Olin Niagara Falls
Plant 2 Area Remediation

Summary: Contaminant Mass and Groundwater Extracted

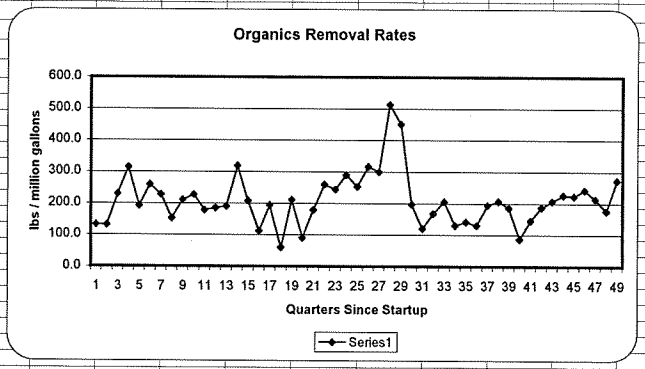
Since system start-up: December - 1997

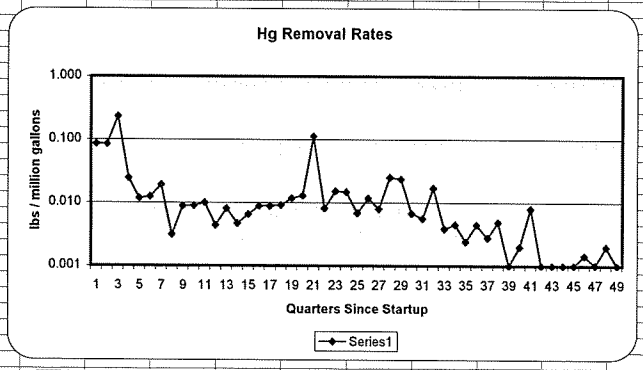
Quarter	organics		mercury		pesticides		g.w. extracted			organics	hg	pesticides
	lb	Ann. Tot.	lb	Ann. Tot.	lb	Ann. Tot.	gal	Ann. Tot.		lb/ million gallons	lb/ million gallons	lb/ million gallons
Startup/Q1-98 [est]	27.81		0.02		0.2		210,000			132.43	0.0857	1.11
Q2-98	154.5		0.1		1.3		1,175,799			131.40	0.0850	1.11
Q3-98	595.5		0.6		4.9		2,583,159			230.53	0.2323	1.90
Q4-98	1273.1		0.1		5.2		4,054,996		4	313.96	0.0247	1.28
		2,051		1		12		8,023,954		**255.60**	**0.10**	**1.45**
Q1-99	817.3		0.05		8.5		4,233,521			193.05	0.0118	2.01
Q2-99	1034.7		0.05		7.1		3,991,584			259.22	0.0125	1.78
Q3-99	1188.2		0.1		8.7		5,219,207			227.66	0.0192	1.67
Q4-99	976.3		0.02		6.9		6,366,935		8	153.34	0.0031	1.08
		4,017		0.22		31		19,811,247		**202.74**	**0.01**	**1.57**
Q1-00	1422.9		0.06		6.2		6,757,602			210.56	0.0089	0.92
Q2-00	1514.9		0.06		10.3		6,663,345			227.35	0.0090	1.55
Q3-00	1071.6		0.06		18.6		6,007,756			178.37	0.0100	3.10
Q4-00	1260.7		0.03		9.7		6,803,495		12	185.30	0.0044	1.43
		5,270		0.21		45		26,232,198		**200.90**	**0.01**	**1.71**
Q1-01	1406.2		0.06		8.9		7,379,548			190.55	0.0081	1.21
Q2-01	2704.8		0.04		11.9		8,474,363			319.17	0.0047	1.40
Q3-01	1576.8		0.05		9.5		7,607,539			207.27	0.0066	1.25
Q4-01	637.0		0.05		8.4		5,642,388		16	112.90	0.0089	1.49
		6,325		0.20		39		29,103,838		**217.32**	**0.01**	**1.33**
Q1-02	1319.8		0.06		6.9		6,781,550			194.62	0.0088	1.02
Q2-02	530.7		0.08		7.2		8,693,727			61.04	0.0092	0.83
Q3-02	1251.8		0.07		6.0		5,950,649			210.36	0.0118	1.01
Q4-02	490.8		0.07		3.5		5,385,584		20	91.13	0.0130	0.65
		3,593		0.28		24		26,811,510		**134.01**	**0.01**	**0.88**
Q1-03	922.6		0.58		3.6		5,151,629			179.09	0.1126	0.70
Q2-03	1884.7		0.06		5.2		7,276,723			259.00	0.0082	0.71
Q3-03	1611		0.1		0.0		6,598,467			244.15	0.0152	-
Q4-03	1954.4		0.1		8.5		6,735,421		24	290.17	0.0148	1.26
		6,373		0.84		17		25,762,240		**247.37**	**0.03**	**0.67**
Q1-04	1479.6		0.04		4.8		5,846,144			253.09	0.0068	0.82
Q2-04	2158.2		0.08		5.7		6,826,643			316.14	0.0117	0.83
Q3-04	1880.3	[a]	0.05	[a]	5.6	[a]	6,262,226			300.26	0.0080	0.89
Q4-04	3665.6		0.18		5.5		7,152,900		28	512.46	0.0252	0.77
		9,184		0.35		22		26,087,913		**352.03**	**0.01**	**0.83**
Q1-05	2648.9	[a]	0.14	[a]	4.3	[a]	5,870,533			451.22	0.0238	0.73
Q2-05	1168		0.04		3.5		5,910,496			197.61	0.0068	0.59
Q3-05	860.2	[a]	0.04	[a]	2.8	[a]	7,113,517			120.92	0.0056	0.39
Q4-05	887.8		0.09		6.7		5,271,114		32	168.43	0.0171	1.27
		5,565		0.31		17		24,165,660		**230.28**	**0.01**	**0.72**
Q1-06	1056		0.02		3.2		5,139,061			205.49	0.0039	0.62
Q2-06	1160		0.04		4.5		8,872,651			130.74	0.0045	0.51
Q3-06	1169		0.02		4.2		8,253,471			141.64	0.0024	0.51
Q4-06	1175.0		0.04		4.9		8,959,291		36	131.15	0.0045	0.55
		4,560		0.12		17		31,224,474		**146.04**	**0.004**	**0.54**
Q1-07	1409.0	.	0.02		4.0		7,250,389			194.33	0.0028	0.55
Q2-07	1692.0		0.04		4.2		8,203,421			206.26	0.0049	0.51
Q3-07	1222.0		0.004		3.5		6,553,414			186.47	0.001	0.53
Q4-07	498.0		0.012		6.9		5,741,687		40	86.73	0.002	1.20
		4,821		0.08		19		27,748,911		**173.74**	**0.003**	**0.67**
Q1-08	933.0	.	0.054		3.3		6,394,472			145.91	0.008	0.52
Q2-08	1268.0		0.01		4.3		6,750,450			187.84	0.001	0.637
Q3-08	1686.0		0.008		6.73		8,159,637			206.63	0.001	0.825
Q4-08	2034.0		0.011		7.57		9,010,318		44	225.74	0.001	0.840
		5,921		0.08		22		30,314,877		**195.32**	**0.003**	**0.72**
Q1-09	1667.0	.	0.007		5.8		7,487,247		45	222.65	0.001	0.772
Q2-09	1686.0		0.010		5.65		6,960,098		46	242.24	0.00144	0.812
Q3-09	1887.0		0.009		12.77		8,806,214		47	214.28	0.00102	1.450
Q4-09	1713.0		0.022		30.3		9,730,305		48	176	0.002	3.114
		6,953		0.05		55		32,983,864		**210.80**	**0.001**	**1.65**
Q1-10	2226.0		0.007		6.21		8,157,833		49	273	0.001	0.761
Q2-10												
Q3-10												
Q4-10												
		2,226		0.01		6		8,157,833				
TOTAL		**66,858**		**3.6**		**324**		**316,428,519**		**211.29**	**0.011**	**1.02**

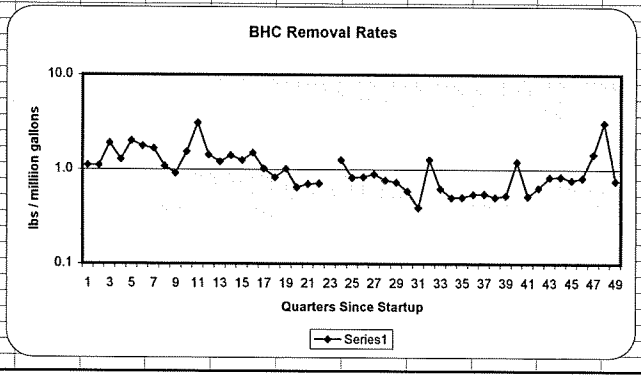
[a] estimated loading based on replication of previous quarter's constituent concentrations.
Flow data are actual for each quarter

Olin Niagara Falls
Plant 2 Area Remediation Rates
lbs/million gallons removed

Qtr	organics	hg	pesticides	.b/mil gal
1	132.4	0.086	1.1	
2	131.4	0.085	1.1	
3	230.5	0.232	1.9	
4	314.0	0.025	1.3	
5	193.1	0.012	2.0	
6	259.2	0.013	1.8	
7	227.7	0.019	1.7	
8	153.3	0.003	1.1	
9	210.6	0.009	0.9	
10	227.3	0.009	1.5	
11	178.4	0.010	3.1	
12	185.3	0.004	1.4	
13	190.6	0.008	1.2	
14	319.2	0.005	1.4	
15	207.3	0.007	1.2	
16	112.9	0.009	1.5	
17	194.6	0.009	1.0	
18	61.0	0.009	0.8	
19	210.4	0.012	1.0	
20	91.1	0.013	0.6	
21	179.1	0.113	0.7	
22	259.0	0.008	0.7	
23	244.1	0.015	0.0	
24	290.2	0.015	1.3	
25	253.1	0.007	0.8	
26	316.1	0.012	0.8	
27	300.3	0.008	0.9	
28	512.5	0.025	0.8	
29	451.2	0.024	0.7	
30	197.6	0.007	0.6	
31	120.9	0.006	0.4	
32	168.4	0.017	1.3	
33	205.5	0.004	0.6	
34	130.7	0.005	0.5	
35	141.6	0.002	0.5	
36	131.1	0.004	0.5	
37	194.33	0.0028	0.55	
38	206.26	0.0049	0.51	
39	186.47	0.001	0.53	
40	86.73	0.002	1.2	
41	145.91	0.008	0.52	
42	187.94	0.001	0.637	
43	206.63	0.001	0.825	
44	225.74	0.001	0.84	
45	222.65	0.001	0.772	
46	242.24	0.00144	0.812	
47	214.28	0.00102	1.45	
48	176.00	0.002	3.110	
49	273	0.001	0.761	
50				







Olin Niagara Falls Plant Site: Plant 2 Area Remediation
Groundwater Contaminant Mass Removed
Q1-10

ORGANICS

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	26.343	3.8	2.20E-06	0.00022023	1190476.19	405,529	89
RW2	0.256	3.8	2.20E-06	0.00000214	1190476.19	3,765,360	8
RW3	0.382	3.8	2.20E-06	0.00000319	1190476.19	373,869	1
RW4	0.537	3.8	2.20E-06	0.00000449	1190476.19	434,885	2
PR4	4.556	3.8	2.20E-06	0.00003809	1190476.19	649,168	25
RW5	105.260	3.8	2.20E-06	0.00087997	1190476.19	1,921,635	1691
PR12	85.594	3.8	2.20E-06	0.00071557	1190476.19	550,337	394
OBA9AR	33.814	3.8	2.20E-06	0.00028269	1190476.19	57,050	16.13
TOTAL							**2,226**

MERCURY

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	0.0017	3.8	2.20E-06	0.00000001	1190476.19	405,529	0.006
RW2	0.0000	3.8	2.20E-06	0.00000000	1190476.19	3,765,360	0.000
RW3	0.0000	3.8	2.20E-06	0.00000000	1190476.19	373,869	0.000
RW4	0.0004	3.8	2.20E-06	0.00000000	1190476.19	434,885	0.001
PR4	0.0000	3.8	2.20E-06	0.00000000	1190476.19	649,168	0.000
RW5	0.0000	3.8	2.20E-06	0.00000000	1190476.19	1,921,635	0.000
PR12	0.0000	3.8	2.20E-06	0.00000000	1190476.19	550,337	0.000
OBA9AR	0.0000	3.8	2.20E-06	0.00000000	1190476.19	57,050	0.000
TOTAL							**0.007**

PESTICIDES

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	0.0223	3.8	2.20E-06	0.00000019	1190476.19	405,529	0.08
RW2	0.0004	3.8	2.20E-06	0.00000000	1190476.19	3,765,360	0.01
RW3	0.0115	3.8	2.20E-06	0.00000010	1190476.19	373,869	0.04
RW4	0.0091	3.8	2.20E-06	0.00000008	1190476.19	434,885	0.03
PR4	0.3090	3.8	2.20E-06	0.00000258	1190476.19	649,168	1.68
RW5	0.2020	3.8	2.20E-06	0.00000169	1190476.19	1,921,635	3.25
PR12	0.1530	3.8	2.20E-06	0.00000128	1190476.19	550,337	0.70
OBA9AR	0.9000	3.8	2.20E-06	0.00000752	1190476.19	57,050	0.429
TOTAL							**6.21**

[A] = Total of parameter group in quarterly sample from recovery well discharge header.

8,157,833
total flow (gal)

Olin Niagara Falls Plant Site: Plant 2 Area Remediation
Groundwater Contaminant Mass Removed
Q4--09

ORGANICS

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	35.300	3.8	2.20E-06	0.00029511	1190476.19	290,250	86
RW2	0.227	3.8	2.20E-06	0.00000190	1190476.19	3,887,322	7
RW3	0.634	3.8	2.20E-06	0.00000530	1190476.19	704,449	4
RW4	0.340	3.8	2.20E-06	0.00000284	1190476.19	987,600	3
PR4	4.192	3.8	2.20E-06	0.00003505	1190476.19	898,935	32
RW5	79.800	3.8	2.20E-06	0.00066713	1190476.19	2,051,940	1369
PR12	24.920	3.8	2.20E-06	0.00020833	1190476.19	762,806	159
OBA9AR	43.990	3.8	2.20E-06	0.00036776	1190476.19	147,003	54.06
TOTAL							**1,713**

MERCURY

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	0.0048	3.8	2.20E-06	0.00000004	1190476.19	290,250	0.012
RW2	0.0000	3.8	2.20E-06	0.00000000	1190476.19	3,887,322	0.000
RW3	0.0006	3.8	2.20E-06	0.00000000	1190476.19	704,449	0.003
RW4	0.0003	3.8	2.20E-06	0.00000000	1190476.19	987,600	0.002
PR4	0.0000	3.8	2.20E-06	0.00000000	1190476.19	898,935	0.000
RW5	0.0002	3.8	2.20E-06	0.00000000	1190476.19	2,051,940	0.003
PR12	0.0002	3.8	2.20E-06	0.00000000	1190476.19	762,806	0.001
OBA9AR	0.0000	3.8	2.20E-06	0.00000000	1190476.19	147,003	0.000
TOTAL							**0.022**

PESTICIDES

WELL	conc [A] mg/l	conv liter / gal	conv lb /mg	conversion lb/gallon	conversion gal/lb	flow gal/qtr	MASS lb/qtr
RW1	0.0262	3.8	2.20E-06	0.00000022	1190476.19	290,250	0.06
RW2	0.0008	3.8	2.20E-06	0.00000001	1190476.19	3,887,322	0.02
RW3	0.0183	3.8	2.20E-06	0.00000015	1190476.19	704,449	0.11
RW4	0.0046	3.8	2.20E-06	0.00000004	1190476.19	987,600	0.04
PR4	0.2030	3.8	2.20E-06	0.00000170	1190476.19	898,935	1.53
RW5	1.5390	3.8	2.20E-06	0.00001287	1190476.19	2,051,940	26.40
PR12	0.0823	3.8	2.20E-06	0.00000069	1190476.19	762,806	0.52
OBA9AR	1.3100	3.8	2.20E-06	0.00001095	1190476.19	147,003	1.610
TOTAL							**30.30**

[A] = Total of parameter group in quarterly sample from recovery well discharge header.

9,730,305
total flow (gal)

Olin Niagara Falls Plant
Groundwater Recovery System Header and influent/effluent Data
Q4-09 / Q1-10

LocationID	ParameterName	Result	LabFlag	SampleDate	SampleType	Units	Total or Dissolved	result	total
GAC-SP-3	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Trichloroethene (TCE)	56		11/3/2009	N	ug/l	N	56	
GAC-SP-3	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Tetrachloroethene (PCE)	11		11/3/2009	N	ug/l	N	11	
GAC-SP-3	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Mercury	0.00030		11/3/2009	N	mg/l	T	0.0003	
GAC-SP-3	Mercury		U	11/3/2009	N	mg/l	D	0	
GAC-SP-3	gamma-BHC	37		11/3/2009	N	ug/l	N	37	
GAC-SP-3	delta-BHC		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	cis-1,2-Dichloroethene	14		11/3/2009	N	ug/l	N	14	
GAC-SP-3	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	beta-BHC		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Benzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	alpha-BHC	47		11/3/2009	N	ug/l	N	47	
GAC-SP-3	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	1,2,4-Trichlorobenzene	10		11/3/2009	N	ug/l	N	10	
GAC-SP-3	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	1,1,2,2-Tetrachloroethane	300		11/3/2009	N	ug/l	N	300	
GAC-SP-3	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
GAC-SP-3	Vinyl Chloride			2/8/2010	N	ug/l	N	0	
GAC-SP-3	Trichloroethene (TCE)	130		2/8/2010	N	ug/l	N	130	
GAC-SP-3	trans-1,2-Dichloroethene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	Tetrachloroethene (PCE)	25		2/8/2010	N	ug/l	N	25	
GAC-SP-3	Methylene chloride (Dichloromethane)			2/8/2010	N	ug/l	N	0	
GAC-SP-3	Mercury	0.0002		2/8/2010	N	mg/l	T	0.0002	
GAC-SP-3	Mercury			2/8/2010	N	mg/l	D	0	
GAC-SP-3	gamma-BHC	19		2/8/2010	N	ug/l	N	19	
GAC-SP-3	delta-BHC	3.5	J	2/8/2010	N	ug/l	N	3.5	
GAC-SP-3	cis-1,2-Dichloroethene	21		2/8/2010	N	ug/l	N	21	
GAC-SP-3	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
GAC-SP-3	Chlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
GAC-SP-3	beta-BHC	4.0	J	2/8/2010	N	ug/l	N	4	
GAC-SP-3	Benzene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	alpha-BHC	23		2/8/2010	N	ug/l	N	23	
GAC-SP-3	1,4-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	1,3-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	1,2-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	1,2,4-Trichlorobenzene	13		2/8/2010	N	ug/l	N	13	
GAC-SP-3	1,1-Dichloroethene			2/8/2010	N	ug/l	N	0	
GAC-SP-3	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
GAC-SP-3	1,1,2,2-Tetrachloroethane	750		2/8/2010	N	ug/l	N	750	
GAC-SP-3	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,1,2,2-Tetrachloroethane	210		11/3/2009	N	ug/l	N	210	
GAC-SP-4	1,1,2,2-Tetrachloroethane	670		2/8/2010	N	ug/l	N	670	
GAC-SP-4	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,1-Dichloroethene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,2,4-Trichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,2,4-Trichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,2-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,3-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	1,4-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	alpha-BHC	0.30		11/3/2009	N	ug/l	N	0.3	
GAC-SP-4	alpha-BHC	0.43		2/8/2010	N	ug/l	N	0.43	
GAC-SP-4	Benzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	Benzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	beta-BHC	2.0		11/3/2009	N	ug/l	N	2	
GAC-SP-4	beta-BHC	2.6		2/8/2010	N	ug/l	N	2.6	
GAC-SP-4	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
GAC-SP-4	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	Chlorobenzene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	

