
		RM-GW217-30	15-Jul-02	30	131727.9647	497582.4589	NR	
	Soil Gas	SG-217-0003	09-Jul-02	3	131727.9647	497582.4589	NR	
218	Groundwater	OU2-GW218-12	09-Jul-02	12	133013.0890	497432.6449	NR	
		OU2-GW218-17	09-Jul-02	17	133013.0890	497432.6449	NR	
		OU2-GW218-21	09-Jul-02	21	133013.0890	497432.6449	NR	
	Soil Gas	SG-218-0003	10-Jul-02	3	133013.0890	497432.6449	NR	
		SG-218-0008	10-Jul-02	8	133013.0890	497432.6449	NR	
		SG-218-0010	10-Jul-02	10	133013.0890	497432.6449	NR	
		SG-218-0010	10-Jul-02	10	133013.0890	497432.6449	NR	

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Boring	Matrix	Sample ID	Sample Date	Bottom of Screen	Northing	Easting	Elevation	Comments
219	Groundwater	RM-GW219-13	10-Jul-02	13	132872.8155	497215.0569	NR	4
		RM-GW219-18	10-Jul-02	18	132872.8155	497215.0569	NR	4
	Soil Gas	SG-219-0003	09-Jul-02	3	132872.8155	497215.0569	NR	4
		SG-219-0008	09-Jul-02	8	132872.8155	497215.0569	NR	4
		SG-219-0010	09-Jul-02	10	132872.8155	497215.0569	NR	4
220	Groundwater	RM-GW220-11	10-Jul-02	11	132821.3811	496749.0162	NR	
		RM-GW220-16	10-Jul-02	16	132821.3811	496749.0162	NR	
		RM-GW220-21	10-Jul-02	21	132821.3811	496749.0162	NR	
		RM-GW220-31	11-Jul-02	31	132821.3811	496749.0162	NR	
		RM-GW220-41	11-Jul-02	41	132821.3811	496749.0162	NR	
		RM-GW220-51	11-Jul-02	51	132821.3811	496749.0162	NR	
	Soil Gas	SG-220-0003	09-Jul-02	3	132821.3811	496749.0162	NR	
		SG-220-0008	09-Jul-02	8	132821.3811	496749.0162	NR	
		SG-220-0008	09-Jul-02	8	132821.3811	496749.0162	NR	
221	Groundwater	RM-GW221-16	12-Jul-02	0	132508.2126	496060.1701	NR	4
		RM-GW221-21	12-Jul-02	0	132508.2126	496060.1701	NR	4
		RM-GW221-26	15-Jul-02	0	132508.2126	496060.1701	NR	4
		RM-GW221-53	15-Jul-02	0	132508.2126	496060.1701	NR	4
	Soil Gas	SG-221-0003	10-Jul-02	3	132508.2126	496060.1701	NR	4
		SG-221-0008	10-Jul-02	8	132508.2126	496060.1701	NR	4
		SG-221-0010	10-Jul-02	10	132508.2126	496060.1701	NR	4
		SG-221-0010	10-Jul-02	10	132508.2126	496060.1701	NR	4
222	Soil Gas	SG-222-0003	11-Jul-02	3	132344.0902	498195.4458	NR	4
		SG-222-0008	11-Jul-02	8	132344.0902	498195.4458	NR	4
		SG-222-0010	11-Jul-02	10	132344.0902	498195.4458	NR	4
		SG-222-0012	11-Jul-02	12	132344.0902	498195.4458	NR	4
		SG-222-0016	11-Jul-02	16	132344.0902	498195.4458	NR	4
		SG-222-0020	11-Jul-02	20	132344.0902	498195.4458	NR	4
223	Groundwater	RM-GW223-22	11-Jul-02	22	132259.7799	498390.0724	NR	
		RM-GW223-27	11-Jul-02	27	132259.7799	498390.0724	NR	
		RM-GW223-32	11-Jul-02	32	132259.7799	498390.0724	NR	
		RM-GW223-42	11-Jul-02	42	132259.7799	498390.0724	NR	
	Soil Gas	SG-223-0003	11-Jul-02	3	132259.7799	498390.0724	NR	
		SG-223-0008	11-Jul-02	8	132259.7799	498390.0724	NR	
		SG-223-0013	11-Jul-02	13	132259.7799	498390.0724	NR	
		SG-223-0016	11-Jul-02	16	132259.7799	498390.0724	NR	
224	Soil Gas	SG-224-0003	12-Jul-02	3	132691.9327	497188.4606	NR	
		SG-224-0008	12-Jul-02	8	132691.9327	497188.4606	NR	
		SG-224-0010	12-Jul-02	10	132691.9327	497188.4606	NR	
225	Groundwater	RM-GW225-07	12-Jul-02	7	132844.3429	497619.6051	NR	
		RM-GW225-12	12-Jul-02	12	132844.3429	497619.6051	NR	
		RM-GW225-17	12-Jul-02	17	132844.3429	497619.6051	NR	
	Soil Gas	SG-225-0003	12-Jul-02	3	132844.3429	497619.6051	NR	
226	Soil Gas	SG-226-0003	12-Jul-02	3	132591.5673	496925.9112	NR	
		SG-226-0008	12-Jul-02	8	132591.5673	496925.9112	NR	
		SG-226-0008	12-Jul-02	8	132591.5673	496925.9112	NR	
227	Soil Gas	SG-227-0003	12-Jul-02	3	131933.7865	497763.8377	NR	4. Same location as SG43
		SG-227-0008	12-Jul-02	8	131933.7865	497763.8377	NR	4. Same location as SG44
		SG-227-0012	12-Jul-02	12	131933.7865	497763.8377	NR	4. Same location as SG45

Notes:
Top of screen is 1' above the bottom of screen for groundwater samples; bottom of screen is a single point for soil gas samples.
1 CT DEP sample method was used to collect soil gas sample in addition to standard soil gas sample collected as outlined in
2 Soil gas sample collected using modified EPA sampling method connected to Geoprobe Post-Run tubing system.
3 Time series samples colleted in addition to standard soil gas sample.
4 Summa canister sample collected in addition to standard soil sample.

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
MW-101D	DEEP	600 East Broadway	131544.1200	497010.5483	8.5	10.56	10.71	2.06	2.21	6	Sch.40 PVC	2	10	58.9	68.9	63.9	-50.4	-60.4	-55.4	10.0	Silica sand	drive and wash	Haliburton NUS	6.63	TIC	4/15/2003	3.93	>72	<-63.5	72.3	-63.8
MW-101M	INTERMEDIATE	601 East Broadway	131547.0579	497000.6154	9.1	11.21	11.36	2.11	2.26	6	Sch.40 PVC	2	10	21.0	26.0	23.5	-11.9	-16.9	-14.4	5.0	Silica sand	drive and wash	Haliburton NUS	7.39	TIC	4/15/2003	3.82			27	-17.9
MW-101S	SHALLOW	602 East Broadway	131552.5000	497007.1500	8.6	10.51	10.65	1.91	2.05	6	Sch.40 PVC	2	10	9.4	14.4	11.9	-0.8	-5.8	-3.3	5.0	Silica sand	drive and wash	Haliburton NUS	5.69	TIC	4/15/2003	4.82			15.4	-6.8
MW-102D	DEEP	603 East Broadway	131521.7071	496637.6091	9.5	11.75	12.02	2.25	2.52	6	Sch.40 PVC	2	10	101.5	111.5	106.5	-92.0	-102.0	-97.0	10.0	Sand	drive and wash	Haliburton NUS	7.35	TIC	4/15/2003	4.40	>114.25	<-104.55	114.25	-104.75
MW-102M	INTERMEDIATE	604 East Broadway	131512.5927	496663.7909	9.6	11.30	11.73	1.70	2.13	6	Sch.40 PVC	2	10	20.0	30.0	25.0	-10.4	-20.4	-15.4	10.0	Sand	drive and wash	Haliburton NUS	6.99	TIC	4/15/2003	4.31			32	-22.4
MW-102S	SHALLOW	605 East Broadway	131539.7613	496642.7821	9.6	11.40	11.74	1.80	2.14	6	Sch.40 PVC	2	10	6.0	10.0	8.0	3.6	-0.4	1.6	4.0	Sand	drive and wash	Haliburton NUS	5.33	TIC	4/15/2003	6.07			15.4	-5.8
MW-103D	DEEP	606 East Broadway	131757.0402	496927.4905	13	15.11	15.47	2.11	2.47	6	Sch.40 PVC	2	10	73.0	83.0	78.0	-60.0	-70.0	-65.0	10.0	Sand	drive and wash	Haliburton NUS	11.10	TIC	4/15/2003	4.01	88	-75	97.5	-84.5
MW-103M	INTERMEDIATE	607 East Broadway	131773.6053	496929.2076	12.6	14.71	15	2.11	2.40	6	Sch.40 PVC	2	10	28.0	38.0	33.0	-15.4	-25.4	-20.4	10.0	Sand	drive and wash	Haliburton NUS	10.74	TIC	4/15/2003	3.97			40	-27.4
MW-104B	BEDROCK	608 East Broadway	132019.7592	497022.8533	8.6	10.30	10.96	1.70	2.36	4	Sch.40 PVC	2	20	87.9	117.9	102.9	-79.3	-109.3	-94.3	30	NONE	drive and wash	TINUS	6.98	TIC	4/15/2003	3.32	87	-78.4	119.5	-110.9
MW-104D	DEEP	609 East Broadway	132041.4207	497011.7777	8.8	11.03	11.2	2.23	2.40	6	Sch.40 PVC	2	10	69.0	79.0	74.0	-60.2	-70.2	-65.2	10.0	Coarse Sand	drive and wash	Haliburton NUS	7.71	TIC	4/15/2003	3.32	>80.5	<-71.7	81	-72.2
MW-104M	INTERMEDIATE	610 East Broadway	132027.8894	496994.6714	9.4	11.44	11.56	2.04	2.16	6	Sch.40 PVC	2	10	23.5	27.5	25.5	-14.1	-18.1	-16.1	4.0	Coarse Sand	drive and wash	Haliburton NUS	8.03	TIC	4/15/2003	3.41			29	-19.6
MW-104S	SHALLOW	611 East Broadway	132021.4522	497037.3801	8.7	10.99	11.17	2.29	2.47	6	Sch.40 PVC	2	10	6.5	10.5	8.5	2.2	-1.8	0.2	4.0	Sand	drive and wash	Haliburton NUS	6.08	TIC	4/15/2003	4.91			11	-2.3
MW-110D	DEEP	Ferry Boulevard	131745.1097	497515.3583	9.7	9.33	9.69	-0.37	-0.01	6	Sch.40 PVC	2	10	42.5	52.5	47.5	-32.8	-42.8	-37.8	10.0	Silica Sand	drive and wash	Haliburton NUS	5.78	TIC	4/15/2003	3.55	>54	<-44.4	55	-45.3
MW-110M	INTERMEDIATE	Ferry Boulevard	131755.2313	497522.3224	9.7	9.28	9.85	-0.42	0.15	6	Sch.40 PVC	2	10	18.0	28.0	23.0	-8.3	-18.3	-13.3	10.0	Silica Sand	drive and wash	Haliburton NUS	5.85	TIC	4/15/2003	3.43			28.8	-19.1
MW-110S	SHALLOW	Ferry Boulevard	131764.2191	497531.1854	9.8	9.64	9.83	-0.16	0.03	6	Sch.40 PVC	2	10	8.0	14.0	11.0	1.8	-4.2	-1.2	6.0	Silica Sand	drive and wash	Haliburton NUS	0.34	TIC	4/15/2003	9.30			15	-5.2
MW-111D	DEEP	Ferry Boulevard	131686.4590	497279.8341	10.5	12.33	12.49	1.83	1.99	8	Sch.40 PVC	2	10	79.3	89.3	84.3	-68.8	-78.8	-73.8	10.0	Silica Sand	drive and wash	Haliburton NUS	8.99	TIC	4/15/2003	3.34	>90	<-79.5	90	-79.5
MW-111M	INTERMEDIATE	Ferry Boulevard	131673.9148	497278.6417	10.8	12.70	12.98	1.90	2.18	6	Sch.40 PVC	2	10	24.0	34.0	29.0	-13.2	-23.2	-18.2	10.0	Silica Sand	drive and wash	Haliburton NUS	9.61	TIC	4/15/2003	3.09			35.5	-24.7
MW-111SG	SOIL GAS	Ferry Boulevard	131672.4190	497286.8250	10.4		13.58	2.50	3.00	3	PVC	1.5	10	4.9	6.0	5.5	5.5	4.4	5.0	1.1	Sand	DP & soil removal	TINUS							6	4.4
MW-111S	SHALLOW	Ferry Boulevard	131677.9642	497290.6749	10.3	12.03	12.3	1.73	2.00	6	Sch.40 PVC	2	10	6.0	10.0	8.0	4.3	0.3	2.3	4.0	Silica Sand	drive and wash	Haliburton NUS	8.61	TIC	4/15/2003	3.42			10.5	-0.2
MW-112B	BEDROCK	Ferry Boulevard	131497.6348	497572.0897	7	6.41	7.06	-0.59	0.06	6	Sch.40 PVC	2	10	47.0	57.0	52.0	-40.0	-50.0	-45.0	10.0	Silica Sand	drive and wash	Haliburton NUS	3.08	TIC	4/15/2003	3.33	42	-35	63	-56
MW-112D	DEEP	Ferry Boulevard	131489.5079	497562.6704	7	6.74	7.02	-0.26	0.02	6	Sch.40 PVC	2	10	38.0	42.0	40.0	-31.0	-35.0	-33.0	4.0	Silica Sand	drive and wash	Haliburton NUS	3.43	TIC	4/15/2003	3.31	>42.5	<-35.5	42.5	-35.5
MW-112M	INTERMEDIATE	Ferry Boulevard	131501.8020	497560.8338	7.1	6.73	7.27	-0.37	0.17	6	Sch.40 PVC	2	10	24.0	34.0	29.0	-16.9	-26.9	-21.9	10.0	Silica Sand	drive and wash	Haliburton NUS	3.56	TIC	4/15/2003	3.17			35.3	-28.2
MW-113B	BEDROCK	Ferry Boulevard	130739.6161	497208.1722	7.1	8.96	9.2	1.86	2.10	6	Sch.40 PVC	2	10	96.5	106.5	101.5	-89.4	-99.4	-94.4	10.0	Silica Sand	drive and wash	Haliburton NUS	6.23	TIC	4/15/2003	2.73	92	-84.9	112.5	-105.4
MW-113M	INTERMEDIATE	Ferry Boulevard	130743.9059	497191.6284	7.1	8.76	9.14	1.66	0.38	6	Sch.40 PVC	2	10	28.0	38.0	33.0	-20.9	-30.9	-25.9	10.0	Silica Sand	drive and wash	Haliburton NUS	5.70	TIC	4/15/2003	3.06			38.5	-31.4
MW-120S	SHALLOW	Housatonic Boat Club	128227.4400	496834.7600	8.3	8.00	8.2	-0.30	0.20	6	Sch.40 PVC	2	10	11.9	21.9	16.9	-3.6	-13.6	-8.6	10.0	Silica Sand	drive and wash	Haliburton NUS	Not Found				>22	<-13.7	22	-13.7
MW-201B	BEDROCK	DOT	133933.3470	499269.7096	15.0	14.62	15.12	-0.38	0.12	4	Sch.40 PVC	2	20	45.5	65.5	65.5	-30.5	-70.5	-50.5	40	NONE	drive and wash	TINUS	9.49	TIC	4/15/2003	5.13	42	-27	86	-71
MW-201D	DEEP	DOT	133933.9155	499265.1665	14.92	14.71	14.91	-0.21	-0.01	6	Sch.40 PVC	2	10	32.7	37.7	35.2	-17.8	-22.8	-20.3	5.0	Silica Sand	drive and wash	Haliburton NUS	9.65	TIC	4/15/2003	5.06	>38	<-23.08	38.2	-23.28
MW-202SG	SOIL GAS	DOT	133539.0870	498970.0290	11.9		12.05	-0.50	0.15	4		1.5	10	6.5	7.5	7.0	5.4	4.4	4.9	1.0	Sand	DP & soil removal	TINUS							8	3.9
MW-202S	SHALLOW	DOT	133543.7530	498973.0800	11.7	11.62	11.91	-0.40	0.21	4	Sch.40 PVC	2	10	5.1	15.1	10.1	6.6	-3.4	1.6	10.0	Silica Sand	drive and wash	TINUS	6.76	TIC	4/15/2003	4.86			18	-6.3
MW-202D	DEEP	DOT	133536.4729	498966.2391	11.65	11.35	11.68	-0.31	0.02	6	Sch.40 PVC	2	10	29.0	34.0	31.5	-17.3	-22.3	-19.8	5.0	Silica Sand	drive and wash	Haliburton NUS	6.52	TIC	4/15/2003	4.83	>35	<-23.34	35	-23.34
MW-203SG	SOIL GAS	DOT	133690.6020	499210.6300	13.1		13.2	-0.50	0.10	3	PVC	1.5	10	6.7	7.8	7.3				1.1	Sand	DP & soil removal	TINUS							7.8	
MW-203S	SHALLOW	DOT	133688.9860	499216.9000	13.3	12.92	13.27	-0.40	-0.03	4		2	10	7.1	17.1	12.1	6.2	-3.8	1.2	10.0	Sand	drive and wash	TINUS	7.88	TIC	4/15/2003	5.04			18.3	-5
MW-203D	DEEP	DOT	133683.5816	499211.0652	13.24	12.98	13.26	-0.26	0.02	6	Sch.40 PVC	2	10	24.0	29.0	26.5	-10.8	-15.8	-13.3	5.0	Silica Sand	drive and wash	Haliburton NUS	7.99	TIC	4/15/2003	4.99	>30	<-16.76	30	-16.76
MW-204D	DEEP	DOT	133420.6006	498512.9837	11.5	11.27	11.52	-0.23	0.02	6	Sch.40 PVC	2	10	45.0	50.0	47.5	-33.5	-38.5	-36.0	5.0	Silica Sand	drive and wash	Haliburton NUS	6.48	TIC	4/15/2003	4.79	>51	<-39.5	55	-43.5
MW-205D	DEEP	DOT	133347.1044	498433.9973	18.24	17.99	18.24	-0.25	0.00	6	Sch.40 PVC	2	10	57.6	62.6	60.1	-39.4	-44.4	-41.9	5.0	Silica Sand	drive and wash	Haliburton NUS	13.26	TIC	4/15/2003	4.73	>62.6	<-44.36	63.55	-45.31
MW-206D	DEEP	DOT	133929.7741	498974.0255	11.59	11.04	11.61	-0.55	0.02	6	Sch.40 PVC	2	10	60.6	65.6	63.1	-49.0	-54.0	-51.5	5.0	Silica Sand	drive and wash	Haliburton NUS	5.97	TIC	4/15/2003	5.07	>65.5	<-53.91	66.5	-54.91
MW-206MR	INTERMEDIATE	DOT	133812.8150	498889.6130	11.9	11.54	12.08	-0.50	0.18	4	PVC	2	10	23.8	33.8	28.8	-11.9	-21.9	-16.9	10.0	Sand	drive and wash	TINUS	6.53	TIC	4/15/2003	5.01			35	-23.1
MW-206SR	SHALLOW	DOT	133822.6010	498902.8270	12	11.91	12.11	-0.15	0.11	4	PVC	2	10	6.0	21.0	13.5	6.0	-9.0	-1.5	10.0	Sand	drive and wash	TINUS	6.87	TIC	4/15/2003	5.04			23.5	-11.5
MW-207B	BEDROCK	DOT	133397.3910	498165.7860	20.7	20.27	20.79	-0.50	0.09	3	PVC	2	10	86.0	96.0	91.0	-65.3	-75.3	-70.3	10.0	Sand	drive and wash	TINUS	15.43	TIC	4/15/2003	4.84	84	-63.3	99	-78.3
MW-207DR	DEEP	DOT	133397.3100	498170.4830	20.7	20.34	20.83	-0.40	0.13	4	PVC	2	10	73.3	83.3	78.3	-52.6	-62.6	-57.6	10.0	Sand	drive and wash	TINUS	15.22	TIC	4/15/2003	5.12			85	-64.3
MW-207MR	INTERMEDIATE	DOT	133396.0190	498160.7720	20.7	20.26	20.78	-0.40	0.08	4	PVC	2	10	41.8	51.8	46.8	-21.1	-31.1	-26.1	10.0	Sand	drive and wash	TINUS	15.42	TIC	4/15/2003	4.84			53	-32.3
MW-207SR	SHALLOW	DOT	133395.4370	498155.2790	20.6	19.96	20.7	-0.60	0.10	4	PVC	2	10	11.8	26.8	19.3	8.8	-6.2	1.3	15.0	Sand	drive and wash	TINUS	15.15	TIC	4/15/2003	4.81			28	-7.4
MW-208B	BEDROCK	DOT & R.R. Access Rd.	133363.5068	496917.0117	24.5	23.85	24.45	-0.65	-0.05	4	Sch.40 PVC	2	20	73.7	123.7	98.7	-49.2	-99.2	-74.2	50	NONE	drive and wash	TINUS	17.00	TIC	4/15/2003	6.85	74	-49.5	124.7	-100.2
MW-208D	DEEP	DOT & R.R. Access Rd.	133364.4362	496911.6241	23.99	23.71	23.95	-0.28	-0.04	6	PVC	2	20	65.0	73.0	69.0	-41.0	-49.0	-45.0	8.0	0 Sand	vibra-sonic	B&RE	16.67	TIC	4/15/2003	6.84	73	-49.01	78	-54.01
MW-208M	INTERMEDIATE	DOT & R.R. Access Rd.	133365.2921	496906.8895	23.7	23.53	23.73	-0.17	0.03	6	PVC	2	20	46.25	55.25	50.8	-22.6	-31.6	-27.1	9.0	0 Sand	vibra-sonic	B&RE	16.68	TIC	4/15/2003	6.85			56	-32.3
MW-208S	SHALLOW	DOT & R.R. Access Rd.	133364.4362	496911.6241	23.99	23.75	23.95	-0.24	-0.04	8	PVC	2	6	13.0	28.0	20.5	11.0	-4.0	3.5	15.0	00 Sand	vibra-sonic	B&RE	16.84	TIC	4/15/2003	6.91			78	-54.01
MW-209B	BEDROCK	411 Barnum Ave Cut-Off	132927.0275	496916.2680	12.26	11.81	12.16	-0.45	-0.10	5	PVC	2	10	85.0	100.0	92.5	-72.7	-87.7	-80.2	15.0	00 Sand	vibra-sonic	B&RE	5.72	TIC	4/15/2003	6.09	69	-56.74	101	-88.74
MW-209D	DEEP	411 Barnum Ave Cut-Off	132931.1060	496921.0163	12.29	12.01	12.28	-0.28	-0.01	6	PVC	2	10	58.3	68.3	63.3	-46.0	-56.0	-51.0	10.0	00 Sand	vibra-sonic	B&RE	5.80	TIC	4/15/2003	6.21			69	-56.71
MW-209S	SHALLOW	411 Barnum Ave Cut-Off	132926.5348	496929.8462	12.57	12.25	12.62	-0.32	0.05	8	PVC	2	6	5.0	13.0	9.0	7.6	-0.4	3.6	8.0	00N Sand	vibra-sonic	B&RE	5.52	TIC	4/15/2003	6.73			91	-78.43
MW-210B	BEDROCK	411 Barnum Ave Cut-Off	132591.1080	497235.9670	10.5	10.2	10.46	-0.30	-0.04	3	PVC	2	20	38.5	48.5	43.5	-28.0	-38.0	-33.0	10.0	Sand	drive and wash	TINUS	6.51	TIC	4/15/2003	3.69	36.5	-25	51.5	-41
SB-210(OLD)	Boring Only	VFW pkg. lot	133101.8143	497651.9448	15.88	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	vibra-sonic	B&RE	NA	NA	NA	NA	13	2.88	45	-29.12
MW-210D (NEW)	DEEP	411 Barnum Ave Cut-Off	132587.4200	497239.5556	10.38	10.06	10.34	-0.32	-0.04	6	PVC	2	20	27.0	32.0	29.5	-16.6	-21.6	-19.1	5.0	0 Sand	vibra-sonic	B&RE	6.31	TIC	4/15/2003	3.75	33	-22.62	40	-29.62
MW-210S	SHALLOW	411 Barnum Ave Cut-Off	132587.4200	497239.5556	10.38	10.05	10.34	-0.33	-0.04	8	PVC	2	10	7.0	22.0	14.5	3.4	-11.6	-4.1	15.0	00 Sand	vibra-sonic	B&RE	6.38	TIC	4/15/2003	3.67			40	-29.62
MW-211B	BEDROCK	DOT	133226.4173	498185.4539	19.58	19.25	19.56	-0.33	-0.02	5	PVC	2	10	155.0	170.0	162.5	-135.4	-150.4	-142.9	15.0	00 Sand	vibra-sonic	B&RE	14.63	TIC	4/15/2003	4.62	150	-130.42	171	-151.42
MW-211D	DEEP	DOT	133232.3914	498191.5225	19.56	19.29	19.57	-0.27	0.01	6	PVC	2	10	128.0	143.0	135.5	-108.4	-123.4	-115.9	15.0	00 Sand	vibra-sonic	B&RE	14.77	TIC	4/15/2003	4.52			144	-124.44
MW-211M	INTERMEDIATE	DOT	133232.3914	498191.5225	19.56	19.28	19.57	-0.28	0.01	8	PVC	2	10	97.0	104.5	100.8	-77.4	-84.9	-81.2	7.5	00 Sand	vibra-sonic	B&RE	14.69	TIC	4/15/2003	4.59			144	-124.44
MW-211S	SHALLOW	DOT	133226.4173	498185.4539	19.58	19.24	19.56	-0.34	-0.02	8	PVC	2	10	12.0	27.0	19.5	7.6	-7.4	0.1	15.0	00 Sand	vibra-sonic	B&RE	14.68	TIC	4/15/2003	4.56			171	-151.42
MW-212B	BEDROCK	DOT	132473.8043	497644.2448	12.03	11.82	12.03	-0.21	0.00	4.5	Sch.40 PVC	2	6	69.0	84.0	76.5	-57.0	-72.0	-64.5	15.0	00 Sand	vibra-sonic	B&RE	7.85	TIC	4/15/2003	3.97	60	-47.97	85.5	-73.47
MW-212D	DEEP	DOT	132474.1750	497649.6693	12.04	11.82	12.06	-0.22	0.02	6	PVC	2	6	50.0	55.0	52.5	-38.0	-43.0	-40.5	5.0	00N Sand	vibra-sonic	B&RE	7.88	TIC	4/15/2003	3.94			55.8	-43.76
MW-212M	INTERMEDIATE	DOT	132474.1750	497649.6693	12.04	11.77	12.06	-0.27	0.02	9	PVC	2	20	38.0	43.0	40.5	-26.0	-31.0	-28.5	5.0	0 Sand	vibra-sonic	B&RE	7.85	TIC	4/15/2003	3.92			55.8	-43.76
MW-212S	SHALLOW	DOT	132473.8043	497644.2448	12.03	11.83	12.03	-0.20	0.00	8.75	Sch.40 PVC	2	20	7.0	22.0	14.5	5.0	-10.0	-2.5	15.0	0 Sand	vibra-sonic	B&RE	7.94	TIC	4/15/2003	3.89			85.5	-73.47
MW-213SG	SOIL GAS	MINOR AND BURR	132523.6480	498377.4480	23		22.95	-0.80	-0.05	4	PVC	1.5	10	7.0	8.0	7.5	16.0	15.0	15.5	1.0	Sand	drive and wash	TINUS							8	15
MW-213DB	DEEP BEDROCK	MINOR AND BURR	132531.6400	498356.0110	23.4	22.9	23.4	-0.60	0.00	6	PVC	2	10	74.0	84.0	79.0	-50.6	-60.6	-55.6	10.0	Sand	air rotary	TINUS	19.21	TIC	4/15/2003	3.69	25		130	-106.6
MW-213B	BEDROCK	MINOR AND BURR	132526.0820	498368.9660	23.2	22.77	23.2	-0.43	0.00	5	PVC	2	10	37.5	52.5	45.0	-14.3	-29.3	-21.8	15.0	00 Sand	vibra-sonic	B&RE	19.01	TIC	4/15/2003	3.76	29	-5.8	53	-29.8
MW-213S	SHALLOW	MINOR AND BURR	132526.0820	498368.9660	23.2	22.75	23.2	-0.45	0.00	9	PVC	2	10	13.0	28.0	20.5	10.2	-4.8	2.7	15.0	00 Sand	vibra-sonic	B&RE	18.99	TIC	4/15/2003	3.76			53	-29.8
MW-214SG	SOIL GAS	462 HOUSATONIC	132045.1210	498464.7350	20.6		20.66	-0.50	0.06	4	PVC	1.5	10	6.9	8.0	7.5	13.7	12.6	13.2	1.1	Sand	DP & soil removal	TINUS							8.1	12.5
MW-214B	BEDROCK	462 HOUSATONIC	132056.2270	498472.0180	20.2	19.68	20.21	-0.40	0.01		PVC	2	20	56.0	66.0	61.0	-35.8	-45.8	-40.8	10.0	Sand	drive and wash	TINUS	16.17	TIC	4/15/2003	3.51	53	-32.8	67.2	-47
MW-214D	DEEP	462 HOUSATONIC	132049.1330	498466.4348	20.05	19.73	20.56	-0.32	0.51	6.5	PVC	2	10	42.8	47.8	45.3	-22.8	-27.8	-25.3	5.0	00 Sand	vibra-sonic	B&RE	16.21	TIC	4/15/2003	3.52	51	-30.95	56	-35.95
MW-214M	INTERMEDIATE	462 HOUSATONIC	132052.9256	498468.9186	19.87	19.37	20.57	-0.50	0.70	6.5	PVC	2	20	30.5	40.5	35.5	-10.6	-20.6	-15.6	10.0	0 Sand	vibra-sonic	B&RE	15.82	TIC	4/15/2003	3.55			41	-21.13
MW-214S	SHALLOW	462 HOUSATONIC	132049.1330	498466.4348	20.05	19.73	20.56	-0.32	0.51	8.75	PVC	2	10	12.3	27.3	19.8	7.8	-7.3	0.3	15.0	00 Sand	vibra-sonic	B&RE	16.16	TIC	4/15/2003	3.57			56	-35.95
MW-215SG	SOIL GAS	73 WILLOW	131899.1380	497813.2750	20.6		20.62	-0.50	0.02	4	PVC	1.5	10	7.0	8.0	7.5	13.6	12.6	13.1	1.0										8	12.6
MW-215DB	DEEP BEDROCK	73 WILLOW	131900.3970	497810.1320	20.6	20.05	20.6	-0.70	0.00	6	PVC	2	10	44.0	54.0	49.0	-23.4	-33.4	-28.4	10.0	Sand	drive and wash	TINUS	16.40	TIC	4/15/2003	3.65	20		61	-40.4
MW-215B	BEDROCK	73 WILLOW	131902.8365	497806.0204	20.66	20.39	20.65	-0.27	-0.01	4.5	Sch.40 PVC	2	6	28.0	38.0	33.0	-7.3	-17.3	-12.3	10.0	00N Sand	vibra-sonic	B&RE	16.70	TIC	4/15/2003	3.69	19	1.66	40.6	-19.94
MW-215S	SHALLOW	73 WILLOW	131902.8365	497806.0204	20.66	20.41	20.65	-0.25	-0.01	8.75	PVC	2	10	9.0	19.0	14.0	11.7	1.7	6.7	10.0	00 Sand	vibra-sonic	B&RE	16.73	TIC	4/15/2003	3.68			40.6	-19.94

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
MW-216B	BEDROCK	DPW BLDG.	135386.2631	497845.2905	31.21	30.89	31.23	-0.32	0.02	5	Sch.40 PVC	2	10	40.7	65.7	53.2	-9.5	-34.5	-22.0	25.0	00 Sand	vibra-sonic	B&RE	24.61	TIC	4/15/2003	6.28	13.5	17.71	66	-34.79
MW-216DB	DEEP BEDROCK	DPW BLDG.	135389.3458	497853.5357	31.2	30.96	31.17	-0.24	-0.03	4	Sch.40 PVC	2	20	68.5	98.5	83.5	-37.3	-67.3	-52.3	30	NONE	drive and wash	TINUS	24.65	TIC	4/15/2003	6.31	15	16.2	105	-73.8
MW-217SG	SOIL GAS	242 HOUSATONIC	131184.6580	497892.1680	15.7		15.76	-1.00	0.06	4	PVC	1.5	10	7	8	7.5	8.7	7.7	8.2	1	Sand	drive and wash	TINUS							8	7.7
MW-217B	BEDROCK	242 HOUSATONIC	131192.6333	497902.5238	16.23	16.01	16.26	-0.22	0.03	5	PVC	2	10	45.0	70.0	57.5	-28.8	-53.8	-41.3	25.0	00 Sand	vibra-sonic	B&RE	12.29	TIC	4/15/2003	3.72	36	-19.77	71	-54.77
MW-217D	DEEP	242 HOUSATONIC	131192.6333	497902.5238	16.23	15.97	16.26	-0.26	0.03	9	PVC	2	10	25.0	35.0	30.0	-8.8	-18.8	-13.8	10.0	00 Sand	vibra-sonic	B&RE	12.14	TIC	4/15/2003	3.83			71	-54.77
MW-217S	SHALLOW	242 HOUSATONIC	131180.3440	497889.7780	15.7	15.3	15.67	-0.5	-0.03	6	PVC	2	10	10.8	20.8	15.8	4.9	-5.1	-0.1	10	Sand	drive and wash	TINUS	12.00	TIC	4/15/2003	3.30			22	-6.3
MW-301B	BEDROCK	99 RIVERVIEW PLACE	132739.5190	498931.9880	13.5	13.12	13.52	-0.38	0.02	4	Sch.40 PVC	2	20	54.2	84.2	69.2	-40.7	-70.7	-55.7	30	NONE	drive and wash	TINUS	9.42	TIC	4/15/2003	3.70	51.75	-38.25	84.5	-71
MW-301D	DEEP	99 RIVERVIEW PLACE	132746.9793	498921.8596	13.8	13.38	13.79	-0.42	-0.01	4	Sch.40 PVC	2	10	35.4	45.4	40.4	-21.6	-31.6	-26.6	10	No. 1 Sand	drive and wash	TINUS	9.64	TIC	4/15/2003	3.74			45.95	-32.15
MW-301S	SHALLOW	99 RIVERVIEW PLACE	132747.6955	498916.1760	14.0	13.67	14.01	-0.33	0.01	4	Sch.40 PVC	2	10	5	20	12.5	9.0	-6.0	1.5	15	No. 1 Sand	drive and wash	TINUS	9.77	TIC	4/15/2003	3.90			21	-7
MW-302SG	SOIL GAS	337 Housatonic Ave.	131602.5520	498167.6990	22.1		22.06	-0.80	-0.04	4	PVC	1.5	10	7	8	7.5				1	Sand	DP & soil removal	TINUS							8	
MW-302B	BEDROCK	337 Housatonic Ave.	131605.3236	498174.4302	22.7	22.46	23.29	-0.24	0.59	4	Sch.40 PVC	2	20	59.5	91.9	75.7	-36.8	-69.2	-53.0	32.4	NONE	drive and wash	TINUS	18.33	TIC	4/15/2003	4.13	57	-34.3	92.4	-69.7
MW-302D	DEEP	337 Housatonic Ave.	131597.4145	498169.7240	22.6	22.07	22.93	-0.53	0.33	4	Sch.40 PVC	2	10	35	45	40.0	-12.4	-22.4	-17.4	10	No. 1 Sand	drive and wash	TINUS	18.22	TIC	4/15/2003	3.85			46	-23.4
MW-302S	SHALLOW	337 Housatonic Ave.	131601.4950	498171.8800	22.7	22.22	22.96	-0.48	0.26	4	Sch.40 PVC	2	10	15	25	20.0	7.7	-2.3	2.7	10	No. 1 Sand	drive and wash	TINUS	18.42	TIC	4/15/2003	3.80				22.7
MW-303B	BEDROCK	730 BARNUM AVE.	133383.0134	496129.0289	30.3	30.03	30.30	-0.27	0.00	4	Sch.40 PVC	2	20	12.5	52.5	32.5	17.8	-22.2	-2.2	40	NONE	drive and wash	TINUS	19.93	TIC	4/15/2003	10.10	7.5	22.8	53	-22.7
MW-304B	BEDROCK	411 Barnum Ave Cut-Off	132916.8144	497758.4817	10.6	10.16	10.73	-0.44	0.13	4	Sch.40 PVC	2	20	63.4	93.4	78.4	-52.8	-82.8	-67.8	30	NONE	drive and wash	TINUS	5.62	TIC	4/15/2003	4.54	62.5	-51.9	94.4	-83.8
MW-304D	DEEP	411 Barnum Ave Cut-Off	132905.9343	497767.5540	10.4	9.78	10.37	-0.62	-0.03	4	Sch.40 PVC	2	10	49.5	59.5	54.5	-39.1	-49.1	-44.1	10	No. 1 Sand	drive and wash	TINUS	5.56	TIC	4/15/2003	4.22			59.9	-49.5
MW-304S	SHALLOW	411 Barnum Ave Cut-Off	132912.8702	497756.5158	10.2	10.00	10.38	-0.20	0.18	4	Sch.40 PVC	2	10	4.3	19.3	11.8	5.9	-9.1	-1.6	15	No. 1 Sand	drive and wash	TINUS	5.76	TIC	4/15/2003	4.24			20.2	-10
MW-305BR	BEDROCK	411 Barnum Ave Cut-Off	132506.2720	496454.0760	9.1	8.65	9.27	-0.50	0.17	3	Sch.40 PVC	2	10	95.5	105.5	100.5	-86.4	-96.4	-91.4	10	NONE	drive and wash	TINUS	4.12	TIC	4/15/2003	4.53	69.5		109	-99.9
MW-305DR	DEEP	411 Barnum Ave Cut-Off	132510.4620	496452.5430	9.1	8.65	9.26	-0.50	0.16	4	Sch.40 PVC	2	10	48.8	58.8	53.8	-39.7	-49.7	-44.7	10	Sand	drive and wash	TINUS	4.45	TIC	4/15/2003	4.20			60	-50.9
MW-305SR	SHALLOW	411 Barnum Ave Cut-Off	132514.6130	496451.2840	9.3	8.94	9.45	-0.50	0.15	4	Sch.40 PVC	2	10	3.5	12	7.8	5.8	-2.7	1.6	8.5	Sand	drive and wash	TINUS	6.21	TIC	4/15/2003	2.73			12	-2.7
MW-306B	BEDROCK	540 Longbrook Ave	133900.3472	497023.7655	18.8	18.20	18.79	-0.60	-0.01	4	Sch.40 PVC	2	20	23	53	38.0	-4.2	-34.2	-19.2	30	NONE	drive and wash	TINUS	9.59	TIC	4/15/2003	8.61	22	-3.2	54	-35.2
MW-306DB	DEEP BEDROCK	541 Longbrook Ave	133895.8473	497018.0766	18.8	18.37	18.78	-0.43	-0.02	4	Sch.40 PVC	2	20	54	84	69.0	-35.2	-65.2	-50.2	30	NONE	drive and wash	TINUS	9.54	TIC	4/15/2003	8.83	21	-2.2	86	-67.2
MW-307B	BEDROCK	COTTAGE PLACE	133992.1050	496693.5306	34.8	34.44	34.77	-0.36	-0.03	4	Sch.40 PVC	2	20	7.5	37.5	22.5	27.3	-2.7	12.3	30	NONE	drive and wash	TINUS	7.92	TIC	4/15/2003	26.52	6	28.8	39	-4.2
MW-307DB	DEEP BEDROCK	COTTAGE PLACE	133995.7697	496696.3109	35.0	34.55	34.98	-0.45	-0.02	4	Sch.40 PVC	2	20	41	71	56.0	-6.0	-36.0	-21.0	30	NONE	drive and wash	TINUS	8.75	TIC	4/15/2003	25.80	6	29	73	-38
MW-308B	BEDROCK	North End Clinton Ave. near Patterson	135053.9928	497206.4482	38.4	37.77	38.41	-0.63	0.01	4	Sch.40 PVC	2	20	5.5	35.5	20.5	32.9	2.9	17.9	30	NONE	drive and wash	TINUS	11.09	TIC	4/15/2003	26.68	3.7	34.7	38.2	0.2
MW-308DB	DEEP BEDROCK	North End Clinton Ave. near Patterson	135057.4404	497208.6603	38.3	37.93	38.25	-0.37	-0.05	4	Sch.40 PVC	2	20	40	70	55.0	-1.7	-31.7	-16.7	30	NONE	drive and wash	TINUS	11.09	TIC	4/15/2003	26.84	3.7	34.6	71.7	-33.4
MW-309B	BEDROCK	250 East Main St	135054.7874	498624.4228	11.2	10.89	11.19	-0.31	-0.01	4	Sch.40 PVC	2	20	99.1	129.1	114.1	-87.9	-117.9	-102.9	30	NONE	drive and wash	TINUS	5.75	TIC	4/15/2003	5.14	96	-84.8	130	-118.8
MW-309D	DEEP	251 East Main St	135084.4689	498615.8787	11.6	11.38	11.61	-0.22	0.01	4	Sch.40 PVC	2	10	84	94	89.0	-72.4	-82.4	-77.4	10	No. 1 Sand	drive and wash	TINUS	6.32	TIC	4/15/2003	5.06			94.2	-82.6
MW-309S	SHALLOW	252 East Main St	135091.0974	498614.5597	11.7	11.18	11.73	-0.52	0.03	4	Sch.40 PVC	2	10	5	20	12.5	6.7	-8.3	-0.8	15	No. 1 Sand	drive and wash	TINUS	6.15	TIC	4/15/2003	5.03			20.3	-8.6
MW-310B	BEDROCK	EAST BROADWAY	131174.6702	496868.4025	16.9	16.24	16.86	-0.66	-0.04	4	Sch.40 PVC	2	20	63.5	113.8	88.7	-46.6	-96.9	-71.8	50	NONE	drive and wash	TINUS	12.90	TIC	4/15/2003	3.34	62.5	-45.6	114.1	-97.2
MW-310D	DEEP	EAST BROADWAY	131173.3948	496863.0017	16.9	16.36	16.93	-0.54	0.03	4	Sch.40 PVC	2	10	48	58	53.0	-31.1	-41.1	-36.1	10	No. 1 Sand	drive and wash	TINUS	12.87	TIC	4/15/2003	3.49			59	-42.1
MW-310S	SHALLOW	EAST BROADWAY	131177.0665	496871.7788	16.9	16.46	16.85	-0.44	-0.05	4	Sch.40 PVC	2	10	11.8	26.8	19.3	5.1	-9.9	-2.4	15	No. 1 Sand	drive and wash	TINUS	12.87	TIC	4/15/2003	3.59			28.1	-11.2
MW-311B	BEDROCK	ELM ST. & JUDSON PLACE	130590.6148	496113.6910	17.5	17.37	17.52	-0.13	0.02	4	Sch.40 PVC	2	20	70	100	85.0	-52.5	-82.5	-67.5	30	NONE	drive and wash	TINUS	11.80	TIC	4/15/2003	5.57	68.2	-50.7	100.35	-82.85
MW-311D	DEEP	ELM ST. & JUDSON PLACE	130592.9385	496105.2921	17.8	17.48	17.78	-0.32	-0.02	4	Sch.40 PVC	2	10	53.5	63.5	58.5	-35.7	-45.7	-40.7	10	No. 1 Sand	drive and wash	TINUS	12.04	TIC	4/15/2003	5.44			64.7	-46.9
MW-311S	SHALLOW	ELM ST. & JUDSON PLACE	130593.3171	496110.4975	17.7	17.49	17.68	-0.21	-0.02	4	Sch.40 PVC	2	10	8	23	15.5	9.7	-5.3	2.2	15	No. 1 Sand	drive and wash	TINUS	10.20	TIC	4/15/2003	7.29			24	-6.3
MW-312B	BEDROCK	Lockwood Ave	129381.8092	496697.8471	7.3	7.05	7.32	-0.25	0.02	4	Sch.40 PVC	2	20	93	123	108.0	-85.7	-115.7	-100.7	30	NONE	drive and wash	TINUS	4.06	TIC	4/15/2003	2.99	90.5	-83.2	124	-116.7
MW-312D	DEEP	Lockwood Ave	129388.5299	496698.3972	7.5	7.14	7.51	-0.36	0.01	4	Sch.40 PVC	2	10	79	89	84.0	-71.5	-81.5	-76.5	10	No. 1 Sand	drive and wash	TINUS	4.22	TIC	4/15/2003	2.92			90.1	-82.6
MW-312S	SHALLOW	Lockwood Ave	129393.2366	496699.5218	7.5	7.29	7.47	-0.21	-0.03	4	Sch.40 PVC	2	10	3.2	8.2	5.7	4.3	-0.7	1.8	5	No. 1 Sand	drive and wash	TINUS	2.55	TIC	4/15/2003	4.74			8.8	-1.3
MW-313B	BEDROCK	Access Rd by 95 off Main St	131691.1590	495311.8069	9.9	11.49	12.51	1.59	2.61	4	Sch.40 PVC	2	20	32	62	47.0	-22.1	-52.1	-37.1	30	NONE	drive and wash	TINUS	5.61	TIC	4/15/2003	5.88	30.5	-20.6	62.8	-52.9
MW-313D	DEEP	Access Rd by 95 off Main St	131693.8316	495315.1240	9.9	11.61	12.45	1.71	2.55	4	Sch.40 PVC	2	10	18	28.5	23.3	-8.1	-18.6	-13.4	10	No. 1 Sand	drive and wash	TINUS	5.73	TIC	4/15/2003	5.88			29.5	-19.6
MW-313S	SHALLOW	Access Rd by 95 off Main St	131698.8958	495318.7670	9.9	11.78	12.66	1.88	2.76	4	Sch.40 PVC	2	10	3	12	7.5	6.9	-2.1	2.4	9	No. 1 Sand	drive and wash	TINUS	6.08	TIC	4/15/2003	5.70			13	-3.1
MW-401B	BEDROCK	OU4 - BALLFIELD	134511.8678	497542.9905	23.4	25.36	25.69	1.96	2.29	4	Sch.40 PVC	2	20	37.5	57	47.3	-14.1	-33.6	-23.9	20	NONE	drive and wash	TINUS	18.42	TIC	4/15/2003	6.94	36	-12.6	57.4	-34
MW-401S	SHALLOW	OU4 - BALLFIELD	134522.6602	497550.2177	23.0	24.77	25.12	1.77	2.12	4	Sch.40 PVC	2	10	15	25	20.0	8.0	-2.0	3.0	10	No. 1 Sand	drive and wash	TINUS	17.97	TIC	4/15/2003	6.80			26.4	-3.4
MW-402B	BEDROCK	OU4 - BALLFIELD	134900.2329	498245.5025	13.0	12.67	12.98	-0.33	-0.02	4	Sch.40 PVC	2	20	61.1	121.1	91.1	-48.1	-108.1	-78.1	60	NONE	drive and wash	TINUS	7.43	TIC	4/15/2003	5.24	60	-47	121.95	-108.95
MW-402S	SHALLOW	OU4 - BALLFIELD	134907.2262	498247.0812	13.0	12.60	12.97	-0.40	-0.03	4	Sch.40 PVC	2	10	5	20	12.5	8.0	-7.0	0.5	15	No. 1 Sand	drive and wash	TINUS	7.09	TIC	4/15/2003	5.51			21.2	-8.2
MW-2		OU4 - Ballfield - Old Well	134532.3260	497500.5630	25.0	25.62	26.10	0.62	1.10		Sch.40 PVC	2																		14.19	10.81
MW-3		OU4 - Ballfield - Old Well	134868.0310	498163.8810	13.5	14.19	14.35	0.69	0.85		Sch.40 PVC	2												Dry (TD=14.19')	TIC	4/15/2003				18.7	-5.2
MW-4		OU4 - Ballfield - Old Well	134778.0830	497854.9460	13.9	15.06	?	1.16			Sch.40 PVC	2												9.11	TIC	4/15/2003	6.08			17.9	-4
MW-06 (200-E)		OU4 - Ballfield - Old Well	134499.2200	497676.6230	16.8	17.46	17.72	0.66	0.92		Sch.40 PVC	2												7.99	TIC	4/15/2003	7.07			16.6	0.2
																								9.84	TIC	4/15/2003	7.62				
SB-421	NA	OU4 - BALLFIELD	134900.1730	497555.9257	23.4	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	10	13.4	17	6.4
SB-422	NA	OU4 - BALLFIELD	135130.7056	497889.3691	13.0	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	20	-7	29.5	-16.5
SB-423	NA	OU4 - BALLFIELD	135032.0987	498050.4240	12.9	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	62	-49.1	67	-54.1
SB-424	NA	OU4 - BALLFIELD	134627.8617	497874.4648	15.3	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	55	-39.7	62	-46.7
SB-425	NA	OU4 - BALLFIELD	134596.9467	497693.6801	16.2	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	42	-25.8	47.5	-31.3
SB-426	NA	OU4 - BALLFIELD	134682.1645	497661.5405	16.5	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	28	-11.5	35	-18.5
SB-427	NA	OU4 - BALLFIELD	134639.9958	497441.5591	28.9	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	17.5	11.4	25	3.9
SB-428	NA	OU4 - BALLFIELD	134892.9641	498015.1551	13.2	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	>16	< - 2.8	16	-2.8
SB-429	NA	OU4 - BALLFIELD	135122.8477	497693.6752	13.8	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	3	10.8	10	3.8
SB-430	NA	OU4 - BALLFIELD	134810.9455	497801.5819	14.1	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TINUS	NA	NA	NA	NA	>16	< - 1.9	16	-1.9
MW-501S	SHALLOW	ALLYNDALE / E. MAIN ST	135936.7390	498270.9880	16.5	16.01	16.60	-0.51	0.08	4	PVC	2	10	6.8	16.8	11.8	9.7	-0.3	4.7	10	0 Sand	drive and wash	TINUS	8.00	TIC	4/15/2003	8.01			19	-2.48
MW-501D	DEEP	ALLYNDALE / E. MAIN ST	135935.7660	498275.0540	16.5	16.05	16.57	-0.44	0.08	4	PVC	2	10	38.8	43.8	41.3	-22.3	-27.3	-24.8	5	0 Sand	drive and wash	TINUS	10.30	TIC	4/15/2003	5.75			45	-28.51
MW-501B	BEDROCK	ALLYNDALE / E. MAIN ST	135934.6720	498278.3750	16.5	16.72	16.70	0.19	0.17	3	PVC	2	20	48.0	58.0	53.0	-31.5	-41.5	-36.5	10	NONE	drive and wash	TINUS	9.82	TIC	4/15/2003	6.90	45.4	-28.87	61.0	-44.47
MW-502S	SHALLOW	411 Barnum Ave Cut-Off	132997.6290	497361.9960	13.6	13.42	13.64	-0.22	0.00	4	PVC	2	10	8.4	18.4	13.4	5.2	-4.8	0.2	10	0 Sand	drive and wash	TINUS	9.16	TIC	4/15/2003	4.26			19.5	-5.86
MW-502D	DEEP	411 Barnum Ave Cut-Off	133007.0240	497368.8150	13.7	13.42	13.69	-0.27	0.00	4	PVC	2	10	24.7	29.7	27.2	-11.0	-16.0	-13.5	5	0 Sand	drive and wash	TINUS	9.19	TIC	4/15/2003	4.23			32.0	-18.31
MW-502B	BEDROCK	411 Barnum Ave Cut-Off	133006.0750	497361.4930	13.7	13.44	13.74	-0.30	0.00	3	PVC	2	20	34.6	44.6	39.6	-20.9	-30.9	-25.9	10	NONE	drive and wash	TINUS	9.14	TIC	4/15/2003	4.30	32	-18.26	47.0	-33.26
MW-503S	SHALLOW	345 Ferry Blvd	132313.8690	497324.3520	6.5	6.24	6.71	-0.28	0.19	4	PVC	2	10	4.5	7.0	5.8	2.0	-0.5	0.8	2.5	0 Sand	drive and wash	TINUS	3.48	TIC	4/15/2003	2.76			7.0	-0.48
MW-503M	INTERMEDIATE	346 Ferry Blvd	132311.5840	497321.9700	6.5	6.00	6.60	-0.50	0.10	4	PVC	2	10	37.0	42.0	39.5	-30.5	-35.5	-33.0	5	0 Sand	drive and wash	TINUS	2.36	TIC	4/15/2003	3.64			43.2	-36.7
MW-503D	DEEP	347 Ferry Blvd	132309.9220	497319.5990	6.5	5.96	6.66	-0.54	0.16	4	PVC	2	10	76.0	86.0	81.0	-69.5	-79.5	-74.5	10	0 Sand	drive and wash	TINUS	2.30	TIC	4/15/2003	3.66			87.2	-80.7
MW-503B	BEDROCK	348 Ferry Blvd	132308.2160	497316.5520	6.7	6.21	6.69	-0.45	0.03	3	PVC	2	10	91.0	101.0	96.0	-84.3	-94.3	-89.3	10	NONE	drive and wash	TINUS	2.60	TIC	4/15/2003	3.61	85.5	-78.8	104.0	-97.34
MW-504S	SHALLOW	411 Barnum Ave Cut-Off	132843.1940	497626.4350	10.0	9.65	9.98	-0.33	0.00	4	PVC	2	10	5.0	15.0	10.0	5.0	-5.0	0.0	10	0 Sand	drive and wash	TINUS	5.55	TIC	4/15/2003	4.10			16.0	-6.02
MW-504D	DEEP	411 Barnum Ave Cut-Off	132847.2080	497631.0080	10.0	9.17	9.97	-0.80	0.00	4	PVC	2	10	52.0	62.0	57.0	-42.0	-52.0	-47.0	10	0 Sand	drive and wash	TINUS	5.03	TIC	4/15/2003	4.14			63	-53.03
MW-504B	BEDROCK	411 Barnum Ave Cut-Off	132850.1050	497634.9400	9.9	9.55	9.88	-0.33	0.00	3	PVC	2	20	68.2	78.2	73.2	-58.3	-68.3	-63.3	10	NONE	drive and wash	TINUS	5.39	TIC	4/15/2003	4.16	65.8	-55.92	81	-71.12
MW-505S	SHALLOW	411 Barnum Ave Cut-Off	132834.8330	497693.0100	9.7	9.03	9.78	-0.68	0.07	4	PVC	2	10	5.0	15.0	10.0	4.7	-5.3	-0.3	10	0 Sand	drive and wash	TINUS	5.13	TIC	4/15/2003	3.90			16	-6.29

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
MW-505M	INTERMEDIATE	411 Barnum Ave Cut-Off	132838.9190	497698.2340	9.5	8.99	9.54	-0.48	0.07	4	PVC	2	10	17.0	22.0	19.5	-7.5	-12.5	-10.0	5	0 Sand	drive and wash	TINUS	4.89	TIC	4/15/2003	4.10				
MW-505D	DEEP	411 Barnum Ave Cut-Off	132842.7890	497702.4820	9.4	8.92	9.47	-0.48	0.07	4	PVC	2	10	63.0	73.0	68.0	-53.6	-63.6	-58.6	10	0 Sand	drive and wash	TINUS	4.71	TIC	4/15/2003	4.21			74	-64.6
MW-505B	BEDROCK	411 Barnum Ave Cut-Off	132846.1910	497706.1710	9.2	8.72	9.39	-0.46	0.21	3	PVC	2	20	77.0	87.0	82.0	-67.8	-77.8	-72.8	10	NONE	drive and wash	TINUS	4.58	TIC	4/15/2003	4.14	74.5	-65.32	90	-80.82
MW-506S	SHALLOW	RAYMARK FACILITY	133330.1820	497126.7220	29.6	29.21	29.70	-0.41	0.08	4	PVC	2	10	22.0	32.0	27.0	7.6	-2.4	2.6	10	0 Sand	drive and wash	TINUS	22.66	TIC	4/15/2003	6.55			33	-3.38
MW-506M	INTERMEDIATE	RAYMARK FACILITY	133334.6820	497121.6500	30.0	29.36	30.05	-0.61	0.08	4	PVC	2	10	41.0	51.0	46.0	-11.0	-21.0	-16.0	10	0 Sand	drive and wash	TINUS	22.77	TIC	4/15/2003	6.59			52	-22.03
MW-506D	DEEP	RAYMARK FACILITY	133336.6520	497118.5430	30.2	29.51	30.29	-0.67	0.11	4	PVC	2	10	88.0	98.0	93.0	-57.8	-67.8	-62.8	10	0 Sand	drive and wash	TINUS	22.85	TIC	4/15/2003	6.66			99	-68.82
MW-506B	BEDROCK	RAYMARK FACILITY	133327.2640	497124.2730	30.1	29.65	30.22	-0.48	0.09	3	PVC	2	10	105.0	115.0	110.0	-74.9	-84.9	-79.9	10	NONE	drive and wash	TINUS	19.18	TIC	4/15/2003	10.47	96	-65.87	111	-80.87
MW-507SG	SOIL GAS	605 HOUSATONIC	132573.1220	498772.5950	15.7		15.74	-0.50	0.00	3	PVC	1.5	10	6.4	7.4	6.9	9.3	8.3	8.8	1	0 Sand	DP & Soil removal	TINUS							7.4	8.34
MW-507S	SHALLOW	605 HOUSATONIC	132586.4610	498780.1730	15.7	15.35	15.65	-0.33	-0.03	4	PVC	2	10	10.8	20.8	15.8	4.9	-5.1	-0.1	10	0 Sand	drive and wash	TINUS	11.61	TIC	4/15/2003	3.74			22	-6.32
MW-507D	DEEP	605 HOUSATONIC	132577.3290	498774.7350	15.7	15.18	15.64	-0.52	-0.06	4	PVC	2	10	37.8	42.8	40.3	-22.1	-27.1	-24.6	5	0 Sand	drive and wash	TINUS	11.51	TIC	4/15/2003	3.67			45	-29.3
MW-507B	BEDROCK	605 HOUSATONIC	132590.9370	498782.5380	15.7	15.13	15.66	-0.52	0.01	3	PVC	2	10	49.0	59.0	54.0	-33.4	-43.4	-38.4	10	NONE	drive and wash	TINUS	11.61	TIC	4/15/2003	3.52	46.3	-30.65	62	-46.35
MW-508SG	SOIL GAS	85 HOMESTEAD	132197.7760	498215.1130	25.4		25.32	-0.70	-0.04	4	PVC	1.5	10	7.0	8.0	7.5	18.4	17.4	17.9	1	0 Sand	drive and wash	TINUS							8	17.36
MW-508S	SHALLOW	85 HOMESTEAD	132193.7830	498221.5020	25.2	24.44	25.21	-0.78	-0.01	4	PVC	2	10	19.0	29.0	24.0	6.2	-3.8	1.2	10	0 Sand	drive and wash	TINUS	20.81	TIC	4/15/2003	3.63			30	-4.78
MW-508D	DEEP	85 HOMESTEAD	132195.9950	498217.9300	25.3	24.71	25.29	-0.60	-0.02	4	PVC	2	10	62.0	67.0	64.5	-36.7	-41.7	-39.2	5	0 Sand	drive and wash	TINUS	21.10	TIC	4/15/2003	3.61			68	-42.69
MW-508B	BEDROCK	85 HOMESTEAD	132199.3700	498221.4640	25.4	24.98	25.48	-0.45	0.05	3	PVC	2	20	72.5	82.5	77.5	-47.1	-57.1	-52.1	10.0	NONE	drive and wash	TINUS	21.41	TIC	4/15/2003	3.57	70	-44.57	85.5	-60.07
MW-509M	INTERMEDIATE	411 Barnum Ave Cut-Off	132593.8130	497115.0370	9.7	9.39	9.74	-0.35	0.00	4	PVC	2	10	12.0	17.0	14.5	-2.3	-7.3	-4.8	5.0	0 Sand	drive and wash	TINUS	5.59	TIC	4/15/2003	3.80			20	-10.26
MW-510M	INTERMEDIATE	411 Barnum Ave Cut-Off	132502.9690	496454.6980	9.2	9.09	9.36	-0.09	0.18	4	PVC	2	10	19.3	24.3	21.8	-10.1	-15.1	-12.6	5.0	0 Sand	drive and wash	TINUS	5.31	TIC	4/15/2003	3.50			26	-16.82
MW-511M	INTERMEDIATE	411 Barnum Ave Cut-Off	132452.2350	496325.7800	9.7	9.17	9.66	-0.49	0.00	4	PVC	2	10	18.8	23.8	21.3	-9.1	-14.1	-11.6	5.0	0 Sand	drive and wash	TINUS	5.59	TIC	4/15/2003	2.81			26.0	-16.34
MW-512M	INTERMEDIATE	411 Barnum Ave Cut-Off	132547.9540	496616.1370	11.0	10.61	11.00	-0.39	0.00	4	PVC	2	10	21.6	26.6	24.1	-10.6	-15.6	-13.1	5.0	0 Sand	drive and wash	TINUS	6.36	TIC	4/15/2003	4.25			28.0	-17
MW-513SG	SOIL GAS	DOT - FERRY BLVD	132439.0330	497765.1720	13.2		13.23	-0.50	0.07	3	PVC	1.5	10	6.8	7.9	7.4	6.4	5.3	5.8	1.1	0 Sand	DP & Soil removal	TINUS							7.9	5.26
MW-513S	SHALLOW	DOT - FERRY BLVD	132443.1970	497761.9130	13.0	12.50	13.00	-0.50	0.00	4	PVC	2	10	7.2	17.2	12.2	5.8	-4.2	0.8	10.0	0 Sand	drive and wash	TINUS	8.54	TIC	4/15/2003	3.96			18.5	-5.5
MW-514SG	SOIL GAS	DOT - FERRY BLVD	132609.9090	497952.7360	15.6		15.79	-0.50	0.15	3	PVC	1.5	10	6.9	8.0	7.5	8.7	7.6	8.2	1.1	0 Sand	DP & Soil removal	TINUS							8.0	7.64
MW-514S	SHALLOW	DOT - FERRY BLVD	132613.0010	497950.4310	15.4	15.00	15.35	-0.36	-0.01	4	PVC	2	10	7.3	17.3	12.3	8.1	-1.9	3.1	10.0	0 Sand	drive and wash	TINUS	10.85	TIC	4/15/2003	4.15			18.0	-2.64
MW-514D	DEEP	DOT - FERRY BLVD	132615.1090	497964.5080	16.2	15.48	16.31	-0.73	0.10	4	PVC	2	10	60.5	70.5	65.5	-44.3	-54.3	-49.3	10.0	0 Sand	drive and wash	TINUS	11.41	TIC	4/15/2003	4.07			74.2	-57.99
MW-514B	BEDROCK	DOT - FERRY BLVD	132606.8480	497955.5440	15.9	15.29	16.06	-0.62	0.15	3	PVC	2	20	80.5	90.5	85.5	-64.6	-74.6	-69.6	10.0	NONE	drive and wash	TINUS	11.55	TIC	4/15/2003	3.74	78	-62.09	93.0	-77.09
MW-515SG	SOIL GAS	350 FERRY BLVD	132227.8740	497620.3300	14.9		14.93	-0.50	0.00	3	PVC	1.5	10	6.9	8.0	7.5	8.0	6.9	7.5	1.1	0 Sand	DP & Soil removal	TINUS							8.0	6.93
MW-515S	SHALLOW	350 FERRY BLVD	132220.2460	497612.7510	14.9	14.62	14.99	-0.30	0.07	4	PVC	2	10	7.3	17.3	12.3	7.6	-2.4	2.6	10.0	0 Sand	drive and wash	TINUS	10.82	TIC	4/15/2003	3.80			18.5	-3.58
MW-516M	INTERMEDIATE	411 Barnum Ave Cut-Off	132586.1510	496831.0950	9.8	9.28	9.75	-0.47	0.00	4	PVC	2	10	19.8	24.8	22.3	-10.1	-15.1	-12.6	5.0	0 Sand	drive and wash	TINUS	4.95	TIC	4/15/2003	4.33			26.0	-16.25
MW-517SG	SOIL GAS	DOT - FERRY BLVD	132763.7910	498134.8860	21.4		21.35	-0.50	-0.04	4	PVC	1.5	10	7.0	8.0	7.5	14.4	13.4	13.9	1.0	0 Sand	drive and wash	TINUS							8.0	13.39
MW-517S	SHALLOW	DOT - FERRY BLVD	132758.0580	498127.0280	21.0	20.63	21.05	-0.33	0.09	4	PVC	2	10	16.0	26.0	21.0	5.0	-5.0	0.0	10.0	0 Sand	drive and wash	TINUS	16.26	TIC	4/15/2003	4.37			28.0	-7.04
MW-518SG	SOIL GAS	DOT - FERRY BLVD	133028.2640	498401.7900	20.3		20.48	-0.50	0.15	3	PVC	1.5	10	6.5	7.5	7.0	13.8	12.8	13.3	1.0	0 Sand	DP & Soil removal	TINUS							7.5	12.83
MW-518S	SHALLOW	DOT - FERRY BLVD	133036.3410	498403.1500	20.1	19.78	20.26	-0.34	0.14	4	PVC	2	10	6.4	16.4	11.4	13.7	3.7	8.7	10.0	0 Sand	drive and wash	TINUS	15.23	TIC	4/15/2003	4.55			18.0	2.12
MW-519SG	SOIL GAS	DOT - FERRY BLVD	133246.0030	498598.3770	16.7		16.69	-0.50	0.02	4	PVC	1.5	10	7.0	8.0	7.5	9.7	8.7	9.2	1.0	0 Sand	drive and wash	TINUS							8.0	8.67
MW-519S	SHALLOW	DOT - FERRY BLVD	133241.1870	498595.3060	16.6	16.27	16.69	-0.29	0.13	4	PVC	2	0.5	5.7	20.7	13.2	10.9	-4.1	3.4	15.0	0 Sand	drive and wash	TINUS	11.58	TIC	4/15/2003	4.69			22.0	-5.44
MW-520SG	SOIL GAS	DOT - FERRY BLVD	131905.7050	497275.0250	13.4		13.39	-0.50	0.00	3	PVC	1.5	10	6.9	8.0	7.5	6.5	5.4	5.9	1.1	0 Sand	DP & Soil removal	TINUS							8.0	5.39
MW-520S	SHALLOW	DOT - FERRY BLVD	131909.7880	497279.9750	13.3	12.71	13.27	-0.60	-0.04	4	PVC	2	10	11.3	21.3	16.3	2.0	-8.0	-3.0	10	0 Sand	drive and wash	TINUS	9.26	TIC	4/15/2003	3.45			22.5	-9.19
MW-521S	SHALLOW	OU4 - BALLFIELD	134946.2600	498262.8490	12.6	12.10	12.61	-0.51	0.00	4	PVC	2	10	6.0	16.0	11.0	6.6	-3.4	1.6	10	0 Sand	drive and wash	TINUS	6.56	TIC	4/15/2003	5.54			18.0	-5.39
MW-522S	SHALLOW	1255 West Broad St	132975.7760	497812.5660	12.1	11.58	12.11	-0.49	0.04	4	PVC	2	10	6.0	16.0	11.0	6.1	-3.9	1.1	10	0 Sand	drive and wash	TINUS	7.26	TIC	4/15/2003	4.32			18.0	-5.93
MW-523SGS	SOIL GAS SHALLOW	MINOR / HOUSATONIC	132416.5730	498596.6290	16.5		16.46	-0.90	0.00	4	PVC	4	10	2.0	3.0	2.5	14.5	13.5	14.0	10	0 Sand	drive and wash	TINUS							3.0	13.46
MW-523SGM	SOIL GAS INTERMED.	MINOR / HOUSATONIC	132415.4770	498600.3310	16.4		16.39	-0.90	0.00	4	PVC	4	10	7.0	8.0	7.5	9.4	8.4	8.9	10	0 Sand	drive and wash	TINUS							8.0	8.39
MW-523SGD	SOIL GAS DEEP	MINOR / HOUSATONIC	132414.0930	498603.6760	16.3		16.34	-0.90	0.00	4	PVC	4	10	10.5	11.5	11.0	5.8	4.8	5.3	10	0 Sand	drive and wash	TINUS							11.5	4.84
MW-523S	SHALLOW	MINOR / HOUSATONIC	132417.4460	498594.0410	16.6	16.13	16.53	-0.43	-0.03	4	PVC	2	10	10.0	20.0	15.0	6.6	-3.4	1.6	10	0 Sand	drive and wash	TINUS	12.48	TIC	4/15/2003	3.65			21.0	-4.44
MW-524B	BEDROCK	VFW	133112.9730	497647.2500	15.7	15.32	15.72	-0.40	0.00	6	PVC	2	10	75.0	85.0	80.0	-59.3	-69.3	-64.3	10	NONE	air rotary	TINUS	10.93	TIC	4/15/2003	4.39	15.5	0.22	120.5	-104.78
MW-525SG	SOIL GAS	Across from 405 Housatonic	131861.7120	498340.2110	22.9		22.92	-0.80	0.01	4	PVC	1.5	10	7.0	8.0	7.5	15.9	14.9	15.4	1	0 Sand	drive and wash	TINUS							8.0	14.91
MW-525S	SHALLOW	Across from 405 Housatonic	131865.7510	498342.8820	22.9	22.39	22.90	-0.49	0.02	4	PVC	2	10	13.0	23.0	18.0	9.9	-0.1	4.9	10	0 Sand	drive and wash	TINUS	18.99	TIC	4/15/2003	3.40			24.0	-1.12
MW-526SGS	SOIL GAS SHALLOW	520 HOUSATONIC	132351.5920	498664.2280	14.9		14.87	-0.70	0.00	4	PVC	1.5	10	2.0	3.0	2.5	12.9	11.9	12.4	1	0 Sand	DP & Soil removal	TINUS							3.3	11.57
MW-526SGM	SOIL GAS INTERMED.	520 HOUSATONIC	132356.9630	498667.3660	14.9		14.88	-0.80	0.00	4	PVC	1.5	10	7.0	8.0	7.5	7.9	6.9	7.4	1	0 Sand	drive and wash	TINUS							8.0	6.68
MW-526SGD	SOIL GAS DEEP	520 HOUSATONIC	132348.9880	498662.5250	14.9		14.92	-0.70	0.00	4	PVC	1.5	10	10.0	11.0	10.5	4.9	3.9	4.4	1	0 Sand	drive and wash	TINUS							11.0	3.92
MW-526S	SHALLOW	520 HOUSATONIC	132338.1490	498654.3800	15.1	14.41	15.07	-0.65	0.01	4	PVC	2	10	10.0	20.0	15.0	5.1	-4.9	0.1	10	0 Sand	drive and wash	TINUS	10.91	TIC	4/15/2003	3.50			21.0	-5.94
MW-527SG	SOIL GAS	RIVERVIEW PLACE	132926.1330	498565.1180	17.2		17.24	-0.70	0.00	4	PVC	1.5	10	7.0	8.0	7.5	10.2	9.2	9.7	1	0 Sand	drive and wash	TINUS							8.0	9.24
MW-527S	SHALLOW	RIVERVIEW PLACE	132924.7510	498568.0150	17.2	16.71	17.22	-0.51	0.00	4	PVC	2	10	10.0	20.0	15.0	7.2	-2.8	2.2	10	0 Sand	drive and wash	TINUS	12.29	TIC	4/15/2003	4.42			21.0	-3.78
MW-528SG	SOIL GAS	Vacant Lot on Hous. Ave	131651.5180	497697.6620	9.0		12.21	2.50	3.19	3	PVC	1.5	10	4.0	5.0	4.5	5.0	4.0	4.5	1	0 Sand	DP & Soil removal	TINUS							5.0	4.02
MW-528S	SHALLOW	Vacant Lot on Hous. Ave	131655.4980	497700.9690	9.2	11.59	11.81	2.44	2.66	4	PVC	2	10	5.0	15.0	10.0	4.2	-5.9	-0.9	10	0 Sand	drive and wash	TINUS	8.00	TIC	4/15/2003	3.59			16.0	-6.85
MW-529SG	SOIL GAS	VFW	133199.1200	497507.5470	17.8		17.77	-1.00	0.00	4	PVC	1.5	10	6.5	7.5	7.0	11.3	10.3	10.8	1	0 Sand	drive and wash	TINUS							7.5	10.27
MW-529S	SHALLOW	VFW	133199.4560	497504.9670	17.7	17.23	17.77	-0.50	0.04	4	PVC	2	10	11.0	21.0	16.0	6.7	-3.3	1.7	10	0 Sand	drive and wash	TINUS	12.39	TIC	4/15/2003	4.84			22.0	-4.27
MW-530S	SHALLOW	Housatonic Boat Club - OU5	128359.5010	497078.4620	8.1	7.54	8.03	-0.57	-0.08	4	PVC	2	10	5.0	10.0	7.5	3.1	-1.9	0.6	5	0 Sand	drive and wash	TINUS	6.63	TIC	4/15/2003	0.71			12.0	-3.89
MW-531S	SHALLOW	Housatonic Boat Club - OU5	128033.7990	496922.7090	8.2	7.50	8.09	-0.65	-0.06	4	PVC	2	10	4.5	9.5	7.0	3.7	-1.4	1.2	5	0 Sand	drive and wash	TINUS	3.74	TIC	4/15/2003	3.76			12.0	-3.85
MW-532S	SHALLOW	SHORE RD - OU5	128273.5800	496819.8080	11.2	10.78	11.25	-0.45	0.02	4	PVC	2	10	6.0	16.0	11.0	5.2	-4.8	0.2	10	0 Sand	drive and wash	TINUS	7.93	TIC	4/15/2003	2.85			17.0	-5.77
MW-533S	SHALLOW	SYDNEY / E. MAIN ST	134333.8200	496991.7110	15.9	15.34	15.87	-0.53	0.00	4	PVC	2	10	8.0	18.0	13.0	7.9	-2.1	2.9	10	0 Sand	drive and wash	TINUS	10.23	TIC	4/15/2003	5.11			20.0	-4.13
MW-533D	DEEP	SYDNEY / E. MAIN ST	134336.9280	498995.6380	15.9	15.16	15.90	-0.74	0.00	4	PVC	2	10	93.8	103.8	98.8	-77.9	-87.9	-82.9	10	0 Sand	drive and wash	TINUS	10.38	TIC	4/15/2003	4.78			105.0	-89.1
MW-533B	BEDROCK	SYDNEY / E. MAIN ST	134337.9380	498999.1730	16.0	15.57	15.96	-0.39	0.00	3	PVC	2	10	109.0	119.0	114.0	-93.0	-103.0	-98.0	10	NONE	drive and wash	TINUS	10.75	TIC	4/15/2003	4.82	107	-91.04	122.0	-106.04
MW-534SG	SOIL GAS	462 and 448 Housatonic	131971.9400	498543.0770	19.1		19.10	-0.50	0.03	3	PVC	1.5	10	7.0	8.0	7.5	12.1	11.1	11.6	1	0 Sand	DP & Soil removal	TINUS							8.0	11.07
MW-534S	SHALLOW	462 and 448 Housatonic	131969.8320	498544.8630	19.0	18.37	18.99	-0.65	-0.03	4	PVC	2	10	12.5	22.5	17.5	6.5	-3.5	1.5	10	0 Sand	drive and wash	TINUS	16.01	TIC	4/15/2003	3.36			24.0	-4.98
MW-535SG	SOIL GAS	520 Housatonic Backyard	132274.5030	498893.6050	8.5		8.66		0.17	3	PVC	1.5	10	6.0	7.0	6.5	2.5	1.5	2.0	1	0 Sand	DP & Soil removal	TINUS							7.0	1.49
MW-535S	SHALLOW	521 Housatonic Backyard	132275.8690	498891.5090	8.5	7.48	8.56	-1.03	0.05	4	PVC	2	10	4.5	9.5	7.0	4.0	-1.0	1.5	5	0 Sand	drive and wash	TINUS	3.74	TIC	4/15/2003	3.74			16.0	-7.49
MW-536SG	SOIL GAS	Lot Behind 382 Ferry Blvd.	132100.8630	497899.7830	18.6		18.55	1.50	0.00	4	PVC	1.5	10	7.0	8.0	7.5	11.6	10.6	11.1	1	1 Sand	drive and wash	TINUS							8.0	10.55
MW-536S	SHALLOW	Lot Behind 382 Ferry Blvd.	132107.2260	497900.9730	18.5	18.20	18.49	-0.26	0.03	4	PVC	2	10	8.8	18.8	13.8	9.7	-0.3	4.7	10	0 Sand	drive and wash	TINUS	14.57	TIC	4/15/2003	3.63			20.0	-1.54
(Aquifer)Test Well 1	DEEP	411 Barnum Ave Cut-Off	132828.7600	497676.9200	9.5	8.85	9.50	-0.65	0.00	14	PVC/Steel	8		48.0	68.0	58.0	-38.5	-58.5	-48.5	20	2 Sand	mud rotary	TINUS		TIC					69.0	-59.5
FCP-1	INTERMEDIATE	FERRY CREEK - Peizometer	132123.2186	497132.6220	-0.01	4.39	4.39	-	4.40	0.62	Steel	0.62	10	11.5	13.5	12.5	-11.5	-13.5	-12.5	2.0	NA	DP - drive point	B&RE		TIC	12/1/1997		NA			
FCP-2	INTERMEDIATE	FERRY CREEK - Peizometer	131605.5295	497435.2628	-0.69	6.43	6.43	-	7.12	0.62	Steel	0.62	10	11.0	13.0	12.0	-11.7	-13.7	-12.7	2.0	NA	DP - drive point	B&RE		TIC	12/1/1997		NA			
FCP-3	INTERMEDIATE	FERRY CREEK - Peizometer	131524.8364	497597.9703	-1.47	5.51	5.51	-	6.98	0.62	Steel	0.62	10	12.0	14.0	13.0	-13.5	-15.5	-14.5	2.0	NA	DP - drive point	B&RE		TIC	12/1/1997		NA			
FCP-4	SHALLOW	FERRY CREEK - Peizometer	132562.7213	497116.4764																	NA	hand-driven	TINUS								
FCP-5	SHALLOW	FERRY CREEK - Peizometer	132564.5968	496929.3219																	NA	hand-driven	TINUS								
FCP-6	SHALLOW	FERRY CREEK - Peizometer	132548.2078	496822.2493																	NA	hand-driven	TINUS								
FCP-7	SHALLOW	FERRY CREEK - Peizometer	132540.3164	496648.7895																	NA	hand-driven	TINUS								
FCP-8	SHALLOW	FERRY CREEK - Peizometer	132487.4114	496299.8429																	NA	hand-driven	TINUS								