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GAC-SP-4	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
GAC-SP-4	cis-1,2-Dichloroethene	12		11/3/2009	N	ug/l	N	12	
GAC-SP-4	cis-1,2-Dichloroethene	32		2/8/2010	N	ug/l	N	32	
GAC-SP-4	delta-BHC	1.3		11/3/2009	N	ug/l	N	1.3	
GAC-SP-4	delta-BHC	1.5		2/8/2010	N	ug/l	N	1.5	
GAC-SP-4	gamma-BHC	0.43		11/3/2009	N	ug/l	N	0.43	
GAC-SP-4	gamma-BHC	0.77		2/8/2010	N	ug/l	N	0.77	
GAC-SP-4	Mercury		U	11/3/2009	N	mg/l	T	0	
GAC-SP-4	Mercury		U	11/3/2009	N	mg/l	D	0	
GAC-SP-4	Mercury			2/8/2010	N	mg/l	T	0	
GAC-SP-4	Mercury			2/8/2010	N	mg/l	D	0	
GAC-SP-4	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	Methylene chloride (Dichloromethane)			2/8/2010	N	ug/l	N	0	
GAC-SP-4	Tetrachloroethene (PCE)	11		11/3/2009	N	ug/l	N	11	
GAC-SP-4	Tetrachloroethene (PCE)	41		2/8/2010	N	ug/l	N	41	
GAC-SP-4	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	trans-1,2-Dichloroethene			2/8/2010	N	ug/l	N	0	
GAC-SP-4	Trichloroethene (TCE)	110		11/3/2009	N	ug/l	N	110	
GAC-SP-4	Trichloroethene (TCE)	250		2/8/2010	N	ug/l	N	250	
GAC-SP-4	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	
GAC-SP-4	Vinyl Chloride			2/8/2010	N	ug/l	N	0	
Influent Stripper	Mercury	0.00049		11/3/2009	N	mg/l	T	0.00049	
Influent Stripper	Mercury		U	11/3/2009	N	mg/l	D	0	
Influent Stripper	Mercury	0.0002		2/8/2010	N	mg/l	T	0.0002	
Influent Stripper	Mercury			2/8/2010	N	mg/l	D	0	
Influent Stripper	alpha-BHC	25		2/8/2010	N	ug/l	N	25	
Influent Stripper	beta-BHC	3.8	J	2/8/2010	N	ug/l	N	3.8	
Influent Stripper	delta-BHC	3.5	J	2/8/2010	N	ug/l	N	3.5	
Influent Stripper	gamma-BHC	21		2/8/2010	N	ug/l	N	21	
Influent Stripper	alpha-BHC	42		11/3/2009	N	ug/l	N	42	
Influent Stripper	beta-BHC		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	delta-BHC	5.8		11/3/2009	N	ug/l	N	5.8	
Influent Stripper	gamma-BHC	31		11/3/2009	N	ug/l	N	31	
Influent Stripper	1,1,1-Trichloroethane	51		2/8/2010	N	ug/l	N	51	
Influent Stripper	1,1,2,2-Tetrachloroethane	2000		2/8/2010	N	ug/l	N	2000	
Influent Stripper	1,1,2-Trichloroethane	36		2/8/2010	N	ug/l	N	36	
Influent Stripper	1,1-Dichloroethene	28		2/8/2010	N	ug/l	N	28	
Influent Stripper	1,2,4-Trichlorobenzene	460		2/8/2010	N	ug/l	N	460	
Influent Stripper	1,2-Dichlorobenzene	45		2/8/2010	N	ug/l	N	45	
Influent Stripper	1,3-Dichlorobenzene	70		2/8/2010	N	ug/l	N	70	
Influent Stripper	1,4-Dichlorobenzene	86		2/8/2010	N	ug/l	N	86	
Influent Stripper	Benzene	60		2/8/2010	N	ug/l	N	60	
Influent Stripper	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
Influent Stripper	Chlorobenzene	74		2/8/2010	N	ug/l	N	74	
Influent Stripper	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
Influent Stripper	cis-1,2-Dichloroethene	1300		2/8/2010	N	ug/l	N	1300	
Influent Stripper	Methylene chloride (Dichloromethane)	150	J	2/8/2010	N	ug/l	N	150	
Influent Stripper	Tetrachloroethene (PCE)	6600		2/8/2010	N	ug/l	N	6600	
Influent Stripper	trans-1,2-Dichloroethene	38		2/8/2010	N	ug/l	N	38	
Influent Stripper	Trichloroethene (TCE)	15000		2/8/2010	N	ug/l	N	15000	
Influent Stripper	Vinyl Chloride	210		2/8/2010	N	ug/l	N	210	
Influent Stripper	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	1,1,2,2-Tetrachloroethane	1800		11/3/2009	N	ug/l	N	1800	
Influent Stripper	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	1,2,4-Trichlorobenzene	740		11/3/2009	N	ug/l	N	740	
Influent Stripper	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	1,4-Dichlorobenzene	200		11/3/2009	N	ug/l	N	200	
Influent Stripper	Benzene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	cis-1,2-Dichloroethene	1400		11/3/2009	N	ug/l	N	1400	
Influent Stripper	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	Tetrachloroethene (PCE)	4500		11/3/2009	N	ug/l	N	4500	
Influent Stripper	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
Influent Stripper	Trichloroethene (TCE)	12000		11/3/2009	N	ug/l	N	12000	
Influent Stripper	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	
LocationID	**ParameterName**	**Result**	**LabFlag**	**SampleDate**	**SampleType**	**Units**	**Total or Dissolved**	**result**	**total**
OBA-9AR	alpha-BHC	760		11/3/2009	N	ug/l	N	760	
OBA-9AR	beta-BHC		U	11/3/2009	N	ug/l	N	0	

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OBA-9AR	delta-BHC		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	gamma-BHC	550		11/3/2009	N	ug/l	N	550	1310
PR-12	alpha-BHC	36		11/3/2009	N	ug/l	N	36	
PR-12	beta-BHC	5.3		11/3/2009	N	ug/l	N	5.3	
PR-12	delta-BHC	6.0		11/3/2009	N	ug/l	N	6	
PR-12	gamma-BHC	35		11/3/2009	N	ug/l	N	35	82.3
RW-2	alpha-BHC	0.32		11/3/2009	N	ug/l	N	0.32	
RW-2	beta-BHC	0.22		11/3/2009	N	ug/l	N	0.22	
RW-2	delta-BHC		U	11/3/2009	N	ug/l	N	0	
RW-2	gamma-BHC	0.22		11/3/2009	N	ug/l	N	0.22	0.76
RW-3	alpha-BHC	7.7		11/3/2009	N	ug/l	N	7.7	
RW-3	beta-BHC		U	11/3/2009	N	ug/l	N	0	
RW-3	delta-BHC	3.0		11/3/2009	N	ug/l	N	3	
RW-3	gamma-BHC	7.0		11/3/2009	N	ug/l	N	7	17.7
RW-3	alpha-BHC	9.7		11/3/2009	FD	ug/l	N	9.7	
RW-3	beta-BHC		U	11/3/2009	FD	ug/l	N	0	
RW-3	delta-BHC		U	11/3/2009	FD	ug/l	N	0	
RW-3	gamma-BHC	8.6		11/3/2009	FD	ug/l	N	8.6	18.3
RW-1	alpha-BHC	21		11/3/2009	N	ug/l	N	21	
RW-1	beta-BHC		U	11/3/2009	N	ug/l	N	0	
RW-1	delta-BHC		U	11/3/2009	N	ug/l	N	0	
RW-1	gamma-BHC	5.2		11/3/2009	N	ug/l	N	5.2	26.2
RW-4	alpha-BHC	2.1		11/3/2009	N	ug/l	N	2.1	
RW-4	beta-BHC	0.51		11/3/2009	N	ug/l	N	0.51	
RW-4	delta-BHC	0.43		11/3/2009	N	ug/l	N	0.43	
RW-4	gamma-BHC	1.6		11/3/2009	N	ug/l	N	1.6	4.64
PR-4	alpha-BHC	110		11/3/2009	N	ug/l	N	110	
PR-4	beta-BHC	8.0		11/3/2009	N	ug/l	N	8	
PR-4	delta-BHC	11		11/3/2009	N	ug/l	N	11	
PR-4	gamma-BHC	74		11/3/2009	N	ug/l	N	74	203
RW-5	alpha-BHC	780		11/3/2009	N	ug/l	N	780	
RW-5	beta-BHC	82		11/3/2009	N	ug/l	N	82	
RW-5	delta-BHC	87		11/3/2009	N	ug/l	N	87	
RW-5	gamma-BHC	590		11/3/2009	N	ug/l	N	590	1539
OBA-9AR	alpha-BHC	530		2/8/2010	N	ug/l	N	530	
OBA-9AR	beta-BHC	44	J	2/8/2010	N	ug/l	N	44	
OBA-9AR	delta-BHC	26	J	2/8/2010	N	ug/l	N	26	
OBA-9AR	gamma-BHC	300		2/8/2010	N	ug/l	N	300	900
PR-12	alpha-BHC	59		2/8/2010	N	ug/l	N	59	
PR-12	beta-BHC	14	J	2/8/2010	N	ug/l	N	14	
PR-12	delta-BHC	14	J	2/8/2010	N	ug/l	N	14	
PR-12	gamma-BHC	66		2/8/2010	N	ug/l	N	66	153
PR-4	alpha-BHC	140		2/8/2010	N	ug/l	N	140	
PR-4	beta-BHC	14		2/8/2010	N	ug/l	N	14	
PR-4	delta-BHC	15		2/8/2010	N	ug/l	N	15	
PR-4	gamma-BHC	140		2/8/2010	N	ug/l	N	140	309
RW-5	alpha-BHC	84		2/8/2010	N	ug/l	N	84	
RW-5	beta-BHC	12		2/8/2010	N	ug/l	N	12	
RW-5	delta-BHC	8.4		2/8/2010	N	ug/l	N	8.4	
RW-5	gamma-BHC	67		2/8/2010	N	ug/l	N	67	171.4
RW-5	alpha-BHC	96		2/8/2010	FD	ug/l	N	96	
RW-5	beta-BHC	15	J	2/8/2010	FD	ug/l	N	15	
RW-5	delta-BHC	15	J	2/8/2010	FD	ug/l	N	15	
RW-5	gamma-BHC	76		2/8/2010	FD	ug/l	N	76	202
RW-4	alpha-BHC	4.5		2/8/2010	N	ug/l	N	4.5	
RW-4	beta-BHC	0.95		2/8/2010	N	ug/l	N	0.95	
RW-4	delta-BHC	0.69		2/8/2010	N	ug/l	N	0.69	
RW-4	gamma-BHC	3.0		2/8/2010	N	ug/l	N	3	9.14
RW-3	alpha-BHC	4.2		2/8/2010	N	ug/l	N	4.2	
RW-3	beta-BHC			2/8/2010	N	ug/l	N	0	
RW-3	delta-BHC	2.1	J	2/8/2010	N	ug/l	N	2.1	
RW-3	gamma-BHC	5.2		2/8/2010	N	ug/l	N	5.2	11.5
RW-2	alpha-BHC	0.13		2/8/2010	N	ug/l	N	0.13	
RW-2	beta-BHC	0.11		2/8/2010	N	ug/l	N	0.11	
RW-2	delta-BHC	0.028	J	2/8/2010	N	ug/l	N	0.028	
RW-2	gamma-BHC	0.095		2/8/2010	N	ug/l	N	0.095	0.363
RW-1	alpha-BHC	15		2/8/2010	N	ug/l	N	15	
RW-1	beta-BHC	3.6	J	2/8/2010	N	ug/l	N	3.6	
RW-1	delta-BHC	1.7	J	2/8/2010	N	ug/l	N	1.7	
RW-1	gamma-BHC	2.0	J	2/8/2010	N	ug/l	N	2	22.3

LocationID	ParameterName	Result	LabFlag	SampleDate	SampleType	Units	Total or Dissolved	result	total
OBA-9AR	Mercury		U	11/3/2009	N	mg/l	T	0	0
OBA-9AR	Mercury		U	11/3/2009	N	mg/l	D	0	
PR-12	Mercury	0.00021		11/3/2009	N	mg/l	T	0.00021	0.00021
PR-12	Mercury		U	11/3/2009	N	mg/l	D	0	

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RW-2	Mercury		U	11/3/2009	N	mg/l	T	0	0
RW-2	Mercury		U	11/3/2009	N	mg/l	D	0	
RW-3	Mercury	0.00056		11/3/2009	N	mg/l	T	0.00056	0.00056
RW-3	Mercury		U	11/3/2009	N	mg/l	D	0	
RW-3	Mercury	0.00055		11/3/2009	FD	mg/l	T	0.00055	0.00055
RW-3	Mercury		U	11/3/2009	FD	mg/l	D	0	
RW-1	Mercury	0.0048		11/3/2009	N	mg/l	T	0.0048	0.0048
RW-1	Mercury	0.0016		11/3/2009	N	mg/l	D	0.0016	
RW-4	Mercury	0.00029		11/3/2009	N	mg/l	T	0.00029	0.00029
RW-4	Mercury		U	11/3/2009	N	mg/l	D	0	
PR-4	Mercury		U	11/3/2009	N	mg/l	T	0	0
PR-4	Mercury		U	11/3/2009	N	mg/l	D	0	
RW-5	Mercury	0.00020		11/3/2009	N	mg/l	T	0.0002	0.0002
RW-5	Mercury		U	11/3/2009	N	mg/l	D	0	
OBA-9AR	Mercury			2/8/2010	N	mg/l	T	0	0
OBA-9AR	Mercury			2/8/2010	N	mg/l	D	0	
PR-12	Mercury			2/8/2010	N	mg/l	T	0	0
PR-12	Mercury			2/8/2010	N	mg/l	D	0	
PR-4	Mercury			2/8/2010	N	mg/l	T	0	0
PR-4	Mercury			2/8/2010	N	mg/l	D	0	
RW-5	Mercury			2/8/2010	N	mg/l	T	0	0
RW-5	Mercury			2/8/2010	N	mg/l	D	0	
RW-5	Mercury			2/8/2010	FD	mg/l	T	0	0
RW-5	Mercury			2/8/2010	FD	mg/l	D	0	
RW-4	Mercury	0.0004		2/8/2010	N	mg/l	T	0.0004	0.0004
RW-4	Mercury			2/8/2010	N	mg/l	D	0	
RW-3	Mercury			2/8/2010	N	mg/l	T	0	0
RW-3	Mercury			2/8/2010	N	mg/l	D	0	
RW-2	Mercury			2/8/2010	N	mg/l	T	0	0
RW-2	Mercury			2/8/2010	N	mg/l	D	0	
RW-1	Mercury	0.0017		2/8/2010	N	mg/l	T	0.0017	0.0017
RW-1	Mercury	0.0005		2/8/2010	N	mg/l	D	0.0005	

LocationID	ParameterName	Result	LabFlag	SampleDate	SampleType	Units	Total or Dissolved	result	total
OBA-9AR	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	1,1,2,2-Tetrachloroethane	250		11/3/2009	N	ug/l	N	250	
OBA-9AR	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	1,2,4-Trichlorobenzene	11000	D	11/3/2009	N	ug/l	N	11000	
OBA-9AR	1,2-Dichlorobenzene	12000	D	11/3/2009	N	ug/l	N	12000	
OBA-9AR	1,3-Dichlorobenzene	1700		11/3/2009	N	ug/l	N	1700	
OBA-9AR	1,4-Dichlorobenzene	10000	D	11/3/2009	N	ug/l	N	10000	
OBA-9AR	Benzene	500		11/3/2009	N	ug/l	N	500	
OBA-9AR	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	Chlorobenzene	710		11/3/2009	N	ug/l	N	710	
OBA-9AR	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	cis-1,2-Dichloroethene	430		11/3/2009	N	ug/l	N	430	
OBA-9AR	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	Tetrachloroethene (PCE)	2100		11/3/2009	N	ug/l	N	2100	
OBA-9AR	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
OBA-9AR	Trichloroethene (TCE)	5300		11/3/2009	N	ug/l	N	5300	
OBA-9AR	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	43,990
PR-12	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
PR-12	1,1,2,2-Tetrachloroethane	2500		11/3/2009	N	ug/l	N	2500	
PR-12	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
PR-12	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
PR-12	1,2,4-Trichlorobenzene	720		11/3/2009	N	ug/l	N	720	
PR-12	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
PR-12	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
PR-12	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
PR-12	Benzene		U	11/3/2009	N	ug/l	N	0	
PR-12	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
PR-12	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
PR-12	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
PR-12	cis-1,2-Dichloroethene	1800		11/3/2009	N	ug/l	N	1800	
PR-12	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
PR-12	Tetrachloroethene (PCE)	5900		11/3/2009	N	ug/l	N	5900	
PR-12	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
PR-12	Trichloroethene (TCE)	14000		11/3/2009	N	ug/l	N	14000	
PR-12	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	24,920
RW-2	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-2	1,1,2,2-Tetrachloroethane	7.0		11/3/2009	N	ug/l	N	7	
RW-2	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-2	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-2	1,2,4-Trichlorobenzene	15		11/3/2009	N	ug/l	N	15	
RW-2	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	

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RW-2	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-2	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-2	Benzene		U	11/3/2009	N	ug/l	N	0	
RW-2	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
RW-2	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-2	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
RW-2	cis-1,2-Dichloroethene	35		11/3/2009	N	ug/l	N	35	
RW-2	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
RW-2	Tetrachloroethene (PCE)	70		11/3/2009	N	ug/l	N	70	
RW-2	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-2	Trichloroethene (TCE)	100		11/3/2009	N	ug/l	N	100	
RW-2	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	227
RW-3	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-3	1,1,2,2-Tetrachloroethane	8.9		11/3/2009	N	ug/l	N	8.9	
RW-3	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-3	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-3	1,2,4-Trichlorobenzene	120		11/3/2009	N	ug/l	N	120	
RW-3	1,2-Dichlorobenzene	18		11/3/2009	N	ug/l	N	18	
RW-3	1,3-Dichlorobenzene	67		11/3/2009	N	ug/l	N	67	
RW-3	1,4-Dichlorobenzene	53		11/3/2009	N	ug/l	N	53	
RW-3	Benzene	8.8		11/3/2009	N	ug/l	N	8.8	
RW-3	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
RW-3	Chlorobenzene	40		11/3/2009	N	ug/l	N	40	
RW-3	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
RW-3	cis-1,2-Dichloroethene	94		11/3/2009	N	ug/l	N	94	
RW-3	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
RW-3	Tetrachloroethene (PCE)	76		11/3/2009	N	ug/l	N	76	
RW-3	trans-1,2-Dichloroethene	2.2		11/3/2009	N	ug/l	N	2.2	
RW-3	Trichloroethene (TCE)	91		11/3/2009	N	ug/l	N	91	
RW-3	Vinyl Chloride	32		11/3/2009	N	ug/l	N	32	611
RW-3	1,1,1-Trichloroethane		U	11/3/2009	FD	ug/l	N	0	
RW-3	1,1,2,2-Tetrachloroethane	9.7		11/3/2009	FD	ug/l	N	9.7	
RW-3	1,1,2-Trichloroethane		U	11/3/2009	FD	ug/l	N	0	
RW-3	1,1-Dichloroethene		U	11/3/2009	FD	ug/l	N	0	
RW-3	1,2,4-Trichlorobenzene	130		11/3/2009	FD	ug/l	N	130	
RW-3	1,2-Dichlorobenzene	19		11/3/2009	FD	ug/l	N	19	
RW-3	1,3-Dichlorobenzene	70		11/3/2009	FD	ug/l	N	70	
RW-3	1,4-Dichlorobenzene	55		11/3/2009	FD	ug/l	N	55	
RW-3	Benzene	9.1		11/3/2009	FD	ug/l	N	9.1	
RW-3	Carbon tetrachloride		U	11/3/2009	FD	ug/l	N	0	
RW-3	Chlorobenzene	42		11/3/2009	FD	ug/l	N	42	
RW-3	Chloromethane (Methyl chloride)		U	11/3/2009	FD	ug/l	N	0	
RW-3	cis-1,2-Dichloroethene	96		11/3/2009	FD	ug/l	N	96	
RW-3	Methylene chloride (Dichloromethane)		U	11/3/2009	FD	ug/l	N	0	
RW-3	Tetrachloroethene (PCE)	77		11/3/2009	FD	ug/l	N	77	
RW-3	trans-1,2-Dichloroethene	2.3		11/3/2009	FD	ug/l	N	2.3	
RW-3	Trichloroethene (TCE)	92		11/3/2009	FD	ug/l	N	92	
RW-3	Vinyl Chloride	32		11/3/2009	FD	ug/l	N	32	634
RW-1	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-1	1,1,2,2-Tetrachloroethane		U	11/3/2009	N	ug/l	N	0	
RW-1	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-1	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-1	1,2,4-Trichlorobenzene	4700		11/3/2009	N	ug/l	N	4700	
RW-1	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-1	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-1	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-1	Benzene		U	11/3/2009	N	ug/l	N	0	
RW-1	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
RW-1	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-1	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
RW-1	cis-1,2-Dichloroethene	3800		11/3/2009	N	ug/l	N	3800	
RW-1	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
RW-1	Tetrachloroethene (PCE)	4800		11/3/2009	N	ug/l	N	4800	
RW-1	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-1	Trichloroethene (TCE)	22000		11/3/2009	N	ug/l	N	22000	
RW-1	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	35,300
RW-4	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-4	1,1,2,2-Tetrachloroethane	6.6		11/3/2009	N	ug/l	N	6.6	
RW-4	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-4	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-4	1,2,4-Trichlorobenzene	23		11/3/2009	N	ug/l	N	23	
RW-4	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-4	1,3-Dichlorobenzene	9.5		11/3/2009	N	ug/l	N	9.5	
RW-4	1,4-Dichlorobenzene	5.5		11/3/2009	N	ug/l	N	5.5	
RW-4	Benzene		U	11/3/2009	N	ug/l	N	0	
RW-4	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	

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RW-4	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-4	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
RW-4	cis-1,2-Dichloroethene	74		11/3/2009	N	ug/l	N	74	
RW-4	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
RW-4	Tetrachloroethene (PCE)	91		11/3/2009	N	ug/l	N	91	
RW-4	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-4	Trichloroethene (TCE)	130		11/3/2009	N	ug/l	N	130	
RW-4	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	340
PR-4	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
PR-4	1,1,2,2-Tetrachloroethane		U	11/3/2009	N	ug/l	N	0	
PR-4	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
PR-4	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
PR-4	1,2,4-Trichlorobenzene	1400		11/3/2009	N	ug/l	N	1400	
PR-4	1,2-Dichlorobenzene	170		11/3/2009	N	ug/l	N	170	
PR-4	1,3-Dichlorobenzene	500		11/3/2009	N	ug/l	N	500	
PR-4	1,4-Dichlorobenzene	430		11/3/2009	N	ug/l	N	430	
PR-4	Benzene	93		11/3/2009	N	ug/l	N	93	
PR-4	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
PR-4	Chlorobenzene	400		11/3/2009	N	ug/l	N	400	
PR-4	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
PR-4	cis-1,2-Dichloroethene	650		11/3/2009	N	ug/l	N	650	
PR-4	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
PR-4	Tetrachloroethene (PCE)	79		11/3/2009	N	ug/l	N	79	
PR-4	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
PR-4	Trichloroethene (TCE)	180		11/3/2009	N	ug/l	N	180	
PR-4	Vinyl Chloride	290		11/3/2009	N	ug/l	N	290	4,192
RW-5	1,1,1-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-5	1,1,2,2-Tetrachloroethane	6700		11/3/2009	N	ug/l	N	6700	
RW-5	1,1,2-Trichloroethane		U	11/3/2009	N	ug/l	N	0	
RW-5	1,1-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-5	1,2,4-Trichlorobenzene	1300		11/3/2009	N	ug/l	N	1300	
RW-5	1,2-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-5	1,3-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-5	1,4-Dichlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-5	Benzene		U	11/3/2009	N	ug/l	N	0	
RW-5	Carbon tetrachloride		U	11/3/2009	N	ug/l	N	0	
RW-5	Chlorobenzene		U	11/3/2009	N	ug/l	N	0	
RW-5	Chloromethane (Methyl chloride)		U	11/3/2009	N	ug/l	N	0	
RW-5	cis-1,2-Dichloroethene	4800		11/3/2009	N	ug/l	N	4800	
RW-5	Methylene chloride (Dichloromethane)		U	11/3/2009	N	ug/l	N	0	
RW-5	Tetrachloroethene (PCE)	18000		11/3/2009	N	ug/l	N	18000	
RW-5	trans-1,2-Dichloroethene		U	11/3/2009	N	ug/l	N	0	
RW-5	Trichloroethene (TCE)	49000		11/3/2009	N	ug/l	N	49000	
RW-5	Vinyl Chloride		U	11/3/2009	N	ug/l	N	0	79,800
OBA-9AR	1,1,1-Trichloroethane	5.3		2/8/2010	N	ug/l	N	5.3	
OBA-9AR	1,1,2,2-Tetrachloroethane	52		2/8/2010	N	ug/l	N	52	
OBA-9AR	1,1,2-Trichloroethane	1.6		2/8/2010	N	ug/l	N	1.6	
OBA-9AR	1,1-Dichloroethene	2.4		2/8/2010	N	ug/l	N	2.4	
OBA-9AR	1,2,4-Trichlorobenzene	11000		2/8/2010	N	ug/l	N	11000	
OBA-9AR	1,2-Dichlorobenzene	9000		2/8/2010	N	ug/l	N	9000	
OBA-9AR	1,3-Dichlorobenzene	1300		2/8/2010	N	ug/l	N	1300	
OBA-9AR	1,4-Dichlorobenzene	8500		2/8/2010	N	ug/l	N	8500	
OBA-9AR	Benzene	440	J	2/8/2010	N	ug/l	N	440	
OBA-9AR	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
OBA-9AR	Chlorobenzene	600		2/8/2010	N	ug/l	N	600	
OBA-9AR	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
OBA-9AR	cis-1,2-Dichloroethene			2/8/2010	N	ug/l	N	0	
OBA-9AR	Methylene chloride (Dichloromethane)	0.75	J	2/8/2010	N	ug/l	N	0.75	
OBA-9AR	Tetrachloroethene (PCE)	1300		2/8/2010	N	ug/l	N	1300	
OBA-9AR	trans-1,2-Dichloroethene	4.0		2/8/2010	N	ug/l	N	4	
OBA-9AR	Trichloroethene (TCE)	1600		2/8/2010	N	ug/l	N	1600	
OBA-9AR	Vinyl Chloride	7.9		2/8/2010	N	ug/l	N	7.9	33,814
PR-12	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
PR-12	1,1,2,2-Tetrachloroethane	7800		2/8/2010	N	ug/l	N	7800	
PR-12	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
PR-12	1,1-Dichloroethene	84		2/8/2010	N	ug/l	N	84	
PR-12	1,2,4-Trichlorobenzene	920		2/8/2010	N	ug/l	N	920	
PR-12	1,2-Dichlorobenzene	290	J	2/8/2010	N	ug/l	N	290	
PR-12	1,3-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
PR-12	1,4-Dichlorobenzene	360	J	2/8/2010	N	ug/l	N	360	
PR-12	Benzene	600		2/8/2010	N	ug/l	N	600	
PR-12	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
PR-12	Chlorobenzene			2/8/2010	N	ug/l	N	0	
PR-12	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
PR-12	cis-1,2-Dichloroethene	4300		2/8/2010	N	ug/l	N	4300	
PR-12	Methylene chloride (Dichloromethane)	390	J	2/8/2010	N	ug/l	N	390	

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PR-12	Tetrachloroethene (PCE)	21000		2/8/2010	N	ug/l	N	21000	
PR-12	trans-1,2-Dichloroethene			2/8/2010	N	ug/l	N	0	
PR-12	Trichloroethene (TCE)	49000		2/8/2010	N	ug/l	N	49000	
PR-12	Vinyl Chloride	850		2/8/2010	N	ug/l	N	850	85,594
PR-4	1,1,1-Trichloroethane	1.3		2/8/2010	N	ug/l	N	1.3	
PR-4	1,1,2,2-Tetrachloroethane	18		2/8/2010	N	ug/l	N	18	
PR-4	1,1,2-Trichloroethane	0.67	J	2/8/2010	N	ug/l	N	0.67	
PR-4	1,1-Dichloroethene	2.6		2/8/2010	N	ug/l	N	2.6	
PR-4	1,2,4-Trichlorobenzene	1900		2/8/2010	N	ug/l	N	1900	
PR-4	1,2-Dichlorobenzene	150		2/8/2010	N	ug/l	N	150	
PR-4	1,3-Dichlorobenzene	330		2/8/2010	N	ug/l	N	330	
PR-4	1,4-Dichlorobenzene	310		2/8/2010	N	ug/l	N	310	
PR-4	Benzene	84		2/8/2010	N	ug/l	N	84	
PR-4	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
PR-4	Chlorobenzene	410		2/8/2010	N	ug/l	N	410	
PR-4	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
PR-4	cis-1,2-Dichloroethene	580		2/8/2010	N	ug/l	N	580	
PR-4	Methylene chloride (Dichloromethane)	0.75	J	2/8/2010	N	ug/l	N	0.75	
PR-4	Tetrachloroethene (PCE)	160		2/8/2010	N	ug/l	N	160	
PR-4	trans-1,2-Dichloroethene	8.6		2/8/2010	N	ug/l	N	8.6	
PR-4	Trichloroethene (TCE)	300		2/8/2010	N	ug/l	N	300	
PR-4	Vinyl Chloride	300		2/8/2010	N	ug/l	N	300	4,556
RW-5	1,1,1-Trichloroethane	230	N1E	2/8/2010	N	ug/l	N	230	
RW-5	1,1,2,2-Tetrachloroethane	6600		2/8/2010	N	ug/l	N	6600	
RW-5	1,1,2-Trichloroethane	140	N1E	2/8/2010	N	ug/l	N	140	
RW-5	1,1-Dichloroethene	100	N1E	2/8/2010	N	ug/l	N	100	
RW-5	1,2,4-Trichlorobenzene	1100		2/8/2010	N	ug/l	N	1100	
RW-5	1,2-Dichlorobenzene	120	N1E	2/8/2010	N	ug/l	N	120	
RW-5	1,3-Dichlorobenzene	150	N1E	2/8/2010	N	ug/l	N	150	
RW-5	1,4-Dichlorobenzene	230	N1E	2/8/2010	N	ug/l	N	230	
RW-5	Benzene	150	N1E	2/8/2010	N	ug/l	N	150	
RW-5	Carbon tetrachloride	520	N1E	2/8/2010	N	ug/l	N	520	
RW-5	Chlorobenzene	170	N1E	2/8/2010	N	ug/l	N	170	
RW-5	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
RW-5	cis-1,2-Dichloroethene	5100		2/8/2010	N	ug/l	N	5100	
RW-5	Methylene chloride (Dichloromethane)	860	J	2/8/2010	N	ug/l	N	860	
RW-5	Tetrachloroethene (PCE)	27000		2/8/2010	N	ug/l	N	27000	
RW-5	trans-1,2-Dichloroethene	150	N1E	2/8/2010	N	ug/l	N	150	
RW-5	Trichloroethene (TCE)	62000		2/8/2010	N	ug/l	N	62000	
RW-5	Vinyl Chloride	640	J	2/8/2010	N	ug/l	N	640	105,260
RW-5	1,1,1-Trichloroethane	230		2/8/2010	FD	ug/l	N	230	
RW-5	1,1,2,2-Tetrachloroethane	6700		2/8/2010	FD	ug/l	N	6700	
RW-5	1,1,2-Trichloroethane	150		2/8/2010	FD	ug/l	N	150	
RW-5	1,1-Dichloroethene	110		2/8/2010	FD	ug/l	N	110	
RW-5	1,2,4-Trichlorobenzene	980	J	2/8/2010	FD	ug/l	N	980	
RW-5	1,2-Dichlorobenzene	130		2/8/2010	FD	ug/l	N	130	
RW-5	1,3-Dichlorobenzene	160		2/8/2010	FD	ug/l	N	160	
RW-5	1,4-Dichlorobenzene	260		2/8/2010	FD	ug/l	N	260	
RW-5	Benzene	160		2/8/2010	FD	ug/l	N	160	
RW-5	Carbon tetrachloride			2/8/2010	FD	ug/l	N	0	
RW-5	Chlorobenzene	180		2/8/2010	FD	ug/l	N	180	
RW-5	Chloromethane (Methyl chloride)			2/8/2010	FD	ug/l	N	0	
RW-5	cis-1,2-Dichloroethene	5000		2/8/2010	FD	ug/l	N	5000	
RW-5	Methylene chloride (Dichloromethane)	910	J	2/8/2010	FD	ug/l	N	910	
RW-5	Tetrachloroethene (PCE)	27000		2/8/2010	FD	ug/l	N	27000	
RW-5	trans-1,2-Dichloroethene	150		2/8/2010	FD	ug/l	N	150	
RW-5	Trichloroethene (TCE)	61000		2/8/2010	FD	ug/l	N	61000	
RW-5	Vinyl Chloride	650	J	2/8/2010	FD	ug/l	N	650	103,770
RW-4	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-4	1,1,2,2-Tetrachloroethane	6.3		2/8/2010	N	ug/l	N	6.3	
RW-4	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-4	1,1-Dichloroethene			2/8/2010	N	ug/l	N	0	
RW-4	1,2,4-Trichlorobenzene	69		2/8/2010	N	ug/l	N	69	
RW-4	1,2-Dichlorobenzene	7.7		2/8/2010	N	ug/l	N	7.7	
RW-4	1,3-Dichlorobenzene	53		2/8/2010	N	ug/l	N	53	
RW-4	1,4-Dichlorobenzene	30		2/8/2010	N	ug/l	N	30	
RW-4	Benzene	11		2/8/2010	N	ug/l	N	11	
RW-4	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
RW-4	Chlorobenzene	32		2/8/2010	N	ug/l	N	32	
RW-4	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
RW-4	cis-1,2-Dichloroethene	84		2/8/2010	N	ug/l	N	84	
RW-4	Methylene chloride (Dichloromethane)			2/8/2010	N	ug/l	N	0	
RW-4	Tetrachloroethene (PCE)	95		2/8/2010	N	ug/l	N	95	
RW-4	trans-1,2-Dichloroethene	1.6		2/8/2010	N	ug/l	N	1.6	
RW-4	Trichloroethene (TCE)	130		2/8/2010	N	ug/l	N	130	
RW-4	Vinyl Chloride	17		2/8/2010	N	ug/l	N	17	537

Olin Niagara Falls Plant
Groundwater Recovery System Header and influent/effluent Data
Q4-09 / Q1-10

LocationID	ParameterName	Result	LabFlag	SampleDate	SampleType	Units	Total or Dissolved	result	total
RW-3	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-3	1,1,2,2-Tetrachloroethane	11		2/8/2010	N	ug/l	N	11	
RW-3	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-3	1,1-Dichloroethene			2/8/2010	N	ug/l	N	0	
RW-3	1,2,4-Trichlorobenzene	50		2/8/2010	N	ug/l	N	50	
RW-3	1,2-Dichlorobenzene	3.8		2/8/2010	N	ug/l	N	3.8	
RW-3	1,3-Dichlorobenzene	22		2/8/2010	N	ug/l	N	22	
RW-3	1,4-Dichlorobenzene	12		2/8/2010	N	ug/l	N	12	
RW-3	Benzene	2.7		2/8/2010	N	ug/l	N	2.7	
RW-3	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
RW-3	Chlorobenzene	5.4		2/8/2010	N	ug/l	N	5.4	
RW-3	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
RW-3	cis-1,2-Dichloroethene	72		2/8/2010	N	ug/l	N	72	
RW-3	Methylene chloride (Dichloromethane)			2/8/2010	N	ug/l	N	0	
RW-3	Tetrachloroethene (PCE)	86		2/8/2010	N	ug/l	N	86	
RW-3	trans-1,2-Dichloroethene	1.8		2/8/2010	N	ug/l	N	1.8	
RW-3	Trichloroethene (TCE)	110		2/8/2010	N	ug/l	N	110	
RW-3	Vinyl Chloride	5.5		2/8/2010	N	ug/l	N	5.5	382
RW-2	1,1,1-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-2	1,1,2,2-Tetrachloroethane	7.6		2/8/2010	N	ug/l	N	7.6	
RW-2	1,1,2-Trichloroethane			2/8/2010	N	ug/l	N	0	
RW-2	1,1-Dichloroethene			2/8/2010	N	ug/l	N	0	
RW-2	1,2,4-Trichlorobenzene	15		2/8/2010	N	ug/l	N	15	
RW-2	1,2-Dichlorobenzene			2/8/2010	N	ug/l	N	0	
RW-2	1,3-Dichlorobenzene	1.8		2/8/2010	N	ug/l	N	1.8	
RW-2	1,4-Dichlorobenzene	1.0		2/8/2010	N	ug/l	N	1	
RW-2	Benzene	0.50	J	2/8/2010	N	ug/l	N	0.5	
RW-2	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
RW-2	Chlorobenzene			2/8/2010	N	ug/l	N	0	
RW-2	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
RW-2	cis-1,2-Dichloroethene	26		2/8/2010	N	ug/l	N	26	
RW-2	Methylene chloride (Dichloromethane)			2/8/2010	N	ug/l	N	0	
RW-2	Tetrachloroethene (PCE)	73		2/8/2010	N	ug/l	N	73	
RW-2	trans-1,2-Dichloroethene			2/8/2010	N	ug/l	N	0	
RW-2	Trichloroethene (TCE)	130		2/8/2010	N	ug/l	N	130	
RW-2	Vinyl Chloride	0.86	J	2/8/2010	N	ug/l	N	0.86	256
RW-1	1,1,1-Trichloroethane	7.4		2/8/2010	N	ug/l	N	7.4	
RW-1	1,1,2,2-Tetrachloroethane	27		2/8/2010	N	ug/l	N	27	
RW-1	1,1,2-Trichloroethane	9.8		2/8/2010	N	ug/l	N	9.8	
RW-1	1,1-Dichloroethene	55		2/8/2010	N	ug/l	N	55	
RW-1	1,2,4-Trichlorobenzene	4800		2/8/2010	N	ug/l	N	4800	
RW-1	1,2-Dichlorobenzene	150		2/8/2010	N	ug/l	N	150	
RW-1	1,3-Dichlorobenzene	250		2/8/2010	N	ug/l	N	250	
RW-1	1,4-Dichlorobenzene	100		2/8/2010	N	ug/l	N	100	
RW-1	Benzene	150		2/8/2010	N	ug/l	N	150	
RW-1	Carbon tetrachloride			2/8/2010	N	ug/l	N	0	
RW-1	Chlorobenzene	130		2/8/2010	N	ug/l	N	130	
RW-1	Chloromethane (Methyl chloride)			2/8/2010	N	ug/l	N	0	
RW-1	cis-1,2-Dichloroethene	2200		2/8/2010	N	ug/l	N	2200	
RW-1	Methylene chloride (Dichloromethane)	170		2/8/2010	N	ug/l	N	170	
RW-1	Tetrachloroethene (PCE)	3900		2/8/2010	N	ug/l	N	3900	
RW-1	trans-1,2-Dichloroethene	54		2/8/2010	N	ug/l	N	54	
RW-1	Trichloroethene (TCE)	14000		2/8/2010	N	ug/l	N	14000	
RW-1	Vinyl Chloride	340		2/8/2010	N	ug/l	N	340	26,343

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: January 12, 2010

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for December 2009**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107100001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for December 2009:

Ground-Water Collection and Treatment System Status
December 2009

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	2.2	557.3	557.5	21
RW-2	29.8	557.3	557.7	30
RW-3	3.8	556.9	557.5	29
RW-4	6.1	557.1	557.5	29
PR-4	4.7	552.5	556.7	31
RW-5	15.6	557.4	557.5	29
PR-12	5.2	554.5	558.5	31
OBA-9AR	0.7	557.1	557.7	31

Prepared By: AWE 1/12/2010 AWE 1/12/2010
Checked By: BSA 1/13/2010 BSA 2/8/2010

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor for most wells and due to fluctuating flow rates and water levels. RW-1 had multiple exceedances caused by plugging of the discharge line. The acid feed to the well was increased to clean the line which, in turn, increased the flow rate from RW-1 and lowered the water level.

The following is a list of downtimes occurring in December and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
SYSTEM	12/9/2009	1.25	Rain event – high 7S level
RW-1	12/10/2009– 12/12/2009	41.75	loose wire on transducer - repaired
RW-1	12/17/2009	1.7	loose wire on transducer - repaired
RW-1	12/21/2009	4.4	loose wire on transducer - repaired

Prepared By: AWE 1/12/2010 Awe 1/12/2010
Checked By: BSA 1/13/2010 BSA 1/13/2010

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary.

The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	12/1/2009	0.05	0.11	
	12/8/2009	0.08	-0.08	
	12/15/2009	0.10	0.01	
	12/22/2009	NA	-0.05	
	12/29/2009	NA	-0.02	
RW-2	12/1/2009	-0.11	-0.06	
	12/8/2009	-0.08	-0.03	
	12/15/2009	-0.08	-0.02	
	12/22/2009	-0.07	-0.14	
	12/29/2009	0.07	-0.12	
RW-3	12/1/2009	-0.23	-0.04	
	12/8/2009	-0.02	-0.06	
	12/15/2009	0.00	-0.06	
	12/22/2009	-0.13	-0.06	
	12/29/2009	-0.06	-0.03	
RW-4	12/1/2009	0.20	0.04	
	12/8/2009	0.21	0.09	
	12/15/2009	0.19	0.04	
	12/22/2009	0.11	0.11	
	12/29/2009	0.21	0.04	
PR-4	12/1/2009	0.14	0.03	
	12/8/2009	0.14	0.13	
	12/15/2009	1.04	-2.27	
	12/22/2009	0.93	-1.67	
	12/29/2009	0.99	-1.32	
RW-5	12/1/2009	-0.16	0.00	
	12/8/2009	-0.16	-0.03	
	12/15/2009	-0.16	-0.02	
	12/22/2009	-0.26	-0.05	
	12/29/2009	-0.16	-0.05	
PR-12	12/1/2009	-2.11	NA	Bad transducer – replacement on order
	12/8/2009	-3.61	NA	
	12/15/2009	-1.46	NA	
	12/22/2009	-1.62	NA	
	12/29/2009	1.82	NA	
OBA-9AR	12/1/2009	0.33	-0.07	
	12/8/2009	0.28	-0.17	
	12/15/2009	0.18	-0.07	
	12/22/2009	0.18	-0.08	
	12/29/2009	0.23	-0.30	

Prepared By: AWE 1/12/2010 AWE 1/12/2010

Checked By: BSA 1/13/2010 BSA 1/13/2010

DNAPL INSPECTION

Based on historical DNAPL recovery data, the DNAPL recovery program was revised to include one monthly well, 7 quarterly wells, and 16 annual wells. On December 2, 2009, one well was inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
OBA-9AR	1.0	YES	250	

Prepared By: AWE 1/12/2010 AWE 1/12/2010
Checked By: BSA 1/13/2010 BSA 1/13/2010

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: March 29, 2010

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for February 2010**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107100001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for February 2010:

Ground-Water Collection and Treatment System Status
February 2010

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	2.9	556.91	557.5	28
RW-2	28.8	557.21	557.7	28
RW-3	3.0	556.52	557.5	28
RW-4	3.3	557.10	557.5	28
PR-4	5.7	553.13	556.7	26
RW-5	14.8	557.28	557.5	25
PR-12	4.7	554.77	558.5	28
OBA-9AR	0.4	557.40	557.7	26

Prepared By: AWE 3/3/2010 AWE 3/3/2010
Checked By: BSA 3/3/2010 BSA 3/3/2010

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor and due to downtimes caused by a rain/snow melt event (high 7S level). RW-1 experienced multiple downtimes due to the loss of the transducer signal. Olin resolved this issue as of March 9, 2010.

The following is a list of downtimes occurring in February and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
RW-1	2/5/2010-2/6/2010	46	Bad transducer signal – corrected
SYSTEM	2/7/2010-2/8/2010	15.5	High 7S sump level
SYSTEM	2/8/2010	3.5	High 7S sump level
SYSTEM	2/12/2010	1.5	High air stripper sump level
RW-1	2/13/2010	7	Bad transducer signal – corrected
RW-1	2/14/2010	4	Bad transducer signal – corrected
SYSTEM	2/15/2010	1.5	High air stripper sump level
RW-1	2/21/2010-2/22/2010	20	Bad transducer signal – corrected
PR-12	2/24/2010	1..25	Acid washing
OBA-9AR	2/24/2010	1.25	Acid washing
SYSTEM	2/25/2010	1	High air stripper sump level
RW-1	2/27/2010	4.5	Bad transducer signal – corrected

Prepared By: AWE 3/3/2010 AWE 3/3/2010
Checked By: BSA 3/3/2010 BSA 3/3/2010

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	2/2/2010	NA	-0.01	Bad transducer wiring
	2/9/2010	NA	0.00	Bad transducer wiring
	2/16/2010	NA	-0.03	Bad transducer wiring
	2/23/2010	NA	-0.03	Bad transducer wiring
RW-2	2/2/2010	-0.07	-0.13	
	2/9/2010	-0.03	-0.18	
	2/16/2010	-0.08	-0.04	
	2/23/2010	-0.02	-0.08	
RW-3	2/2/2010	0.05	-0.06	
	2/9/2010	0.03	-0.04	
	2/16/2010	0.10	-0.06	
	2/23/2010	0.08	-0.06	
RW-4	2/2/2010	0.16	0.04	
	2/9/2010	0.11	0.04	
	2/16/2010	0.10	0.06	
	2/23/2010	0.16	0.04	
PR-4	2/2/2010	1.99	2.16	
	2/9/2010	2.26	-0.30	
	2/16/2010	2.08	-0.14	
	2/23/2010	1.67	0.51	Suspect bad transducer
RW-5	2/2/2010	-0.27	-0.05	
	2/9/2010	-0.26	-0.05	
	2/16/2010	-0.16	-0.05	
	2/23/2010	-0.18	-0.05	
PR-12	2/2/2010	-1.30	NA	
	2/9/2010	-0.05	NA	
	2/16/2010	2.31	NA	
	2/23/2010	0.93	NA	Suspect bad manual measurements due to fouling in well
OBA-9AR	2/2/2010	0.28	-0.05	
	2/9/2010	0.28	-0.32	
	2/16/2010	0.28	-0.05	
	2/23/2010	0.26	-0.02	

Prepared By: AWE 3/3/2010 AWE 3/3/2010
Checked By: BSA 3/3/2010 BSA 3/3/2010

DNAPL INSPECTION

Based on historical DNAPL recovery data, the DNAPL recovery program was revised to include one monthly well, 7 quarterly wells, and 16 annual wells. This change was approved by NYSDEC per email to M.J. Bellotti on November 30, 2009. On February 8, 2010, one well was inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
OBA-9AR	2.0	YES	150	

Prepared By: AWE 3/3/2010 AWE 3/3/2010
Checked By: BSA 3/3/2010 BSA 3/3/2010

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: February 5, 2010

Subject: Monthly O&M Status Update for Ground-Water Collection and Treatment System for January 2010
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107100001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for January 2010:

Ground-Water Collection and Treatment System Status
January 2010

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	3.3	557.0	557.5	30
RW-2	29.7	557.2	557.7	31
RW-3	3.5	556.4	557.5	30
RW-4	4.7	557.1	557.5	31
PR-4	5.2	553.0	556.7	31
RW-5	15.1	557.3	557.5	29
PR-12	3.4	554.8	558.5	31
OBA-9AR	0.4	558.7	557.7	20

Prepared By: AWE 2/5/2010 AWE 2/5/2010
Checked By: BSA 2/5/2010 BSA 2/15/2010

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor for most wells and due to fluctuating flow rates and water levels. Exceedances in OBA-9AR were caused by a section of aboveground piping freezing. The piping was thawed once the weather improved and the well was put back into service.