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
FOSTER-WHEELER OU1 DATA																																
PC-01B	BEDROCK	RAYMARK FACILITY	134067.4517	498945.7712	19	18.79	NA	NA	NA	6	SS	NA	30				-73.0	-88.0	-80.5	15.0	NA	vibra-sonic	Foster Wheeler	13.61	TIC	4/15/2003	5.18		-64		-90
PC-01D	DEEP	RAYMARK FACILITY	134065.1017	498948.5311	19	18.76	NA	NA	NA	6	SS	NA	50				-57.5	-63.0	-60.2	5.5	NA	vibra-sonic	Foster Wheeler	13.61	TIC	4/15/2003	5.15				
PC-01M	INTERMEDIATE	RAYMARK FACILITY	134067.4116	498950.5811	19	18.69	NA	NA	NA	6	SS	NA	15				-28.6	-38.6	-33.6	10.0	NA	vibra-sonic	Foster Wheeler	13.54	TIC	4/15/2003	5.15				
PC-01S	SHALLOW	RAYMARK FACILITY	134069.6716	498947.5412	19	18.81	NA	NA	NA	6	SS	NA	5				4.5	-10.5	-3.0	15.0	NA	vibra-sonic	Foster Wheeler	13.62	TIC	4/15/2003	5.19				
PC-02B	BEDROCK	RAYMARK FACILITY	133726.2287	498587.2731	16	15.20	NA	NA	NA	6	SS	NA	30				-100.1	-115.1	-107.6	15.0	NA	vibra-sonic	Foster Wheeler	10.59	TIC	4/15/2003	4.61	96	-90.3		-120
PC-02D	DEEP	RAYMARK FACILITY	133732.7986	498589.5531	16	15.10	NA	NA	NA	6	SS	NA	20				-77.1	-92.1	-84.6	15.0	NA	vibra-sonic	Foster Wheeler	10.49	TIC	4/15/2003	4.61				
PC-02M	INTERMEDIATE	RAYMARK FACILITY	133730.3687	498585.0632	16	15.15	NA	NA	NA	6	SS	NA	15				-53.1	-63.1	-58.1	10.0	NA	vibra-sonic	Foster Wheeler	10.31	TIC	4/15/2003	4.84				
PC-02S	SHALLOW	RAYMARK FACILITY	133729.6886	498591.0631	16	15.07	NA	NA	NA	6	SS	NA	20				4.7	-5.3	-0.3	10.0	NA	vibra-sonic	Foster Wheeler	10.46	TIC	4/15/2003	4.61				
PC-03B	BEDROCK	RAYMARK FACILITY	134356.6815	498742.7779	22.5	22.22	NA	NA	NA	6	SS	NA	30				-18.6	-33.6	-26.1	15.0	NA	vibra-sonic	Foster Wheeler	17.25	TIC	4/15/2003	4.97	34	-12.22		-38
PC-03D	DEEP	RAYMARK FACILITY	134353.0115	498742.6578	22.5	22.22	NA	NA	NA	6	SS	NA	20				-4.2	-10.2	-7.2	6.0	NA	vibra-sonic	Foster Wheeler	17.16	TIC	4/15/2003	5.06				
PC-03S	SHALLOW	RAYMARK FACILITY	134355.2715	498739.6279	22.5	22.21	NA	NA	NA	6	SS	NA	30				6.2	-3.8	1.2	10.0	NA	vibra-sonic	Foster Wheeler	17.11	TIC	4/15/2003	5.10				
PC-04B	BEDROCK	RAYMARK FACILITY	134596.6399	498703.3813	14.25	13.88	NA	NA	NA	6	SS	NA	30				-30.9	-45.9	-38.4	15.0	NA	vibra-sonic	Foster Wheeler	8.86	TIC	4/15/2003	5.02	39	-25.49		-50
PC-04D	DEEP	RAYMARK FACILITY	134600.1799	498701.8213	14.25	14.09	NA	NA	NA	6	SS	NA	50				-12.5	-22.5	-17.5	10.0	NA	vibra-sonic	Foster Wheeler	9.00	TIC	4/15/2003	5.09				
PC-04S	SHALLOW	RAYMARK FACILITY	134598.1998	498706.9712	14.25	14.08	NA	NA	NA	6	SS	NA	5				6.1	-9.0	-1.5	15.0	NA	vibra-sonic	Foster Wheeler	9.01	TIC	4/15/2003	5.07				
PC-05B	BEDROCK	RAYMARK FACILITY	134523.3037	498422.7950	21.25	20.64	NA	NA	NA	6	SS	NA	30				-68.0	-83.0	-75.5	15.0	NA	vibra-sonic	Foster Wheeler	15.53	TIC	4/15/2003	5.11		-59.5		-90
PC-05D	DEEP	RAYMARK FACILITY	134525.6238	498415.0752	21.25	20.60	NA	NA	NA	6	SS	NA	5				-46.0	-56.0	-51.0	10.0	NA	vibra-sonic	Foster Wheeler	15.49	TIC	4/15/2003	5.11				
PC-05M	INTERMEDIATE	RAYMARK FACILITY	134520.9838	498416.8251	21.25	20.63	NA	NA	NA	6	SS	NA	10				-34.0	-44.0	-39.0	10.0	NA	vibra-sonic	Foster Wheeler	15.76	TIC	4/15/2003	4.87				
PC-05S	SHALLOW	RAYMARK FACILITY	134598.2031	498420.6959	21.25	20.49	NA	NA	NA	6	SS	NA	50				6.5	-3.5	1.5	10.0	NA	vibra-sonic	Foster Wheeler	15.31	TIC	4/15/2003	5.18				
PC-06B	BEDROCK	RAYMARK FACILITY	134665.3233	498348.6279	18	17.41	NA	NA	NA	6	SS	NA	30				-91.3	-106.3	-98.8	15.0	#1 Sand	vibra-sonic	Foster Wheeler	12.21	TIC	4/15/2003	5.20	98	-82		-110
PC-06D	DEEP	RAYMARK FACILITY	134669.4233	498348.0179	18	17.52	NA	NA	NA	6	SS	NA	50				-52.7	-62.7	-57.7	10.0	#2 Sand	vibra-sonic	Foster Wheeler	12.43	TIC	4/15/2003	5.09				
PC-06M	INTERMEDIATE	RAYMARK FACILITY	134672.1832	498349.7379	18	17.48	NA	NA	NA	6	SS	NA	20				-32.5	-42.5	-37.5	10.0	#0 Sand	vibra-sonic	Foster Wheeler	12.37	TIC	4/15/2003	5.11				
PC-06S	SHALLOW	RAYMARK FACILITY	134667.4333	498352.5378	18	17.43	NA	NA	NA	6	SS	NA	20				6.1	-3.9	1.1	10.0	#0 Sand	vibra-sonic	Foster Wheeler	12.22	TIC	4/15/2003	5.21				
PC-07S	SHALLOW	RAYMARK FACILITY	134809.4599	498537.3264	23	22.60	NA	NA	NA	6	SS	NA	30				6.6	-8.5	-1.0	15.1	NA	vibra-sonic	Foster Wheeler	17.49	TIC	4/15/2003	5.11		<-10.5		-10.5
PC-08B	BEDROCK	RAYMARK FACILITY	133826.5617	498244.9598	19.9	19.22	NA	NA	NA	6	SS	NA	30				-28.3	-43.3	-35.8	15.0	NA	vibra-sonic	Foster Wheeler	14.39	TIC	4/15/2003	4.83		-20.8		-50
PC-08D	DEEP	RAYMARK FACILITY	133827.3118	498240.0499	19.9	19.31	NA	NA	NA	6	SS	NA	30				-10.1	-20.1	-15.1	10.0	NA	vibra-sonic	Foster Wheeler	14.40	TIC	4/15/2003	4.91				
PC-08S	SHALLOW	RAYMARK FACILITY	133823.2918	498241.8598	19.9	19.22	NA	NA	NA	6	SS	NA	50				6.5	-8.5	-1.0	15.0	NA	vibra-sonic	Foster Wheeler	14.30	TIC	4/15/2003	4.92				
PC-09D	DEEP	RAYMARK FACILITY	133516.0451	498186.6271	19.9	19.41	NA	NA	NA	6	SS	NA	50				-13.2	-28.2	-20.7	15.0	NA	vibra-sonic	Foster Wheeler	14.70	TIC	4/15/2003	4.71		-30.1		-40
PC-09S	SHALLOW	RAYMARK FACILITY	133514.1151	498183.5472	19.9	19.49	NA	NA	NA	6	SS	NA	50				4.5	-10.5	-3.0	15.0	NA	vibra-sonic	Foster Wheeler	15.19	TIC	4/15/2003	4.30				
PC-10B	BEDROCK	RAYMARK FACILITY	134193.1340	497766.4819	21	20.73	NA	NA	NA	6	SS	NA	30				-53.3	-68.3	-60.8	15.0	NA	vibra-sonic	Foster Wheeler	14.56	TIC	4/15/2003	6.17	55	-45.84		-75
PC-10D	DEEP	RAYMARK FACILITY	134189.9341	497764.4818	21	20.73	NA	NA	NA	6	SS	NA	10				-39.8	-44.8	-42.3	5.0	NA	vibra-sonic	Foster Wheeler	14.69	TIC	4/15/2003	6.04				
PC-10M	INTERMEDIATE	RAYMARK FACILITY	134192.0741	497760.1919	21	20.71	NA	NA	NA	6	SS	NA	5				-17.8	-27.8	-22.8	10.0	NA	vibra-sonic	Foster Wheeler	14.70	TIC	4/15/2003	6.01				
PC-10S	SHALLOW	RAYMARK FACILITY	134195.2040	497763.2119	21	20.72	NA	NA	NA	6	SS	NA	5				7.8	-7.2	0.3	15.0	NA	vibra-sonic	Foster Wheeler	14.68	TIC	4/15/2003	6.04				
PC-11B	BEDROCK	RAYMARK FACILITY	133760.4264	497889.0648	23.2	22.51	NA	NA	NA	6	SS	NA	30				-46.9	-61.9	-54.4	15.0	NA	vibra-sonic	Foster Wheeler	0.21	TIC	4/15/2003	22.30	57	-39.33		-70
PC-11D	DEEP	RAYMARK FACILITY	133761.4063	497892.3148	23.2	22.41	NA	NA	NA	6	SS	NA	5				-28.3	-38.3	-33.3	10.0	NA	vibra-sonic	Foster Wheeler	17.21	TIC	4/15/2003	5.20				
PC-11M	INTERMEDIATE	RAYMARK FACILITY	133755.8364	497889.9747	23.2	22.46	NA	NA	NA	6	SS	NA	5				-13.3	-23.3	-18.3	10.0	NA	vibra-sonic	Foster Wheeler	17.10	TIC	4/15/2003	5.36				
PC-11S	SHALLOW	RAYMARK FACILITY	133756.9863	497893.7647	23.2	22.43	NA	NA	NA	6	SS	NA	5				5.9	-9.1	-1.6	15.0	NA	vibra-sonic	Foster Wheeler	17.38	TIC	4/15/2003	5.05				
PC-12B	BEDROCK	RAYMARK FACILITY	133423.7709	497751.2931	22.5	21.72	NA	NA	NA	6	SS	NA	30				-39.5	-54.5	-47.0	15.0	NA	vibra-sonic	Foster Wheeler	17.21	TIC	4/15/2003	4.51	42.5	-32.57		-58
PC-12D	DEEP	RAYMARK FACILITY	133420.4309	497751.7431	22.5	21.78	NA	NA	NA	6	SS	2	10				-20.1	-30.1	-25.1	10.0	00 Sand	vibra-sonic	Foster Wheeler	16.99	TIC	4/15/2003	4.79				
PC-12S	SHALLOW	RAYMARK FACILITY	133422.9708	497756.2230	22.5	21.72	NA	NA	NA	6	SS	2	5				4.3	-9.2	-2.5	13.5	000 Sand	vibra-sonic	Foster Wheeler	16.85	TIC	4/15/2003	4.87				
PC-13B	BEDROCK	RAYMARK FACILITY	133899.3103	497440.1537	19.5	19.21	NA	NA	NA	6	NA	NA	NA				-67.4	-82.4	-74.9	15.0	NA	vibra-sonic	Foster Wheeler	12.73	TIC	4/15/2003	6.48		-59.5		-84.5
PC-13D	DEEP	RAYMARK FACILITY	133901.9102	497443.2637	19.5	19.13	NA	NA	NA	6	NA	NA	NA				-51.0	-61.0	-56.0	10.0	NA	vibra-sonic	Foster Wheeler	12.60	TIC	4/15/2003	6.53				
PC-13M	INTERMEDIATE	RAYMARK FACILITY	133899.1302	497446.0636	19.5	19.28	NA	NA	NA	6	NA	NA	NA				-30.1	-40.1	-35.1	10.0	NA	vibra-sonic	Foster Wheeler	12.73	TIC	4/15/2003	6.55				
PC-13S	SHALLOW	RAYMARK FACILITY	133896.2203	497442.8936	19.5	19.30	NA	NA	NA	6	NA	NA	NA				9.0	-6.0	1.5	15.0	NA	vibra-sonic	Foster Wheeler	12.74	TIC	4/15/2003	6.56				
PC-14B	BEDROCK	RAYMARK FACILITY	133553.3621	497540.2681	25.25	24.84	NA	NA	NA	6	SS	NA	30				-40.3	-55.3	-47.8	15.0	NA	vibra-sonic	Foster Wheeler	19.01	TIC	4/15/2003	5.83	49.5	-33.28		-60
PC-14D	DEEP	RAYMARK FACILITY	133553.7422	497535.3181	25.25	24.55	NA	NA	NA	6	SS	2	5				-18.3	-31.8	-25.0	13.5	000 Sand	vibra-sonic	Foster Wheeler	18.60	TIC	4/15/2003	5.95				
PC-14S	SHALLOW	RAYMARK FACILITY	133556.4621	497538.0381	25.25	24.64	NA	NA	NA	6	SS	2	5				7.4	-7.6	-0.1	15.0	000 Sand	vibra-sonic	Foster Wheeler	18.41	TIC	4/15/2003	6.23				
PC-15B	BEDROCK	RAYMARK FACILITY	133343.4867	497301.1095	24.25	23.74	NA	NA	NA	6	SS	NA	30				-21.1	-36.1	-28.6	15.0	NA	vibra-sonic	Foster Wheeler	17.94	TIC	4/15/2003	5.80	34.5	-13.95		-40
PC-15D	DEEP	RAYMARK FACILITY	133347.7567	497300.0695	24.25	23.71	NA	NA	NA	6	SS	NA	5				-6.0	-12.0	-9.0	6.0	NA	vibra-sonic	Foster Wheeler	17.39	TIC	4/15/2003	6.32				
PC-15S	SHALLOW	RAYMARK FACILITY	133346.2666	497304.0295	24.25	23.64	NA	NA	NA	6	SS	NA	5				7.9	-7.1	0.4	15.0	NA	vibra-sonic	Foster Wheeler	17.30	TIC	4/15/2003	6.34				
PC-16B	BEDROCK	RAYMARK FACILITY	133529.8660	497048.9658	28.25	27.20	NA	NA	NA	6	SS	NA	30				-77.8	-92.8	-85.3	15.0	NA	vibra-sonic	Foster Wheeler	20.29	TIC	4/15/2003	6.91	83	-65.34		-100
PC-16D	DEEP	RAYMARK FACILITY	133525.4880	497049.8357	28.25	27.20	NA	NA	NA	6	SS	NA	5				-48.3	-63.3	-55.8	15.0	NA	vibra-sonic	Foster Wheeler	20.31	TIC	4/15/2003	6.89				
PC-16M	INTERMEDIATE	RAYMARK FACILITY	133528.2679	497051.6557	28.25	27.24	NA	NA	NA	6	SS	NA	5				-18.3	-28.3	-23.3	10.0	NA	vibra-sonic	Foster Wheeler	20.21	TIC	4/15/2003	7.03				
PC-16S	SHALLOW	RAYMARK FACILITY	133526.7280	497047.6057	28.25	27.17	NA	NA	NA	6	SS	NA	10				9.8	-5.2	2.3	15.0	NA	vibra-sonic	Foster Wheeler	20.20	TIC	4/15/2003	6.97				
RW1		RAYMARK FACILITY	133714.0000	497357.0000	26.25	24.30	NA	-1.95	NA	12	SS	6	0.020				-12.0	-37.0	-24.5	25.0	Morie 00		Foster Wheeler									-42
RW2		RAYMARK FACILITY	133616.0000	497469.0000	26.25	23.30	NA	-2.95	NA	12	SS	6	0.020				9.1	-30.9	-10.9	40.0	Morie 00		Foster Wheeler									-35.9
RW3		RAYMARK FACILITY	133514.0000	497221.0000	25.5	23.10	NA	-2.40	NA	12	SS	6	0.020				14.5	-35.5	-10.5	50.0	Morie 00		Foster Wheeler									-40.5
RW5		RAYMARK FACILITY	133569.0000	497164.0000	24.25	22.10	NA	-2.15	NA	12	SS	6	0.020				-2.6	-87.6	-45.1	85.0	Morie 00		Foster Wheeler									-92.7
RW6		RAYMARK FACILITY	133537.0000	497199.0000	25.25	22.90	NA	-2.35	NA	12	SS	6	0.020				9.2	-30.8	-10.8	40.0	Morie 00		Foster Wheeler									-35.8
CRA-1D (SB-1)	INTERMEDIATE	375 Barnum Ave	133285.3944	497947.2571	11.26	10.88	NA	-0.38	NA	8	SS	2	10	22.0	27.0	24.5	-10.7	-15.7	-13.2	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	NA	NA	NA		>27	<-15.74	27	-15.74
CRA-1S (SB-1)	SHALLOW	375 Barnum Ave	133287.0834	497951.3261	11.22	10.84	NA	-0.38	NA	8	SS	2	10	5.5	10.5	8.0	5.7	0.7	3.2	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	NA	NA	NA				10.5	0.72
CRA-2D(SB-2)	INTERMEDIATE	375 Barnum Ave	133289.6328	498037.1296	11.32	10.98	11.32	-0.34	0.00	8	SS	2	10	20.1	25.1	22.6	-8.8	-13.8	-11.3	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	6.00	TIC	4/15/2003	4.98	>27	<-15.97	27	-15.97
CRA-2S	SHALLOW	375 Barnum Ave	133289.2328	498042.0104	11.31	10.98	11.33	-0.33	0.02	8	SS	2	10	5.5	10.5	8.0	5.8	0.8	3.3	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	6.24	TIC	4/15/2003	4.74			10.5	0.55
CRA-3(SB-6)	SHALLOW	375 Barnum Ave	133234.3142	498076.5812	7.9	7.43	NA	-0.47	NA	8	SS	2	10	3.0	8.0	5.5	4.9	-0.1	2.4	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	NA	NA	NA		70.2	-62.4		
CRA-4D	INTERMEDIATE	375 Barnum Ave	133170.1832	498022.9671	8.85	8.58	8.88	-0.27	0.03	NA	SS	2	10	18.0	23.0	20.5	-9.2	-14.2	-11.7	5.0	NA	NA	Conestoga-Rovers		TIC	12/1/1997					
CRA-4S	SHALLOW	375 Barnum Ave	133167.6187	498021.0454	8.96	8.59	8.96	-0.37	0.00	8	SS	2	10	4.0	9.0	6.5	5.0	0.0	2.5	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers		TIC	12/1/1997					
CRA-5D	INTERMEDIATE	375 Barnum Ave	133181.0633	497980.9010	9.77	9.44	9.79	-0.33	0.02	NA	SS	2	10	18.0	23.0	20.5	-8.2	-13.2	-10.7	5.0	NA	NA	Conestoga-Rovers	4.90	TIC	4/15/2003	4.54				
CRA-5S	SHALLOW	375 Barnum Ave	133183.8024	497985.1525	9.77	9.50	9.78	-0.27	0.01	NA	SS	2	10	4.0	9.0	6.5	5.8	0.8	3.3	5.0	NA	NA	Conestoga-Rovers	4.80	TIC	4/15/2003	4.70				
CRA-6D (SB-9)	INTERMEDIATE	375 Barnum Ave	133114.5490	497958.0011	10.12	9.77	10.16	-0.35	0.04	8	SS	2	10	18.0	23.0	20.5	-7.9	-12.9	-10.4	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	5.25	TIC	4/15/2003	4.52	43	-32.88	23.5	-13.38

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
CRA-6S (SB-9A)	SHALLOW	375 Barnum Ave	133124.3827	497957.0687	10.18	9.97	10.24	-0.21	0.06	8	SS	2	10	5.0	10.0	7.5	5.2	0.2	2.7	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	5.55	TIC	4/15/2003	4.42			11	-0.82
CRA-7 (SB-11)	SHALLOW	375 Barnum Ave	133199.8700	497874.5299	11.65	11.36				4	SS	2	10	4.5	9.5	7.0	7.2	2.2	4.7	5.0	No.1 Sand	4" TRICONE	Conestoga-Rovers	6.99	TIC	4/15/2003	4.37	>9.5	<2.15	9.5	2.15
CRA-8(SB-13)	SHALLOW	375 Barnum Ave	133278.3501	497841.5342	12.95	12.50	12.96	-0.45	0.03	8	SS	2	10	5.0	10.0	7.5	8.0	3.0	5.5	5.0	No.1 Sand	hollow stem auger	Conestoga-Rovers	7.88	TIC	4/15/2003	4.62			11	1.95
CRA-8D(SB-13)	DEEP	375 Barnum Ave	133289.6300	498037.1300	11.32	10.98	11.32	-0.34	0.00														Conestoga-Rovers							11	0.32
CRA-8S(SB-13)	SHALLOW	375 Barnum Ave	133289.2300	498042.0100	11.31	10.98	11.33	-0.33	0.02														Conestoga-Rovers							11	0.31
SB-1 (CRA-1D&S)		375 Barnum Ave	133284.3876	497953.0192	11.32																	4" mud rotary	Conestoga-Rovers					51.5	-40.18	56.5	-45.18
SB-1A		375 Barnum Ave	133281.2222	497960.8280	11.33																	hollow stem auger	Conestoga-Rovers					>15	<-3.67	15	-3.67
SB-1B		375 Barnum Ave	133291.2501	497959.7446	11.01																	hollow stem auger	Conestoga-Rovers					>15	<-3.99	15	-3.99
SB-1C		375 Barnum Ave	133285.9081	497963.3506	11.13																	hollow stem auger	Conestoga-Rovers					>15	<-3.87	15	-3.87
SB-2 (CRA-2S&D)		375 Barnum Ave	133286.8950	498018.1433	11.03																	hollow stem auger	Conestoga-Rovers					>27	<-15.97	27	-15.97
SB-6 (CRA-3)		375 Barnum Ave	133228.7254	498075.7953	7.8																	4" mud rotary	Conestoga-Rovers					70.2	-62.4	75	-67.2
SB-9 (CRA-6D)		375 Barnum Ave	133114.5490	497958.0011	10.07																	4" mud rotary	Conestoga-Rovers					43	-32.93	48	-37.93
SB-9A (CRA-6S)		375 Barnum Ave	133124.3827	497957.0687	10.03																	4" mud rotary	Conestoga-Rovers					>11	<-0.97	11	-0.97
SB-11(CRA-7)		375 Barnum Ave	133199.8700	497874.5299	11.65																	4" TRICONE	Conestoga-Rovers					>9.5	<2.15	9.5	2.15
SB-13 (CRA-8)		375 Barnum Ave	133278.3501	497841.5342	12.77																	hollow stem auger	Conestoga-Rovers					>11	<1.77	11	1.77
MW-1B	BEDROCK	THE DOCK	134485.8060	498891.2236	16.63	16.17	16.62	-0.46	-0.01	8	Sch.40 PVC	2	10	59.5	74.5	67.0	-42.9	-57.9	-50.4	15.0	Morie Sand	hollow stem auger	AKRF, Inc.	11.10	TIC	4/15/2003	5.07	56	-39.37	75	-58.37
MW-1M	INTERMEDIATE	THE DOCK	134489.3203	498885.2906	16.34	16.01	16.36	-0.33	0.02	8	PVC	2	10	31.0	36.0	33.5	-14.7	-19.7	-17.2	5.0	Morie #1	hollow stem auger	AKRF, Inc.	10.96	TIC		5.05			37	-20.66
MW-1S	SHALLOW	THE DOCK	134490.8112	498894.0878	16.55	16.33	16.57	-0.22	0.02	8	Sch.40 PVC	2	10	8.0	18.0	13.0	8.6	-1.5	3.6	10.0	Morie #1	hollow stem auger	AKRF, Inc.	11.26	TIC	4/15/2003	5.07			17.5	-0.95
MW-2S	SHALLOW	THE DOCK	134385.2162	499027.7445	17.37	17.11	17.38	-0.26	0.01	8	Sch.40 PVC	2	10	8.0	18.0	13.0	9.4	-0.6	4.4	10.0	Morie Sand	hollow stem auger	AKRF, Inc.	12.04	TIC	4/15/2003	5.07	>18	<-0.63	18	-0.63
MW-3S	SHALLOW	THE DOCK	134168.9511	499078.4302	16.37	16.02	16.36	-0.35	-0.01	8	Sch.40 PVC	2	10	8.0	18.0	13.0	8.4	-1.6	3.4	10.0	Morie Sand	hollow stem auger	AKRF, Inc.	10.95	TIC	4/15/2003	5.07	>18	<-1.63	18	-1.63
MW-4B	BEDROCK	THE DOCK	134947.0539	499531.0276	14.62	14.31	14.63	-0.31	0.01	4	Sch.40 PVC	2	10	36.2	51.2	43.7	-21.6	-36.6	-29.1	15.0	Morie Sand	hollow stem auger	AKRF, Inc.	8.93	TIC	4/15/2003	5.38	30.5	-15.88	51.5	-36.88
MW-4M (MW-4D)	INTERMEDIATE	THE DOCK	134945.5355	499538.0742	14.62	14.38	14.62	-0.24	0.00	4.25 to 8	Sch.40 PVC	2	10	19.3	24.3	21.8	-4.7	-9.7	-7.2	5.0	Morie Sand	hollow stem auger	AKRF, Inc.	9.41	TIC	4/15/2003	4.97			25.5	-10.88
MW-4S	SHALLOW	THE DOCK	134940.6580	499532.7715	14.72	14.34	14.71	-0.38	-0.01	4.25 to 8	Sch.40 PVC	2	10	7.0	17.0	12.0	7.7	-2.3	2.7	10.0	Morie Sand	hollow stem auger	AKRF, Inc.	9.32	TIC	4/15/2003	5.02			18	-3.28
MW-1	SHALLOW	540 Longbrook Ave	134144.7489	497222.4501	18.1	18.53	19.21	0.43	1.11	6	Sch.40 PVC	2	10	9.8	19.8	14.8	8.3	-1.7	3.3	10.0	Ottowa sand	hollow stem auger	HRP Associates, Inc.	12.10	TPC	4/15/2003	7.11	>21.5	<-3.4	21.5	-3.4
MW-2A	SHALLOW	540 Longbrook Ave	133872.3647	497178.2618	19.11	18.93	20.32	-0.18	1.21	8	Sch.40 PVC	2	10	10.0	20.0	15.0	9.1	-0.9	4.1	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	13.28	TPC	4/15/2003	7.04	>20	<-0.89	20	-0.89
MW-3A	SHALLOW	540 Longbrook Ave	134024.8231	497297.1500	18.45	17.97	19.68	-0.48	1.23	NA	Sch.40 PVC	2	10	12.0	22.0	17.0	6.5	-3.6	1.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.82	TPC	4/15/2003	6.86	>22	<-3.55	22	-3.55
MW-4	SHALLOW	540 Longbrook Ave	133545.6224	496810.6136	22.07	22.06	23.07	-0.01	1.00	6.7	Sch.40 PVC	2	10	10.0	25.0	17.5	12.1	-2.9	4.6	15.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	15.73	TPC	4/15/2003	7.34	>26.2	<-4.13	26.2	-4.13
MW-5	SHALLOW	540 Longbrook Ave	133822.4434	496993.5559	17.4	17.25	17.44	-0.15	0.04	6.7	Sch.40 PVC	2	10	8.3	18.3	13.3	9.1	-0.9	4.1	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	Not Found	TPC			>19	<-1.6		
MW-6	SHALLOW	540 Longbrook Ave	133853.2015	497063.6395	17.39	17.19	20.09	-0.20	2.70	6.7	Sch.40 PVC	2	10	8.0	18.0	13.0	9.4	-0.6	4.4	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.26	TPC	4/15/2003	7.83	>19	<-1.61	19	-1.61
MW-7	INTERMEDIATE	540 Longbrook Ave	134030.0831	497292.6089	18.47	19.86	19.99	1.39	1.52	6.7	Sch.40 PVC	2	10	29.0	39.0	34.0	-10.5	-20.5	-15.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.97	TIC	4/15/2003	6.89	>39	<-20.53		18.47
MW-8	SHALLOW	540 Longbrook Ave	134070.7241	497279.3483	18.08	18.13	19.6	0.05	1.52	6.7	Sch.40 PVC	2	10	10.0	20.0	15.0	8.1	-1.9	3.1	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.71	TPC	4/15/2003	6.89	>22	<-3.92	22	-3.92
MW-9	SHALLOW	540 Longbrook Ave	134251.9290	497416.5505	20.36	21.85	21.81	1.49	1.45	6.7	Sch.40 PVC	2	10	13.0	23.0	18.0	7.4	-2.6	2.4	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	14.97	TIC	4/15/2003	6.88	>24	<-3.64		
MW-10	SHALLOW	540 Longbrook Ave	134307.2692	497633.9622	20.53	22.38	22.36	1.85	1.83	6.7	Sch.40 PVC	2	10	13.0	23.0	18.0	7.5	-2.5	2.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	16.04	TIC	4/15/2003	6.34	>23	<-2.47		
MW-BR-1	INTERMEDIATE	540 Longbrook Ave	134067.2939	497285.1009	18.02	19.49	19.7	1.47	1.68	4.5	Sch.40 PVC	2	10	32.5	42.5	37.5	-14.5	-24.5	-19.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.56	TIC	4/15/2003	6.93	27.5	-9.48	42.5	-24.48
MW-BR-2	INTERMEDIATE	540 Longbrook Ave	133978.3695	497278.4833	19.13	19.79	21.17	0.66	2.04	4.5	Sch.40 PVC	2	10	45.0	55.0	50.0	-25.9	-35.9	-30.9	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	14.30	TPC	4/15/2003	6.87	40	-20.87	55	-35.87
MW-X	SHALLOW	540 Longbrook Ave	134494.2925	497478.3986	20.83	21.90	22.79	1.07	1.96	6.7	Sch.40 PVC	2	10	16.5	26.5	21.5	4.3	-5.7	-0.7	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	Unable to open	TPC	4/15/2003		>26.5	<-5.67	26.5	-5.67
MW-Y	SHALLOW	540 Longbrook Ave	133732.1885	497040.2707	23.1	23.78	24.07	0.68	0.97	4	Sch.40 PVC	2	10	15.0	25.0	20.0	8.1	-1.9	3.1	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	Not found	TPC			>25	<-1.9		
MW-Z	SHALLOW	540 Longbrook Ave	134176.8136	497482.6267	21.01	22.42	22.93	1.41	1.92	6.7	Sch.40 PVC	2	10	16.5	26.5	21.5	4.5	-5.5	-0.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	16.38	TPC	4/15/2003	6.55	>26.5	<-5.49		
PZ-12	SHALLOW	540 Longbrook Ave	133900.8991	497021.0020	18.75	18.71	18.8	-0.04	0.05	NA	Sch.40 PVC	NA	10	7.0	17.0	12.0	11.8	1.8	6.8	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	9.55	TIC	4/15/2003	9.16				
PZ-13	SHALLOW	540 Longbrook Ave	133921.5505	497083.2572	18.52	20.28	20.36	1.76	1.84	NA	Sch.40 PVC	NA	10	7.5	17.5	12.5	11.0	1.0	6.0	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.77	TIC	4/15/2003	7.51				
PZ-14	SHALLOW	540 Longbrook Ave	133983.7215	497124.4347	18.49	20.27	20.31	1.78	1.82	NA	Sch.40 PVC	NA	10	8.0	18.0	13.0	10.5	0.5	5.5	10.0	Silica Sand	hollow stem auger	HRP Associates, Inc.	12.87	TIC	4/15/2003	7.40				
SWG-1		Ferry Creek at Ferry Blvd by MW-111	131723.0630	497295.3600		7.83																	TtNUS	8.74	TPC	4/15/2003	-0.91				
SWG-2		Broad St. - Ferry Creek	130115.1110	497038.4530		9.60																	TtNUS	10.57	TPC	4/15/2003	-0.97				
SWG-3		Ferry Creek N. of I-95	132557.8590	497172.7860		11.77																	TtNUS	10.42	TPC	4/15/2003	1.35				
SWG-4		OU5 - Housatonic Boat Club	128347.8740	497115.0490		8.90																	TtNUS	9.79	TPC	4/15/2003	-0.89				
SWG-5		Housatonic River	129783.2130	497475.5770		10.65																	TtNUS	11.35	TPC	4/15/2003	-0.70				
SWG-6		Housatonic River	134434.4780	501376.9610		11.13																	TtNUS	11.95	TPC	4/15/2003	-0.82				
SWG-7 (PIER)		The Dock Mall/Marina	135104.7140	500465.9330		8.38																	EMS Inc.	6.40	TPC	4/15/2003	1.98				
MW-DOT1		Beneath I-95/The Dock Mall	135261.0910	500257.9850	13.4	13.38	13.43	-0.05	0.00															9.21	TIC	4/15/2003	4.17				
MW-DOT2		Beneath I-95/The Dock Mall	135269.5520	500268.4490	13.2	13.10	13.15	-0.05	0.00															8.89	TIC	4/15/2003	4.21				
MW-DOT3		Beneath I-95/The Dock Mall	135255.1850	500271.8110	13.4	13.32	13.38	-0.06	0.00															8.71	TIC	4/15/2003	4.61				
MW-DOT4		Beneath I-95/The Dock Mall	135242.4810	500276.1380	13.6	13.53	13.57	-0.04	0.00															8.91	TIC	4/15/2003	4.62				
MW-DOT5		Beneath I-95/The Dock Mall	135220.2170	500304.1300	13.5	13.44	13.50	-0.06	0.00															9.54	TIC	4/15/2003	3.90				
MW-DOT6		Beneath I-95/The Dock Mall	135234.9210	500290.4450	13.4	13.35	None	-0.05																Dry	TIC	4/15/2003					
SPDA-E222,S132		Spada Wetland	131530.5630	497650.8170	7.9	10.14	—																								
WA120A6-E512-541		120 Willow Ave. front	131748.8880	497947.9820	22.5	22.64	—				PVC			14.5	19.5	17.0	-6.6	-11.6	-9.1	5.0		geoprobe	Weston	6.85		4/15/2003	3.29			19.25	-11.35
																						geoprobe	Weston	19.11		4/15/2003	3.53			32	-9.5
MF-SB1	NA-BORING ONLY	600 East Broadway	131544.6000	496788.5300	9.6	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>18	<-8.4	18	-8.4
MF-SB2	NA-BORING ONLY	600 East Broadway	131628.9300	496730.0000	10	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>22	<-12	22	-12
MF-SB3	NA-BORING ONLY	600 East Broadway	131707.7900	496659.6200	8.8	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>20	<-11.2	20	-11.2
MF-SB4	NA-BORING ONLY	600 East Broadway	131783.3900	496796.1200	10.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>18	<-7.5	18	-7.5
MF-SB5	NA-BORING ONLY	600 East Broadway	131858.2800	497126.6800	8.9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>22	<-13.1	22	-13.1
MF-SB6	NA-BORING ONLY	600 East Broadway	131820.0000	497000.9000	9.6	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>18	<-8.4	18	-8.4
MF-SB7	NA-BORING ONLY	600 East Broadway	131640.2700	497001.7700	10.4	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>22	<-11.6	22	-11.6
MF-SB8	NA-BORING ONLY	600 East Broadway	131938.9100	496859.1900	9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>12	<-3	12	-3
A1-SB01	NA-BORING ONLY	600 East Broadway	131652.0561	497173.9615		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-16
A1-SB02	NA-BORING ONLY	600 East Broadway	131838.5391	497256.4817	12.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-3.7
A1-SB03	NA-BORING ONLY	600 East Broadway	131867.2803	497056.7242	7.9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-8.1

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (In.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
A1-SB04	NA-BORING ONLY	600 East Broadway	132023.4068	497212.2578	8	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-8
A1-SB05	NA-BORING ONLY	600 East Broadway	132176.4646	497188.1435		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	
A1-SB06	NA-BORING ONLY	600 East Broadway	132252.0805	497297.7408	7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-9
A1-SB07	NA-BORING ONLY	600 East Broadway	132354.0292	497420.2541	8	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-8
A1-SB09	NA-BORING ONLY	600 East Broadway	132394.1491	497635.2286	12	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-4
A1-SB10	NA-BORING ONLY	600 East Broadway	132092.8213	497344.8066	12	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-4
A1-SB11	NA-BORING ONLY	600 East Broadway	131912.2286	497114.7505	7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS					NA		16	-9
A1-SD01	NA-BORING ONLY	FERRY CREEK	132113.6433	497019.7010	7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	Brown & Root Env.					NA		20	-13
A1-SD02	NA-BORING ONLY	FERRY CREEK	132198.1082	497146.3605	1	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	Brown & Root Env.					NA		20	-19
A1-SD03	NA-BORING ONLY	FERRY CREEK	132047.6669	497166.3507	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	Brown & Root Env.					NA		20	
A1-SD05	NA-BORING ONLY	FERRY CREEK	132312.3679	497260.0574	1	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	Brown & Root Env.					NA		24	-23
A1-SD06	NA-BORING ONLY	FERRY CREEK	132083.2997	497162.1295	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	Brown & Root Env.					NA		20	
SP-SB1	NA-BORING ONLY	vacant lot at Housatonic Ave	131953.1100	497391.4400	12.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>10	<2.3	10	2.3
SP-SB2	NA-BORING ONLY	vacant lot at Housatonic Ave	131280.7600	497480.5600	9.4	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>12	<-2.6	12	-2.6
SP-SB3	NA-BORING ONLY	vacant lot at Housatonic Ave	131088.5000	497519.8500	6.9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>18	<-11.1	18	-11.1
SP-SB4	NA-BORING ONLY	vacant lot at Housatonic Ave	131082.5700	497289.8500	9.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>14	<-4.5	14	-4.5
SP-SB5	NA-BORING ONLY	vacant lot at Housatonic Ave	130553.4500	497082.6000	10.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>20	<-9.7	20	-9.7
SP-SB6	NA-BORING ONLY	vacant lot at Housatonic Ave	130397.9500	497070.3500	8.9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>14	<-5.1	14	-5.1
SP-SB7	NA-BORING ONLY	vacant lot at Housatonic Ave	130161.9200	496979.6700	8.2	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>12	<-3.8	12	-3.8
SP-SB8	NA-BORING ONLY	vacant lot at Housatonic Ave	131139.5900	497175.7900	7.9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>14	<-6.1	14	-6.1
SP-SB9	NA-BORING ONLY	vacant lot at Housatonic Ave	131296.3600	497210.8800	8.6	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Haliburton NUS					>14	<-5.4	14	-5.4
A2-SB01	NA-BORING ONLY	vacant lot at Housatonic Ave	131408.3028	497417.9383	9.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-6.5
A2-SB02	NA-BORING ONLY	vacant lot at Housatonic Ave	130861.4097	497296.0051	7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-9
A2-SB03	NA-BORING ONLY	vacant lot at Housatonic Ave	131450.4228	497230.7309	10	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-6
A2-SB04	NA-BORING ONLY	vacant lot at Housatonic Ave	130970.1633	497328.3920	6.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							14	-7.5
A2-SB04A	NA-BORING ONLY	vacant lot at Housatonic Ave	130976.5789	497326.9975	6.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-9.5
A3-SB01	NA-BORING ONLY	vacant lot at Housatonic Ave	131693.3942	497632.2724	9.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-6.5
A3-SB02	NA-BORING ONLY	vacant lot at Housatonic Ave	131600.0544	497734.3455	8.1	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							16	-7.9
A3-SB03	NA-BORING ONLY	vacant lot at Housatonic Ave	131505.5176	497800.6645	3.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS							12	-8.5
A3-SD01	NA-BORING ONLY	FERRY CREEK	131619.1551	497416.3315	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD02	NA-BORING ONLY	FERRY CREEK	131564.3665	497546.0317	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD03	NA-BORING ONLY	FERRY CREEK	131402.6503	497621.0390	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD04	NA-BORING ONLY	FERRY CREEK	131188.7070	497586.4247	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD05	NA-BORING ONLY	FERRY CREEK	131026.3534	497531.4687	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD06	NA-BORING ONLY	FERRY CREEK	131061.1952	497153.3529	4	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	-16
A3-SD07	NA-BORING ONLY	FERRY CREEK	130827.3949	497429.3689	0.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	-19.5
A3-SD08	NA-BORING ONLY	FERRY CREEK	130342.7388	497181.4614	< 0.0	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	
A3-SD09	NA-BORING ONLY	FERRY CREEK	130663.5630	497196.8159	1	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	-19
A3-SD10	NA-BORING ONLY	FERRY CREEK	130504.1994	497117.4790	0.5	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	-19.5
A3-SD11	NA-BORING ONLY	FERRY CREEK	130222.9050	497081.4336	1	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	drive and wash	TtNUS							20	-19
BC - SB1	NA-BORING ONLY	Housatonic Boat Club	127878.3900	496649.6100	9.7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>14	<-4.3	14	-4.3
BC - SB2	NA-BORING ONLY	Housatonic Boat Club	128005.5800	496849.5400	6.8	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>14	<-7.2	14	-7.2
BC - SB3	NA-BORING ONLY	Housatonic Boat Club	128062.1200	496679.1800	9.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>8	<1.3	8	1.3
BC - SB4	NA-BORING ONLY	Housatonic Boat Club	128103.7000	496948.4500	7.2	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>20	<12.8	20	-12.8
BC - SB5	NA-BORING ONLY	Housatonic Boat Club	128339.2500	496976.5400	8.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>10	<-1.7	10	-1.7
BC - SB6	NA-BORING ONLY	Housatonic Boat Club	128142.3500	496844.3700	9	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>20	<-11	20	-11
BC - SB7	NA-BORING ONLY	Housatonic Boat Club	128401.2200	496910.5500	7.2	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>6	<1.2	6	1.2
BC - SB8	NA-BORING ONLY	Housatonic Boat Club	127741.5800	496544.1200	7.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>10	<-2.7	10	-2.7
BC - SB8A	NA-BORING ONLY	Housatonic Boat Club	127744.5000	496545.1000	7.3	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>18	<-10.7	18	-10.7
BC - SB9	NA-BORING ONLY	Housatonic Boat Club	127613.1300	496444.5500	6.7	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	Brown & Root Env.					>14	<-7.3	14	-7.3
B2-SB1	NA-BORING ONLY	Wetland on Lockwood Ave	129797.1085	496862.0001	*8*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB2	NA-BORING ONLY	Wetland on Lockwood Ave	129556.2695	496872.6986	*10.5*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB3	NA-BORING ONLY	Wetland on Lockwood Ave	129358.2287	496752.3138	*8.5*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB4	NA-BORING ONLY	Wetland on Lockwood Ave	129220.6537	496754.3874	*7*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB5	NA-BORING ONLY	Wetland on Lockwood Ave	129369.2676	496955.5540	*2.5*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB6	NA-BORING ONLY	Wetland on Lockwood Ave	129199.5469	496857.5408	*3*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB7	NA-BORING ONLY	Wetland on Lockwood Ave	129170.4562	497032.1883	*6*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB8	NA-BORING ONLY	Wetland on Lockwood Ave	130016.0894	496931.3627	*5.5*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
B2-SB9	NA-BORING ONLY	Wetland on Lockwood Ave	129336.6412	497141.5714	*3*	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	hollow stem auger	TtNUS								
1-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133275.2369	498440.2419		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>60.3	<-44.2	60.33	-44.23
2-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133310.5128	498493.3360		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					63.5	-49.1	68.5	-54.1
3-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133355.5852	498540.1130		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>53.8	<-41.4	53.8	-41.43
6-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133338.4100	498640.9149		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					47	-32.9	52	-37.9
7-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133292.1748	498607.3842		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					54	-39.4	59	-44.4
8-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133268.4855	498585.4335		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>57.8	<-42.7	57.83	-42.73
9-B	NA-BORING ONLY	~~I-95 CT DOT - Barnum Ave~~	133224.3891	498544.2942		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					57.6	-43.3	62.66	-48.26
1-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131102.0972	494559.0721		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					0.25	25.65	5.25	20.65
2-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131132.3504	494602.6440		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					3.5	20.1	8.5	15.1
3-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131181.4940	494641.5854		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					10.5	10	15.5	5
4-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131222.2768	494648.3139		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					6.7	11.2	11.66	6.24
5-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131210.1920	494790.0028		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					14.5	1.4	20	-4.1
6-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131180.0826	494727.8329		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					23	-6.3	28	-11.3
7-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131132.8752	494692.1187		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					15.5	1.8	20.5	-3.2
8-C	NA-BORING ONLY	I - 95 CT DOT - Church St.	131099.4295	494687.0355		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					20.5	-4	25.16	-8.66

Monitoring Well and Soil Boring Construction Details
Raymark OU2 - Groundwater
Remedial Investigation

WELL/ BORING IDENTIFIER	AQUIFER	PROPERTY	NORTHING (CT Grid System NAD 27)	EASTING (CT Grid System NAD 27)	GROUND ELEV. (ft*)	TOP OF INNER CASING ELEV. (ft*)	TOP OF OUTER CASING ELEV. (ft*)	INNER CASING STICK UP (ft.)	OUTER CASING STICK UP (ft.)	BOREHOLE DIAMETER (IN.)	WELL CASING AND SCREEN MATERIAL	WELL INSIDE DIAMETER (in.)	WELL SCREEN SLOT No.	DEPTH TOP OF SCREEN (ft. BGS)	DEPTH BOTTOM OF SCREEN (ft. BGS)	DEPTH MIDPOINT OF SCREEN (ft. BGS)	ELEV. TOP OF SCREEN (ft*)	ELEV. BOTTOM OF SCREEN (ft*)	ELEV. MIDPOINT OF SCREEN (ft*)	LENGTH OF SCREEN (ft.)	FILTER PACK	DRILLING METHOD	CONSULTANT	DEPTH TO GROUND WATER BELOW MONITORING POINT (ft.)	MONITORING POINT	WATER LEVEL MEASUREMENT DATE	GROUND WATER ELEV. (ft*)	DEPTH TO BEDROCK (ft.)	TOP OF BEDROCK ELEV. (ft*)	DEPTH TO BOTTOM OF BORING (ft.)	BOTTOM OF BORING ELEV. (ft*)
1-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	133943.4768	499044.8923		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>61.5	<-48.5	61.5	-48.5
2-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	133990.7345	499077.0413		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					49.75	-37.05	54.75	-42.05
3-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	134069.9674	499128.6457		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>56.2	<-41.9	56.16	-41.86
4-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	134105.6725	499151.2087		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					57.3	-44	69.33	-56.03
5-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	134093.3829	499261.3599		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					45.2	-27.7	50.16	-32.66
6-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	134054.4842	499236.7936		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>47.3	<-32.2	47.33	-32.23
7-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	133994.4711	499198.7497		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					46.75	-32.45	51.75	-37.45
8-E.M.	NA-BORING ONLY	I-95 CT DOT - East Main St.	133899.5094	499136.0174		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					42.5	-31.7	47.5	-36.7
1-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134679.7821	499637.1907		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					2.1	17.6	6	13.7
2-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134728.4004	499573.9511		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					25.2	-6.8	30	-11.6
3-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134726.5130	499576.8716		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					6.4	12	12	6.4
4-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134779.7692	499617.3551		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					23	-5.2	1	16.8
5-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134751.5409	499732.6903		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					4.4	12.7	14.4	2.7
6-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134827.3640	499662.6282		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					9.3	3.5	14.3	-1.5
7-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134821.6622	499762.2226		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					2.9	9.3	6.2	7.8
8-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134876.4548	499702.3480		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					12.2	0.1	3.5	9.9
9-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134853.0638	499792.1287		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					1.7	10.5	6.7	5.5
10-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134952.5862	499780.1624		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					10.3	4.5	15.3	-0.5
11-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134923.5247	499868.0389		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					28.9	-12.1	33.9	-17.1
12-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134985.0643	499813.6220		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					17.8	3.1	16.6	-1.9
13-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	134967.7560	499917.5680		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					48.8	-34.3	53.8	-39.3
14-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135027.8391	499864.5034		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					32.8	-12.3	39.8	-19.3
15-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135022.8704	499955.4665		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					50.2	-36.4	55.2	-41.4
16-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135069.7391	499918.0340		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					42.3	-28.6	42.3	-28.6
17-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135062.7111	500033.7416		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					52	-37.5	57	-42.5
18-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135120.8315	499987.0311		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					77	-49	82	-54
19-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135114.9267	500109.3681		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					35	-20.3	40	-25.3
20-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135180.5716	500061.4458		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					38.2	-24.3	42.2	-28.3
21-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135159.1126	500179.4150		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					20.3	-5.7	25.3	-10.7
22-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135220.9722	500146.1112		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					25.4	-11.6	30.4	-16.6
23-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135218.2199	500257.7446		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					16.9	-4	21.9	-9
24-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135278.1787	500216.0070		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					7	5.9	15	-2.1
25-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135250.7667	500339.1540		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					7.8	-1.4	12.8	-6.4
26-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135317.5382	500302.5996		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					17.3	-10.7	22.3	-15.7
27-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135287.1992	500417.3576		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					29.3	-25.1	36.96	-32.76
28-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135361.4684	500382.5229		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					15.5	-11.1	20.5	-16.1
29-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135327.3849	500501.1012		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					30.6	-31.6	42.6	-41.6
30-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135401.8701	500470.8160		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					46.8	-46.1	59.8	-59.1
31-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135373.6062	500630.8997		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					80.4	-101.4	86.9	-107.9
32-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135450.3738	500606.2380		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					57.5	-80.5	65.5	-88.5
33-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135420.6711	500781.1384		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					53.8	-73.8	58.8	-78.8
34-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135498.0727	500756.5558		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					94	-115	99	-120
35-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135476.0650	500957.5243		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					71.8	-83.8	78.9	-90.9
36-HR	NA-BORING ONLY	I-95 CT DOT - Hous. R. x-ing	135553.0788	500935.1702		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					70.8	-84.8	75.8	-89.8
2-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132811.8883	497825.4661		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					79.2	-73.3	88	-76.3
3-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132710.6210	497717.9236		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					>68.5	<-63.5	-63.5	63.5
4-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132761.6174	497760.5099		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					75.7	-69.5	80.66	-74.46
5-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132570.4766	497715.1406		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					42	-26.6	47	-31.6
6-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132577.0751	497679.9623		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					40.1	-23.9	45.1	-29
9-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132647.4802	497698.8852		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					62	-47.3	67	-52.3
10-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132683.5723	497757.6122		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					53.5	-42.1	53.5	-42.1
11-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132618.2589	497749.4381		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					39.8	-24.9	45	-30.1
12-L	NA-BORING ONLY	I - 95 CT DOT - Longbrook Ave	132624.5979	497790.3242		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					55	-40.9	67	-52.3
1-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131306.6632	494859.2845		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					25	-15	29	-19
2-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131456.0381	494863.3810		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					19.5	-7.9	24.5	-12.9
3-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131345.9676	494894.5769		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					27	-16.6	27	-16.6
4-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131502.6789	494918.5024		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					24	-13.2	31	-20.2
5-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131432.0842	494974.6112		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					42.5	-31.6	45.8	-34.9
6-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131538.3831	494982.8820		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					35.8	-24.3	40.6	-29.1
7-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131495.0512	495019.4789		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					30.1	-19	35.16	-24.06
8-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131640.1649	495049.4656		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					30.5	-13.3	35.5	-18.3
9-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131561.6906	495118.2694		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					51.9	-23	38.66	-26.96
10-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131697.0446	495115.7620		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					22.5	-1.9	26	-5.4
11-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131621.2809	495179.8942		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					35	-25	40	-30
12-M	NA-BORING ONLY	I - 95 CT DOT - MAIN ST.	131770.1270	495207.2041		NA	NA	NA	NA	unspecified	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	unspecified	Parsons, Brinckerhoff					24	-4.4	29	-9.4

Notes:

Italics = elevation estimated from FW Final EPA Site Grading Plan C-002A
TIC = top of inner casing
*elevation = feet NGVD 1929

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MW-101D	DEEP	10.56	6.63	3.93
MW-101M	INTERMEDIATE	11.21	7.39	3.82
MW-101S	SHALLOW	10.51	5.69	4.82
MW-102D	DEEP	11.75	7.35	4.4
MW-102M	INTERMEDIATE	11.30	6.99	4.31
MW-102S	SHALLOW	11.40	5.33	6.07
MW-103D	DEEP	15.11	11.10	4.01
MW-103M	INTERMEDIATE	14.71	10.74	3.97
MW-104B	BEDROCK	10.30	6.98	3.32
MW-104D	DEEP	11.03	7.71	3.32
MW-104M	INTERMEDIATE	11.44	8.03	3.41
MW-104S	SHALLOW	10.99	6.08	4.91
MW-110D	DEEP	9.33	5.78	3.55
MW-110M	INTERMEDIATE	9.28	5.85	3.43
MW-110S	SHALLOW	9.64	0.34	9.3
MW-111D	DEEP	12.33	8.99	3.34
MW-111M	INTERMEDIATE	12.70	9.61	3.09
MW-111S	SHALLOW	12.03	8.61	3.42
MW-112B	BEDROCK	6.41	3.08	3.33
MW-112D	DEEP	6.74	3.43	3.31
MW-112M	INTERMEDIATE	6.73	3.56	3.17
MW-113B	BEDROCK	8.96	6.23	2.73
MW-113M	INTERMEDIATE	8.76	5.70	3.06
MW-201B	BEDROCK	14.62	9.49	5.13
MW-201D	DEEP	14.71	9.65	5.06
MW-202S	SHALLOW	11.62	6.76	4.86
MW-202D	DEEP	11.35	6.52	4.83
MW-203S	SHALLOW	12.92	7.88	5.04
MW-203D	DEEP	12.98	7.99	4.99
MW-204D	DEEP	11.27	6.48	4.79
MW-205D	DEEP	17.99	13.26	4.73
MW-206D	DEEP	11.04	5.97	5.07
MW-206MR	INTERMEDIATE	11.54	6.53	5.01
MW-206SR	SHALLOW	11.91	6.87	5.04
MW-207B	BEDROCK	20.27	15.43	4.84
MW-207DR	DEEP	20.34	15.22	5.12
MW-207MR	INTERMEDIATE	20.26	15.42	4.84
MW-207SR	SHALLOW	19.96	15.15	4.81
MW-208B	BEDROCK	23.85	17.00	6.85
MW-208D	DEEP	23.71	16.87	6.84
MW-208M	INTERMEDIATE	23.53	16.68	6.85
MW-208S	SHALLOW	23.75	16.84	6.91
MW-209B	BEDROCK	11.81	5.72	6.09
MW-209D	DEEP	12.01	5.80	6.21

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MW-209S	SHALLOW	12.25	5.52	6.73
MW-210B	BEDROCK	10.2	6.51	3.69
MW-210D (NEW)	DEEP	10.06	6.31	3.75
MW-210S	SHALLOW	10.05	6.38	3.67
MW-211B	BEDROCK	19.25	14.63	4.62
MW-211D	DEEP	19.29	14.77	4.52
MW-211M	INTERMEDIATE	19.28	14.69	4.59
MW-211S	SHALLOW	19.24	14.68	4.56
MW-212B	BEDROCK	11.82	7.85	3.97
MW-212D	DEEP	11.82	7.88	3.94
MW-212M	INTERMEDIATE	11.77	7.85	3.92
MW-212S	SHALLOW	11.83	7.94	3.89
MW-213DB	DEEP BEDROCK	22.9	19.21	3.69
MW-213B	BEDROCK	22.77	19.01	3.76
MW-213S	SHALLOW	22.75	18.99	3.76
MW-214B	BEDROCK	19.68	16.17	3.51
MW-214D	DEEP	19.73	16.21	3.52
MW-214M	INTERMEDIATE	19.37	15.82	3.55
MW-214S	SHALLOW	19.73	16.16	3.57
MW-215DB	DEEP BEDROCK	20.05	16.40	3.65
MW-215B	BEDROCK	20.39	16.70	3.69
MW-215S	SHALLOW	20.41	16.73	3.68
MW-216B	BEDROCK	30.89	24.61	6.28
MW-216DB	DEEP BEDROCK	30.96	24.65	6.31
MW-217B	BEDROCK	16.01	12.29	3.72
MW-217D	DEEP	15.97	12.14	3.83
MW-217S	SHALLOW	15.3	12.00	3.3
MW-301B	BEDROCK	13.12	9.42	3.7
MW-301D	DEEP	13.38	9.64	3.74
MW-301S	SHALLOW	13.67	9.77	3.9
MW-302B	BEDROCK	22.46	18.33	4.13
MW-302D	DEEP	22.07	18.22	3.85
MW-302S	SHALLOW	22.22	18.42	3.8
MW-303B	BEDROCK	30.03	19.93	10.1
MW-304B	BEDROCK	10.16	5.62	4.54
MW-304D	DEEP	9.78	5.56	4.22
MW-304S	SHALLOW	10.00	5.76	4.24
MW-305BR	BEDROCK	8.65	4.12	4.53
MW-305DR	DEEP	8.65	4.45	4.2
MW-305SR	SHALLOW	8.94	6.21	2.73
MW-306B	BEDROCK	18.20	9.59	8.61
MW-306DB	DEEP BEDROCK	18.37	9.54	8.83
MW-307B	BEDROCK	34.44	7.92	26.52
MW-307DB	DEEP BEDROCK	34.55	8.75	25.8

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WELL / BORING IDENTIFIER	AQUIFER	TOP OF INNER CASING ELEVATION (ft-NGVD 29)	DEPTH TO GROUNDWATER BELOW MONITORING POINT (ft.)	GROUNDWATER ELEVATION (ft-NGVD 29)
MW-308B	BEDROCK	37.77	11.09	26.68
MW-308DB	DEEP BEDROCK	37.93	11.09	26.84
MW-309B	BEDROCK	10.89	5.75	5.14
MW-309D	DEEP	11.38	6.32	5.06
MW-309S	SHALLOW	11.18	6.15	5.03
MW-310B	BEDROCK	16.24	12.90	3.34
MW-310D	DEEP	16.36	12.87	3.49
MW-310S	SHALLOW	16.46	12.87	3.59
MW-311B	BEDROCK	17.37	11.80	5.57
MW-311D	DEEP	17.48	12.04	5.44
MW-311S	SHALLOW	17.49	10.20	7.29
MW-312B	BEDROCK	7.05	4.06	2.99
MW-312D	DEEP	7.14	4.22	2.92
MW-312S	SHALLOW	7.29	2.55	4.74
MW-313B	BEDROCK	11.49	5.61	5.88
MW-313D	DEEP	11.61	5.73	5.88
MW-313S	SHALLOW	11.78	6.08	5.7
MW-401B	BEDROCK	25.36	18.42	6.94
MW-401S	SHALLOW	24.77	17.97	6.8
MW-402B	BEDROCK	12.67	7.43	5.24
MW-402S	SHALLOW	12.60	7.09	5.51
MW-2		25.62	Dry (TD=14.19')	
MW-3		14.19	8.11	6.08
MW-4		15.06	7.99	7.07
MW-06 (200-E)		17.46	9.84	7.62
MW-501S	SHALLOW	16.01	8.00	8.01
MW-501D	DEEP	16.05	10.30	5.75
MW-501B	BEDROCK	16.72	9.82	6.9
MW-502S	SHALLOW	13.42	9.16	4.26
MW-502D	DEEP	13.42	9.19	4.23
MW-502B	BEDROCK	13.44	9.14	4.3
MW-503S	SHALLOW	6.24	3.48	2.76
MW-503M	INTERMEDIATE	6.00	2.36	3.64
MW-503D	DEEP	5.96	2.30	3.66
MW-503B	BEDROCK	6.21	2.60	3.61
MW-504S	SHALLOW	9.65	5.55	4.1
MW-504D	DEEP	9.17	5.03	4.14
MW-504B	BEDROCK	9.55	5.39	4.16
MW-505S	SHALLOW	9.03	5.13	3.9
MW-505M	INTERMEDIATE	8.99	4.89	4.1
MW-505D	DEEP	8.92	4.71	4.21

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WELL / BORING IDENTIFIER	AQUIFER	TOP OF INNER CASING ELEVATION (ft-NGVD 29)	DEPTH TO GROUNDWATER BELOW MONITORING POINT (ft.)	GROUNDWATER ELEVATION (ft-NGVD 29)
MW-505B	BEDROCK	8.72	4.58	4.14
MW-506S	SHALLOW	29.21	22.66	6.55
MW-506M	INTERMEDIATE	29.36	22.77	6.59
MW-506D	DEEP	29.51	22.85	6.66
MW-506B	BEDROCK	29.65	19.18	10.47
MW-507S	SHALLOW	15.35	11.61	3.74
MW-507D	DEEP	15.18	11.51	3.67
MW-507B	BEDROCK	15.13	11.61	3.52
MW-508S	SHALLOW	24.44	20.81	3.63
MW-508D	DEEP	24.71	21.10	3.61
MW-508B	BEDROCK	24.98	21.41	3.57
MW-509M	INTERMEDIATE	9.39	5.59	3.8
MW-510M	INTERMEDIATE	9.09	5.31	3.5
MW-511M	INTERMEDIATE	9.17	5.59	2.81
MW-512M	INTERMEDIATE	10.61	6.36	4.25
MW-513S	SHALLOW	12.50	8.54	3.96
MW-514S	SHALLOW	15.00	10.85	4.15
MW-514D	DEEP	15.48	11.41	4.07
MW-514B	BEDROCK	15.29	11.55	3.74
MW-515S	SHALLOW	14.62	10.82	3.8
MW-516M	INTERMEDIATE	9.28	4.95	4.33
MW-517S	SHALLOW	20.63	16.26	4.37
MW-518S	SHALLOW	19.78	15.23	4.55
MW-519S	SHALLOW	16.27	11.58	4.69
MW-520S	SHALLOW	12.71	9.26	3.45
MW-521S	SHALLOW	12.10	6.56	5.54
MW-522S	SHALLOW	11.58	7.26	4.32
MW-523SGD	SOIL GAS DEEP			
MW-523S	SHALLOW	16.13	12.48	3.65
MW-524B	BEDROCK	15.32	10.93	4.39
MW-525S	SHALLOW	22.39	18.99	3.4
MW-526S	SHALLOW	14.41	10.91	3.5
MW-527S	SHALLOW	16.71	12.29	4.42
MW-528S	SHALLOW	11.59	8.00	3.59
MW-529S	SHALLOW	17.23	12.39	4.84
MW-530S	SHALLOW	7.54	6.83	0.71
MW-531S	SHALLOW	7.50	3.74	3.76
MW-532S	SHALLOW	10.78	7.93	2.85
MW-533S	SHALLOW	15.34	10.23	5.11
MW-533D	DEEP	15.16	10.38	4.78
MW-533B	BEDROCK	15.57	10.75	4.82
MW-534S	SHALLOW	18.37	15.01	3.36
MW-535S	SHALLOW	7.48	3.74	3.74
MW-536S	SHALLOW	18.20	14.57	3.63

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PC-01B	BEDROCK	18.79	13.61	5.18
PC-01D	DEEP	18.76	13.61	5.15
PC-01M	INTERMEDIATE	18.69	13.54	5.15
PC-01S	SHALLOW	18.81	13.62	5.19
PC-02B	BEDROCK	15.20	10.59	4.61
PC-02D	DEEP	15.10	10.49	4.61
PC-02M	INTERMEDIATE	15.15	10.31	4.84
PC-02S	SHALLOW	15.07	10.46	4.61
PC-03B	BEDROCK	22.22	17.25	4.97
PC-03D	DEEP	22.22	17.16	5.06
PC-03S	SHALLOW	22.21	17.11	5.1
PC-04B	BEDROCK	13.88	8.86	5.02
PC-04D	DEEP	14.09	9.00	5.09
PC-04S	SHALLOW	14.08	9.01	5.07
PC-05B	BEDROCK	20.64	15.53	5.11
PC-05D	DEEP	20.60	15.49	5.11
PC-05M	INTERMEDIATE	20.63	15.76	4.87
PC-05S	SHALLOW	20.49	15.31	5.18
PC-06B	BEDROCK	17.41	12.21	5.2
PC-06D	DEEP	17.52	12.43	5.09
PC-06M	INTERMEDIATE	17.48	12.37	5.11
PC-06S	SHALLOW	17.43	12.22	5.21
PC-07S	SHALLOW	22.60	17.49	5.11
PC-08B	BEDROCK	19.22	14.39	4.83
PC-08D	DEEP	19.31	14.40	4.91
PC-08S	SHALLOW	19.22	14.30	4.92
PC-09D	DEEP	19.41	14.70	4.71
PC-09S	SHALLOW	19.49	15.19	4.3
PC-10B	BEDROCK	20.73	14.56	6.17
PC-10D	DEEP	20.73	14.69	6.04
PC-10M	INTERMEDIATE	20.71	14.70	6.01
PC-10S	SHALLOW	20.72	14.68	6.04
PC-11B	BEDROCK	22.51	0.21	22.3
PC-11D	DEEP	22.41	17.21	5.2
PC-11M	INTERMEDIATE	22.46	17.10	5.36
PC-11S	SHALLOW	22.43	17.38	5.05
PC-12B	BEDROCK	21.72	17.21	4.51
PC-12D	DEEP	21.78	16.99	4.79
PC-12S	SHALLOW	21.72	16.85	4.87
PC-13B	BEDROCK	19.21	12.73	6.48
PC-13D	DEEP	19.13	12.60	6.53
PC-13M	INTERMEDIATE	19.28	12.73	6.55
PC-13S	SHALLOW	19.30	12.74	6.56

GROUNDWATER LEVELS- APRIL 15, 2003
RAYMARK- OU2- GROUNDWATER
REMEDIAL INVESTIGATION REPORT

WELL / BORING IDENTIFIER	AQUIFER	TOP OF INNER CASING ELEVATION (ft-NGVD 29)	DEPTH TO GROUNDWATER BELOW MONITORING POINT (ft.)	GROUNDWATER ELEVATION (ft-NGVD 29)
PC-14B	BEDROCK	24.84	19.01	5.83
PC-14D	DEEP	24.55	18.60	5.95
PC-14S	SHALLOW	24.64	18.41	6.23
PC-15B	BEDROCK	23.74	17.94	5.8
PC-15D	DEEP	23.71	17.39	6.32
PC-15S	SHALLOW	23.64	17.30	6.34
PC-16B	BEDROCK	27.20	20.29	6.91
PC-16D	DEEP	27.20	20.31	6.89
PC-16M	INTERMEDIATE	27.24	20.21	7.03
PC-16S	SHALLOW	27.17	20.20	6.97
CRA-2D(SB-2)	INTERMEDIATE	10.98	6.00	4.98
CRA-2S	SHALLOW	10.98	6.24	4.74
CRA-5D	INTERMEDIATE	9.44	4.90	4.54
CRA-5S	SHALLOW	9.50	4.80	4.7
CRA-6D (SB-9)	INTERMEDIATE	9.77	5.25	4.52
CRA-6S (SB-9A)	SHALLOW	9.97	5.55	4.42
CRA-7 (SB-11)	SHALLOW	11.36	6.99	4.37
CRA-8(SB-13)	SHALLOW	12.50	7.88	4.62
MW-1B	BEDROCK	16.17	11.10	5.07
MW-1M	INTERMEDIATE	16.01	10.96	5.05
MW-1S	SHALLOW	16.33	11.26	5.07
MW-2S	SHALLOW	17.11	12.04	5.07
MW-3S	SHALLOW	16.02	10.95	5.07
MW-4B	BEDROCK	14.31	8.93	5.38
MW-4M (MW-4D)	INTERMEDIATE	14.38	9.41	4.97
MW-4S	SHALLOW	14.34	9.32	5.02
MW-1	SHALLOW	18.53	12.10	7.11
MW-2A	SHALLOW	18.93	13.28	7.04
MW-3A	SHALLOW	17.97	12.82	6.86
MW-4	SHALLOW	22.06	15.73	7.34
MW-5	SHALLOW	17.25	Not Found	
MW-6	SHALLOW	17.19	12.26	7.83
MW-7	INTERMEDIATE	19.86	12.97	6.89
MW-8	SHALLOW	18.13	12.71	6.89
MW-9	SHALLOW	21.85	14.97	6.88
MW-10	SHALLOW	22.38	16.04	6.34
MW-BR-1	INTERMEDIATE	19.49	12.56	6.93
MW-BR-2	INTERMEDIATE	19.79	14.30	6.87
MW-X	SHALLOW	21.90	Unable to open	
MW-Y	SHALLOW	23.78	Not found	
MW-Z	SHALLOW	22.42	16.38	6.55

GROUNDWATER LEVELS- APRIL 15, 2003
RAYMARK- OU2- GROUNDWATER
REMEDIAL INVESTIGATION REPORT

WELL / BORING IDENTIFIER	AQUIFER	TOP OF INNER CASING ELEVATION (ft-NGVD 29)	DEPTH TO GROUNDWATER BELOW MONITORING POINT (ft.)	GROUNDWATER ELEVATION (ft-NGVD 29)
PZ-12	SHALLOW	18.71	9.55	9.16
PZ-13	SHALLOW	20.28	12.77	7.51
PZ-14	SHALLOW	20.27	12.87	7.4
SWG-1		7.83	8.74	-0.91
SWG-2		9.60	10.57	-0.97
SWG-3		11.77	10.42	1.35
SWG-4		8.90	9.79	-0.89
SWG-5		10.65	11.35	-0.7
SWG-6		11.13	11.95	-0.82
MW-DOT1		13.38	9.21	4.17
MW-DOT2		13.10	8.89	4.21
MW-DOT3		13.32	8.71	4.61
MW-DOT4		13.53	8.91	4.62
MW-DOT5		13.44	9.54	3.9
MW-DOT6		13.35	Dry @7.98	
SPDA-E222,S132		10.14	6.85	3.29
WA120A6-E512-541		22.64	19.11	3.53

ROUND 1 GROUNDWATER LEVELS - MAY 16, 1994
RAYMARK - OU2 -GROUNDWATER
REMEDIAL INVESTIGATION REPORT

Round 1 Groundwater Levels - May 16, 1994				
Well or Piezometer ID	Time of Measurement	Reference Point Elev. (ft)	Water Level Reading, Top of PVC (ft)	Ground Water Elev. (ft)
MW-101D	15:05	10.56	7.4	3.16
MW-101M	15:05	11.21	8.05	3.16
MW-101S	15:05	10.51	6.39	4.12
MW-102D	15:10	11.80	8.2	3.60
MW-102M	15:10	11.30	6.65	4.65
MW-102S	15:10	11.40	6.31	5.09
MW-103D	15:15	15.47	12.32	3.15
MW-103M	15:15	15.02	11.88	3.14
MW-104D	15:25	11.03	8.46	2.57
MW-104M	15:25	11.44	8.7	2.74
MW-104S	15:25	10.99	6.67	4.32
MW-110D	14:25	9.48	6.45	3.03
MW-110M	14:25	9.28	6.40	2.88
MW-110S	14:25	9.62	0.10	9.52
MW-111D	14:55	12.33	9.44	2.89
MW-111M	14:55	12.70	9.85	2.85
MW-111S	14:55	12.03	9.69	2.34
MW-112B	14:45	6.41	3.58	2.83
MW-112D	14:45	6.74	3.9	2.84
MW-112M	14:45	6.73	3.9	2.83
MW-113B	14:59	8.96	6.63	2.33
MW-113M	14:59	8.76	6.27	2.49
MW-120	15:35	8.00	5.57	2.43

ROUND 2 GROUNDWATER LEVELS - AUGUST 24,1994
RAYMARK - OU2 - GROUNDWATER
REMEDIAL INVESTIGATION REPORT

Round 2 Groundwater Levels - August 24, 1994				
Well or Piezometer ID	Time of Measurement	Reference Point Elev. (ft)	Water Level Reading, Top of PVC (ft)	Ground Water Elev. (ft)
MW - 101D	09:00	10.56	8.02	2.54
MW - 101M	09:03	11.21	8.73	2.48
MW - 101S	08:58	10.51	6.53	3.98
MW - 102D	11:51	11.80	9.11	2.69
MW - 102M	11:49	11.30	7.81	3.49
MW - 102S	11:53	11.40	7.35	4.05
MW - 103D	11:59	15.47	13.01	2.46
MW - 103M	12:03	15.02	12.61	2.41
MW - 104D	12:12	11.03	9.02	2.01
MW - 104M	12:10	11.44	9.27	2.17
MW - 104S	12:15	10.99	7.38	3.61
MW - 110D	11:14	9.48	7.11	2.37
MW - 110M	11:21	9.28	6.97	2.31
MW - 110S	11:26	9.62	1.32	8.30
MW - 111D	17:24	12.33	10.03	2.30
MW - 111M	17:22	12.70	10.37	2.33
MW - 111S	17:20	12.03	9.33	2.70
MW - 112B	17:35	6.41	4.2	2.21
MW - 112D	17:37	6.74	4.52	2.22
MW - 112M	17:39	6.73	4.53	2.20
MW - 113B	15:10	8.96	7.1	1.86
MW - 113M	16:12	8.76	6.65	2.11
MW - 120	19:30	8.00	5.82	2.18

ROUND 3 GROUNDWATER LEVELS - NOVEMBER 28, 1994
RAYMARK - OU2 - GROUNDWATER
REMEDIAL INVESTIGATION REPORT

Round 3 Groundwater Levels - November 28, 1994				
Well or Piezometer ID	Time of Measurement	Reference Point Elev. (ft)	Water Level Reading, Top of PVC (ft)	Ground Water Elev. (ft)
MW-101D	17:00	10.56	8.17	2.39
MW-101M	16:58	11.21	9.27	1.94
MW-101S	16:56	10.51	6.42	4.09
MW-102D	16:38	11.80	9.23	2.57
MW-102M	16:36	11.30	8.04	3.26
MW-102S	16:34	11.40	6.80	4.60
MW-103D	16:45	15.47	13.02	2.45
MW-103M	16:43	15.02	12.58	2.44
MW-104D	16:28	11.03	8.87	2.16
MW-104M	16:27	11.44	9.20	2.24
MW-104S	16:26	10.99	6.48	4.51
MW-110D	14:39	9.48	7.14	2.34
MW-110M	14:45	9.28	7.21	2.07
MW-110S	14:48	9.62	0.80	8.82
MW-111D	16:15	12.33	10.14	2.19
MW-111M	16:14	12.70	10.60	2.10
MW-111S	16:13	12.03	8.73	3.30
MW-112B	16:08	6.41	4.31	2.10
MW-112D	16:06	6.74	4.64	2.10
MW-112M	16:10	6.73	4.61	2.12
MW-113B	17:35	8.96	7.38	1.58
MW-113M	17:32	8.76	6.89	1.87
MW-120	na	8.00	-------- na --------	

ROUND 4 GROUNDWATER LEVELS - MARCH 27, 1995
RAYMARK - OU2 - GROUNDWATER
REMEDIAL INVESTIGATION REPORT

Round 4 Groundwater Levels - March 27, 1995				
Well or Piezometer ID	Time of Measurement	Reference Point Elev. (ft)	Water Level Reading, Top of PVC (ft)	Ground Water Elev. (ft)
MW-101D	10:30	10.56	7.61	2.95
MW-101M	10:28	11.21	8.34	2.87
MW-101S	10:26	10.51	6.99	3.52
MW-102D	10:02	11.80	6.49	5.31
MW-102M	10:01	11.30	6.92	4.38
MW-102S	10:00	11.40	6.62	4.78
MW-103D	10:22	15.47	12.49	2.98
MW-103M	10:20	15.02	12.06	2.96
MW-104D	10:15	11.03	8.44	2.59
MW-104M	10:13	11.44	8.78	2.66
MW-104S	10:11	10.99	6.90	4.09
MW-110D	08:31	9.48	6.67	2.81
MW-110M	08:31	9.28	6.68	2.60
MW-110S	08:30	9.62	0.63	8.99
MW-111D	11:06	12.33	9.67	2.66
MW-111M	11:04	12.70	10.02	2.68
MW-111S	11:02	12.03	9.66	2.37
MW-112B	10:54	6.41	3.77	2.64
MW-112D	10:52	6.74	4.08	2.66
MW-112M	10:50	6.73	4.09	2.64
MW-113B	09:51	8.96	7.02	1.94
MW-113M	09:50	8.76	6.51	2.25
MW-120	09:40	8.00	5.55	2.45

Round Five Ground Water Levels - December 1, 1997

Well or Piezometer ID	Time of Measurement	Reference Point Elev. (ft)	Water Level Reading, Top of PVC (ft)	Ground Water Elev. (ft)
MW-101D	na	10.56	8.27	2.29
MW-101M	na	11.21	9.04	2.17
MW-101S	na	10.51	6.68	3.83
MW-102D	na	11.80	9.24	2.56
MW-102M	na	11.30	7.99	3.31
MW-102S	na	11.40	6.92	4.48
MW-103D	na	15.47	15.13	0.34
MW-103M	na	15.02	12.73	2.29
MW-104D	na	11.03	9.07	1.96
MW-104M	na	11.44	9.36	2.08
MW-104S	na	10.99	7.02	3.97
MW-110D	na	9.48	7.17	2.31
MW-110M	na	9.28	7.07	2.21
MW-110S	na	9.62	0.61	9.01
MW-111D	na	12.33	10.28	2.05
MW-111M	na	12.70	10.65	2.05
MW-111S	na	12.03	10	2.03
MW-112B	na	6.41	4.19	2.22
MW-112D	na	6.74	4.52	2.22
MW-112M	na	6.73	4.54	2.19
MW-113B	na	8.96	7.36	1.60
MW-113M	na	8.76	6.88	1.88
MW-120	na	8.00	-------- na --------	

Round Six Groundwater Levels - March 23, 1999				
Well or Piezometer ID	**Time of Measurement**	**Reference Point Elev. (ft)**	**Water Level Reading, Top of PVC (ft)**	**Ground Water Elev. (ft)**
MW-101D	na	10.56	7.01	3.55
MW-101M	na	11.21	8.75	2.46
MW-101S	na	10.51	5.76	4.75
MW-102D	na	11.80	7.80	4.00
MW-102M	na	11.30	6.35	4.95
MW-102S	na	11.40	5.40	6.00
MW-103D	na	15.47	11.80	3.67
MW-103M	na	15.02	11.40	3.62
MW-104B	na	10.30	7.21	3.09
MW-104D	na	11.03	7.99	3.04
MW-104M	na	11.44	8.28	3.16
MW-104S	na	10.99	6.17	4.82
MW-110D	na	9.48	6.21	3.27
MW-110M	na	9.28	6.30	2.98
MW-110S	na	9.62	0.52	9.10
MW-111D	na	12.33	9.28	3.05
MW-111M	na	12.70	9.45	3.25
MW-111S	na	12.03	8.63	3.40
MW-112B	na	6.41	3.33	3.08
MW-112D	na	6.74	3.66	3.08
MW-112M	na	6.73	3.73	3.00
MW-113B	na	8.96	6.63	2.33
MW-113M	na	8.76	6.01	2.75
MW-120S	na	8.00	-------- na --------	

BEDROCK OUTCROP DATA

APPENDIX D
BEDROCK OUTCROP DATA
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

X (EAST)	Y (NORTH)	Z (ELEV)	Location	Foliation Strike	Foliation Dip	Comments
499740.27	136384.73	17.06	Area A	N40E	85 EAST to 90	Prevalent fracture orientation same as foliation.
499724.33	136309.74	16.59	Area A			Outcrop = Garnet, quartz, mica, SCHST.
499661.99	136264.57	8.98	Area A			Structural features include: numerous folds,
499626.64	136192.00	8.03	Area A			quartz & garnet less easily eroded,
499649.22	136139.17	12.90	Area A			abundant differential weathering, quartz
499591.27	136058.33	7.57	Area A			augens and boudinage.
499771.70	136165.75	41.09	Area A			Localized high-ang. fracture sets noted crossing
499595.70	135999.66	8.47	Area A			foliation. Oxidation stains common,
499709.70	136014.66	9.69	Area A			Many fractures Strike - S60E, Dip - 65 deg. south
499817.39	136083.55	7.75	Area A			Glacial Striation at southern end = N5W.
499858.23	136113.03	8.42	Area A			Glacial erosion (rounding northern edge, plucking
499866.68	136170.60	6.78	Area A			southern side noted).
499893.78	136245.27	6.45	Area A			
499854.12	136321.42	9.13	Area A			
499815.77	136356.83	12.29	Area A			
497411.81	136187.12	25.92	Area B	N35E	?	Unable to meas. Dip angle from exposures
497329.88	136096.76	38.20	Area B			Multiple small exposures noted along ridgeline.
497180.83	135936.79	35.58	Area B			Similar rock type to other outcrops.
497176.63	135918.91	38.60	Area B			Town of Stratford Survey monument #5015 found
497205.89	135855.51	46.06	Area B			near E. Broadway and Glenridge st.
497217.27	135853.04	47.16	Area B			
497244.45	135866.53	45.92	Area B			
497273.34	135898.76	45.24	Area B			
497286.85	135958.87	46.63	Area B			
497408.61	136115.32	35.48	Area B			
497440.50	136170.12	28.76	Area B			
497298.58	136004.56	48.63	Area B			
497241.07	135803.75	39.15	Area C			
497185.36	135750.26	34.41	Area D			
497185.20	135744.35	36.58	Area D			
497191.02	135742.05	36.72	Area D			
497194.55	135746.15	34.84	Area D			
496851.98	135387.41	28.99	Area E			
496846.95	135386.27	28.93	Area E			
496849.21	135387.88	29.22	Area E			
496846.86	135331.31	29.77	Area F			
496841.26	135319.99	29.62	Area F			
496848.45	135312.53	29.81	Area F			
496844.66	135318.94	29.98	Area F			
496914.16	134606.43	41.63	Area G			
496903.92	134606.79	37.63	Area G			
496899.44	134598.59	37.48	Area G			
496904.95	134595.95	40.33	Area G			
496903.87	134593.88	38.63	Area G			
496909.06	134594.94	40.86	Area G			
496930.47	134583.56	42.35	Area G			
496934.33	134590.72	42.82	Area G			
496930.46	134591.93	43.38	Area G			
496914.16	134606.43	41.63	Area G			
497096.49	134429.54	40.46	Area H			
497094.47	134425.86	42.79	Area H			
497097.34	134421.36	43.07	Area H			
497100.10	134423.45	40.52	Area H			
497098.53	134423.76	42.78	Area H			
497048.68	134444.60	45.14	Area I			
497042.07	134430.77	47.73	Area I			
497058.22	134410.52	48.86	Area I			
497063.85	134420.12	45.39	Area I			
497054.79	134425.55	47.60	Area I			
497032.16	134356.01	51.29	Area J			
497026.98	134361.70	51.66	Area J			
497031.91	134354.37	51.46	Area J			
496764.53	134122.99	45.58	Area K	N55E	85 West to 90	Similar rock type to other outcrops.
496741.31	134107.11	45.34	Area K			
496734.47	134085.14	44.16	Area K			

APPENDIX D
BEDROCK OUTCROP DATA
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

496750.81	134076.79	44.65	Area K			
496764.00	134066.85	46.30	Area K			
496780.23	134074.09	43.44	Area K			
496783.72	134095.91	42.20	Area K			
496768.96	134089.91	44.17	Area K			
496772.29	134110.81	42.64	Area K			
496757.61	134091.15	51.72	Area K			
496948.03	133950.75	33.98	Area L			
496928.17	133912.67	34.17	Area L			
496934.50	133897.90	24.93	Area L			
496961.66	133943.39	26.00	Area L			
496499.07	133958.99	41.57	Area M			
496434.73	133916.07	45.94	Area M			
496427.77	133931.80	46.75	Area M			
496408.94	133916.42	45.49	Area M			
496407.93	133900.14	42.82	Area M			
496426.77	133897.76	43.94	Area M			
496404.77	133859.59	40.23	Area M			
496377.67	133819.39	37.21	Area M			
496393.35	133812.37	37.80	Area M			
496404.55	133832.27	40.45	Area M			
496412.17	133853.48	40.90	Area M			
496455.82	133871.08	36.64	Area M			
496474.63	133895.40	36.01	Area M			
496500.77	133934.68	37.09	Area M			
496503.07	133954.43	38.64	Area M			
496423.19	133904.20	46.85	Area M			
496817.46	133781.69	32.56	Area N			
496733.63	133726.04	43.59	Area N			
496686.07	133714.64	43.57	Area N			
496650.45	133709.64	44.91	Area N			
496632.27	133705.09	44.05	Area N			
496614.50	133665.21	40.85	Area N			
496596.37	133636.56	33.29	Area N			
496613.41	133614.75	33.34	Area N			
496641.24	133623.46	32.46	Area N			
496690.87	133658.90	39.66	Area N			
496704.35	133668.94	26.80	Area N			
496761.86	133724.26	25.94	Area N			
496823.18	133781.18	24.88	Area N			
496639.23	133676.77	47.11	Area N			
499480.56	133874.97	17.71	Area O	N30E	?	No Dip angle avail. Gray quartz rich SCHIST.
499527.85	133925.13	20.15	Area P	N30E	~80W	Garnet, quartz, mica, SCHIST. Minor fractures
499530.63	133886.63	19.95	Area P			noted ~perpendicular to foliation;~N35W.
499543.01	133880.28	21.28	Area P			U.S. Coast & Geodetic Survey Benchmark located
499571.43	133871.34	19.45	Area P			at highpoint on outcrop.
499585.57	133888.56	19.86	Area P			
499603.34	133889.37	19.78	Area P			
499627.40	133917.18	20.90	Area P			
499568.46	133902.85	26.19	Area P			
499346.81	133655.01	16.36	Area Q	N40E	~82W to 90	Garnet, quartz, mica, SCHIST. No signif. fractures
499309.03	133624.77	15.93	Area Q			noted. Quartz augen & Boudinage noted. Differential
499310.29	133606.03	15.72	Area Q			weathering noted with quartz & garnet more resistant
499332.97	133613.15	18.04	Area Q			
499348.87	133634.57	17.79	Area Q			
499327.47	133616.89	19.97	Area Q			

Note: Areas are indicated on Figure 3-6.