During recent months, several repairs and improvements have been made in Building 73. A leak had been discovered in the base of the clarifier tank. The tank has been bypassed, drained, and cleaned. The tank will remain decommissioned and the system will continue to operate without it. The lead pH adjustment tank (out of two) will serve the function of clarifier. Sediments from the clarifier tank and from sumps are being removed and disposed of.

Repairs were also made to several floor sumps in the building. Cracked flooring around the sumps was repaired as necessary and all of the sumps were cleaned out. A dedicated sump pump was reinstalled in the main sump. The original pump had been removed to due to sediment buildup in the sump.

Vapors from the hydrochloric acid totes in the building have historically caused to corrosion to equipment near the totes. In an effort to reduce the acid vapors from the totes, the totes were vented to containers of low concentration sodium hydroxide to absorb the acid vapors. In addition, the acid delivery system is currently being refurbished with new metering pumps to further reduce the hydrochloric acid vapors and leaks.

The following is a list of downtimes occurring in January and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
SYSTEM	**1/7/2010**	**3.3**	Carbon vessel repair
SYSTEM	**1/25/2010**	**0.8**	Rain event – high 7S level
SYSTEM	**1/27/2010**	**0.25**	Air stripper sump high level
SYSTEM	**1/27/2010**	**1.8**	Air stripper sump high level – effluent pump flowrate increased
PR-12	**1/14/2010-1/15/2010**	**26.75**	Transducer replacement
PR-4	**1/26/2010**	**5.4**	Acid washing

Prepared By: AWE 2/5/2010 AWE 2/5/2010
Checked By: BSA 2/5/2010 BSA 2/5/2010

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	1/5/2010	0.07	-0.02	
	1/12/2010	NA	-0.04	
	1/19/2010	-0.07	0.13	Transducer replaced
	1/26/2010	-0.04	-0.05	
RW-2	1/5/2010	-0.08	-0.12	
	1/12/2010	-0.08	-0.10	
	1/19/2010	-0.04	-0.18	
	1/26/2010	-0.07	-0.02	
RW-3	1/5/2010	0.03	-0.06	
	1/12/2010	-0.32	-0.06	
	1/19/2010	-0.07	-0.06	
	1/26/2010	0.22	-0.06	
RW-4	1/5/2010	0.19	0.07	
	1/12/2010	0.05	0.04	
	1/19/2010	0.12	0.09	
	1/26/2010	0.11	0.04	
PR-4	1/5/2010	1.33	0.26	
	1/12/2010	0.20	-0.31	
	1/19/2010	1.16	0.26	
	1/26/2010	1.34	2.03	
RW-5	1/5/2010	-0.16	-0.05	
	1/12/2010	-0.30	-0.05	
	1/19/2010	-0.24	-0.05	
	1/26/2010	-0.24	0.00	
PR-12	1/5/2010	1.76	NA	
	1/12/2010	-2.58	NA	
	1/19/2010	-1.66	NA	Transducer replaced
	1/26/2010	-1.38	NA	
OBA-9AR	1/5/2010	0.23	-0.03	
	1/12/2010	0.25	-0.03	
	1/19/2010	0.20	0.00	
	1/26/2010	0.26	0.01	

Prepared By: AWE 2/5/2010 AWE 2/5/2010
Checked By: BSA 2/5/2010 BSA 2/5/2010

DNAPL INSPECTION

Based on historical DNAPL recovery data, the DNAPL recovery program was revised to include one monthly well, 7 quarterly wells, and 16 annual wells. On January 20, 2010, one well was inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
OBA-9AR	2.0	YES	1000	

Prepared By: AWE 2/5/2010 AWE 2/5/2010
Checked By: BSA 2/5/2010 BSA 2/5/2010

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: April 15, 2010

Subject: Monthly O&M Status Update for Ground-Water Collection and Treatment System for March 2010
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107100001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for March 2010:

Ground-Water Collection and Treatment System Status
March 2010

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	3.1	557.3	557.5	30
RW-2	28.6	557.4	557.7	29
RW-3	2.1	557.1	557.5	29
RW-4	2.1	557.3	557.5	29
PR-4	4.1	555.7	556.7	28
RW-5	14.6	557.5	557.5	14
PR-12	4.6	554.8	558.5	31
OBA-9AR	0.5	557.7	557.7	28

Prepared By: AWE 4/1/2010 AWE 4/1/2010
Checked By: BSA 4/1/2010 BSA 4/1/2010

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor and due mostly to fluctuating water levels. RW-5 experienced multiple exceedances but the average water level for the month met the drawdown target level. RW-5 is pumping at its maximum flow rate.

The following is a list of downtimes occurring in March and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
SYSTEM	3/8/2010 – 3/9/2010	23	Electrical switchgear problem - repaired
SYSTEM	3/11/2010	4.5	High air stripper sump level – adjusted effluent pump rate
SYSTEM	3/13/2010	1.5	High pH – acid tote replaced

Prepared By: AWE 4/1/2010 AWE 4/1/2010
Checked By: BSA 4/1/2010 BSA 4/1/2010

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	3/2/2010	NA	-0.04	
	3/9/2010	NA	-0.05	
	3/16/2010	-0.04	-0.06	Transducer wiring repaired
	3/23/2010	-0.05	-0.04	
	3/30/2010	-0.09	-0.07	
RW-2	3/2/2010	0.02	-0.14	
	3/9/2010	-0.08	-0.05	
	3/16/2010	0.02	-0.02	
	3/23/2010	-0.03	-0.04	
	3/30/2010	0.00	-0.11	
RW-3	3/2/2010	0.21	-0.06	
	3/9/2010	0.23	-0.06	
	3/16/2010	0.23	-0.06	
	3/23/2010	0.17	-0.06	
	3/30/2010	0.13	-0.06	
RW-4	3/2/2010	0.20	0.06	
	3/9/2010	0.11	0.04	
	3/16/2010	0.19	0.04	
	3/23/2010	0.16	0.00	
	3/30/2010	0.26	0.10	
PR-4	3/2/2010	1.49	0.78	
	3/9/2010	-1.19	-1.87	
	3/16/2010	-1.16	-0.07	
	3/23/2010	-1.35	0.11	
	3/30/2010	-0.36	0.42	
RW-5	3/2/2010	-0.16	-0.05	
	3/9/2010	-0.15	-0.04	
	3/16/2010	-0.16	-0.05	
	3/23/2010	-0.21	-0.05	
	3/30/2010	-0.15	-0.05	
PR-12	3/2/2010	-0.01	NA	
	3/9/2010	-0.01	NA	
	3/16/2010	-0.61	NA	
	3/23/2010	-0.11	NA	
	3/30/2010	-0.03	NA	
OBA-9AR	3/2/2010	0.28	-0.33	
	3/9/2010	0.23	-0.12	
	3/16/2010	0.28	0.03	
	3/23/2010	-0.73	-0.06	
	3/30/2010	-0.02	0.24	

Prepared By: AWE 4/1/2010 AWE 4/1/2010

Checked By: BSA 4/1/2010 BSA 4/1/2010

DNAPL INSPECTION

On March 9, 2010, one well was inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
OBA-9AR	1.0	YES	1000	

Prepared By: AWE 4/1/2010 AWE 4/1/2010
Checked By: BSA 4/1/2010 BSA 4/1/2010

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: December 7, 2009

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for November 2009**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107090001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for November 2009:

Ground-Water Collection and Treatment System Status
November 2009

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	1.7	557.33	557.5	29
RW-2	29.9	557.29	557.7	30
RW-3	5.5	556.76	557.5	30
RW-4	7.6	557.14	557.5	30
PR-4	7.5	553.03	556.7	30
RW-5	16.0	557.35	557.5	27
PR-12	6.0	554.55	558.5	30
OBA-9AR	1.4	557.27	557.7	29

Prepared By: AWE 12/07/09 AWE 12/7/09
Checked By: BSA 12/08/09 BSA 12/08/09

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor and due to fluctuating flow rates and water levels. Flow rates were adjusted as necessary to lower the water levels.

The following is a list of downtimes occurring in November and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
SYSTEM	**11/19/2009**	**2.4**	Rain event – high 7S level

Prepared By: AWE 12/07/09 AWE 12/7/09
Checked By: BSA 12/08/09 BSA 12/08/09

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	11/03/2009	0.06	-0.03	
	11/10/2009	0.05	-0.04	
	11/17/2009	0.08	-0.02	
	11/24/2009	0.06	-0.03	
RW-2	11/03/2009	-0.10	-0.11	
	11/10/2009	-0.05	-0.15	
	11/17/2009	-0.07	-0.18	
	11/24/2009	-0.07	-0.18	
RW-3	11/03/2009	0.03	-0.35	
	11/10/2009	-0.07	-0.06	
	11/17/2009	-0.16	-0.06	
	11/24/2009	-0.05	-0.06	
RW-4	11/03/2009	0.16	0.04	
	11/10/2009	0.21	0.04	
	11/17/2009	0.20	-0.05	
	11/24/2009	0.20	0.06	
PR-4	11/03/2009	0.12	-0.34	
	11/10/2009	0.05	-0.26	
	11/17/2009	0.04	-0.29	
	11/24/2009	0.05	-0.67	
RW-5	11/03/2009	-0.18	-0.02	
	11/10/2009	-0.15	-0.02	
	11/17/2009	-0.16	-0.05	
	11/24/2009	-0.16	-0.04	
PR-12	11/03/2009	0.11	NA	
	11/10/2009	-1.03	NA	
	11/17/2009	-1.43	NA	
	11/24/2009	2.68	NA	
OBA-9AR	11/03/2009	0.20	-0.12	
	11/10/2009	0.08	-0.05	
	11/17/2009	0.13	-0.24	
	11/24/2009	0.21	-0.03	

Prepared By: AWE 12/07/2009 AWE 12/7/09
Checked By: BSA 12/08/09 BSA 12/08/09

DNAPL INSPECTION

On November 3, 2009, thirteen wells were inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
PR-1	1	NO	---	
PR-2	1	NO	---	
PR-3	1	NO	---	
PR-4	1.5	NO	---	
PR-5	1	NO	---	
PR-6	1	NO	---	
PR-7	1.5	NO	---	
PR-8	1	NO	---	
PR-9	1	YES	TRACE	
PR-10	1	YES	5ml	
PR-11	1	NO	---	
PR-12	1	NO	---	
RW-1	1	NO	---	
RW-2	1.5	NO	---	
RW-3	1	NO	---	
RW-4	1	NO	---	
RW-5	1	NO	---	
OBA-9AR	1.5	YES	500ml	
OBA-10A	1	NO	---	
PN-11B	1.5	NO	---	
PN-12B	1	YES	75ml	
PN-14B	1	YES	10ml	
PN-21B	1.5	YES	100ml	

Prepared By: AWE 12/07/2009 AWE 12/7/09
Checked By: BSA 12/08/2009 BSA 12/8/09

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Mike Sebring, and Gina Senia @ Olin-Niagara.

From: Tony Englund/Rick Marotte

Date: November 9, 2009

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for October 2009**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6107090001

This memo addresses the status of the O&M issues for the ground-water collection and treatment system at the Olin –Niagara Plant, Niagara Falls, New York.

SYSTEM STATUS

The following table presents general treatment system data for October 2009:

Ground-Water Collection and Treatment System Status
October 2009

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	2.7	557.3	557.5	25
RW-2	28.4	557.5	557.7	29
RW-3	6.7	557.2	557.5	28
RW-4	8.7	557.3	557.5	28
PR-4	8.1	556.3	556.7	28
RW-5	15.0	557.4*	557.5	24*
PR-12	6.0	555.9	558.5	31
OBA-9AR	1.3	557.8	557.7	26

Prepared By: AWE 11/06/09 Awe 11/6/09
Checked By: MLR 11/16/09 MLR 11/16/09

***- estimated based on weekly groundwater elevation measurements**

Flow rates at the site remain consistent to previous months. Exceedances of the drawdown target levels were minor and due to system downtimes. However, the monthly average water levels for each of the wells were at or below the target levels.

Several downtimes were caused due to out of specification pH values. These pH fluctuations appear to be the result of fluctuating pH of the incoming groundwater from RW-1 and/or RW-2. Acid injection at these wells is used to lower the pH of high pH incoming groundwater and prevent scaling. However, in the last month, Olin has responded to the changing conditions as they occur and are working to incorporate that response into our standard protocol to maintain the appropriate acid delivery. Olin will continue to respond to these changes and adjust the system as necessary.

The following is a list of downtimes occurring in October and their associated causes.

DOWNTIMES

Well	Date	Duration (hrs)	Reason
PR-12	10/1/2009	7	Out of spec pH – adjust acid flow to wells
SYSTEM	10/3/2009	2	Out of spec pH – adjust acid flow to wells
SYSTEM	10/4/2009	2.5	High carbon bed DP - backwashed
SYSTEM	10/14/2009	1.5	Out of spec pH – adjust acid flow to wells
SYSTEM	10/15/2009	1.8	Out of spec pH – adjust acid flow to wells
SYSTEM	10/16/2009	1.5	pH probe calibration
SYSTEM	10/19/2009	1.9	Out of spec pH – adjust acid flow to wells
SYSTEM	10/20/2009	16.5	Out of spec pH – adjust acid flow to wells
SYSTEM	10/21/2009	7.5	Out of spec pH – adjust acid flow to wells
SYSTEM	10/22/2009	3.7	Out of spec pH – adjust acid flow to wells
SYSTEM	10/25/2009	1.2	Air stripper high sump level – adjusted effluent pump rate
SYSTEM	10/29/2009	0.75	Out of spec pH – adjust acid flow to wells
SYSTEM	10/30/2009	1.8	pH probe calibration

Prepared By: AWE 11/06/09 AWE 11/6/09
Checked By: MLR 11/16/09 MLR 11/10/09

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Consistent differences of a foot or greater between the well and the piezometer indicate unacceptable well loss, which is generally corrected by acid washing the well. Any differences seen between the APACs measurement and the actual measurement are generally a result of level changes between the time the readings are collected or differences caused by signal noise. If high differences (>1 ft) are seen consistently, the transducer will be checked, cleaned, and/or replaced, if necessary. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/APACS Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	10/6/2009	0.05	-0.04	
	10/13/2009	0.05	-0.02	
	10/23/2009	0.05	-0.04	
	10/27/2009	0.08	-0.05	
RW-2	10/6/2009	0.01	-0.05	
	10/13/2009	-0.03	-0.10	
	10/23/2009	0.01	-0.24	
	10/27/2009	0.02	-0.13	
RW-3	10/6/2009	0.13	-0.03	
	10/13/2009	0.03	-0.01	
	10/23/2009	0.21	-0.06	
	10/27/2009	0.11	-0.13	
RW-4	10/6/2009	0.25	0.06	
	10/13/2009	0.16	0.04	
	10/23/2009	0.15	0.04	
	10/27/2009	0.17	0.04	
PR-4	10/6/2009	0.05	-0.07	
	10/13/2009	0.05	-0.07	
	10/23/2009	0.04	-0.04	
	10/27/2009	0.03	-0.05	
RW-5	10/6/2009	NM	-0.05	Bad transducer
	10/13/2009	NM	-0.05	Bad transducer
	10/23/2009	NM	-0.05	Bad transducer
	10/27/2009	NM	-0.05	Bad transducer – replaced 10/30/09
PR-12	10/6/2009	0.18	NA	
	10/13/2009	0.09	NA	
	10/23/2009	0.04	NA	
	10/27/2009	0.12	NA	
OBA-9AR	10/6/2009	0.13	-0.08	
	10/13/2009	0.15	0.00	
	10/23/2009	0.16	-0.07	
	10/27/2009	0.13	-0.11	

Prepared By: AWE 11/06/2009 11/6/09
Checked By: MLR 11/16/2009 MLR 11/10/09

DNAPL INSPECTION

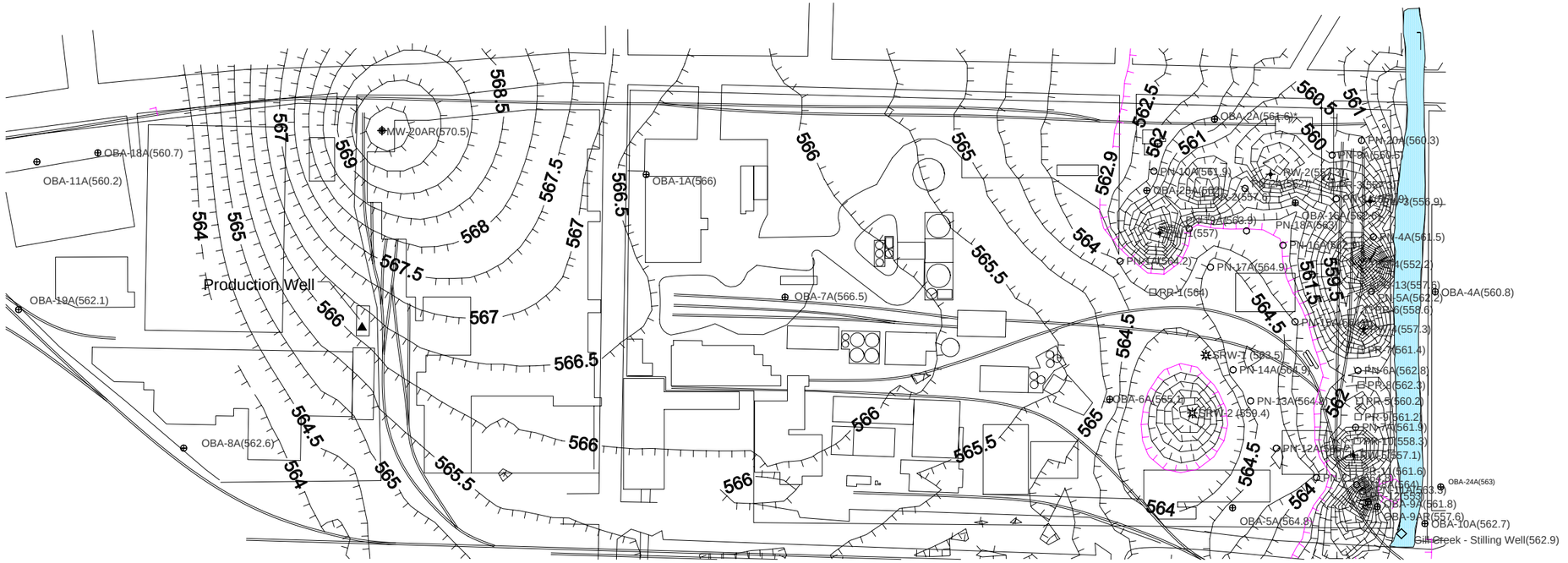
On October 1, 2009, thirteen wells were inspected for the presence of DNAPL. The following table presents the results of the inspection:

Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
PR-4	1.0	NO	---	
PR-12	1.0	NO	---	
RW-1	1.0	NO	---	
RW-2	1.0	NO	---	
RW-3	1.0	NO	---	
RW-4	1.0	NO	---	
RW-5	1.0	NO	---	
OBA-9AR	1.0	YES	2 liters	
OBA-10A	1.0	NO	---	
PN-11B	1.0	NO	---	
PN-12B	1.0	YES	100	
PN-14B	1.0	YES	100	
PN-21B	1.0	YES	80	

Prepared By: AWE 11/06/2009 AWE 11/6/09
Checked By: MLR 11/16/2009 MLR 11/16/09

Anthony W. Englund
Senior Engineer

Frederick K. Marotte
Project Principal



LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUNDWATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION (HACH LINES SHOWING FLOW DIRECTION)
- GILL CREEK AREA

Extraction Well	Average Flow Rate (gpm)***
RW-1	2.4
RW-2	20.0
RW-3	2.2
RW-4	2.4
RW-5	10.2
PR-4	3.9
PR-12	3.7
OBA-9AR	0.0

*** : Averaged using daily flow rates for February 8, 2010. The water levels in RW-1, RW-2, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

0 200 400

Scale 1 inch = 200 feet

NOTES

* : Well dry or water level below the bottom of the A-zone, elevation of bottom of A-Zone used in contouring.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is estimated as the bottom of the A-zone. The bottom of the A-zone along Buffalo Avenue was estimated from borings OBA-1A, OBA-2A, OBA-3A, and OBA-11A.

NM : Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well. The average diurnal elevation on February 8, 2010 (562.9 ft msl) was used in contouring the A zone.

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

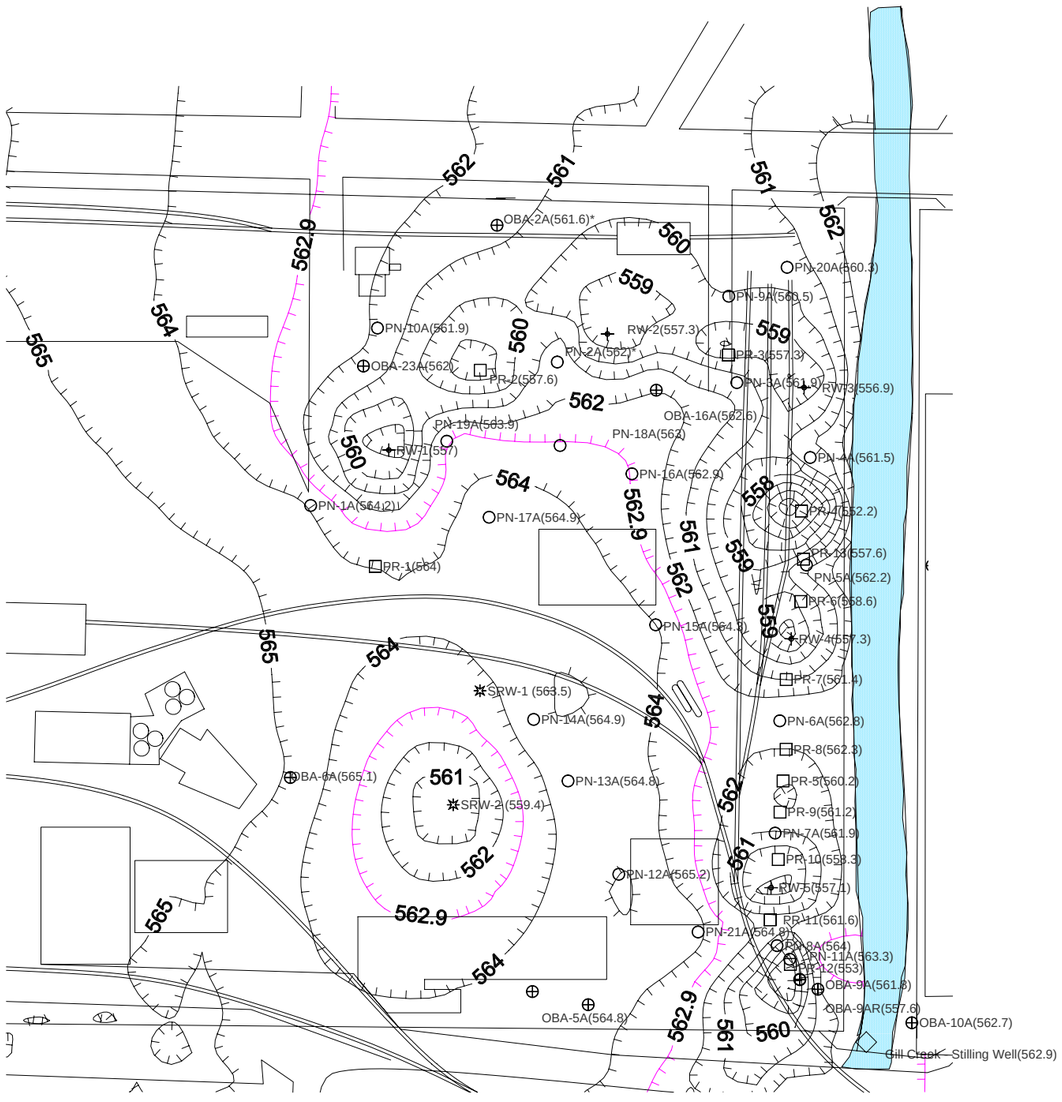
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- A ZONE (FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 1



Extraction Well	Average Flow Rate (gpm)***
RW-1	2.4
RW-2	20.0
RW-3	2.2
RW-4	2.4
RW-5	10.2
PR-4	3.9
PR-12	3.7
OBA-9AR	0.0

*** : Averaged using daily flow rates for February 8, 2010. The water levels in RW-1, RW-2, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUND WATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 1 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION (HACH LINES SHOWING FLOW DIRECTION)
- GILL CREEK AREA

0 120 240

Scale 1 inch = 120 feet

NOTES

* : Well dry or water level below the bottom of the A-zone, elevation of bottom of A-Zone used in contouring.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is estimated as the bottom of the A-zone. The bottom of the A-zone along Buffalo Avenue was estimated from borings OBA-1A, OBA-2A, OBA-3A, and OBA-11A.

NM : Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well. The average diurnal elevation on February 8, 2010 (562.9 ft msl) was used in contouring the A zone.

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

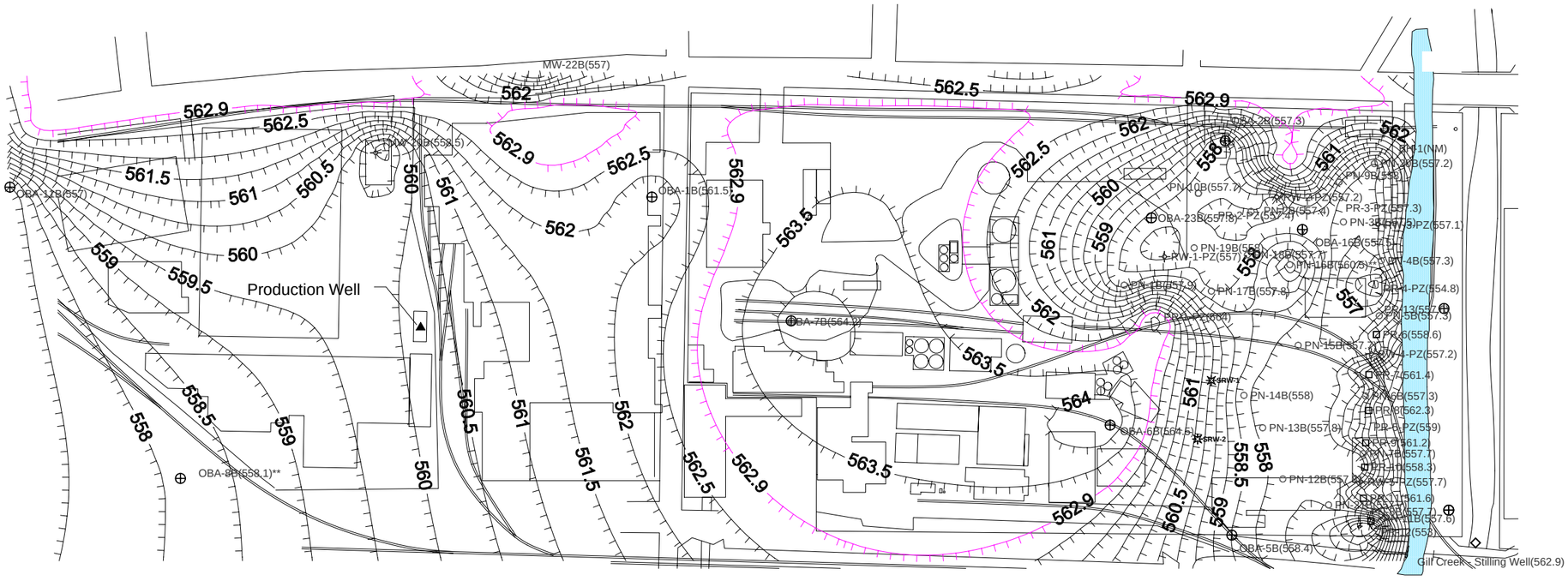
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- A ZONE
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 1A



Scale: 1 inch = 200 feet

LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- ⊕ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⌖ GROUNDWATER RECOVERY WELLS
- □ PASSIVE RELIEF WELLS
- ✲ SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- GILL CREEK AREA

Extraction Well	Average Flow Rate (gpm)***
RW-1	2.4
RW-2	20.0
RW-3	2.2
RW-4	2.4
RW-5	10.2
PR-4	3.9
PR-12	3.7
OBA-9AR	0.0

*** : Averaged using daily flow rates for February 8, 2010. The water levels in RW-1, RW-2, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

NOTES

** Locking cap broken

▲ :Olin Production Well.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is not known.

The ground water contours were estimated based on the sewer invert elevation.

NM: Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well.

Contour interval = 0.5 foot

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

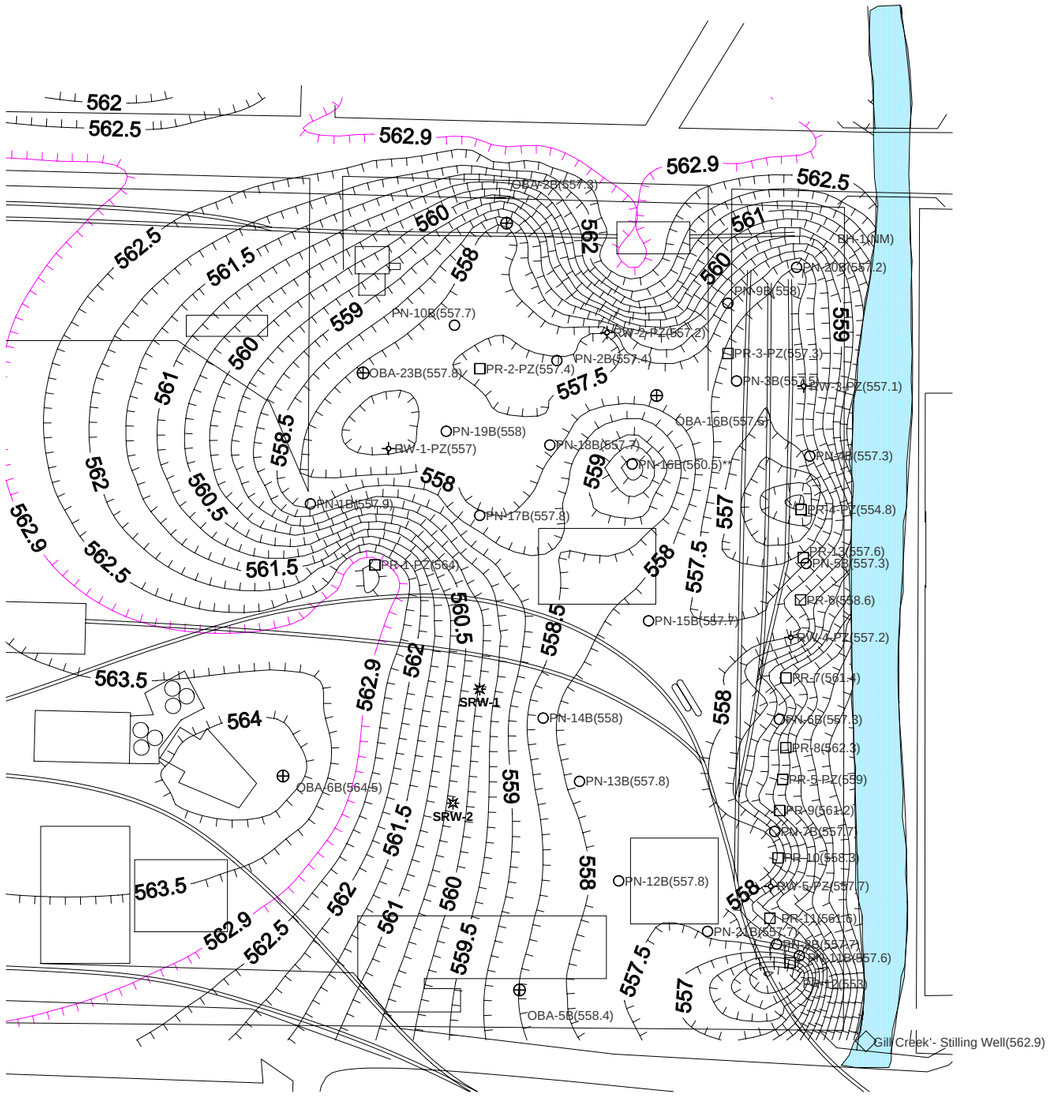
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- B ZONE
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 2



Extraction Well	Average Flow Rate (gpm)***
RW-1	2.4
RW-2	20.0
RW-3	2.2
RW-4	2.4
RW-5	10.2
PR-4	3.9
PR-12	3.7
OBA-9AR	0.0

*** : Averaged using daily flow rates for February 8, 2010. The water levels in RW-1, RW-2, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUND WATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 — ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- GILL CREEK AREA

0 120 240

Scale: 1 inch = 120 feet

NOTES

** Locking cap broken

▲: Olin Production Well.
Buffalo Avenue Sewer invert is assumed to be a ground-water sink. The piezometric surface is not known.
The ground water contours were estimated based on the sewer invert elevation.

NM: Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well.
Contour interval = 1 foot

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

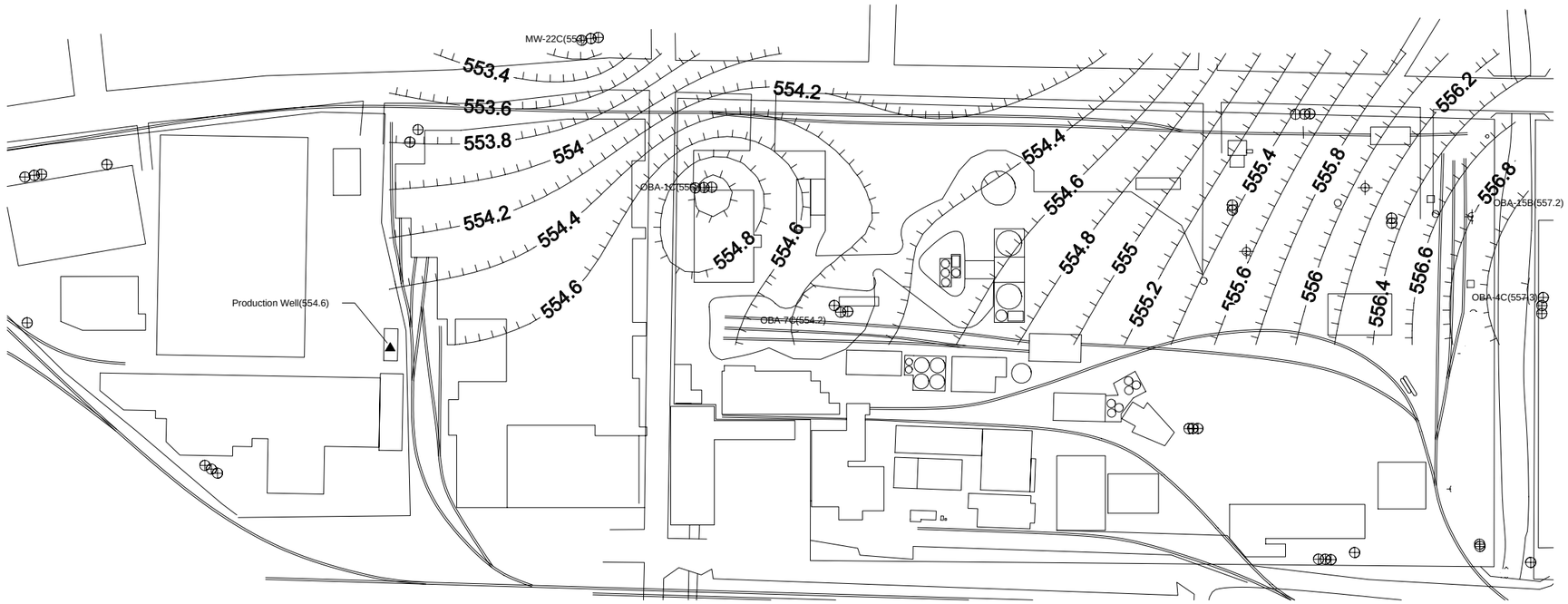
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- B ZONE
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 2A



LEGEND

- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION

Well	Average Flow Rate (gpm)
Olin Production Well	542

Pumping Rate to Water Elevation Conversion:
Y = -0.00613915 (X) + 557.951

Where:
Y = Water Elevation (ft)
X = Pumping Rate (gpm)

NOTES

All elevation data are measured above sea level and referenced to NGVD 29

0 200 400

Scale 1 inch = 200 feet

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

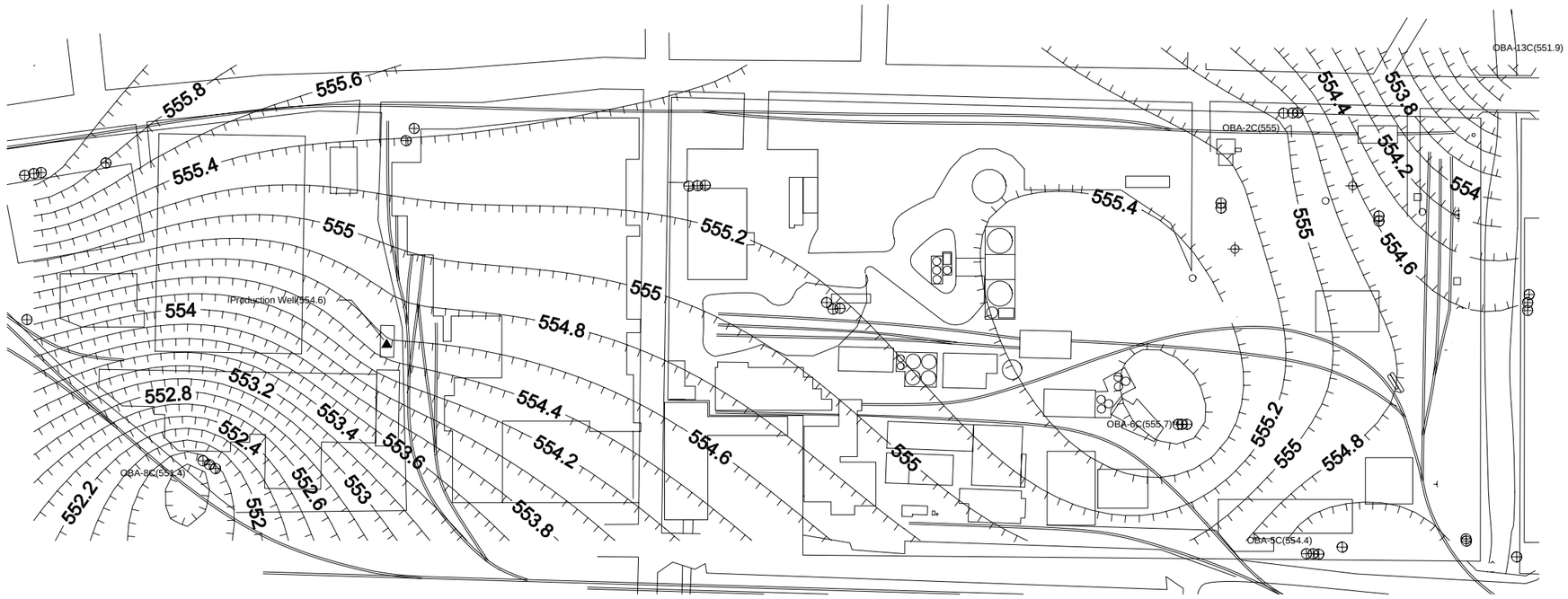
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- C ZONE
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 3



LEGEND

- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION

Well	Average Flow Rate (gpm)
Olin Production Well	542

Pumping Rate to Water Elevation Conversion:
Y = -0.00613915 (X) + 557.951

Where:
Y = Water Elevation (ft)
X = Pumping Rate (gpm)

NOTES

All elevation data are measured above sea level and referenced to NGVD 29

0 200 400
Scale 1 inch = 200 feet

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

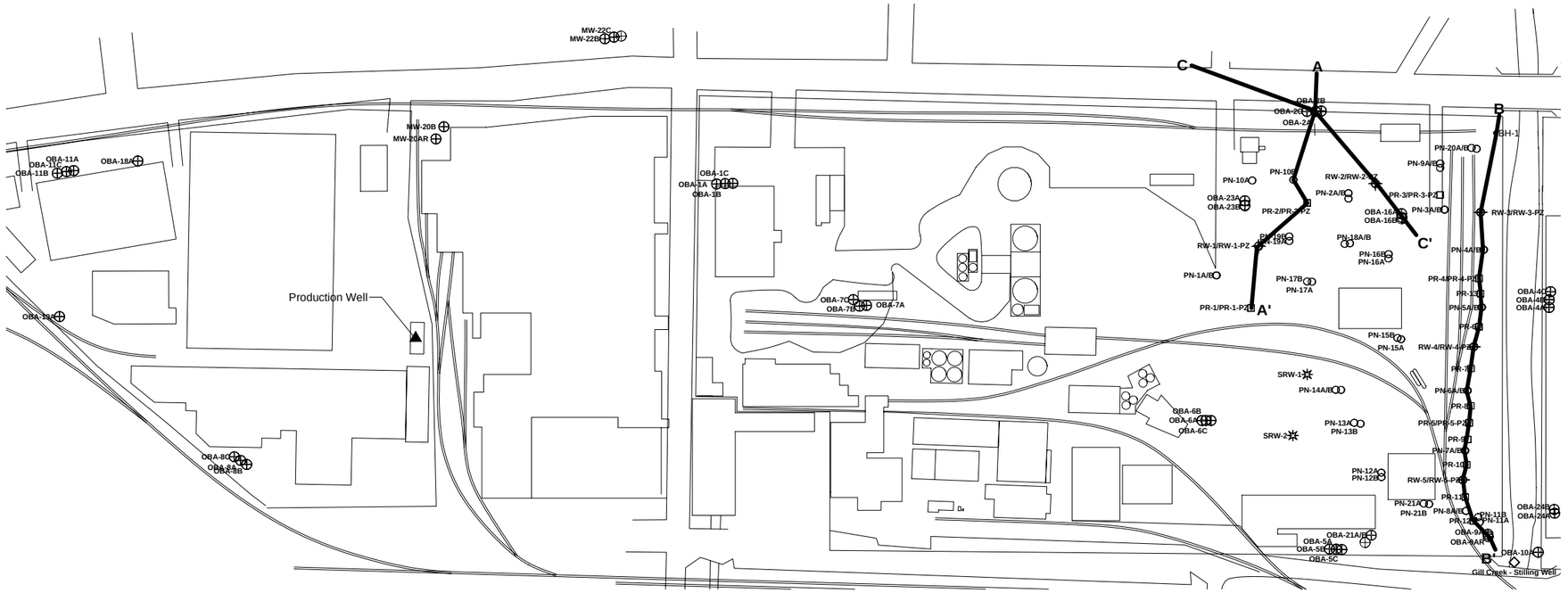
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- CD ZONE
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 4



LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⌖ GROUNDWATER RECOVERY WELLS
- □ PASSIVE RELIEF WELLS
- ● SEWER INVERT ELEVATION
- ✲ SUPPLEMENTAL REMEDIATION WELL
- ——— PROPERTY LINE

0 200 400

Scale 1 inch = 200 feet

Prepared By: AWE 03/16/2009
Checked By: CMB 03/17/2009

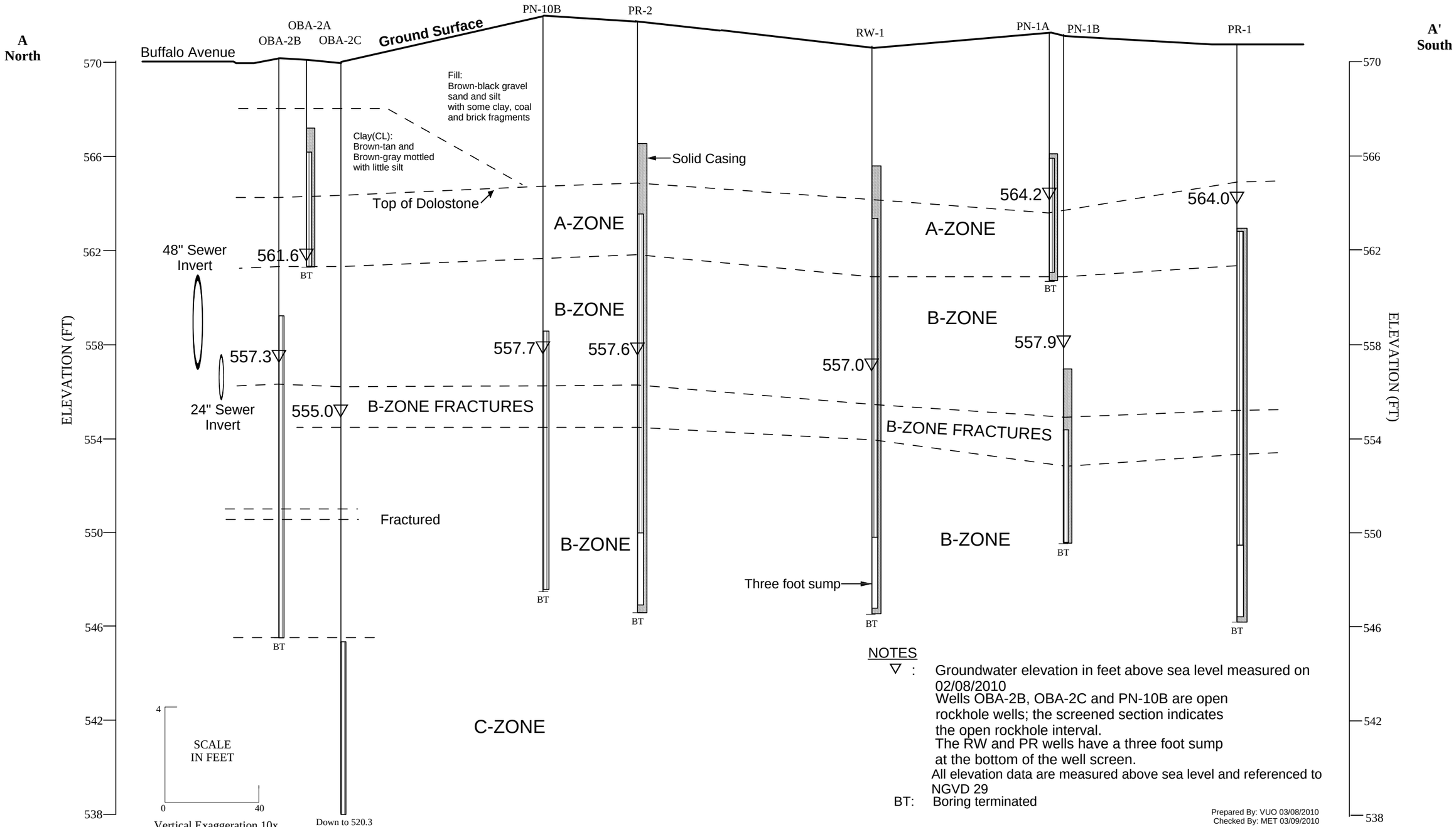
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

CROSS SECTION LOCATION MAP
(FEBRUARY 24, 2009)

Job No.: 6107-09-0001

Figure 5



NOTES

▽ : Groundwater elevation in feet above sea level measured on 02/08/2010

Wells OBA-2B, OBA-2C and PN-10B are open rockhole wells; the screened section indicates the open rockhole interval.