PACKER TESTS 1999

APPENDIX D
PACKER TESTS FOR HYDRAULIC CONDUCTIVITY
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
MW-104B	96 - 104.5?	10	7.5	3.5	1.7	11	15	34.65	45.65	4900	182	0.50	Stick-up = 1.7 ft. WL in ft-bgs from 2/24/99.
		10	7.5	3.5	2.7	11	30	69.3	80.3	4900	165	0.45	Assume guage height =3.5 ft
		10	7.5	3.5	5	11	48	110.88	121.88	4900	201	0.55	
		10	7.5	3.5	3.1	11	30	69.3	80.3	4900	189	0.52	
		10	7.5	3.5	1.9	11	15	34.65	45.65	4900	204	0.56	
MW-104B	103 - 111.5?	10	7.5	3.5	1.5	11	15	34.65	45.65	4900	161	0.44	Stick-up = 1.7 ft. WL in ft-bgs = 5.8. WL from 2/24/99.
		10	7.5	3.5	2.9	11	30	69.3	80.3	4900	177	0.48	Assume guage height =3.5 ft
		10	7.5	3.5	5	11	50	115.5	126.5	4900	194	0.53	
		10	7.5	3.5	2.7	11	30	69.3	80.3	4900	165	0.45	
		10	7.5	3.5	1.6	11	15	34.65	45.65	4900	172	0.47	
MW-104B	108 - 116.5?	10	7.5	3.5	0	11	15	34.65	45.65	4900	0	0.00	Stick-up = 1.7 ft. WL in ft-bgs = 5.8. WL from 2/24/99.
		10	7.5	3.5	0	11	30	69.3	80.3	4900	0	0.00	Assume guage height =3.5 ft. Holding test @50 psi for
		10	7.5	3.5	0	11	50	115.5	126.5	4900	0	0.00	6 min. - pressure stable.
SB-201B	46.5-56.5	10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	Holding test @ 32 psi for 3.5 min - pressure stable
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	WL from 2/24/99
		10	10.55	3.1	0	13.65	30	69.3	82.95	4900	0	0.00	
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	
		10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	
SB-201B	54 - 64	10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	Holding test @ 32 psi for 3.5 min - pressure stable
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	WL from 2/24/99
		10	10.55	3.1	0	13.65	30	69.3	82.95	4900	0	0.00	
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	
		10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	
SB-201B	61 - 71	10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	Holding test @ 34 psi for 3 min. - pressure stable
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	WL from 2/24/99
		10	10.55	3.1	0	13.65	30	69.3	82.95	4900	0	0.00	
		10	10.55	3.1	0	13.65	20	46.2	59.85	4900	0	0.00	
		10	10.55	3.1	0	13.65	10	23.1	36.75	4900	0	0.00	
MW-208B	79 - 89	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	Holding test @ 42 psi for 4 min. - pressure decreases
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	40	92.4	114.45	4900	0	0.00	
MW-208B	83 - 93	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	Holding test @ 40 psi for 2 min. - pressure increases
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	40	92.4	114.45	4900	0	0.00	

APPENDIX D
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REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
MW-208B	93 - 103	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	At test end, pressure increases w/o moving handle
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	40	92.4	114.45	4900	0	0.00	
MW-208B	98 - 108	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	Holding test @ 52 psi for 5 min. - pressure decreases
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	50	115.5	137.55	4900	0	0.00	
MW-208B	103 - 113	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	Holding test @ 54 psi for 5 min. - pressure stable
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	50	115.5	137.55	4900	0	0.00	
MW-208B	111 - 121	10	18.55	3.5	0	22.05	20	46.2	68.25	4900	0	0.00	Holding test @ 53 psi for 4 min. - pressure stable
		10	18.55	3.5	0	22.05	30	69.3	91.35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/24/99
		10	18.55	3.5	0	22.05	50	115.5	137.55	4900	0	0.00	
SB-216DB	67 - 77	10	25.7	3.5	2.1	29.2	10	23.1	52.3	4900	197	0.54	Assume guage height = 3.5 ft; WL from 2/25/99
		10	25.7	3.5	2.7	29.2	20	46.2	75.4	4900	175	0.48	
		10	25.7	3.5	2.7	29.2	30	69.3	98.5	4900	134	0.37	
		10	25.7	3.5	2	29.2	20	46.2	75.4	4900	130	0.36	
		10	25.7	3.5	1	29.2	10	23.1	52.3	4900	94	0.26	
SB-216DB	76 - 86	10	25.7	3.5	0	29.2	10	23.1	52.3	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	25.7	3.5	0.1	29.2	20	46.2	75.4	4900	6	0.02	
		10	25.7	3.5	2.5	29.2	30	69.3	98.5	4900	124	0.34	
		10	25.7	3.5	0.2	29.2	20	46.2	75.4	4900	13	0.04	
		10	25.7	3.5	0	29.2	10	23.1	52.3	4900	0	0.00	
SB-216DB	85.25-95.25	10	25.7	3.5	0	29.2	10	23.1	52.3	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	25.7	3.5	0.7	29.2	20	46.2	75.4	4900	45	0.12	
		10	25.7	3.5	3.4	29.2	29	66.99	96.19	4900	173	0.47	
		10	25.7	3.5	0.8	29.2	20	46.2	75.4	4900	52	0.14	
		10	25.7	3.5	0	29.2	10	23.1	52.3	4900	0	0.00	
MW-301B	61 - 71	10	10.91	3	0.7	13.91	10	23.1	37.01	4900	93	0.25	WL from 2/25/99
		10	10.91	3	1.1	13.91	20	46.2	60.11	4900	90	0.25	
		10	10.91	3	1.6	13.91	30	69.3	83.21	4900	94	0.26	
		10	10.91	3	1.1	13.91	20	46.2	60.11	4900	90	0.25	
		10	10.91	3	0.7	13.91	10	23.1	37.01	4900	93	0.25	

APPENDIX D
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RAYMARK OU2 - GROUNDWATER
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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
MW-301B	71 - 81	10	10.91	3	0.1	13.91	10	23.1	37.01	4900	13	0.04	Holding test @ 36 psi for 4 min. - pressure decreases
		10	10.91	3	0	13.91	20	46.2	60.11	4900	0	0.00	WL from 2/25/99
		10	10.91	3	0	13.91	30	69.3	83.21	4900	0	0.00	
		10	10.91	3	0	13.91	20	46.2	60.11	4900	0	0.00	
		10	10.91	3	0	13.91	10	23.1	37.01	4900	0	0.00	
MW-302B	64 - 69	5	20.21	3.5	0.1	23.71	10	23.1	46.81	8200	18	0.05	Assume guage height = 3.5 ft; WL from 2/25/99
		5	20.21	3.5	0.13	23.71	20	46.2	69.91	8200	15	0.04	
		5	20.21	3.5	0.16	23.71	30	69.3	93.01	8200	14	0.04	
		5	20.21	3.5	0.06	23.71	20	46.2	69.91	8200	7	0.02	
		5	20.21	3.5	0.04	23.71	10	23.1	46.81	8200	7	0.02	
MW-302B	69 - 74	5	20.21	3.5	0.02	23.71	10	23.1	46.81	8200	4	0.01	Assume guage height = 3.5 ft; WL from 2/25/99
		5	20.21	3.5	0.5	23.71	20	46.2	69.91	8200	59	0.16	
		5	20.21	3.5	0.7	23.71	30	69.3	93.01	8200	62	0.17	
		5	20.21	3.5	0.5	23.71	20	46.2	69.91	8200	59	0.16	
		5	20.21	3.5	0.3	23.71	10	23.1	46.81	8200	53	0.14	
MW-302B	74 - 79	5	20.21	3.5	0.12	23.71	10	23.1	46.81	8200	21	0.06	Assume guage height = 3.5 ft; WL from 2/25/99
		5	20.21	3.5	0.43	23.71	20	46.2	69.91	8200	50	0.14	
		5	20.21	3.5	0.48	23.71	30	69.3	93.01	8200	42	0.12	
		5	20.21	3.5	0	23.71	20	46.2	69.91	8200	0	0.00	
		5	20.21	3.5	0.31	23.71	10	23.1	46.81	8200	54	0.15	
MW-302B	79 - 84	5	20.21	3.5	0	23.71	10	23.1	46.81	8200	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		5	20.21	3.5	0.08	23.71	20	46.2	69.91	8200	9	0.03	
		5	20.21	3.5	0.08	23.71	30	69.3	93.01	8200	7	0.02	
		5	20.21	3.5	0.02	23.71	20	46.2	69.91	8200	2	0.01	
		5	20.21	3.5	0.02	23.71	10	23.1	46.81	8200	4	0.01	
MW-302B	84 - 89	5	20.21	3.5	4.3	23.71	10	23.1	46.81	8200	753	2.06	Assume guage height = 3.5 ft; WL from 2/25/99
		5	20.21	3.5	7.3	23.71	20	46.2	69.91	8200	856	2.35	Overflow of 4 in casing noted @ 5 gpm and occurred
		5	20.21	3.5	7.9	23.71	22.5	51.975	75.685	8200	856	2.34	throughout test.
SB-303B	12 - 22	10	20.9	3.5	0.06	24.4	10	23.1	47.5	4900	6	0.02	Assume guage height = 3.5 ft; WL from 2/25/99
		10	20.9	3.5	1.1	24.4	20	46.2	70.6	4900	76	0.21	
		10	20.9	3.5	1.8	24.4	25	57.75	82.15	4900	107	0.29	
		10	20.9	3.5	1.2	24.4	20	46.2	70.6	4900	83	0.23	
		10	20.9	3.5	0.05	24.4	10	23.1	47.5	4900	5	0.01	
SB-303B	22 - 32	10	20.9	3.5	0	24.4	10	23.1	47.5	4900	0	0.00	Holding test @ 26 psi for 9 min. - pressure stable for
		10	20.9	3.5	0	24.4	20	46.2	70.6	4900	0	0.00	initial 4.5 min. then decreases over next 4.5 min.

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RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
		10	20.9	3.5	0	24.4	25	57.75	82.15	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
SB-303B	32 - 42	10	20.9	3.5	0.2	24.4	10	23.1	47.5	4900	21	0.06	Assume guage height = 3.5 ft; WL from 2/25/99
		10	20.9	3.5	0.5	24.4	20	46.2	70.6	4900	35	0.10	
		10	20.9	3.5	0.5	24.4	25	57.75	82.15	4900	30	0.08	
		10	20.9	3.5	0.4	24.4	20	46.2	70.6	4900	28	0.08	
		10	20.9	3.5	0.3	24.4	10	23.1	47.5	4900	31	0.08	
SB-303B	39.25-49.25	10	20.9	3.5	0.06	24.4	10	23.1	47.5	4900	6	0.02	Assume guage height = 3.5 ft; WL from 2/25/99
		10	20.9	3.5	0.3	24.4	20	46.2	70.6	4900	21	0.06	
		10	20.9	3.5	0.3	24.4	25	57.75	82.15	4900	18	0.05	
		10	20.9	3.5	0.2	24.4	20	46.2	70.6	4900	14	0.04	
		10	20.9	3.5	0.06	24.4	10	23.1	47.5	4900	6	0.02	
MW-304B	66.7-68.7 ?	5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	Multiple holding tests @31, 20, 10 psi for 2-4 min. -
		5	7.07	3.5	0	10.57	20	46.2	56.77	8200	0	0.00	pressure stable. Assume guage height = 3.5 ft;
		5	7.07	3.5	0	10.57	30	69.3	79.87	8200	0	0.00	WL from 2/25/99
		5	7.07	3.5	0	10.57	20	46.2	56.77	8200	0	0.00	
		5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	
MW-304B	68.7-73.2 ?	5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	Multiple holding tests @11, 22, 31 psi for 4 min. each -
		5	7.07	3.5	0	10.57	20	46.2	56.77	8200	0	0.00	pressure stable. Assume guage height = 3.5 ft
		5	7.07	3.5	0	10.57	30	69.3	79.87	8200	0	0.00	WL from 2/25/99
		5	7.07	3.5	0	10.57	20	46.2	56.77	8200	0	0.00	
		5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	
MW-304B	73.2-77.7 ?	5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	Holding tests @13,18, 20 psi - pressure stable
		5	7.07	3.5	0.02	10.57	20	46.2	56.77	8200	3	0.01	Holding test @32 psi for 8 min. - pressure decreases.
		5	7.07	3.5	0.03	10.57	30	69.3	79.87	8200	3	0.01	Assume guage height = 3.5 ft.; WL from 2/25/99
		5	7.07	3.5	0	10.57	20	46.2	56.77	8200	0	0.00	
MW-304B	77.7-82.2 ?	5	7.07	3.5	0.1	10.57	10	23.1	33.67	8200	24	0.07	Assume guage height = 3.5 ft.; WL from 2/25/99
		5	7.07	3.5	0.1	10.57	20	46.2	56.77	8200	14	0.04	
		5	7.07	3.5	0.16	10.57	30	69.3	79.87	8200	16	0.05	
		5	7.07	3.5	0.1	10.57	20	46.2	56.77	8200	14	0.04	
		5	7.07	3.5	0.03	10.57	10	23.1	33.67	8200	7	0.02	
MW-304B	82.2-86.7 ?	5	7.07	3.5	0.1	10.57	10	23.1	33.67	8200	24	0.07	Assume guage height = 3.5 ft.; WL from 2/25/99
		5	7.07	3.5	0.1	10.57	20	46.2	56.77	8200	14	0.04	
		5	7.07	3.5	0.2	10.57	30	69.3	79.87	8200	21	0.06	
		5	7.07	3.5	0.1	10.57	20	46.2	56.77	8200	14	0.04	
		5	7.07	3.5	0.1	10.57	10	23.1	33.67	8200	24	0.07	

APPENDIX D
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RAYMARK OU2 - GROUNDWATER
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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
MW-304B	86.7-91.2 ?	5	7.07	3.5	0	10.57	10	23.1	33.67	8200	0	0.00	Assume guage height = 3.5 ft.; WL from 2/25/99
		5	7.07	3.5	0.2	10.57	20	46.2	56.77	8200	29	0.08	
		5	7.07	3.5	0.1	10.57	30	69.3	79.87	8200	10	0.03	
		5	7.07	3.5	0.1	10.57	20	46.2	56.77	8200	14	0.04	
		5	7.07	3.5	0.02	10.57	10	23.1	33.67	8200	5	0.01	
SB-305B	106.8-116.8	10	6.01	3.5	0	9.51	10	23.1	32.61	4900	0	0.00	Holding test @ 30 psi for 8 min. - pressure stable
		10	6.01	3.5	0	9.51	20	46.2	55.71	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	6.01	3.5	0	9.51	30	69.3	78.81	4900	0	0.00	
		10	6.01	3.5	0	9.51	40	92.4	101.91	4900	0	0.00	
		10	6.01	3.5	0.06	9.51	50	115.5	125.01	4900	2	0.01	
		10	6.01	3.5	0	9.51	40	92.4	101.91	4900	0	0.00	
		10	6.01	3.5	0	9.51	30	69.3	78.81	4900	0	0.00	
SB-305B	111.8-121.8	10	6.01	3.5	0	9.51	10	23.1	32.61	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	6.01	3.5	0.3	9.51	20	46.2	55.71	4900	26	0.07	
		10	6.01	3.5	0.5	9.51	30	69.3	78.81	4900	31	0.09	
		10	6.01	3.5	0.7	9.51	40	92.4	101.91	4900	34	0.09	
		10	6.01	3.5	1	9.51	50	115.5	125.01	4900	39	0.11	
		10	6.01	3.5	0.8	9.51	40	92.4	101.91	4900	38	0.11	
		10	6.01	3.5	0.6	9.51	30	69.3	78.81	4900	37	0.10	
		10	6.01	3.5	0.4	9.51	20	46.2	55.71	4900	35	0.10	
SB-305B	121.8-131.8	10	6.01	3.5	0.04	9.51	10	23.1	32.61	4900	6	0.02	Holding test @ 56 psi for 11 min. - pressure decreases
		10	6.01	3.5	0.03	9.51	20	46.2	55.71	4900	3	0.01	Assume guage height = 3.5 ft; WL from 2/25/99
		10	6.01	3.5	0.07	9.51	30	69.3	78.81	4900	4	0.01	
		10	6.01	3.5	0	9.51	40	92.4	101.91	4900	0	0.00	
		10	6.01	3.5	0.08	9.51	50	115.5	125.01	4900	3	0.01	
		10	6.01	3.5	0.03	9.51	60	138.6	148.11	4900	1	0.00	
SB-306B	25.25-35.25	10	12.4	3.5	0	15.9	10	23.1	39	4450	0	0.00	Holding test @ 14 psi for 4.5 min. - pressure stable
		10	12.4	3.5	0	15.9	20	46.2	62.1	4450	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.4	3.5	0.01	15.9	30	69.3	85.2	4450	1	0.00	
		10	12.4	3.5	0	15.9	20	46.2	62.1	4450	0	0.00	
		10	12.4	3.5	0	15.9	10	23.1	39	4450	0	0.00	
SB-306B	35.25-45.25	10	12.4	3.5	1	15.9	10	23.1	39	4450	114	0.31	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.4	3.5	2.4	15.9	20	46.2	62.1	4450	172	0.47	
		10	12.4	3.5	2.4	15.9	25	57.75	73.65	4450	145	0.40	
		10	12.4	3.5	0	15.9	20	46.2	62.1	4450	0	0.00	
		10	12.4	3.5	0	15.9	10	23.1	39	4450	0	0.00	

APPENDIX D
PACKER TESTS FOR HYDRAULIC CONDUCTIVITY
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
SB-306B	40.25-50.25	10	12.4	3.5	0	15.9	10	23.1	39	4450	0	0.00	Holding test @18 psi for 4.5 min.- pressure decreases
		10	12.4	3.5	0.9	15.9	20	46.2	62.1	4450	64	0.18	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.4	3.5	0	15.9	25	57.75	73.65	4450	0	0.00	
		10	12.4	3.5	0	15.9	20	46.2	62.1	4450	0	0.00	
SB-306DB	56.25-66.25	10	13.43	3.5	1	16.93	10	23.1	40.03	4900	122	0.34	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.43	3.5	1.2	16.93	20	46.2	63.13	4900	93	0.26	
		10	13.43	3.5	1.5	16.93	30	69.3	86.23	4900	85	0.23	
		10	13.43	3.5	1.1	16.93	20	46.2	63.13	4900	85	0.23	
		10	13.43	3.5	0.7	16.93	10	23.1	40.03	4900	86	0.23	
SB-306DB	62.25-72.25	10	13.43	3.5	0.12	16.93	10	23.1	40.03	4900	15	0.04	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.43	3.5	0	16.93	20	46.2	63.13	4900	0	0.00	
		10	13.43	3.5	0	16.93	30	69.3	86.23	4900	0	0.00	
		10	13.43	3.5	0	16.93	20	46.2	63.13	4900	0	0.00	
		10	13.43	3.5	0	16.93	10	23.1	40.03	4900	0	0.00	
		10	13.43	3.5	3.3	16.93	40	92.4	109.33	4900	148	0.41	
		10	13.43	3.5	0.5	16.93	30	69.3	86.23	4900	28	0.08	
		10	13.43	3.5	0	16.93	20	46.2	63.13	4900	0	0.00	
SB-306DB	72.25-82.25	10	13.43	3.5	0	16.93	10	23.1	40.03	4900	0	0.00	Holding test @29 psi for 6 min.- pressure decreases
		10	13.43	3.5	0	16.93	20	46.2	63.13	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.43	3.5	0	16.93	30	69.3	86.23	4900	0	0.00	
SB-307B	10.25-20.25	10	10.03	3.5	0	13.53	6	13.86	27.39	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	10.03	3.5	0.9	13.53	8	18.48	32.01	4900	138	0.38	
		10	10.03	3.5	1.3	13.53	10	23.1	36.63	4900	174	0.48	
		10	10.03	3.5	0.5	13.53	8	18.48	32.01	4900	77	0.21	
		10	10.03	3.5	0	13.53	6	13.86	27.39	4900	0	0.00	
SB-307B	20.25-30.25	10	10.03	3.5	2.7	13.53	5	11.55	25.08	4900	528	1.45	Assume guage height = 3.5 ft; WL from 2/25/99
		10	10.03	3.5	4.7	13.53	10	23.1	36.63	4900	629	1.72	
		10	10.03	3.5	5.3	13.53	12	27.72	41.25	4900	630	1.72	
		10	10.03	3.5	4.9	13.53	10	23.1	36.63	4900	655	1.80	
		10	10.03	3.5	2.1	13.53	6	13.86	27.39	4900	376	1.03	
SB-307B	25.25-35.25	10	10.03	3.5	4.2	13.53	5	11.55	25.08	4900	821	2.25	Assume guage height = 3.5 ft; WL from 2/25/99
		10	10.03	3.5	5.5	13.53	10	23.1	36.63	4900	736	2.02	
		10	10.03	3.5	7.3	13.53	15	34.65	48.18	4900	742	2.03	
		10	10.03	3.5	4.9	13.53	10	23.1	36.63	4900	655	1.80	
		10	10.03	3.5	3.9	13.53	6	13.86	27.39	4900	698	1.91	

APPENDIX D
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RAYMARK OU2 - GROUNDWATER
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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
SB-307DB	43 - 53	10	10.03	3.5	0	13.53	10	23.1	36.63	4900	0	0.00	Holding test @30 psi for 7 min.- pressure stable
		10	10.03	3.5	0	13.53	20	46.2	59.73	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	10.03	3.5	0	13.53	30	69.3	82.83	4900	0	0.00	
SB-307DB	53 - 63	10	28.33	3.5	0	31.83	10	23.1	54.93	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	28.33	3.5	0	31.83	20	46.2	78.03	4900	0	0.00	
		10	28.33	3.5	0.2	31.83	30	69.3	101.13	4900	10	0.03	
		10	28.33	3.5	0	31.83	20	46.2	78.03	4900	0	0.00	
		10	28.33	3.5	0	31.83	10	23.1	54.93	4900	0	0.00	
SB-307DB	59.25-69.25	10	28.33	3.5	0.03	31.83	10	23.1	54.93	4900	3	0.01	Holding test @20 psi for 5 min.- pressure decreases
		10	28.33	3.5	0.2	31.83	20	46.2	78.03	4900	13	0.03	Assume guage height = 3.5 ft; WL from 2/25/99
		10	28.33	3.5	0.4	31.83	30	69.3	101.13	4900	19	0.05	
		10	28.33	3.5	0	31.83	20	46.2	78.03	4900	0	0.00	
MW-308B	14.5 - 23 ?	10	13.02	3.5	13.3	16.52	6	13.86	30.38	4900	2145	5.88	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	14.3	16.52	8	18.48	35	4900	2002	5.48	Actual headloss tbd - substantial
		10	13.02	3.5	14.8	16.52	10	23.1	39.62	4900	1830	5.01	
		10	13.02	3.5	14.3	16.52	8	18.48	35	4900	2002	5.48	
		10	13.02	3.5	13.6	16.52	6	13.86	30.38	4900	2194	6.01	
MW-308B	21.5 - 30 ?	10	13.02	3.5	13.7	16.52	5	11.55	28.07	4900	2392	6.55	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	14.4	16.52	8	18.48	35	4900	2016	5.52	Actual headloss tbd - substantial
		10	13.02	3.5	15.1	16.52	10	23.1	39.62	4900	1867	5.12	
		10	13.02	3.5	15.3	16.52	12	27.72	44.24	4900	1695	4.64	
		10	13.02	3.5	14	16.52	8	18.48	35	4900	1960	5.37	
		10	13.02	3.5	13.6	16.52	6	13.86	30.38	4900	2194	6.01	
MW-308B	26.5 - 35 ?	10	13.02	3.5	0	16.52	8	18.48	35	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	0.3	16.52	14	32.34	48.86	4900	30	0.08	
		10	13.02	3.5	0.3	16.52	15	34.65	51.17	4900	29	0.08	
		10	13.02	3.5	0.2	16.52	20	46.2	62.72	4900	16	0.04	
		10	13.02	3.5	0.2	16.52	14	32.34	48.86	4900	20	0.05	
		10	13.02	3.5	0	16.52	8	18.48	35	4900	0	0.00	
MW-308DB	49 - 57.5?	10	13.02	3.5	0.9	16.52	8	18.48	35	4900	126	0.35	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	1.1	16.52	16	36.96	53.48	4900	101	0.28	
		10	13.02	3.5	1.5	16.52	24	55.44	71.96	4900	102	0.28	
		10	13.02	3.5	1.1	16.52	16	36.96	53.48	4900	101	0.28	
		10	13.02	3.5	0.7	16.52	8	18.48	35	4900	98	0.27	

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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
MW-308DB	54-62.5?	10	13.02	3.5	0.1	16.52	8	18.48	35	4900	14	0.04	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	0.1	16.52	16	36.96	53.48	4900	9	0.03	
		10	13.02	3.5	0.1	16.52	26	60.06	76.58	4900	6	0.02	Actual headloss tbd - substantial
		10	13.02	3.5	0	16.52	16	36.96	53.48	4900	0	0.00	
		10	13.02	3.5	0	16.52	8	18.48	35	4900	0	0.00	
MW-308DB	60-68.5?	10	13.02	3.5	0	16.52	10	23.1	39.62	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	13.02	3.5	0.7	16.52	20	46.2	62.72	4900	55	0.15	
		10	13.02	3.5	0.7	16.52	30	69.3	85.82	4900	40	0.11	
		10	13.02	3.5	0.4	16.52	20	46.2	62.72	4900	31	0.09	
		10	13.02	3.5	0.3	16.52	10	23.1	39.62	4900	37	0.10	
SB-309B	101 - 111	10	3.05	3.5	0.6	6.55	10	23.1	29.65	4900	99	0.27	Assume guage height = 3.5 ft; WL from 2/25/99
		10	3.05	3.5	3.1	6.55	25	57.75	64.3	4900	236	0.65	
		10	3.05	3.5	6.1	6.55	40	92.4	98.95	4900	302	0.83	
		10	3.05	3.5	4.6	6.55	25	57.75	64.3	4900	351	0.96	
		10	3.05	3.5	2.3	6.55	10	23.1	29.65	4900	380	1.04	
SB-309B	111 - 121	10	3.05	3.5	2.7	6.55	10	23.1	29.65	4900	446	1.22	Assume guage height = 3.5 ft; WL from 2/25/99
		10	3.05	3.5	6.1	6.55	20	46.2	52.75	4900	567	1.55	
		10	3.05	3.5	8.8	6.55	30	69.3	75.85	4900	568	1.56	Actual headloss tbd - substantial
		10	3.05	3.5	6.7	6.55	20	46.2	52.75	4900	622	1.71	
		10	3.05	3.5	3.3	6.55	10	23.1	29.65	4900	545	1.49	
SB-309B	116.25-126.25	10	3.05	3.5	0.1	6.55	10	23.1	29.65	4900	17	0.05	Assume guage height = 3.5 ft; WL from 2/25/99
		10	3.05	3.5	0.1	6.55	25	57.75	64.3	4900	8	0.02	
		10	3.05	3.5	0.2	6.55	45	103.95	110.5	4900	9	0.02	
		10	3.05	3.5	0.1	6.55	25	57.75	64.3	4900	8	0.02	
		10	3.05	3.5	0	6.55	10	23.1	29.65	4900	0	0.00	
SB-310B	68.25-71.75?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0	17.7	20	46.2	63.9	8200	0	0.00	
		5	14.3	3.4	0	17.7	30	69.3	87	8200	0	0.00	
SB-310B	78.75-82.25?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0	17.7	20	46.2	63.9	8200	0	0.00	
		5	14.3	3.4	0	17.7	30	69.3	87	8200	0	0.00	
SB-310B	83.75-87.25?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0.03	17.7	20	46.2	63.9	8200	4	0.01	
		5	14.3	3.4	0.04	17.7	30	69.3	87	8200	4	0.01	

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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
SB-310B	87.25-90.75?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0	17.7	20	46.2	63.9	8200	0	0.00	
		5	14.3	3.4	0.03	17.7	30	69.3	87	8200	3	0.01	
SB-310B	92-95.5?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0	17.7	20	46.2	63.9	8200	0	0.00	
		5	14.3	3.4	0	17.7	30	69.3	87	8200	0	0.00	
SB-310B	97-100.5?	5	14.3	3.4	0	17.7	10	23.1	40.8	8200	0	0.00	WL from 2/25/99
		5	14.3	3.4	0	17.7	20	46.2	63.9	8200	0	0.00	
		5	14.3	3.4	0	17.7	30	69.3	87	8200	0	0.00	
SB-310B	105.5-109?	5	14.3	3.4	0.15	17.7	20	46.2	63.9	8200	19	0.05	WL from 2/25/99
		5	14.3	3.4	0.13	17.7	30	69.3	87	8200	12	0.03	
		5	14.3	3.4	1.2	17.7	40	92.4	110.1	8200	89	0.24	
		5	14.3	3.4	3.4	17.7	50	115.5	133.2	8200	209	0.57	
		5	14.3	3.4	0.9	17.7	40	92.4	110.1	8200	67	0.18	
		5	14.3	3.4	0.08	17.7	20	46.2	63.9	8200	10	0.03	
SB-311B	70 - 80	10	12.5	3.5	0	16	10	23.1	39.1	4900	0	0.00	Holding test @30 psi for 5 min.- pressure stable
		10	12.5	3.5	0	16	20	46.2	62.2	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.5	3.5	0	16	30	69.3	85.3	4900	0	0.00	
SB-311B	80 - 90	10	12.5	3.5	0.2	16	10	23.1	39.1	4900	25	0.07	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.5	3.5	0.2	16	20	46.2	62.2	4900	16	0.04	
		10	12.5	3.5	0.2	16	30	69.3	85.3	4900	11	0.03	
		10	12.5	3.5	0.15	16	20	46.2	62.2	4900	12	0.03	
		10	12.5	3.5	0	16	10	23.1	39.1	4900	0	0.00	
SB-311B	86.25-96.25	10	12.5	3.5	0	16	10	23.1	39.1	4900	0	0.00	Holding test @38 psi for 4 min.- pressure decreases
		10	12.5	3.5	0	16	20	46.2	62.2	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	12.5	3.5	0.07	16	30	69.3	85.3	4900	4	0.01	
		10	12.5	3.5	0	16	40	92.4	108.4	4900	0	0.00	
SB-312B	94.75-104.75	10	4.34	3.5	3	7.84	10	23.1	30.94	4900	475	1.30	Losing water out of casing @ 15 psi - 14:30 into test
		10	4.34	3.5	6.4	7.84	20	46.2	54.04	4900	580	1.59	Assume guage height = 3.5 ft; WL from 2/25/99
		10	4.34	3.5	4.3	7.84	15	34.65	42.49	4900	496	1.36	
		10	4.34	3.5	1.7	7.84	10	23.1	30.94	4900	269	0.74	
		10	4.34	3.5	0.1	7.84	5	11.55	19.39	4900	25	0.07	

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RAYMARK OU2 - GROUNDWATER
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	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
SB-312B	99.75-109.75	10	4.34	3.5	0	7.84	10	23.1	30.94	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	4.34	3.5	0	7.84	20	46.2	54.04	4900	0	0.00	
		10	4.34	3.5	0	7.84	30	69.3	77.14	4900	0	0.00	
		10	4.34	3.5	0.6	7.84	40	92.4	100.24	4900	29	0.08	
		10	4.34	3.5	1.3	7.84	50	115.5	123.34	4900	52	0.14	
		10	4.34	3.5	0.1	7.84	40	92.4	100.24	4900	5	0.01	
		10	4.34	3.5	0	7.84	30	69.3	77.14	4900	0	0.00	
		10	4.34	3.5	0	7.84	20	46.2	54.04	4900	0	0.00	
SB-312B	109.75-119.75	10	4.34	3.5	1	7.84	10	23.1	30.94	4900	158	0.43	Assume guage height = 3.5 ft; WL from 2/25/99
		10	4.34	3.5	1.5	7.84	20	46.2	54.04	4900	136	0.37	
		10	4.34	3.5	2.1	7.84	30	69.3	77.14	4900	133	0.37	
		10	4.34	3.5	1.3	7.84	20	46.2	54.04	4900	118	0.32	
		10	4.34	3.5	0.7	7.84	10	23.1	30.94	4900	111	0.30	
SB-313B	39.5-48?	10	7.6	3.5	0	11.1	7	16.17	27.27	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	7.6	3.5	0	11.1	14	32.34	43.44	4900	0	0.00	
		10	7.6	3.5	0	11.1	20	46.2	57.3	4900	0	0.00	
SB-313B	44.5-53?	10	7.6	3.5	0	11.1	7	16.17	27.27	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	7.6	3.5	0	11.1	14	32.34	43.44	4900	0	0.00	
		10	7.6	3.5	0	11.1	22	50.82	61.92	4900	0	0.00	
SB-313B	51.5-60?	10	7.6	3.5	0	11.1	8	18.48	29.58	4900	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		10	7.6	3.5	0	11.1	16	36.96	48.06	4900	0	0.00	
		10	7.6	3.5	0.13	11.1	25	57.75	68.85	4900	9	0.03	
		10	7.6	3.5	0	11.1	16	36.96	48.06	4900	0	0.00	
SB-402B	63.5-68.5	5	8.7	3.5	0.01	12.2	10	23.1	35.3	8200	2	0.01	Assume guage height = 3.5 ft; WL from 2/25/99
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0.01	12.2	30	69.3	81.5	8200	1	0.00	
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	
SB-402B	68.5-73.5	5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0.01	12.2	30	69.3	81.5	8200	1	0.00	
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	

APPENDIX D
PACKER TESTS FOR HYDRAULIC CONDUCTIVITY
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

	Depth Interval	Packer Spacing	Ground Water Depth	Height of Gauge	Q	h_1	Pressure	h_2	H	Cp	K	K	
	(ft-bgs)	(ft)	(ft-bpvc)	(feet)	(gal/min)	(feet)	(psi)	(feet)	(feet)		(ft/year)	(ft/day)	Comments
SB-402B	73.5-78.5	5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		5	8.7	3.5	0.01	12.2	20	46.2	58.4	8200	1	0.00	
		5	8.7	3.5	0.01	12.2	30	69.3	81.5	8200	1	0.00	
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	
SB-402B	78.5-83.5	5	8.7	3.5	0.04	12.2	10	23.1	35.3	8200	9	0.03	Assume guage height = 3.5 ft; WL from 2/25/99
		5	8.7	3.5	0.04	12.2	20	46.2	58.4	8200	6	0.02	
		5	8.7	3.5	0.02	12.2	30	69.3	81.5	8200	2	0.01	
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	
SB-402B	83.5-88.5	5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	Assume guage height = 3.5 ft; WL from 2/25/99
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	30	69.3	81.5	8200	0	0.00	
		5	8.7	3.5	0	12.2	20	46.2	58.4	8200	0	0.00	
		5	8.7	3.5	0	12.2	10	23.1	35.3	8200	0	0.00	
SB-402B	80.5-121.95		8.7	3.5	0	12.2	10	23.1	35.3		0	0.00	Single packer test
			8.7	3.5	0	12.2	20	46.2	58.4		0	0.00	Very low flow rates recorded, but water overflowed
			8.7	3.5	0	12.2	30	69.3	81.5		0	0.00	casing so flow into fractures assumed to be negligible
			8.7	3.5	0	12.2	20	46.2	58.4		0	0.00	
			8.7	3.5	0	12.2	10	23.1	35.3		0	0.00	

Potential head loss problem
in wells MW-308B and 309B

Q =	2.5	gal/min	Pumping Rate in gallons per minute
h_1 =		feet	height of gauge above water table
Pressure		psi	Water pressure
h_2 =		feet	gauge pressure, psi converted to feet of water
H +	15	feet	Total pressure of water in test section, feet
C_p	8200		Constant for Bore hole diameter, test length and units conversion
			C_p is = 8,200 for a three inch hole with 5 foot packer spacing
			Cp is = 4,900 for a 3-inch hole with a 10-foot packer spacing
	4450		Cp is = 4,450 for a 4-inch hole with a 10-foot packer spacing

SINGLE WELL TESTS 1999

APPENDIX D
SINGLE WELL PUMP TESTS FOR HYDRAULIC CONDUCTIVITY
REMEDIAL INVESTIGATION REPORT
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

Mon. Well	Q(liter/sec)	Q(gal/sec)	Q(gal/min)	Q(ft^3/day)	L(ft)	D(ft)	s(ft)	K(ft/day)	comments
MW-104D			3.000	577.5	13.20	0.542	0.62	43.65	
MW-104M			4.000	770.0	7.70	0.542	2.75	19.38	
MW-112B			0.750	144.4	12.92	0.542	3.85	1.79	filter pack in bedrock well
MW-112D			1.000	192.5	6.70	0.542	1.15	12.76	
MW-112M			1.000	192.5	13.40	0.542	0.66	13.51	
MW-113B		0.025	1.519	292.4	14.63	0.542	4.54	2.80	filter pack in bedrock well
MW-113M		0.042	2.500	481.3	12.42	0.542	0.48	49.15	
MW-201B	0.01166667		0.185	35.6	42.00	0.250	13.69	0.06	
MW-201D		0.031	1.875	360.9	7.70	0.542	7.89	3.17	
MW-208D			2.500	481.3	12.80	0.542	0.78	29.58	
MW-208M			3.000	577.5	13.00	0.542	0.55	49.76	
MW-209B			1.000	192.5	19.00	0.458	40.61	0.18	filter pack in bedrock well
MW-209D			4.000	770.0	15.00	0.542	1.56	21.02	
MW-211B	0.00991667		0.157	30.3	18.50	0.458	71.25	0.02	filter pack in bedrock well
MW-211D		0.017	1.043	200.9	20.50	0.542	0.10	67.47	
MW-211M			1.000	192.5	11.00	0.667	2.79	3.49	
MW-212B	unsteady								filter pack in bedrock well
MW-212D		0.031	1.875	360.9	8.80	0.542	0.89	25.53	
MW-212M		0.029	1.714	330.0	9.00	0.792	0.29	62.89	borehole dia = 9in?
MW-212S	no data								
MW-213S	unsteady								
MW-214D		0.040	2.400	462.0	8.00	0.542	1.24	25.10	
MW-214M		0.040	2.400	462.0	14.00	0.542	0.58	35.72	
MW-301D		0.050	3.000	577.5	14.95	0.375	0.11	244.74	
MW-302D		0.042	2.500	481.3	13.00	0.375	2.07	12.07	
MW-304B	0.03333333		0.528	101.7	29.90	0.250	1.91	1.55	
MW-304D		0.045	2.727	525.0	12.90	0.375	0.24	114.20	
MW-305B		0.026	1.579	303.9	30.90	0.250	24.82	0.35	
MW-305D		0.024	1.463	281.7	14.00	0.375	1.09	12.67	
MW-310B	unsteady								

APPENDIX D
SINGLE WELL PUMP TESTS FOR HYDRAULIC CONDUCTIVITY
REMEDIAL INVESTIGATION REPORT
RAYMARK - OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

Mon. Well	Q(liter/sec)	Q(gal/sec)	Q(gal/min)	Q(ft^3/day)	L(ft)	D(ft)	s(ft)	K(ft/day)	comments
MW-310D			6.500	1251.3	13.00	0.375	1.25	51.95	
MW-311B	unsteady								
MW-401B		0.091	5.455	1050.0	20.40	0.250	0.57	73.22	
MW-402B			1.000	192.5	61.15	0.250	5.04	0.62	
PC-01D		0.031	1.875	360.9	10.50	0.542	0.09	222.34	
PC-09D		0.033	2.000	385.0	20.00	0.542	0.04	329.47	
PC-10M		0.042	2.500	481.3	15.00	0.542	1.86	11.02	
PC-13M		0.030	1.818	350.0	15.00	0.542	6.04	2.47	
PC-15B	unsteady								
PC-15D		0.033	2.000	385.0	9.00	0.542	3.20	7.45	

Notes:
1. quasi steady state, low-flow, single well pump test
2. data analyzed via case G in Ch 19 of Lambe and Whitman, 1969
3. assume media is homogeneous and isotropic
4. computations by G. Sturgeon July 1999

K = hydraulic conductivity [L/T]
Q = flow of water [L^3/T]
L = length of sandpack
D = diameter of sandpack
s = drawdown

SINGLE WELL TESTS 2003

APPENDIX D
SINGLE WELL PUMP TESTS FOR HYDRAULIC CONDUCTIVITY
RAYMARK SUPERFUND SITE
calculations from well development, 2002/2003

Mon. Well	Q(gal/min)	Q(ft^3/day)	L(ft)	D(ft)	s(ft)	K(ft/day)	comments
NEW WELLS							
MW-207B	0.58	111.7	13.0	0.250	17.00	0.37	(low flow value used in summary table)
MW-207DR	1.50	288.8	13.5	0.333	0.67	22.33	
MW-214B	10.00	1925.0	13.0	0.250	0.23	475.90	
MW-215DB	0.27	52.0	13.5	0.500	37.00	0.07	well went dry - K less than calculated
MW-217S	1.59	306.1	9.5	0.333	0.04	518.33	upper 1.5 ft of screen exposed
MW-305BR	7.00	1347.5	13.5	0.250	3.30	22.54	
MW-305DR	3.50	673.8	13.0	0.333	3.00	11.98	
MW-501D	1.19	229.1	12.8	0.333	0.08	154.61	
MW-501B	0.30	57.8	13.0	0.250	0.78	4.21	well went dry - K less than calculated
MW-503M	1.72	330.5	8.7	0.333	0.08	298.96	
MW-503D	1.90	365.8	13.2	0.333	0.24	80.34	
MW-505M	1.11	213.7	8.0	0.333	0.59	27.90	
MW-505D	11.11	2138.7	13.0	0.333	0.35	326.01	
MW-506S	0.42	80.9	8.9	0.333	0.05	115.03	upper 2 ft of screen exposed
MW-506D	1.59	306.1	13.0	0.333	0.23	70.98	
MW-507B	5.50	1058.8	12.5	0.250	1.20	51.73	
MW-508S	0.48	92.4	7.6	0.333	0.13	56.70	upper 3.5 ft of screen exposed
MW-508B	1.59	306.1	13.0	0.250	0.27	64.46	
MW-509M	1.72	331.1	10.0	0.333	0.08	269.72	
MW-510M	2.06	396.6	9.0	0.333	0.41	68.23	
MW-514D	17.65	3397.6	14.1	0.333	1.18	144.24	
MW-515S	1.90	365.8	13.5	0.333	0.09	210.55	upper 4 ft of screen exposed
MW-520S	1.43	275.3	12.5	0.333	0.30	50.44	
MW-523S	1.11	213.7	13.0	0.333	0.05	227.95	upper 3 ft of screen exposed
MW-525S	0.48	92.4	13.0	0.333	0.02	246.43	
MW-528S	2.00	385.0	7.3	0.333	0.13	243.34	upper 4.5 ft of screen exposed
MW-532S	1.90	365.8	8.5	0.333	0.40	67.32	upper 2.5 ft of screen exposed
MW-534S	0.87	167.5	8.2	0.333	0.04	317.49	upper 3 ft of screen exposed
MW-535S	0.48	92.4	10.5	0.333	0.28	20.68	upper 1 ft of screen exposed
OLD WELLS							
MW-102M	2.50	481.3	14.5	0.500	0.21	102.14	
MW-202D	9.00	1732.5	8.0	0.500	0.60	199.15	
MW-212S	20.00	3850.0	13.3	0.500	0.97	188.98	
MW-214D	7.50	1443.8	8.0	0.500	3.60	27.66	
MW-302S	2.00	385.0	6.0	0.333	0.11	331.97	upper 3.5 ft of screen exposed

Notes:
quasi steady state, low-flow, single well pump test
data analyzed via case G in Ch 19 of Lambe and Whitman, 1969
assume media is homogeneous and isotropic

K = hydraulic conductivity [L/T]
Q = flow of water [L^3/T]
L = length of saturated sandpack
D = diameter of sandpack
s = drawdown

APPENDIX D
SINGLE WELL PUMP TESTS FOR HYDRAULIC CONDUCTIVITY
RAYMARK SUPERFUND SITE
STRATFORD, CT
calculations based on purging during low-flow sampling

	Q(ml/min)	Q(ft3/day)	L(ft)	D(ft)	s(ft)	K(ft/day)
MW-213DB	200	10.17	14.50	0.50	0.05	9.07
MW-502B	150	7.63	13.00	0.25	0.38	1.14
MW-505B	50	2.54	12.60	0.25	2.77	0.05
MW-524B	130	6.61	13.20	0.50	0.6	0.53
MW-530S	100	5.09	4.23	0.33	0.19	3.26
MW-207B	300	15.26	13.00	0.25	0.33	2.63
OLD WELLS						
MW-110S	160	8.14	8.50	0.50	0.41	1.31
MW-301B	130	6.61	30.50	0.33	0.58	0.31
MW-306DB	130	6.61	32.00	0.33	1.9	0.09
MW-310B	100	5.09	50.60	0.33	1.15	0.08
MW-312B	170	8.64	30.40	0.33	0.19	1.24
PC-01B	130	6.61	19.00	0.50	0.46	0.52
PC-04B	210	10.68	20.00	0.50	1.04	0.36
PC-06B	130	6.61	20.00	0.50	4.68	0.05
PC-08B	50	2.54	20.00	0.50	1.38	0.06
PC-10B	100	5.09	19.00	0.50	0.68	0.27
PC-13B	100	5.09	20.00	0.50	0.45	0.39
PC-15B	300	15.26	19.00	0.50	1.6	0.35
PC-16S	320	16.27	20.00	0.50	0.2	2.84
PC-16M	210	10.68	15.00	0.50	0.31	1.50

ASSUMPTIONS
Soil at intake
Unconfined aquifer
Directional isotropy
No disturbance, segregation, swelling, or consolidation of soil
No sedimentation or leakage
No air or gas in soil, well point or pipe
Hydraulic losses in pipes, well point, or filter negligible
Thickness of bedrock aquifer is 40 feet

Equation used is (1) K = (Q*ln(mL/D + square root(1 + (mL/D)^2))/(2*PI*L*S)

where
K = Hydraulic conductivity
Q=flow
m=transformation ratio
L=length of intake
D=diameter of intake
S=drawdown
T=transmissivity

Equation 1 is from
Lambe, T.W. and R.V. Whitman. Soil Mechanics. John Wiley and Sons, Inc: New York, 1969, pp. 285

AQUIFER TEST DATA AND ANALYSIS

AQUIFER TEST ANALYSIS
TW-01
RAYMARK SUPERFUND SITE
Stratford, Connecticut

Introduction

The purpose of this memo is to present a description of the aquifer test conducted as part of the Raymark OU2 Groundwater field investigation and the results of the aquifer test analysis. The aquifer test primary objectives are to provide data regarding the hydraulic conductivity and storage coefficient of the overburden aquifer. A secondary objective is to determine the nature of the connection between the overburden and bedrock aquifers.

This memo will present a brief description of the test well installation and a detailed presentation of the aquifer test and the aquifer test analysis.

Test Well Installation

The test well was installed behind the Marshall's department store, located in the Stratford Shopping Center. This location was chosen because this is the area where the south bedrock valley approaches Ferry Creek and groundwater contaminants have been identified in the monitoring wells in this vicinity. It is also hoped that this test well could be utilized in a future groundwater remedy if a remedy is determined to be necessary.

The test well was installed in a 14-inch diameter boring using a biodegradable drilling mud advanced to a depth of 69 feet below ground surface. The boring encountered bedrock at a depth of 68 feet below ground surface and the well screen was set on top of bedrock. The test well consists of an 8-inch inside diameter 20-foot long stainless steel wire wound well screen. The well screen has a slot opening of 0.030-inches. The well screen is attached to a solid 8-inch PVC riser. The boring was backfilled with a #2 sand pack to a depth of 15-feet below ground surface. A bentonite seal was placed above the sand pack and cement grout placed to a depth of 2 feet below ground surface. The test well installation was completed by installing a 24 inch by 24 inch steel manhole. A locking metal cap was secured to the top of the PVC riser and the steel manhole is also locked.

After well completion the well was left overnight to allow the cement to set up and the biodegradable drilling mud to degrade. The following day the well was developed by pumping and surging until the well produced clear water. After development a stepped drawdown test was conducted on the well to estimate the well yield. During development it was determined that the well would only yield about 100 gallons per minute. This well yield is lower than the estimated rate of 200 gallons per minute assumed for the aquifer test design. A submersible pump that was capable of pumping 200 gallons per minute was used to develop and rate the well yield. However, with the well yield lower than expected, the larger pump had difficulty maintaining a steady rate at

the lower pumping rates. These fluctuations in the pumping rate resulted in fluctuations in the water level in the test well during the rating of the well.

It was estimated that the well could sustain a pumping rate of about 110 gallons per minute. It was decided that the aquifer test would start with a rate of 110 gallons per minute. This pumping rate would allow for a larger area of influence in the overburden aquifer during the aquifer test and result in more representative values of hydraulic conductivity and storage coefficients. The higher pumping rate would result in a larger drawdown in the overburden aquifer and increase the potential to determine the nature of the connection between the overburden and bedrock aquifers.

Aquifer Test

Electronic transducers were installed on May 6, 2003 in monitoring wells MW-208B, MW-208D, and MW-514B. The groundwater elevation data from these wells was used to evaluate pre-pumping groundwater trends in both the bedrock and overburden aquifers. In addition, transducers were installed in 18 monitoring wells on May 9, 2003. The data from these wells was also used to evaluate pre-pumping groundwater trends in both the bedrock and overburden aquifers. Finally, 5 more transducers were installed on the day of the aquifer test. A summary of the transducer installation dates is presented on Table 1. A total of 26 transducers were installed as part of the aquifer test.

Two monitoring intervals were used for the test, 30 minutes and a log time scale. During the pre-test monitoring period, all the transducers were set up to take readings at 30-minute intervals. Prior to the start of the test, the transducers in the monitoring wells closest to the test well were reset to take readings on a log cycle of time with a minimum of ten data points per log cycle. These transducers were set to start collecting data at the predetermined time when the pump of the test would be started. This time scale allowed for more data to be collected during the earlier portion of the test, when the rate of drawdown would be greatest. The remaining transducers continued to take readings at 30-minute intervals. Table 1 presents a summary of the transducers used for the aquifer test, as well as the start dates and monitoring frequency.

The aquifer test was started at 0830 hours on Tuesday May 13, 2003 with a pumping rate of 110 gallons per minute. The pumping rate had to be adjusted to progressively lower rates because of excessive drawdown in the test well. The water level in the well was dropping too close to the intake of the submersible pump. The pumping rate was monitored using a digital electronic factory calibrated flow meter and maintained to within a few tenths of a gallon per minute. Table 2 presents the pumping rate for each pumping interval and the elapsed time since the start of the aquifer test when the pumping rate was adjusted.

The groundwater elevations in the monitoring wells located adjacent to the pumping well started to stabilize after about 24 hours of pumping. Pumping was continued until stable groundwater elevations had been achieved for about 24 hours. When stabilization of the groundwater elevations had been achieved the pumping was stopped and the recovery phase of the test was started.

The recovery phase of the test included re-setting the transducers start readings when the pump was shut off and to take readings on a log cycle of time. The pump was shut off at about 0930 hours on May 15, 2003. Groundwater elevation monitoring was continued until the groundwater elevation in the monitoring wells approached pre-pumping elevations.

Aquifer Test Analysis

The data collected from the transducers was exported into excel format and plotted. The plots present the groundwater elevation versus time for the monitoring wells and the test well. As indicated on Table 1, some of the transducers were installed in monitoring wells several days prior to the start of the aquifer test. These background wells were used to determine the pre-pumping groundwater trends. The rate of groundwater elevation change observed prior to the aquifer test would have to be subtracted from the change in groundwater elevation measured during the test period. The need to perform this correction is determined by a review of the pre-pumping groundwater elevations over time.

A review of the pre-pumping groundwater elevation data indicates that the groundwater elevations changed by only a few thousands of a foot and these changes were observed in both directions, i.e. both increase and decrease in groundwater elevation. These small changes in groundwater elevation are most likely the result of instrument drift during the monitoring period. Since these changes are very small and do not indicate any trend in change of groundwater elevations, no corrections were needed for the aquifer test data due to ambient changes in groundwater elevations.

The analytical method to calculate the hydraulic properties of the overburden aquifer had to be determined. Because the pumping rate had to be adjusted during the test period, the more traditional curve matching analytical methods could not be used for this analysis. A variable-discharge test method of analysis was used instead.

One such method developed by Bisory and Summers is presented by Kruseman, G. P. and N. A. de Ridder, 1990. The analytical solution is for the drawdown response in a confined aquifer that has been pumped at variable rates. The analysis uses the observed drawdown and pumping rates. The analysis uses an application of the principal of superposition applied to the Jacob's approximation of the Theis equation.

The typical analytical approaches used for aquifer analysis assume the following general assumptions as presented by Kruseman, G. P. and N. A. de Ridder, 1990:

1. The aquifer is confined;
2. The aquifer has a seemingly infinite areal extent;
3. The aquifer is homogeneous, isotropic, and of uniform thickness over the area influenced by the test;
4. Prior to pumping, the piezometric surface is horizontal (or nearly so) over the area that will be influenced by the test;
5. The aquifer is pumped at a constant discharge rate;
6. The well penetrates the entire thickness of the aquifer and thus receives water by horizontal flow;

7. The water removed from storage is discharged instantaneously with decline in head;
8. The diameter of the well is small, i.e. the storage in the well can be neglected.

The aquifer test conducted as part of the Raymark OU2 field investigation did not meet three of the assumptions listed above. These assumptions are: constant pumping rate; the aquifer is an unconfined aquifer; and the test well screen does not extent across the entire saturated thickness. These deviations from the listed assumptions are frequently not meet with the exception of the constant pumping rate. The variable pumping rate represents the greatest challenge during analysis of the aquifer test data.

The data gathered during the aquifer test will have to be corrected. The first correction involves adjusting the observed change in groundwater elevation observed in each monitoring well for changes that would have occurred in the monitoring well without pumping the test well. To determine if this type of correction is needed the pre-pumping groundwater elevation data is reviewed to determine the rate of groundwater decline, feet per day, that occurs in the aquifer without pumping.

A review of the groundwater elevation graphs for the wells with transducers installed prior to the aquifer test indicates that the rate of groundwater change in these wells for a 48 hour period is essentially zero. There are some fluctuations in the groundwater elevations in these wells but these fluctuations include both increases and decreased in groundwater elevation. Given that these observed changes include both increase and decreases and these changes were observed as a few thousandths of a foot it is interpreted that the changes in the groundwater elevations recorded is actually the result of instrument drift. Therefore, the field data does not have to be corrected for changes in the groundwater elevations that would have occurred without pumping.

The field data then has to be corrected for the effects of a partially penetrating well screen in the test well. This is a common correction needed for field data because the top of the well screen in a pumping well should be kept below the anticipated groundwater elevation in the well during pumping. This requires that the well screen be shorter than the thickness of the aquifer. As stated in the introduction this test well was sited and designed so that the test well could potentially be used as part of a groundwater treatment system if the RI results indicated that groundwater treatment is necessary.

There are a number of analytical solutions that use type curves to analyze the test data from a partially penetrating well in an unconfined aquifer. However, since the aquifer test required the adjustment of the pumping rate these analytical methods are not appropriate.

The field data was corrected for the effects of partial penetration using a method developed by Jacobs and presented by Butler, 1964, which requires that groundwater elevation data be available from well clusters. The method is to average the observed in a pair of monitoring wells located at a similar distance from the pumping well that have well screens set at the top of the aquifer and the bottom of the aquifer. This correction was done for the field data gathered from the MW-504 and MW-505 well clusters, which T are located adjacent to the pumping well. The corrected values are presented on the Data Correction table for each cluster and are attached to this memo.

After the field data was corrected for the effects of partial penetration the data was then corrected to an equivalent confined aquifer. The method used for this correction was also developed by Jacobs and is presented by Stallman, 1977. The correction equation and the corrected data are presented on the Data Correction table for each of the well clusters and are attached to this memo.

The final step in the analysis is to use the corrected data in the analysis developed by Bisory and Summers and presented by Kruseman, G. P. and N. A. de Ridder, 1990, for a variable rate pumping test. The Bisory and Summers analytical method involves plotting the specific drawdown versus the adjusted time on semi-log paper. The adjusted time values are plotted on the x-axis, which has a logarithmic scale. The equation for calculating the adjusted time is presented on the Aquifer Test Analysis Table for each cluster and is attached to this memo.

The adjusted time and specific drawdown data are plotted on the semi-log paper and a straight line is fitted to the data. The slope of the line and the adjusted time that the line intercepts the specific drawdown of zero are used to calculate the transmissivity and storativity, respectively. These data are used in the equations presented by Kruseman, G. P. and N. A. de Ridder, 1990. The equations and the values used to solve these equations are presented on the Calculation Worksheet for each well cluster and are attached to this memo.

The transmissivity of the aquifer is between 30,500 feet^2/day (MW-504 cluster) and 45,700 feet^2/day (MW-505 cluster), with a storativity between 0.0791 and 0.472. The transmissivity of the aquifer, as determined by the aquifer test, indicates that the aquifer is unconfined, which is supported by the geologic data. The aquifer material encountered at the MW-504 cluster consists of silty sands compared to the sand and gravel encountered at the MW-505 cluster. This variation in aquifer materials could account for the difference in transmissivity between the two clusters.

Overburden/Bedrock Connection

The potential hydraulic connection between the overburden and bedrock aquifers was evaluated using data gathered during the aquifer test by comparing the groundwater elevation in the 13 bedrock monitoring wells prior to and during the aquifer test. The bedrock wells were located between 34 feet (MW-505B) and 1,320 feet (MW-302B) from the aquifer test well. The bedrock wells and their respective distances from the aquifer test well are listed on Table 1. The groundwater elevation in each of the monitoring wells is presented on the data graphs for each well. A review of these data graphs indicates that 11 of the 13 bedrock monitoring wells did show a response to pumping, as indicated by a drop in the groundwater elevation at the start of pumping or shortly after the start of pumping.

Bedrock monitoring wells MW-302B and MW-514B did not indicated a response to pumping. These wells are located 1,321 and 356 feet from the aquifer test well, respectively. The observed change in groundwater elevation at or shortly after the start of pumping indicates that the bedrock aquifer is in hydraulic connection with the overburden aquifer. The nature of this connection would require additional field testing,

including a bedrock aquifer pumping test and a detailed evaluation of the bedrock fractures.

References

Butler, Stanley S., 1964, Engineering Hydrology, Prentice Hall.

Kruseman, G. P. and N. A. de Ridder, 1990. Analysis of Pumping Test Data, International Institute for Land Reclamation and Improvement, The Netherlands.

Stallman, Robert W., 1971. Aquifer-Test Design, Observation, and Data Analysis, Techniques of Water-Resource Investigations of the United States Geological Survey, Chapter B1, Book 3, U. S. Geological Survey.

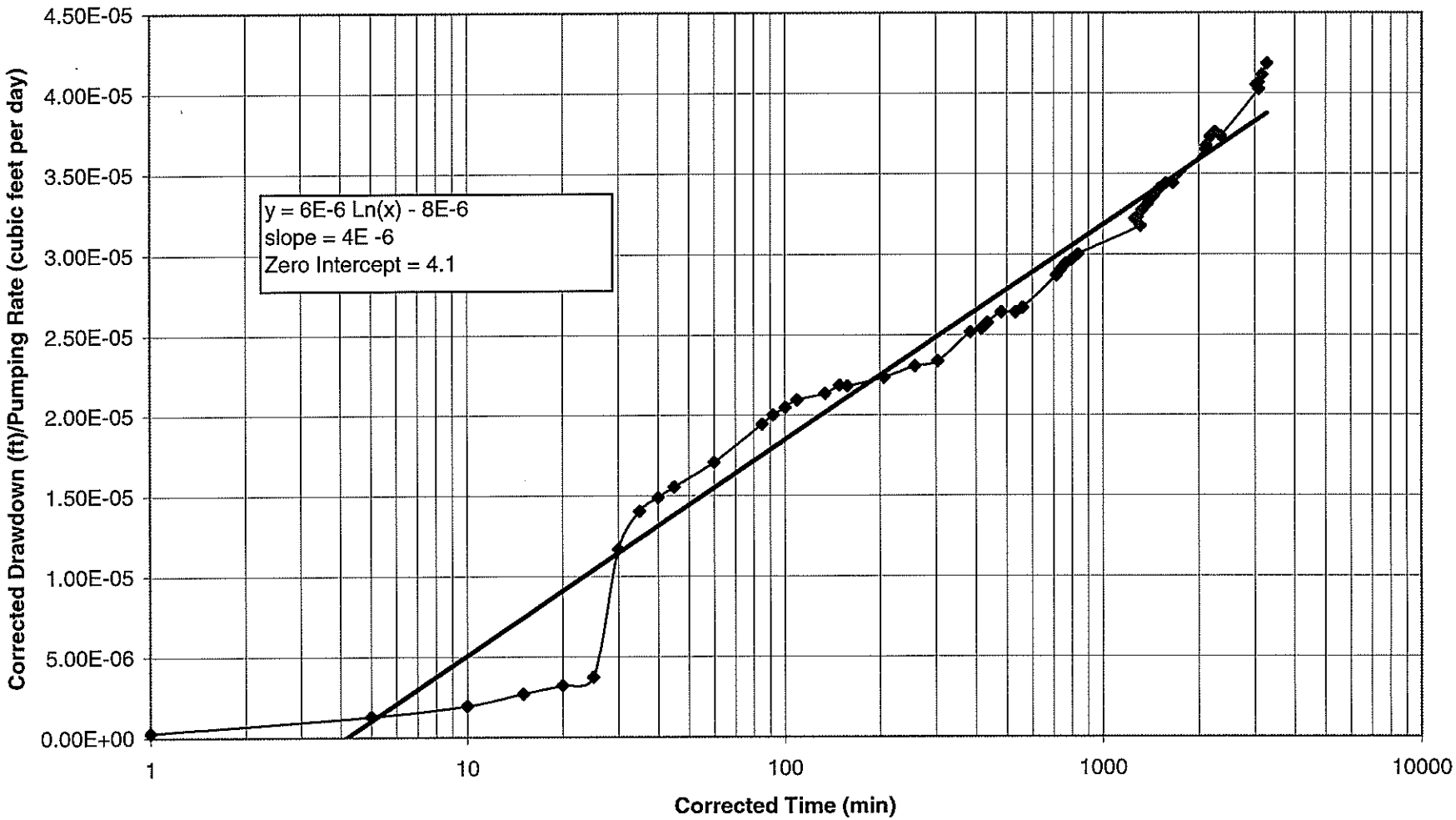
TABLE 1
AQUIFER TEST TRANSDUCER SUMMARY
Raymark OU2 Groundwater
Stratford, Connecticut

	Well No.	Radial Distance from Test Well (feet)	Transducer Monitoring Interval			Transducer Installation Date
			30 minute	Log Scale Drawdown	Log Scale Recovery	
1	MW-208B	930	yes	no	no	5/7/2003
2	MW-208D	934	yes	no	no	5/7/2003
3	MW-210B	491	yes	yes	yes	5/9/2003
4	MW-210D	500	yes	yes	yes	5/9/2003
5	MW-211B	646	yes	no	no	5/9/2003
6	MW-211M	654	yes	no	no	5/9/2003
7	MW-212B	357	yes	no	no	5/9/2003
8	MW-212D	356	yes	no	no	5/9/2003
9	MW-213DB	741	yes	no	no	5/9/2003
10	MW-213B	755	yes	no	no	5/9/2003
11	MW-302B	1,321	yes	no	no	5/9/2003
12	MW-304B	121	yes	yes	yes	5/9/2003
13	MW-304D	119	yes	yes	yes	5/9/2003
14	MW-502B	362	no	yes	yes	5/13/2003
15	MW-502D	356	no	yes	yes	5/13/2003
16	MW-504B	47	yes	yes	yes	5/9/2003
17	MW-504D	49	yes	yes	yes	5/9/2003
18	MW-504S	53	no	yes	yes	5/13/2003
19	MW-505B	34	yes	yes	yes	5/9/2003
20	MW-505D	29	yes	yes	yes	5/9/2003
21	MW-505M	24	yes	yes	yes	5/9/2003
22	MW-505S	17	no	yes	yes	5/13/2003
23	MW-508B	832	yes	no	no	5/9/2003
24	MW-514B	356	yes	no	no	5/9/2003
25	MW-514D	358	yes	no	no	5/7/2003
26	Test Well	0	no	yes	yes	5/13/2003

TABLE 2
AQUIFER TEST PUMPING SCHEDULE
Raymark OU2 Groundwater
Stratford, Connecticut

Pumping Interval	Pumping Start Times (elapsed time in min)	Pumping Rate (gpm)	Pumping Rate (ft^3/day)	Delta Q Change in Pumping Rate (ft^3/day)
1	0.0	110.0	21,176.5	21,176.5
2	60.0	100.0	19,251.3	1,925.1
3	300.0	95.0	18,288.8	962.6
4	540.0	90.0	17,326.2	962.6
5	930.0	85.0	16,363.6	962.6
6	1,500.0	80.0	15,401.1	962.6
7	2,040.0	75.0	14,438.5	962.6

Aquifer Test Analysis
Corrected Data for MW-504 Cluster
Raymark Superfund Site OU2 Groundwater



AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-504
Raymark superfund Site OU2 Groundwater
Stratford, Connecticut

Correction for Partial Penetration

$$s' = \frac{s_{(shallow)} + s_{(deep)}}{2}$$

Source: Jacob, C. E. 1945 as presented by Butler, Stanley S., 1964, Engineering Hydrology, Prentice-Hall, Inc., Englewood Cliffs, NJ.

Correction to Equivalent Confined Aquifer

$$s'' = s' - (s'^2/2D)$$

Source: Jacob C. E., 1963 as presented by Stallman, Robert W., 1971 Techniques of Water-Resource Investigations of the United States Geological Survey, Chapter B1 Book 3 Applications of Hydraulics

Saturated Thickness 60 feet

Drawdown MW-504S (s) (feet)	Drawdown MW-504D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0	0	0.000		0.000	0.000
-0.008	-0.00328	-0.006		0.005	-0.006
-0.009	-0.00328	-0.006		0.010	-0.006
-0.011	-0.00656	-0.009		0.015	-0.009
-0.011	-0.00656	-0.009		0.020	-0.009
-0.013	-0.00656	-0.010		0.025	-0.010
-0.013	-0.00656	-0.010		0.030	-0.010
-0.013	-0.00656	-0.010		0.035	-0.010
-0.011	-0.00656	-0.009		0.040	-0.009
-0.013	-0.00984	-0.011		0.045	-0.011
-0.013	-0.00984	-0.011		0.050	-0.011
-0.013	-0.00984	-0.011		0.055	-0.011
-0.015	-0.00984	-0.012		0.060	-0.012
-0.013	-0.00984	-0.011		0.065	-0.011
-0.015	-0.00984	-0.012		0.070	-0.012
-0.015	-0.00984	-0.012		0.075	-0.012
-0.012	-0.00984	-0.011		0.080	-0.011
-0.012	-0.00984	-0.011		0.085	-0.011
-0.012	-0.00984	-0.011		0.090	-0.011
-0.012	-0.00984	-0.011		0.095	-0.011
-0.014	-0.00984	-0.012		0.100	-0.012
-0.014	-0.00984	-0.012		0.106	-0.012
-0.014	-0.00984	-0.012		0.112	-0.012
-0.012	-0.00984	-0.011		0.119	-0.011
-0.012	-0.00984	-0.011		0.126	-0.011
-0.014	-0.00984	-0.012		0.133	-0.012
-0.014	-0.00984	-0.012		0.141	-0.012
-0.012	-0.00984	-0.011		0.149	-0.011
-0.012	0	-0.006		0.158	-0.006
-0.009	0	-0.005		0.167	-0.005
-0.007	0	-0.004		0.177	-0.004
-0.007	0.00328	-0.002		0.188	-0.002
-0.006	0.00328	-0.001		0.199	-0.001

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-504
Raymark superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-504S (s) (feet)	Drawdown MW-504D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
-0.006	0.00328	-0.001		0.210	-0.001
-0.006	0.00328	-0.001		0.223	-0.001
-0.006	0.00328	-0.001		0.236	-0.001
-0.006	0.00656	0.000		0.250	0.000
-0.006	0.00328	-0.001		0.265	-0.001
-0.006	0.00656	0.000		0.280	0.000
-0.004	0.00656	0.001		0.297	0.001
-0.006	0.00656	0.000		0.315	0.000
-0.006	0.00656	0.000		0.333	0.000
-0.004	0.00656	0.001		0.353	0.001
-0.004	0.00656	0.001		0.374	0.001
-0.004	0.00656	0.001		0.396	0.001
-0.004	0.00984	0.003		0.420	0.003
-0.004	0.00984	0.003		0.445	0.003
-0.004	0.00656	0.001		0.470	0.001
-0.004	0.00984	0.003		0.496	0.003
-0.004	0.00984	0.003		0.525	0.003
-0.004	0.00984	0.003		0.555	0.003
-0.002	0.00656	0.002		0.586	0.002
-0.004	0.00656	0.001		0.621	0.001
-0.002	0.00656	0.002		0.658	0.002
-0.002	0.00656	0.002		0.696	0.002
-0.004	0.00656	0.001		0.738	0.001
-0.002	0.00984	0.004		0.781	0.004
-0.002	0.00984	0.004		0.828	0.004
0	0.00656	0.003		0.876	0.003
0	0.00984	0.005		0.928	0.005
0.002	0.00984	0.006		0.983	0.006
0.001	0.00984	0.005		1.041	0.005
0.002	0.00656	0.004		1.103	0.004
0.001	0.00984	0.005		1.168	0.005
0.001	0.00984	0.005		1.238	0.005
0.003	0.00984	0.006		1.311	0.006
0.005	0.00656	0.006		1.390	0.006
0.007	0.00984	0.008		1.473	0.008
0.005	0.00328	0.004		1.561	0.004
0.007	0.00984	0.008		1.655	0.008
0.005	0.00984	0.007		1.753	0.007
0.009	0.01312	0.011		1.858	0.011
0.009	0.00984	0.009		1.968	0.009
0.009	0.01312	0.011		2.085	0.011
0.011	0.00656	0.009		2.210	0.009
0.012	0.00656	0.009		2.341	0.009
0.014	0.00656	0.010		2.481	0.010

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-504
Raymark superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-504S (s) (feet)	Drawdown MW-504D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.016	0.00984	0.013		2.630	0.013
0.018	0.00984	0.014		2.786	0.014
0.018	0.00984	0.014		2.953	0.014
0.022	0.00984	0.016		3.130	0.016
0.024	0.00984	0.017		3.316	0.017
0.024	0.00984	0.017		3.515	0.017
0.027	0.00984	0.018		3.725	0.018
0.029	0.00984	0.019		3.946	0.019
0.031	0.00984	0.020		4.181	0.020
0.033	0.00984	0.021		4.430	0.021
0.033	0.00656	0.020		4.693	0.020
0.038	0.0164	0.027		4.973	0.027
0.038	0.00984	0.024		5.270	0.024
0.042	0.00656	0.024		5.583	0.024
0.046	0.00984	0.028		5.915	0.028
0.046	0.00984	0.028		6.266	0.028
0.051	0.00984	0.030		6.640	0.030
0.053	0.00984	0.031		7.035	0.031
0.053	0.00984	0.031		7.453	0.031
0.06	0.00656	0.033		7.896	0.033
0.064	0.00984	0.037		8.366	0.037
0.068	0.00984	0.039		8.865	0.039
0.071	0.00984	0.040		9.391	0.040
0.073	0.00984	0.041		9.950	0.041
0.081	-0.00328	0.039		10.541	0.039
0.082	0.01312	0.048		11.168	0.048
0.088	-0.00984	0.039		11.831	0.039
0.091	0.00984	0.050		12.535	0.050
0.093	0.00984	0.051		13.280	0.051
0.101	0.00656	0.054		14.070	0.054
0.104	0.00984	0.057		14.906	0.057
0.11	0.00984	0.060		15.791	0.060
0.112	0.00984	0.061		16.730	0.061
0.12	0.00984	0.065		17.723	0.065
0.122	0.00984	0.066		18.776	0.066
0.127	0.00984	0.068		19.891	0.068
0.133	0.00984	0.071		21.073	0.071
0.139	0.00984	0.074		22.325	0.074
0.143	0.01312	0.078		23.650	0.078
0.149	0.00984	0.079		25.055	0.079
0.153	0.00984	0.081		26.543	0.081
0.162	0.00984	0.086		28.118	0.086
0.164	0.33128	0.248		29.786	0.247
0.172	0.38704	0.280		31.555	0.279

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-504
Raymark superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-504S (s) (feet)	Drawdown MW-504D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.177	0.40344	0.290		33.428	0.290
0.183	0.41328	0.298		35.411	0.297
0.189	0.43296	0.311		37.513	0.310
0.191	0.43952	0.315		39.740	0.314
0.199	0.44608	0.323		42.098	0.322
0.203	0.45592	0.329		44.596	0.329
0.209	0.4592	0.334		47.243	0.333
0.214	0.46576	0.340		50.046	0.339
0.22	0.46904	0.345		53.015	0.344
0.23	0.48544	0.358		56.160	0.357
0.232	0.492	0.362		59.491	0.361
0.234	0.89216	0.563		63.020	0.560
0.242	0.49528	0.369		66.758	0.368
0.249	0.50184	0.375		70.718	0.374
0.251	0.50512	0.378		74.911	0.377
0.255	0.51824	0.387		79.355	0.385
0.259	0.52152	0.390		84.061	0.389
0.263	0.52808	0.396		89.046	0.394
0.266	0.53464	0.400		94.326	0.399
0.267	0.5412	0.404		99.920	0.403
0.275	0.53464	0.405		105.845	0.403
0.276	0.53136	0.404		112.120	0.402
0.28	0.53464	0.407		118.768	0.406
0.286	0.53792	0.412		125.810	0.411
0.288	0.5412	0.415		133.268	0.413
0.293	0.55104	0.422		141.168	0.421
0.295	0.54776	0.421		149.536	0.420
0.299	0.5576	0.428		158.401	0.427
0.303	0.5412	0.422		167.791	0.421
0.307	0.5412	0.424		177.738	0.423
0.309	0.55104	0.430		188.275	0.428
0.312	0.55104	0.432		199.435	0.430
0.318	0.55432	0.436		211.256	0.435
0.319	0.5576	0.438		223.778	0.437
0.324	0.56416	0.444		237.043	0.442
0.328	0.56416	0.446		251.093	0.444
0.332	0.57728	0.455		265.976	0.453
0.33	0.5576	0.444		281.741	0.442
0.336	0.56744	0.452		298.440	0.450
0.341	0.57072	0.456		316.128	0.454
0.346	0.57728	0.462		334.865	0.460
0.348	0.574	0.461		354.711	0.459
0.352	0.58056	0.466		375.735	0.464
0.358	0.58712	0.473		398.003	0.471

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-504
Raymark superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-504S (s) (feet)	Drawdown MW-504D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.364	0.59368	0.479		421.591	0.477
0.37	0.60024	0.485		446.578	0.483
0.373	0.60352	0.488		473.045	0.486
0.377	0.59368	0.485		501.080	0.483
0.379	0.60024	0.490		530.776	0.488
0.382	0.60024	0.491		562.233	0.489
0.388	0.61008	0.499		595.553	0.497
0.394	0.61664	0.505		630.848	0.503
0.401	0.6232	0.512		668.233	0.510
0.405	0.62648	0.516		707.835	0.514
0.411	0.63304	0.522		749.783	0.520
0.416	0.61664	0.516		794.216	0.514
0.416	0.61336	0.515		841.283	0.512
0.42	0.61992	0.520		891.138	0.518
0.419	0.62648	0.523		943.946	0.520
0.423	0.63632	0.530		999.885	0.527
0.427	0.63632	0.532		1,059.138	0.529
0.433	0.64288	0.538		1,121.901	0.536
0.44	0.64944	0.545		1,188.385	0.542
0.443	0.66256	0.553		1,258.806	0.550
0.452	0.66912	0.561		1,333.401	0.558
0.458	0.6724	0.565		1,412.416	0.563
0.468	0.66256	0.565		1,496.113	0.563
0.466	0.66256	0.564		1,584.770	0.562
0.469	0.66912	0.569		1,678.680	0.566
0.477	0.67568	0.576		1,778.155	0.574
0.479	0.68552	0.582		1,883.523	0.579
0.484	0.6724	0.578		1,995.135	0.575
0.488	0.67896	0.583		2,113.361	0.581
0.494	0.68224	0.588		2,238.593	0.585
0.498	0.68224	0.590		2,371.245	0.587
0.499	0.69536	0.597		2,511.756	0.594
0.508	0.7052	0.607		2,660.595	0.604

AQUIFER TEST ANALYSIS
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$\prod_{i=1}^{n}(t-t_i)^{(\Delta Q_i/Q_n)}$ Pumping Interval	Pumping Start Times (elapsed time min)	Pumping Rate (ft^3/day)	Delta Q Change in Pumping Rate (ft^3/day)
1	0	21,176.5	21,176.5
2	60	19,251.3	-1,925.1
3	300	18,288.8	-962.6
4	540	17,326.2	-962.6
5	930	16,363.6	-962.6
6	1,500	15,401.1	-962.6
7	2,040	14,438.5	-962.6

n	t	s"	s_n/Q_n (day/feet^2)
1	1.0	0.006	2.833E-07
1	5.0	0.027	1.275E-06
1	10.0	0.041	1.936E-06
1	15.0	0.057	2.692E-06
1	20.0	0.068	3.211E-06
1	25.0	0.079	3.731E-06
1	30.0	0.247	1.166E-05
1	35.0	0.297	1.403E-05
1	40.0	0.315	1.488E-05
1	45.0	0.329	1.554E-05
1	60.0	0.361	1.705E-05

The following equation was used to calculate values for β to prepare a data plot using specific drawdown (s_n/Q_n).

$$\beta_{t(n)} = \prod_{i=1}^{n}(t-t_i)^{(\Delta Q_i/Q_n)}$$

$$\beta_{t(n)} = (t-t_1)^{\Delta Q_1/Q_n} x (t-t_2)^{\Delta Q_2/Q_n} x \ldots x (t-t_n)^{\Delta Q_n/Q_n}$$

Equation No. 12.2 (Kruseman, G. P. and N. A. de Ridder, 1990)

Source: Kruseman, G. P. and N. A. de Ridder, 1990, Analysis and Evaluation of Pumping Test Data, International Institute for Land Reclamation and Improvement, The Netherlands.

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_2$	$t-t_2$	$\Delta Q_2/Q_2$	$\beta_{t(2)}$
2	70.0	0.374	1.943E-05	70.0	1.10	10.0	-0.10	85.0
2	80.0	0.385	2.000E-05	80.0	1.10	20.0	-0.10	91.9
2	90.0	0.394	2.047E-05	90.0	1.10	30.0	-0.10	100.5
2	100.0	0.403	2.093E-05	100.0	1.10	40.0	-0.10	109.6
2	126.0	0.411	2.135E-05	126.0	1.10	66.0	-0.10	134.4
2	141.0	0.421	2.187E-05	141.0	1.10	81.0	-0.10	149.0
2	150.0	0.420	2.182E-05	150.0	1.10	90.0	-0.10	157.9
2	199.0	0.430	2.234E-05	199.0	1.10	139.0	-0.10	206.3
2	251.0	0.444	2.306E-05	251.0	1.10	191.0	-0.10	258.0
2	298.0	0.450	2.337E-05	298.0	1.10	238.0	-0.10	304.8

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n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_3$	$t-t_2$	$\Delta Q_2/Q_3$	$t-t_3$	$\Delta Q_3/Q_3$	$\beta_{t(3)}$
3	335.0	0.460	2.515E-05	335.0	1.16	275.0	-0.10526	35.0	-0.05	385.2
3	376.0	0.464	2.537E-05	376.0	1.16	316.0	-0.10526	76.0	-0.05	416.6
3	398.0	0.471	2.575E-05	398.0	1.16	338.0	-0.10526	98.0	-0.05	435.9
3	447.0	0.483	2.641E-05	447.0	1.16	387.0	-0.10526	147.0	-0.05	481.2
3	501.0	0.483	2.641E-05	501.0	1.16	441.0	-0.10526	201.0	-0.05	532.8
3	531.0	0.488	2.668E-05	531.0	1.16	471.0	-0.10526	231.0	-0.05	561.8

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_4$	$t-t_2$	$\Delta Q_2/Q_4$	$t-t_3$	$\Delta Q_3/Q_4$	$t-t_4$	$\Delta Q_4/Q_4$	$\beta_{t(4)}$
4	596.0	0.497	2.868E-05	596.0	1.22	536.0	-0.11111	296.0	-0.056	56.0	-0.06	715.0
4	631.0	0.503	2.903E-05	631.0	1.22	571.0	-0.11111	331.0	-0.056	91.0	-0.06	736.4
4	668.0	0.510	2.944E-05	668.0	1.22	608.0	-0.11111	368.0	-0.056	128.0	-0.06	764.8
4	708.0	0.514	2.967E-05	708.0	1.22	648.0	-0.11111	408.0	-0.056	168.0	-0.06	798.6
4	750.0	0.520	3.001E-05	750.0	1.22	690.0	-0.11111	450.0	-0.056	210.0	-0.06	835.8

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_5$	$t-t_2$	$\Delta Q_2/Q_5$	$t-t_3$	$\Delta Q_3/Q_5$	$t-t_4$	$\Delta Q_4/Q_5$	$t-t_5$	$\Delta Q_5/Q_5$	$\beta_{t(5)}$
5	944.0	0.520	3.178E-05	944.0	1.29	884.0	-0.12	644.0	-0.06	404.0	-0.06	14.0	-0.06	1,310.26
5	1000.0	0.527	3.221E-05	1,000.0	1.29	940.0	-0.12	700.0	-0.06	460.0	-0.06	70.0	-0.06	1,259.06
5	1059.0	0.529	3.233E-05	1,059.0	1.29	999.0	-0.12	759.0	-0.06	519.0	-0.06	129.0	-0.06	1,283.47
5	1122.0	0.536	3.276E-05	1,122.0	1.29	1,062.0	-0.12	822.0	-0.06	582.0	-0.06	192.0	-0.06	1,326.23
5	1188.0	0.542	3.312E-05	1,188.0	1.29	1,128.0	-0.12	888.0	-0.06	648.0	-0.06	258.0	-0.06	1,378.47
5	1259.0	0.550	3.361E-05	1,259.0	1.29	1,199.0	-0.12	959.0	-0.06	719.0	-0.06	329.0	-0.06	1,439.03
5	1333.0	0.558	3.410E-05	1,333.0	1.29	1,273.0	-0.12	1,033.0	-0.06	793.0	-0.06	403.0	-0.06	1,504.96
5	1412.0	0.563	3.441E-05	1,412.0	1.29	1,352.0	-0.12	1,112.0	-0.06	872.0	-0.06	482.0	-0.06	1,577.34
5	1496.0	0.563	3.441E-05	1,496.0	1.29	1,436.0	-0.12	1,196.0	-0.06	956.0	-0.06	566.0	-0.06	1,655.81

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_6$	$t-t_2$	$\Delta Q_2/Q_6$	$t-t_3$	$\Delta Q_3/Q_6$	$t-t_4$	$\Delta Q_4/Q_6$	$t-t_5$	$\Delta Q_5/Q_6$	$t-t_6$	$\Delta Q_6/Q_6$	$\beta_{t(6)}$
6	1,585.0	0.562	3.649E-05	1585.0	1.37	1,525.0	-0.12	1,285.0	-0.06	1,045.0	-0.06	655.0	-0.06	85.0	-0.06	2,101.5
6	1,679.0	0.566	3.675E-05	1679.0	1.37	1,619.0	-0.12	1,379.0	-0.06	1,139.0	-0.06	749.0	-0.06	179.0	-0.06	2,116.3
6	1,778.0	0.574	3.727E-05	1778.0	1.37	1,718.0	-0.12	1,478.0	-0.06	1,238.0	-0.06	848.0	-0.06	278.0	-0.06	2,173.2
6	1,884.0	0.579	3.759E-05	1884.0	1.37	1,824.0	-0.12	1,584.0	-0.06	1,344.0	-0.06	954.0	-0.06	384.0	-0.06	2,250.9
6	1,995.0	0.575	3.734E-05	1995.0	1.37	1,935.0	-0.12	1,695.0	-0.06	1,455.0	-0.06	1,065.0	-0.06	495.0	-0.06	2,341.3

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_7$	$t-t_2$	$\Delta Q_2/Q_7$	$t-t_3$	$\Delta Q_3/Q_7$	$t-t_4$	$\Delta Q_4/Q_7$	$t-t_5$	$\Delta Q_5/Q_7$	$t-t_6$	$\Delta Q_6/Q_7$	$t-t_7$	$\Delta Q_7/Q_7$	$\beta_{t(7)}$
7	2,113.0	0.581	4.024E-05	2,113.0	1.47	2,053.0	-0.13	1,813.0	-0.07	1,573.0	-0.07	1,183.0	-0.07	613.0	-0.07	73.0	-0.07	3,087.51
7	2,239.0	0.585	4.052E-05	2,239.0	1.47	2,179.0	-0.13	1,939.0	-0.07	1,699.0	-0.07	1,309.0	-0.07	739.0	-0.07	199.0	-0.07	3,030.39
7	2,371.0	0.587	4.066E-05	2,371.0	1.47	2,311.0	-0.13	2,071.0	-0.07	1,831.0	-0.07	1,441.0	-0.07	871.0	-0.07	331.0	-0.07	3,077.76
7	2,512.0	0.594	4.114E-05	2,512.0	1.47	2,452.0	-0.13	2,212.0	-0.07	1,972.0	-0.07	1,582.0	-0.07	1,012.0	-0.07	472.0	-0.07	3,163.92
7	2,661.0	0.604	4.183E-05	2,661.0	1.47	2,601.0	-0.13	2,361.0	-0.07	2,121.0	-0.07	1,731.0	-0.07	1,161.0	-0.07	621.0	-0.07	3,273.33

CALCULATION WORKSHEET

CLIENT:	EPA	JOB NUMBER:	4236
SUBJECT:	Raymark OU2 Groundwater Aquifer Test analysis MW-504		
BY:	MSH CHECKED BY:	DATE:	9/26/2003

Objective: Analysis of Aquifer Test data to estimate Transmissivity and Storage Coeficient

Method Variable-discharge tests and tests in well fields, Presented in Analysis and Evaluation of Pumping Test Data, Kruseman, G. P. and N.A. de Ridder, 1990.

Transmissivity

Equation $KD = \frac{2.3}{4 \P \Delta(S_n/Q_n)}$

(S_n/Q_n) = 6.00E-06 Slope of a straight line through the corrected data.

KD = 30,504.70 feet^2/day

Storativity

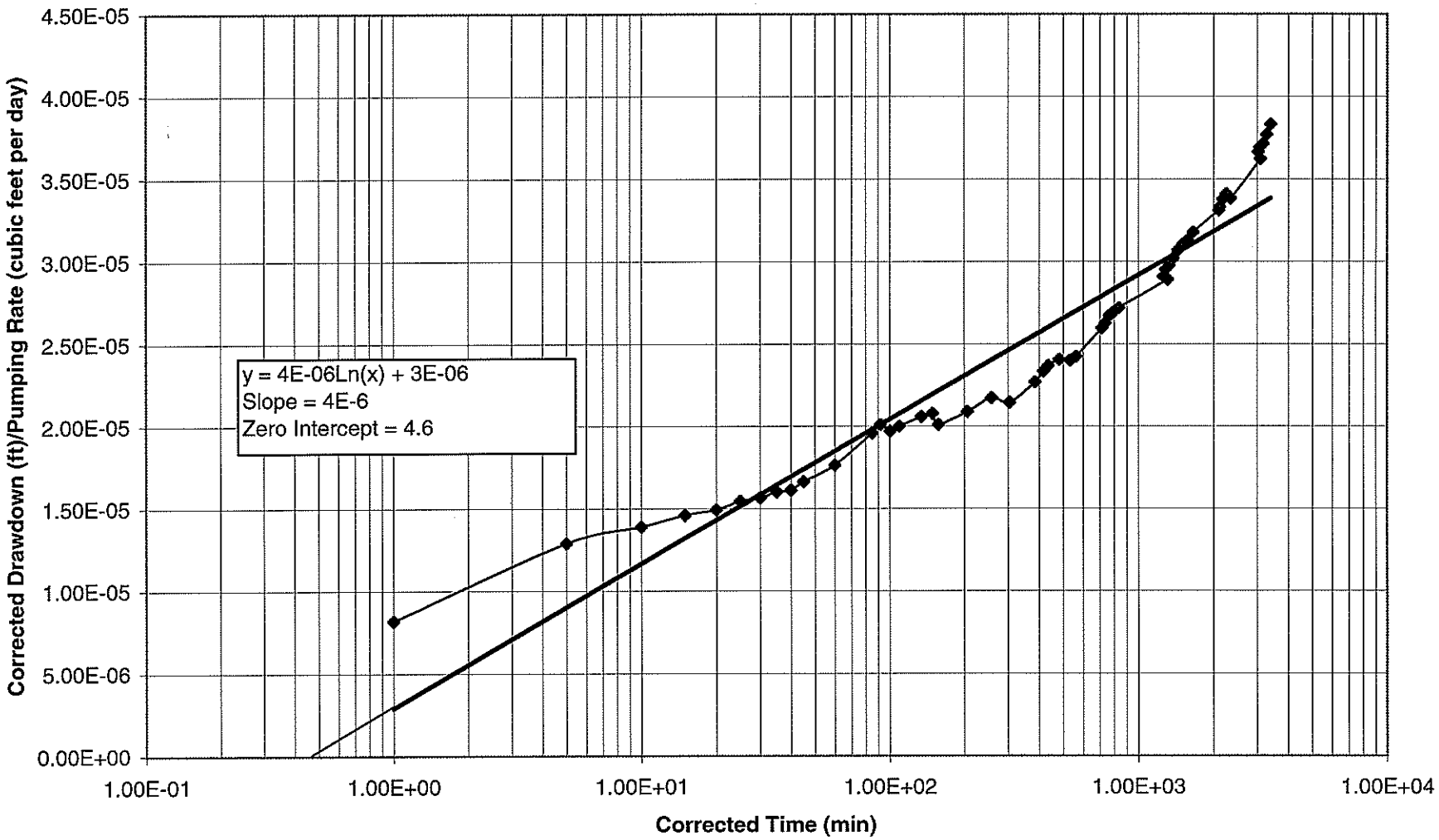
Equation $S = \frac{2.25KD}{r^2} \{\beta_{t(n)}(t-t_n)\}_0$

Radius from Pumping Well r = 49.7 feet

$\{\beta_{t(n)}(t-t_n)\}_0$ = 4.10E+00 Time at which a straight line through the corrected data intercepts Sn/Qn = zero.

S = 7.91E-02 Dimensionless

Aquifer Test Analysis
Corrected Data for MW-505 Cluster
Raymark Superfund Site OU2 Groundwater



AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-505
Raymark Superfund Site OU2 Groundwater
Stratford, Connecticut

Correction for Partial Penetration

$$s' = \frac{s_{(shallow)} + s_{(deep)}}{2}$$

Source: Jacob, C. E. 1945 as presented by Butler, Stanley S., 1964, Engineering Hydrology, Prentice-Hall, Inc., Englewood Cliffs, NJ.

Correction to Equivalent Confined Aquifer

$$s'' = s' - (s'^2/2D)$$

Source: Jacob C. E., 1963 as presented by Stallman, Robert W., 1971 Techniques of Water-Resource Investigations of the United States Geological Survey, Chapter B1 Book 3 Applications of Hydraulics

Saturated Thickness (D) = 60.00 feet

Drawdown MW-505S (s) (feet)	Drawdown MW-505D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.000	0.000	0.000		0.000	0.000
-0.013	-0.018	-0.016		0.005	-0.016
-0.016	-0.020	-0.018		0.010	-0.018
-0.020	-0.023	-0.021		0.015	-0.021
-0.020	-0.020	-0.020		0.020	-0.020
-0.023	-0.018	-0.020		0.025	-0.020
-0.023	-0.015	-0.019		0.030	-0.019
-0.023	-0.010	-0.016		0.035	-0.016
-0.023	-0.008	-0.015		0.040	-0.015
-0.023	-0.006	-0.014		0.045	-0.014
-0.023	-0.001	-0.012		0.050	-0.012
-0.023	0.001	-0.011		0.055	-0.011
-0.023	0.007	-0.008		0.060	-0.008
-0.026	0.009	-0.009		0.065	-0.009
-0.026	0.011	-0.008		0.070	-0.008
-0.026	0.014	-0.006		0.075	-0.006
-0.026	0.018	-0.004		0.080	-0.004
-0.026	0.021	-0.003		0.085	-0.003
-0.026	0.021	-0.003		0.090	-0.003
-0.026	0.026	0.000		0.095	0.000
-0.026	0.028	0.001		0.100	0.001
-0.026	0.030	0.002		0.106	0.002
-0.026	0.035	0.004		0.112	0.004
-0.026	0.040	0.007		0.119	0.007
-0.030	0.042	0.006		0.126	0.006
-0.030	0.044	0.007		0.133	0.007
-0.026	0.047	0.010		0.141	0.010
-0.026	0.052	0.013		0.149	0.013
-0.026	0.056	0.015		0.158	0.015
-0.020	0.072	0.026		0.167	0.026
-0.016	0.079	0.031		0.177	0.031
-0.013	0.087	0.037		0.188	0.037

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-505
Raymark Superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-505S (s) (feet)	Drawdown MW-505D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
-0.013	0.093	0.040		0.199	0.040
-0.013	0.096	0.041		0.210	0.041
-0.013	0.105	0.046		0.223	0.046
-0.013	0.112	0.049		0.236	0.049
-0.010	0.117	0.054		0.250	0.054
-0.010	0.124	0.057		0.265	0.057
-0.010	0.131	0.061		0.280	0.061
-0.010	0.138	0.064		0.297	0.064
-0.010	0.148	0.069		0.315	0.069
-0.010	0.153	0.072		0.333	0.072
-0.010	0.165	0.078		0.353	0.078
-0.007	0.176	0.085		0.374	0.085
-0.007	0.184	0.089		0.396	0.089
-0.007	0.193	0.093		0.420	0.093
-0.003	0.202	0.099		0.445	0.099
-0.007	0.217	0.105		0.470	0.105
-0.003	0.224	0.110		0.496	0.110
-0.003	0.236	0.116		0.525	0.116
-0.003	0.243	0.120		0.555	0.120
-0.003	0.257	0.127		0.586	0.127
-0.003	0.264	0.130		0.621	0.130
-0.003	0.276	0.136		0.658	0.136
-0.003	0.280	0.138		0.696	0.138
0.000	0.292	0.146		0.738	0.146
0.000	0.297	0.149		0.781	0.148
0.003	0.318	0.161		0.828	0.160
0.007	0.326	0.166		0.876	0.166
0.007	0.330	0.168		0.928	0.168
0.010	0.323	0.166		0.983	0.166
0.010	0.337	0.173		1.041	0.173
0.013	0.361	0.187		1.103	0.187
0.016	0.368	0.192		1.168	0.192
0.016	0.373	0.195		1.238	0.194
0.020	0.383	0.201		1.311	0.201
0.023	0.390	0.206		1.390	0.206
0.026	0.392	0.209		1.473	0.209
0.026	0.394	0.210		1.561	0.210
0.030	0.411	0.220		1.655	0.220
0.033	0.418	0.225		1.753	0.225
0.036	0.420	0.228		1.858	0.228
0.039	0.425	0.232		1.968	0.232
0.039	0.432	0.236		2.085	0.235
0.043	0.437	0.240		2.210	0.239
0.043	0.444	0.243		2.341	0.243

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-505
Raymark Superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-505S (s) (feet)	Drawdown MW-505D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.046	0.446	0.246		2.481	0.245
0.049	0.451	0.250		2.630	0.250
0.049	0.451	0.250		2.786	0.250
0.049	0.456	0.253		2.953	0.252
0.052	0.456	0.254		3.130	0.254
0.056	0.465	0.260		3.316	0.260
0.056	0.467	0.261		3.515	0.261
0.059	0.479	0.269		3.725	0.268
0.059	0.477	0.268		3.946	0.267
0.059	0.472	0.266		4.181	0.265
0.062	0.482	0.272		4.430	0.272
0.062	0.484	0.273		4.693	0.273
0.066	0.482	0.274		4.973	0.273
0.069	0.486	0.277		5.270	0.277
0.069	0.486	0.277		5.583	0.277
0.069	0.489	0.279		5.915	0.278
0.069	0.486	0.277		6.266	0.277
0.069	0.498	0.283		6.640	0.283
0.069	0.496	0.282		7.035	0.282
0.072	0.493	0.283		7.453	0.282
0.072	0.501	0.287		7.896	0.286
0.075	0.505	0.290		8.366	0.290
0.075	0.505	0.290		8.865	0.290
0.079	0.519	0.299		9.391	0.298
0.079	0.510	0.294		9.950	0.294
0.079	0.512	0.295		10.541	0.295
0.082	0.512	0.297		11.168	0.296
0.085	0.517	0.301		11.831	0.300
0.085	0.512	0.299		12.535	0.298
0.089	0.524	0.306		13.280	0.306
0.089	0.527	0.308		14.070	0.307
0.092	0.527	0.309		14.906	0.309
0.092	0.529	0.310		15.791	0.310
0.095	0.524	0.310		16.730	0.309
0.095	0.533	0.314		17.723	0.313
0.098	0.533	0.316		18.776	0.315
0.102	0.531	0.316		19.891	0.316
0.102	0.543	0.322		21.073	0.321
0.102	0.543	0.322		22.325	0.321
0.105	0.546	0.325		23.650	0.325
0.108	0.548	0.328		25.055	0.327
0.108	0.550	0.329		26.543	0.328
0.112	0.550	0.331		28.118	0.330
0.112	0.552	0.332		29.786	0.331

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-505
Raymark Superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-505S (s) (feet)	Drawdown MW-505D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.115	0.557	0.336		31.555	0.335
0.118	0.560	0.339		33.428	0.338
0.118	0.562	0.340		35.411	0.339
0.121	0.562	0.342		37.513	0.341
0.121	0.562	0.342		39.740	0.341
0.125	0.567	0.346		42.098	0.345
0.128	0.578	0.353		44.596	0.352
0.131	0.586	0.359		47.243	0.358
0.131	0.590	0.361		50.046	0.360
0.135	0.600	0.367		53.015	0.366
0.138	0.600	0.369		56.160	0.368
0.138	0.610	0.374		59.491	0.373
0.151	0.609	0.380		63.020	0.379
0.144	0.610	0.377		66.758	0.376
0.148	0.609	0.378		70.718	0.377
0.151	0.622	0.386		74.911	0.385
0.154	0.622	0.388		79.355	0.387
0.154	0.610	0.382		84.061	0.381
0.154	0.607	0.381		89.046	0.379
0.154	0.614	0.384		94.326	0.383
0.157	0.614	0.386		99.920	0.385
0.157	0.614	0.386		105.845	0.385
0.161	0.619	0.390		112.120	0.389
0.164	0.619	0.392		118.768	0.390
0.164	0.631	0.398		125.810	0.396
0.167	0.622	0.395		133.268	0.393
0.171	0.633	0.402		141.168	0.400
0.167	0.610	0.389		149.536	0.387
0.171	0.617	0.394		158.401	0.393
0.174	0.619	0.396		167.791	0.395
0.177	0.617	0.397		177.738	0.396
0.180	0.624	0.402		188.275	0.401
0.180	0.626	0.403		199.435	0.402
0.180	0.626	0.403		211.256	0.402
0.187	0.631	0.409		223.778	0.408
0.187	0.624	0.406		237.043	0.404
0.190	0.648	0.419		251.093	0.418
0.190	0.626	0.408		265.976	0.407
0.194	0.622	0.408		281.741	0.406
0.197	0.633	0.415		298.440	0.413
0.203	0.638	0.421		316.128	0.419
0.203	0.638	0.421		334.865	0.419
0.207	0.641	0.424		354.711	0.422
0.213	0.643	0.428		375.735	0.427

AQUIFER TEST ANALYSIS
DATA CORRECTION FOR CLUSTER MW-505
Raymark Superfund Site OU2 Groundwater
Stratford, Connecticut

Drawdown MW-505S (s) (feet)	Drawdown MW-505D (s) (feet)	Drawdown Corrected for Partial Penetration (s') (feet)		Elapsed Time (min)	Drawdown corrected to Equivalent Confined Aquifer (s") (feet)
0.217	0.652	0.434		398.003	0.433
0.220	0.655	0.437		421.591	0.436
0.223	0.660	0.442		446.578	0.440
0.230	0.664	0.447		473.045	0.445
0.230	0.652	0.441		501.080	0.439
0.233	0.657	0.445		530.776	0.443
0.236	0.657	0.447		562.233	0.445
0.240	0.664	0.452		595.553	0.450
0.246	0.667	0.457		630.848	0.455
0.253	0.676	0.464		668.233	0.463
0.256	0.681	0.468		707.835	0.467
0.262	0.683	0.473		749.783	0.471
0.262	0.669	0.466		794.216	0.464
0.266	0.671	0.468		841.283	0.467
0.269	0.671	0.470		891.138	0.468
0.272	0.678	0.475		943.946	0.473
0.276	0.681	0.478		999.885	0.476
0.282	0.688	0.485		1,059.138	0.483
0.285	0.693	0.489		1,121.901	0.487
0.292	0.700	0.496		1,188.385	0.494
0.299	0.709	0.504		1,258.806	0.502
0.305	0.716	0.511		1,333.401	0.508
0.308	0.721	0.515		1,412.416	0.512
0.318	0.726	0.522		1,496.113	0.520
0.315	0.709	0.512		1,584.770	0.510
0.318	0.712	0.515		1,678.680	0.513
0.325	0.719	0.522		1,778.155	0.520
0.328	0.726	0.527		1,883.523	0.525
0.335	0.712	0.523		1,995.135	0.521
0.338	0.712	0.525		2,113.361	0.523
0.341	0.722	0.532		2,238.593	0.529
0.344	0.726	0.535		2,371.245	0.533
0.348	0.729	0.538		2,511.756	0.536
0.358	0.736	0.547		2,660.595	0.544
0.364	0.746	0.555		2,818.251	0.553

AQUIFER TEST ANALYSIS
MONITORING WELL CLUSTER MW-505
RAYMARK OU2 SUPERFUND SITE
Stratford, Connecticut

Pumping Interval	Pumping Start Times (elapsed time min)	Pumping Rate (ft^3/day)	Delta Q Change in Pumping Rate (ft^3/day)
1	0	21,176.5	21,176.5
2	60	19,251.3	-1,925.1
3	300	18,288.8	-962.6
4	540	17,326.2	-962.6
5	930	16,363.6	-962.6
6	1,500	15,401.1	-962.6
7	2,040	14,438.5	-962.6

n	t	s"	s_n/Q_n (day/feet^2)
1	1.0	0.173	8.169E-06
1	5.0	0.273	1.289E-05
1	10.0	0.294	1.388E-05
1	15.0	0.309	1.459E-05
1	20.0	0.316	1.492E-05
1	25.0	0.327	1.544E-05
1	30.0	0.331	1.563E-05
1	35.0	0.339	1.601E-05
1	40.0	0.341	1.610E-05
1	45.0	0.352	1.662E-05
1	60.0	0.373	1.761E-05

The following equation was used to calculate values for β to prepare a data plot using specific drawdown (s_n/Q_n).

$$\beta_{t(n)} = \prod_{i=1}^{n} (t - t_i)^{(\Delta Qi/Qn)}$$

$$\beta_{t(n)} = (t - t_1)^{\Delta Q_1/Q_n} x\,(t - t_2)^{\Delta Q_2/Q_n} x \ldots x\,(t - t_n)^{\Delta Q_n/Q_n}$$

Equation No. 12.2 (Kruseman, G. P. and N. A. de Ridder, 1990)

Source: Kruseman, G. P. and N. A. de Ridder, 1990, Analysis and Evaluation of Pumping Test Data, International Institute for Land Reclamation and Improvement, The Netherlands.

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_2$	$t-t_2$	$\Delta Q_2/Q_2$	$\beta_{t(2)}$
2	70.0	0.377	1.958E-05	70.0	1.10	10.0	-0.10	85.0
2	80.0	0.387	2.010E-05	80.0	1.10	20.0	-0.10	91.9
2	90.0	0.379	1.969E-05	90.0	1.10	30.0	-0.10	100.5
2	100.0	0.385	2.000E-05	100.0	1.10	40.0	-0.10	109.6
2	126.0	0.396	2.057E-05	126.0	1.10	66.0	-0.10	134.4
2	141.0	0.400	2.078E-05	141.0	1.10	81.0	-0.10	149.0
2	150.0	0.387	2.010E-05	150.0	1.10	90.0	-0.10	157.9
2	199.0	0.402	2.088E-05	199.0	1.10	139.0	-0.10	206.3
2	251.0	0.418	2.171E-05	251.0	1.10	191.0	-0.10	258.0
2	298.0	0.413	2.145E-05	298.0	1.10	238.0	-0.10	304.8

AQUIFER TEST ANALYSIS
MONITORING WELL CLUSTER MW-505
RAYMARK OU2 SUPERFUND SITE
Stratford, Connecticut

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_3$	$t-t_2$	$\Delta Q_2/Q_3$	$t-t_3$	$\Delta Q_3/Q_3$	$\beta_{t(3)}$
3	335.0	0.415	2.269E-05	335.0	1.16	275.0	-0.10526	35.0	-0.05	385.2
3	376.0	0.427	2.335E-05	376.0	1.16	316.0	-0.10526	76.0	-0.05	416.6
3	398.0	0.433	2.368E-05	398.0	1.16	338.0	-0.10526	98.0	-0.05	435.9
3	447.0	0.440	2.406E-05	447.0	1.16	387.0	-0.10526	147.0	-0.05	481.2
3	501.0	0.439	2.400E-05	501.0	1.16	441.0	-0.10526	201.0	-0.05	532.8
3	531.0	0.443	2.422E-05	531.0	1.16	471.0	-0.10526	231.0	-0.05	561.8

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_4$	$t-t_2$	$\Delta Q_2/Q_4$	$t-t_3$	$\Delta Q_3/Q_4$	$t-t_4$	$\Delta Q_4/Q_4$	$\beta_{t(4)}$
4	596.0	0.450	2.597E-05	596.0	1.22	536.0	-0.11111	296.0	-0.056	56.0	-0.06	715.0
4	631.0	0.455	2.626E-05	631.0	1.22	571.0	-0.11111	331.0	-0.056	91.0	-0.06	736.4
4	668.0	0.463	2.672E-05	668.0	1.22	608.0	-0.11111	368.0	-0.056	128.0	-0.06	764.8
4	708.0	0.467	2.695E-05	708.0	1.22	648.0	-0.11111	408.0	-0.056	168.0	-0.06	798.6
4	750.0	0.471	2.718E-05	750.0	1.22	690.0	-0.11111	450.0	-0.056	210.0	-0.06	835.8

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_5$	$t-t_2$	$\Delta Q_2/Q_5$	$t-t_3$	$\Delta Q_3/Q_5$	$t-t_4$	$\Delta Q_4/Q_5$	$t-t_5$	$\Delta Q_5/Q_5$	$\beta_{t(5)}$
5	944.0	0.473	2.891E-05	944.0	1.29	884.0	-0.12	644.0	-0.06	404.0	-0.06	14.0	-0.06	1,310.26
5	1000.0	0.476	2.909E-05	1,000.0	1.29	940.0	-0.12	700.0	-0.06	460.0	-0.06	70.0	-0.06	1,259.06
5	1059.0	0.483	2.952E-05	1,059.0	1.29	999.0	-0.12	759.0	-0.06	519.0	-0.06	129.0	-0.06	1,283.47
5	1122.0	0.487	2.976E-05	1,122.0	1.29	1,062.0	-0.12	822.0	-0.06	582.0	-0.06	192.0	-0.06	1,326.23
5	1188.0	0.494	3.019E-05	1,188.0	1.29	1,128.0	-0.12	888.0	-0.06	648.0	-0.06	258.0	-0.06	1,378.47
5	1259.0	0.502	3.068E-05	1,259.0	1.29	1,199.0	-0.12	959.0	-0.06	719.0	-0.06	329.0	-0.06	1,439.03
5	1333.0	0.508	3.104E-05	1,333.0	1.29	1,273.0	-0.12	1,033.0	-0.06	793.0	-0.06	403.0	-0.06	1,504.96
5	1412.0	0.512	3.129E-05	1,412.0	1.29	1,352.0	-0.12	1,112.0	-0.06	872.0	-0.06	482.0	-0.06	1,577.34
5	1496.0	0.520	3.178E-05	1,496.0	1.29	1,436.0	-0.12	1,196.0	-0.06	956.0	-0.06	566.0	-0.06	1,655.81

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_6$	$t-t_2$	$\Delta Q_2/Q_6$	$t-t_3$	$\Delta Q_3/Q_6$	$t-t_4$	$\Delta Q_4/Q_6$	$t-t_5$	$\Delta Q_5/Q_6$	$t-t_6$	$\Delta Q_6/Q_6$	$\beta_{t(5)}$
6	1,585.0	0.510	3.311E-05	1585.0	1.37	1,525.0	-0.12	1,285.0	-0.06	1,045.0	-0.06	655.0	-0.06	85.0	-0.06	2,101.5
6	1,679.0	0.513	3.331E-05	1679.0	1.37	1,619.0	-0.12	1,379.0	-0.06	1,139.0	-0.06	749.0	-0.06	179.0	-0.06	2,116.3
6	1,778.0	0.520	3.376E-05	1778.0	1.37	1,718.0	-0.12	1,478.0	-0.06	1,238.0	-0.06	848.0	-0.06	278.0	-0.06	2,173.2
6	1,884.0	0.525	3.409E-05	1884.0	1.37	1,824.0	-0.12	1,584.0	-0.06	1,344.0	-0.06	954.0	-0.06	384.0	-0.06	2,250.9
6	1,995.0	0.521	3.383E-05	1995.0	1.37	1,935.0	-0.12	1,695.0	-0.06	1,455.0	-0.06	1,065.0	-0.06	495.0	-0.06	2,341.3

n	t	s"	s_n/Q_n (day/feet^2)	$t-t_1$	$\Delta Q_1/Q_7$	$t-t_2$	$\Delta Q_2/Q_7$	$t-t_3$	$\Delta Q_3/Q_7$	$t-t_4$	$\Delta Q_4/Q_7$	$t-t_5$	$\Delta Q_5/Q_7$	$t-t_6$	$\Delta Q_6/Q_7$	$t-t_7$	$\Delta Q_7/Q_7$	$\beta_{t(5)}$
7	2,113.0	0.523	3.622E-05	2,113.0	1.47	2,053.0	-0.13	1,813.0	-0.07	1,573.0	-0.07	1,183.0	-0.07	613.0	-0.07	73.0	-0.07	3,087.51
7	2,239.0	0.529	3.664E-05	2,239.0	1.47	2,179.0	-0.13	1,939.0	-0.07	1,699.0	-0.07	1,309.0	-0.07	739.0	-0.07	199.0	-0.07	3,030.39
7	2,371.0	0.533	3.692E-05	2,371.0	1.47	2,311.0	-0.13	2,071.0	-0.07	1,831.0	-0.07	1,441.0	-0.07	871.0	-0.07	331.0	-0.07	3,077.76
7	2,512.0	0.536	3.712E-05	2,512.0	1.47	2,452.0	-0.13	2,212.0	-0.07	1,972.0	-0.07	1,582.0	-0.07	1,012.0	-0.07	472.0	-0.07	3,163.92
7	2,661.0	0.544	3.768E-05	2,661.0	1.47	2,601.0	-0.13	2,361.0	-0.07	2,121.0	-0.07	1,731.0	-0.07	1,161.0	-0.07	621.0	-0.07	3,273.33
7	2,818.0	0.553	3.830E-05	2,818.0	1.47	2,758.0	-0.13	2,518.0	-0.07	2,278.0	-0.07	1,888.0	-0.07	1,318.0	-0.07	778.0	-0.07	3,399.91

CALCULATION WORKSHEET

CLIENT:	EPA	JOB NUMBER:	4236
SUBJECT:	Raymark OU2 Groundwater Aquifer Test analysis MW-505		
BY:	MSH CHECKED BY:	DATE:	9/26/2003

Objective: Analysis of Aquifer Test data to estimate Transmissivity and Storage Coeficient

Method Variable-discharge tests and tests in well fields, Presented in Analysis and Evaluation of Pumping Test Data, Kruseman, G. P. and N.A. de Ridder, 1990.

Transmissivity

Equation

$$KD = \frac{2.3}{4 \P \Delta(S_n/Q_n)}$$

(S_n/Q_n) = 4.00E-06 Slope of a straight line through the corrected data.

KD = 45,757.05 $feet^2/day$

Storativity

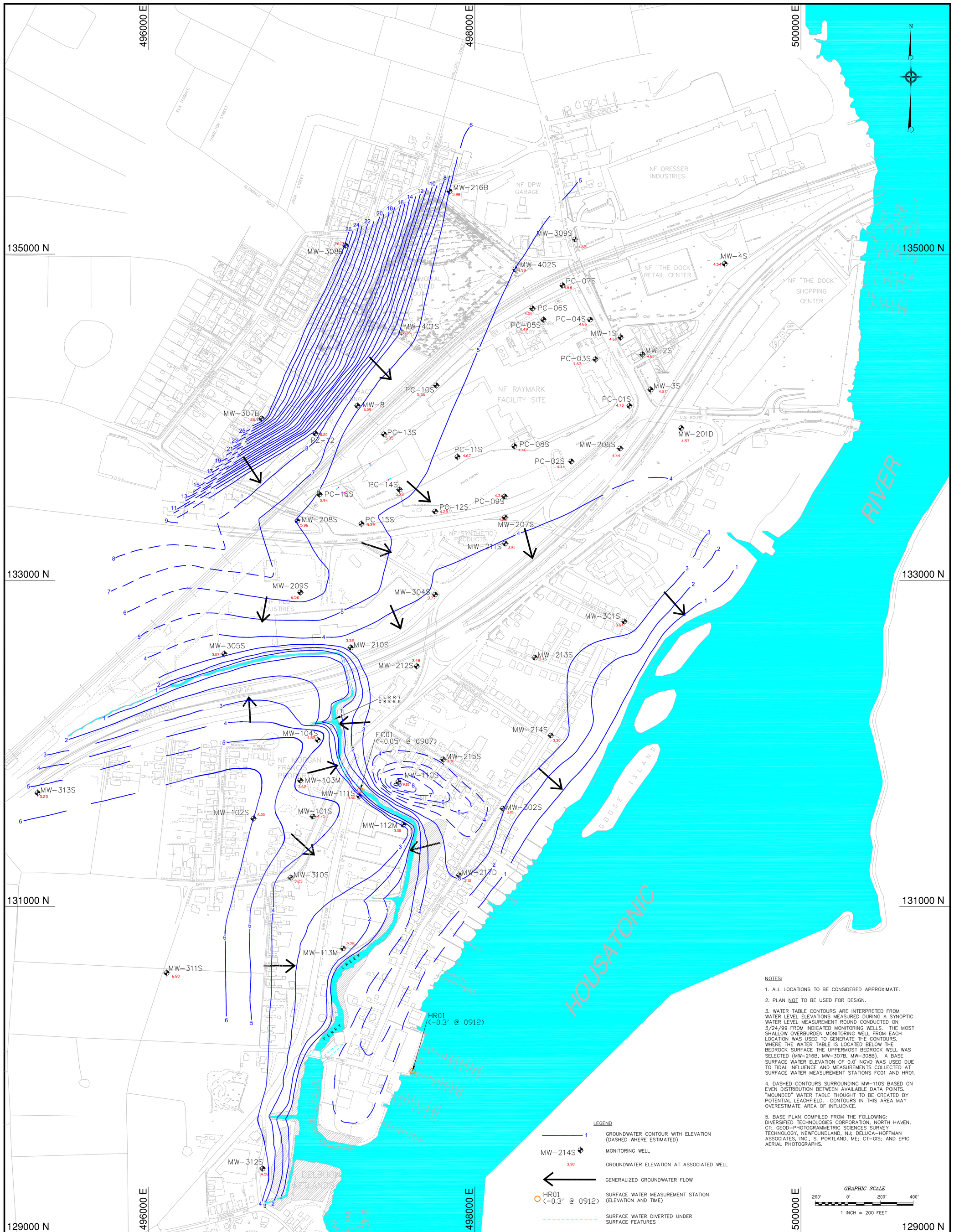
Equation

$$S = \frac{2.25KD}{r^2} \{\beta_{t(n)}(t-t_n)\}_0$$

Radius from Pumping Well r = 26.4 feet

$\{\beta_{t(n)}(t-t_n)\}_0$ = 4.60E+00 Time at which a straight line through the corrected data intercepts Sn/Qn = zero.

S = 4.72E-01 Dimensionless



NOTES:

1. ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.

2. PLAN NOT TO BE USED FOR DESIGN.

3. WATER TABLE CONTOURS ARE INTERPRETED FROM WATER LEVEL ELEVATIONS MEASURED DURING A SYNOPTIC WATER LEVEL MEASUREMENT ROUND CONDUCTED ON 3/24/99 FROM INDICATED MONITORING WELLS. THE MOST SHALLOW OVERBURDEN MONITORING WELL FROM EACH LOCATION WAS USED TO GENERATE THE CONTOURS. WHERE THE WATER TABLE IS LOCATED BELOW THE BEDROCK SURFACE THE UPPERMOST BEDROCK WELL WAS SELECTED (MW-216B, MW-307B, MW-308B). A BASE SURFACE WATER ELEVATION OF 0.0' NGVD WAS USED DUE TO TIDAL INFLUENCE AND MEASUREMENTS COLLECTED AT SURFACE WATER MEASUREMENT STATIONS FC01 AND HR01.

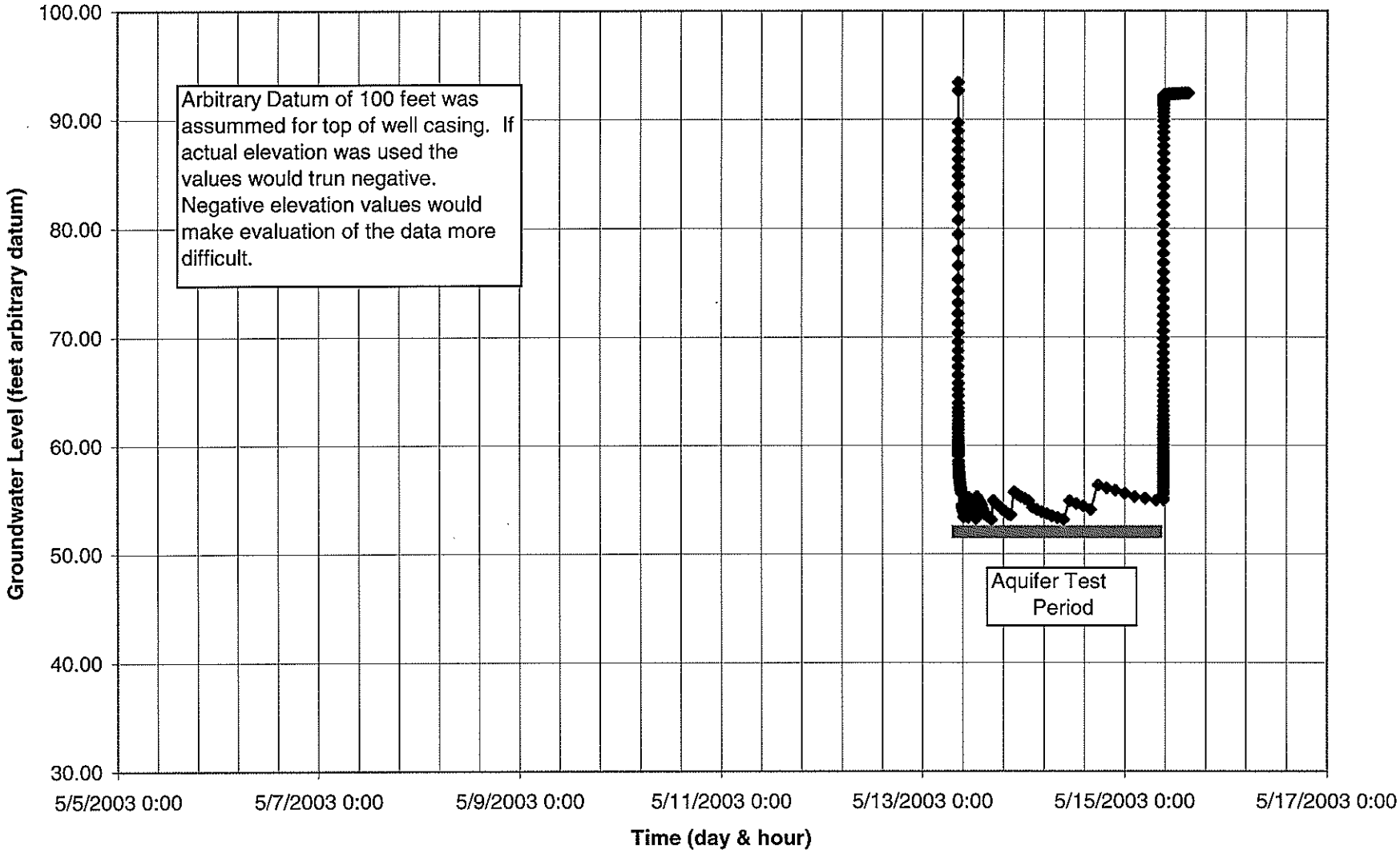
4. DASHED CONTOURS SURROUNDING MW-110S BASED ON EVEN DISTRIBUTION BETWEEN AVAILABLE DATA POINTS. "MOUNDED" WATER TABLE THOUGHT TO BE CREATED BY POTENTIAL LEACHFIELD. CONTOURS IN THIS AREA MAY OVERESTIMATE AREA OF INFLUENCE.

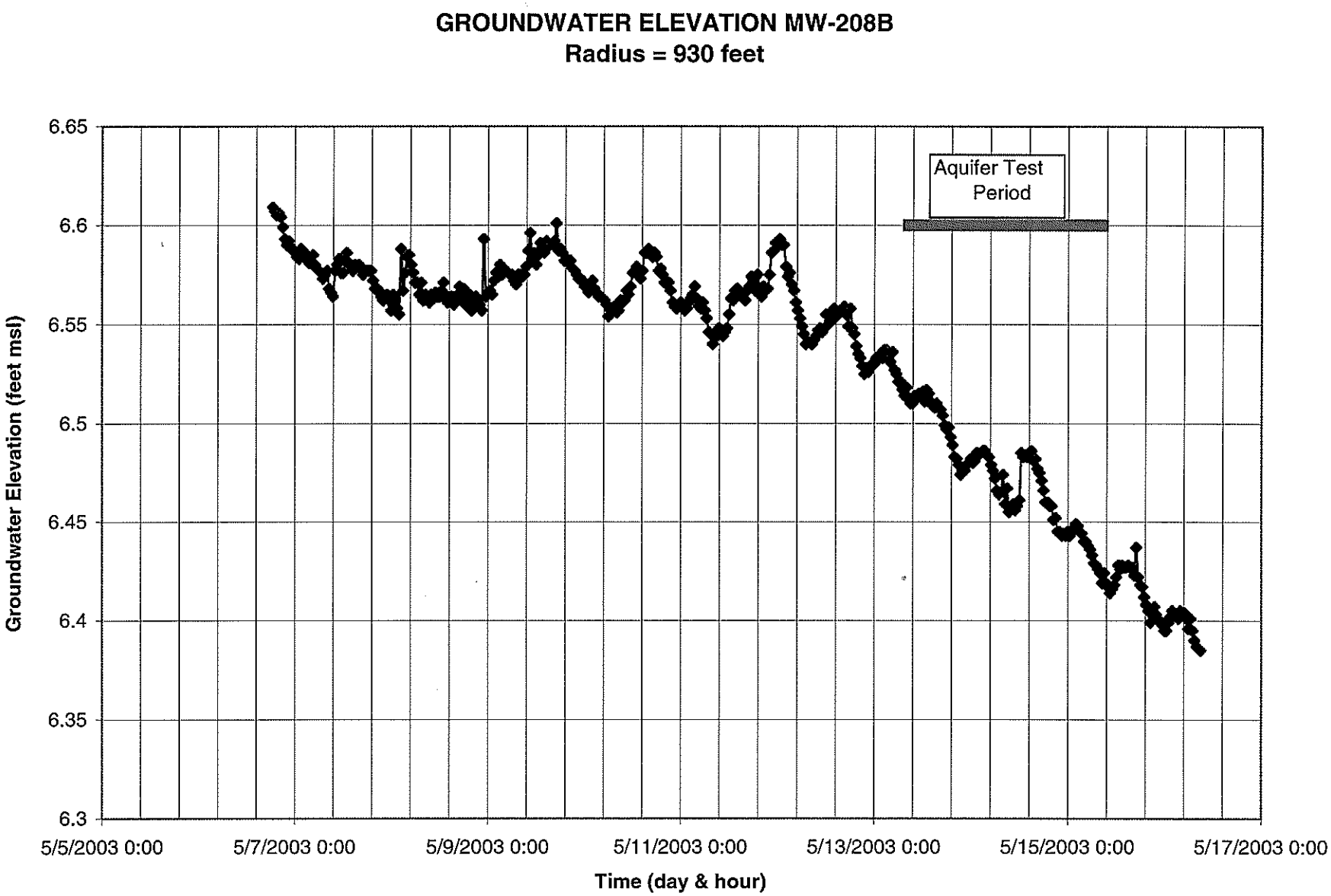
5. BASE PLAN COMPILED FROM THE FOLLOWING: DIVERSIFIED TECHNOLOGIES CORPORATION, NORTH HAVEN, CT; GEOD-PHOTOGRAMMETRIC SCIENCES SURVEY TECHNOLOGY, NEWFOUNDLAND, NJ; DELUCA-HOFFMAN ASSOCIATES, INC., S. PORTLAND, ME; CT-GIS; AND EPIC AERIAL PHOTOGRAPHS.

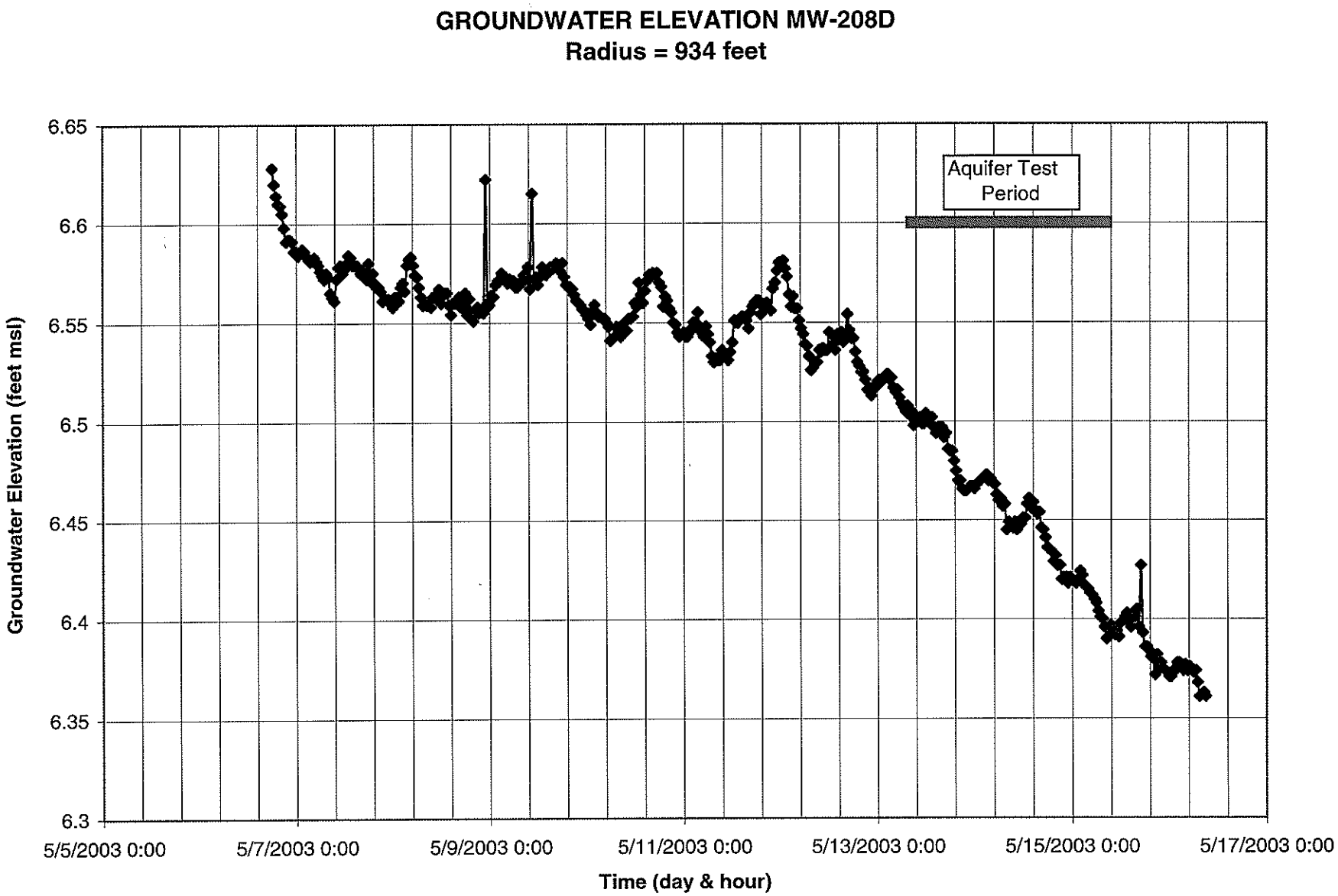
DRAWN BY: R.G. DEWSNAP	TITLE: WATER TABLE CONTOURS AND FLOW DIRECTION REMEDIAL INVESTIGATION REPORT RAYMARK – OU2 – GROUNDWATER STRATFORD, CONNECTICUT		
PREPARED BY: T. DORGAN			
CHECKED BY: M. HEALEY	SOURCE: REFER TO NOTE 5.		
	SCALE: 1" = 200'	DATE: NOVEMBER, 2000	PROJ. NO: N0003
PROJECT MANAGER: H. FORD	DRAWING NO: APPENDIX D, FORMERLY FIGURE 3-6 IN DRAFT OU2	ACFILE NAME: DWG\0003\0920\GW_TABLE2.DWG	REV: 0
PROGRAM MANAGER: G. GARDNER			

TETRA TECH NUS, INC.
55 JONSPIN ROAD
WILMINGTON, MASSACHUSETTS 01887
(978)658-7899

GROUNDWATER LEVEL IN TEST WELL




GROUNDWATER ELEVATION MW-208B
Radius = 930 feet
Aquifer Test Period
Groundwater Elevation (feet msl)
6.65
6.6
6.55
6.5
6.45
6.4
6.35
6.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)


GROUNDWATER ELEVATION MW-208D
Radius = 934 feet
Aquifer Test Period
Groundwater Elevation (feet msl)
6.65
6.6
6.55
6.5
6.45
6.4
6.35
6.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
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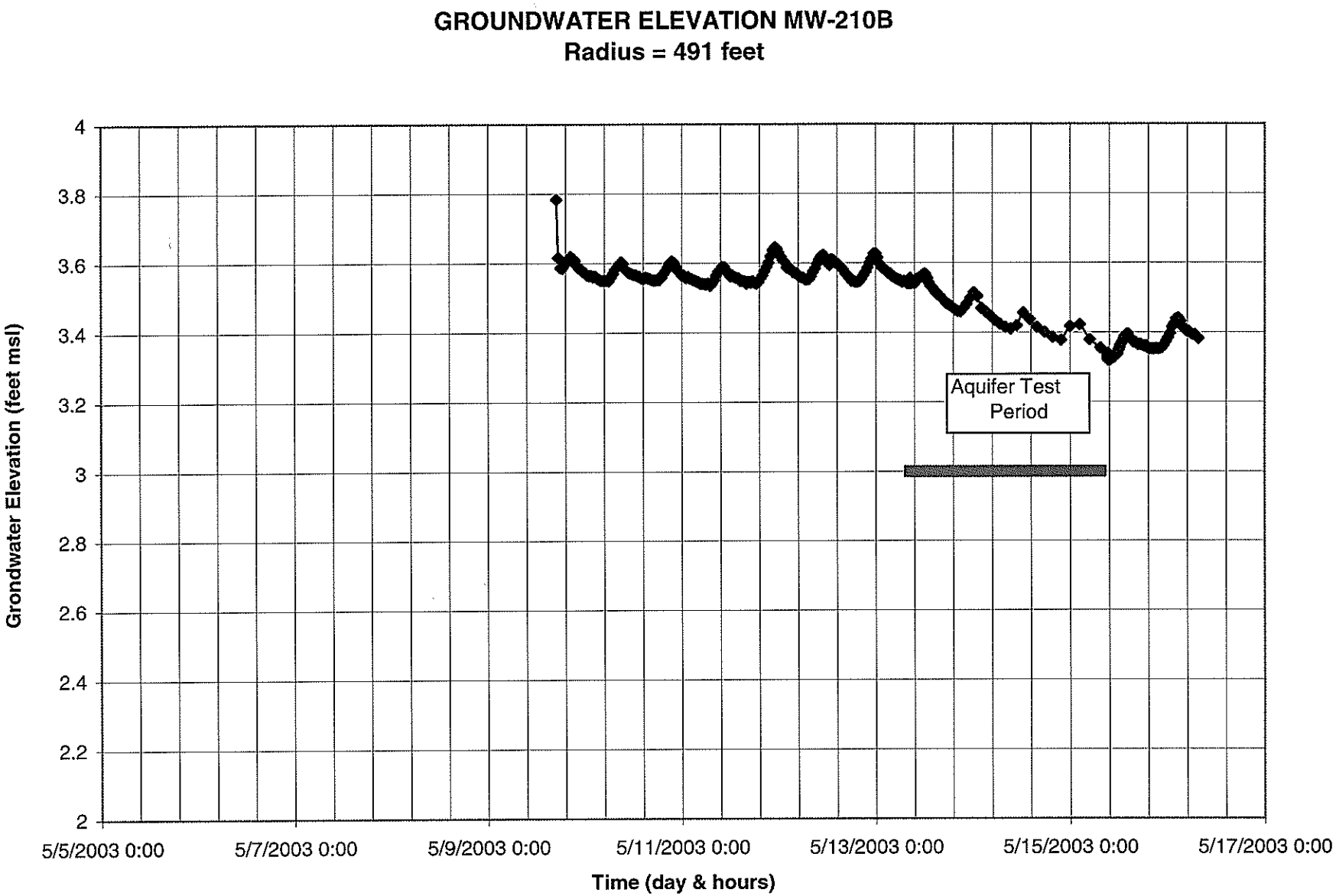
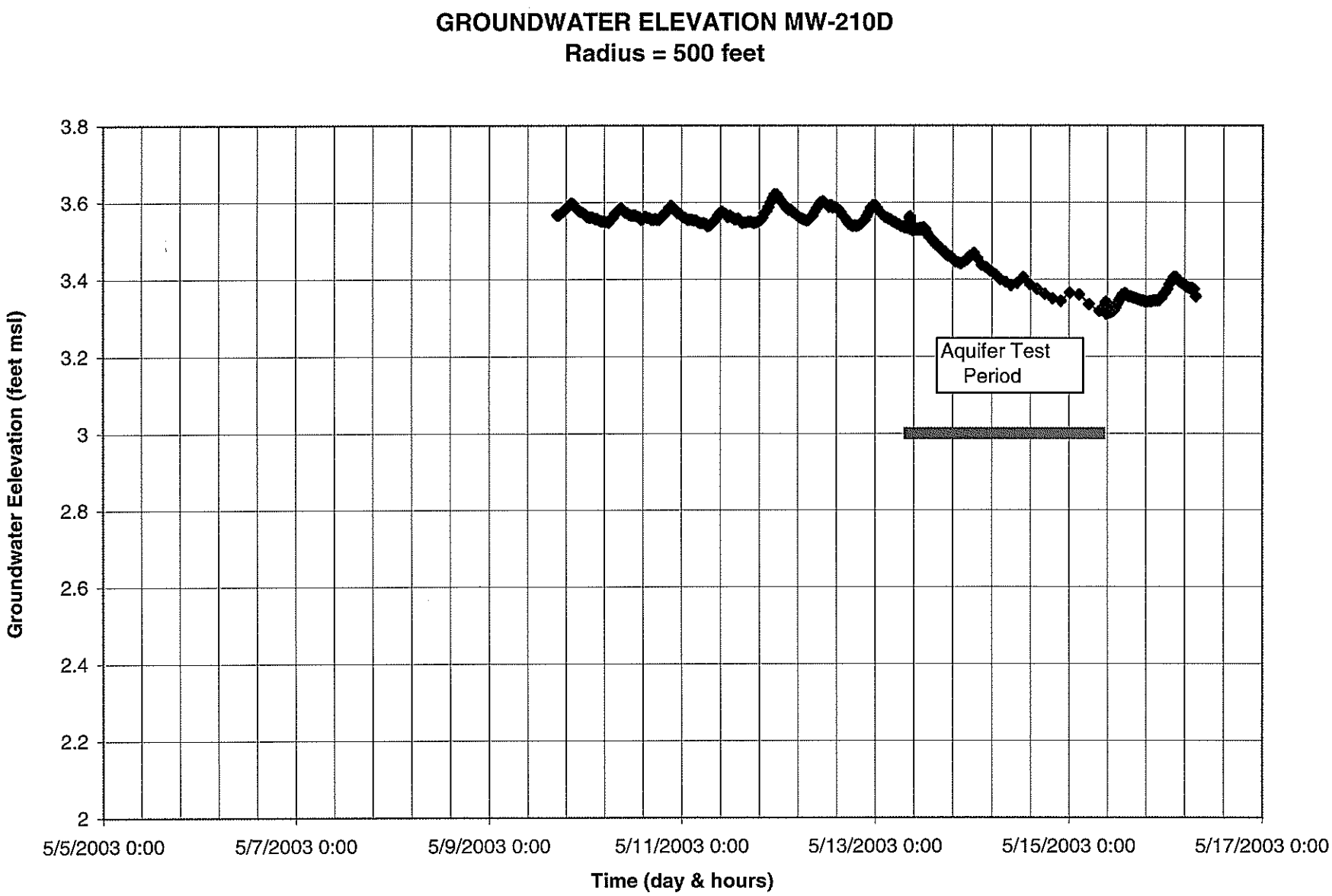
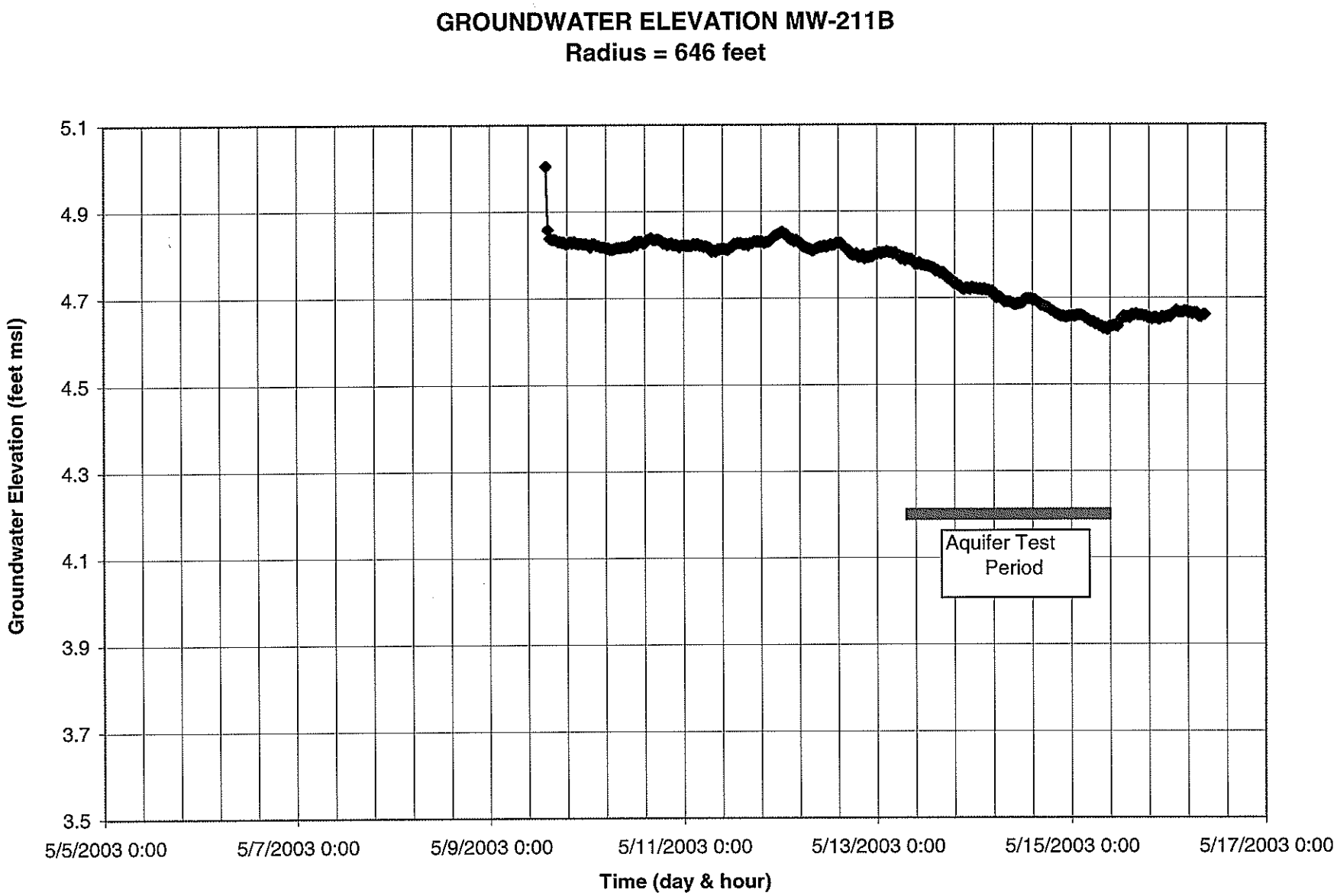
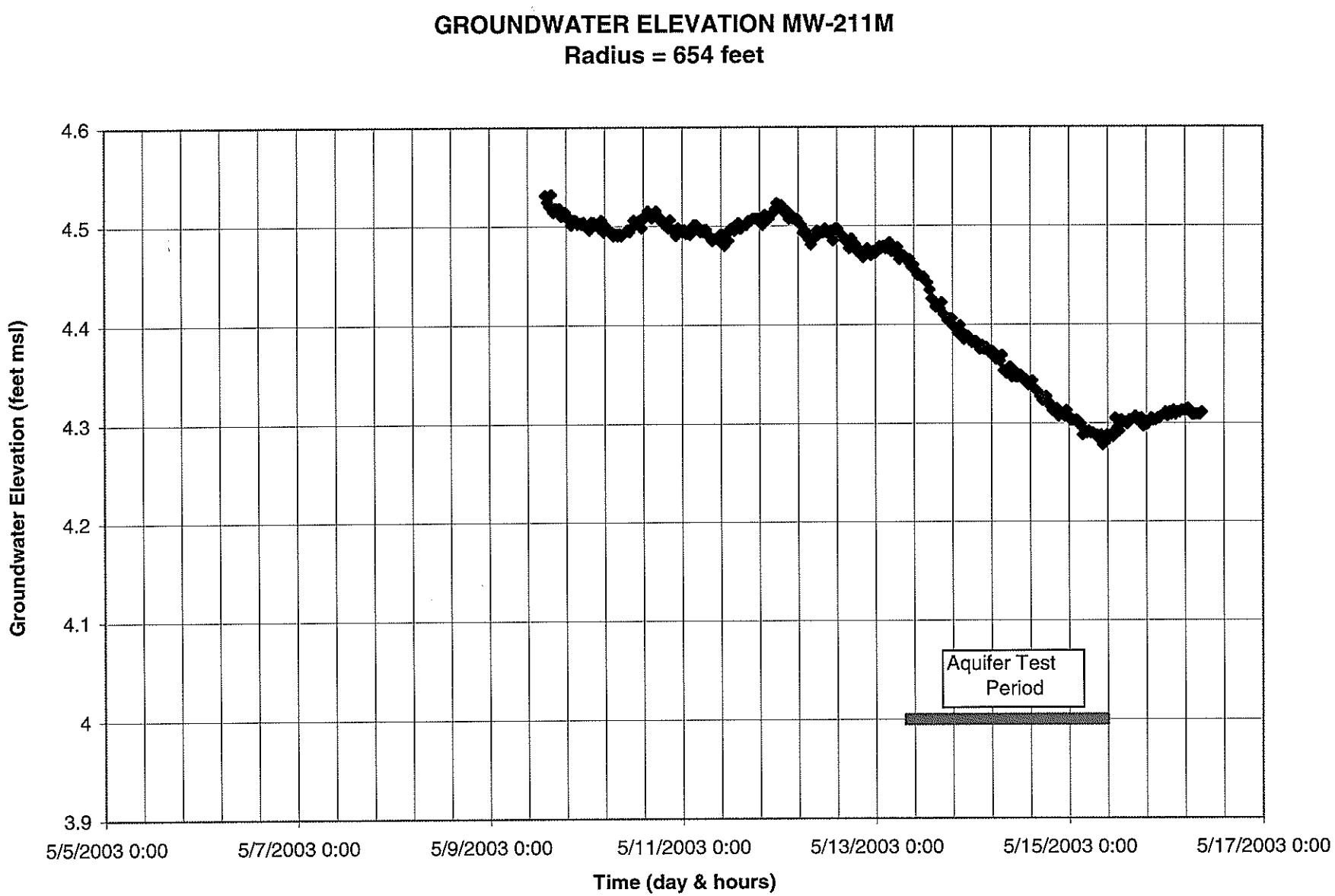
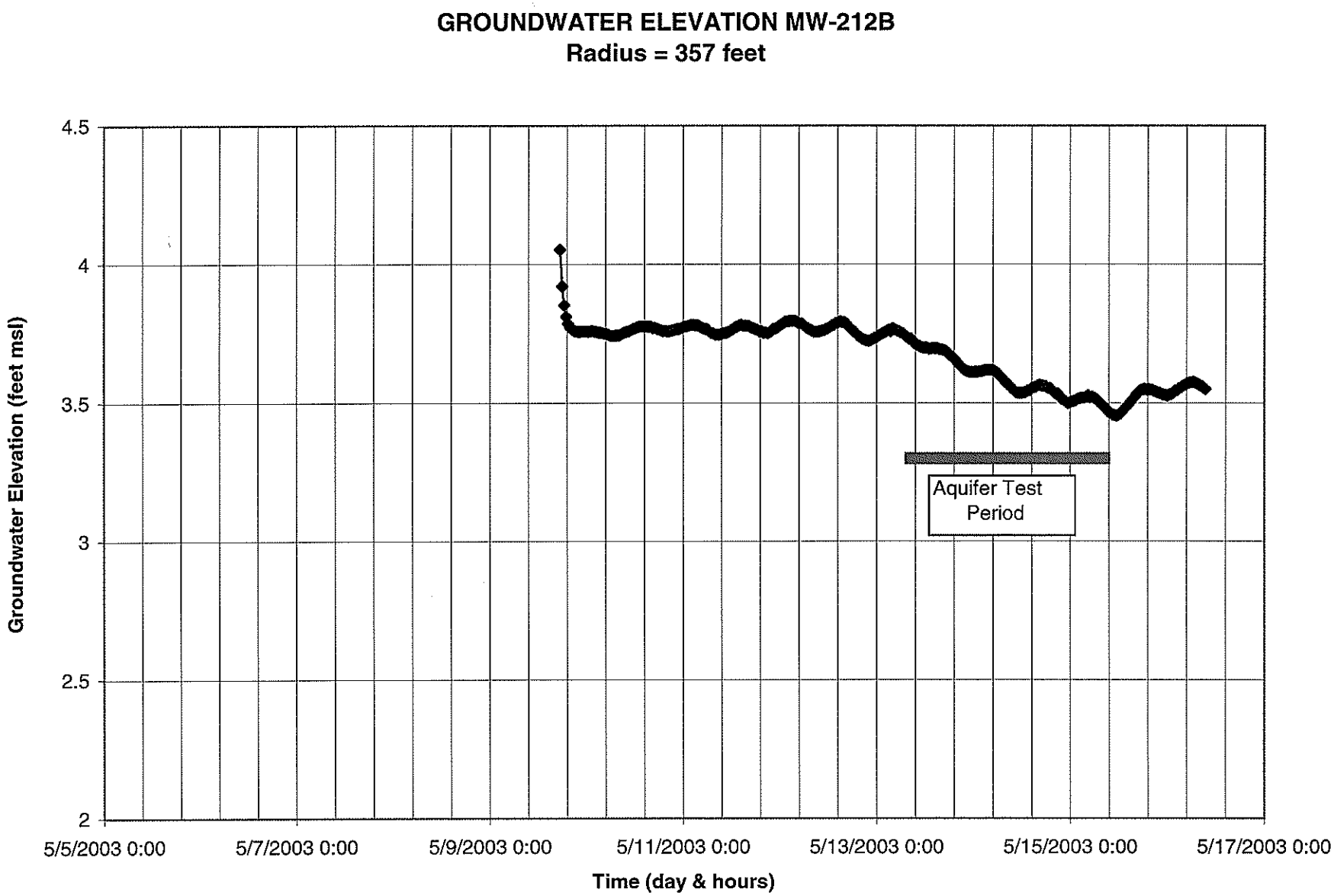
5/17/2003 0:00
Time (day & hour)

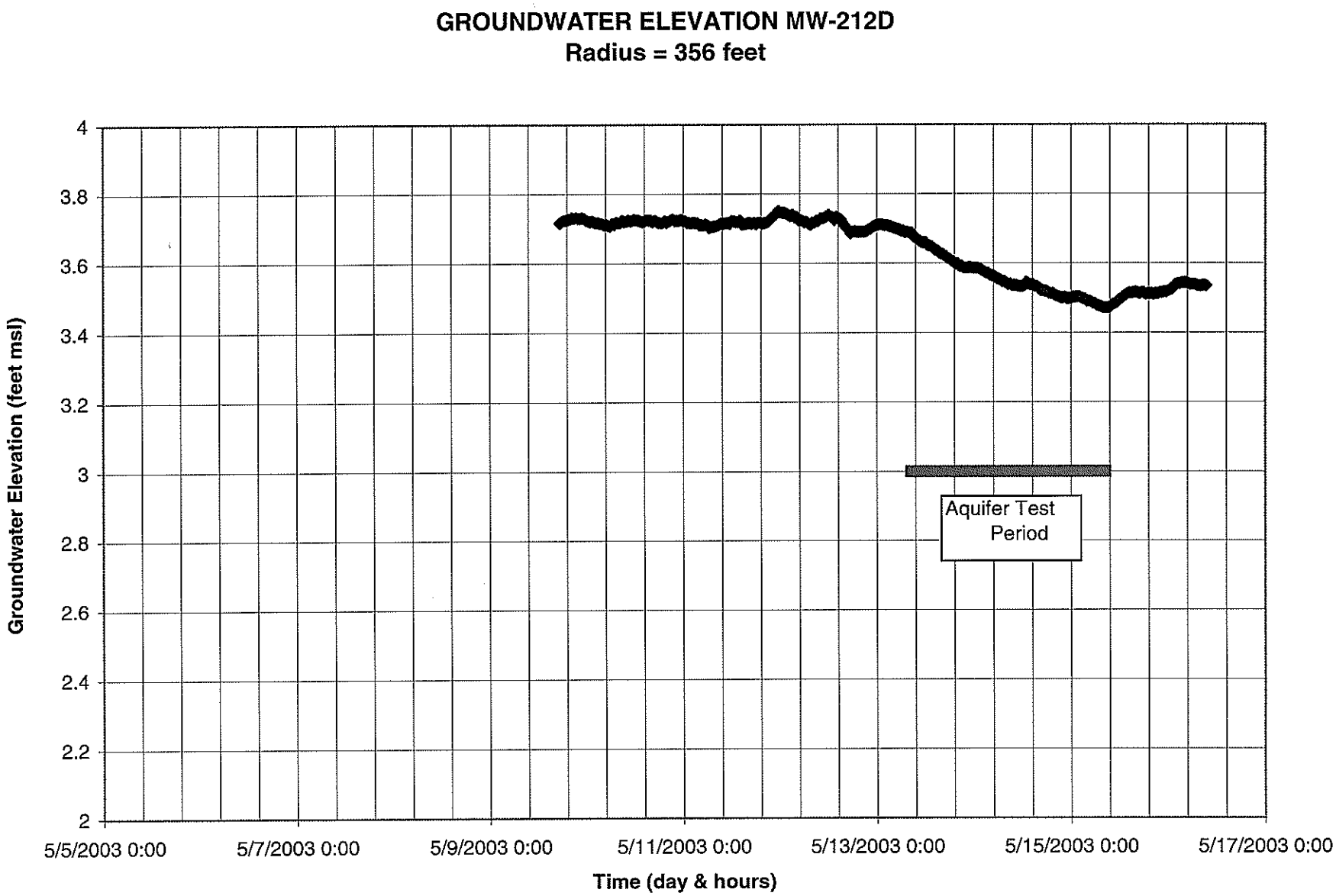

GROUNDWATER ELEVATION MW-210B
Radius = 491 feet
Grondwater Elevation (feet msl)
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

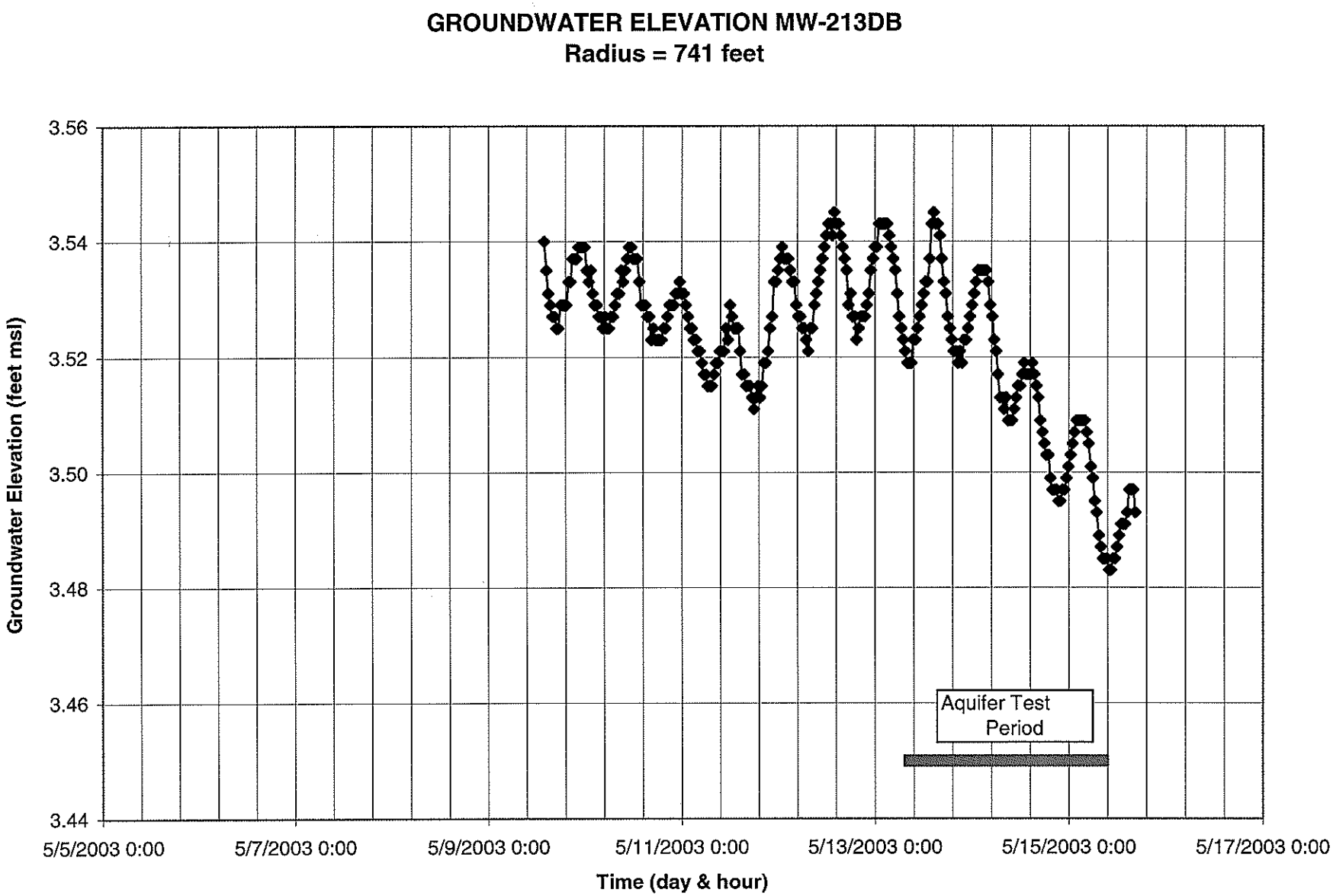

GROUNDWATER ELEVATION MW-210D
Radius = 500 feet
Groundwater Eelevation (feet msl)
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
Aquifer Test Period
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)

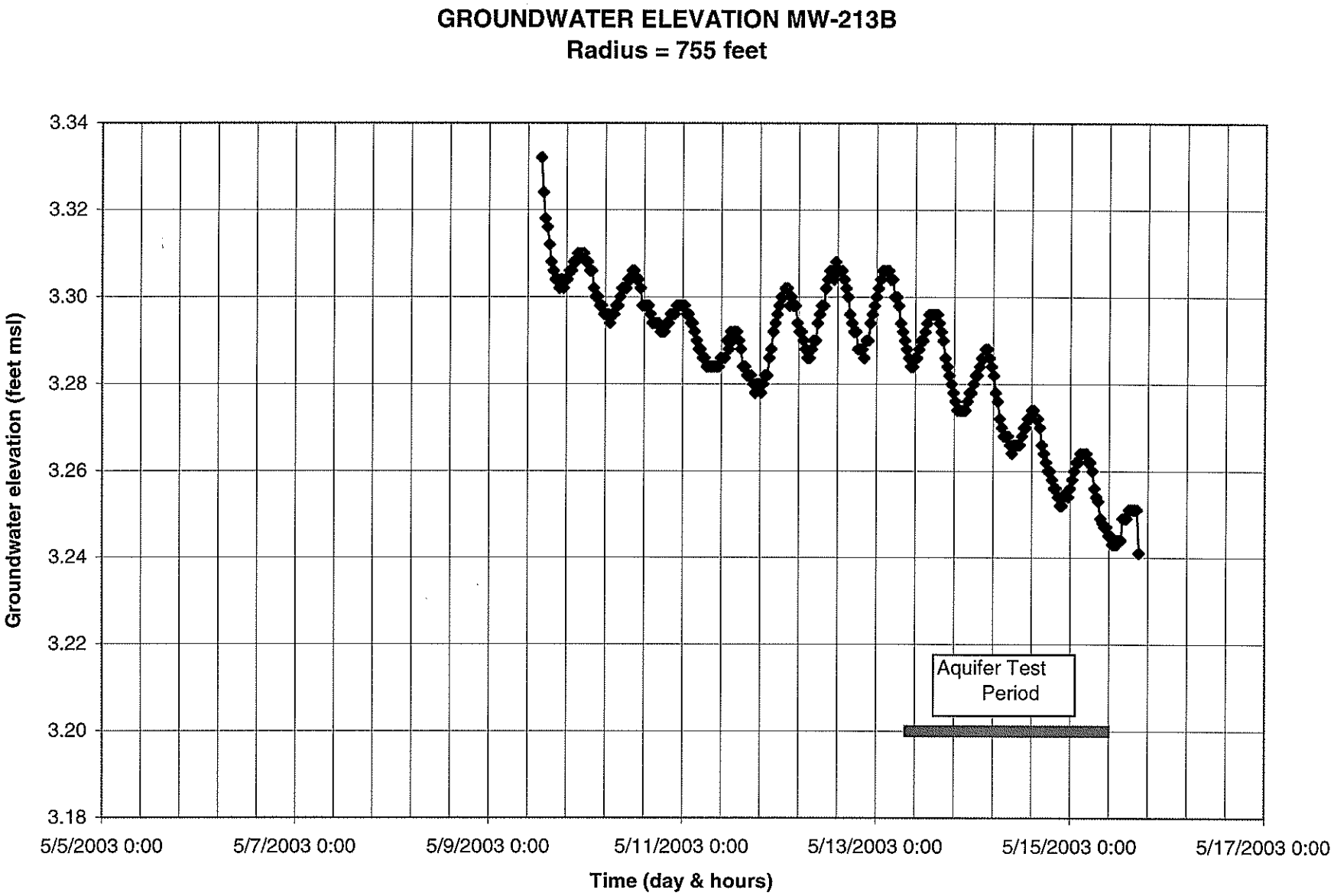

GROUNDWATER ELEVATION MW-211B
Radius = 646 feet
Groundwater Elevation (feet msl)
5.1
4.9
4.7
4.5
4.3
4.1
3.9
3.7
3.5
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

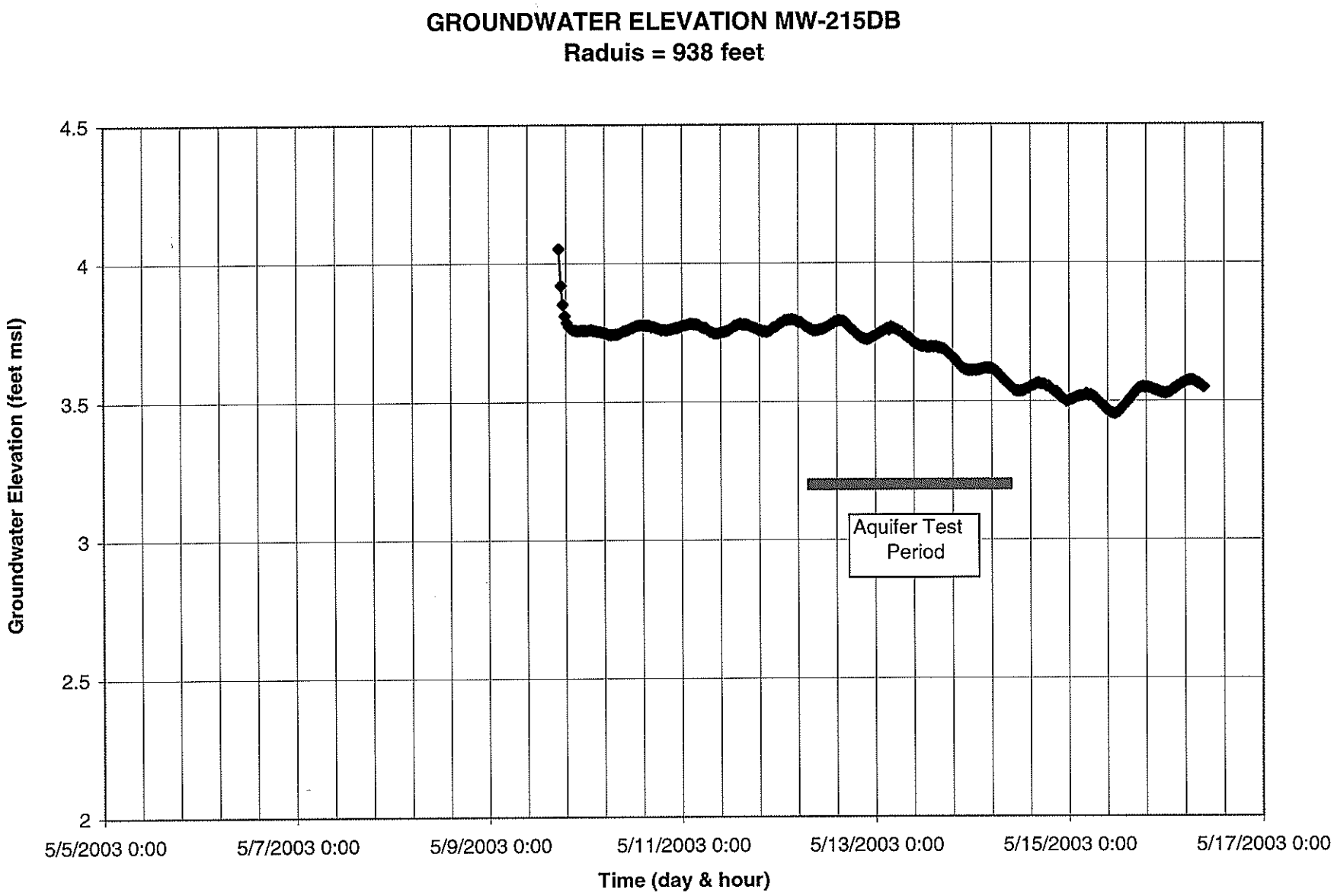

GROUNDWATER ELEVATION MW-211M
Radius = 654 feet
Groundwater Elevation (feet msl)
4.6
4.5
4.4
4.3
4.2
4.1
4
3.9
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