The RW and PR wells have a three foot sump at the bottom of the well screen.

All elevation data are measured above sea level and referenced to NGVD 29

BT: Boring terminated

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

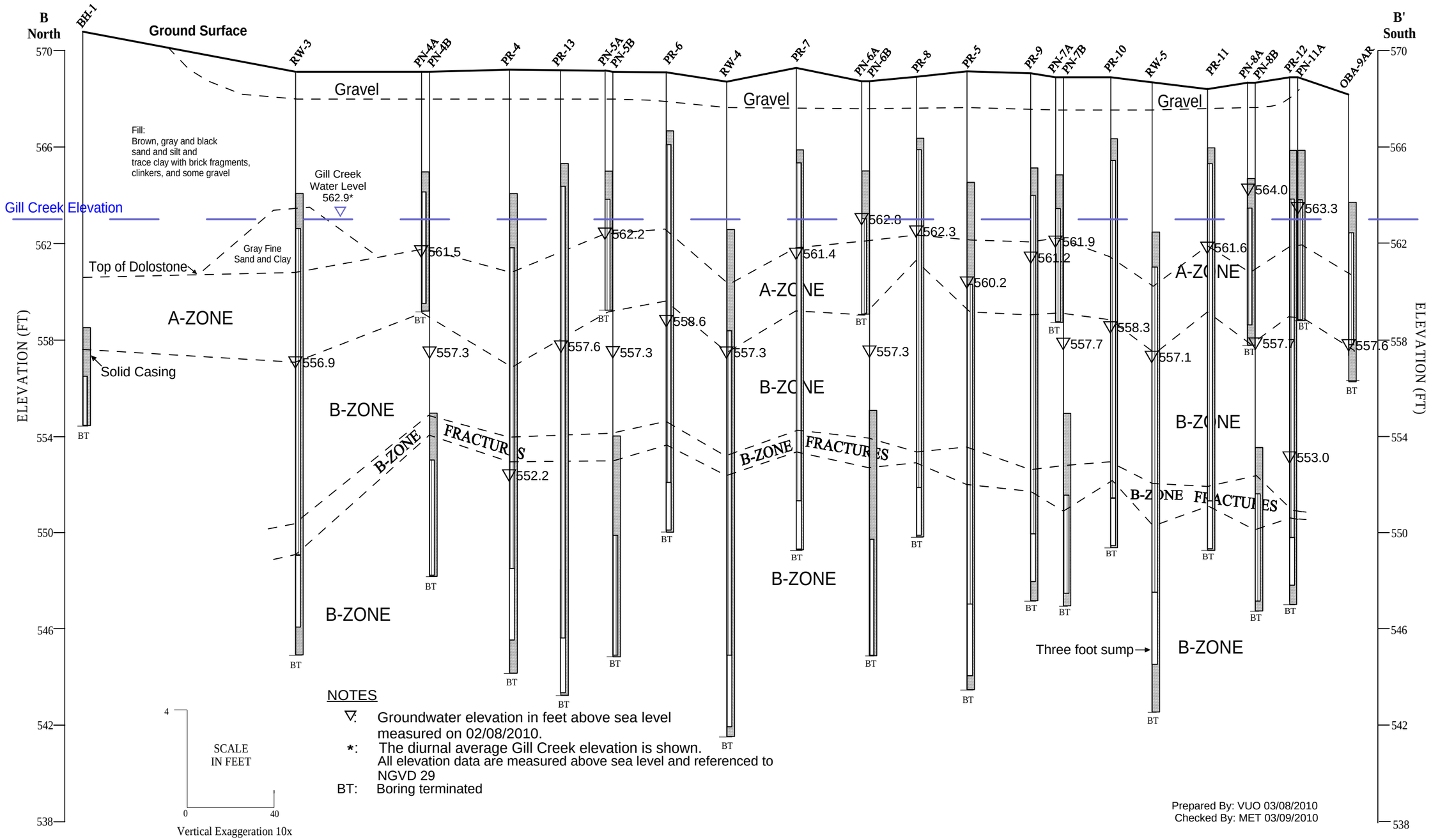
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION AA'
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 6



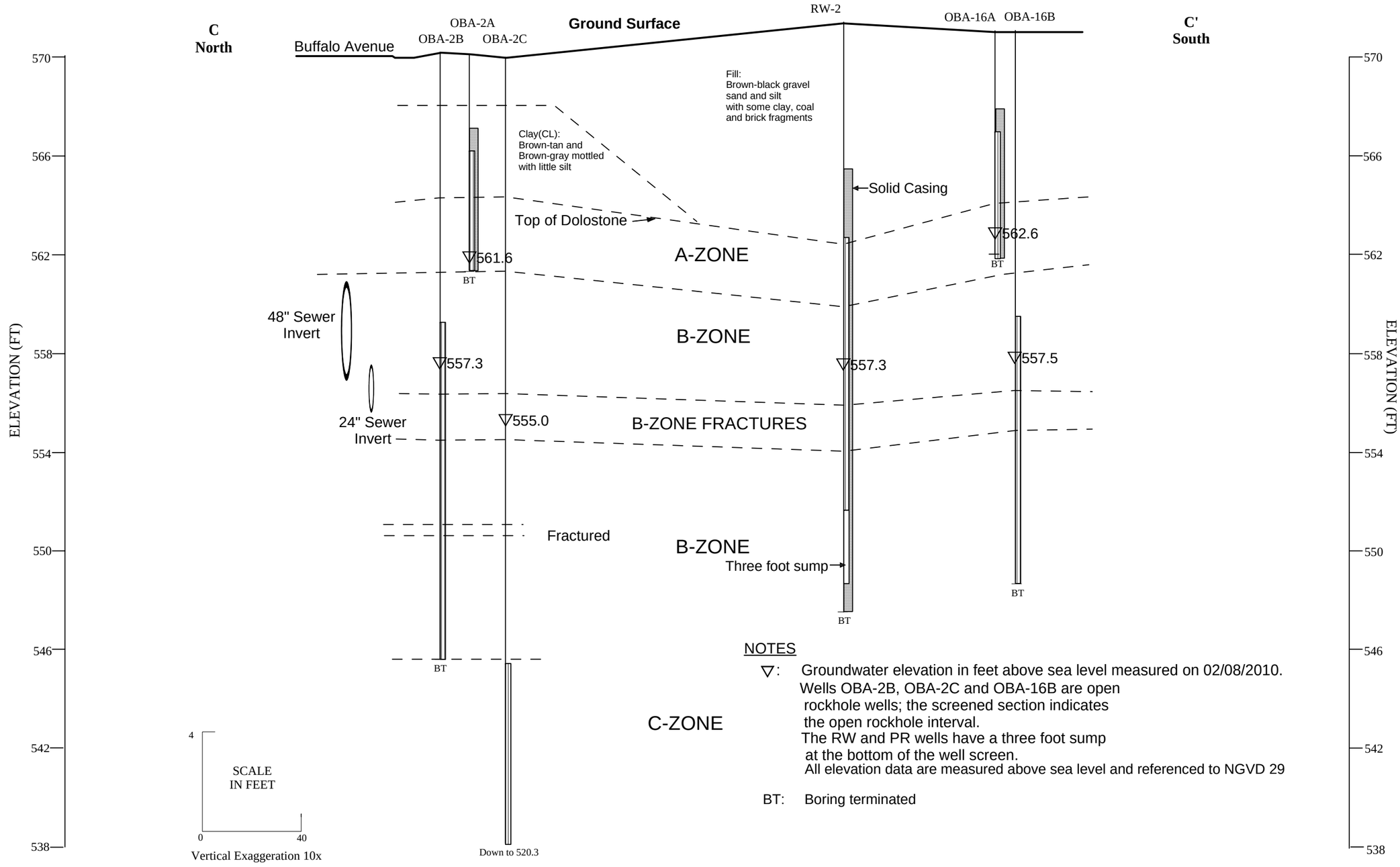
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION BB'
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 7



NOTES

▽: Groundwater elevation in feet above sea level measured on 02/08/2010. Wells OBA-2B, OBA-2C and OBA-16B are open rockhole wells; the screened section indicates the open rockhole interval. The RW and PR wells have a three foot sump at the bottom of the well screen. All elevation data are measured above sea level and referenced to NGVD 29

BT: Boring terminated

Prepared By: VUO 03/08/2010
Checked By: MET 03/09/2010

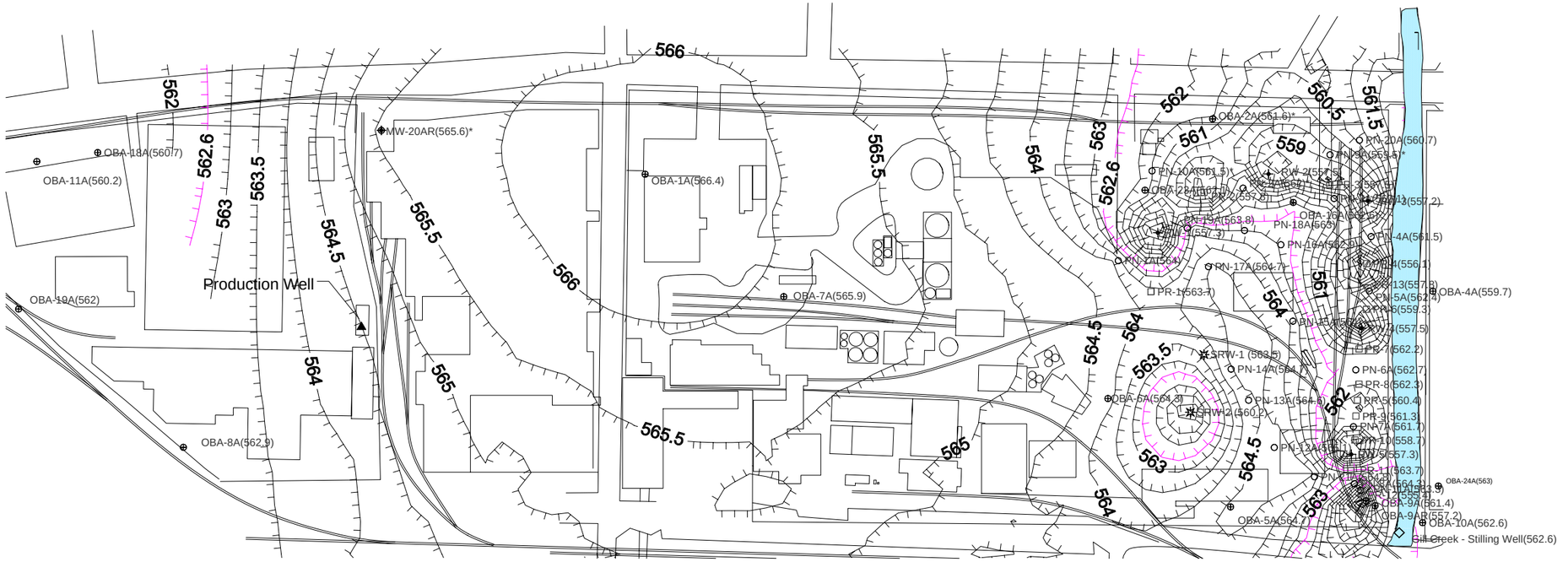
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION CC'
(FEBRUARY 8, 2010)

Job No.: 6107-10-0001

Figure 8



0 200 400

Scale 1 inch = 200 feet

LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUNDWATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION (HACH LINES SHOWING FLOW DIRECTION)
- GILL CREEK AREA

Extraction Well	Average Flow Rate (gpm)***
RW-1	2.8
RW-2	30.2
RW-3	6.5
RW-4	7.9
RW-5	16.8
PR-4	8.7
PR-12	6.9
OBA-9AR	1.4

*** : Averaged using daily flow rates for November 3, 2009. The water levels in RW-1, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

NOTES

* : Well dry or water level below the bottom of the A-zone, elevation of bottom of A-Zone used in contouring.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is estimated as the bottom of the A-zone. The bottom of the A-zone along Buffalo Avenue was estimated from borings OBA-1A, OBA-2A, OBA-3A, and OBA-11A.

NM : Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well. The average diurnal elevation on November 3, 2009 (562.6 ft msl) was used in contouring the A zone.

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

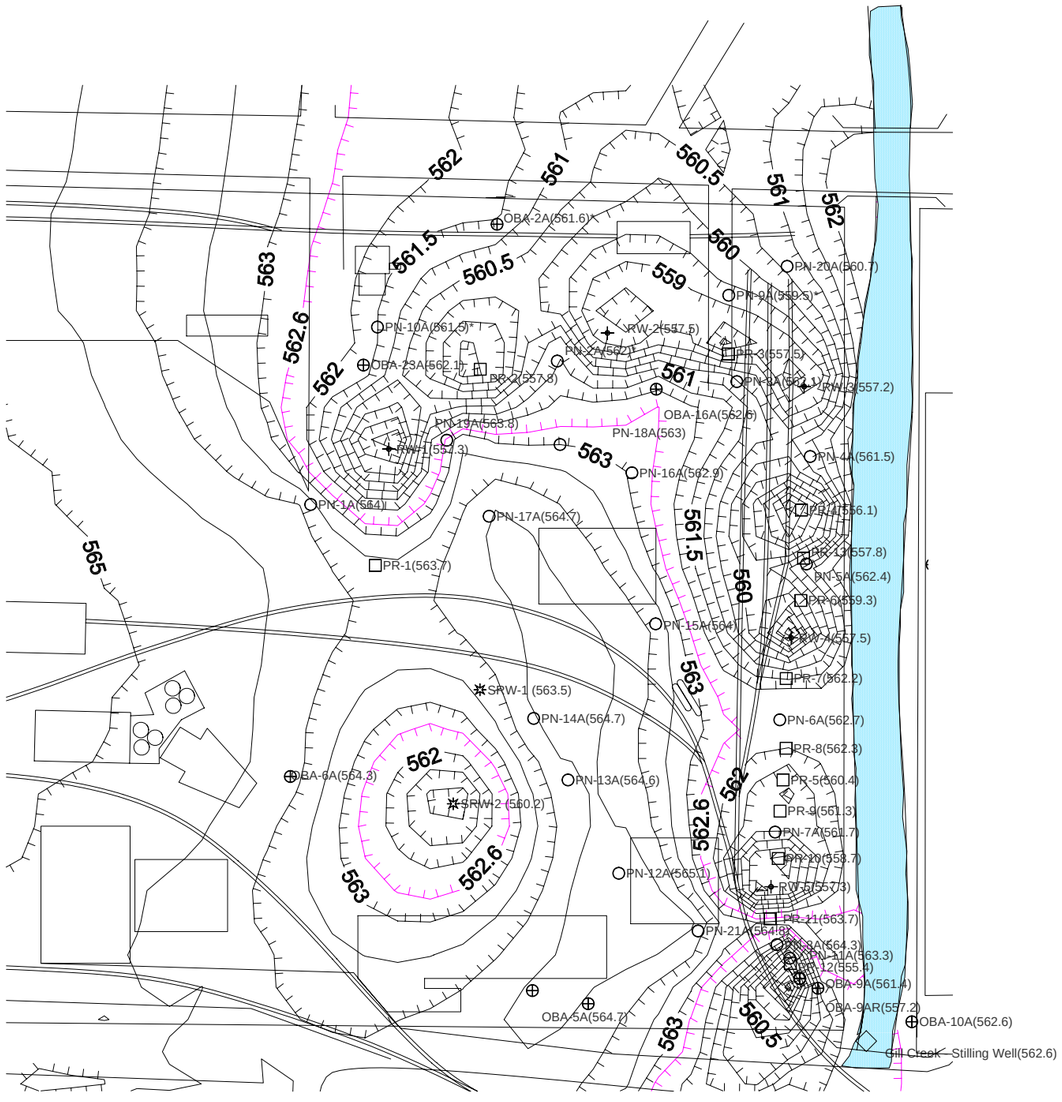
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- A ZONE (NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 1



Extraction Well	Average Flow Rate (gpm)***
RW-1	2.8
RW-2	30.2
RW-3	6.5
RW-4	7.9
RW-5	16.8
PR-4	8.7
PR-12	6.9
OBA-9AR	1.4

*** : Averaged using daily flow rates for November 3, 2009. The water levels in RW-1, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

N

LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUND WATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION (HACH LINES SHOWING FLOW DIRECTION)
- GILL CREEK AREA

0 120 240

Scale 1 inch = 120 feet

NOTES

* : Well dry or water level below the bottom of the A-zone, elevation of bottom of A-Zone used in contouring.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is estimated as the bottom of the A-zone. The bottom of the A-zone along Buffalo Avenue was estimated from borings OBA-1A, OBA-2A, OBA-3A, and OBA-11A.

NM : Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well. The average diurnal elevation on November 3, 2009 (562.6 ft msl) was used in contouring the A zone.

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

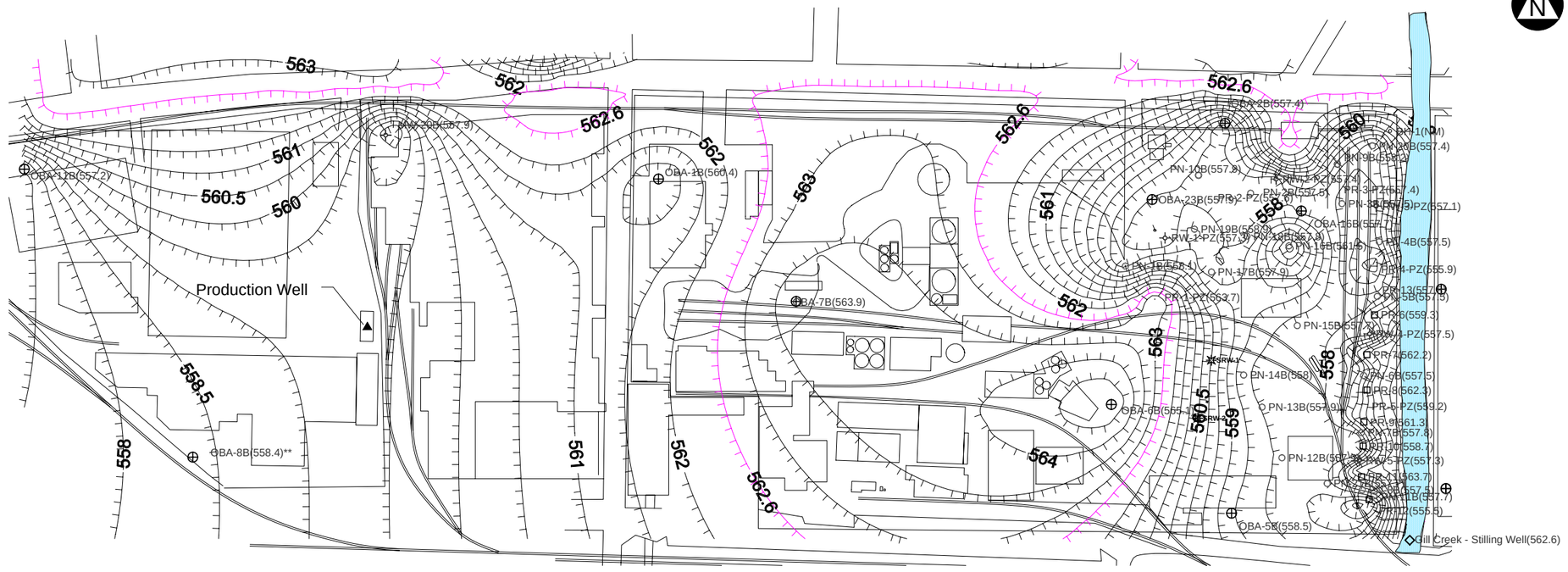
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- A ZONE
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 1A



Scale: 1 inch = 200 feet

LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- ⊕ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⌖ GROUNDWATER RECOVERY WELLS
- □ PASSIVE RELIEF WELLS
- ✳ SUPPLEMENTAL REMEDIATION WELL
- ——— PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- GILL CREEK AREA

Extraction Well	Average Flow Rate (gpm)***
RW-1	2.8
RW-2	30.2
RW-3	6.5
RW-4	7.9
RW-5	16.8
PR-4	8.7
PR-12	6.9
OBA-9AR	1.4

*** : Averaged using daily flow rates for November 3, 2009. The water levels in RW-1, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

NOTES

** Locking cap broken

▲ : Olin Production Well.