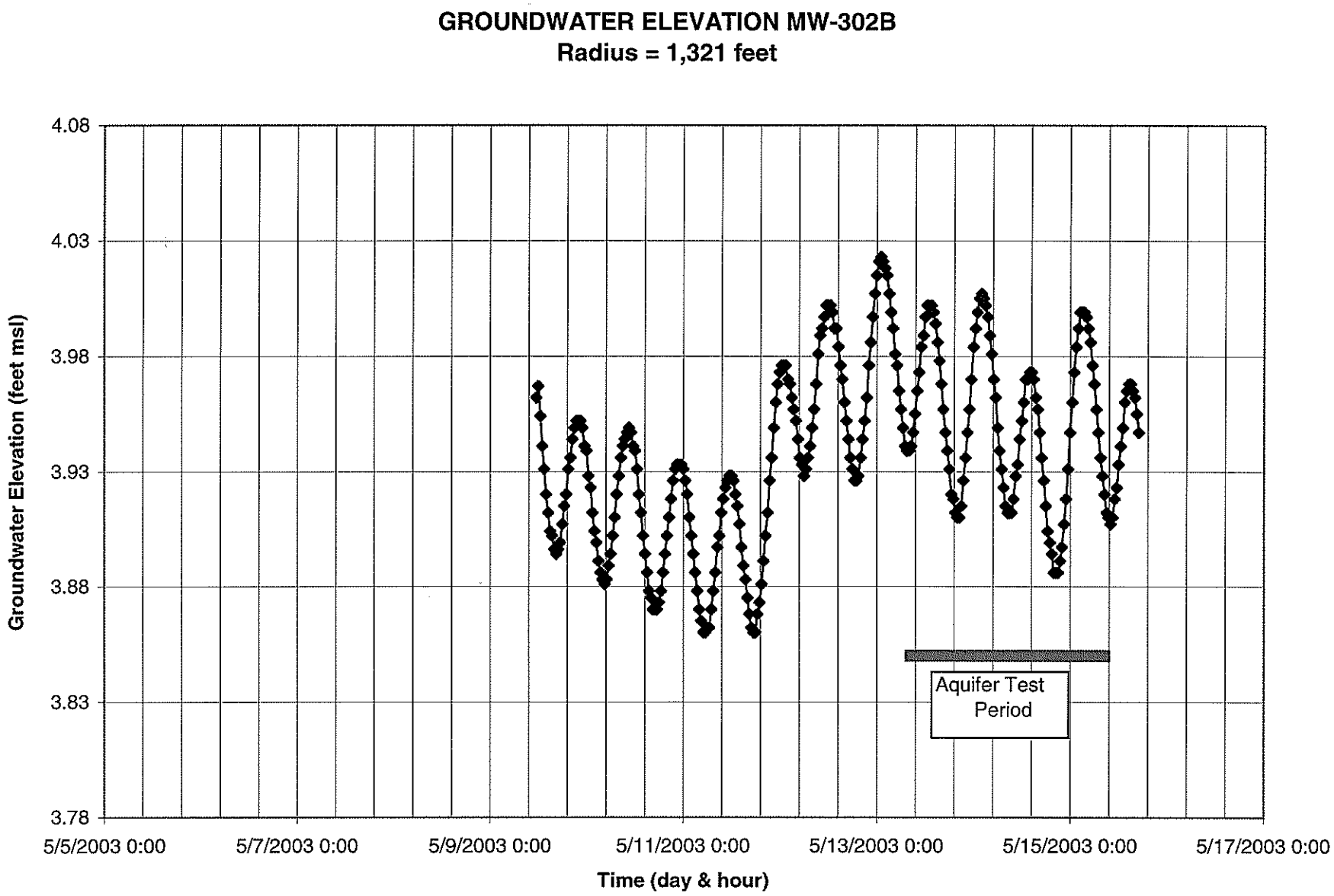

GROUNDWATER ELEVATION MW-212B
Radius = 357 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

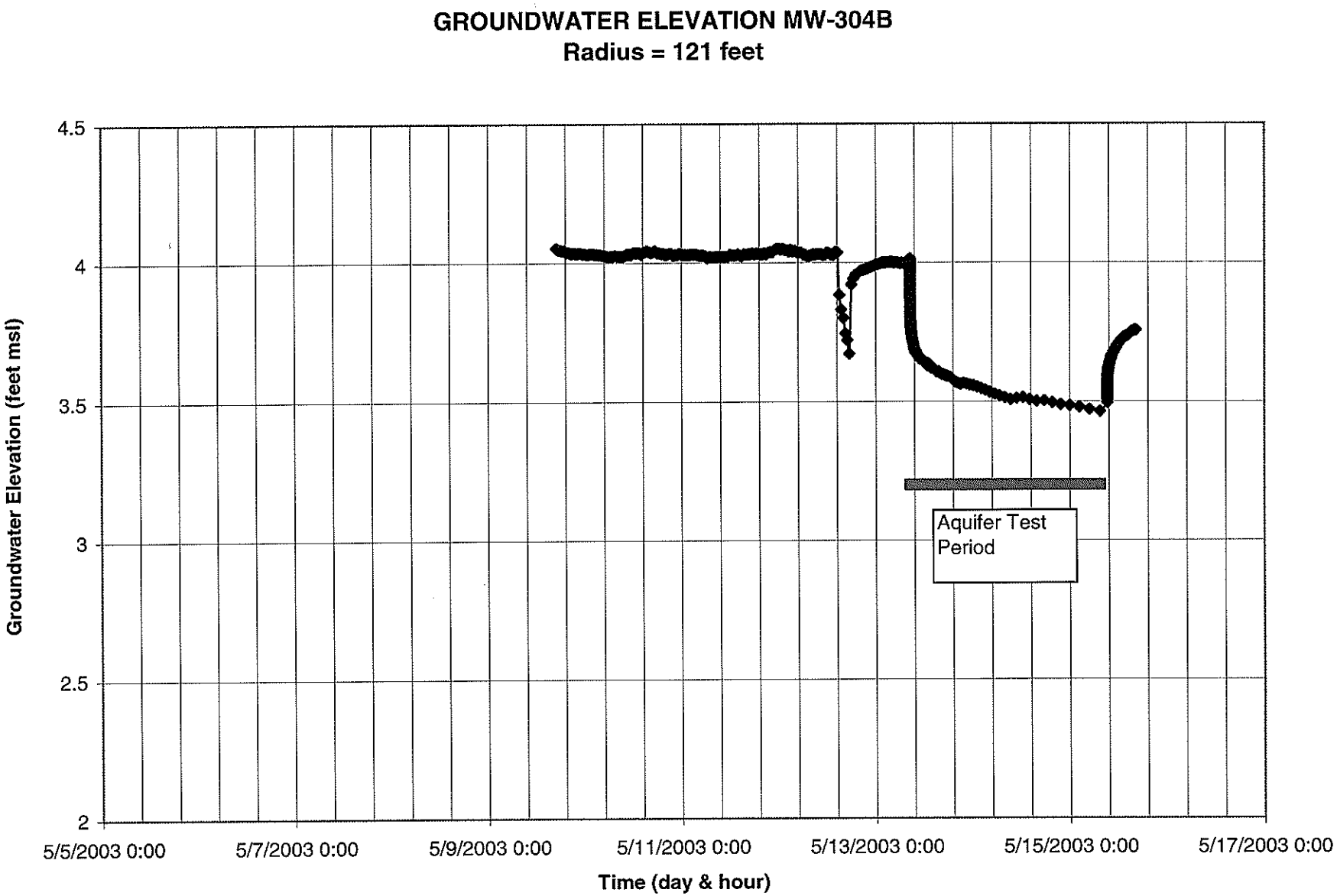

GROUNDWATER ELEVATION MW-212D
Radius = 356 feet
Groundwater Elevation (feet msl)
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period


GROUNDWATER ELEVATION MW-213DB
Radius = 741 feet
Groundwater Elevation (feet msl)
3.56
3.54
3.52
3.50
3.48
3.46
3.44
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

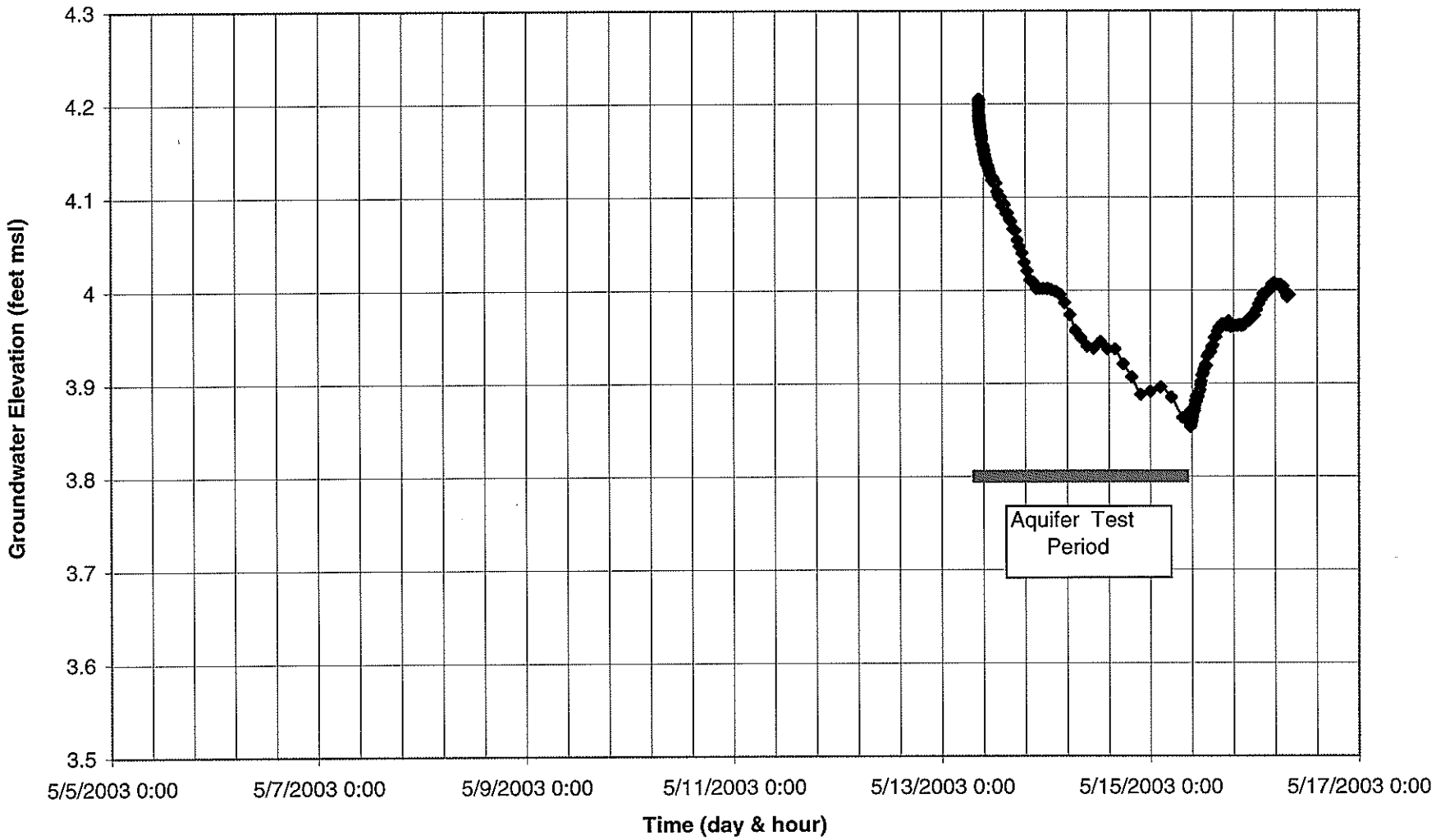

GROUNDWATER ELEVATION MW-213B
Radius = 755 feet
Groundwater elevation (feet msl)
3.34
3.32
3.30
3.28
3.26
3.24
3.22
3.20
3.18
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

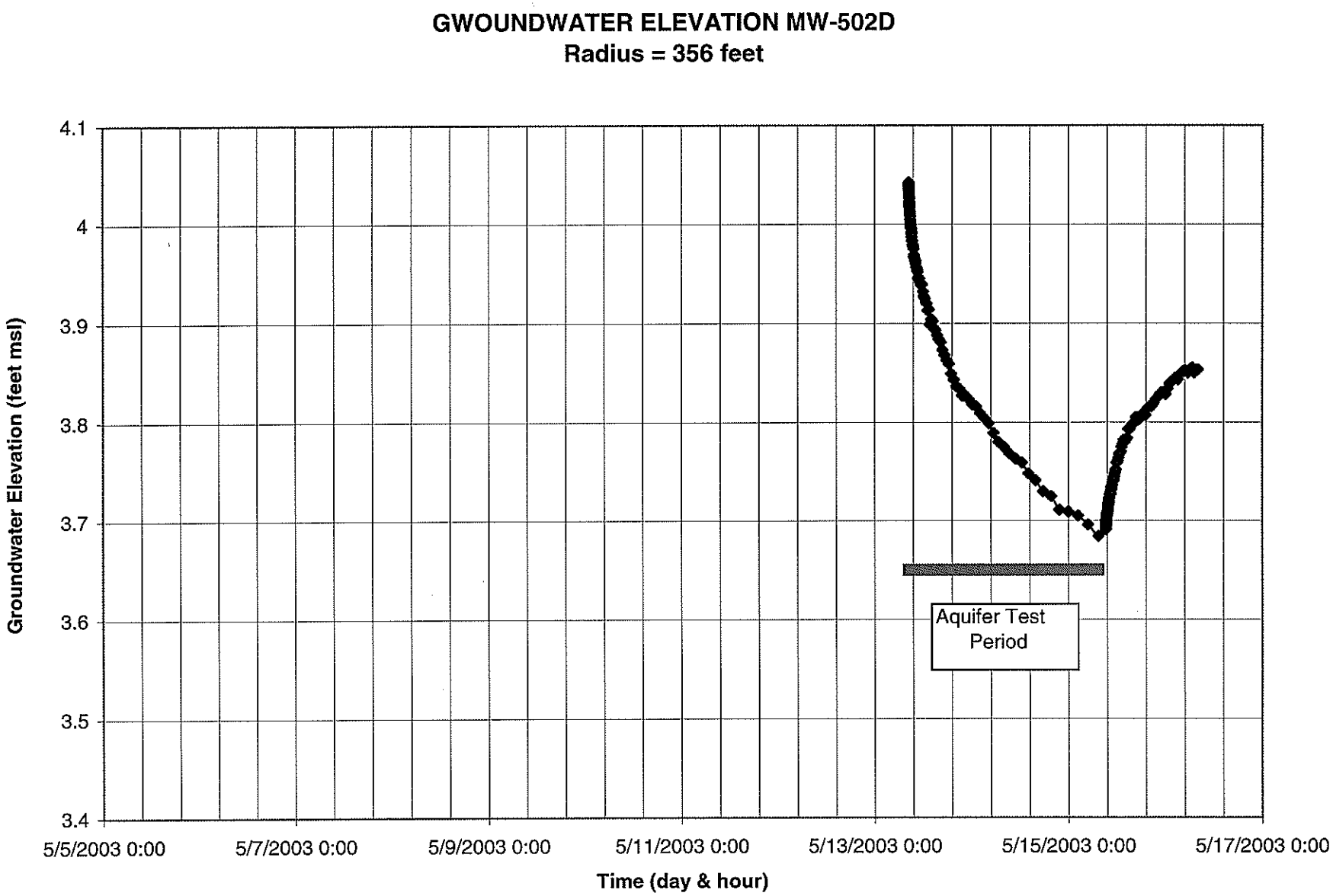

GROUNDWATER ELEVATION MW-215DB
Raduis = 938 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

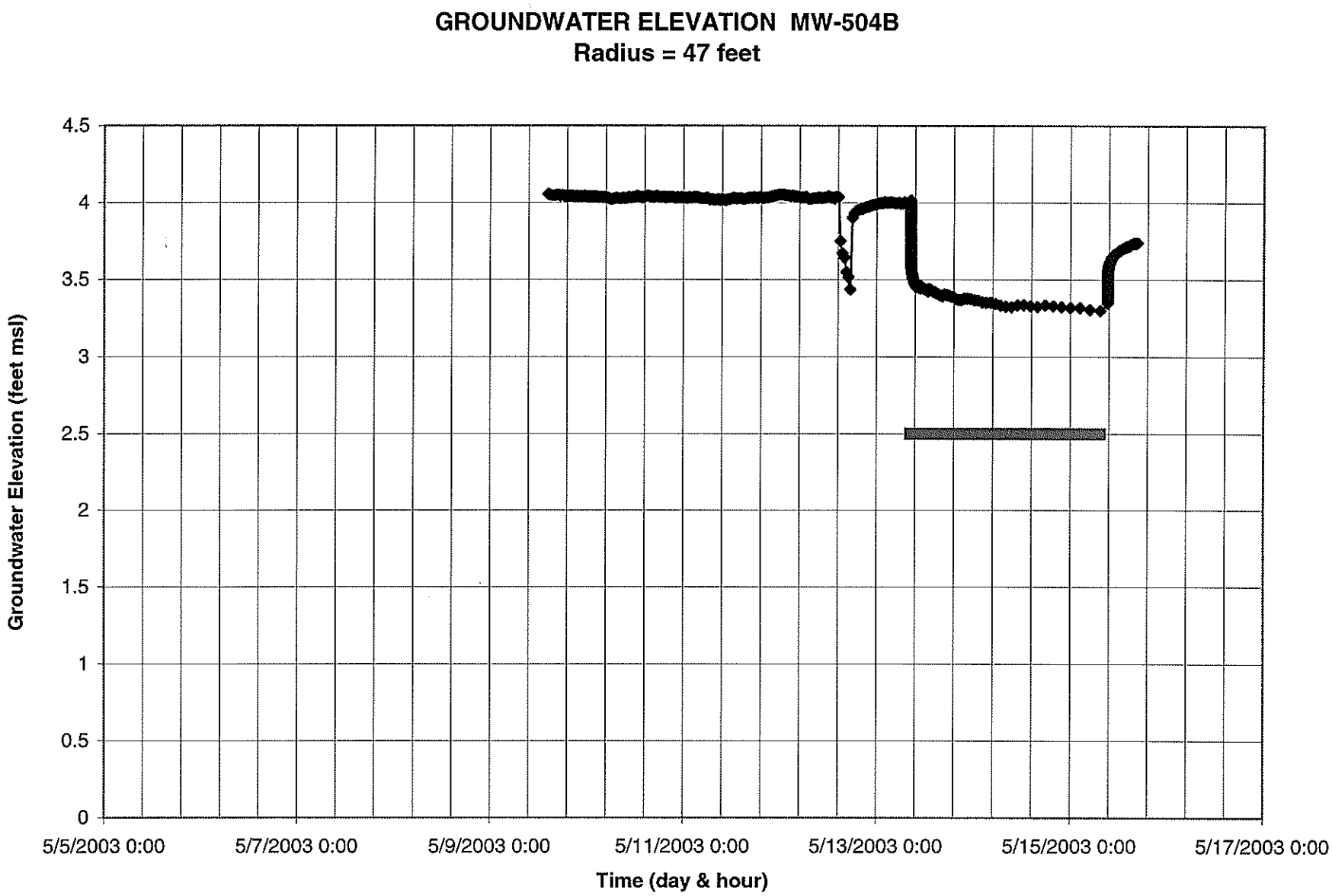

GROUNDWATER ELEVATION MW-302B
Radius = 1,321 feet
Groundwater Elevation (feet msl)
4.08
4.03
3.98
3.93
3.88
3.83
3.78
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

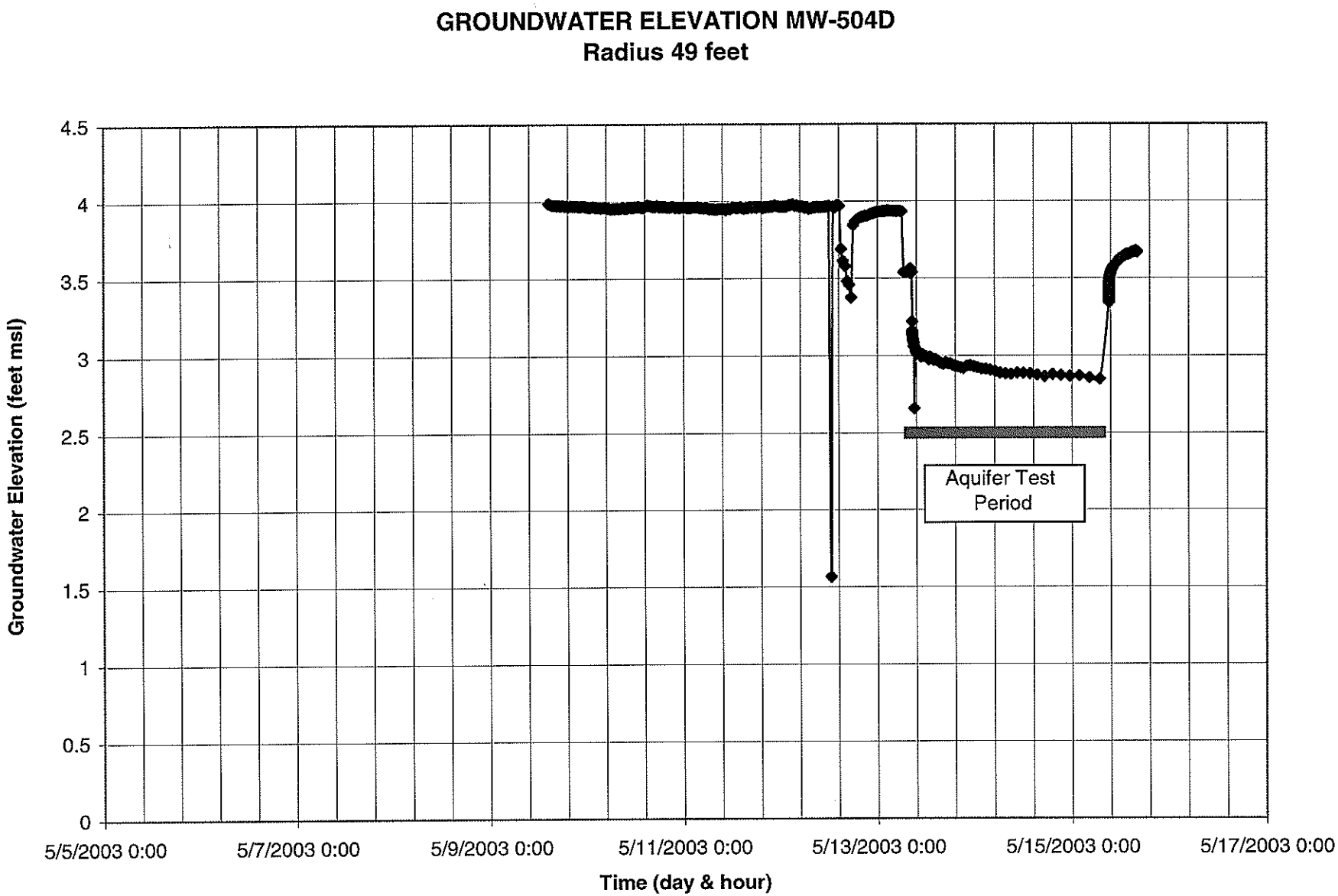

GROUNDWATER ELEVATION MW-304B
Radius = 121 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

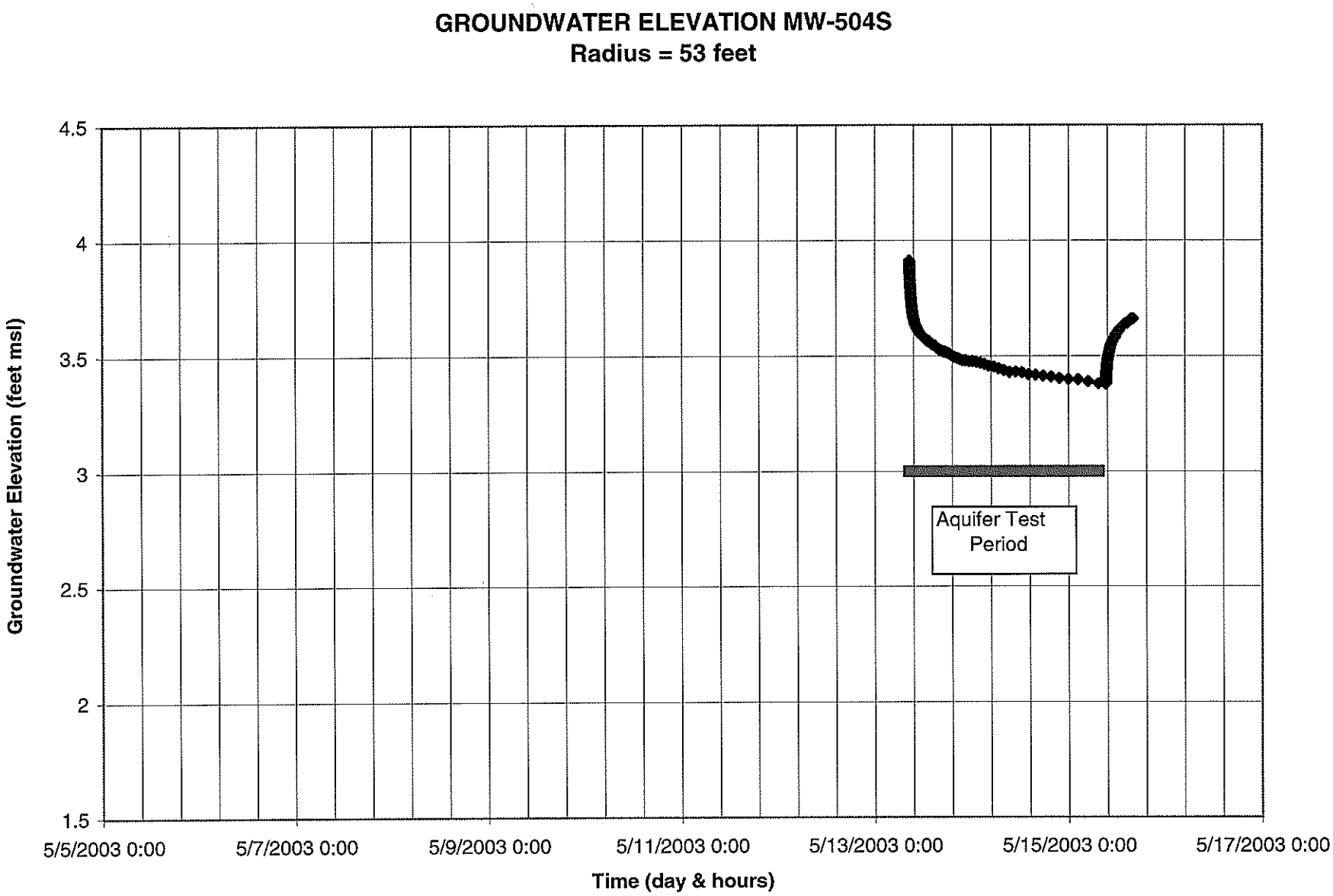
GROUNDWATER ELEVATION MW-502B
Radius = 362 feet

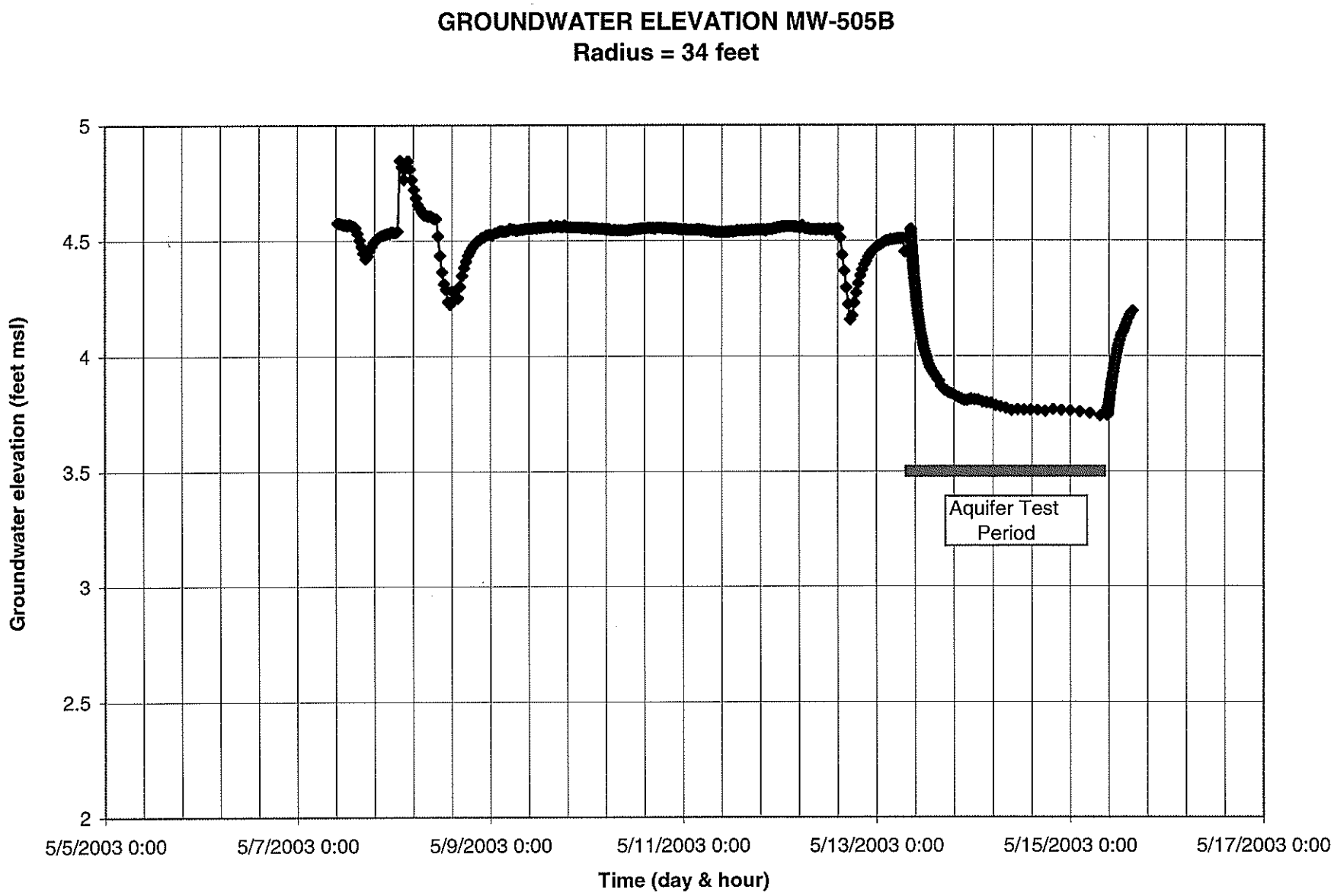


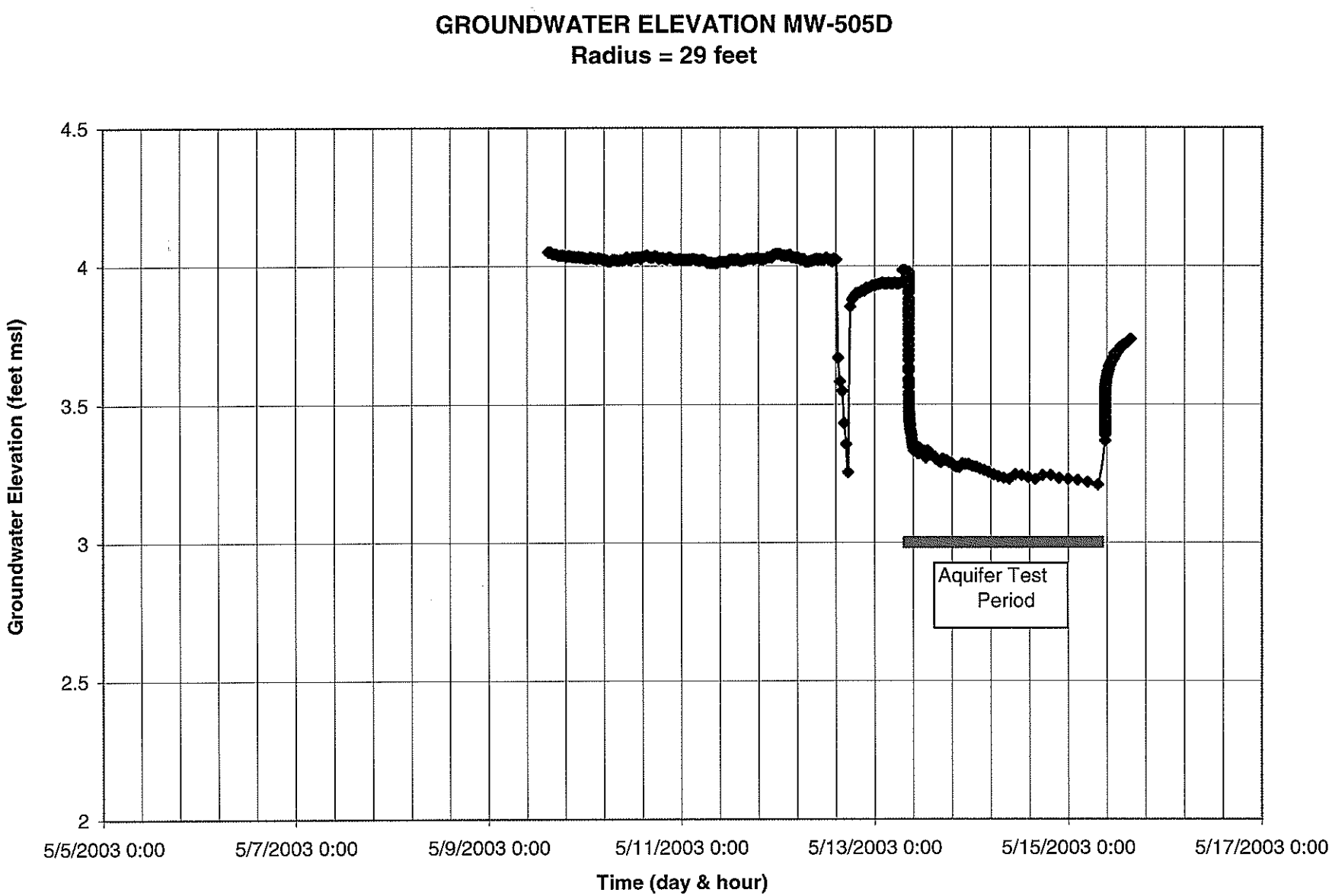

GWOUNDWATER ELEVATION MW-502D
Radius = 356 feet
Groundwater Elevation (feet msl)
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

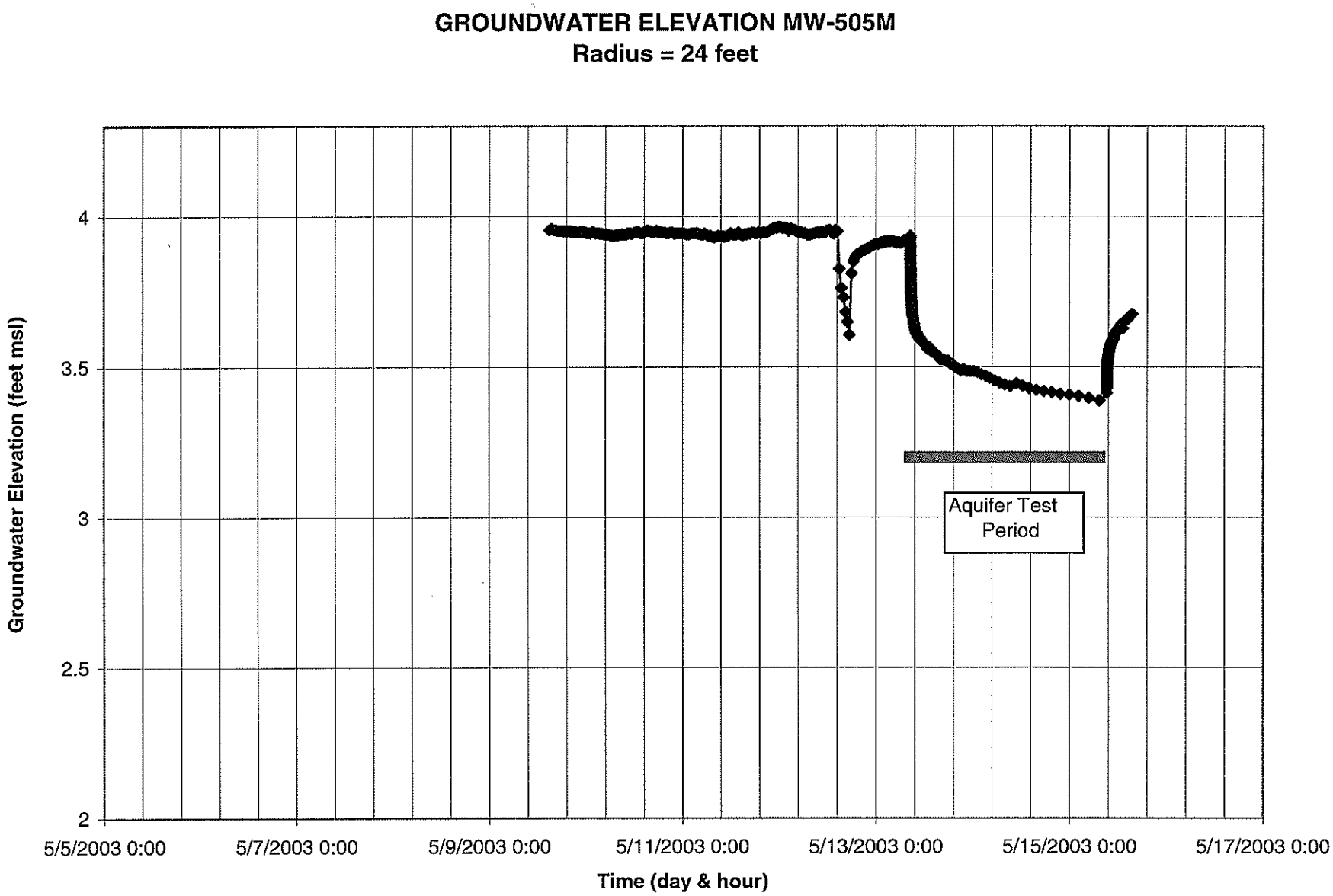

GROUNDWATER ELEVATION MW-504B
Radius = 47 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)


GROUNDWATER ELEVATION MW-504D
Radius 49 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

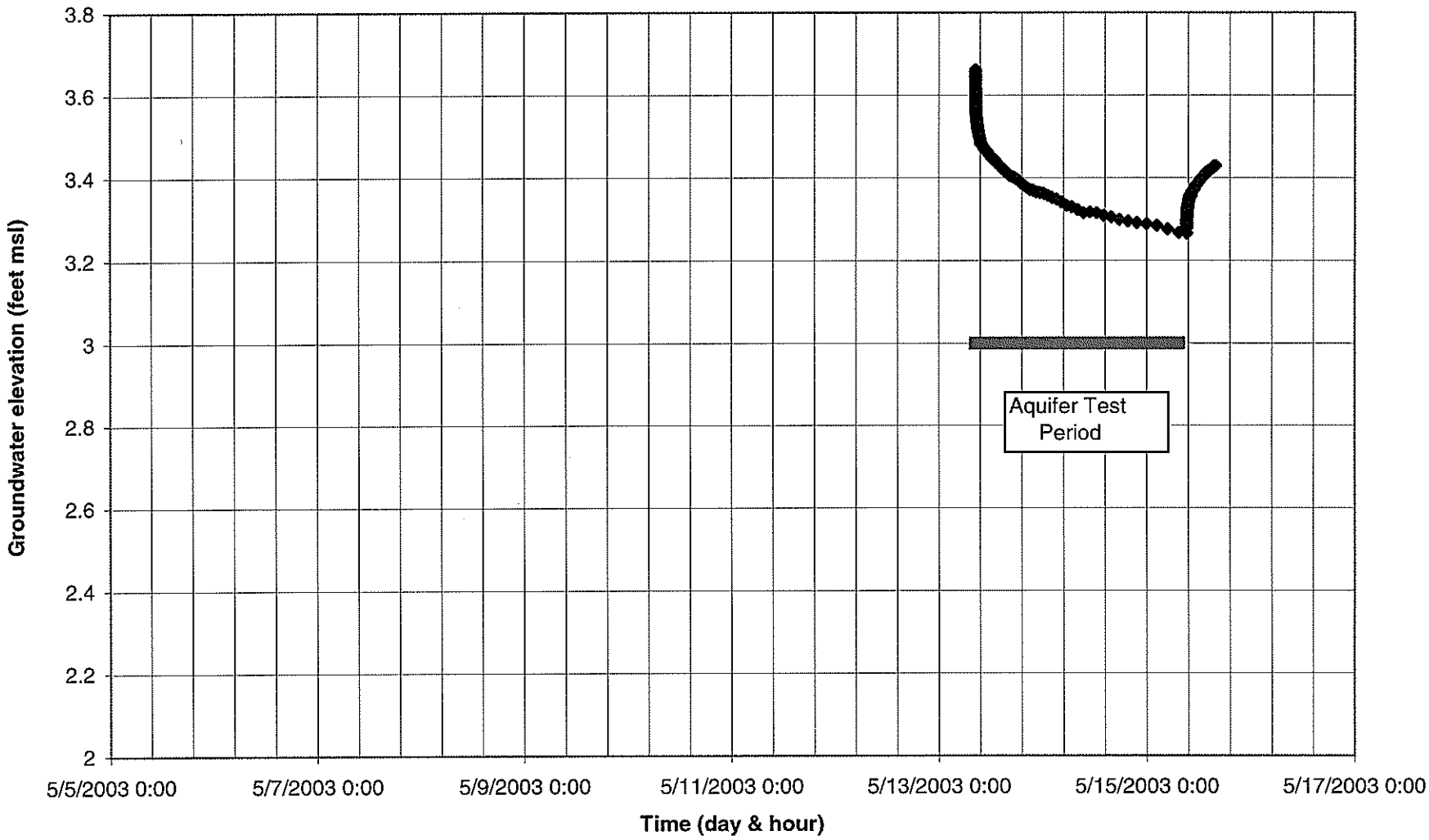

GROUNDWATER ELEVATION MW-504S
Radius = 53 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

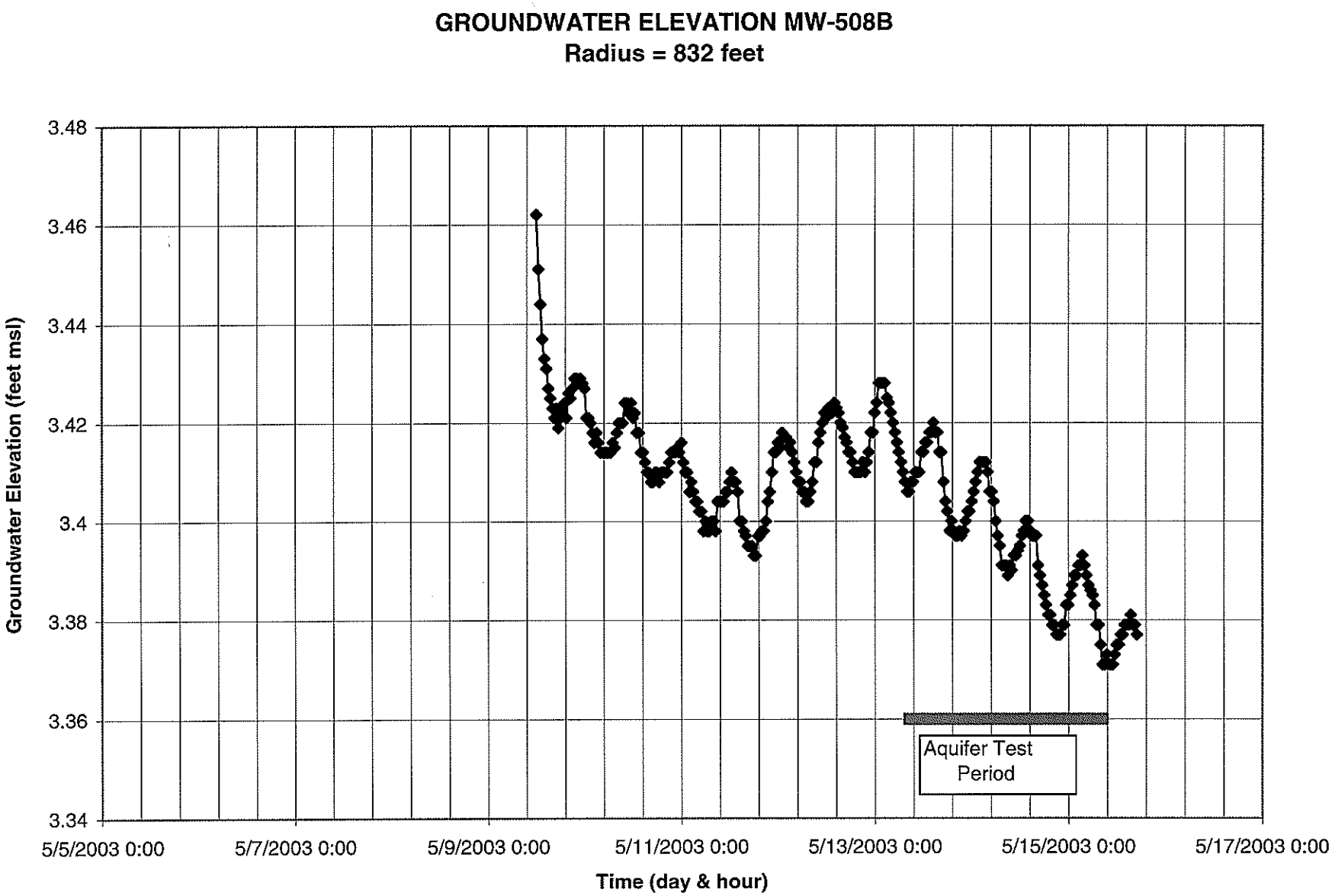

GROUNDWATER ELEVATION MW-505B
Radius = 34 feet
Groundwater elevation (feet msl)
5
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

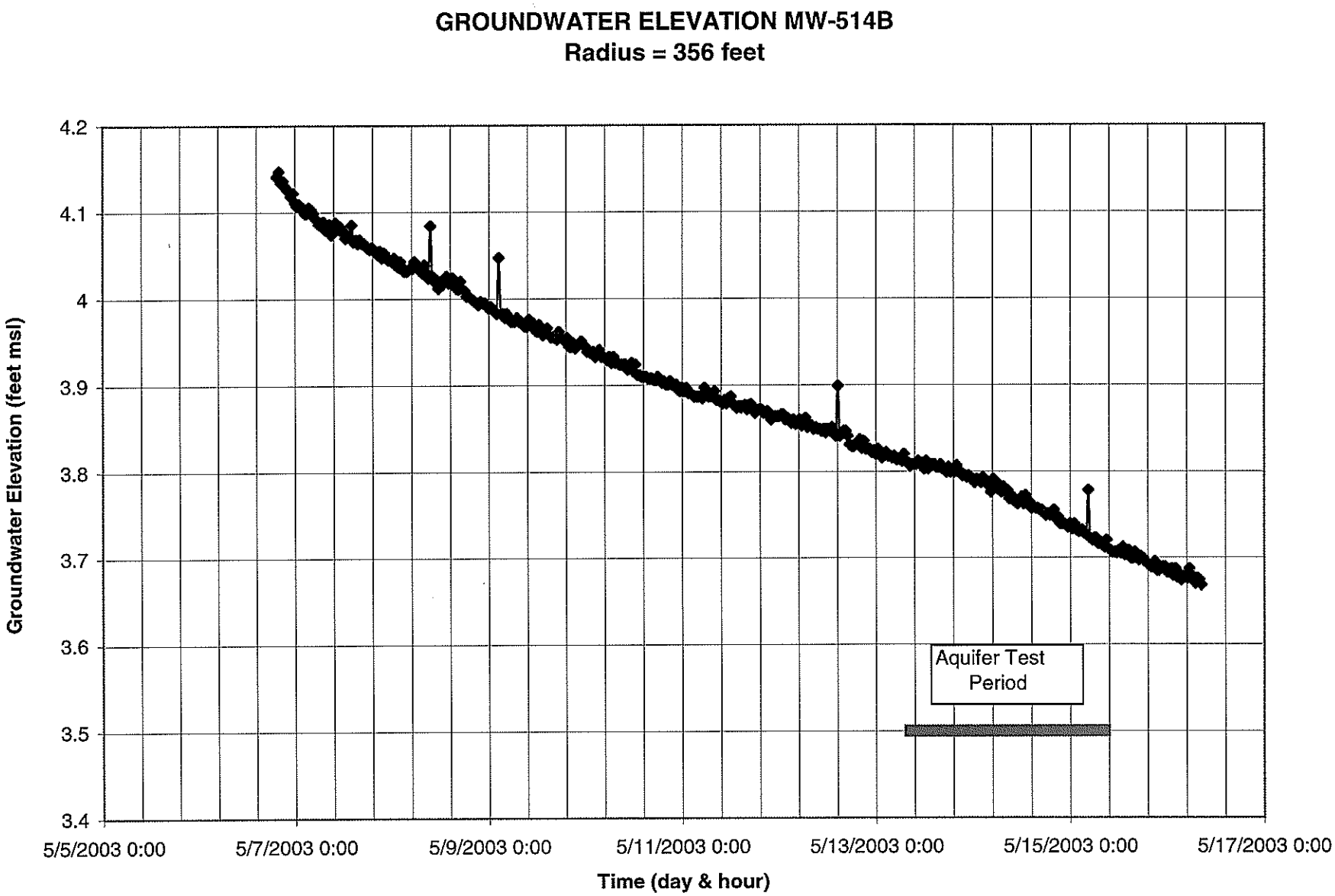

GROUNDWATER ELEVATION MW-505D
Radius = 29 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

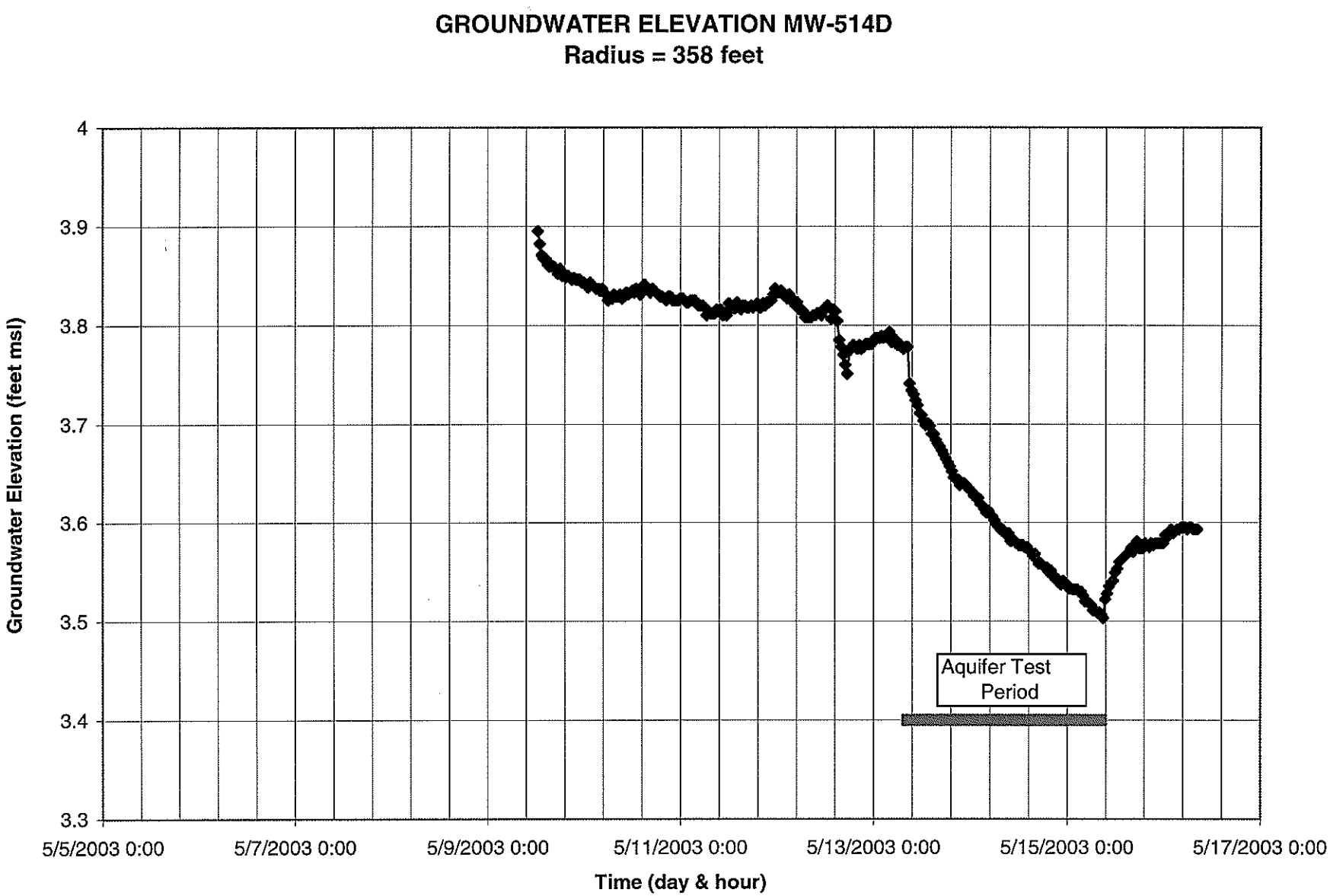

GROUNDWATER ELEVATION MW-505M
Radius = 24 feet
Groundwater Elevation (feet msl)
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

GROUNDWATER ELEVATION MW-505S
Radius = 17 feet




GROUNDWATER ELEVATION MW-508B
Radius = 832 feet
Groundwater Elevation (feet msl)
3.48
3.46
3.44
3.42
3.4
3.38
3.36
3.34
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period


GROUNDWATER ELEVATION MW-514B
Radius = 356 feet
Groundwater Elevation (feet msl)
4.2
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period


GROUNDWATER ELEVATION MW-514D
Radius = 358 feet
Groundwater Elevation (feet msl)
4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

FERRY CREEK SEEPAGE STUDY DATA

APPENDIX D

To: File

From: M. Healey

Date: March, 1999

Re: Ferry Creek Seepage Study

A seepage study was conducted in Ferry Creek in March, 1999 to estimate the amount and rate of ground water contamination from VOCs and SVOCs discharging into the creek into Ferry Creek. The seepage study consisted of installing 13 seepage meters at 12 locations along the lower reach of Ferry Creek, south of Interstate Route 95, and collecting 4 surface water samples from the creek. Seepage meters 2 and 2A were collocated to provide a duplicate ground water sample to meet analytical data quality control needs. Figure 2-3 presents the location of the seepage meters and surface water sample locations.

The initial plan for determining where to locate the seepage meters was to use two field criteria: The first was to conduct a temperature survey of the surface water and the shallow sediment at various locations along the Ferry Creek. The differences in temperature indicate groundwater discharge into the creek, as the surface water temperature is affected more strongly by ambient temperature changes. This method has been used to successfully locate areas of groundwater discharge within water bodies, based on the difference in temperatures between the surface water and groundwater. The second method was to place seepage meters at locations where groundwater seeps were visually observed along the creek bank during low tide.

The temperature survey consisted of taking temperature measurements at various locations along the creek, with two measurements made at each location. The first temperature reading was taken mid way in the water column of the creek, and the second slightly below the sediment in the bottom of the creek at the same location. Measurements were taken with an electronic probe with an accuracy within +/- 0.1° centigrade, and therefore was capable of detecting slight differences that may occur

between groundwater discharge and the surface water. The results of the temperature survey did not produce sufficient differences at all locations to discriminate areas of higher versus lower rates of groundwater discharge. Therefore, the temperature survey was not used to locate metering points at all locations. The small differences in measured temperature between the surface water and groundwater discharge may be due, in part, to turbulent flow and the resulting mixing of the water caused by placing the thermometer in the moving surface water. It is also possible that some mixing of surface water and groundwater occurs in the upper sediments during high tides when surface water may actually flow into the sediment for short periods of time. This phenomena is discussed in further detail in Section 3.4.2.6 (Groundwater/Surface Water Interactions).

The seepage meters were located based on a combination of visual observation of seepage along the banks of Ferry Creek during low tide, the results of the temperature survey, and placing the remaining meters to provide a somewhat uniform spacing along the creek to obtain representative samples. One meter was placed at a location where previous sampling from another investigation had detected VOCs in the surface water and sediment.

The seepage meter devices were constructed from five-gallon plastic buckets that were modified and fitted with brass fittings to allow for venting air, pressure relief of entrapped water as the device was pushed into the sediment, purging water from the device prior to sampling, and collection of samples. The seepage devices were installed so that at least 8 to 9 inches of the bucket was embedded in the sediment. After installation, about 1.5 liters of water was purged from each meter using a peristaltic pump. After the seepage meters were purged the meters were left in the creek bed for a minimum period of 24 hours to allow for the meter to adjust to ambient hydraulic head conditions. Tedlar™ sample bags were attached to each meter until the bag collected about 0.5 liters of water, then the bag was retrieved. Immediately upon removal, the water contained in the sample bags were poured into VOA vials. The water remaining in the bag after the VOA vials were filled was measured using a graduated cylinder. The total volume of water in the sample bag was calculated by adding the amount in the graduated cylinder to the volume in the VOA vials, and these volumes were recorded for

each seepage meter. The water remaining in the graduated cylinder was poured into bottles for SVOC analysis.

Additional sample volume was required for SVOC analysis since a minimum of one liter was required. The necessary sample volume was obtained using a peristaltic pump at a very low pumping rate to acquire the remaining amount needed for the analysis. Natural groundwater flow was sufficient to obtain the additional amount needed for SVOC at 4 meter locations. Pumping reduced the pressure head within the seepage meter to less than that of the surface water in most cases, thereby providing a potential for surface water to leak into the meter. However, the total volume of SVOC sample that was pumped did not exceed the amount of groundwater that was entrapped within the device prior to sampling. This helped to assure that only groundwater was sampled for the SVOC analysis. The SVOC samples were field filtered at the site trailer.

Care was taken during the study to assure surface water did not leak into the seepage devices during the sampling. All the seepage devices were tested for water-tightness prior to installation in the sediment. In addition, the fittings and their effectiveness were tested to assure they would not be a source of leakage. Finally, the seepage meters were embedded deeply into the sediment to minimize potential leakage along the outside wall of the device. During the sampling using the Tedlar™ bags, the elevation head (i.e. pressure head) of water within the seepage meter was observed versus the water level of the creek. Observations showed that the head within the seepage meter exceeded the water level of the creek during the VOC sample collection. This means that the surface water could not leak into the meter since the pressure head of the surface water was always lower than that of the groundwater.

Surface water samples were also collected from three of the twelve locations within the creek for VOC and SVOC analysis. The data from these samples was used for comparison to the seepage meter samples.

Upon completion of the field study, the groundwater discharge rates for the entire creek were estimated. The first step in estimating the discharge rates was to define the areas within Ferry Creek that each seepage meter represented so that the data from the meters could be integrated over the entire length of Ferry Creek. The observed

seepage, evidence of groundwater seepage along the creek banks, and bottom conditions in the creek during low tide allowed for a reasonable assignment of seepage meter results to segments of the creek. The seepage rate measured at a seep meter was then applied to that area of the creek that had similar ground water seeps observed during periods of low tide.

The ground water discharge rates for Ferry Creek were then calculated as follows:

- Ferry Creek was divided into segments that were associated with each seepage meter based on similar physical and sediment characteristics along the creek. The length and width of these segments were used to calculate the area of the bottom of the creek contributing to the groundwater discharge.

- The results of the tidal influence study conducted in February, 1999 and described in Section 3.4.2.6 and Appendix D, were used to estimate the time that groundwater discharged to the creek versus times when discharge was not possible during high tides. High tides in Ferry Creek cause the elevation head of the surface water to exceed the groundwater head at the base of the creek, thereby hydraulically blocking discharge of groundwater to the creek. The duration of discharge to the creek was estimated at 910 minutes per day, versus 530 minutes per day when groundwater did not discharge to the creek.

- This correction of discharge time was not applied to the seepage meters that were left in place over one or more tidal cycles in order to collect enough water to meet the sample requirements. The seepage meters that required adjustment of tidal effects are indicated on Table 1.

- The observed seepage rate, as determined in the field, was corrected by a factor of 38 percent. This value is based on laboratory experiments conducted by Cherkauer and McBride, (1988) that show that the seepage meters similar to those used for this study measured only 62% of the actual flow in a laboratory test tank. The difference in measured seepage rate from the actual seepage rate is caused by disturbance of the sediment during installation of the meter and head losses in the seepage meter

and the sample bags. Therefore, the field seepage rates were increased by 38 percent to better approximate the true seepage rate.

- The corrected seepage rate ($cm^3/day/cm^2$) and the duration of time over which discharge occurred due to tidal influence was used to estimate the daily volume of ground water discharge into the creek.

The results of this analysis are presented on Table 1. The seepage meter SM-3 was located on an unnamed tributary to Ferry Creek that flows between the Morgan Francis property and Route 95. The data from this location was used with the data from seepage meters in Ferry Creek. Seepage meter SM-2A was a collocated meter used to collect duplicate water samples and the seepage from this meter was not added to the seepage rate from SM-2. A review of the table indicates that the segment of Ferry Creek from Route 95 to the flood control structure receives about 0.68 cubic feet per second of ground water.

The data also shows that most of the ground water discharge occurred at seepage meter SM-2. This seepage meter was located at a segment of the creek where the creek sediment contains more sand than other segments of the creek. In addition field observations indicate numerous ground water seeps on the creek banks during low tide.

The total VOC concentrations are summarized on Table 1. The complete chemical data is presented in Appendix B. The highest total VOC concentration was 1,889 ug/l at SM-2. This location also had the highest seepage rate. The data also shows that the highest VOC concentrations were detected in the upper reaches of the creek between Route 95 and Ferry Boulevard. These higher concentrations are associated with most, but not all of the higher seepage rates.

The results of the surface water sample analysis indicate that VOCs are present in the surface water in the upper reached of Ferry Creek. The concentrations of VOCs in the seepage meter samples are one to two orders of magnitude higher than the surface water samples. The order of magnitude difference is probably due to dilution of the concentrations in the groundwater discharging at the base of the creek with the surface water flow.

The results of the surface water and groundwater analysis for SVOCs indicated that this class of compounds was not present in the surface water or groundwater with the exception of a few low concentrations, 6 ug/l or lower, at seepage meters SM-2, SM-2A, SM-3, and SM-4. These SVOCs detected at the levels seen may be due to artifacts of the field filtering process.

The conclusions from the Ferry Creek Seepage Study are as follows:

- Groundwater discharging to Ferry Creek as base flow discharge is contaminated with VOCs.

- SVOCs were only detected in the groundwater samples at isolated locations and at very low concentrations. It is believed that the detection of these SVOCs may be related to field filtering artifacts.

- Groundwater seepage rates vary over five orders of magnitude among the 12 monitored locations. These variations are probably due to changes in the permeability of the different type of sediments that comprise the creek bed.

- Because of tidal influences discussed in Section 3.4.2.6, Groundwater/Surface Water Interactions, the time that contaminated groundwater discharges to the creek can be estimated using 910 minutes per day, versus 530 minutes per day when groundwater did not discharge to the creek.

- The segment of Ferry Creek from Route 95 to the flood control structure receives about 0.68 cubic feet per second, which is about 437,000 gallons per day, of contaminated ground water.

TABLE 1
FERRY CREEK SEEPAGE STUDY
SUMMARY CALCULATIONS
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

Seepage Meter No.	Flux/day (cm/day)	Correction Factor for Tidal Influence[1]	Daily Flux Corrected for Tidal Influence (cm/day)[1]	Area (sq ft)	Area (sq cm)	Daily flux (cm^3/day)	Daily Flux (Corrected for seepage meter factor) (cm^3/day)	Total VOCs (ug/l)	Comments
SM-1	5.2000	0.64	3.3280	2,750.00	2,554,992.00	8,503,013.38	11,734,158.46	130.00	
SM-2	285.3400	0.64	182.6176	6,845.00	6,359,607.36	1,161,376,233.03	1,602,699,201.58	1,889.00	
SM-2A	293.4700	0.64	187.8208					174.00	SM-2A co-located with SM-2
SM-4	0.0600	1.00	0.0600	1,300.00	1,207,814.40	72,468.86	100,007.03	23.00	
SM-5	2.2900	0.64	1.4656	1,800.00	1,672,358.40	2,451,008.47	3,382,391.69	41.00	
SM-6	0.4800	0.64	0.3072	1,350.00	1,254,268.80	385,311.38	531,729.70	90.00	
SM-7	5.2000	0.64	3.3280	5,400.00	5,017,075.20	16,696,826.27	23,041,620.25	26.00	
SM-8	1.1100	0.64	0.7104	5,600.00	5,202,892.80	3,696,135.05	5,100,666.36	23.00	
SM-9	0.2900	1.00	0.2900	4,050.00	3,762,806.40	1,091,213.86	1,505,875.12	34.00	
SM-10	0.1200	1.00	0.1200	6,600.00	6,131,980.80	735,837.70	1,015,456.02	12.00	
SM-11	0.3200	1.00	0.3200	11,000.00	10,219,968.00	3,270,389.76	4,513,137.87	36.00	
SM-12	0.0900	1.00	0.0900	8,000.00	7,432,704.00	668,943.36	923,141.84	49.00	
SM-3	5.4300		3.4752	1,937.00	1,799,643.46	1,799,643.46	2,483,507.97	122.00	SM-3 located on tributary to Ferry Creek
						Total	**1,657,030,893.89**		

Notes:
1. The correction factor for tidal influence is estimated to be 1.0 if the seepage meter collected groundwater through one or more tidal cycles. If the seepage meter yielded enough water in less than one tidal cycle then that rate is applied to that portion of a day (64%) when the surface water elevation is less than the groundwater elevation.
2. The daily seepage volume was calculated using the observed rate applied to 910 minutes.

Calculated Daily Flux

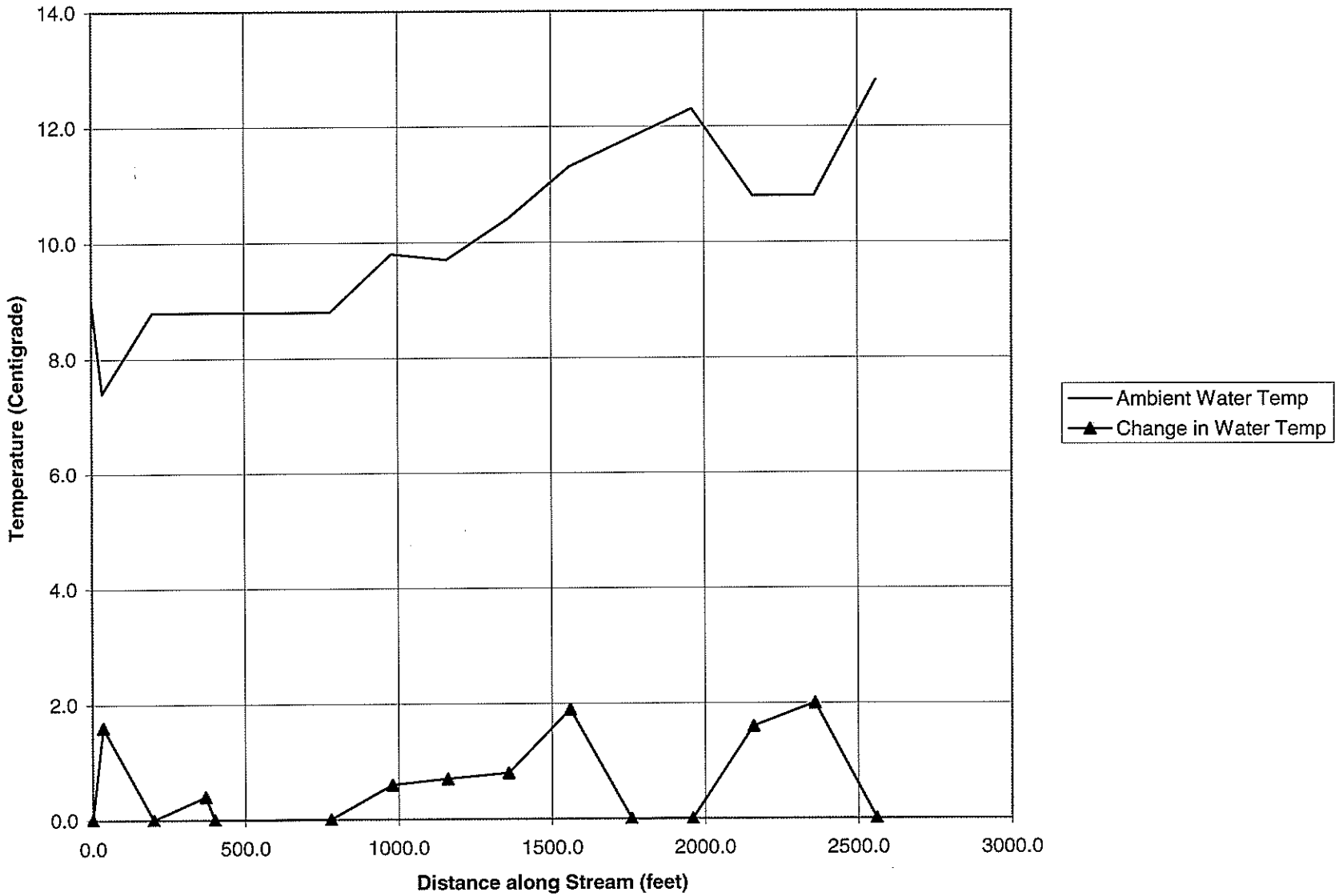
cm^3/day	**1,657,030,893.89**
Gallons/day	**437,662.11**
gpm	**303.93**
cfs	**0.68**

TABLE 2
FERRY CREEK SEEPAGE STUDY
SEEPAGE METER DATA
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

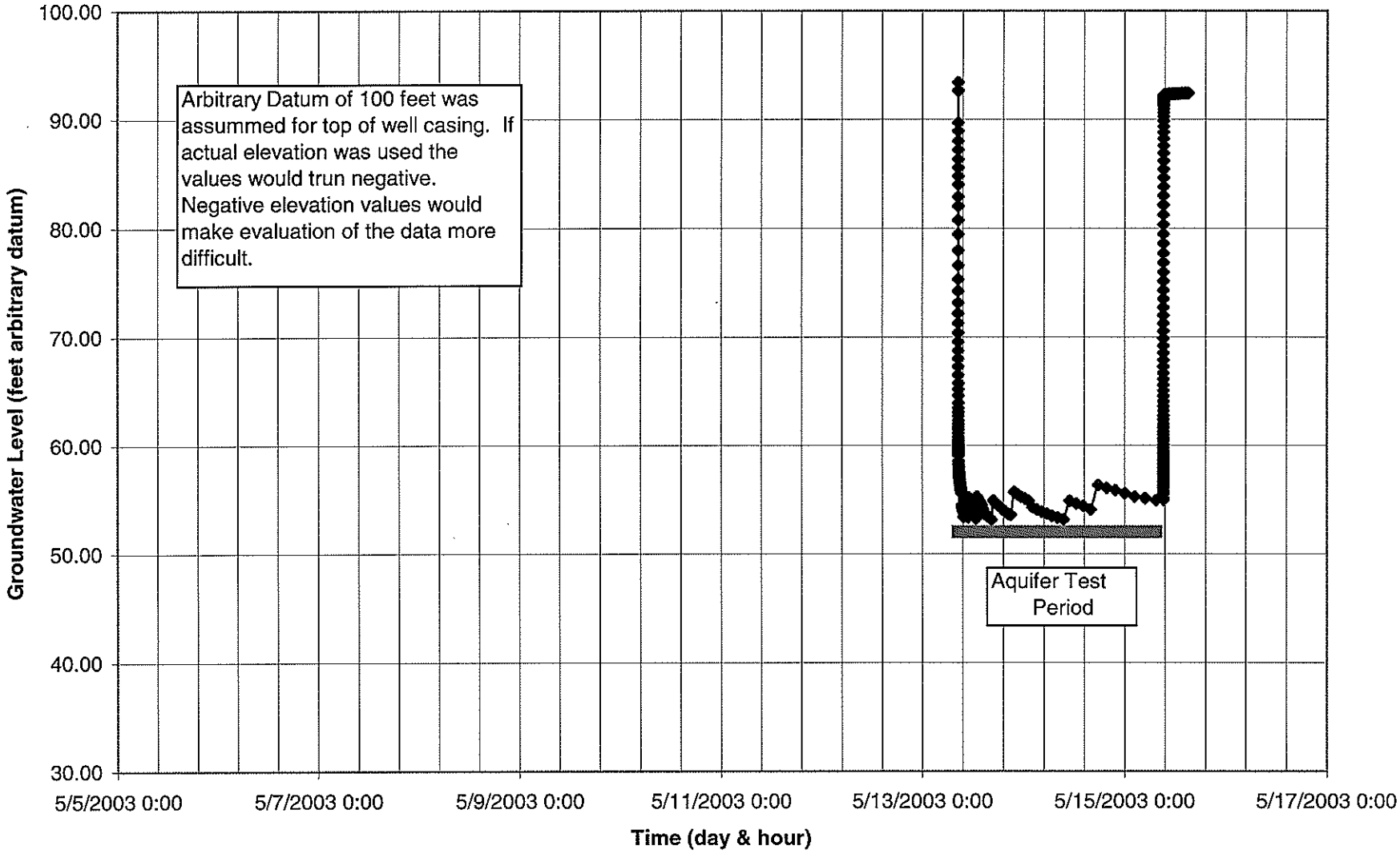
Seepage Meter No.	Date Meter Installed	Date and Time Bag Installed	Date and Time Bag Recovered	Elapsed Time (hrs)	Elapsed Time (min)	Volume of Water (ml)	Discharge Rate (ml/min)	Flux Rate (cm/min)	Comments
SM-1	3/25/1999	3/29/1999 17:40	3/30/1999 6:55	13:15	795	1410	1.77	0.0036075	See note.
SM-2	3/25/1999	3/25/1999 13:22	3/30/1999 13:31	0:09	9	875	97.22	0.4373586	
SM-2A			3/25/1999 13:50		10	1000	100.00	0.2038113	
SM-3	3/25/1999	3/29/1999 17:23	3/30/1999 6:55	13:32	812	1500	1.85	0.0037705	
SM-4	3/25/1999	3/30/1999 6:12	3/31/1999 7:12	25:00	1500	25	0.02	0.0000408	
SM-5	3/25/1999	3/26/1999 12:35	3/26/1999 14:56	2:21	141	110	0.78	0.0015897	
SM-6	3/25/1999	3/30/1999 6:19	3/31/1999 7:00	0:41	1481	235	0.16	0.0003261	The 00:41 designates 24 hours plus 41 min.
SM-7	3/25/1999	3/26/1999 13:07	3/26/1999 14:53	1:46	106	188	1.77	0.0036075	
SM-8	3/25/1999	3/30/1999 6:30	3/31/1999 6:40	0:10	1450	545	0.38	0.0007745	The 00:10 designates 24 hours plus 10 min.
SM-9	3/26/1999	3/30/1999 6:41	3/31/1999 6:16	23:35	1415	140	0.10	0.0002038	
SM-10	3/26/1999	3/29/1999 17:40	3/31/1999 6:15	12:35	755	30	0.04	0.0000815	
SM-11	3/26/1999	3/29/1999 17:17	3/31/1999 5:47	12:30	750	80	0.11	0.0002242	
SM-12	3/26/1999	3/29/1999 17:04	3/31/1999 6:00	12:56	776	25	0.03	0.0000611	

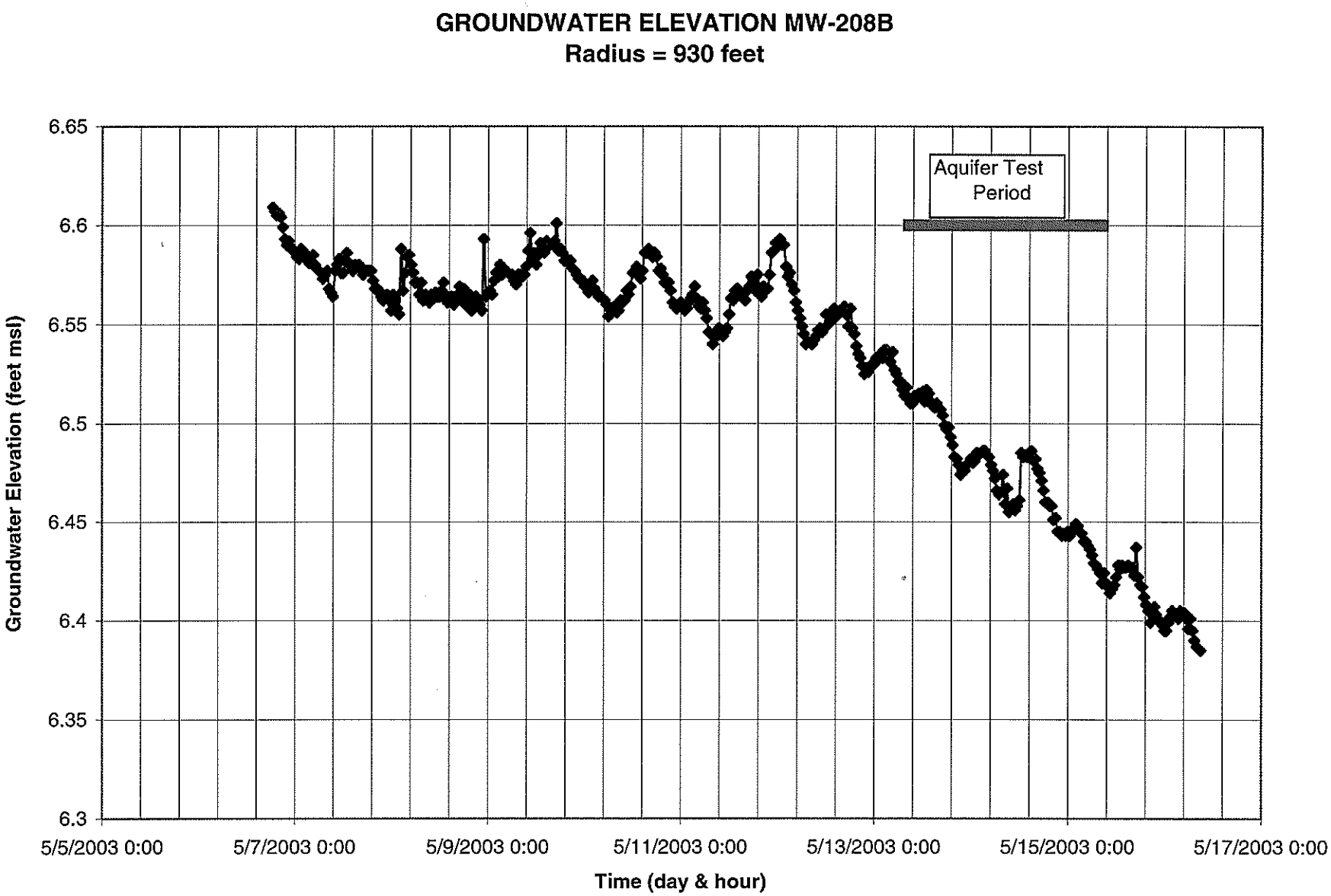
note: This meter was monitored twice; once for a sample and once for flow measurements.

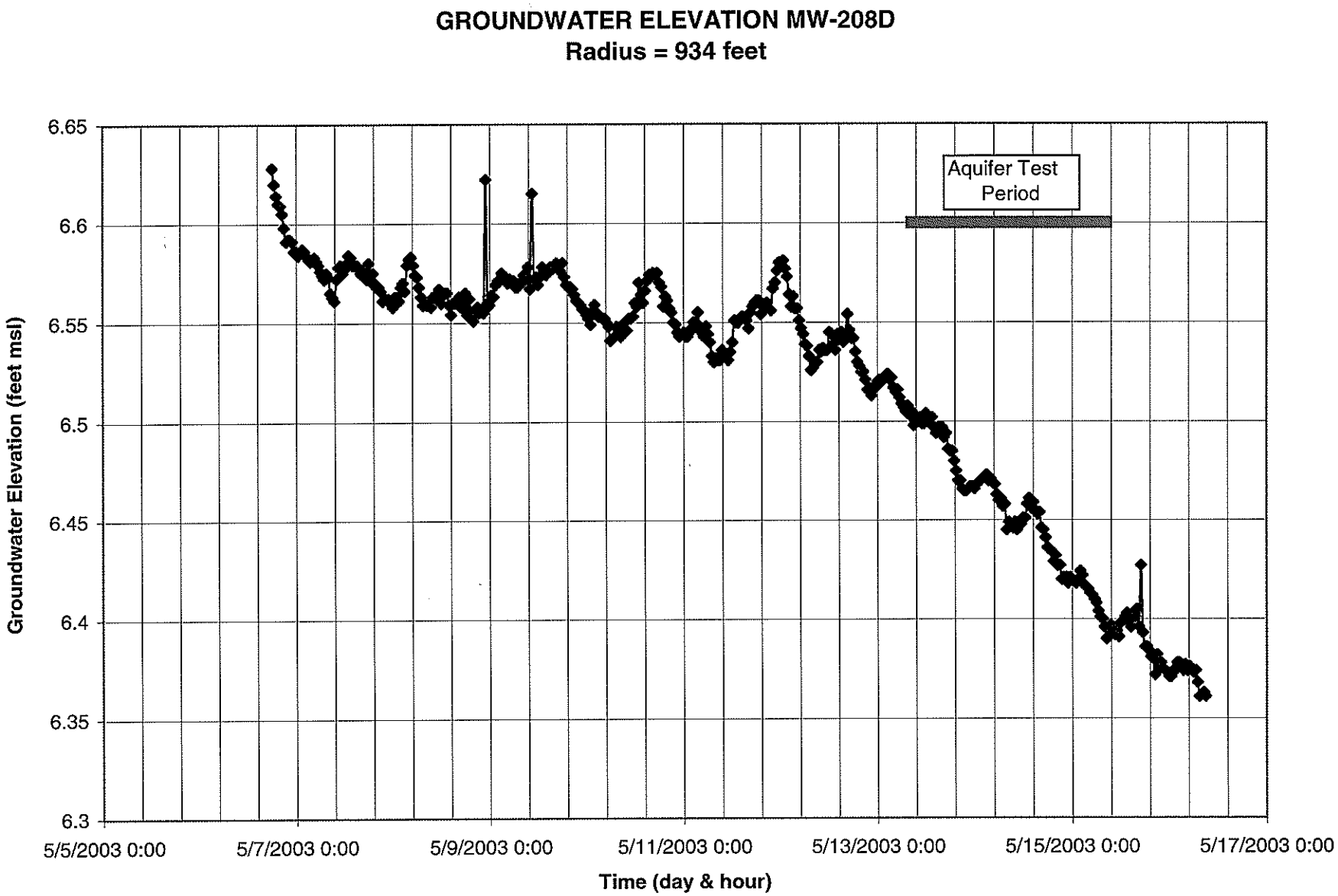
APPENDIX D
FERRY CREEK SEEPAGE STUDY
TEMPERATURE FLUCTUATION VS. DISTANCE ALONG FERRY CREEK
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT



GROUNDWATER LEVEL IN TEST WELL




GROUNDWATER ELEVATION MW-208B
Radius = 930 feet
Aquifer Test Period
Groundwater Elevation (feet msl)
6.65
6.6
6.55
6.5
6.45
6.4
6.35
6.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)


GROUNDWATER ELEVATION MW-208D
Radius = 934 feet
Aquifer Test Period
Groundwater Elevation (feet msl)
6.65
6.6
6.55
6.5
6.45
6.4
6.35
6.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
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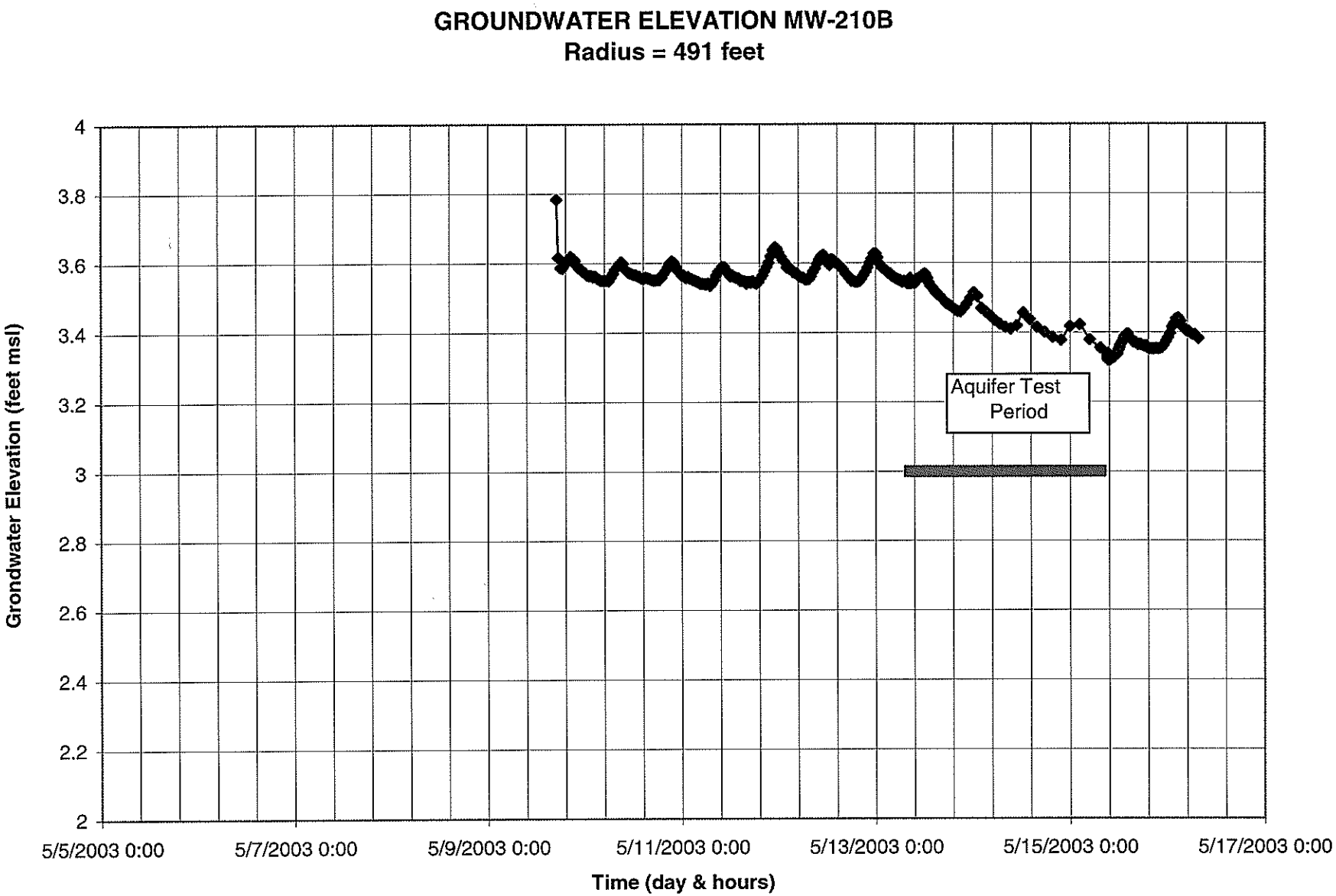
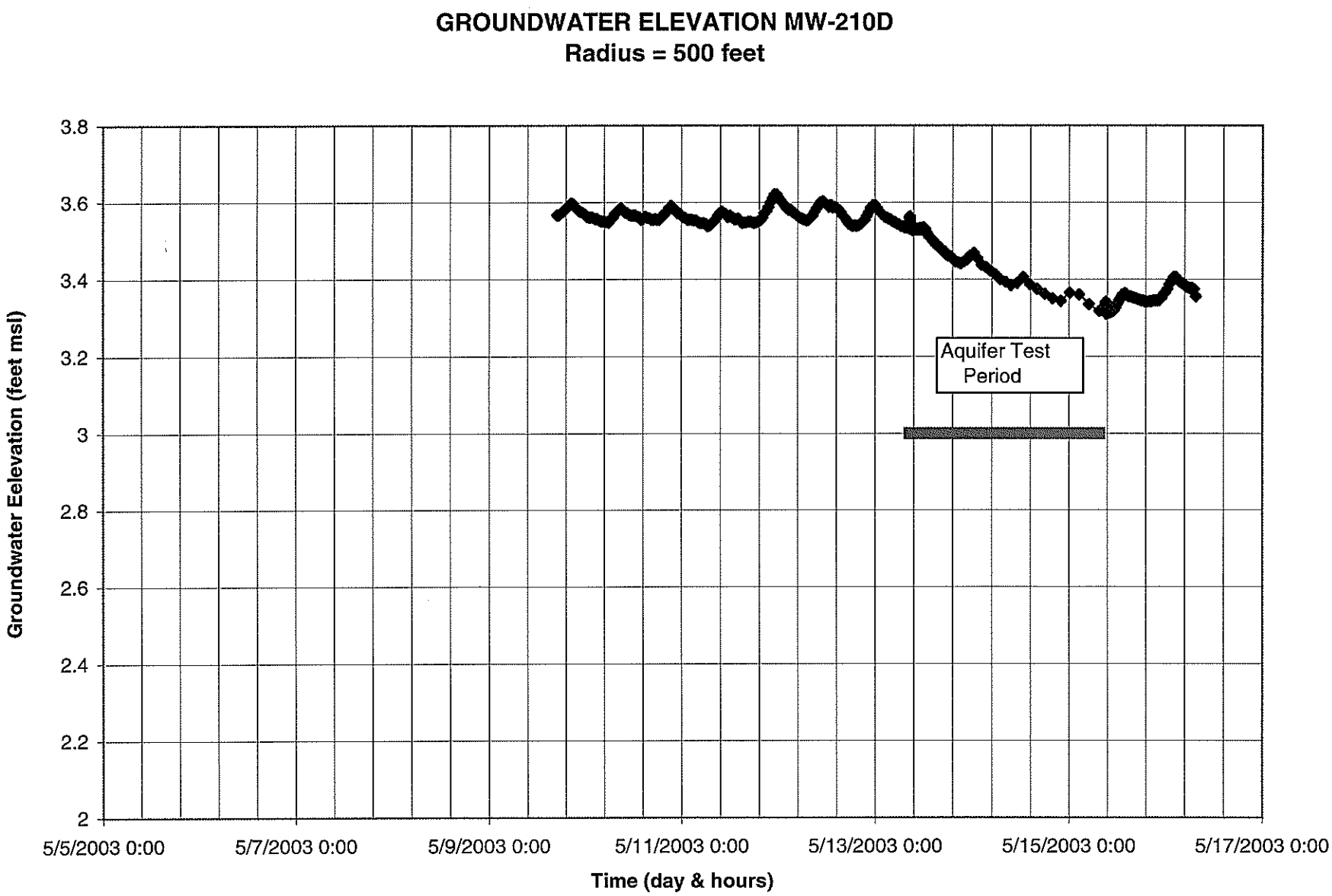
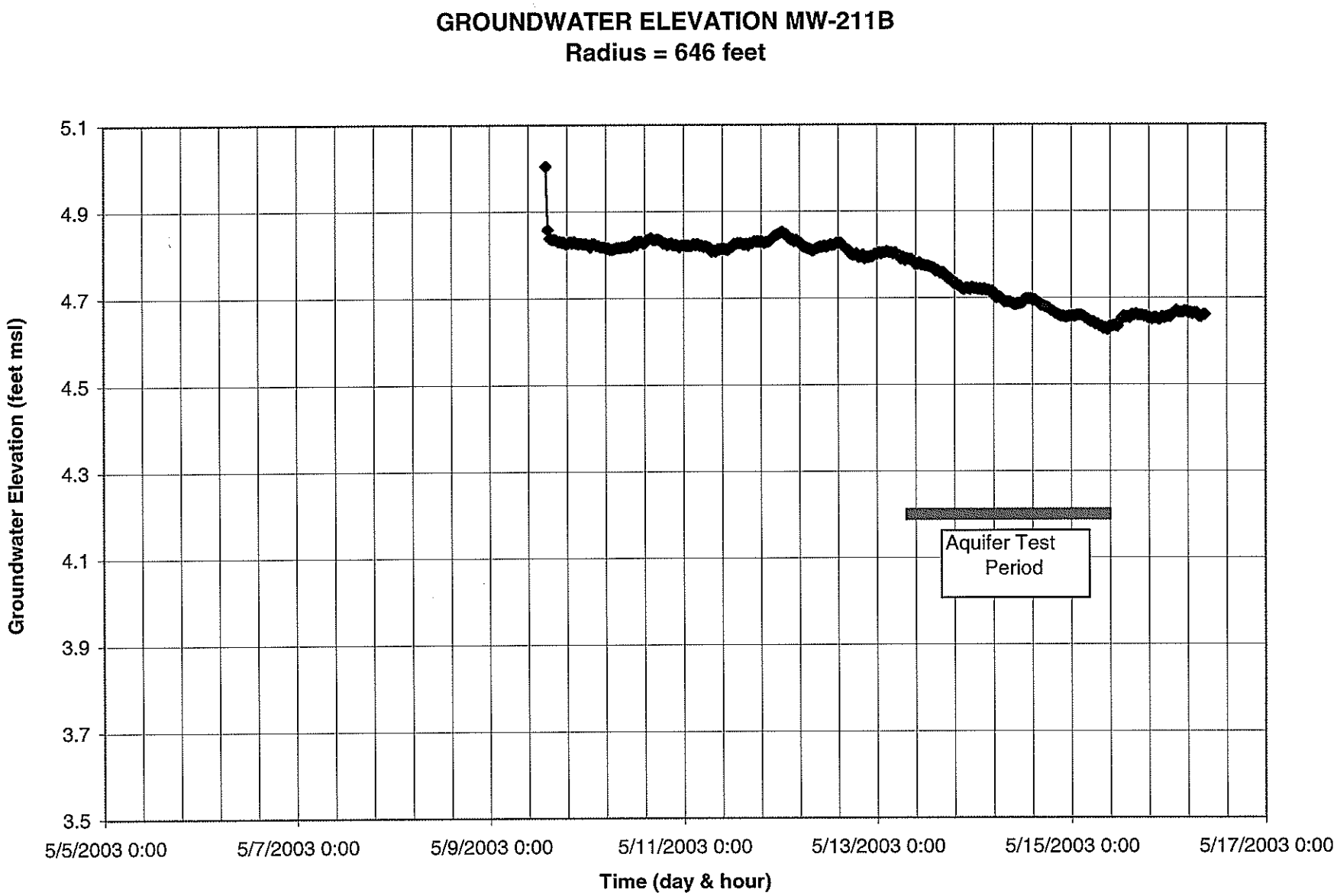
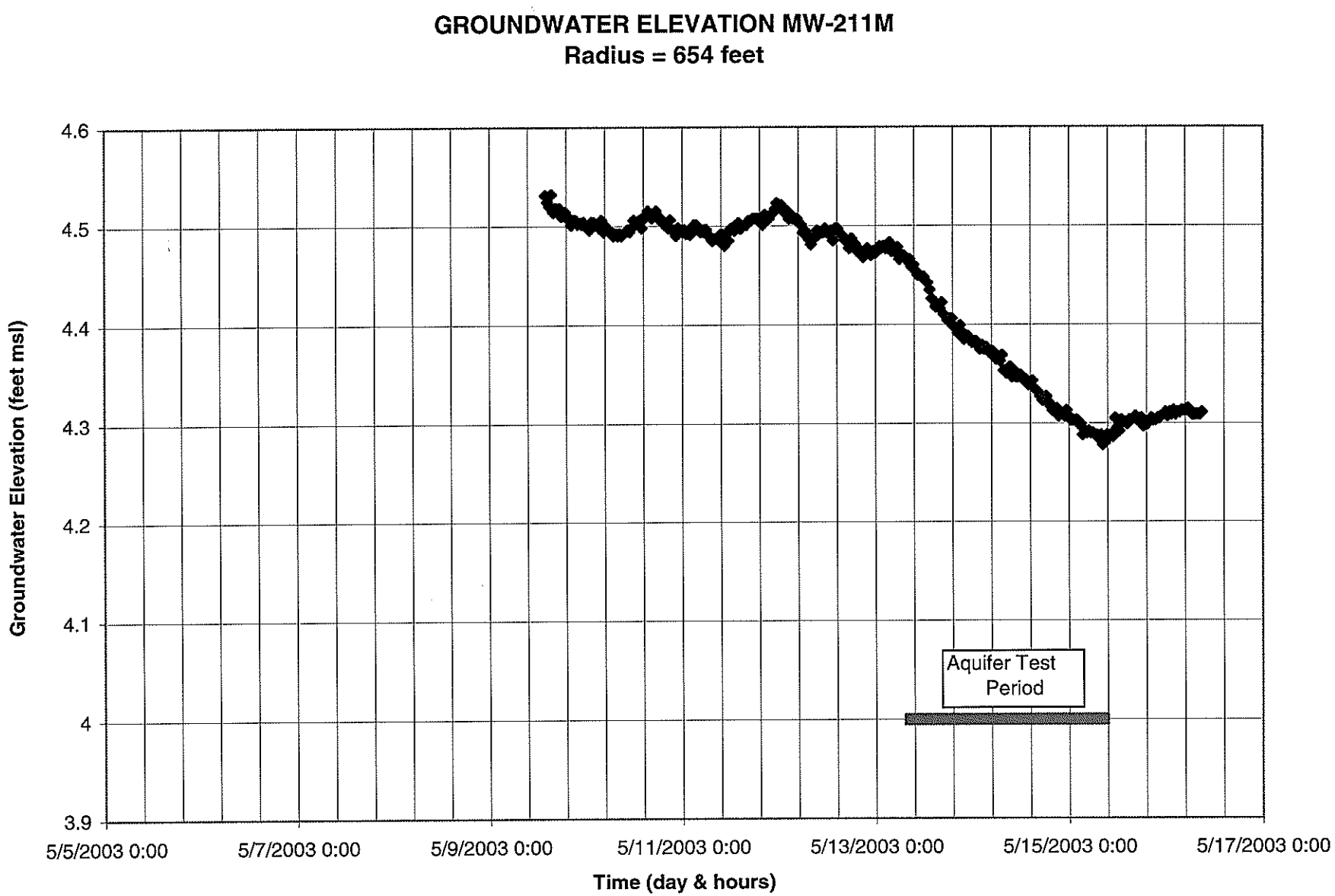
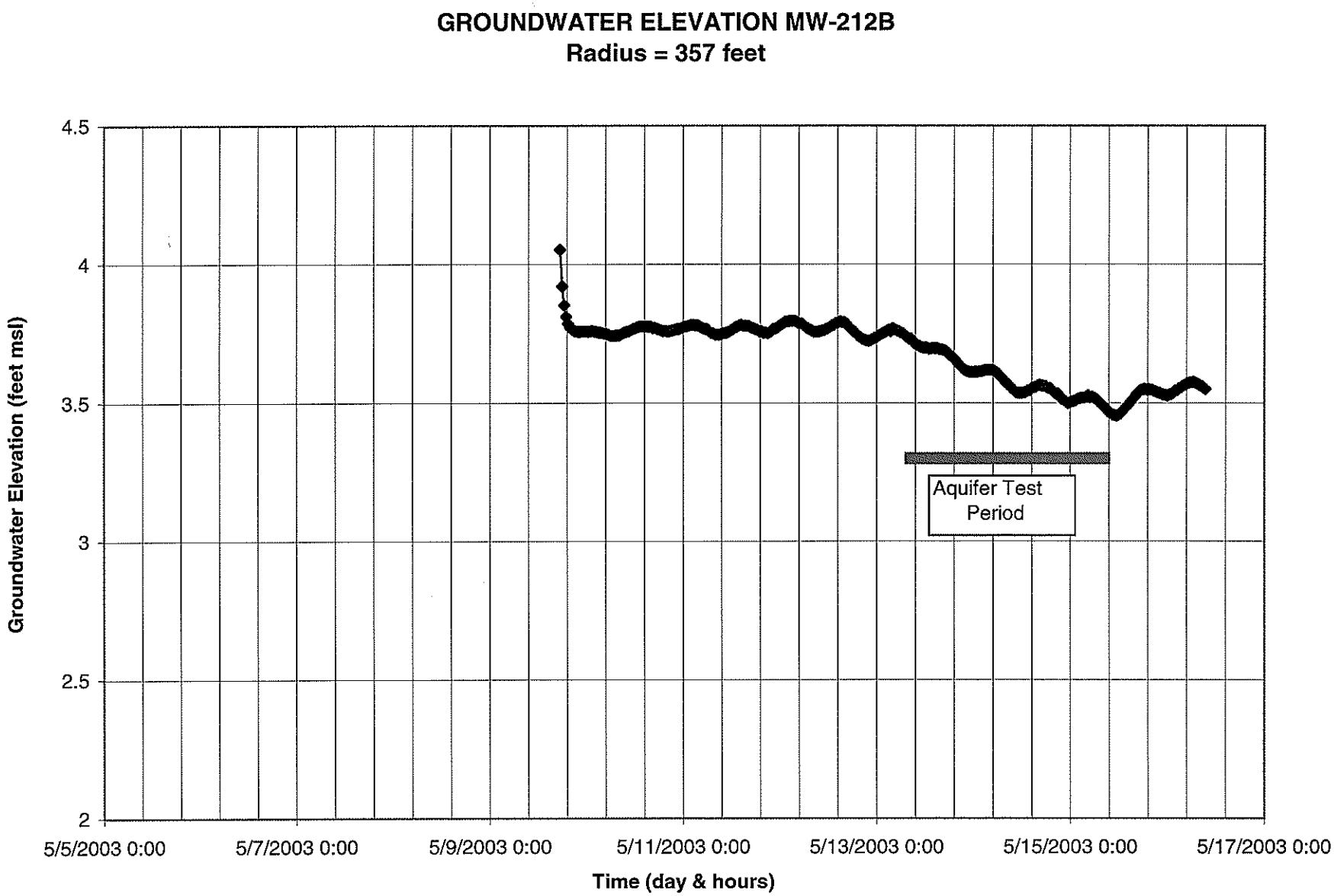
5/17/2003 0:00
Time (day & hour)

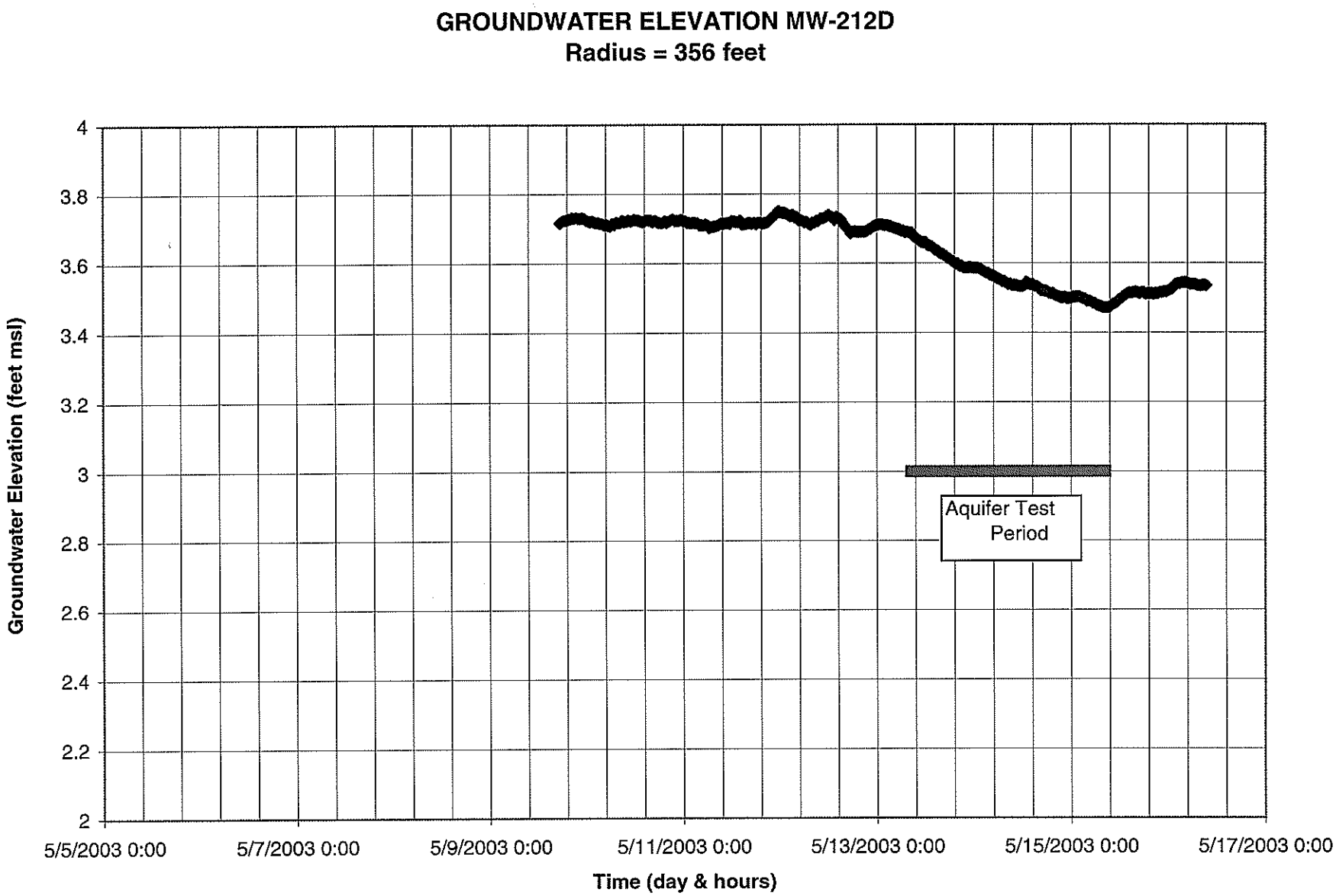

GROUNDWATER ELEVATION MW-210B
Radius = 491 feet
Grondwater Elevation (feet msl)
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

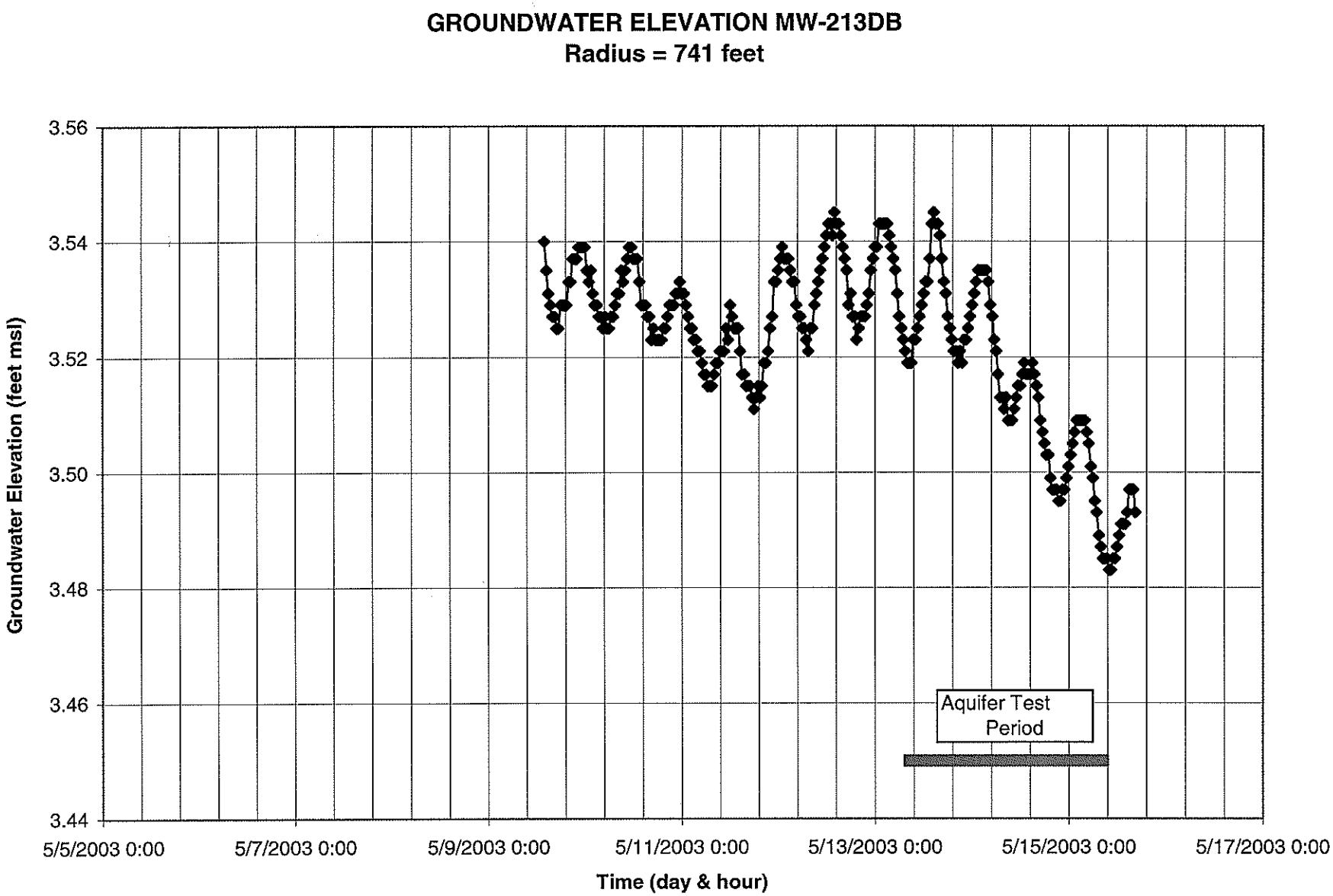

GROUNDWATER ELEVATION MW-210D
Radius = 500 feet
Groundwater Eelevation (feet msl)
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
Aquifer Test Period
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)

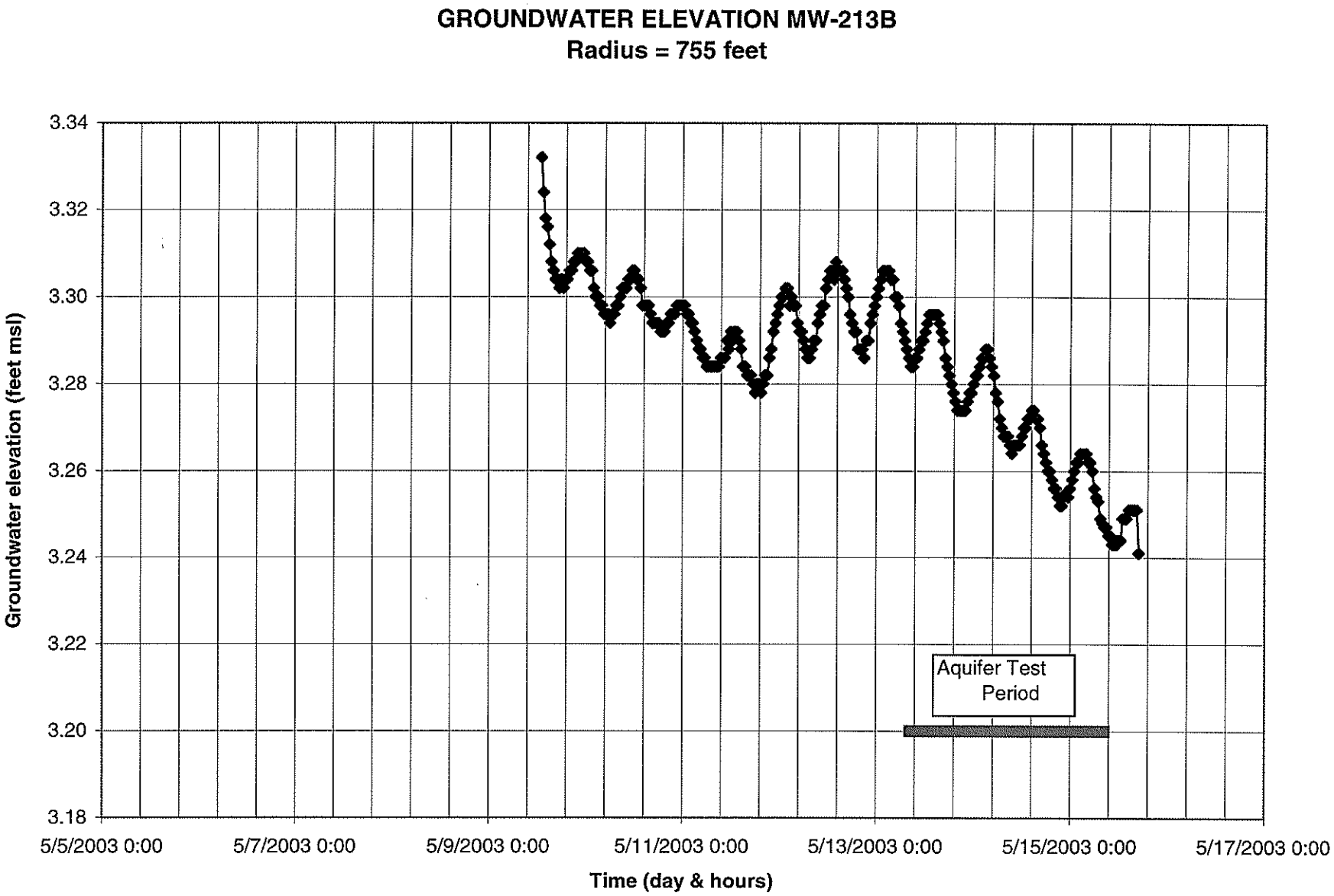

GROUNDWATER ELEVATION MW-211B
Radius = 646 feet
Groundwater Elevation (feet msl)
5.1
4.9
4.7
4.5
4.3
4.1
3.9
3.7
3.5
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

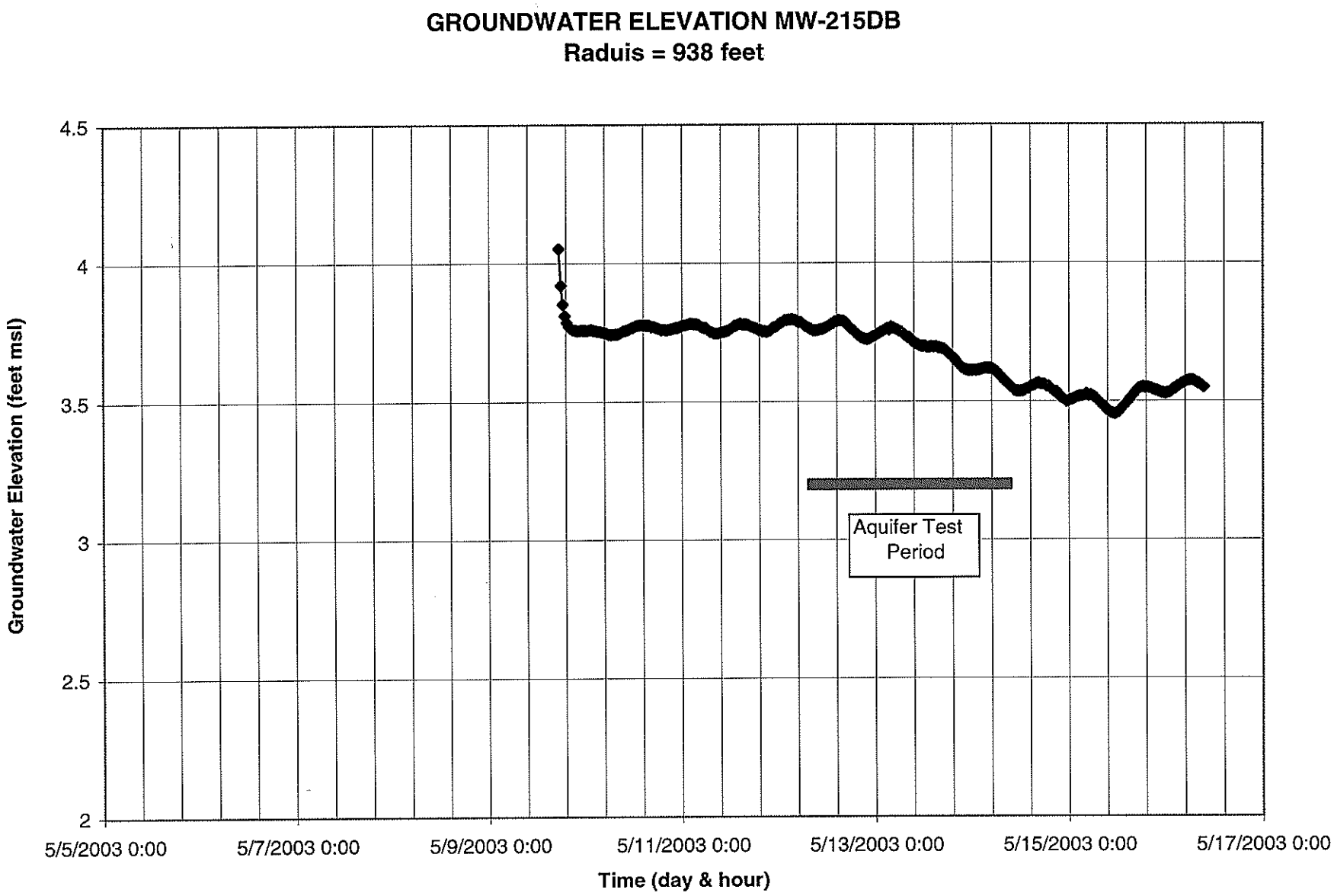

GROUNDWATER ELEVATION MW-211M
Radius = 654 feet
Groundwater Elevation (feet msl)
4.6
4.5
4.4
4.3
4.2
4.1
4
3.9
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

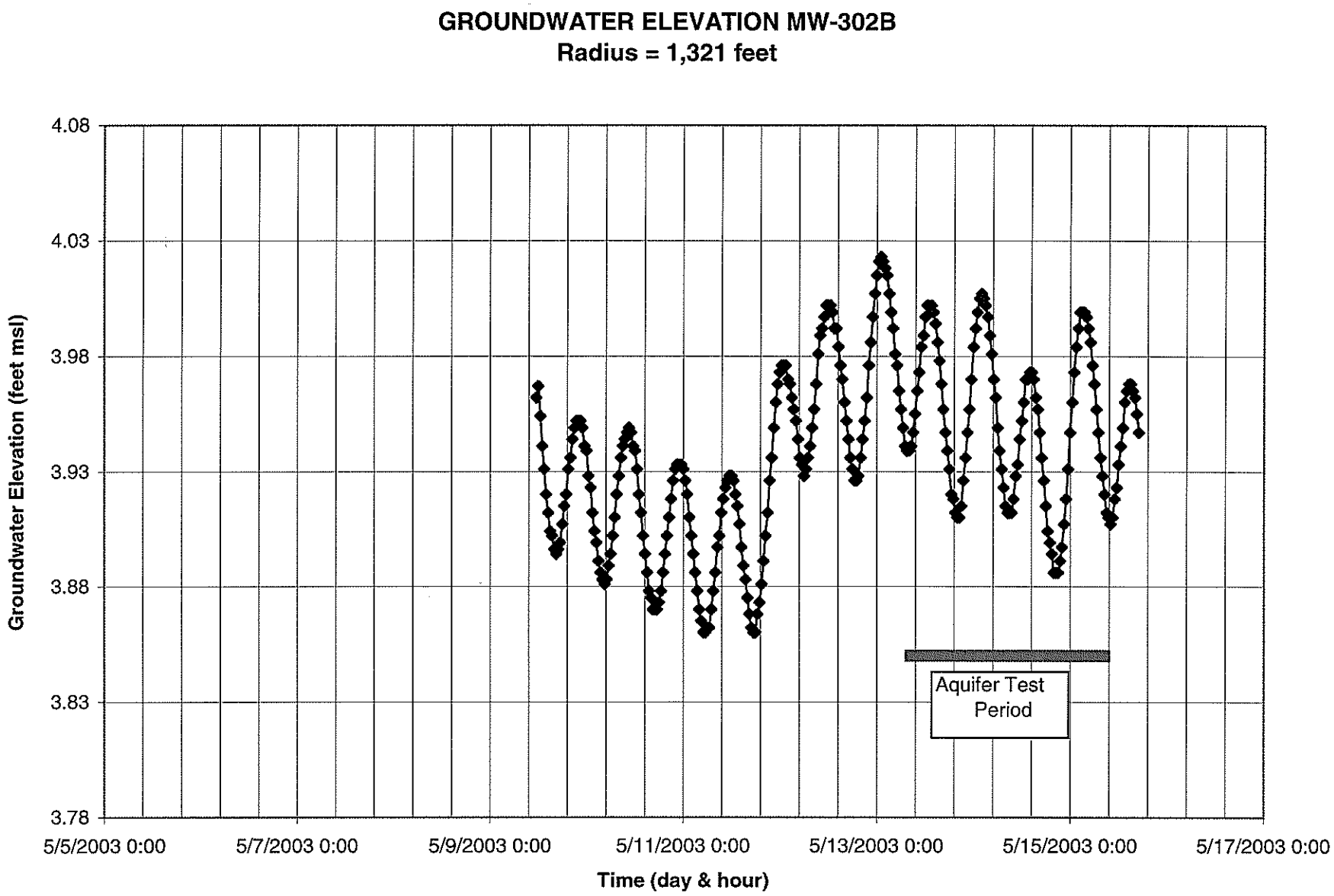

GROUNDWATER ELEVATION MW-212B
Radius = 357 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

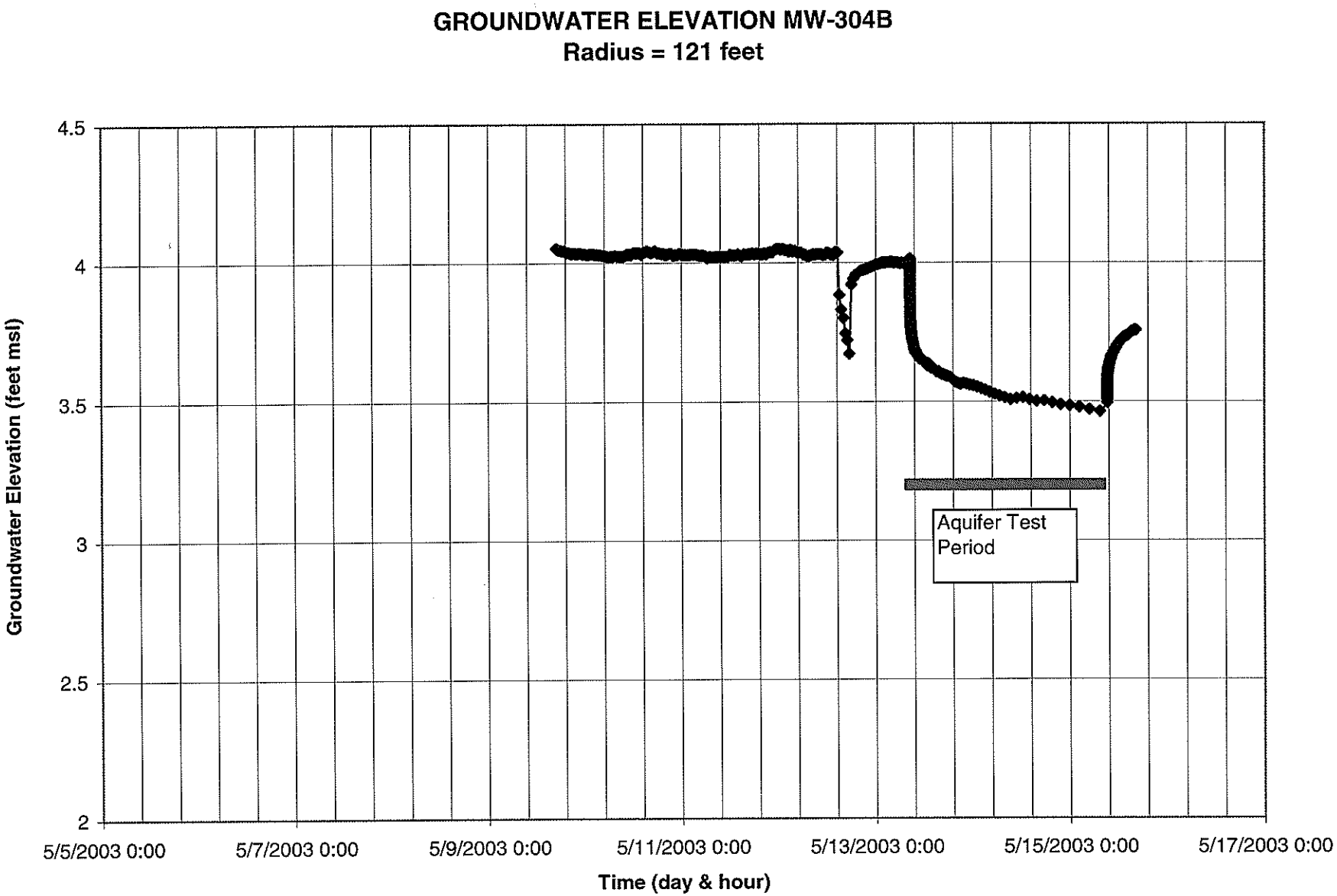

GROUNDWATER ELEVATION MW-212D
Radius = 356 feet
Groundwater Elevation (feet msl)
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period


GROUNDWATER ELEVATION MW-213DB
Radius = 741 feet
Groundwater Elevation (feet msl)
3.56
3.54
3.52
3.50
3.48
3.46
3.44
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

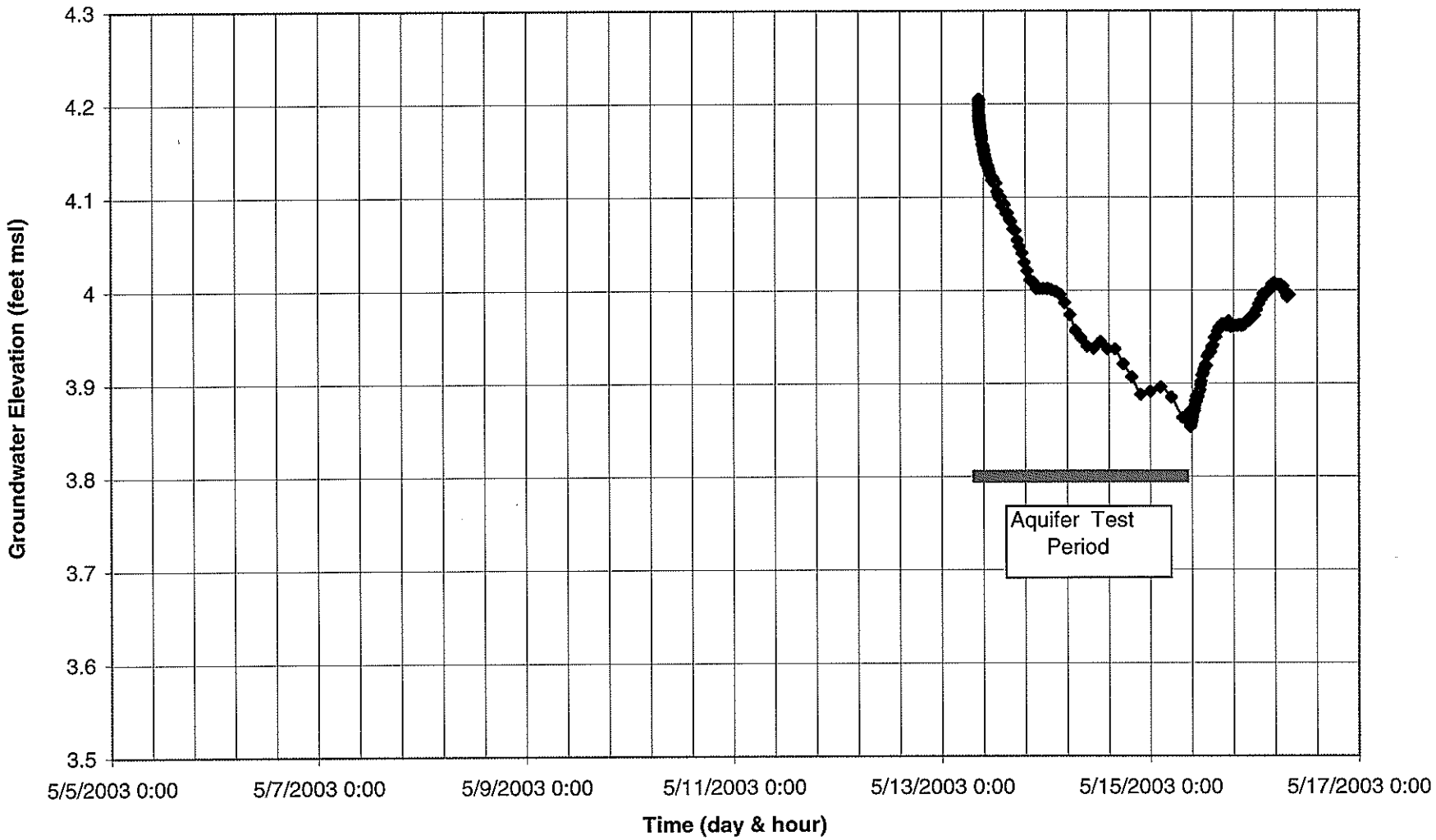

GROUNDWATER ELEVATION MW-213B
Radius = 755 feet
Groundwater elevation (feet msl)
3.34
3.32
3.30
3.28
3.26
3.24
3.22
3.20
3.18
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

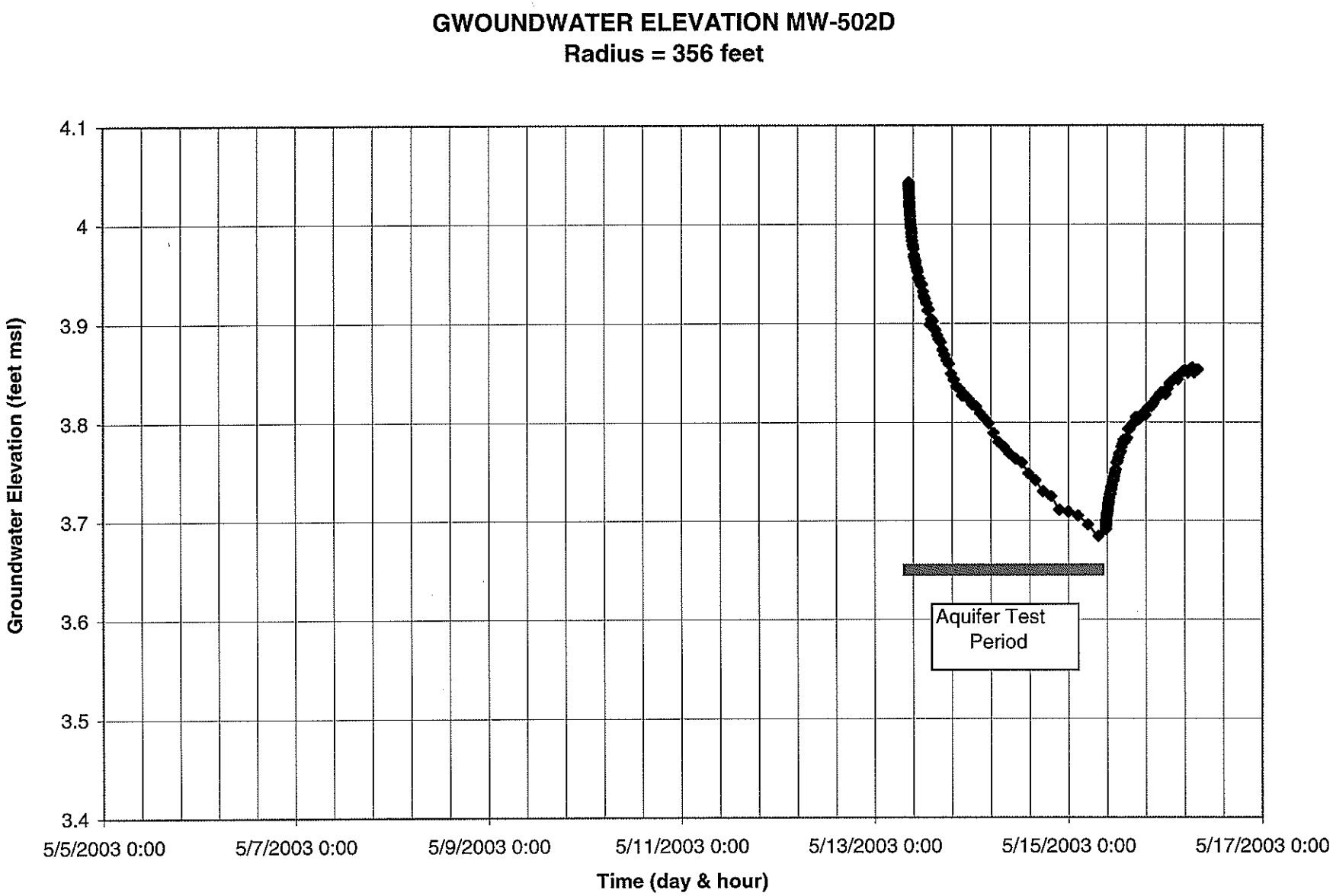

GROUNDWATER ELEVATION MW-215DB
Raduis = 938 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

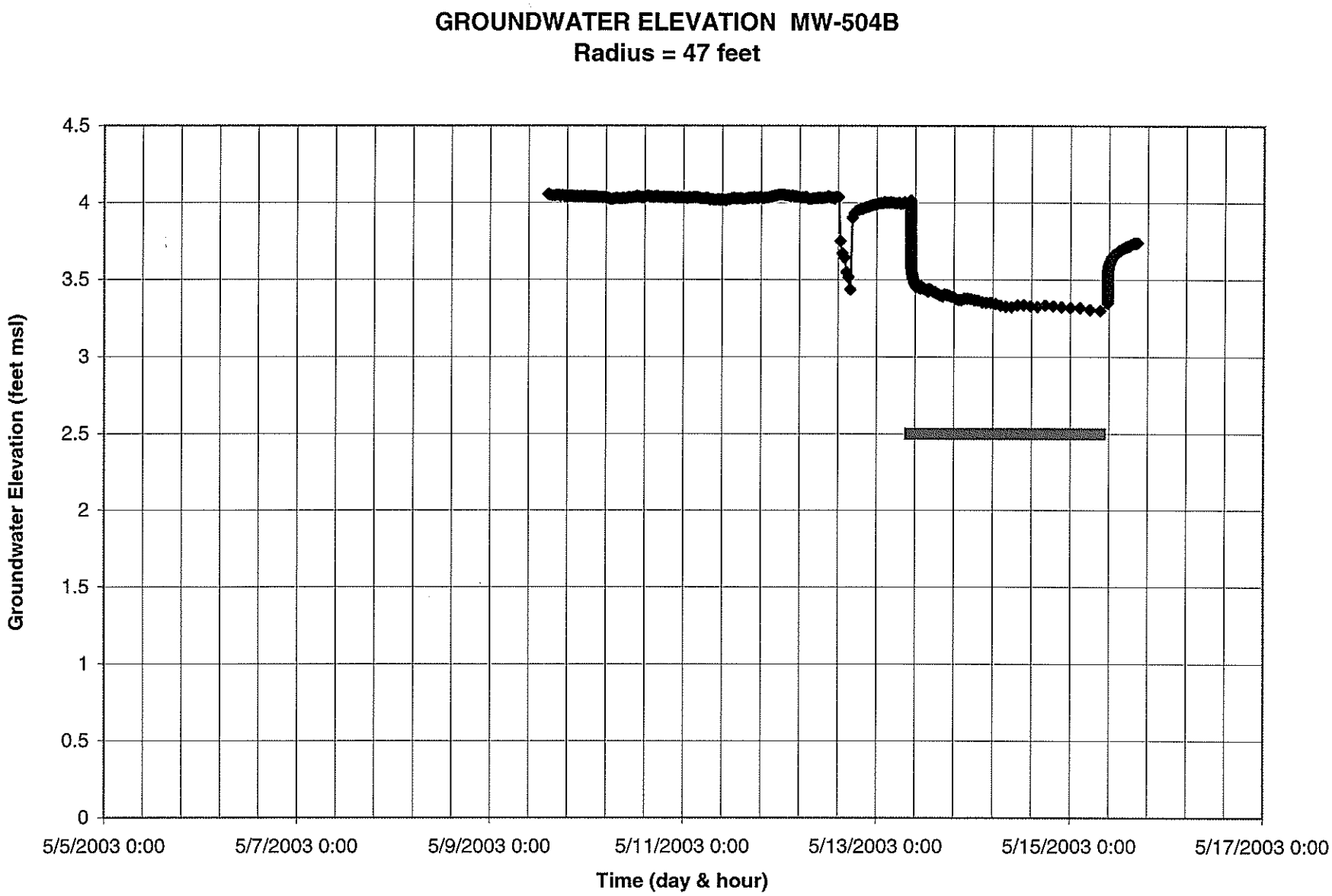

GROUNDWATER ELEVATION MW-302B
Radius = 1,321 feet
Groundwater Elevation (feet msl)
4.08
4.03
3.98
3.93
3.88
3.83
3.78
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

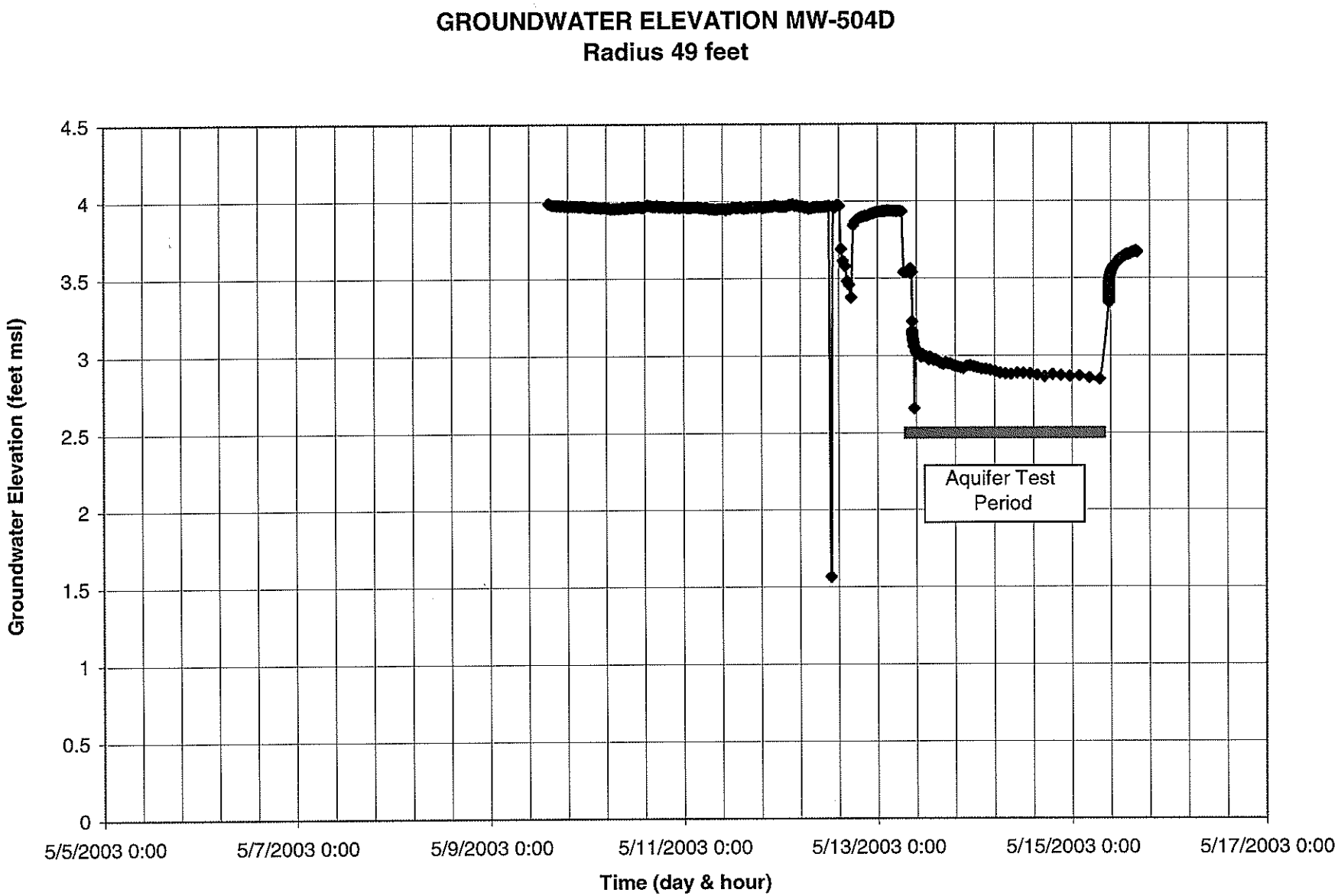

GROUNDWATER ELEVATION MW-304B
Radius = 121 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

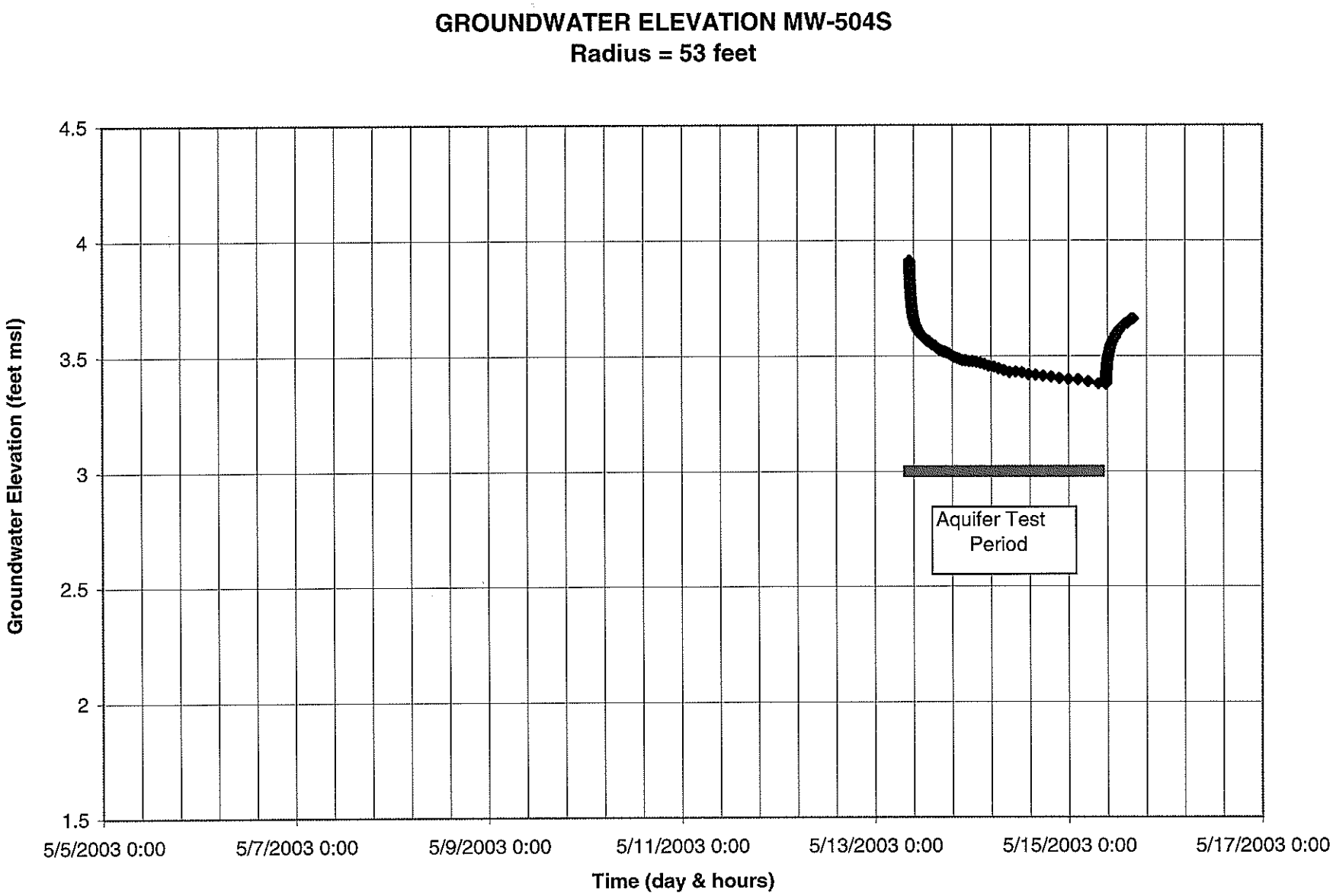
GROUNDWATER ELEVATION MW-502B
Radius = 362 feet

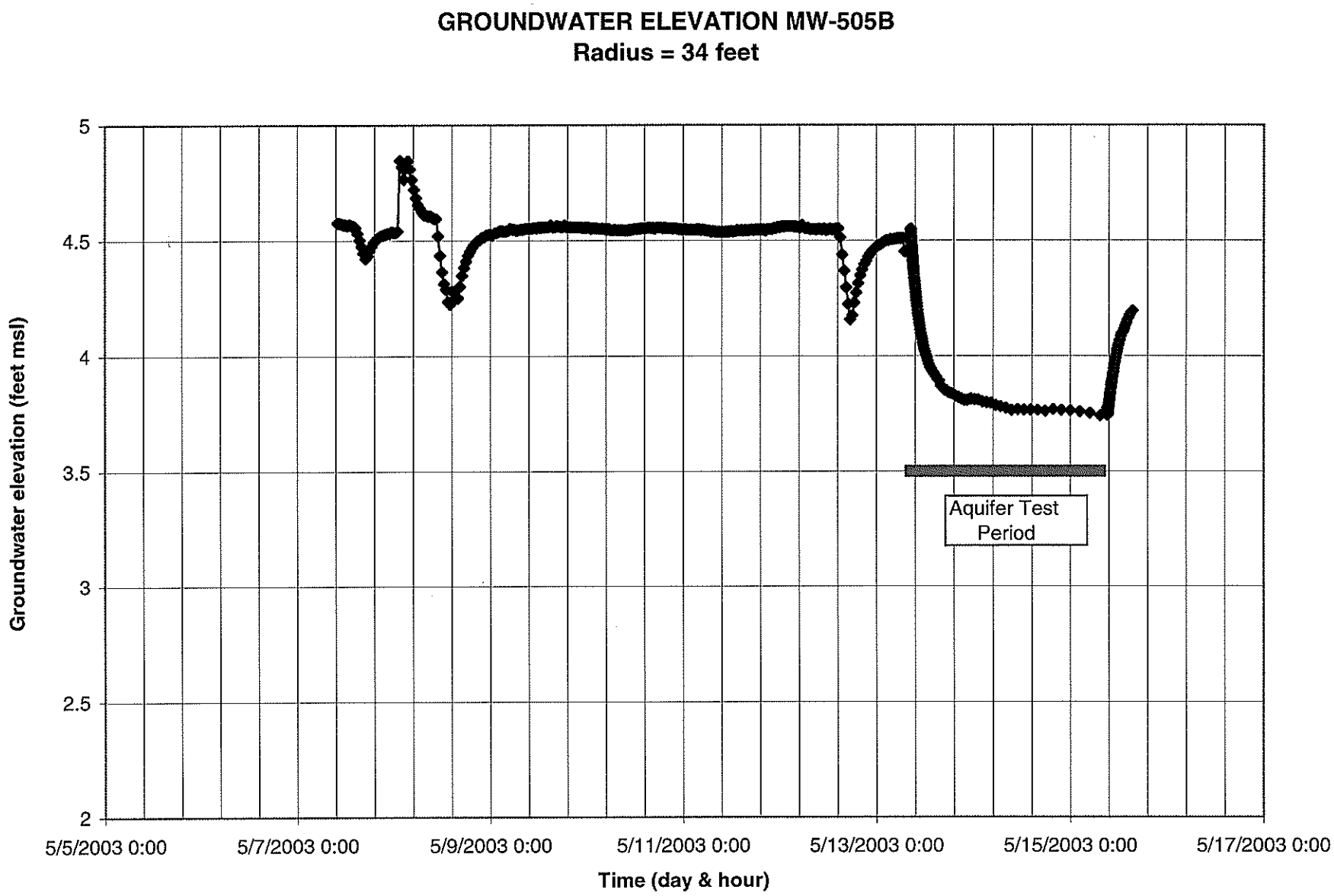


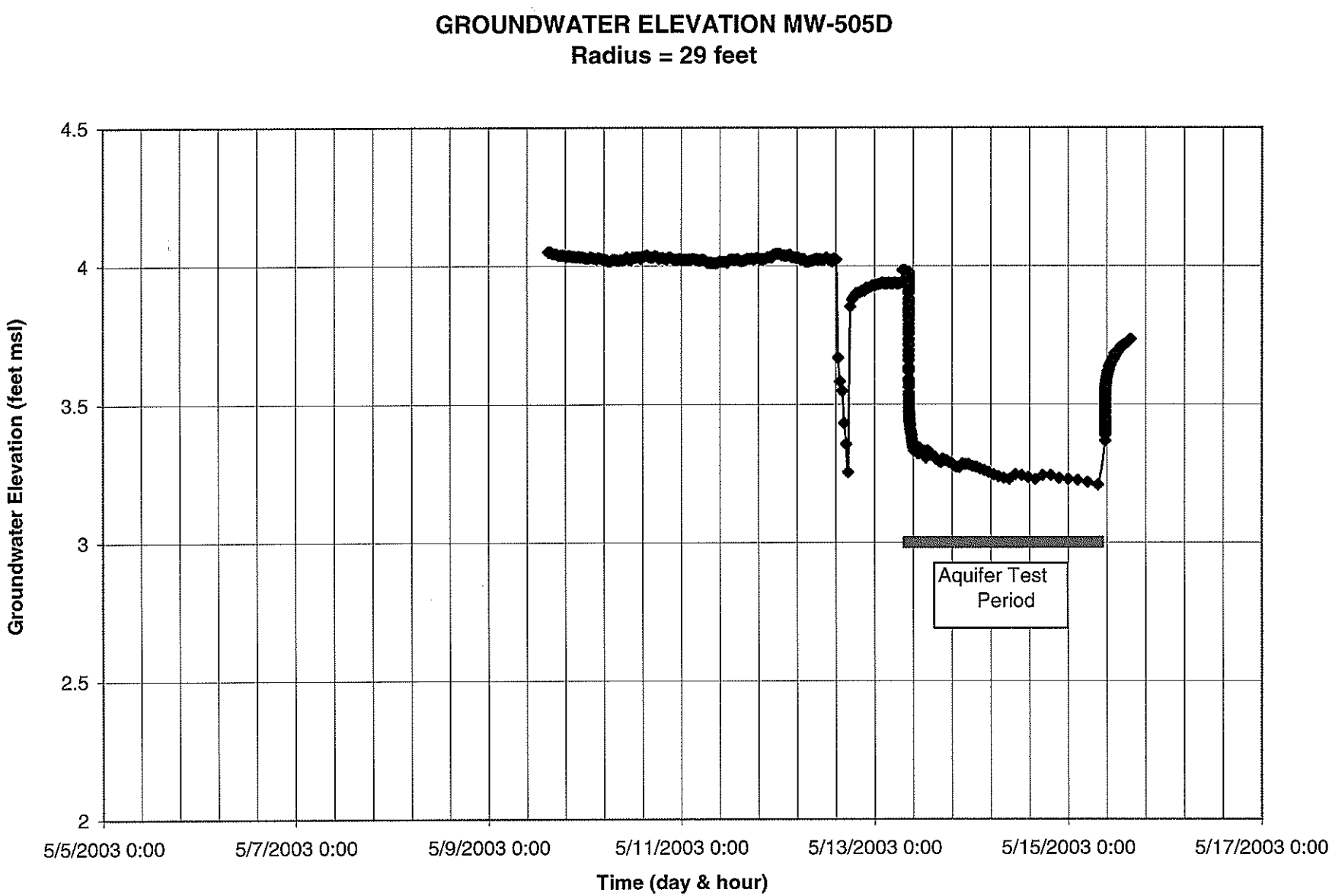

GWOUNDWATER ELEVATION MW-502D
Radius = 356 feet
Groundwater Elevation (feet msl)
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

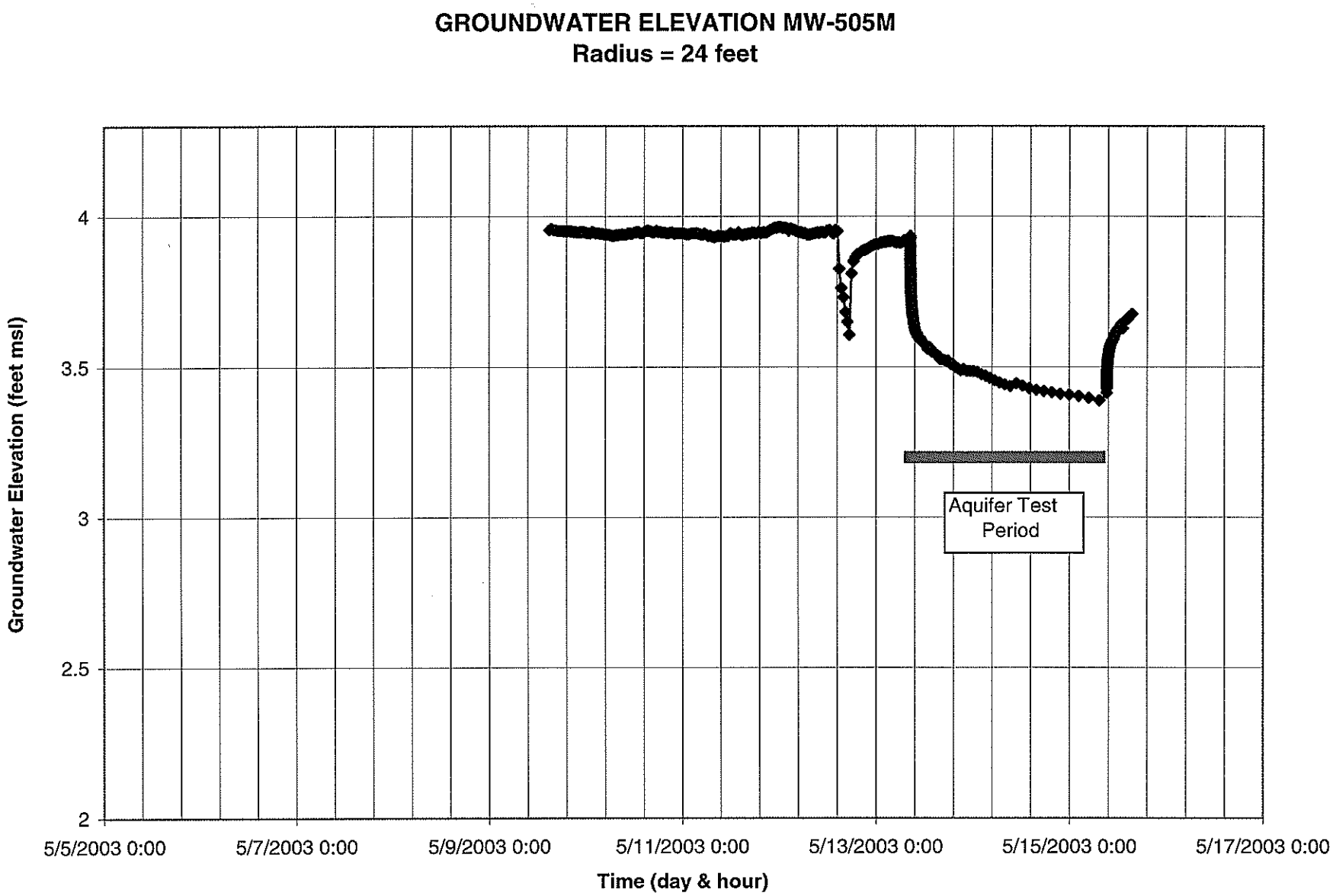

GROUNDWATER ELEVATION MW-504B
Radius = 47 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)


GROUNDWATER ELEVATION MW-504D
Radius 49 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

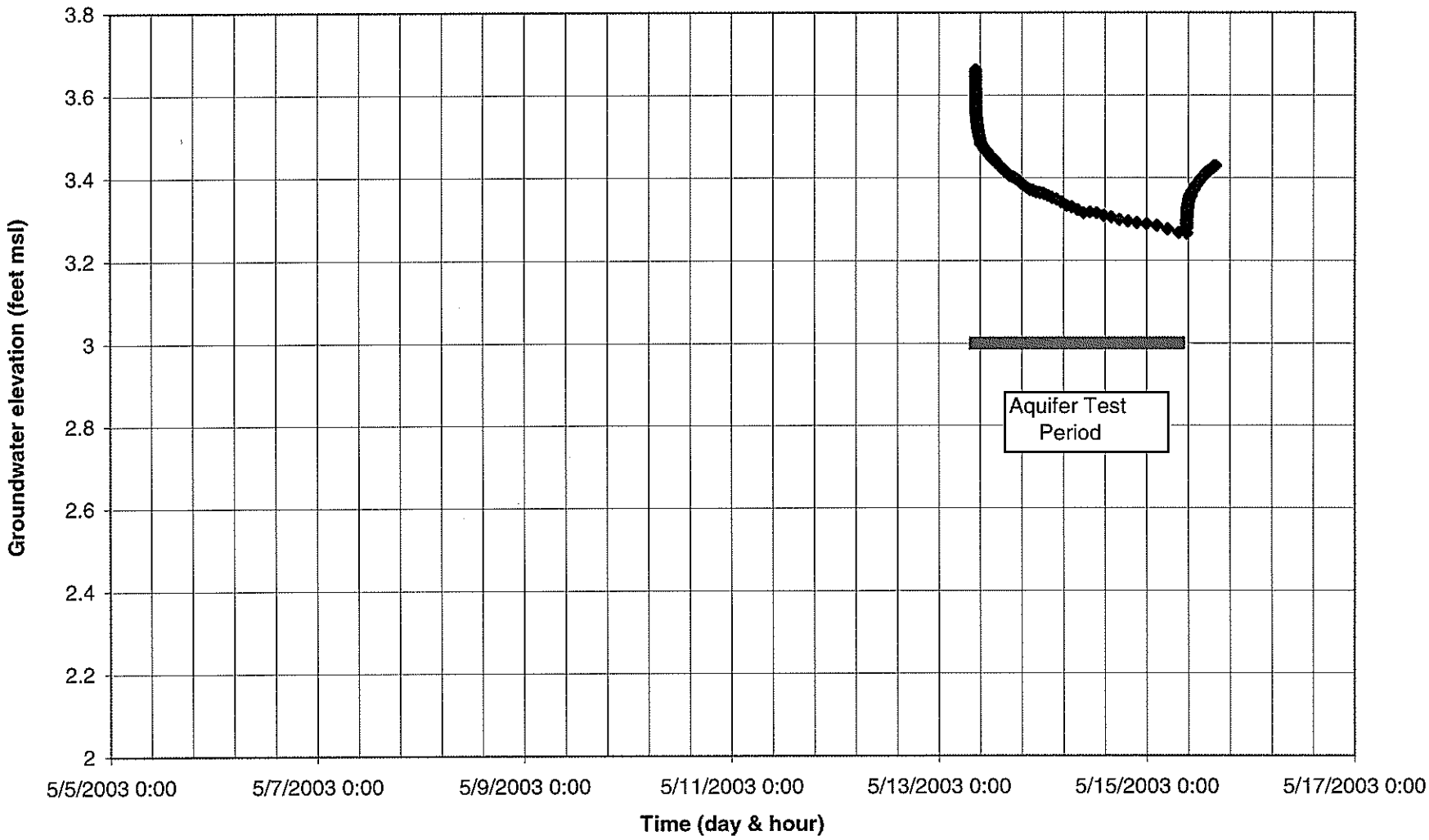

GROUNDWATER ELEVATION MW-504S
Radius = 53 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
1.5
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hours)
Aquifer Test Period

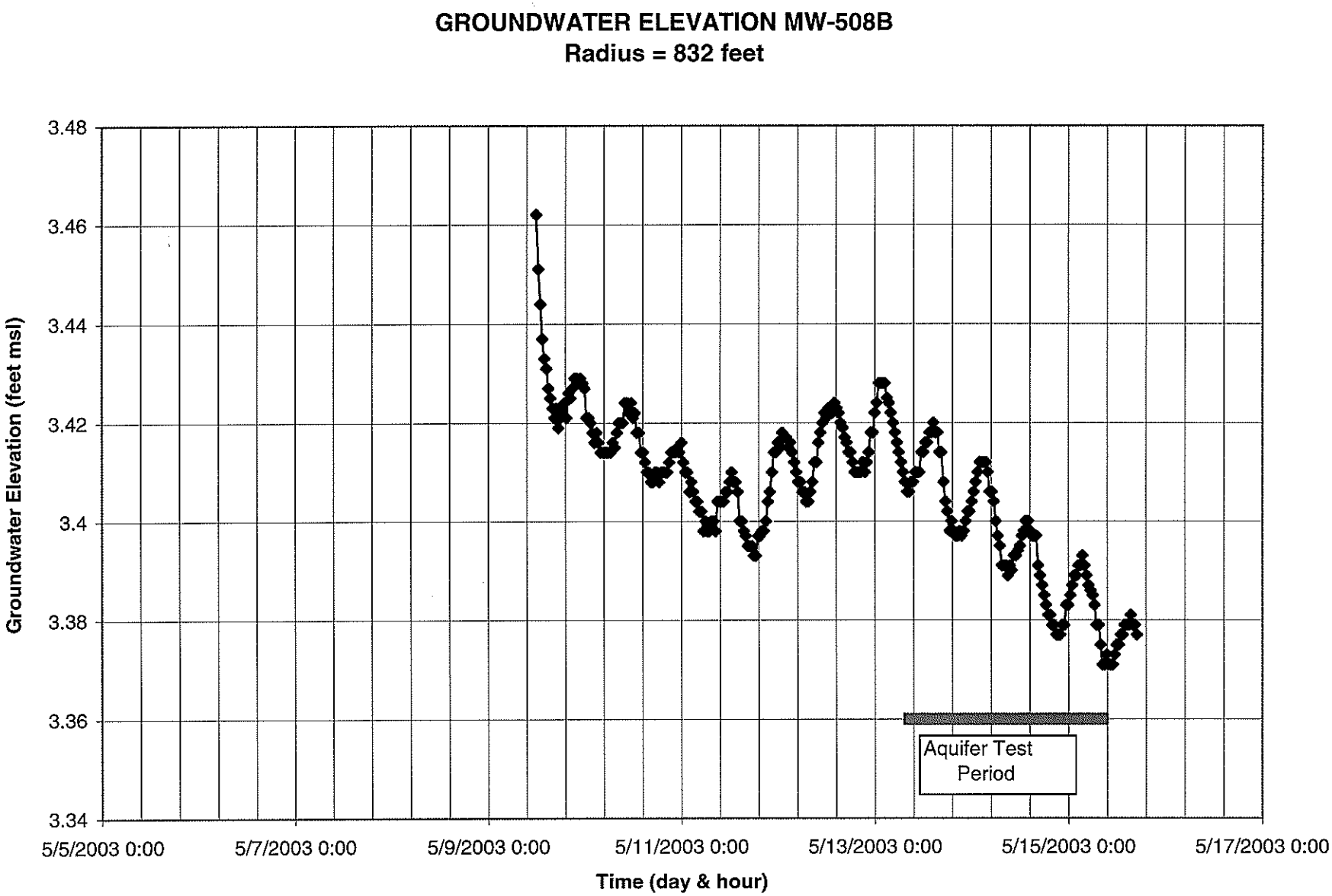

GROUNDWATER ELEVATION MW-505B
Radius = 34 feet
Groundwater elevation (feet msl)
5
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

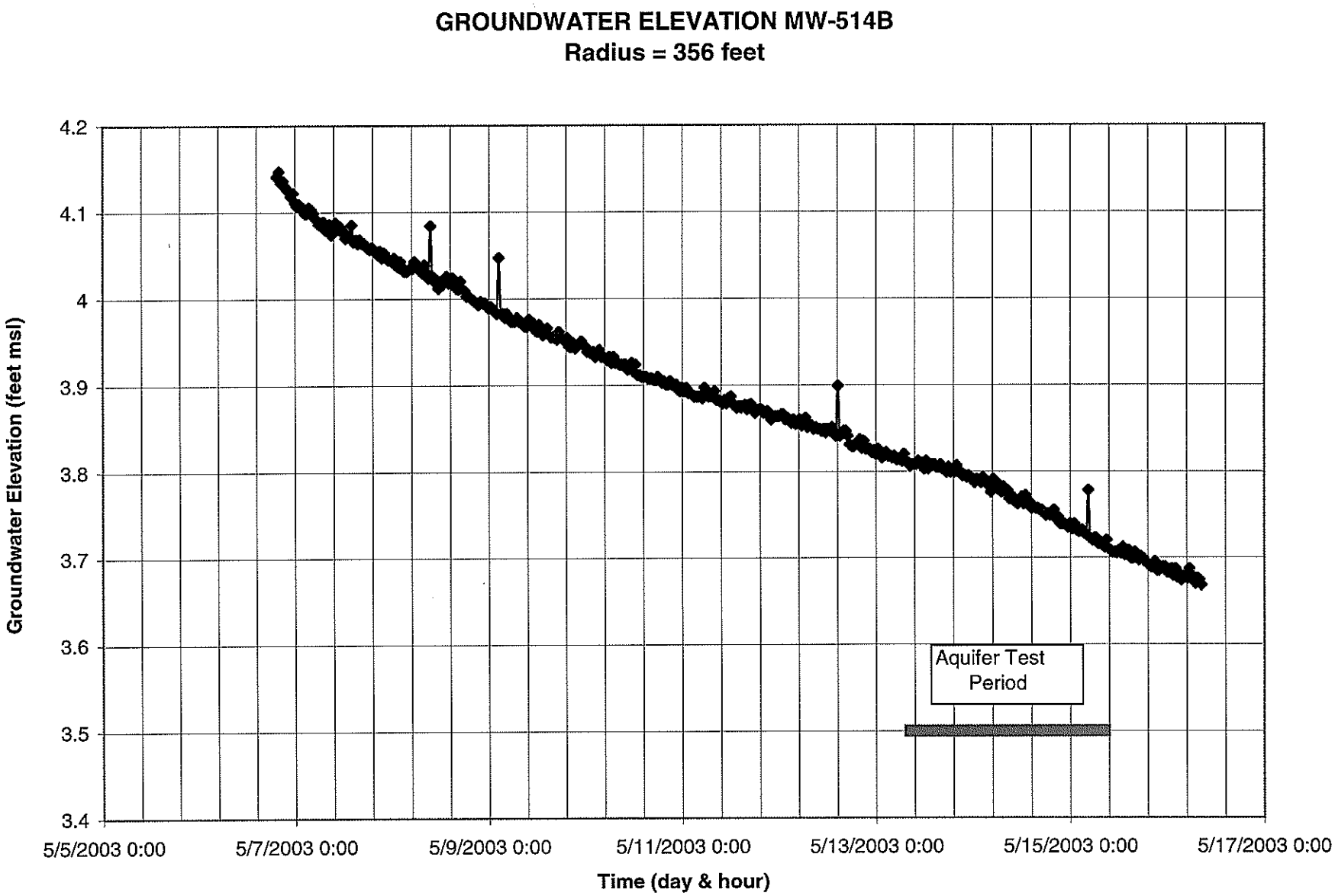

GROUNDWATER ELEVATION MW-505D
Radius = 29 feet
Groundwater Elevation (feet msl)
4.5
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

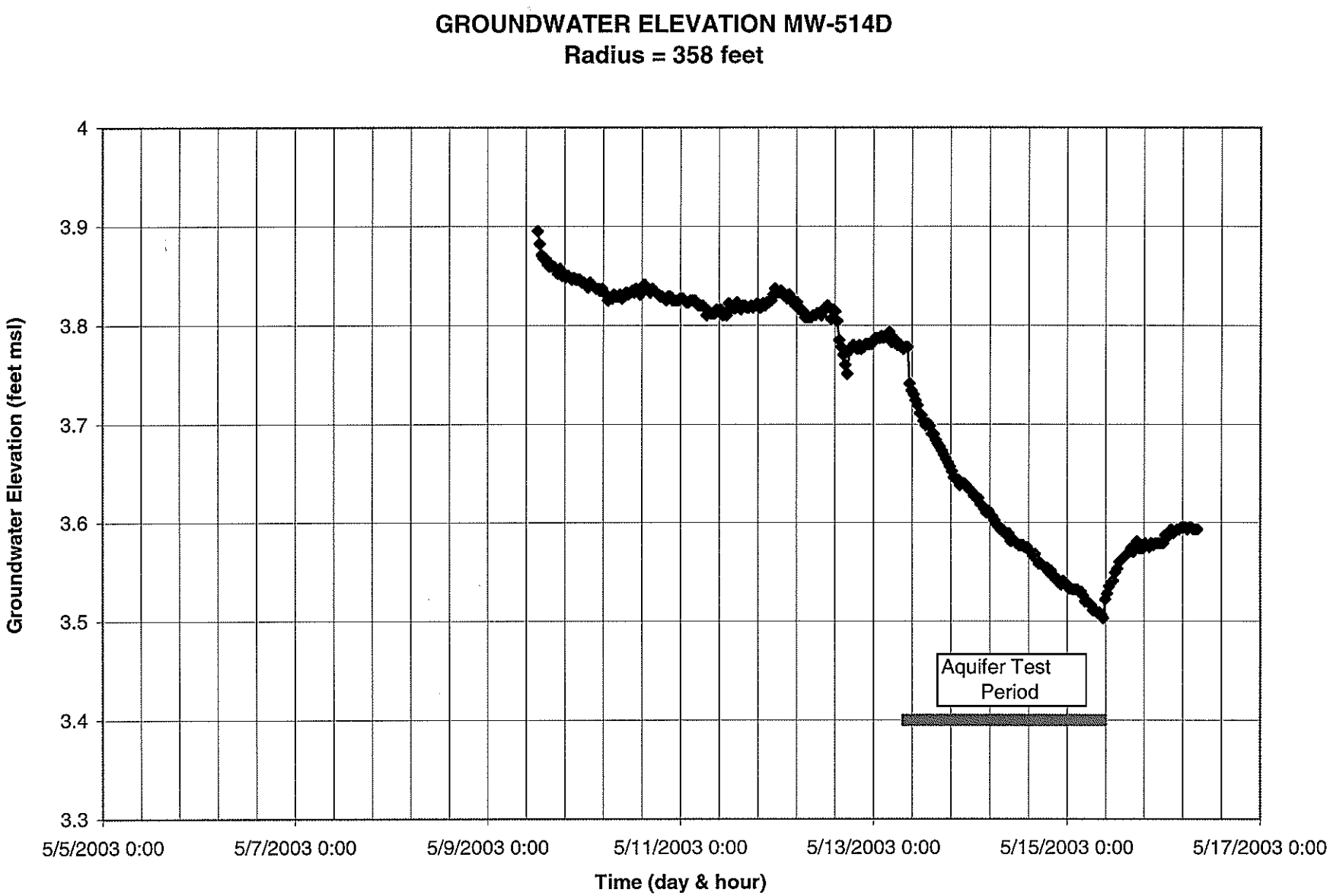

GROUNDWATER ELEVATION MW-505M
Radius = 24 feet
Groundwater Elevation (feet msl)
4
3.5
3
2.5
2
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

GROUNDWATER ELEVATION MW-505S
Radius = 17 feet




GROUNDWATER ELEVATION MW-508B
Radius = 832 feet
Groundwater Elevation (feet msl)
3.48
3.46
3.44
3.42
3.4
3.38
3.36
3.34
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period


GROUNDWATER ELEVATION MW-514B
Radius = 356 feet
Groundwater Elevation (feet msl)
4.2
4.1
4
3.9
3.8
3.7
3.6
3.5
3.4
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period


GROUNDWATER ELEVATION MW-514D
Radius = 358 feet
Groundwater Elevation (feet msl)
4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
5/5/2003 0:00
5/7/2003 0:00
5/9/2003 0:00
5/11/2003 0:00
5/13/2003 0:00
5/15/2003 0:00
5/17/2003 0:00
Time (day & hour)
Aquifer Test Period

FERRY CREEK SEEPAGE STUDY DATA

APPENDIX D

To: File

From: M. Healey

Date: March, 1999

Re: Ferry Creek Seepage Study

A seepage study was conducted in Ferry Creek in March, 1999 to estimate the amount and rate of ground water contamination from VOCs and SVOCs discharging into the creek into Ferry Creek. The seepage study consisted of installing 13 seepage meters at 12 locations along the lower reach of Ferry Creek, south of Interstate Route 95, and collecting 4 surface water samples from the creek. Seepage meters 2 and 2A were collocated to provide a duplicate ground water sample to meet analytical data quality control needs. Figure 2-3 presents the location of the seepage meters and surface water sample locations.