Buffalo Avenue Sewer invert is assumed to be a groundwater sink. The piezometric surface is not known.

The ground water contours were estimated based on the sewer invert elevation.

NM: Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well.

Contour interval = 0.5 foot

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

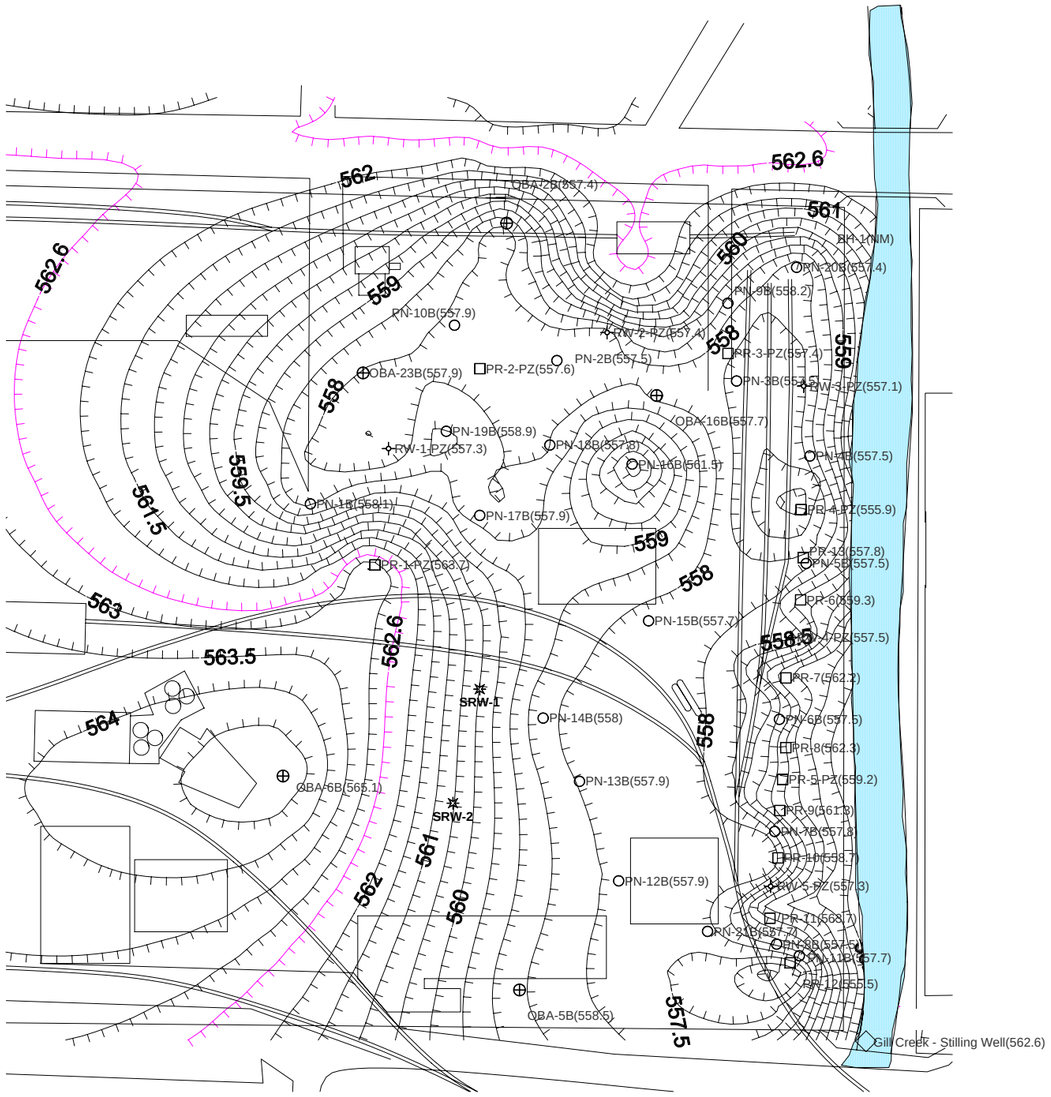
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- B ZONE
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 2



Extraction Well	Average Flow Rate (gpm)***
RW-1	2.8
RW-2	30.2
RW-3	6.5
RW-4	7.9
RW-5	16.8
PR-4	8.7
PR-12	6.9
OBA-9AR	1.4

*** : Averaged using daily flow rates for November 3, 2009.
The water levels in RW-1, RW-3, RW-4, RW-5, PR-4, PR-12, and OBA-9AR were below the bottom of the A-zone.

N

LEGEND

- GILL CREEK MONITORING POINT
- OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- WATER QUALITY MONITORING WELLS
- A/B ZONE PIEZOMETER NESTS
- GROUND WATER RECOVERY WELLS
- PASSIVE RELIEF WELLS
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 — ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION (CONTOUR INTERVAL: 0.5 FOOT)
- GILL CREEK AREA

0 120 240

Scale: 1 inch = 120 feet

NOTES

▲ : Olin Production Well.
Buffalo Avenue Sewer invert is assumed to be a ground-water sink. The piezometric surface is not known.
The ground water contours were estimated based on the sewer invert elevation.

NM: Not measured

The Gill Creek elevation is continuously monitored (1 hr intervals), using a data logging transducer installed in the Gill Creek stilling well.
Contour interval = 1 foot

All elevation data are measured above sea level and referenced to NGVD 29

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

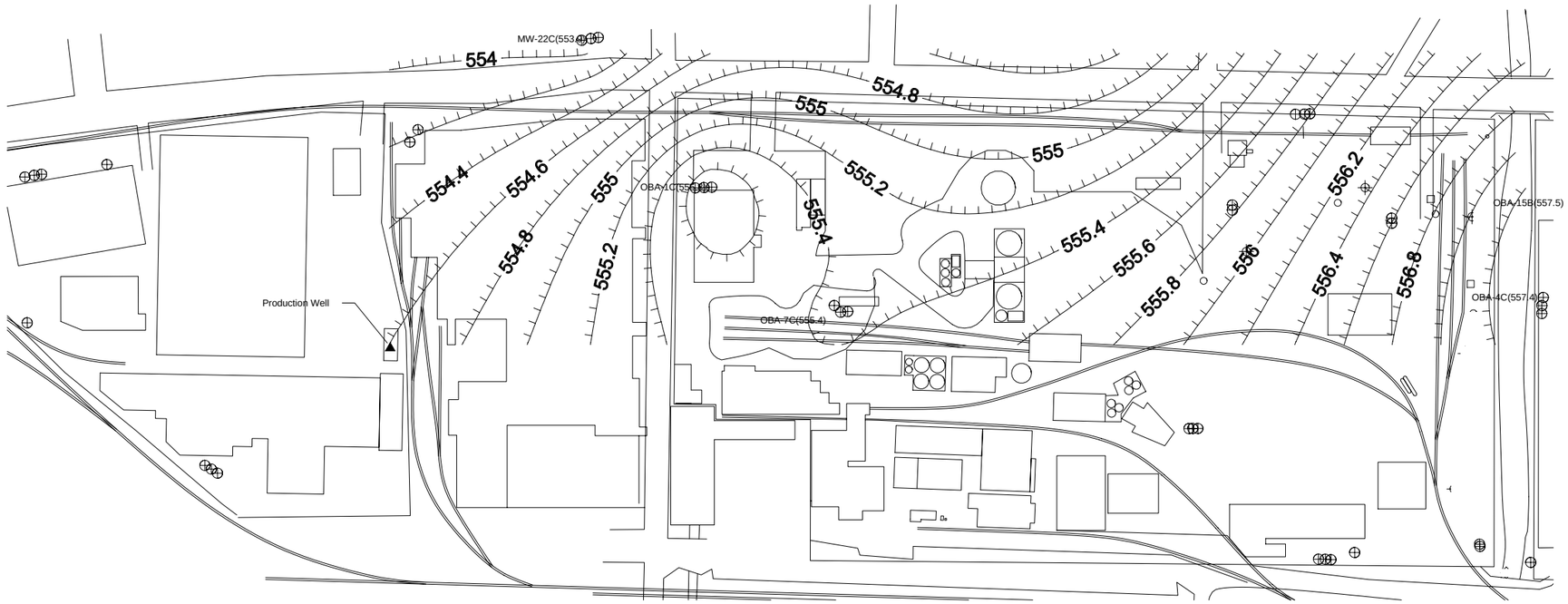
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- B ZONE
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 2A



N

LEGEND

- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION

Well	Average Flow Rate (gpm)
Olin Production Well	542

Pumping Rate to Water Elevation Conversion:
Y = -0.00613915 (X) + 557.951

Where:
Y = Water Elevation (ft)
X = Pumping Rate (gpm)

NOTES

All elevation data are measured above sea level and referenced to NGVD 29

0 200 400
Scale 1 inch = 200 feet

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

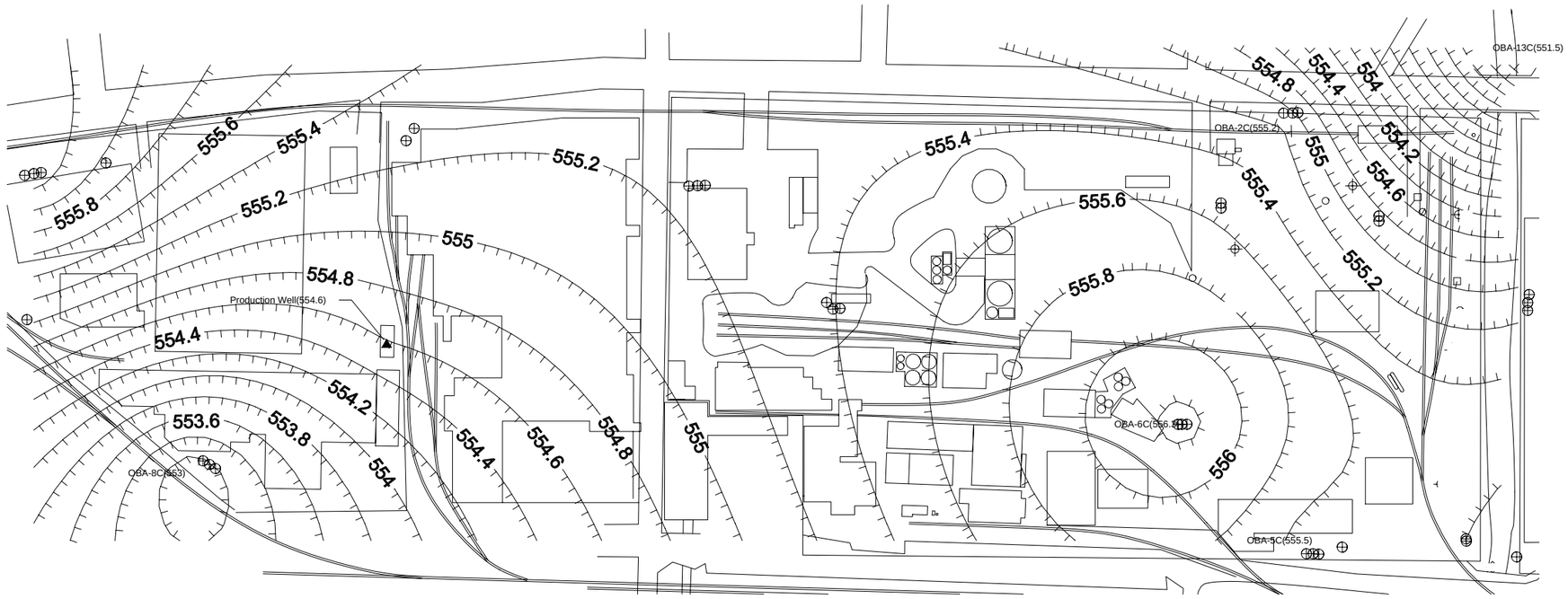
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- C ZONE
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 3



LEGEND

- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES WITH HACH SHOWING FLOW DIRECTION

Well	Average Flow Rate (gpm)
Olin Production Well	542

Pumping Rate to Water Elevation Conversion:
Y = -0.00613915 (X) + 557.951

Where:
Y = Water Elevation (ft)
X = Pumping Rate (gpm)

NOTES

All elevation data are measured above sea level and referenced to NGVD 29

0 200 400

Scale 1 inch = 200 feet

POTENTIOMETRIC SURFACE CONTOUR GENERATED USING SURFER 8 FOR WINDOWS BY GOLDEN SOFTWARE, INC. 2002.

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

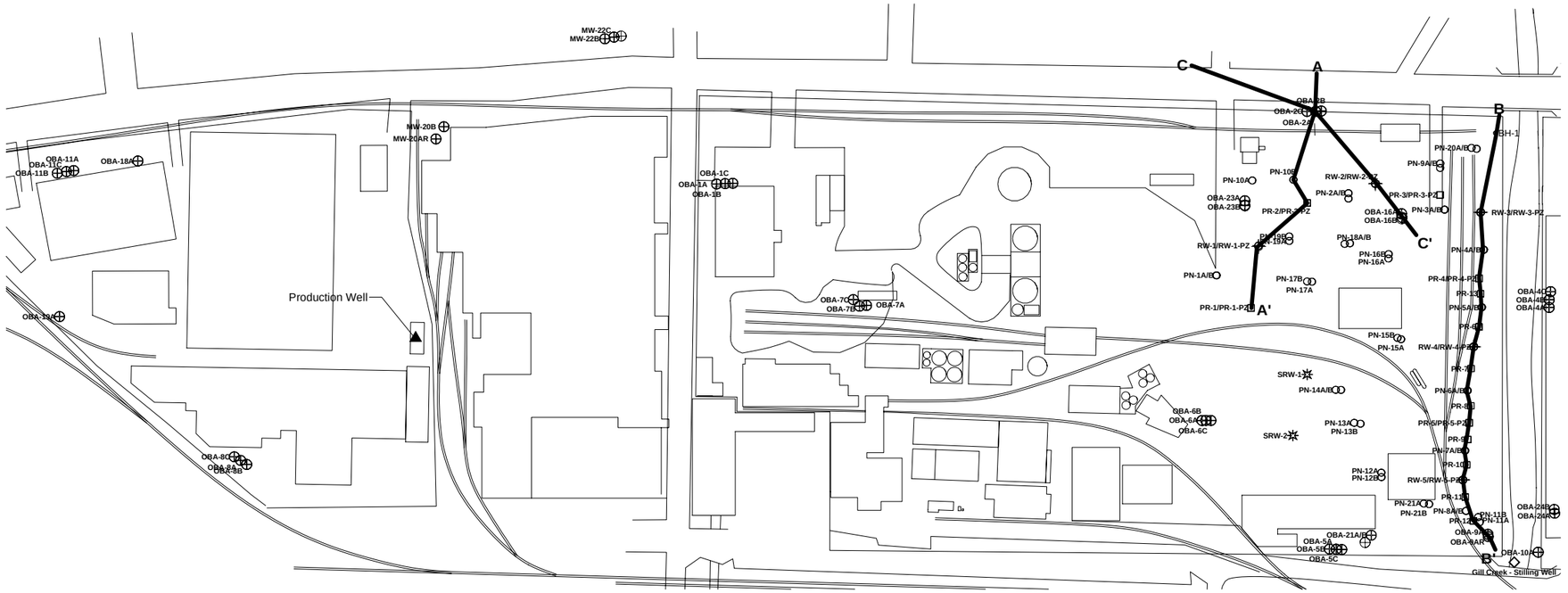
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- CD ZONE
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 4



LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL
- ⊕ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⌖ GROUNDWATER RECOVERY WELLS
- □ PASSIVE RELIEF WELLS
- ● SEWER INVERT ELEVATION
- ✲ SUPPLEMENTAL REMEDIATION WELL
- ——— PROPERTY LINE

0 200 400

Scale 1 inch = 200 feet

Prepared By: AWE 03/16/2009
Checked By: CMB 03/17/2009

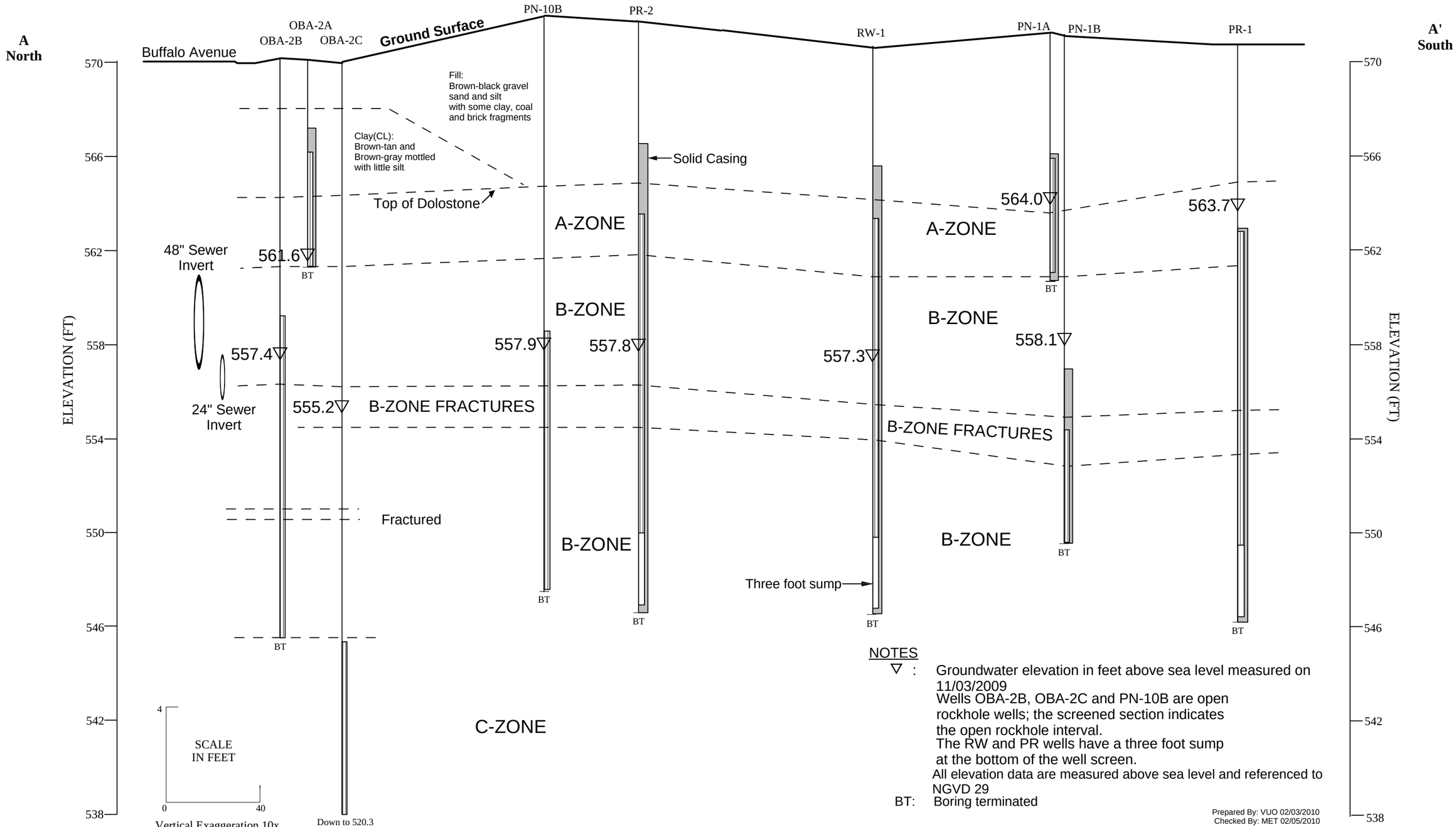
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

CROSS SECTION LOCATION MAP
(FEBRUARY 24, 2009)

Job No.: 6107-09-0001

Figure 5



NOTES

▽ : Groundwater elevation in feet above sea level measured on 11/03/2009

Wells OBA-2B, OBA-2C and PN-10B are open rockhole wells; the screened section indicates the open rockhole interval.

The RW and PR wells have a three foot sump at the bottom of the well screen.

All elevation data are measured above sea level and referenced to NGVD 29

BT: Boring terminated

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

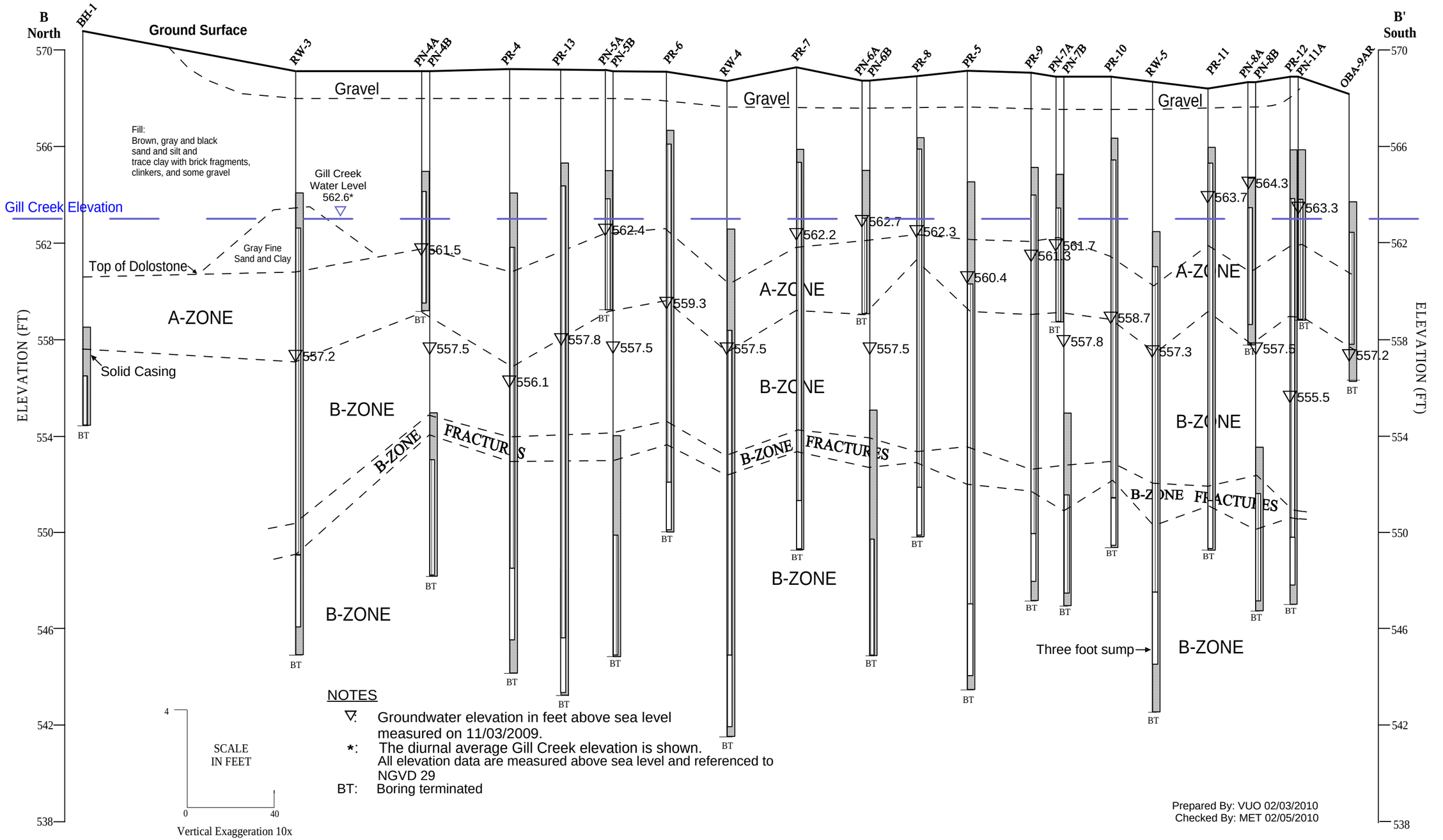
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION AA'
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 6



NOTES

▽: Groundwater elevation in feet above sea level measured on 11/03/2009.