The initial plan for determining where to locate the seepage meters was to use two field criteria: The first was to conduct a temperature survey of the surface water and the shallow sediment at various locations along the Ferry Creek. The differences in temperature indicate groundwater discharge into the creek, as the surface water temperature is affected more strongly by ambient temperature changes. This method has been used to successfully locate areas of groundwater discharge within water bodies, based on the difference in temperatures between the surface water and groundwater. The second method was to place seepage meters at locations where groundwater seeps were visually observed along the creek bank during low tide.

The temperature survey consisted of taking temperature measurements at various locations along the creek, with two measurements made at each location. The first temperature reading was taken mid way in the water column of the creek, and the second slightly below the sediment in the bottom of the creek at the same location. Measurements were taken with an electronic probe with an accuracy within +/- 0.1° centigrade, and therefore was capable of detecting slight differences that may occur

between groundwater discharge and the surface water. The results of the temperature survey did not produce sufficient differences at all locations to discriminate areas of higher versus lower rates of groundwater discharge. Therefore, the temperature survey was not used to locate metering points at all locations. The small differences in measured temperature between the surface water and groundwater discharge may be due, in part, to turbulent flow and the resulting mixing of the water caused by placing the thermometer in the moving surface water. It is also possible that some mixing of surface water and groundwater occurs in the upper sediments during high tides when surface water may actually flow into the sediment for short periods of time. This phenomena is discussed in further detail in Section 3.4.2.6 (Groundwater/Surface Water Interactions).

The seepage meters were located based on a combination of visual observation of seepage along the banks of Ferry Creek during low tide, the results of the temperature survey, and placing the remaining meters to provide a somewhat uniform spacing along the creek to obtain representative samples. One meter was placed at a location where previous sampling from another investigation had detected VOCs in the surface water and sediment.

The seepage meter devices were constructed from five-gallon plastic buckets that were modified and fitted with brass fittings to allow for venting air, pressure relief of entrapped water as the device was pushed into the sediment, purging water from the device prior to sampling, and collection of samples. The seepage devices were installed so that at least 8 to 9 inches of the bucket was embedded in the sediment. After installation, about 1.5 liters of water was purged from each meter using a peristaltic pump. After the seepage meters were purged the meters were left in the creek bed for a minimum period of 24 hours to allow for the meter to adjust to ambient hydraulic head conditions. Tedlar™ sample bags were attached to each meter until the bag collected about 0.5 liters of water, then the bag was retrieved. Immediately upon removal, the water contained in the sample bags were poured into VOA vials. The water remaining in the bag after the VOA vials were filled was measured using a graduated cylinder. The total volume of water in the sample bag was calculated by adding the amount in the graduated cylinder to the volume in the VOA vials, and these volumes were recorded for

each seepage meter. The water remaining in the graduated cylinder was poured into bottles for SVOC analysis.

Additional sample volume was required for SVOC analysis since a minimum of one liter was required. The necessary sample volume was obtained using a peristaltic pump at a very low pumping rate to acquire the remaining amount needed for the analysis. Natural groundwater flow was sufficient to obtain the additional amount needed for SVOC at 4 meter locations. Pumping reduced the pressure head within the seepage meter to less than that of the surface water in most cases, thereby providing a potential for surface water to leak into the meter. However, the total volume of SVOC sample that was pumped did not exceed the amount of groundwater that was entrapped within the device prior to sampling. This helped to assure that only groundwater was sampled for the SVOC analysis. The SVOC samples were field filtered at the site trailer.

Care was taken during the study to assure surface water did not leak into the seepage devices during the sampling. All the seepage devices were tested for water-tightness prior to installation in the sediment. In addition, the fittings and their effectiveness were tested to assure they would not be a source of leakage. Finally, the seepage meters were embedded deeply into the sediment to minimize potential leakage along the outside wall of the device. During the sampling using the Tedlar™ bags, the elevation head (i.e. pressure head) of water within the seepage meter was observed versus the water level of the creek. Observations showed that the head within the seepage meter exceeded the water level of the creek during the VOC sample collection. This means that the surface water could not leak into the meter since the pressure head of the surface water was always lower than that of the groundwater.

Surface water samples were also collected from three of the twelve locations within the creek for VOC and SVOC analysis. The data from these samples was used for comparison to the seepage meter samples.

Upon completion of the field study, the groundwater discharge rates for the entire creek were estimated. The first step in estimating the discharge rates was to define the areas within Ferry Creek that each seepage meter represented so that the data from the meters could be integrated over the entire length of Ferry Creek. The observed

seepage, evidence of groundwater seepage along the creek banks, and bottom conditions in the creek during low tide allowed for a reasonable assignment of seepage meter results to segments of the creek. The seepage rate measured at a seep meter was then applied to that area of the creek that had similar ground water seeps observed during periods of low tide.

The ground water discharge rates for Ferry Creek were then calculated as follows:

- Ferry Creek was divided into segments that were associated with each seepage meter based on similar physical and sediment characteristics along the creek. The length and width of these segments were used to calculate the area of the bottom of the creek contributing to the groundwater discharge.

- The results of the tidal influence study conducted in February, 1999 and described in Section 3.4.2.6 and Appendix D, were used to estimate the time that groundwater discharged to the creek versus times when discharge was not possible during high tides. High tides in Ferry Creek cause the elevation head of the surface water to exceed the groundwater head at the base of the creek, thereby hydraulically blocking discharge of groundwater to the creek. The duration of discharge to the creek was estimated at 910 minutes per day, versus 530 minutes per day when groundwater did not discharge to the creek.

- This correction of discharge time was not applied to the seepage meters that were left in place over one or more tidal cycles in order to collect enough water to meet the sample requirements. The seepage meters that required adjustment of tidal effects are indicated on Table 1.

- The observed seepage rate, as determined in the field, was corrected by a factor of 38 percent. This value is based on laboratory experiments conducted by Cherkauer and McBride, (1988) that show that the seepage meters similar to those used for this study measured only 62% of the actual flow in a laboratory test tank. The difference in measured seepage rate from the actual seepage rate is caused by disturbance of the sediment during installation of the meter and head losses in the seepage meter

and the sample bags. Therefore, the field seepage rates were increased by 38 percent to better approximate the true seepage rate.

- The corrected seepage rate ($cm^3/day/cm^2$) and the duration of time over which discharge occurred due to tidal influence was used to estimate the daily volume of ground water discharge into the creek.

The results of this analysis are presented on Table 1. The seepage meter SM-3 was located on an unnamed tributary to Ferry Creek that flows between the Morgan Francis property and Route 95. The data from this location was used with the data from seepage meters in Ferry Creek. Seepage meter SM-2A was a collocated meter used to collect duplicate water samples and the seepage from this meter was not added to the seepage rate from SM-2. A review of the table indicates that the segment of Ferry Creek from Route 95 to the flood control structure receives about 0.68 cubic feet per second of ground water.

The data also shows that most of the ground water discharge occurred at seepage meter SM-2. This seepage meter was located at a segment of the creek where the creek sediment contains more sand than other segments of the creek. In addition field observations indicate numerous ground water seeps on the creek banks during low tide.

The total VOC concentrations are summarized on Table 1. The complete chemical data is presented in Appendix B. The highest total VOC concentration was 1,889 ug/l at SM-2. This location also had the highest seepage rate. The data also shows that the highest VOC concentrations were detected in the upper reaches of the creek between Route 95 and Ferry Boulevard. These higher concentrations are associated with most, but not all of the higher seepage rates.

The results of the surface water sample analysis indicate that VOCs are present in the surface water in the upper reached of Ferry Creek. The concentrations of VOCs in the seepage meter samples are one to two orders of magnitude higher than the surface water samples. The order of magnitude difference is probably due to dilution of the concentrations in the groundwater discharging at the base of the creek with the surface water flow.

The results of the surface water and groundwater analysis for SVOCs indicated that this class of compounds was not present in the surface water or groundwater with the exception of a few low concentrations, 6 ug/l or lower, at seepage meters SM-2, SM-2A, SM-3, and SM-4. These SVOCs detected at the levels seen may be due to artifacts of the field filtering process.

The conclusions from the Ferry Creek Seepage Study are as follows:

- Groundwater discharging to Ferry Creek as base flow discharge is contaminated with VOCs.

- SVOCs were only detected in the groundwater samples at isolated locations and at very low concentrations. It is believed that the detection of these SVOCs may be related to field filtering artifacts.

- Groundwater seepage rates vary over five orders of magnitude among the 12 monitored locations. These variations are probably due to changes in the permeability of the different type of sediments that comprise the creek bed.

- Because of tidal influences discussed in Section 3.4.2.6, Groundwater/Surface Water Interactions, the time that contaminated groundwater discharges to the creek can be estimated using 910 minutes per day, versus 530 minutes per day when groundwater did not discharge to the creek.

- The segment of Ferry Creek from Route 95 to the flood control structure receives about 0.68 cubic feet per second, which is about 437,000 gallons per day, of contaminated ground water.

TABLE 1
FERRY CREEK SEEPAGE STUDY
SUMMARY CALCULATIONS
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

Seepage Meter No.	Flux/day (cm/day)	Correction Factor for Tidal Influence[1]	Daily Flux Corrected for Tidal Influence (cm/day)[1]	Area (sq ft)	Area (sq cm)	Daily flux (cm^3/day)	Daily Flux (Corrected for seepage meter factor) (cm^3/day)	Total VOCs (ug/l)	Comments
SM-1	5.2000	0.64	3.3280	2,750.00	2,554,992.00	8,503,013.38	11,734,158.46	130.00	
SM-2	285.3400	0.64	182.6176	6,845.00	6,359,607.36	1,161,376,233.03	1,602,699,201.58	1,889.00	
SM-2A	293.4700	0.64	187.8208					174.00	SM-2A co-located with SM-2
SM-4	0.0600	1.00	0.0600	1,300.00	1,207,814.40	72,468.86	100,007.03	23.00	
SM-5	2.2900	0.64	1.4656	1,800.00	1,672,358.40	2,451,008.47	3,382,391.69	41.00	
SM-6	0.4800	0.64	0.3072	1,350.00	1,254,268.80	385,311.38	531,729.70	90.00	
SM-7	5.2000	0.64	3.3280	5,400.00	5,017,075.20	16,696,826.27	23,041,620.25	26.00	
SM-8	1.1100	0.64	0.7104	5,600.00	5,202,892.80	3,696,135.05	5,100,666.36	23.00	
SM-9	0.2900	1.00	0.2900	4,050.00	3,762,806.40	1,091,213.86	1,505,875.12	34.00	
SM-10	0.1200	1.00	0.1200	6,600.00	6,131,980.80	735,837.70	1,015,456.02	12.00	
SM-11	0.3200	1.00	0.3200	11,000.00	10,219,968.00	3,270,389.76	4,513,137.87	36.00	
SM-12	0.0900	1.00	0.0900	8,000.00	7,432,704.00	668,943.36	923,141.84	49.00	
SM-3	5.4300		3.4752	1,937.00	1,799,643.46	1,799,643.46	2,483,507.97	122.00	SM-3 located on tributary to Ferry Creek
						Total	**1,657,030,893.89**		

Notes:
1. The correction factor for tidal influence is estimated to be 1.0 if the seepage meter collected groundwater through one or more tidal cycles. If the seepage meter yielded enough water in less than one tidal cycle then that rate is applied to that portion of a day (64%) when the surface water elevation is less than the groundwater elevation.
2. The daily seepage volume was calculated using the observed rate applied to 910 minutes.

Calculated Daily Flux

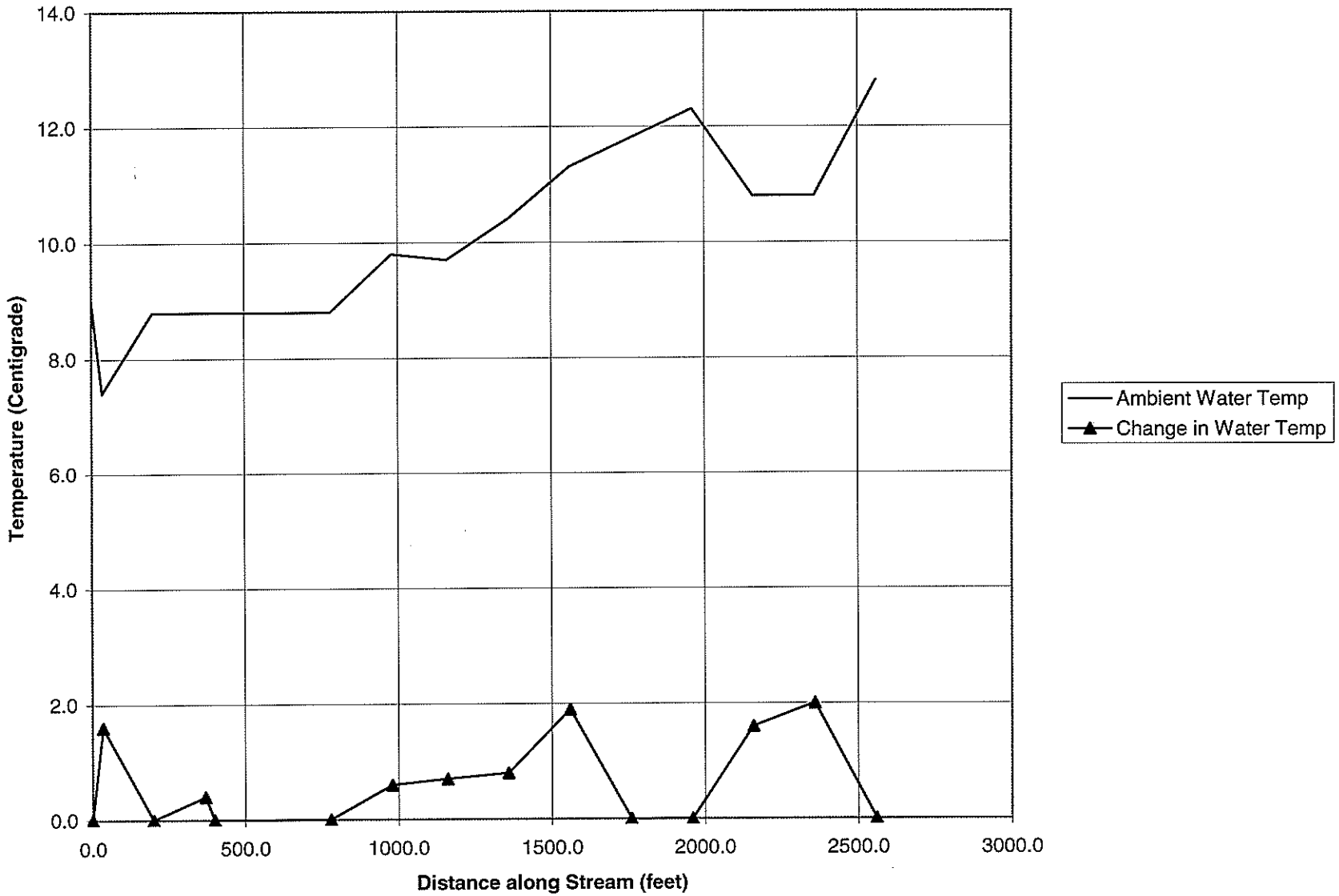
cm^3/day	**1,657,030,893.89**
Gallons/day	**437,662.11**
gpm	**303.93**
cfs	**0.68**

TABLE 2
FERRY CREEK SEEPAGE STUDY
SEEPAGE METER DATA
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT

Seepage Meter No.	Date Meter Installed	Date and Time Bag Installed	Date and Time Bag Recovered	Elapsed Time (hrs)	Elapsed Time (min)	Volume of Water (ml)	Discharge Rate (ml/min)	Flux Rate (cm/min)	Comments
SM-1	3/25/1999	3/29/1999 17:40	3/30/1999 6:55	13:15	795	1410	1.77	0.0036075	See note.
SM-2	3/25/1999	3/25/1999 13:22	3/30/1999 13:31	0:09	9	875	97.22	0.4373586	
SM-2A			3/25/1999 13:50		10	1000	100.00	0.2038113	
SM-3	3/25/1999	3/29/1999 17:23	3/30/1999 6:55	13:32	812	1500	1.85	0.0037705	
SM-4	3/25/1999	3/30/1999 6:12	3/31/1999 7:12	25:00	1500	25	0.02	0.0000408	
SM-5	3/25/1999	3/26/1999 12:35	3/26/1999 14:56	2:21	141	110	0.78	0.0015897	
SM-6	3/25/1999	3/30/1999 6:19	3/31/1999 7:00	0:41	1481	235	0.16	0.0003261	The 00:41 designates 24 hours plus 41 min.
SM-7	3/25/1999	3/26/1999 13:07	3/26/1999 14:53	1:46	106	188	1.77	0.0036075	
SM-8	3/25/1999	3/30/1999 6:30	3/31/1999 6:40	0:10	1450	545	0.38	0.0007745	The 00:10 designates 24 hours plus 10 min.
SM-9	3/26/1999	3/30/1999 6:41	3/31/1999 6:16	23:35	1415	140	0.10	0.0002038	
SM-10	3/26/1999	3/29/1999 17:40	3/31/1999 6:15	12:35	755	30	0.04	0.0000815	
SM-11	3/26/1999	3/29/1999 17:17	3/31/1999 5:47	12:30	750	80	0.11	0.0002242	
SM-12	3/26/1999	3/29/1999 17:04	3/31/1999 6:00	12:56	776	25	0.03	0.0000611	

note: This meter was monitored twice; once for a sample and once for flow measurements.

APPENDIX D
FERRY CREEK SEEPAGE STUDY
TEMPERATURE FLUCTUATION VS. DISTANCE ALONG FERRY CREEK
REMEDIAL INVESTIGATION REPORT
RAYMARK OU2 - GROUNDWATER
STRATFORD, CONNECTICUT



TIDAL STUDIES

1999 TIDAL STUDY DATA

APPENDIX D

To: File

From: M. Healey

Date: February, 1999

Re: Tidal Study Approach

A study of short term impact of tidal fluctuations on groundwater levels was performed as part of the OU2 RI field investigation. The study included the monitoring of ground water elevations in 11 monitoring wells at 4 locations, and the surface water elevation in Ferry Creek and the Housatonic River, over a 24-hour period that included two tide cycles. The objective of this study was to measure the changes in ground water elevation caused by changes in surface water elevations in Ferry Creek and the Housatonic River.

To meet these objectives electronic pressure transducers were installed in the monitoring wells and the creek and river and set to take readings at 5-minute intervals a 24 hour period. The rationale for selecting the monitoring well clusters that were included in the tidal study was as follows:

- MW-302 cluster consisted of three wells. One well, MW-302B, was located in bedrock and the other two wells, MW-302S and MW-302D were in the shallow and deep overburden respectively. These wells were selected because they are located adjacent to the Housatonic River and are believed to be representative of the ground water conditions adjacent to the river.

- MW-112 cluster consisted of three wells. One well, MW-112B was located in the bedrock and the other two wells, MW-112D and MW-112M, were in the shallow and deep overburden respectively. These wells were selected because they are located adjacent to Ferry Creek and are believed to be representative of the groundwater conditions adjacent to the creek.

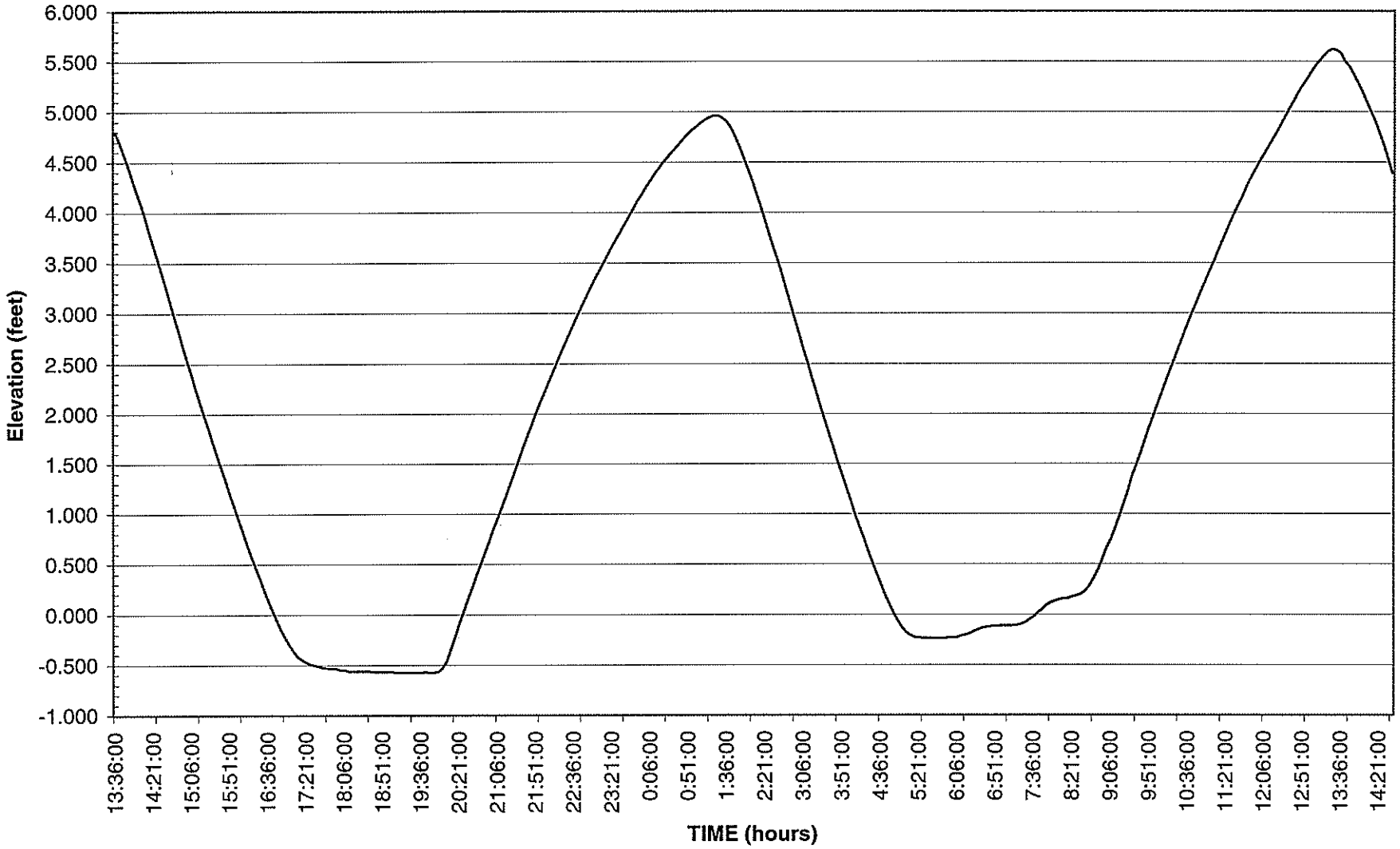
- MW-213 cluster consists of two wells. One well, MW-213B, is located in the bedrock and the other well, MW-213S is located in the shallow overburden. These wells were selected because they are located along a bedrock ridge that separates a deep bedrock valley located to the northwest of the wells toward Route 95 and the Housatonic River located to the southeast. The data gathered at this location could be compared to the data from the other wells located adjacent to the creek and river. This comparison would be able to determine the significance of changes in ground water elevations should changes occur.

- MW-304 cluster consists of three wells. One well, MW304B, is located in bedrock and the other two wells, MW-304S and MW-304D, are located in the shallow and deep overburden respectively. These wells were selected because they are located in the bedrock valley that extends toward Ferry Creek. These wells would help to determine how far inland the tidal influence occurs if a tidal influence is observed.

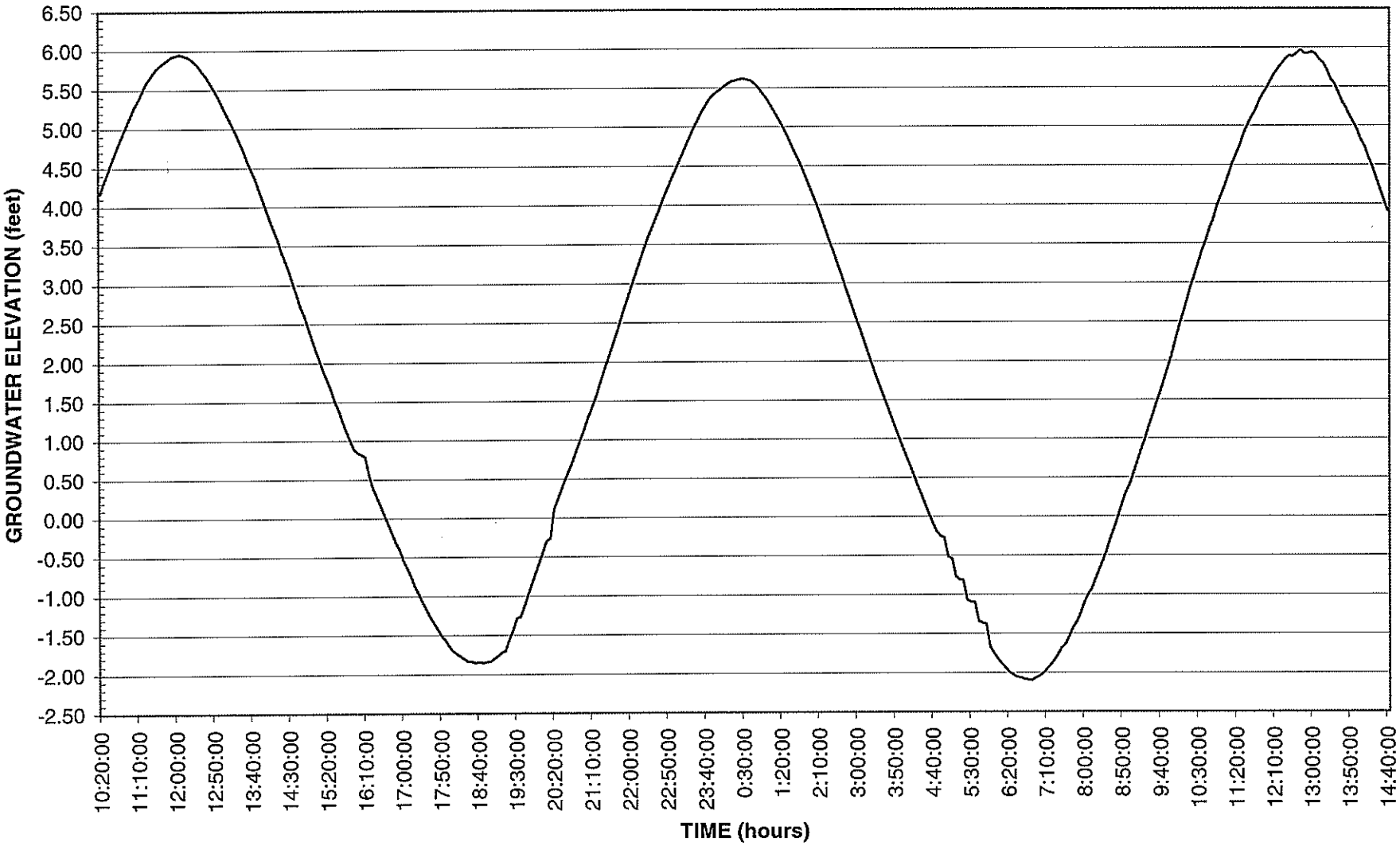
Transducers were also installed in Ferry Creek and the Housatonic River, both of which are influenced by the tidal cycle that may have had an impact on groundwater levels beneath the study area. The water level fluctuations measured in Ferry Creek and the Housantonic River were compared to the fluctuations in the monitoring wells to estimate the impact of the tides.

The water level data collected from monitoring wells, Ferry Creek and the Housatonic River by the electronic transducers was downloaded into a computer in the field, and converted to an MS Excel spreadsheet file. The topographic surveyed elevations for the monitoring wells were input into the spreadsheet to convert the data to geodetic elevations.

TIDAL STUDY RAYMARK FERRY CREEK 02/17/99 TO 02/18/99



TIDAL STUDY RAYMARK HOUSATONIC RIVER 02/17/99 TO 02/18/99



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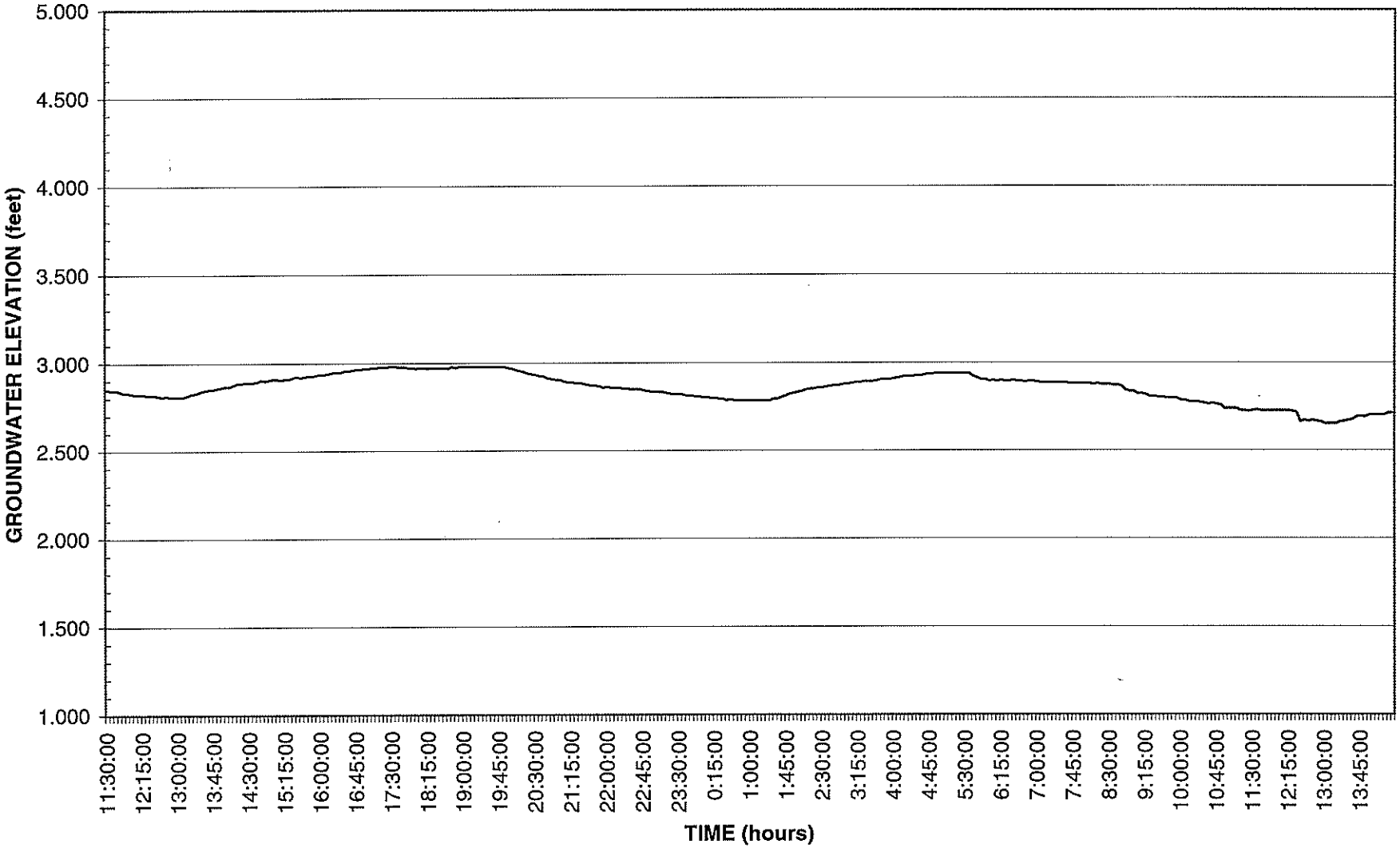

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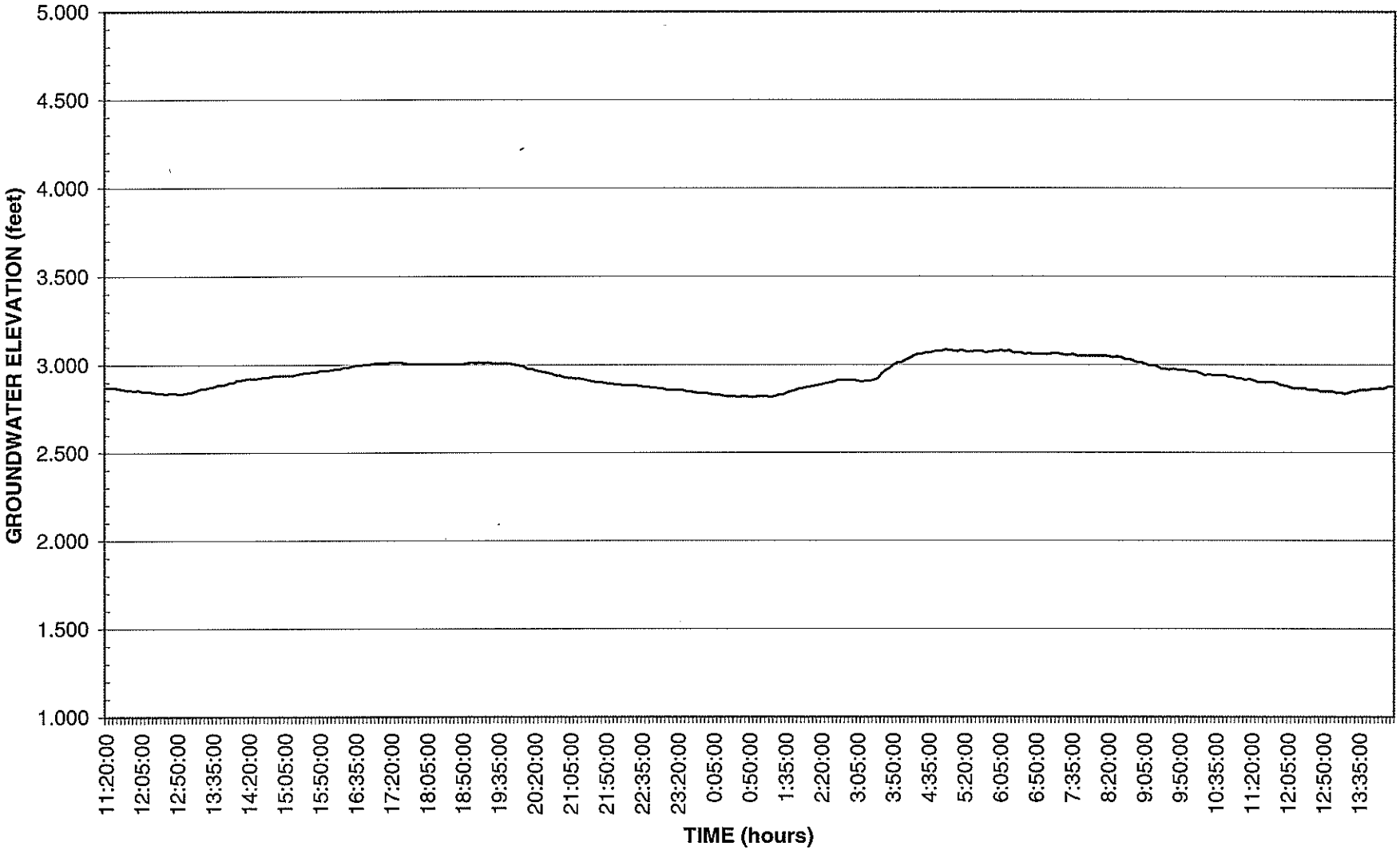

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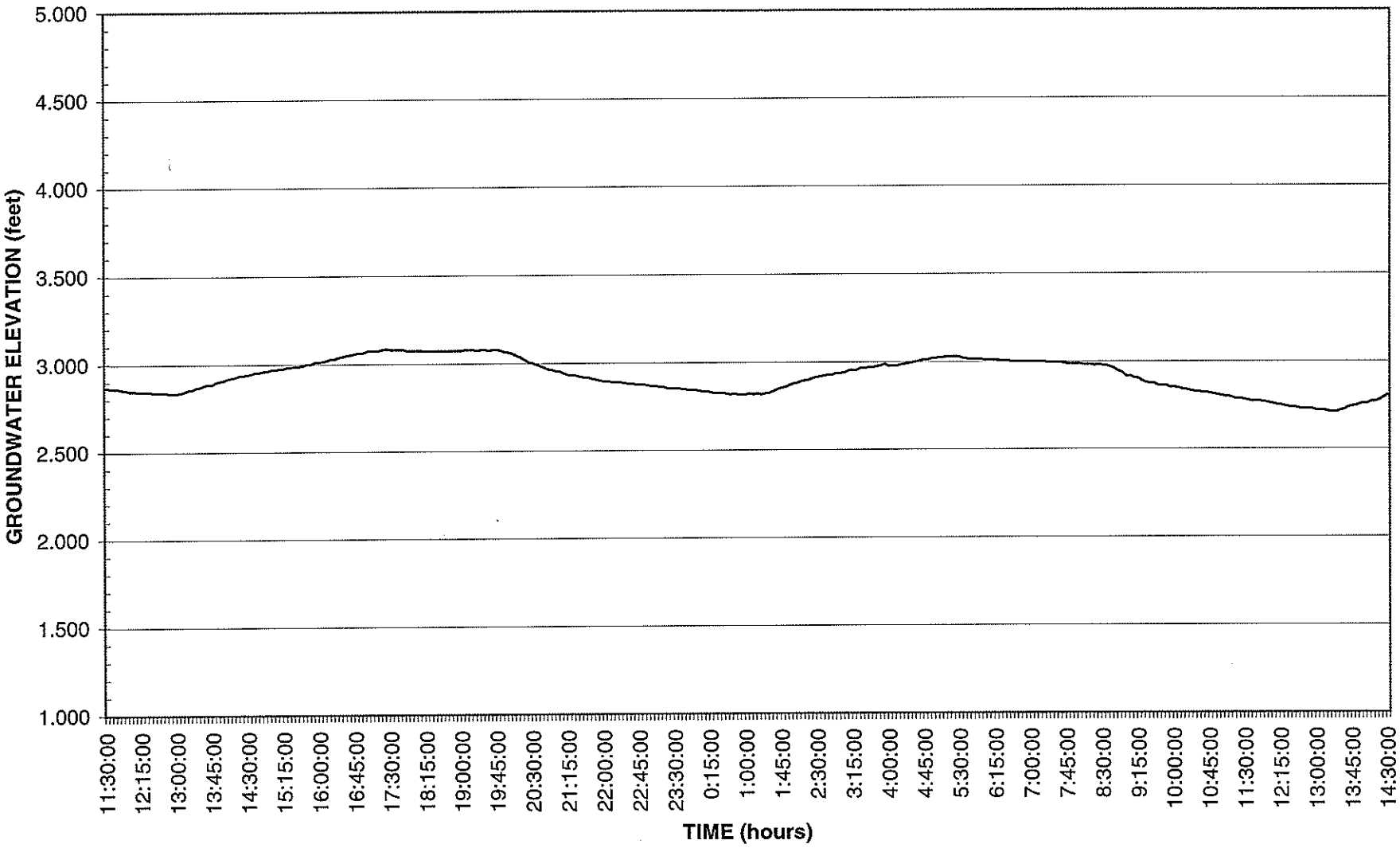

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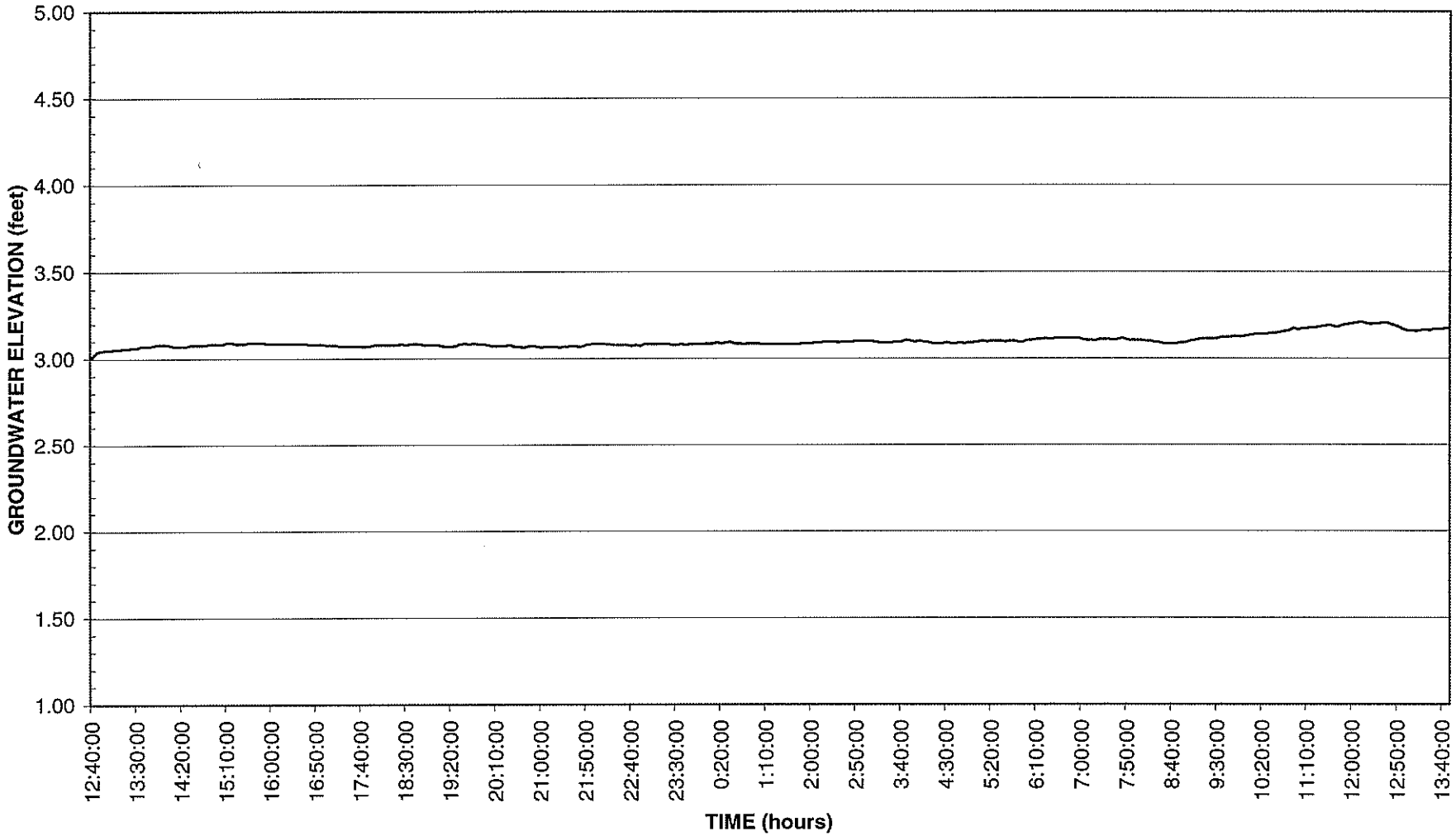

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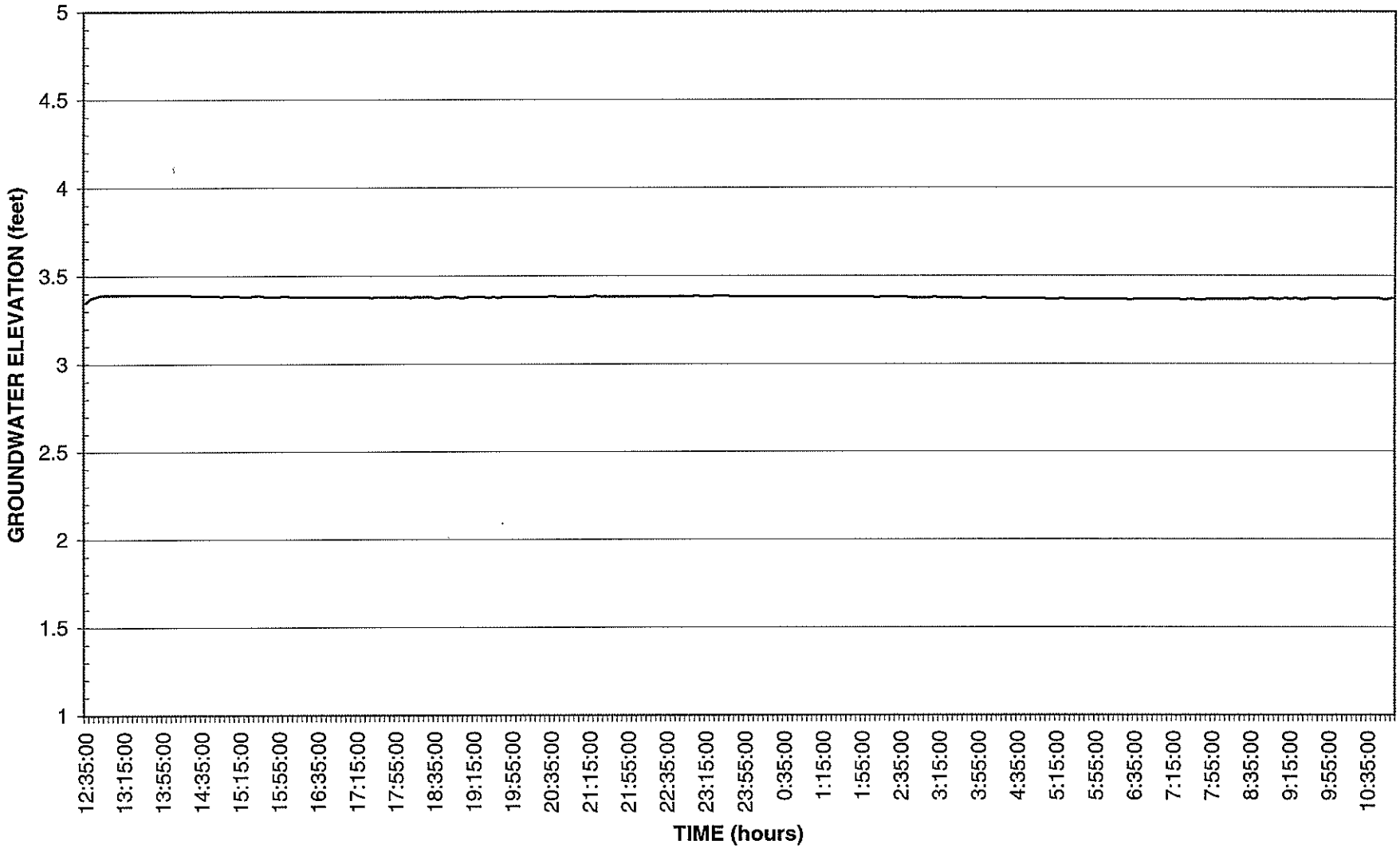

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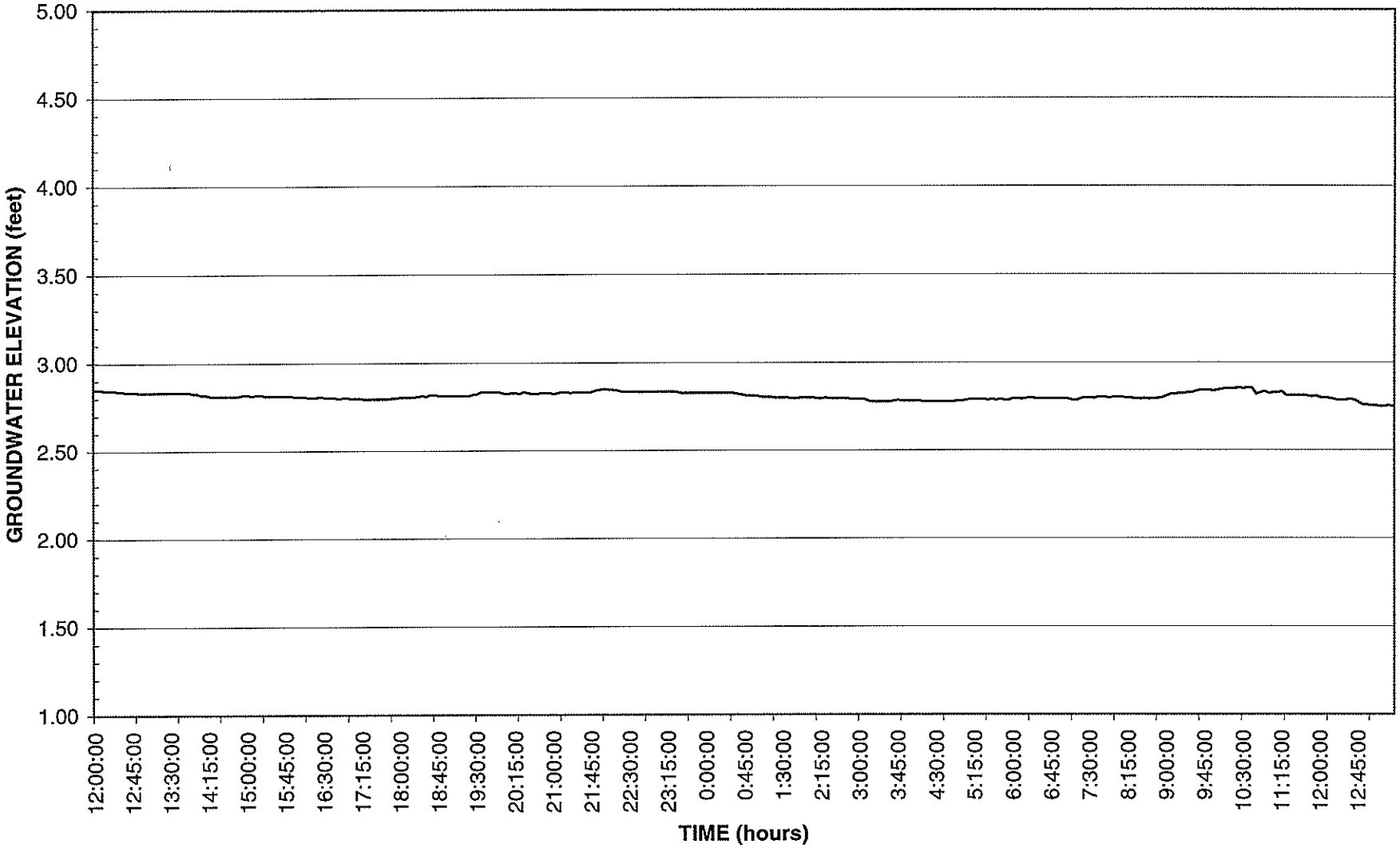

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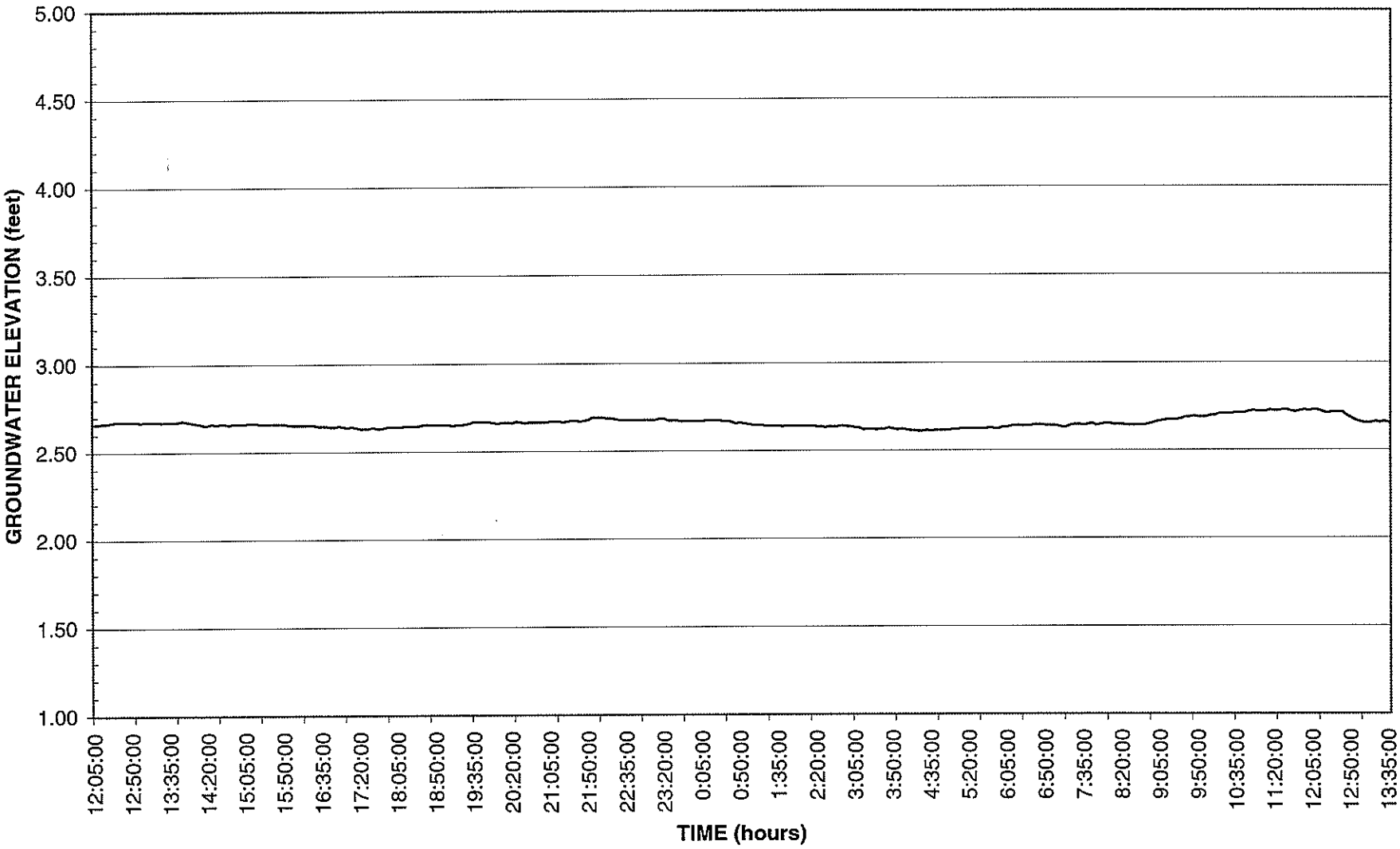
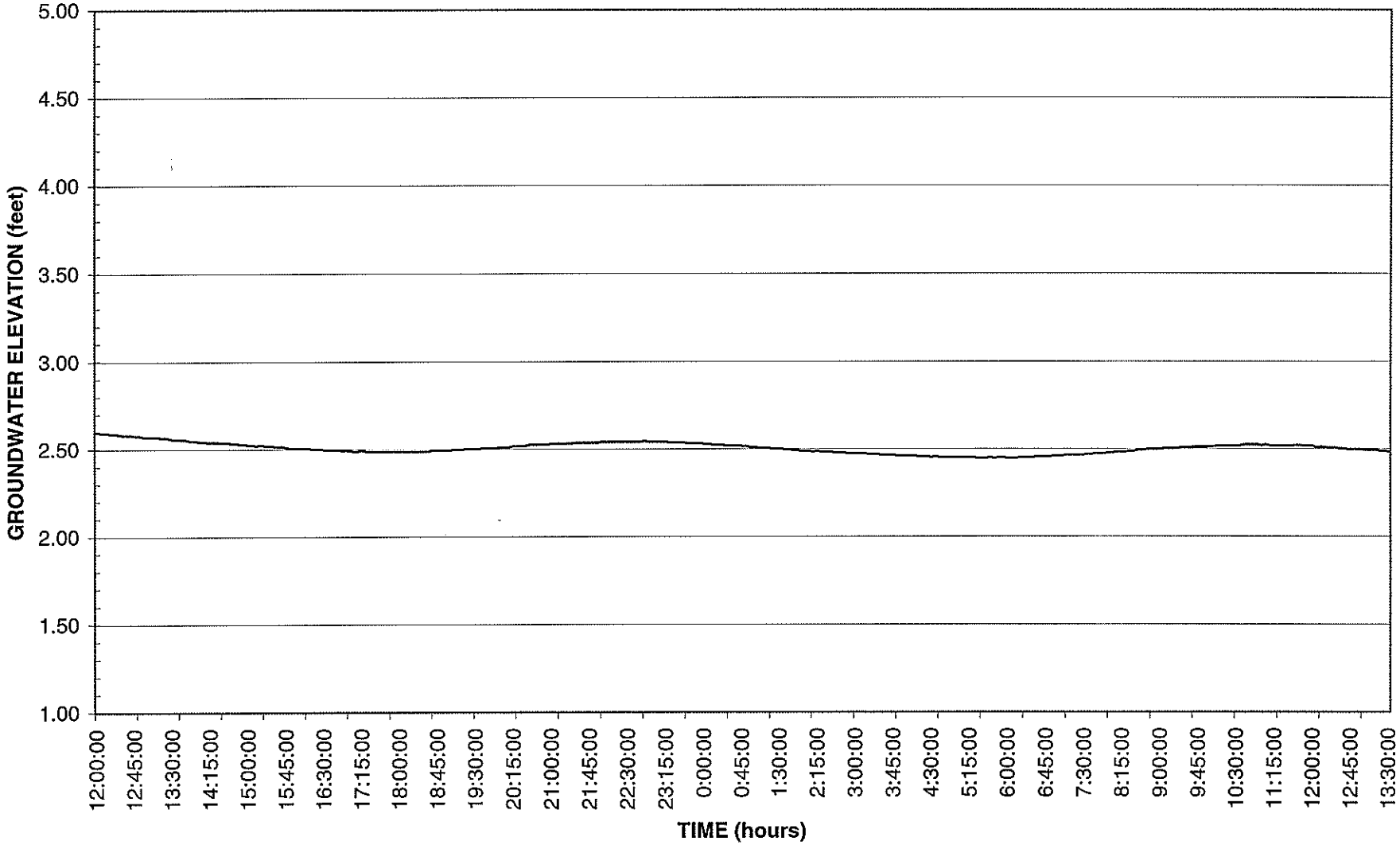
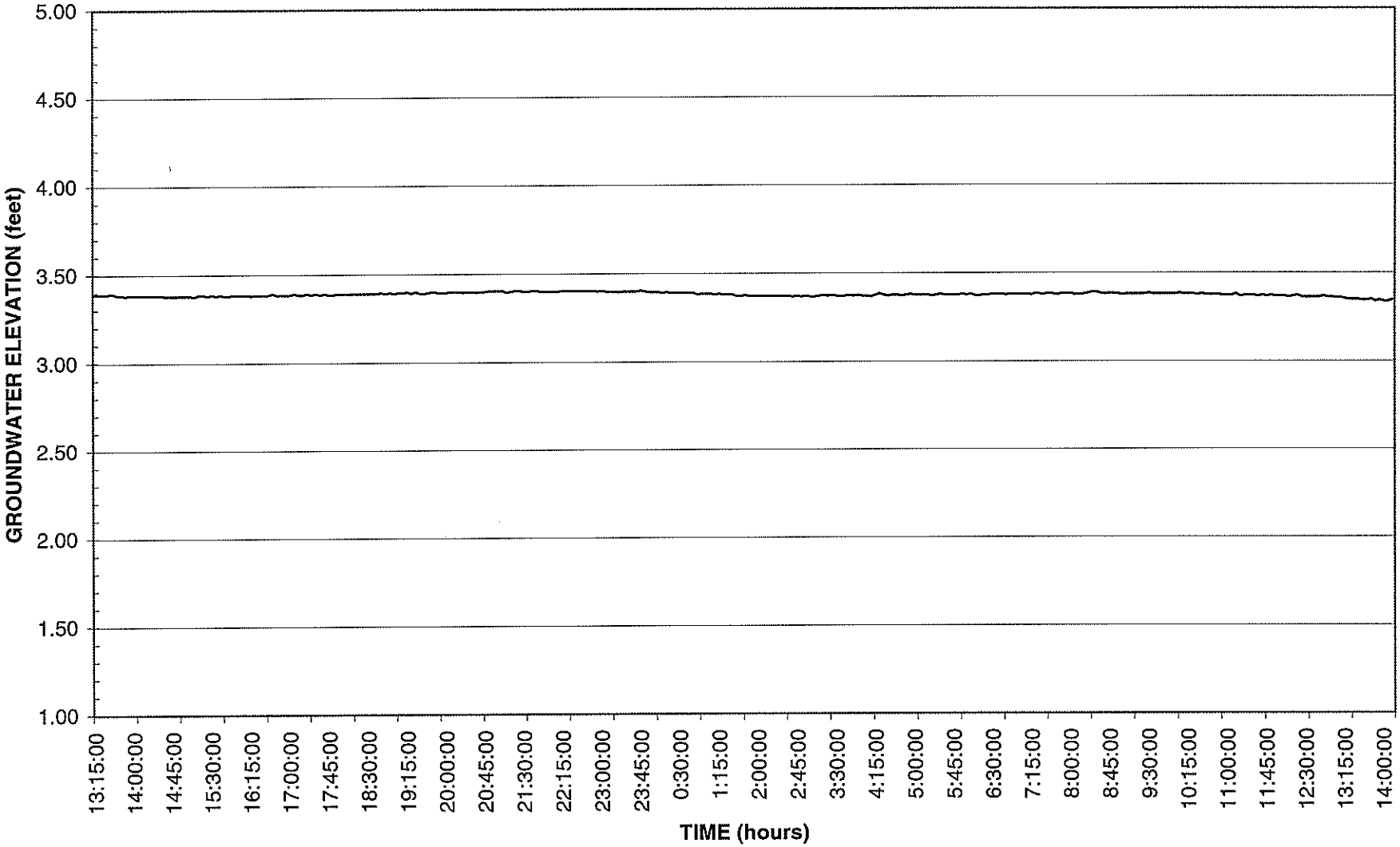


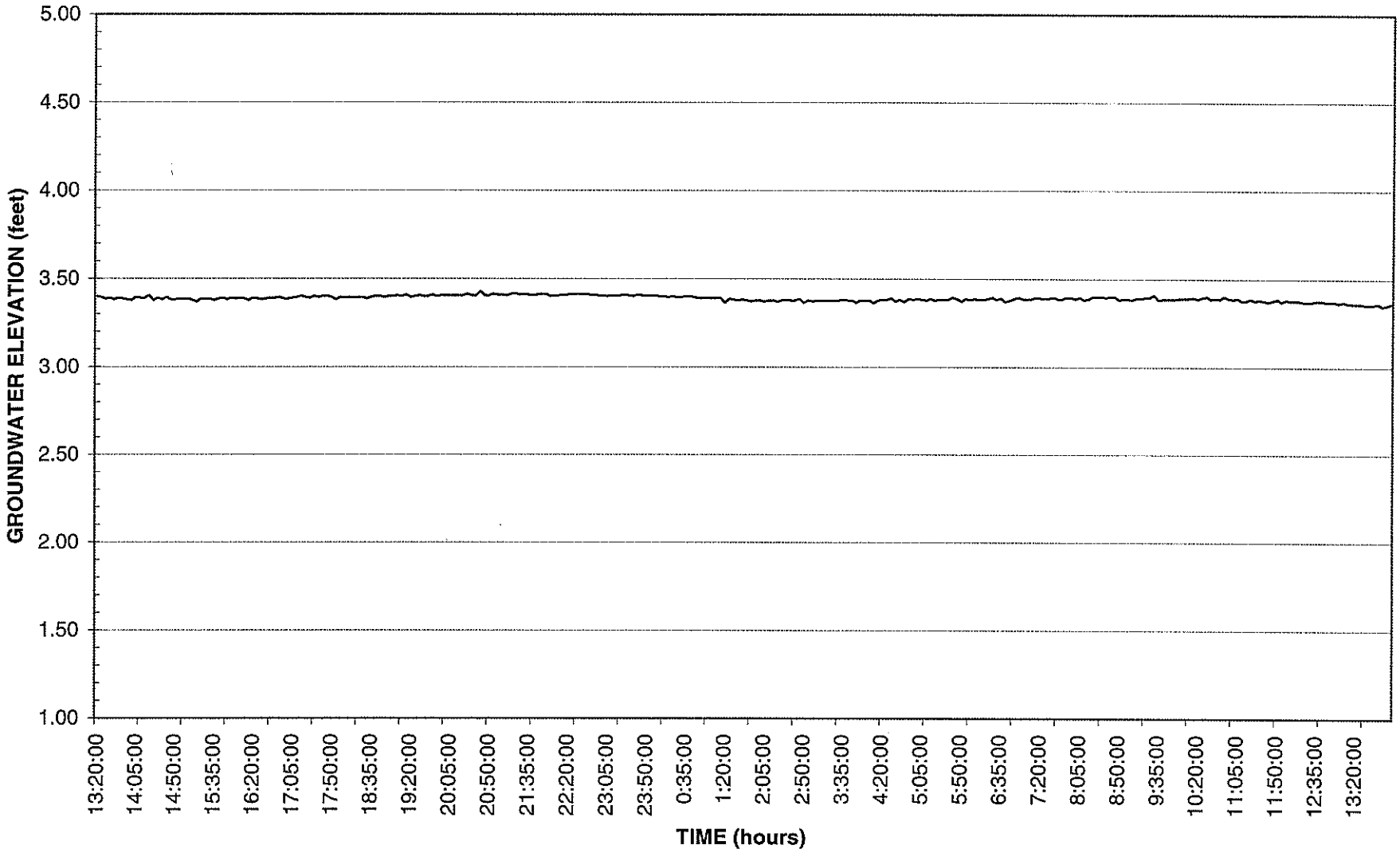
TIDAL STUDY RAYMARK MW-302S 02/17/99 TO 02/18/99



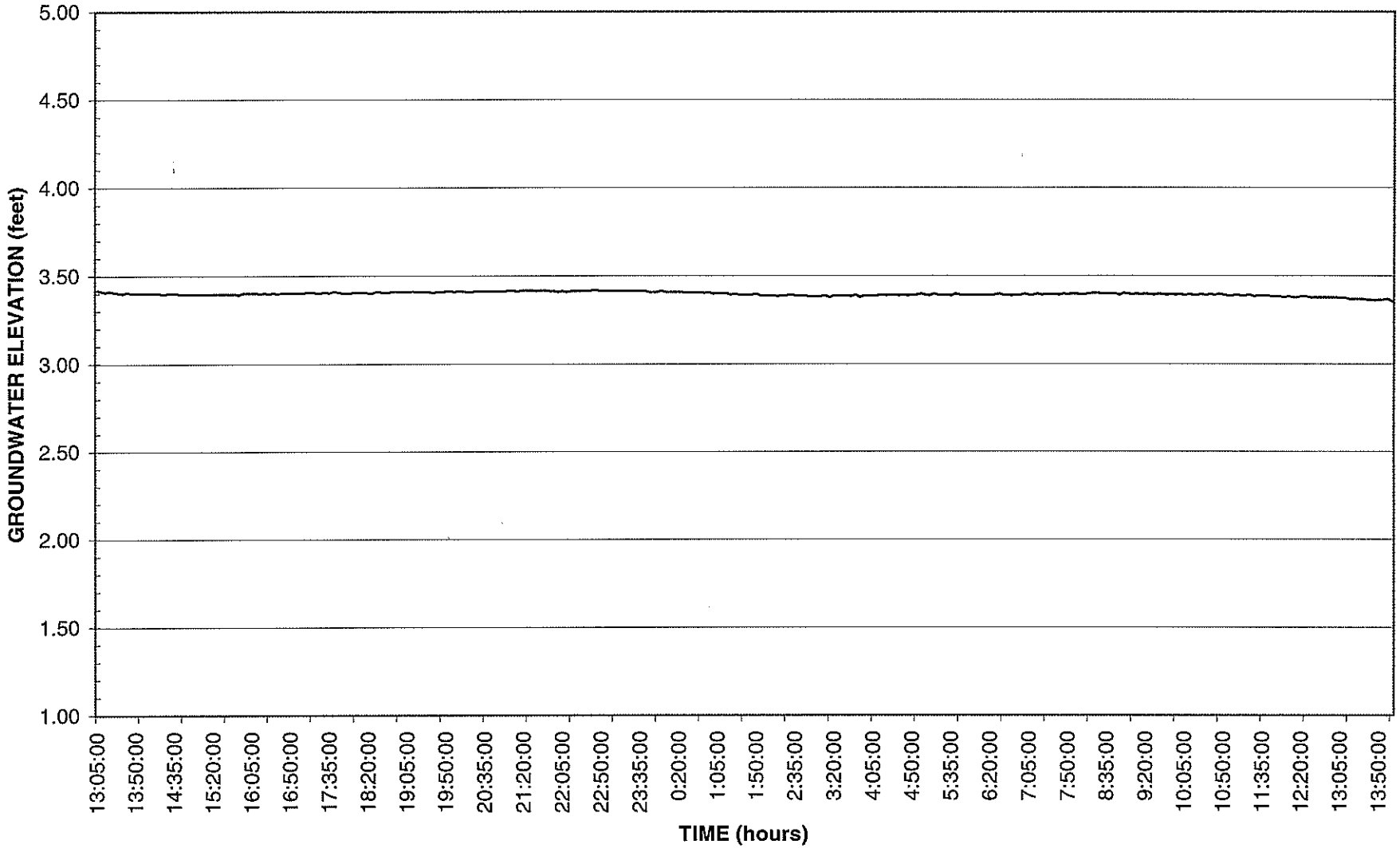
TIDAL STUDY RAYMARK MW-304B 02/17/99 TO 02/18/99



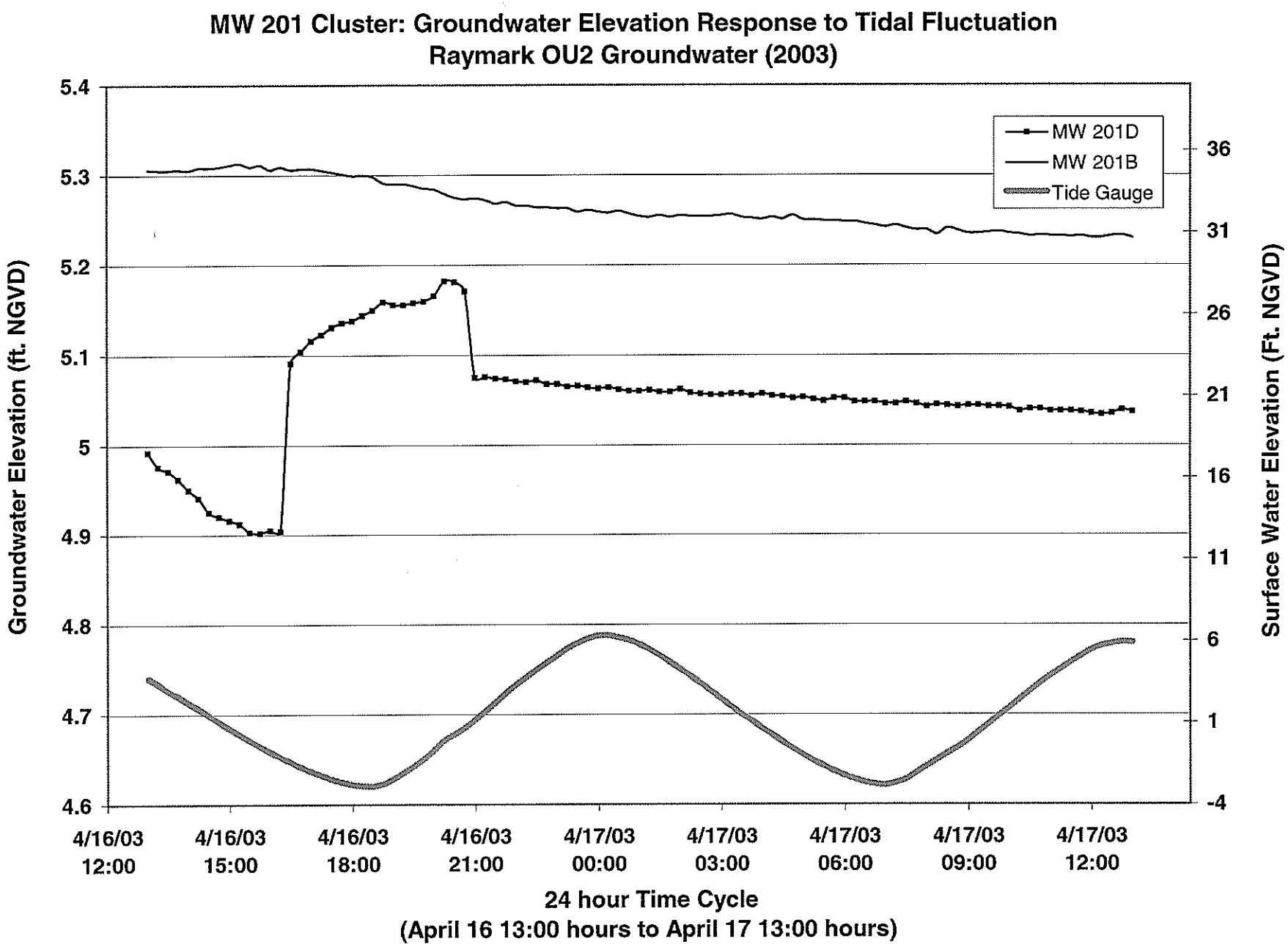
TIDAL STUDY RAYMARK MW304D 02/17/99 TO 02/18/99

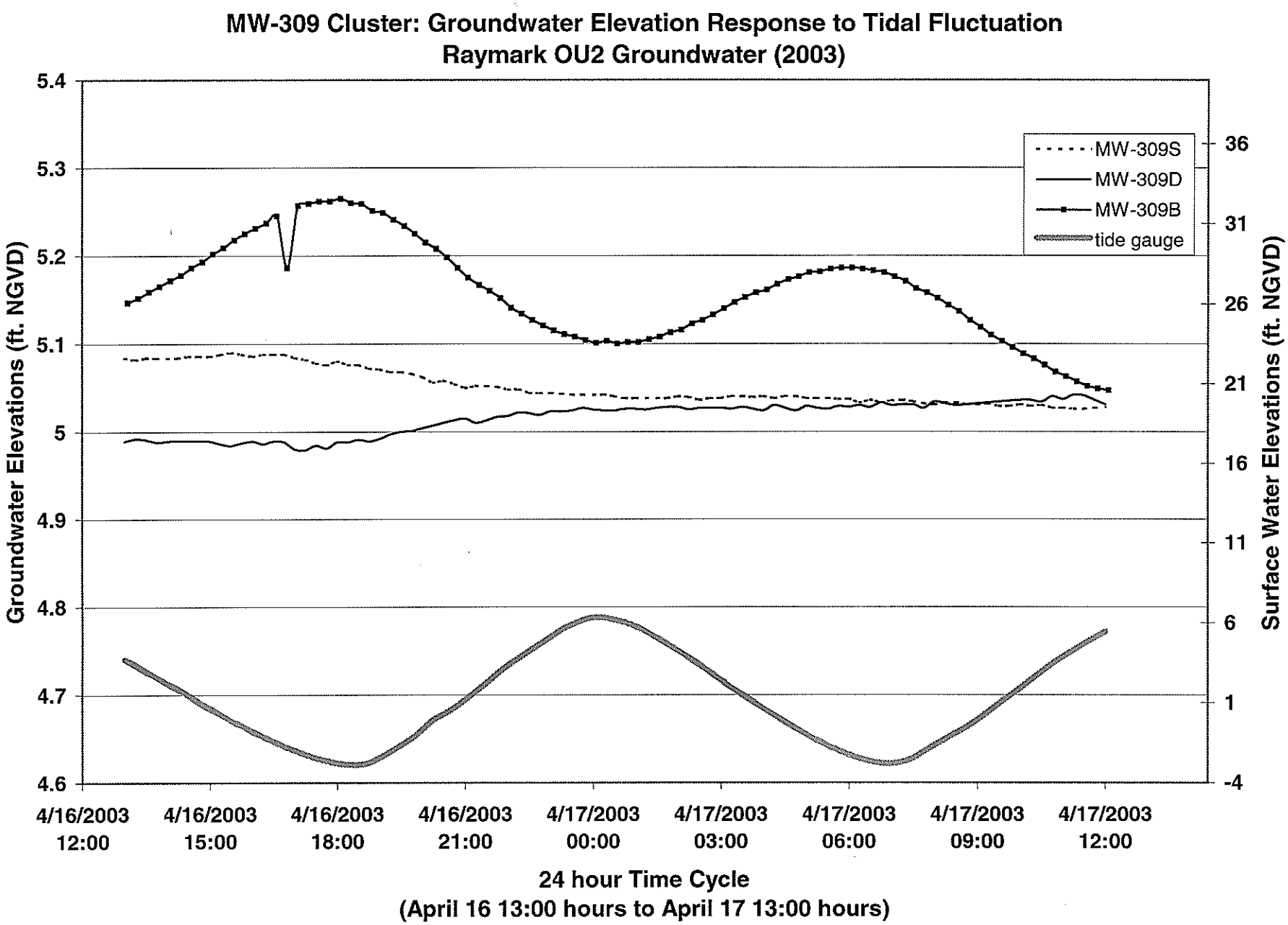


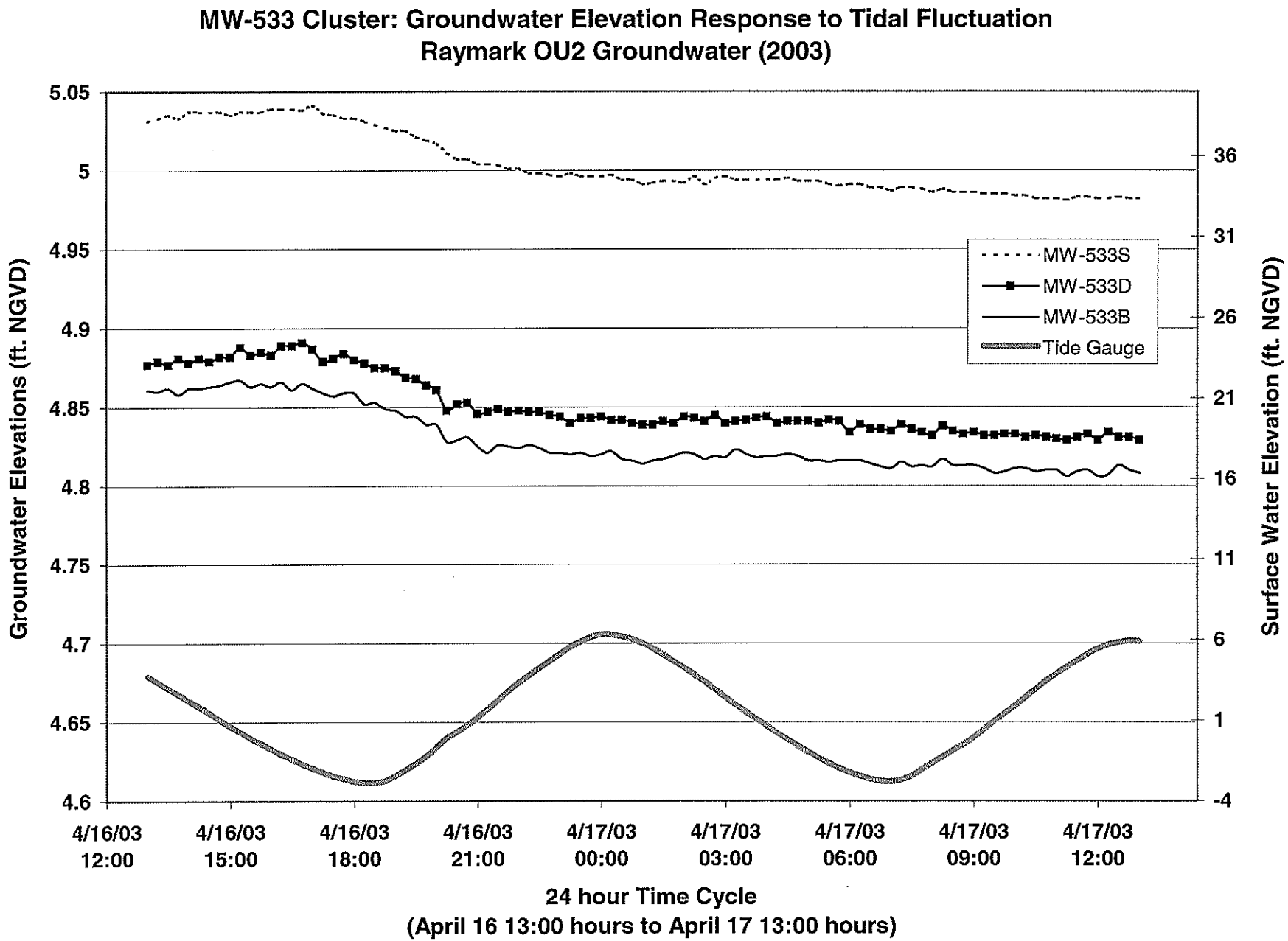
TIDAL STUDY RAYMARK MW-304S 02/17/99 TO 02/18/99

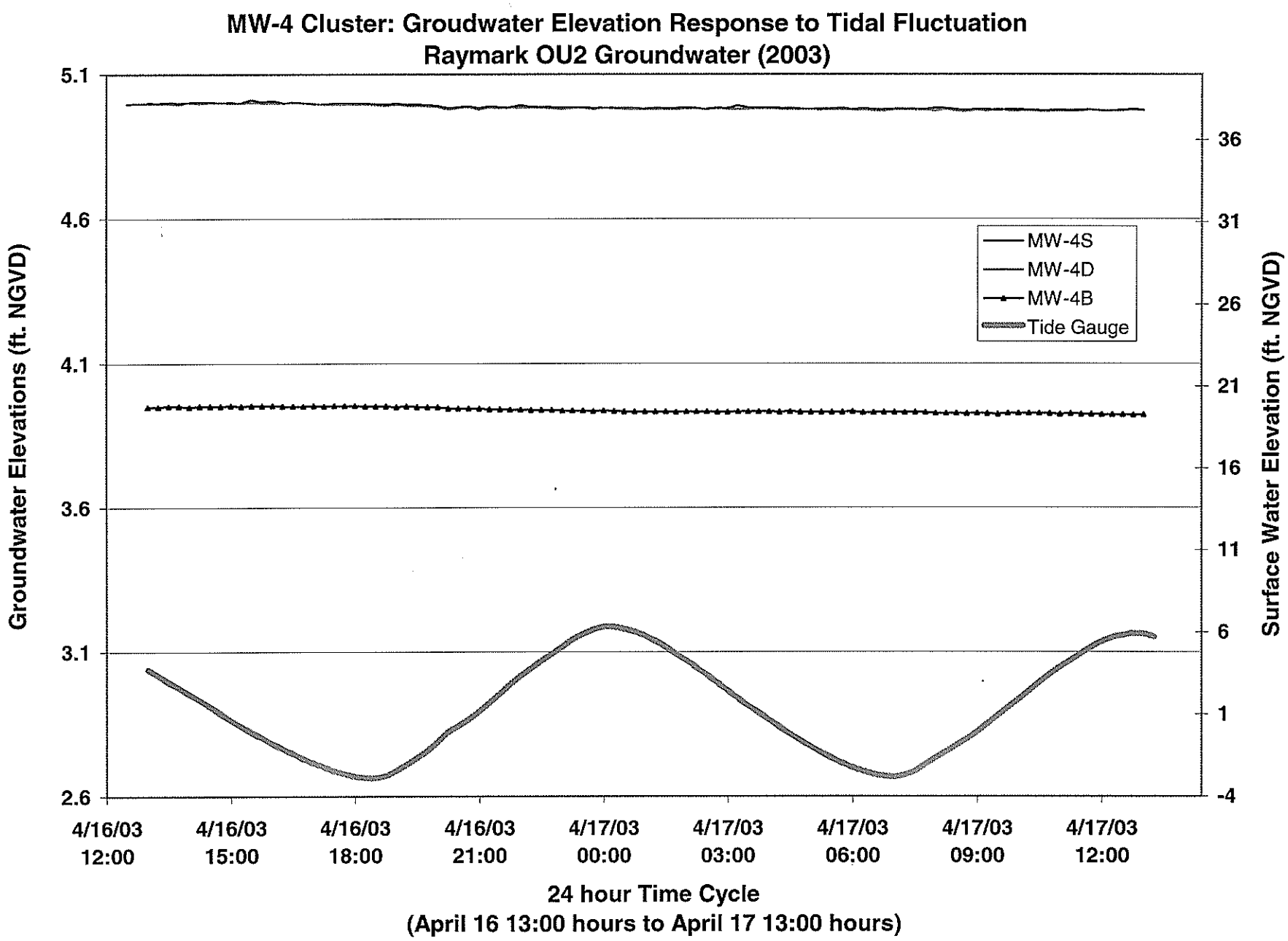


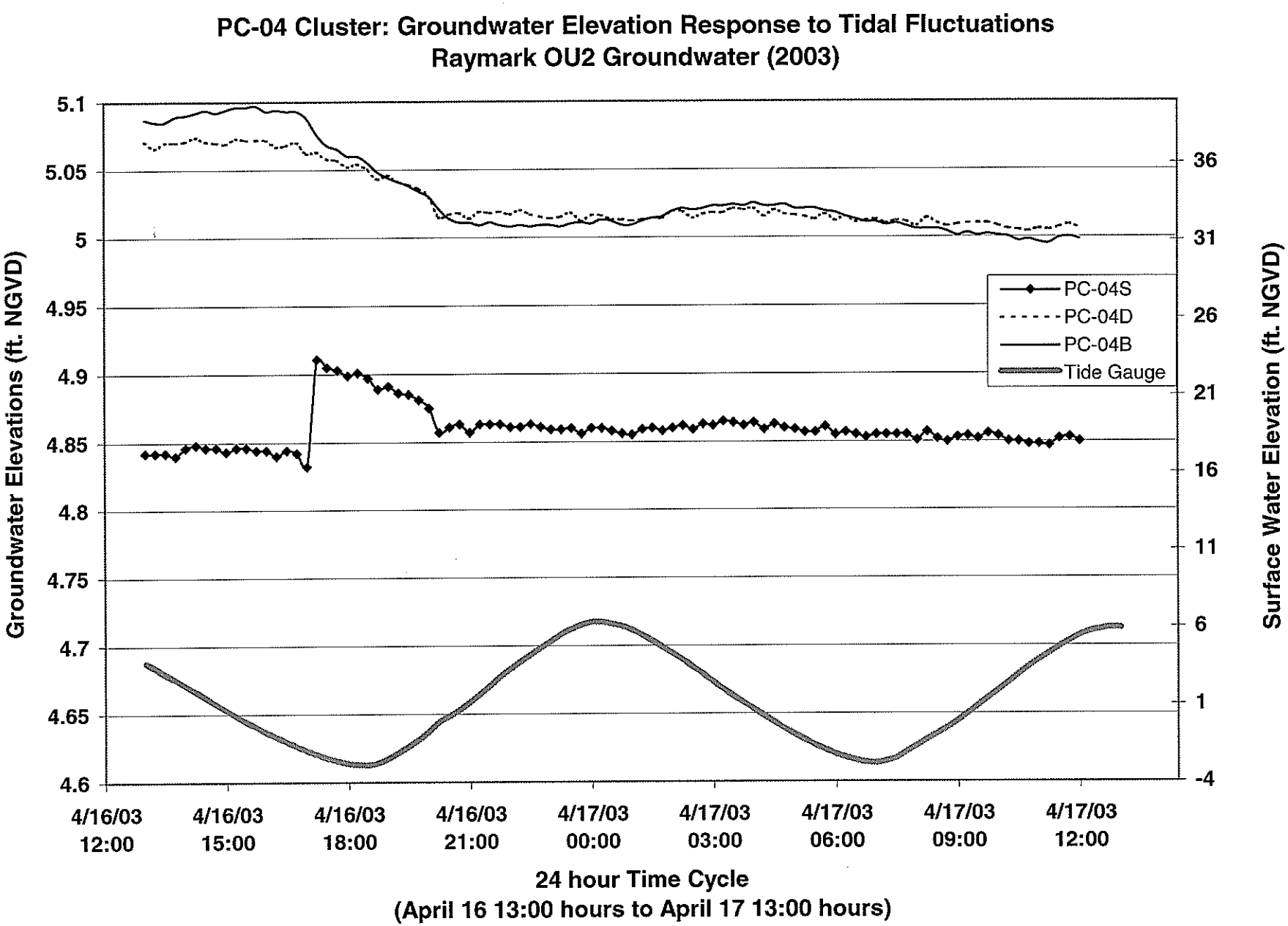
2003 TIDAL STUDY


MW 201 Cluster: Groundwater Elevation Response to Tidal Fluctuation
Raymark OU2 Groundwater (2003)
MW 201D
MW 201B
Tide Gauge
Groundwater Elevation (ft. NGVD)
Surface Water Elevation (Ft. NGVD)
5.4
5.3
5.2
5.1
5
4.9
4.8
4.7
4.6
36
31
26
21
16
11
6
1
-4
4/16/03 12:00
4/16/03 15:00
4/16/03 18:00
4/16/03 21:00
4/17/03 00:00
4/17/03 03:00
4/17/03 06:00
4/17/03 09:00
4/17/03 12:00
24 hour Time Cycle
(April 16 13:00 hours to April 17 13:00 hours)

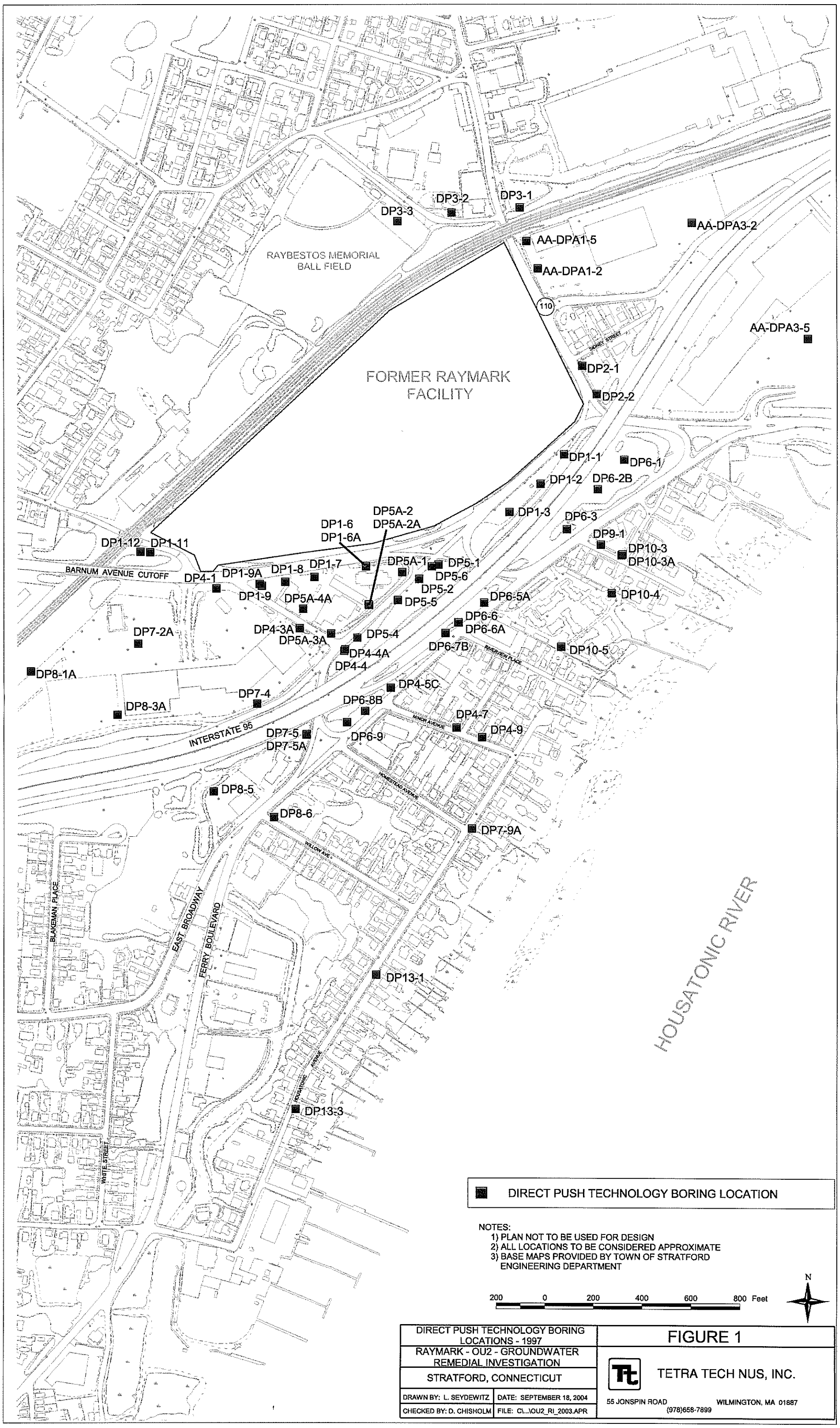

MW-309 Cluster: Groundwater Elevation Response to Tidal Fluctuation
Raymark OU2 Groundwater (2003)
MW-309S
MW-309D
MW-309B
tide gauge
Groundwater Elevations (ft. NGVD)
Surface Water Elevations (ft. NGVD)
5.4
5.3
5.2
5.1
5
4.9
4.8
4.7
4.6
36
31
26
21
16
11
6
1
-4
4/16/2003 12:00
4/16/2003 15:00
4/16/2003 18:00
4/16/2003 21:00
4/17/2003 00:00
4/17/2003 03:00
4/17/2003 06:00
4/17/2003 09:00
4/17/2003 12:00
24 hour Time Cycle
(April 16 13:00 hours to April 17 13:00 hours)


MW-533 Cluster: Groundwater Elevation Response to Tidal Fluctuation
Raymark OU2 Groundwater (2003)
Groundwater Elevations (ft. NGVD)
Surface Water Elevation (ft. NGVD)
5.05
5
4.95
4.9
4.85
4.8
4.75
4.7
4.65
4.6
36
31
26
21
16
11
6
1
-4
MW-533S
MW-533D
MW-533B
Tide Gauge
4/16/03 12:00
4/16/03 15:00
4/16/03 18:00
4/16/03 21:00
4/17/03 00:00
4/17/03 03:00
4/17/03 06:00
4/17/03 09:00
4/17/03 12:00
24 hour Time Cycle
(April 16 13:00 hours to April 17 13:00 hours)


MW-4 Cluster: Groudwater Elevation Response to Tidal Fluctuation
Raymark OU2 Groundwater (2003)
Groundwater Elevations (ft. NGVD)
5.1
4.6
4.1
3.6
3.1
2.6
Surface Water Elevation (ft. NGVD)
36
31
26
21
16
11
6
1
-4
MW-4S
MW-4D
MW-4B
Tide Gauge
4/16/03 12:00
4/16/03 15:00
4/16/03 18:00
4/16/03 21:00
4/17/03 00:00
4/17/03 03:00
4/17/03 06:00
4/17/03 09:00
4/17/03 12:00
24 hour Time Cycle
(April 16 13:00 hours to April 17 13:00 hours)


PC-04 Cluster: Groundwater Elevation Response to Tidal Fluctuations
Raymark OU2 Groundwater (2003)
Groundwater Elevations (ft. NGVD)
Surface Water Elevation (ft. NGVD)
5.1
5.05
5
4.95
4.9
4.85
4.8
4.75
4.7
4.65
4.6
36
31
26
21
16
11
6
1
-4
PC-04S
PC-04D
PC-04B
Tide Gauge
4/16/03 12:00
4/16/03 15:00
4/16/03 18:00
4/16/03 21:00
4/17/03 00:00
4/17/03 03:00
4/17/03 06:00
4/17/03 09:00
4/17/03 12:00
24 hour Time Cycle
(April 16 13:00 hours to April 17 13:00 hours)

1999 WATER TABLE MAP



DIRECT PUSH TECHNOLOGY BORING LOCATION

NOTES:
1) PLAN NOT TO BE USED FOR DESIGN
2) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE
3) BASE MAPS PROVIDED BY TOWN OF STRATFORD ENGINEERING DEPARTMENT

200 0 200 400 600 800 Feet

N

DIRECT PUSH TECHNOLOGY BORING LOCATIONS - 1997	FIGURE 1
RAYMARK - OU2 - GROUNDWATER REMEDIAL INVESTIGATION	TETRA TECH NUS, INC.
STRATFORD, CONNECTICUT	55 JONSPIN ROAD WILMINGTON, MA 01887 (978)658-7899
DRAWN BY: L. SEYDEWITZ / DATE: SEPTEMBER 18, 2004	
CHECKED BY: D. CHISHOLM / FILE: C\...\OU2_RI_2003.APR	

GROUNDWATER MONITORING PARAMETERS

Groundwater Monitoring Parameters - May, 1994
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Conductivity mOHM/cm	pH	Turbidity NTU's	DO mg/L	Salinity PPT (unless noted)	ORP/Eh mv
BC-MW-120-01	5/17/1994	11.9	1.12	NA	0.50	***0.25***	0.5	NA
MF-MW-101D-01	5/19/1994	12.5	0.480	NA	3.46	0.40	0	NA
MF-MW-101M-01	5/19/1994	14.0	22.2	6.66	0.99	0.25	14%	NA
MF-MW-101S-01	5/19/1994	***10.6***	***12.03***	***6.02***	***13.30***	3.25	0	NA
MF-MW-102M-01	5/20/1994	***14.3***	***0.317***	***6.32***	***0.73***	***6.00***	***0***	NA
MF-MW-102D-01	5/20/1994	12.8	0.308	6.70	0.97	0.60	0	NA
MF-MW-102S-01	5/20/1994	22.1	0.769	5.92	27.20	0.80	0	NA
MF-MW-103D-01	5/19/1994	13.3	1.032	NA	0.85	0.15	0	NA
MF-MW-103M-01	5/19/1994	***14.1***	***1.22***	***6.24***	***0.31***	***0.25***	***0***	NA
MF-MW-104D-01	5/20/1994	***13.8***	***9.90***	***6.33***	***1.17***	***0.20***	***6***	NA
MF-MW-104M-01	5/20/1994	13.6	1.50	6.43	0.26	0.20	0.50%	NA
MF-MW-104S-01	5/20/1994	12.2	2.02	6.70	1.21	0.10	1%	NA
SP-MW-110D-01	5/16/1994	13.9	0.781	6.37	0.56	0.35	0	NA
SP-MW-110M-01	5/16/1994	17.8	1.349	NA	3.24	0.25	1	NA
SP-MW-110S-01	5/16/1994	12.2	2.97	12.13	2.03	0.00	2	NA
SP-MW-111D-01	5/18/1994	15.0	4.04	NA	0.98	0.40	2%	NA
SP-MW-111M-01	5/18/1994	15.3	1.945	6.58	2.00	0.20	1%	NA
SP-MW-111S-01	5/18/1994	12.2	0.441	6.38	0.96	1.00	0	NA
SP-MW-112B-01	5/18/1994	13.2	0.866	NA	***0.60***	0.25	0	NA
SP-MW-112D-01	5/18/1994	14.1	0.75	6.94	11.10	0.20	0	NA
SP-MW-112M-01	5/18/1994	***14.8***	***0.666***	***6.72***	***0.92***	***0.15***	0.5	NA
SP-MW-113B-01	5/17/1994	14.1	8.58	6.26	3.50	0.15	5%	NA
SP-MW-113M-01	5/17/1994	14.7	***2.92***	6.48	0.57	0.10	1.50%	NA

bold/italics = no units on data sheet
NA = data not available

Groundwater Monitoring Parameters - August, 1994
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Conductivity mOHM/cm	pH	Turbidity NTU's	DO mg/L	Salinity PPT	ORP/Eh mv
BC-MW-120-02	8/25/1994	17.2	1.248	7.17	1.03	0.2	1	NA
MF-MW-101D-02	8/24/1994	14.1	0.43	6.02	1.51	0.6	***0.3***	NA
MF-MW-101M-02	8/24/1994	14.5	20.2	NA	0.3	0.29	10.2	NA
MF-MW-101S-02	8/24/1994	24.5	14.37	5.81	22.6	0.5	NA	NA
MF-MW-102D-02	8/22/1994	13.5	0.349	7.41	1	0.15	***0***	NA
MF-MW-102S-02	8/22/1994	17.1	1.08	5.83	32.8	1	***0.5***	NA
MF-MW-103D-02	8/24/1994	14.8	0.846	6.84	4.55	0.55	***0***	NA
MF-MW-103M-02	8/24/1994	15.4	1.36	6.95	0.92	0.5	***0***	NA
MF-MW-104D-02	8/25/1994	14.8	9.7	6.4	1	0.15	4.5	NA
MF-MW-104M-02	8/25/1994	***16.3***	***2.08***	***6.39***	***0.55***	***0.2***	***0***	NA
MF-MW-104S-02	8/25/1994	20.6	2.99	6.69	1.59	0.2	***2.5***	NA
SP-MW-110D-02	8/26/1994	16	0.582	6.54	1.09	0.2	***0.5***	NA
SP-MW-110M-02	8/26/1994	17.9	1.469	6.46	0.54	0.1	***0***	NA
SP-MW-110S-02	8/26/1994	22.6	4.47	11.97	3.9	0.05	3	NA
SP-MW-111D-02	8/23/1994	16	4.31	4.46	0.98	0.3	***3***	NA
SP-MW-111M-02	8/23/1994	15.3	2.05	6.57	0.71	0.25	115	NA
SP-MW-111S-02	8/23/1994	22	0.858	NA	3.03	0.2	***0***	NA
SP-MW-112B-02	8/23/1994	15.2	0.981	NA	1.06	0.2	***0***	NA
SP-MW-112D-02	8/23/1994	16.1	1.003	6.89	1.5	0.3	***0.1***	NA
SP-MW-112M-02	8/23/1994	18.4	0.726	6.85	1.9	0.3	***0***	NA
SP-MW-112M-02	8/22/1994	12.6	0.214	NA	0.58	10.4	***14.8***	NA
SP-MW-113B-02	8/24/1994	14.6	6.83	6.4	1.9	0.3	4.5	NA
SP-MW-113M-02	8/24/1994	15	1.96	6.61	1.01	0.2	***1.5***	NA

bold/italics = no units on data sheet
NA = data not available

Groundwater Monitoring Parameters - Round 3 Nov. 28, 1994 - Dec. 2, 1994
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Conductivity mOHM/cm	pH	Turbidity NTU's	DO mg/L	Salinity PPT (unless noted)	ORP/Eh mv
BC-MW-120-03	11/30/1994	15.8	1.209	6.80	0.74	0.40	NA	NA
MF-MW-101D-03	12/1/1994	13.1	0.419	5.91	1.28	0.70	NA	NA
MF-MW-101M-03	12/1/1994	14.8	23.9	6.53	4.32	0.2	NA	NA
MF-MW-101S-03	12/1/1994	7.7	19.86	6.36	13.27	1.45	NA	NA
MF-MW-102D-03	11/29/1994	13.6	0.296	6.60	1.46	0.80	NA	NA
MF-MW-102M-03	11/29/1994	16.2	0.280	6.26	1.0	3.50	NA	NA
MF-MW-102S-03	11/29/1994	14.2	1.122	6.51	1.08	0.35	NA	NA
MF-MW-103D-03	12/2/1994	13.5	0.803	6.60	3.91	0.65	NA	NA
MF-MW-103M-03	12/2/1994	12.3	1.182	6.69	1.04	0.90	NA	NA
MF-MW-104D-03	12/1/1994	13.0	8.86	5.90	4.17	1.2	NA	NA
MF-MW-104M-03	12/1/1994	14.6	2.13	6.46	1.06	0.9	NA	NA
MF-MW-104S-03	12/1/1994	12.9	2.89	6.30	2.09	0.30	NA	NA
SP-MW-110D-03	11/28/1994	15.7	0.668	6.40	0.19	0.35	NA	NA
SP-MW-110M-03	11/28/1994	15.6	1.366	6.42	1.31	1.40	NA	NA
SP-MW-110S-03	11/28/1994	16.8	4.78	11.10	2.44	0.10	NA	NA
SP-MW-111D-03	11/30/1994	15.2	4.56	4.71	2.21	0.55	NA	NA
SP-MW-111M-03	11/30/1994	17.6	1.926	6.21	1.90	1.1	NA	NA
SP-MW-111S-03	11/30/1994	11.8	0.950	6.53	0.87	4.80	NA	NA
SP-MW-112B-03	11/29/1994	14.8	1.198	7.10	1.18	0.7	NA	NA
SP-MW-112D-03	11/29/1994	15.2	1.082	6.57	3.31	0.60	NA	NA
SP-MW-112M-03	11/29/1994	13.2	0.753	6.78	3.39	0.10	NA	NA
SP-MW-113B-03	11/30/1994	12.9	9.13	6.02	2.41	0.35	NA	NA
SP-MW-113M-03	11/30/1994	15.0	2.58	6.61	1.34	2.3	NA	NA

bold/italics = no units on data sheet
NA = data not available

Groundwater Monitoring Parameters - Round 4 March 1995
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Conductivity mmhos/cm	pH	Turbidity NTU's	DO mg/L	Salinity PPT (unless noted)	ORP/Eh mv
BC-MW-120-04	3/29/1995	14.1	1.290	7.09	* 8.63	0.25	NA	NA
MF-MW-101D-04	3/29/1995	13.1	0.407	5.83	1.38	0.4	NA	NA
MF-MW-101M-04	3/29/1995	14.8	20.9	6.38	0.40	0.8	NA	NA
MF-MW-101S-04	3/29/1995	11.5	15.00	5.55	23.80	0.60	NA	NA
MF-MW-102D-04	3/27/1995	12.8	0.344	6.87	1.03	1.35	NA	NA
MF-MW-102M-04	3/27/1995	14.5	0.273	6.03	1.30	6.0	NA	NA
MF-MW-102S-04	3/27/1995	8.7	0.851	5.71	2.81	0.25	NA	NA
MF-MW-103D-04	3/29/1995	12.8	0.663	5.75	2.1	0.5	NA	NA
MF-MW-103M-04	3/29/1995	12.0	0.915	6.31	1.90	0.50	NA	NA
MF-MW-104D-04	3/28/1995	12.6	8.90	6.18	3.5	0.4	NA	NA
MF-MW-104M-04	3/28/1995	13.9	1.743	6.59	0.70	0.15	NA	NA
MF-MW-104S-04	3/28/1995	7.8	2.23	6.46	4.3	0.25	NA	NA
SP-MW-110D-04	3/27/1995	15.3	0.698	6.90	0.91	0.25	NA	NA
SP-MW-110M-04	3/27/1995	16.9	0.984	6.54	0.83	0.2	NA	NA
SP-MW-110S-04	3/27/1995	11.1	4.17	11.82	1.86	0.10	NA	NA
SP-MW-111D-04	3/28/1995	13.1	4.19	4.81	3.28	0.75	NA	NA
SP-MW-111M-04	3/28/1995	16.2	1.706	6.23	4.9	0.2	NA	NA
SP-MW-111S-04	3/28/1995	9.1	0.801	6.12	1.9	3.5	NA	NA
SP-MW-112B-04	3/28/1994	14.3	1.382	6.82	0.52	0.20	NA	NA
SP-MW-112D-04	3/28/1995	15.0	1.093	7.06	1.51	0.35	NA	NA
SP-MW-112M-04	3/28/1995	13.6	0.624	6.68	1.9	0.50	NA	NA
SP-MW-113B-04	3/29/1995	12.6	8.08	6.19	2.0	0.25	NA	NA
SP-MW-113M-04	3/29/1995	14.6	2.74	6.49	3.18	0.2	NA	NA

bold/italics = no units on data sheet
NA = data not available
* = meter not accurate, low battery

Groundwater Monitoring Parameters - 1997
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Specific Conductance µS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity
OU1-PC-08B	12/5/1997	12.20	***0.303***	8.96	211.2	1.35	4.20	NA
OU1-PC-05B	12/5/1997	13.78	***2.750***	7.80	-127.5	1.47	2.00	NA
OU1-PC-04B	12/3/1997	14.51	***1356***	7.36	-103.6	9.40	1.99	NA
OU1-PC-03B	12/3/1997	14.26	***0.914***	8.02	-42.9	0.83	13.40	NA
OU1-PC-02B	12/2/1997	15.35	***9690***	3.85	-135.2	0.77	1.70	NA
OU1-PC-01B	12/2/1997	14.63	***6910***	4.44	88.5	16.04	3.20	NA
CP-MW-8-01	11/18/1997	18.41	0.350	3.66	277.3	0.91	0.50	***0.17***
CP-MW-4-01	11/18/1997	12.18	0.443	6.83	340.4	1.01	0.95	***0.21***
CP-MW-6-01	11/18/1997	13.34	0.363	6.31	38.5	1.94	34.00	***0.18***
CP-MW-2A-01	11/18/1997	17.60	0.088	5.83	346.8	6.88	0.20	***0.04***
CP-MW-BR1-01	11/18/1997	17.77	1.664	6.71	-153.7	2.00	0.25	***0.85***
CP-MW-BR2-01	11/18/1997	18.01	1.251	6.72	263.1	0.59	1.00	***0.63***
CP-MW-Z-01	11/18/1997	13.86	0.265	6.06	241.7	0.30	0.45	***0.13***
DK-MW-1S-01	12/3/1997	15.60	0.630	6.37	-75.3	0.31	2.70	NA
DK-MW-1M-01	12/3/1997	15.81	0.702	6.48	-69.4	0.32	1.20	***0.34***
DK-MW-1B-01	12/3/1997	15.05	2.719	5.02	-300.2	0.84	6.40	***1.42***
DK-MW-2S-01	12/3/1997	17.71	0.230	5.44	323.1	4.69	1.60	***0.11***
DK-MW-3S-01	12/3/1997	18.74	0.434	5.96	88.1	1.00	0.85	***0.21***
DK-MW-4S-01	12/2/1997	18.77	1.181	3.92	329.9	5.31	0.90	***0.58***
DK-MW-4D-01	12/3/1997	19.55	1.669	3.94	-344.2	0.32	2.50	***0.85***
DK-MW-4B-01	12/3/1997	20.13	3.437	4.45	66.8	3.70	38.00	***1.81***
OU2-MW-104D-05	11/7/1997	14.04	6.179	6.06	-78.4	0.02	0.40	***3.38***
OU2-MW-104M-05	11/7/1997	14.23	0.778	6.11	96.5	0.03	0.12	***0.38***
OU2-MW-104S-05	11/7/1997	14.82	3.193	6.52	-105.6	0.33	1.70	***1.68***
OU2-MW-103D-05	11/6/1997	13.40	0.612	5.74	65.7	0.04	0.70	***0.30***
OU2-MW-103M-05	11/6/1997	14.48	0.818	6.05	136.3	0.07	0.00	***0.40***
OU2-MW-102D-05	11/6/1997	13.48	0.301	6.56	-14.2	0.15	0.12	***0.14***
OU2-MW-102M-05	11/6/1997	13.99	0.222	6.24	186.9	5.35	0.15	***0.11***
OU2-MW-102S-05	11/6/1997	13.97	1.074	5.85	-13.9	0.34	11.00	***0.54***
OU2-MW-101D-05	11/10/1997	12.99	0.350	5.48	133.0	0.30	0.00	***0.17***
OU2-MW-101M-05	11/10/1997	16.14	14.270	6.67	-239.6	0.86	3.90	***8.31***
OU2-MW-110S-05	11/10/1997	20.86	4.542	11.78	-706.8	-0.09	0.95	***2.43***
OU2-MW-101S-05	11/7/1997	13.00	22.900	5.94	-63.4	1.16	70.00	***13.91***
OU2-MW-110M-05	11/10/1997	17.20	1.234	6.63	-103.0	0.14	1.30	***0.62***
OU2-MW-111M-05	11/11/1997	16.76	1.533	6.31	-47.2	0.46	2.00	NA
OU2-MW-111S-05	11/12/1997	13.96	2.665	6.26	397.1	1.63	3.90	***1.39***
OU2-MW-110D-05	11/10/1997	13.99	0.615	6.53	NA	0.15	0.10	***0.30***
OU2-MW-207D-02	11/21/1997	13.79	0.748	6.70	314.5	0.26	0.90	***0.37***
OU2-MW-207M-01	11/12/1997	14.93	0.675	7.17	-527.4	0.23	2.00	***0.33***
OU2-MW-205D-02	11/17/1997	16.55	0.623	6.27	67.3	0.33	1.50	***0.31***
OU2-MW-204D-02	11/17/1997	15.50	0.758	6.35	268.5	0.18	0.30	***0.37***
OU2-MW-203D-02	11/11/1997	13.90	1.807	4.64	175.6	0.32	1.10	***0.92***
OU2-MW-202D-02	11/11/1997	15.13	2.011	6.19	-26.8	0.30	0.85	***1.04***
OU2-MW-201D-02	11/11/1997	18.15	3.353	6.18	-262.4	0.31	3.43	***1.77***
OU2-MW-113B-05	11/12/1997	13.11	7.953	6.32	42.3	0.55	2.70	***4.43***
OU2-MW-113M-05	11/12/1997	15.49	2.711	6.47	-133.9	0.47	0.97	***1.41***

Groundwater Monitoring Parameters - 1997
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Specific Conductance µS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity
OU2-MW-112B-05	11/11/1997	14.32	1.195	6.93	105.3	0.21	0.55	***0.60***
OU2-MW-111D-05	11/11/1997	14.13	3.072	4.03	240.4	0.20	0.80	***1.60***
OU2-MW-112M-05	11/11/1997	17.63	0.569	6.75	278.0	0.29	1.50	***0.28***
OU2-MW-112D-05	11/11/1997	15.45	0.760	6.80	-71.3	0.19	0.80	***0.37***
OU2-MW-206S-01	11/12/1997	17.00	0.716	6.17	-519.3	0.21	0.15	***0.35***
OU2-MW-206M-01	11/12/1997	17.25	1.176	5.83	-459.9	0.54	0.87	***0.59***
OU2-MW-206D-02	11/12/1997	14.96	4.095	3.89	123.4	0.38	0.15	***2.19***
OU2-MW-207S-01	11/12/1997	16.65	0.488	6.86	-521.0	0.17	0.90	***0.24***
OU2-MW-208S-01	11/13/1997	15.99	0.500	6.80	-125.7	0.19	0.80	***0.24***
OU2-MW-208M-01	11/13/1997	15.80	0.479	6.47	271.0	0.25	2.90	***0.23***
OU2-MW-208D-01	11/13/1997	14.24	0.351	6.68	261.2	0.21	1.60	***0.17***
OU2-MW-209S-01	11/13/1997	23.96	1.208	8.01	-391.8	0.07	2.30	NA
OU2-MW-209D-01	11/13/1997	16.40	1.000	6.74	144.5	0.22	1.10	***0.49***
OU2-MW-209B-01	11/13/1997	15.89	0.689	6.70	-493.3	0.32	0.35	***0.34***
OU2-MW-210S-01	11/12/1997	20.54	2.221	7.10	-522.9	0.17	0.87	NA
OU2-MW-210D-01	11/12/1997	16.90	1.191	6.69	-527.0	0.34	0.35	***0.60***
OU2-MW-211S-01	11/19/1997	17.28	1.125	7.06	335.0	2.16	0.48	***0.56***
OU2-MW-211M-01	11/19/1997	15.54	1.035	6.41	-509.3	0.15	55.00	***0.52***
OU2-MW-211D-01	11/19/1997	15.46	6.830	3.91	46.3	18.55	2.10	***3.76***
OU2-MW-211B-01	11/19/1997	15.01	6.113	4.51	-306.5	0.89	30.00	***3.35***
OU2-MW-212S-01	11/13/1997	17.96	1.254	6.58	14.0	0.36	0.40	***0.63***
OU2-MW-212M-01	11/13/1997	15.45	3.798	5.62	-397.6	0.17	0.36	***2.02***
OU2-MW-212D-01	11/13/1997	15.25	4.607	5.58	1.2	10.16	0.35	***2.49***
OU2-MW-212B-01	11/17/1997	18.43	2.849	5.91	-301.8	1.10	17.00	***1.49***
OU2-MW-213S-01	11/17/1997	20.29	0.634	6.95	-458.0	0.90	0.70	***0.31***
OU2-MW-213B-01	11/17/1997	16.97	0.927	6.89	-453.5	0.40	1.40	***0.46***
OU2-MW-214S-01	11/14/1997	17.75	0.828	6.36	309.0	0.39	0.89	***0.41***
OU2-MW-214M-01	11/14/1997	14.66	0.932	6.68	-126.1	0.91	0.80	***0.46***
OU2-MW-214D	11/14/1997	14.55	1.486	6.64	-471.2	0.13	0.65	***0.75***
OU2-MW-215B-01	11/19/1997	15.89	0.352	6.53	26.1	5.80	1.00	***0.17***
OU2-MW-216B-01	11/19/1997	15.47	0.371	8.03	-492.8	0.42	3.30	***0.18***
OU2-MW-217D-01	11/17/1997	15.36	7.633	6.44	-416.9	0.17	0.75	***4.24***
OU2-MW-217B-01	11/17/1997	15.35	14.920	6.90	-504.7	0.55	3.50	***8.71***
OU2-MW-FCP1-01	11/20/1997	10.70	1.319	6.58	130.5	8.01	0.30	***0.66***
OU2-MW-FCP2-01	11/20/1997	12.15	2.615	6.30	-317.0	20.13	2.90	***1.36***
OU2-MW-FCP3-01	12/2/1997	10.30	0.519	6.68	-48.9	0.31	2.50	***0.25***
SP-CRA-2D-01	12/2/1997	16.56	0.954	6.57	55.2	0.18	1.00	***0.47***
SP-CRA-4S-01	12/2/1997	14.81	0.915	6.49	109.9	1.14	0.84	NA
SP-CRA-6S-01	12/2/1997	17.02	0.851	6.45	-87.4	0.14	2.70	***0.42***
SP-CRA-6D-01	12/2/1997	17.08	2.894	6.64	-97.7	0.63	0.25	***1.49***
SP-CRA-8-01	12/2/1997	11.62	1.791	6.48	131.0	2.60	70.00	***0.91***

bold/italics = no units were listed on data sheets.

Groundwater Monitoring Parameters - 1998
Raymark Superfund Site
Stratford, Connecticut

Well ID	Date	Temp °C	Specific Conductance µS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity PPT
OU1-PC-01S-02	11/30/1998	20.43	1.630	6.47	-83.3	4.72	2.00	NA
OU1-PC-01D-02	11/30/1998	15.02	4.568	3.85	206.6	1.21	4.82	NA
OU1-PC-02S-02	12/1/1998	22.90	1.760	7.10	-145.1	-0.50	3.50	NA
OU1-PC-03S-02	12/3/1998	23.11	0.962	6.46	-109.0	0.47	4.19	NA
OU1-PC-04S-02	12/4/1998	23.46	0.800	6.45	-78.4	0.49	1.96	NA
OU1-PC-08S-02	12/1/1998	19.18	0.660	7.12	-101.0	0.24	1.40	NA
OU1-PC-09S-02	12/2/1998	20.53	0.666	6.69	-69.6	0.50	2.50	NA
OU1-PC-09D-02	12/2/1998	17.88	0.692	6.73	2.0	-0.18	3.20	NA
OU1-PC-10S-02	12/4/1998	20.98	0.582	5.99	7.7	0.90	4.40	NA
OU1-PC-10M-02	12/4/1998	17.58	0.766	6.95	48.4	-0.20	3.20	NA
OU1-PC-13S-02	12/3/1998	22.84	0.736	5.58	140.2	1.54	3.20	NA
OU1-PC-13M-02	12/2/1998	16.63	1.945	5.33	178.9	-0.24	2.60	NA
OU1-PC-14S-02	12/2/1998	20.23	2.291	6.57	-264.7	2.32	11.00	NA
OU1-PC-15S-02	12/1/1998	22.31	1.361	6.82	-83.6	0.37	2.60	NA
OU1-PC-15D-02	12/1/1998	19.94	1.256	6.83	-169.9	2.59	2.70	NA
OU1-PC-15B-02	12/1/1998	17.20	1.042	7.05	34.1	-0.02	3.30	NA
OU2-MW-104B-01	2/24/1999	10.98	2.428	6.36	-116.7	3.20	3.20	1.26
OU2-MW-104D-06	11/18/1998	14.21	5.999	6.10	-166.8	0.17	2.60	NA
OU2-MW-104M-06	11/18/1998	14.85	834.000	6.17	64.7	0.16	0.00	NA
OU2-MW-104S-06	11/18/1998	21.05	3.597	6.46	-85.7	4.83	3.80	NA
OU2-MW-113M-06	11/19/1998	15.39	2.463	6.59	-69.8	2.76	2.10	NA
OU2-MW-113B-06	11/19/1998	13.67	8.387	6.27	-12.2	0.55	0.88	NA
OU2-MW-201B-01	2/11/1999	13.16	1.318	6.91	-47.6	1.72	4.90	0.65
OU2-MW-201D-02	11/21/1998	18.62	2.806	5.97	44.8	0.25	1.24	NA
OU2-MW-208B-01	2/12/1999	15.07	0.225	6.74	-152.7	1.20	4.80	0.11
OU2-MW-212S-02	11/20/1998	21.12	1.421	5.99	115.5	-0.41	2.10	NA
OU2-MW-212M-02	11/20/1998	16.90	2.901	5.51	4.0	0.22	0.46	NA
OU2-MW-212D-02	11/20/1998	16.73	3.665	5.57	13.5	7.94	1.60	NA
OU2-MW-212B-02	11/20/1998	16.01	3.815	6.26	-209.4	3.42	10.00	NA
OU2-MW-213B-02	11/21/1998	18.03	1.176	6.72	-18.6	0.68	0.95	NA
OU2-MW-213S-02	11/21/1998	21.02	0.580	6.32	82.8	0.40	0.63	NA
OU2-MW-214D-02	11/19/1998	15.71	1.377	6.25	14.9	0.18	0.70	NA
OU2-MW-214M-02	11/19/1998	18.26	0.737	6.54	78.9	1.75	2.50	NA
OU2-MW-214S-02	11/19/1998	21.91	0.458	6.22	-3.0	1.07	2.10	NA
OU2-MW-216DB-01	2/25/1999	9.34	0.335	8.61	-70.9	5.14	165.00	0.16
OU2-GW-301S-01	1/22/1999	15.97	0.403	5.74	139.9	6.98	0.80	NA
OU2-GW-301D-01	1/19/1999	14.94	0.619	6.07	159.9	2.58	0.00	NA
OU2-GW-301B-01	1/19/1999	13.41	2.302	6.65	35.2	0.72	3.39	NA
OU2-MW-302D-01	1/20/1999	15.74	0.831	6.20	36.8	3.01	1.90	NA
OU2-MW-302B-01	1/20/1999	14.43	1.694	6.60	-4.1	1.46	0.45	NA
OU2-MW-302S-01	1/22/1999	20.46	0.283	6.06	53.1	7.02	0.80	NA
OU2-MW-303B-01	2/3/1999	19.40	0.565	6.06	77.4	10.98	0.40	0.28
OU2-MW-304D-01	1/26/1999	15.94	1.285	6.73	-180.4	2.29	0.60	NA
OU2-MW-304B-01	1/26/1999	14.50	0.972	6.34	40.2	1.28	3.20	NA
OU2-MW-304S-01	1/29/1999	10.56	0.619	6.51	-59.7	1.92	1.59	NA
OU2-MW-305B-01	1/27/1999	11.95	0.255	7.91	-269.0	0.85	0.75	NA
0U2-MW-305D-01	1/27/1999	13.35	6.743	6.42	-115.0	1.88	4.60	NA
OU2-MW-305S-01	1/29/1999	16.32	1.921	6.69	-37.8	12.12	0.80	NA

Groundwater Monitoring Parameters - 1998
Raymark Superfund Site
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Well ID	Date	Temp °C	Specific Conductance µS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity PPT
OU2-MW-306B-01	1/21/1999	14.64	0.242	6.96	52.3	2.62	1.00	NA
OU2-MW-306DB-01	1/21/1999	11.92	0.149	7.53	-95.7	2.02	4.10	NA
OU2-MW-307B-01	2/11/1999	15.74	0.231	5.83	93.1	0.27	0.47	0.11
OU2-MW-307DB-01	2/25/1999	12.92	0.399	7.72	56.8	9.47	30.30	0.19
OU2-MW-308B-01	2/23/1999	13.61	0.109	5.74	38.7	12.73	0.45	0.05
OU2-MW-308DB-01	2/23/1999	15.67	0.166	6.63	-109.8	2.01	5.40	0.08
OU2-MW-309B-01	3/4/1999	9.86	0.987	8.12	-103.7	-0.28	2.62	0.49
OU2-MW-309D-01	3/4/1999	13.59	2.357	6.51	-156.2	1.18	3.50	1.27
OU2-MW-309S-01	3/5/1999	16.60	0.128	5.90	4.2	-2.28	0.60	0.06
OU2-MW-310B-01	1/28/1999	10.89	4.447	5.96	26.7	1.48	2.50	NA
OU2-MW-310D-01	1/28/1999	15.15	0.489	5.51	102.3	1.58	4.78	NA
OU2-MW-310S-01	2/3/1999	18.10	0.312	6.20	78.9	6.03	0.80	0.15
OU2-MW-311B-01	2/4/1999	12.09	0.359	7.86	-146.1	0.82	3.88	0.17
OU2-MW-311D-01	2/10/1999	15.60	0.337	6.96	-73.2	0.40	2.45	0.15
OU2-MW-311S-01	2/4/1999	18.37	0.265	6.03	102.5	8.66	0.10	0.13
0U2-MW-312B-01	2/9/1999	12.69	9.135	6.65	-175.8	0.79	3.04	5.14
OU2-MW-312D-01	2/9/1999	12.00	0.333	6.15	-87.8	3.18	2.80	0.16
OU2-MW-312S-01	2/10/1999	13.47	0.897	6.81	-157.8	1.99	1.80	0.44
OU2-MW-313B-01	3/3/1999	13.42	1.038	6.87	-216.9	-0.02	3.76	0.52
OU2-MW-313D-01	3/3/1999	17.88	0.664	5.84	-119.1	0.15	12.00	NA
OU2-MW-313S-01	3/5/1999	12.42	0.486	6.64	-131.9	1.38	1.00	0.24
OU4-MW-401B-01	2/1/1999	13.46	0.357	6.02	126.5	1.41	0.70	NA
OU4-MW-401S-01	2/1/1999	14.58	0.302	6.41	3.9	0.26	1.80	NA
OU2-MW-402B-01	2/2/1999	13.49	0.300	7.09	-128.9	1.02	4.50	NA
OU4-MW-402S-01	2/2/1999	18.15	6.671	6.54	-102.1	-33.07	2.10	NA

NA = Data not available

APPENDIX D
Groundwater Monitoring Parameters 2002/2003
Raymark OU2 Groundwater
Stratford, Connecticut

Well ID	Date	Temp °C	Specific Conductance mS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity
OU1								
OU1-PC-01D	1/17/2003	7.37	4.451	3.78	297.4	1.89	3.1	NA
OU1-PC-01S	1/17/2003	9.98	1.686	6.68	-82.6	0.98	4.80	NA
OU1-PC-01B	1/17/2003	9.16	6.179	3.95	236.1	0.47	3.28	NA
OU1-PC-01M	1/17/2003	12.77	0.790	5.60	415.2	0.72	0.60	NA
OU1-PC-02S	1/21/2003	13.25	1.709	6.85	-123.9	0.25	4.26	NA
OU1-PC-02B	1/21/2003	13.41	8.963	3.74	205.8	0.27	1.68	NA
OU1-PC-02M	1/21/2003	13.55	3.246	4.06	107.7	0.30	0.88	NA
OU1-PC-02D	1/21/2003	12.44	8.719	3.82	165.0	0.57	4.79	NA
OU1-PC-03S	1/27/2003	11.60	0.642	6.61	-86.7	0.57	1.01	NA
OU1-PC-03B	1/27/2003	12.19	0.912	7.28	336.6	0.53	4.30	NA
OU1-PC-03D	1/27/2003	13.64	0.722	6.78	-97.5	0.42	2.23	NA
OU1-PC-04S	2/4/2003	11.54	0.774	7.07	-136.1	0.10	3.09	NA
OU1-PC-04D	2/4/2003	12.69	0.572	6.87	-97.0	0.52	3.80	NA
OU1-PC-04B	2/4/2003	11.66	0.287	7.25	61.3	0.86	4.90	NA
OU1-PC-05S	2/4/2003	14.51	0.947	6.26	-46.9	0.38	1.58	NA
OU1-PC-05M	2/4/2003	13.25	0.735	6.72	-104.0	0.87	4.13	NA
OU1-PC-05D	2/4/2003	12.77	0.932	6.80	-16.5	0.20	1.40	NA
OU1-PC-05B	2/4/2003	11.93	1.735	7.57	-14.9	0.38	0.97	NA
OU1-PC-06B	1/20/2003	9.71	1.134	11.65	126.7	0.77	0.20	NA
OU1-PC-06S	1/20/2003	10.54	1.211	6.53	-43.3	4.38	1.97	NA
OU1-PC-06M	1/16/2003	12.18	0.421	6.72	-38.3	0.37	0.80	NA
OU1-PC-06D	1/20/2003	11.25	1.551	6.96	223.5	0.01	0.00	NA
OU1-PC-07S	1/16/2003	13.17	0.288	6.55	-70.2	0.33	2.01	NA
OU1-PC-08B	1/29/2003	7.01	0.880	6.99	218.9	1.13	4.90	NA
OU1-PC-08S	1/29/2003	14.65	0.533	6.75	-78.1	0.28	1.80	NA
OU1-PC-08D	1/29/2003	13.50	0.660	6.70	-83.0	1.37	0.50	NA
OU1-PC-09D	1/20/2003	13.96	0.742	6.65	-45.5	0.36	3.2	NA
OU1-PC-09S	1/20/2003	14.39	0.58	6.20	-89.4	1.21	3.21	NA
OU1-PC-10B	1/21/2003	9.74	0.393	7.93	264.9	0.32	1.03	NA
OU1-PC-10D	1/21/2003	12.44	1.344	7.43	364.6	7.72	8.3	NA
OU1-PC-10S	1/16/2003	12.47	0.224	6.03	222.7	1.85	0.78	NA
OU1-PC-10M	1/21/2003	12.69	0.602	6.72	233.9	1.41	2.6	NA
OU1-PC-11D	1/22/2003	13.71	1.226	6.12	325.1	5.31	4.94	NA
OU1-PC-11B	1/22/2003	6.26	14.65	7.27	-190.7	0.13	128	NA
OU1-PC-11S	1/22/2003	14.7	1.151	6.89	-101.8	0.27	0	NA
OU1-PC-11M	1/22/2003	13.78	0.661	6.09	124.4	0.52	0.67	NA
OU1-PC-12B	1/21/2003	5.88	1.087	6.2	205.7	1.17	1.68	NA
OU1-PC-12S	1/16/2003	14.27	2.034	6.91	74.9	0.31	1.9	NA
OU1-PC-12D	1/16/2003	14.61	3.997	5.77	141.7	5.06	0.99	NA
OU1-PC-13B	1/29/2003	7.4	2.214	7.3	73.3	1.79	4.81	NA
OU1-PC-13D	1/24/2003	11.12	1.58	6.09	254.8	0.33	4.86	NA
OU1-PC-13S	1/24/2003	12.03	0.202	6.13	510.2	1.59	3.98	NA
OU1-PC-13M	1/29/2003	11.65	1.209	6.06	69.4	0.11	4.76	NA
OU1-PC-14B	1/23/2003	8.03	0.272	7.06	292.1	0.55	4.8	NA
OU1-PC-14D	1/22/2003	14.12	4.672	3.86	385.2	2.32	0	NA
OU1-PC-14S	1/23/2003	16.65	1.71	6.43	-56.1	0.33	1.49	NA
OU1-PC-15B	1/16/2003	14.7	0.699	7.25	293.9	0.15	0.2	NA
OU1-PC-15D	1/16/2003	14.47	1.334	6.65	-82.1	5.53	4.8	NA
OU1-PC-15S	1/20/2003	11.22	1.315	6.29	158.4	9.18	4.28	NA
OU1-PC-16S	1/31/2003	11.74	0.172	5.9	273	1.03	0.19	NA
OU1-PC-16M	1/31/2003	10.68	1.318	5.4	323.6	1.33	0.06	NA
OU1-PC-16D	1/31/2003	11.16	1.333	6.02	203.5	2.56	2.27	NA
OU1-PC-16B	1/31/2003	11.17	1.088	6.59	352.1	0.82	2.56	NA

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Well ID	Date	Temp °C	Specific Conductance mS/cm	pH	ORP/Eh mv	DO mg/L	Turbidity NTU's	Salinity
OU2								
OU2-MW-1	1/15/2003	11.31	0.086	5.71	357.2	7.58	1.89	NA
OU2-MW-1B	7/24/2003	17.98	3.129	4.60	277.0	1.09	1.58	NA
OU2-MW-1M	7/24/2003	21.57	0.770	6.46	108.4	1.84	0.41	NA
OU2-MW-1S	7/24/2003	15.02	0.343	6.08	0.7	0.40	2.57	NA
OU2-MW-101D	12/4/2002	11.32	0.282	5.58	215.0	0.41	2.11	NA
OU2-MW-101M	12/4/2002	10.66	18.150	6.76	-342.7	3.63	4.60	NA
OU2-MW-101S	12/10/2002	10.81	7.693	5.82	242.0	1.13	35.60	NA
OU2-MW-102D	12/12/2002	12.49	0.257	6.56	8.1	0.31	1.40	NA
OU2-MW-102M	12/12/2002	12.85	0.226	6.17	250.0	5.46	0.61	NA
OU2-MW-102S	12/12/2002	12.05	0.908	5.82	-2.3	0.81	3.31	NA
OU2-MW-103D	12/5/2002	10.81	0.583	6.18	13.6	0.24	4.36	NA
OU2-MW-103M	12/5/2002	10.60	1.060	6.40	53.0	0.33	2.40	NA
OU2-MW-104B	12/12/2002	10.47	10.080	6.60	63.5	NR	1.33	NA
OU2-MW-104D	12/11/2002	9.18	5.345	6.24	-43.4	0.72	1.70	NA
OU2-MW-104M	12/11/2002	11.47	0.672	6.13	151.8	0.30	0.00	NA
OU2-MW-104S	12/12/2002	9.14	1.460	6.59	-64.6	0.68	2.50	NA
OU2-MW-110M	1/13/2003	13.36	0.713	6.93	-99.8	0.49	1.92	NA
OU2-MW-110S	1/13/2003	9.98	3.883	11.95	-405.3	0.60	1.60	NA
OU2-MW-110D	1/13/2003	12.16	0.482	6.61	121.0	0.36	0.43	NA
OU2-MW-111S	1/10/2003	7.75	0.727	6.23	17.3	1.26	0.00	NA
OU2-MW-111D	1/8/2003	12.62	4.275	4.05	258.1	0.96	1.33	NA
OU2-MW-111M	1/8/2003	12.16	1.895	6.31	5.9	0.98	0.01	NA
OU2-MW-112B	12/6/2002	12.57	1.384	6.58	-27.2	0.24	0.85	NA
OU2-MW-112D	12/5/2002	12.13	1.145	6.77	-63.7	0.40	0.39	NA
OU2-MW-112M	12/6/2002	13.15	0.773	6.73	-25.8	0.49	1.40	NA
OU2-MW-113B	12/6/2002	12.49	10.060	6.30	-24.2	0.41	3.90	NA
OU2-MW-113M	12/6/2002	12.31	2.690	6.54	-44.1	0.41	4.78	NA
OU2-MW-2A	12/20/2002	14.13	0.174	5.98	268.8	4.32	0.87	NA
OU2-MW-2S	7/25/2003	16.14	0.152	5.18	370.7	8.72	4.33	NA
OU2-MW-201B	12/18/2002	6.13	1.806	7.18	-16.2	2.03	1.96	NA
OU2-MW-201D	12/18/2002	12.56	2.769	6.05	185.8	1.12	0.00	NA
OU2-MW-202D	1/9/2003	12.54	1.425	6.14	354.2	1.14	0.59	NA
OU2-MW-202S	1/8/2003	9.91	0.693	6.39	352.0	4.53	0.81	NA
OU2-MW-203D	1/7/2003	10.51	1.652	4.63	447.0	1.09	0.40	NA
OU2-MW-203S	1/7/2003	10.15	0.355	6.29	324.3	6.74	1.49	NA
OU2-MW-204D	12/12/2002	13.37	0.865	5.98	265.6	0.66	0.00	NA
OU2-MW-205D	12/13/2002	13.90	0.846	6.10	360.1	0.67	1.02	NA
OU2-MW-206D	1/24/2003	11.81	3.773	3.90	285.2	0.68	2.36	NA
OU2-MW-206MR	1/24/2003	12.63	1.074	5.61	337.8	0.50	0.72	NA
OU2-MW-206SR	1/24/2003	11.99	0.920	5.59	251.5	0.86	3.60	NA
OU2-MW-207DR	1/30/2003	13.70	0.970	6.60	294.0	0.52	4.60	NA
OU2-MW-207MR	1/30/2003	13.40	0.653	6.68	-84.4	0.10	3.77	NA
OU2-MW-207SR	1/30/2003	12.82	0.634	6.53	12.5	0.49	4.64	NA
OU2-MW-207B	1/30/2003	12.25	1.042	6.80	242.2	0.76	3.24	NA
OU2-MW-208B	12/19/2002	9.80	0.387	6.71	351.9	0.98	37.90	NA
OU2-MW-208M	12/19/2002	11.88	0.267	6.45	264.2	0.48	3.20	NA
OU2-MW-208D	12/19/2002	12.10	0.246	6.36	276.9	0.53	0.10	NA
OU2-MW-208S	12/19/2002	11.86	0.282	6.02	74.3	0.44	0.70	NA
OU2-MW-209B	12/12/2002	14.44	0.903	6.61	-40.0	0.47	24.00	NA
OU2-MW-209D	12/12/2002	14.71	1.494	6.50	184.2	0.71	2.20	NA
OU2-MW-209S	12/12/2002	14.20	0.619	7.68	-131.4	0.30	14.00	NA
OU2-MW-210B	12/11/2002	9.98	3.267	6.50	285.2	1.20	0.00	NA
OU2-MW-210S	12/10/2002	14.88	1.446	6.65	178.1	0.45	5.40	NA
OU2-MW-210D	12/10/2002	14.44	1.397	6.66	243.3	0.45	2.10	NA
OU2-MW-211S	12/11/2002	12.53	1.808	6.89	59.3	0.64	0.00	NA

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OU2-MW-211B	12/11/2002	9.28	7.011	3.95	218.9	1.14	13.00	NA
OU2-MW-211D	12/11/2002	13.46	7.510	3.71	199.1	0.77	3.60	NA
OU2-MW-211M	12/11/2002	13.22	1.093	5.38	324.7	0.49	0.50	NA
OU2-MW-212B	12/17/2002	11.02	2.433	6.24	-31.4	0.82	21.10	NA
OU2-MW-212D	12/17/2002	13.21	1.994	5.59	65.2	1.02	2.80	NA
OU2-MW-212M	12/17/2002	11.78	1.160	5.96	45.6	0.45	11.00	NA
OU2-MW-212S	12/17/2002	13.82	1.127	6.26	189.2	0.71	1.01	NA
OU2-MW-213DB	1/15/2003	12.24	1.080	7.08	299.2	11.43	1.56	NA
OU2-MW-213B	1/9/2003	12.78	1.033	6.79	140.2	5.27	3.60	NA
OU2-MW-213S	1/7/2003	11.26	0.393	6.63	265.2	2.68	4.02	NA
OU2-MW-214B	1/8/2003	11.99	1.667	6.35	338.7	0.50	2.42	NA
OU2-MW-214S	1/7/2003	13.31	0.630	5.85	342.6	5.32	0.66	NA
OU2-MW-214D	1/7/2003	12.24	1.401	6.46	308.1	0.39	0.00	NA
OU2-MW-214M	1/7/2003	12.48	0.657	6.40	306.0	2.64	0.55	NA
OU2-MW-215S	1/9/2003	13.05	0.143	5.82	213.1	4.51	0.46	NA
OU2-MW-215DB	1/15/2003	9.68	1.183	7.26	281.7	1.67	2.43	NA
OU2-MW-215B	1/15/2003	11.15	0.208	6.14	388.6	6.48	0.00	NA
OU2-MW-216B	12/12/2002	11.05	0.472	7.72	208.1	0.63	4.40	NA
OU2-MW-216DB	12/12/2002	12.53	0.520	7.84	155.8	0.55	3.70	NA
OU2-MW-217B	1/13/2003	10.70	18.400	6.96	-66.6	0.55	8.60	NA
OU2-MW-217D	1/14/2003	12.62	6.823	5.97	395.5	0.57	1.20	NA
OU2-MW-217S	1/10/2003	13.90	0.173	6.10	451.9	8.29	1.20	NA
OU2-MW-3A	2/5/2003	12.93	0.228	6.08	92.3	0.31	3.62	NA
OU2-MW-3S	7/24/2003	16.59	0.213	5.53	243.7	2.58	1.61	NA
OU2-MW-301D	1/15/2003	13.54	1.170	6.12	500.9	0.71	0.00	NA
OU2-MW-301B	1/15/2003	11.29	4.170	6.46	387.3	0.93	4.30	NA
OU2-MW-301S	1/15/2003	12.61	0.349	5.83	280.6	5.80	0.00	NA
OU2-MW-302S	1/9/2003	13.97	0.287	6.08	418.3	8.44	0.05	NA
OU2-MW-302B	1/9/2003	12.70	4.305	7.12	109.5	0.46	4.80	NA
OU2-MW-302D	1/9/2003	13.21	0.800	6.41	204.1	2.46	1.71	NA
OU2-MW-303B	12/11/2002	12.90	0.463	5.97	295.1	2.85	0.00	NA
OU2-MW-304B	12/10/2002	15.12	1.442	6.57	266.8	1.25	0.00	NA
OU2-MW-304D	12/10/2002	14.85	1.350	6.62	-93.9	0.72	3.96	NA
OU2-MW-304S	12/10/2002	16.36	0.716	6.57	-81.5	0.43	0.00	NA
OU2-MW-305BR	2/3/2003	13.50	0.527	7.52	-155.6	0.16	2.21	NA
OU2-MW-305SR	2/3/2002	13.24	0.971	7.07	-94.8	0.41	0.89	NA
OU2-MW-305DR	2/3/2003	13.35	0.765	6.79	-68.5	0.24	4.15	NA
OU2-MW-306B	12/19/2002	13.41	0.324	6.94	263.4	3.01	4.00	NA
OU2-MW-306DB	12/19/2002	11.29	0.238	7.19	254.4	6.41	3.50	NA
OU2-MW-307B	12/12/2002	14.85	0.323	5.61	203.3	3.82	1.76	NA
OU2-MW-307DB*	12/16/2002	13.02	0.507	7.12	132.2	0.80	3.60	NA
OU2-MW-308B	12/12/2002	14.18	0.166	5.80	244.3	8.00	0.00	NA
OU2-MW-308DB	12/12/2002	13.25	0.157	6.52	130.2	4.07	7.10	NA
OU2-MW-309B	1/23/2003	10.79	0.831	7.73	-210.1	0.32	1.39	NA
OU2-MW-309D	1/23/2003	12.37	3.523	6.78	289.7	0.49	0.20	NA
OU2-MW-309S	1/23/2002	11.86	0.464	6.26	319.6	0.56	0.40	NA
OU2-MW-310B	12/19/2002	10.54	6.847	6.37	-121.5	1.41	4.31	NA
OU2-MW-310D	12/19/2002	12.84	0.326	6.34	261.5	3.78	0.51	NA
OU2-MW-310S	12/19/2002	14.12	0.345	6.17	520.5	3.30	1.10	NA
OU2-MW-311B	12/10/2002	12.49	0.402	7.76	92.1	1.10	9.09	NA
OU2-MW-311D	12/10/2002	13.06	0.394	6.86	206.6	0.47	2.27	NA
OU2-MW-311S	12/9/2002	11.82	0.298	6.17	292.7	6.60	0.00	NA
OU2-MW-312B	12/17/2002	10.85	9.100	6.69	225.1	2.20	2.80	NA
OU2-MW-312D	12/17/2002	13.09	0.430	6.28	303.8	2.83	4.80	NA
OU2-MW-312S	12/17/2002	7.58	0.526	6.71	-61.2	0.96	1.93	NA
OU2-MW-313D	12/17/2002	13.76	1.113	6.31	47.3	1.52	2.60	NA

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OU2-MW-313B	12/17/2002	11.58	1.178	8.00	276.5	1.33	3.30	NA
OU2-MW-313S	12/17/2002	10.40	0.488	6.82	167.5	6.16	0.67	NA
OU2-MW-4	1/29/2003	10.83	0.469	6.82	146.8	0.95	0.04	NA
OU2-MW-4B	7/24/2003	24.21	2.755	5.64	60.0	0.74	17.00	NA
OU2-MW-4M(MW-4D)	7/23/2003	23.79	0.466	4.33	318.2	3.44	0.71	NA
OU2-MW-4S	7/23/2003	25.32	1.325	3.62	434.6	1.55	3.90	NA
OU2-MW-401B	1/14/2003	10.72	1.107	6.47	96.2	0.64	0.70	NA
OU2-MW-401S	1/14/2003	10.60	0.235	6.45	341.3	0.70	0.90	NA
OU2-MW-402B	1/14/2003	11.68	0.271	6.95	326.4	0.67	13.90	NA
OU2-MW-402S	1/14/2003	12.01	0.433	6.19	41.0	1.78	4.94	NA
OU2-MW-501B	12/16/2002	10.30	0.486	7.73	337.3	3.22	1.00	NA
OU2-MW-501S	12/13/2002	14.19	0.173	5.42	445.7	5.20	0.04	NA
OU2-MW-501D	12/13/2002	12.73	0.282	5.99	370.6	4.90	0.85	NA
OU2-MW-502B	12/18/2002	14.42	1.183	6.82	258.4	0.82	2.70	NA
OU2-MW-502D	12/18/2002	15.87	1.625	6.75	316.7	0.51	1.91	NA
OU2-MW-502S	12/18/2002	16.84	1.243	6.85	-116.2	0.92	2.50	NA
OU2-MW-503B	12/18/2002	13.12	2.720	6.35	241.3	1.55	2.80	NA
OU2-MW-503D	12/18/2002	13.34	1.567	6.42	238.9	0.82	1.60	NA
OU2-MW-503M	12/18/2002	13.94	1.277	6.44	282.7	0.42	3.30	NA
OU2-MW-503S	12/18/2002	9.86	0.808	7.14	-117.9	0.49	4.01	NA
OU2-MW-504B	12/17/2002	14.23	2.542	6.33	429.2	2.03	3.00	NA
OU2-MW-504D	12/16/2002	14.57	2.346	6.34	410.8	0.96	4.30	NA
OU2-MW-504S	12/16/2002	14.52	0.587	5.57	397.0	1.06	0.50	NA
OU2-MW-505B	12/16/2002	6.79	1.890	6.91	308.4	2.25	7.50	NA
OU2-MW-505D	12/16/2002	14.41	2.853	6.03	295.0	3.00	2.30	NA
OU2-MW-505M	12/16/2002	14.10	1.223	6.74	-113.6	0.82	4.16	NA
OU2-MW-505S	12/17/2002	11.17	1.106	6.65	-91.2	0.70	0.84	NA
OU2-MW-506M	12/19/2002	11.10	0.516	5.37	226.5	1.10	3.60	NA
OU2-MW-506D	12/19/2002	13.14	1.001	6.31	146.2	1.18	3.46	NA
OU2-MW-506S	12/19/2002	13.49	0.389	6.10	59.2	1.51	0.00	NA
OU2-MW-506B	12/20/2002	14.22	0.158	7.36	230.6	4.49	7.70	NA
OU2-MW-507B	1/7/2003	12.35	1.429	6.30	205.6	0.76	1.11	NA
OU2-MW-507D	1/7/2003	12.59	1.398	6.33	307.3	0.51	0.31	NA
OU2-MW-507S	1/7/2003	12.79	0.426	5.38	336.2	3.93	1.34	NA
OU2-MW-508B	1/8/2003	13.31	0.922	6.73	249.6	0.50	3.21	NA
OU2-MW-508D	1/8/2003	12.98	0.908	6.48	209.0	1.24	4.04	NA
OU2-MW-508S	1/8/2003	12.51	0.410	6.00	207.2	2.98	0.82	NA
OU2-MW-509M	12/17/2002	14.75	0.887	6.38	114.4	0.91	2.08	NA
OU2-MW-510M	1/13/2003	12.30	0.611	6.47	21.4	3.06	1.50	NA
OU2-MW-511M	12/18/2002	14.97	0.488	6.34	27.9	0.90	0.41	NA
OU2-MW-512M	12/18/2002	14.61	0.846	6.39	23.4	1.38	1.75	NA
OU2-MW-513S	1/9/2003	12.61	1.120	6.41	177.5	0.37	3.24	NA
OU2-MW-514S	1/9/2003	11.82	0.680	6.42	82.0	2.59	0.05	NA
OU2-MW-514B	1/9/2003	12.25	3.980	5.81	48.6	0.82	4.01	NA
OU2-MW-514D	1/9/2003	13.68	1.531	6.09	451.1	1.00	1.61	NA
OU2-MW-515S	1/7/2003	11.57	0.373	5.97	289.6	6.82	3.02	NA
OU2-MW-516M	12/18/2002	14.45	0.898	6.74	-115.9	1.23	0.41	NA
OU2-MW-517S	1/9/2003	14.10	1.050	6.28	386.8	1.29	0.62	NA
OU2-MW-518S	1/9/2003	12.33	0.800	6.77	347.2	8.32	0.99	NA
OU2-MW-519S	1/9/2003	13.85	0.806	6.29	344.1	0.86	2.95	NA
OU2-MW-520S	1/7/2003	13.40	0.838	6.40	305.3	1.21	0.53	NA
OU2-MW-521S	12/18/2002	14.06	0.326	6.22	157.7	2.83	0.81	NA
OU2-MW-522S	12/18/2002	12.33	0.712	6.86	-69.3	0.97	3.96	NA
OU2-MW-523S	1/8/2003	13.60	0.423	5.86	143.3	2.48	1.10	NA
OU2-MW-524B	1/17/2003	12.45	2.140	6.88	248.0	7.04	2.64	NA
OU2-MW-525S	1/8/2003	13.68	0.352	6.11	177.8	4.95	0.10	NA

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OU2-MW-526S	1/9/2003	13.22	0.631	6.19	350.2	2.57	1.88	NA
OU2-MW-527S	1/9/2003	13.74	1.402	6.20	90.2	0.62	0.37	NA
OU2-MW-528S	1/6/2003	9.75	0.593	6.14	59.2	0.22	0.00	NA
OU2-MW-529S	1/8/2003	12.22	1.193	6.69	-67.6	1.49	1.40	NA
OU2-MW-530S	1/14/2003	4.69	19.480	8.03	-103.1	2.13	3.46	NA
OU2-MW-531S	1/15/2003	5.92	12.580	8.64	82.0	1.16	0.06	NA
OU2-MW-532S	1/14/2003	12.35	1.004	6.28	327.1	1.71	0.60	NA
OU2-MW-533B	1/14/2003	13.32	9.412	8.81	-278.4	1.39	4.10	NA
OU2-MW-533D	1/14/2003	12.80	8.430	3.74	154.3	0.70	3.70	NA
OU2-MW-533S	1/14/2003	12.57	0.243	5.92	367.5	5.87	0.00	NA
OU2-MW-534S	1/10/2003	12.66	0.238	5.83	347.9	5.18	0.02	NA
OU2-MW-535S	1/10/2003	7.51	5.131	6.39	79.1	2.36	2.42	NA
OU2-MW-536S	1/8/2003	11.44	0.058	6.34	335.4	9.83	0.28	NA
OU2-MW-6	12/20/2002	14.67	0.337	6.22	-43.2	1.52	14.00	NA
OU2-MW-7	2/5/2003	11.50	0.184	5.40	294.2	0.41	8.41	NA
OU2-MW-8	12/20/2002	14.16	0.091	4.52	268.1	2.50	0.90	NA
OU2-MW-9	2/5/2003	10.85	0.131	5.85	330.0	2.60	0.55	NA
OU2-MW-10	2/5/2003	10.71	0.347	6.27	331.0	3.20	1.90	NA
OU2-MW-BR1	12/20/2002	13.34	1.596	6.63	259.3	1.13	1.68	NA
OU2-MW-BR-2	2/5/2003	12.78	1.499	7.82	-183.4	0.16	15.30	NA
OU2-MW-CRA-2D	1/28/2003	13.24	0.805	6.76	240.0	0.48	2.70	NA
OU2-MW-CRA-2S	1/28/2003	6.81	0.226	6.75	493.0	9.74	0.59	NA
OU2-MW-CRA-5D	1/28/2003	14.58	1.469	6.20	-50.0	0.32	4.25	NA
OU2-MW-CRA-5S	1/28/2003	9.85	0.685	6.48	-74.7	0.32	3.86	NA
OU2-MW-CRA-6D	1/28/2003	14.24	1.660	6.62	-86.8	0.27	4.61	NA
OU2-MW-CRA-6S	1/28/2003	9.95	0.716	6.63	-79.1	0.45	2.09	NA
OU2-MW-CRA-7	1/28/2003	8.67	0.604	6.14	21.4	1.71	1.93	NA
OU2-MW-CRA-8	1/28/2003	5.00	0.833	6.70	90.0	3.80	26.00	NA
OU2-WA120AG-E512-S41	2/6/2003	11.34	0.227	6.23	237.2	7.81	0.22	NA
OU2-MW-PZ13	1/23/2003	8.33	0.132	5.66	454.3	5.15	3.15	NA
OU2-MW-PZ14	1/23/2002	5.02	0.122	4.48	526.9	6.20	2.34	NA
OU2-MW-Z	2/5/2003	11.52	0.231	6.00	308.0	3.85	2.10	NA
SPDA-E222,S132	2/3/2003	12.40	2.126	6.19	-116.4	1.41	2.30	NA
OU4								
OU4-MW-03	2/6/2003	8.86	0.430	6.10	108.0	0.91	55.00	NA
OU4-MW-06	2/6/2003	8.17	1.272	6.82	-69.3	2.12	4.92	NA

Notes:
*OU2-MW-307DB = The values given were those measured on12/12/02 just before the well went dry.
The well was sampled on 12/16/02, however no readings were recorded on the sample log sheet.