*: The diurnal average Gill Creek elevation is shown. All elevation data are measured above sea level and referenced to NGVD 29

BT: Boring terminated

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

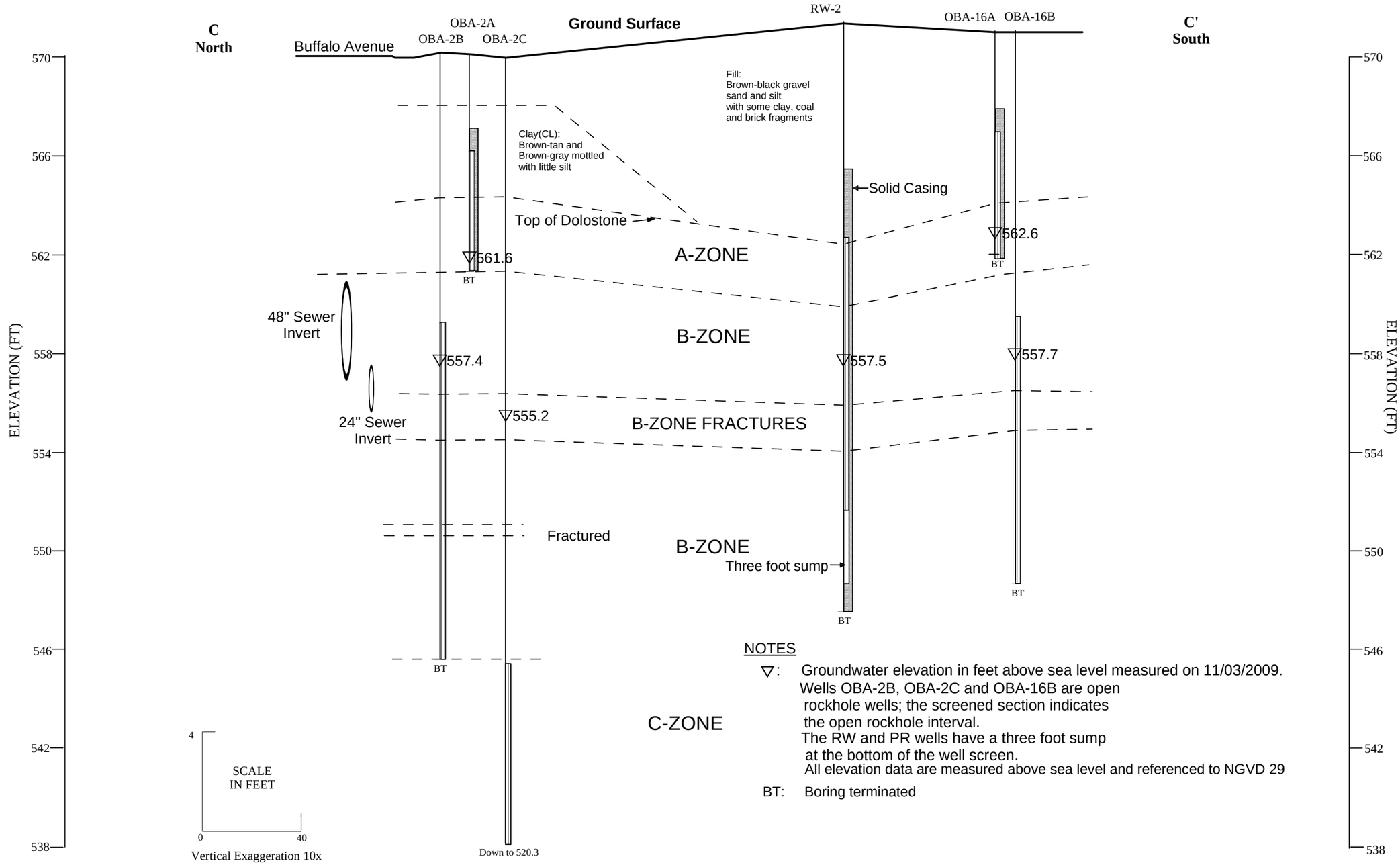
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION BB'
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 7



NOTES

▽: Groundwater elevation in feet above sea level measured on 11/03/2009.
Wells OBA-2B, OBA-2C and OBA-16B are open rockhole wells; the screened section indicates the open rockhole interval.
The RW and PR wells have a three foot sump at the bottom of the well screen.
All elevation data are measured above sea level and referenced to NGVD 29

BT: Boring terminated

Prepared By: VUO 02/03/2010
Checked By: MET 02/05/2010

OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION CC'
(NOVEMBER 3, 2009)

Job No.: 6107-09-0001

Figure 8

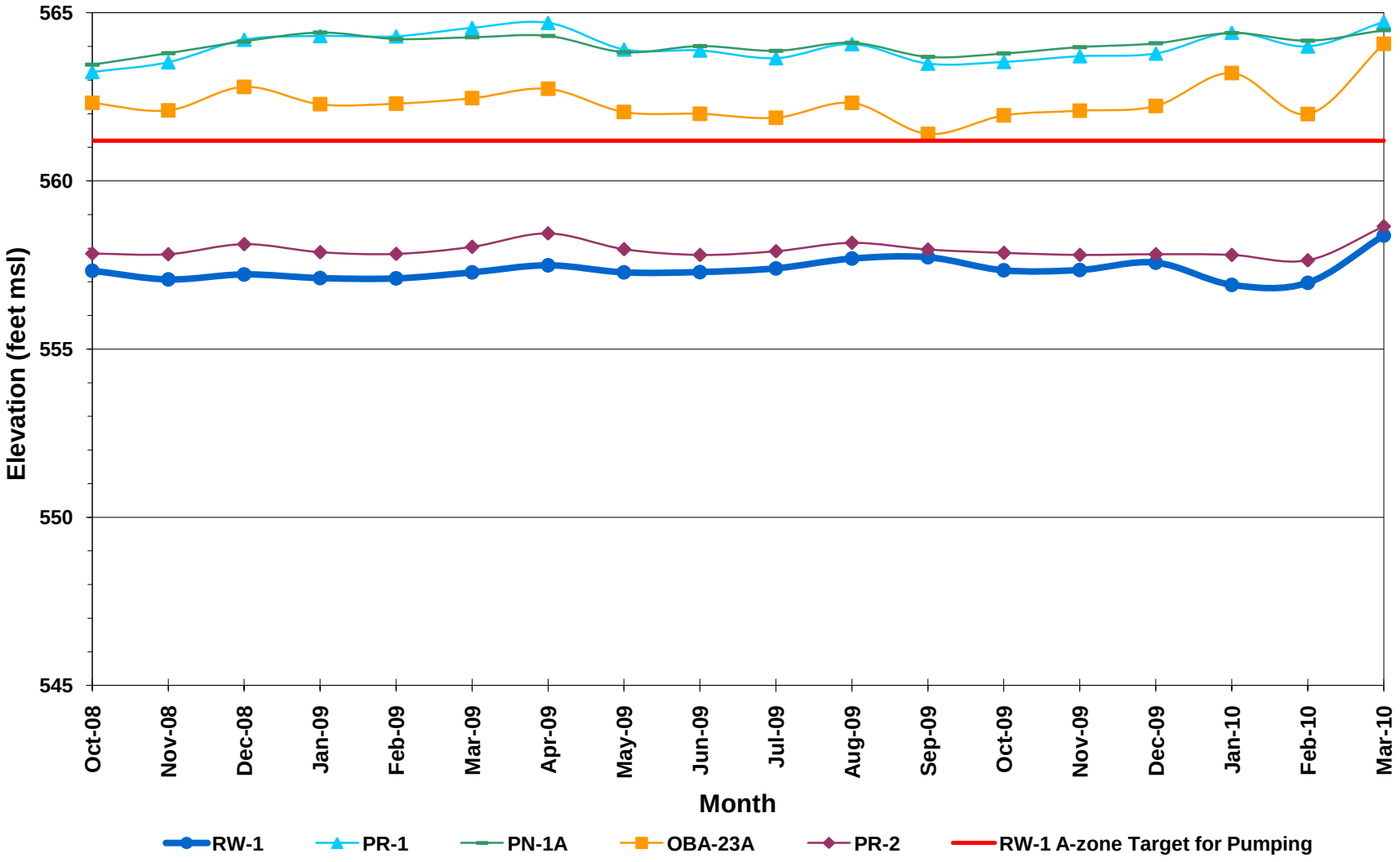
Table A-1
A-Zone
RW-1 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
PR-1	563.24	563.53	564.20	564.31	564.30	564.55	564.70	563.91	563.88	563.65	564.07	563.49	563.54	563.71	563.79	564.41	564.00	564.73
PN-1A	563.46	563.80	564.15	564.41	564.22	564.27	564.31	563.83	564.01	563.87	564.11	563.69	563.79	563.98	564.09	564.40	564.17	564.48
RW-1	557.33	557.07	557.22	557.11	557.10	557.28	557.49	557.28	557.29	557.40	557.69	557.73	557.34	557.35	557.57	556.91	556.97	558.38
OBA-23A	562.32	562.10	562.80	562.28	562.30	562.46	562.74	562.05	562.00	561.88	562.32	561.40	561.95	562.09	562.23	563.21	561.99	564.08
PR-2	557.84	557.82	558.12	557.88	557.83	558.04	558.44	557.97	557.80	557.91	558.16	557.96	557.86	557.80	557.82	557.80	557.64	558.65
RW-1 A-zone Target	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20	561.20

Notes:
Elevations are reported in feet above mean seal level (msl)
*An elevation of 561.40 feet msl for OBA-23A indicates that this well is dry.
#N/A Unable to collect water level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-1
RW-1 Drawdown and Adjacent A-Zone Water Table Surface



Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

msl - mean sea level

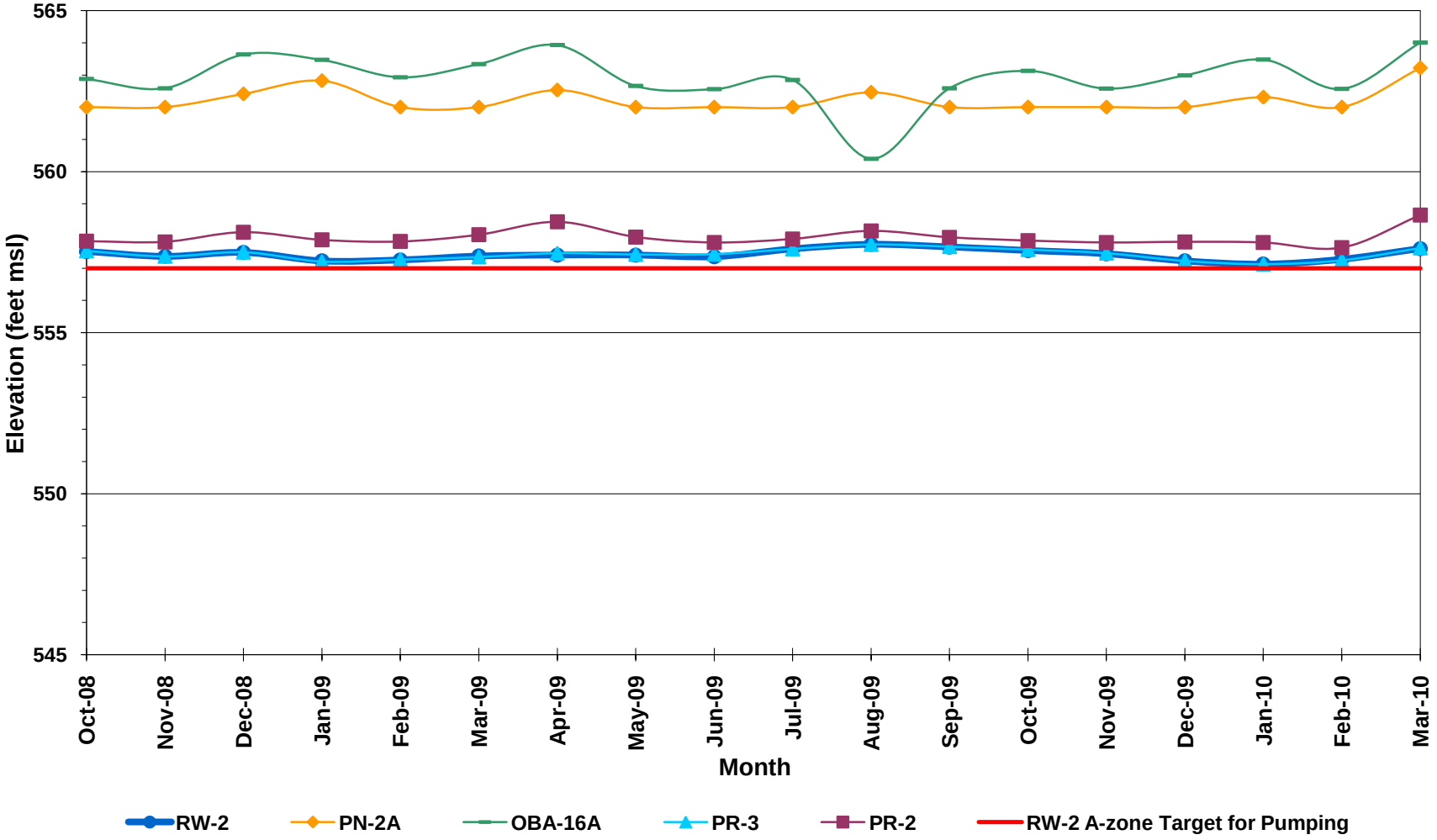
Table A-2
A-Zone
RW-2 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
PN-2A*	562.00	562.00	562.41	562.82	562.00	562.00	562.53	562.00	562.00	562.00	562.46	562.00	562.00	562.00	562.00	562.31	562.00	563.22
RW-2	557.52	557.37	557.49	557.23	557.26	557.38	557.41	557.41	557.36	557.60	557.74	557.66	557.55	557.45	557.23	557.13	557.28	557.61
OBA-16A	562.88	562.59	563.64	563.47	562.93	563.34	563.93	562.66	562.56	562.85	560.40	562.59	563.13	562.58	562.99	563.48	562.57	564.01
PR-3	557.54	557.37	557.50	557.21	557.27	557.35	557.47	557.43	557.44	557.60	557.74	557.67	557.58	557.47	557.23	557.13	557.25	557.63
PR-2	557.84	557.82	558.12	557.88	557.83	558.04	558.44	557.97	557.80	557.91	558.16	557.96	557.86	557.80	557.82	557.80	557.64	558.65
RW-2 A-zone Target	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00	557.00

Notes:
Elevations are reported in feet above mean seal level (msl)
*An elevation of 562.00 feet msl for PN-2A indicates that the piezometer is dry.

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-2
RW-2 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

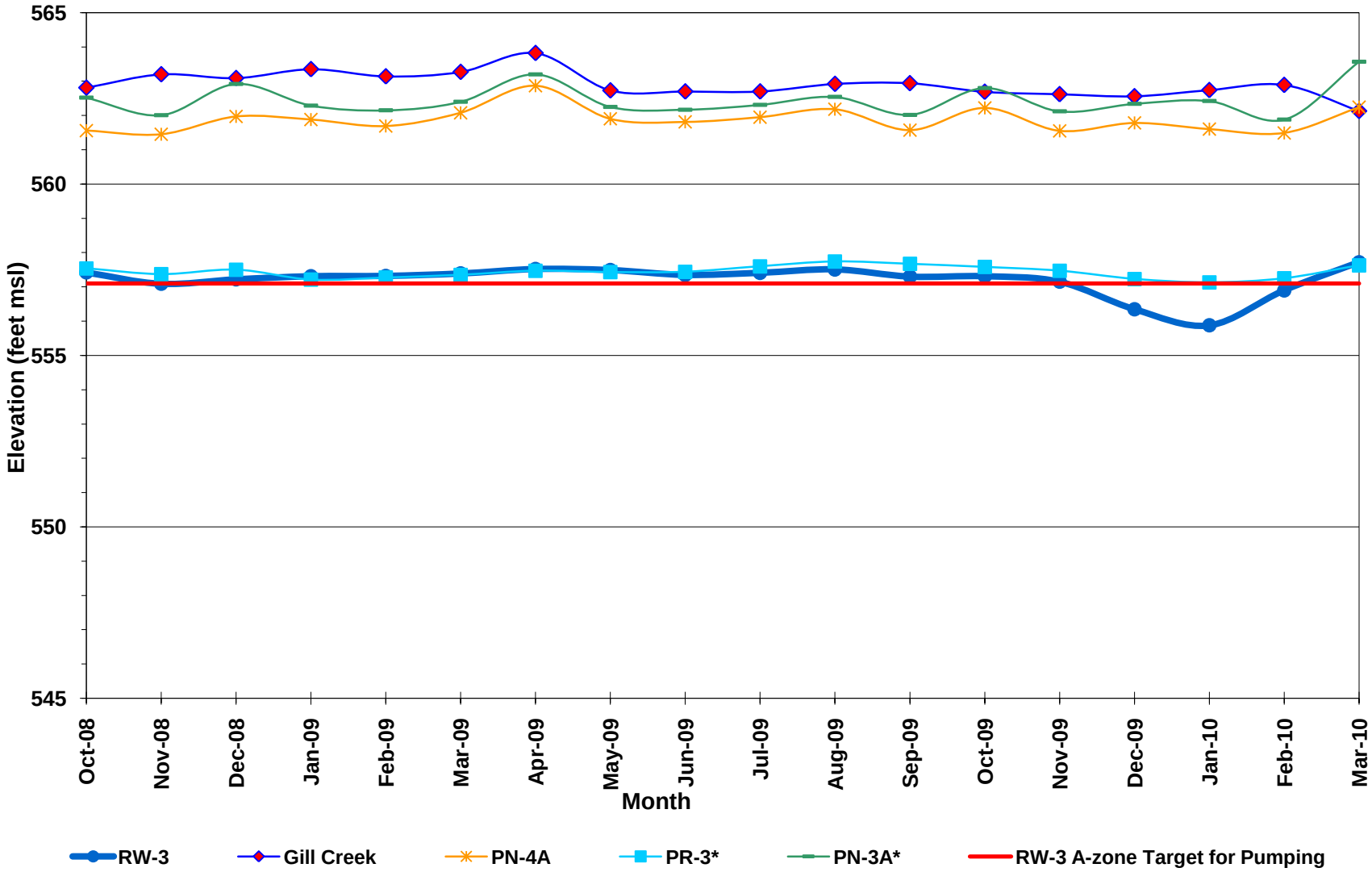
Table A-3
A-Zone
RW-3 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PN-3A	562.52	562.01	562.92	562.29	562.15	562.40	563.20	562.25	562.17	562.31	562.54	562.02	562.80	562.12	562.34	562.42	561.88	563.57
RW-3	557.42	557.09	557.22	557.31	557.32	557.39	557.52	557.49	557.35	557.41	557.51	557.30	557.31	557.15	556.35	555.88	556.90	557.72
PN-4A	561.56	561.45	561.97	561.88	561.69	562.08	562.87	561.90	561.81	561.95	562.18	561.57	562.22	561.55	561.78	561.60	561.49	562.24
PR-3	557.54	557.37	557.50	557.21	557.27	557.35	557.47	557.43	557.44	557.60	557.74	557.67	557.58	557.47	557.23	557.13	557.25	557.63
RW-3 A-zone Target	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10	557.10

Note:
Elevations are reported in feet above mean seal level (msl)

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-3
RW-3 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Table A-4

A-Zone

RW-4 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek -Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PN-5A	562.52	562.33	562.77	562.47	562.38	562.53	562.92	562.53	562.59	562.80	562.84	562.63	562.88	562.36	562.50	562.47	562.22	562.73
PR-13**	557.88	557.66	557.86	557.84	557.78	557.91	558.08	557.88	557.76	558.02	558.09	557.97	557.89	557.84	557.64	557.58	557.56	558.05
RW-4	556.71	556.76	555.89	555.27	555.29	555.50	555.93	556.25	557.08	557.56	557.62	557.45	557.55	557.46	557.25	557.16	557.31	557.64
PN-6A	562.70	562.64	563.15	563.05	563.06	563.25	563.44	563.04	563.09	563.00	563.20	562.74	563.13	562.72	562.92	562.98	562.82	563.45
PR-6*	558.98	559.32	559.56	559.92	560.62	560.49	560.84	559.90	559.72	559.59	559.72	559.75	559.63	559.34	558.93	558.63	558.61	559.24
PR-7*	562.25	562.02	563.86	562.25	561.86	562.03	563.88	562.37	562.25	562.47	562.26	562.26	562.10	562.18	562.13	562.30	561.39	563.97
RW-4 A-zone Target	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30

Notes:

Elevations are reported in feet above mean seal level (msl)

Due to significant well loss documented in RW-4 for March-02, the water level in RW-4-PZ is used as a more accurate water level for RW-4.

* Passive relief well installed in September 2002.

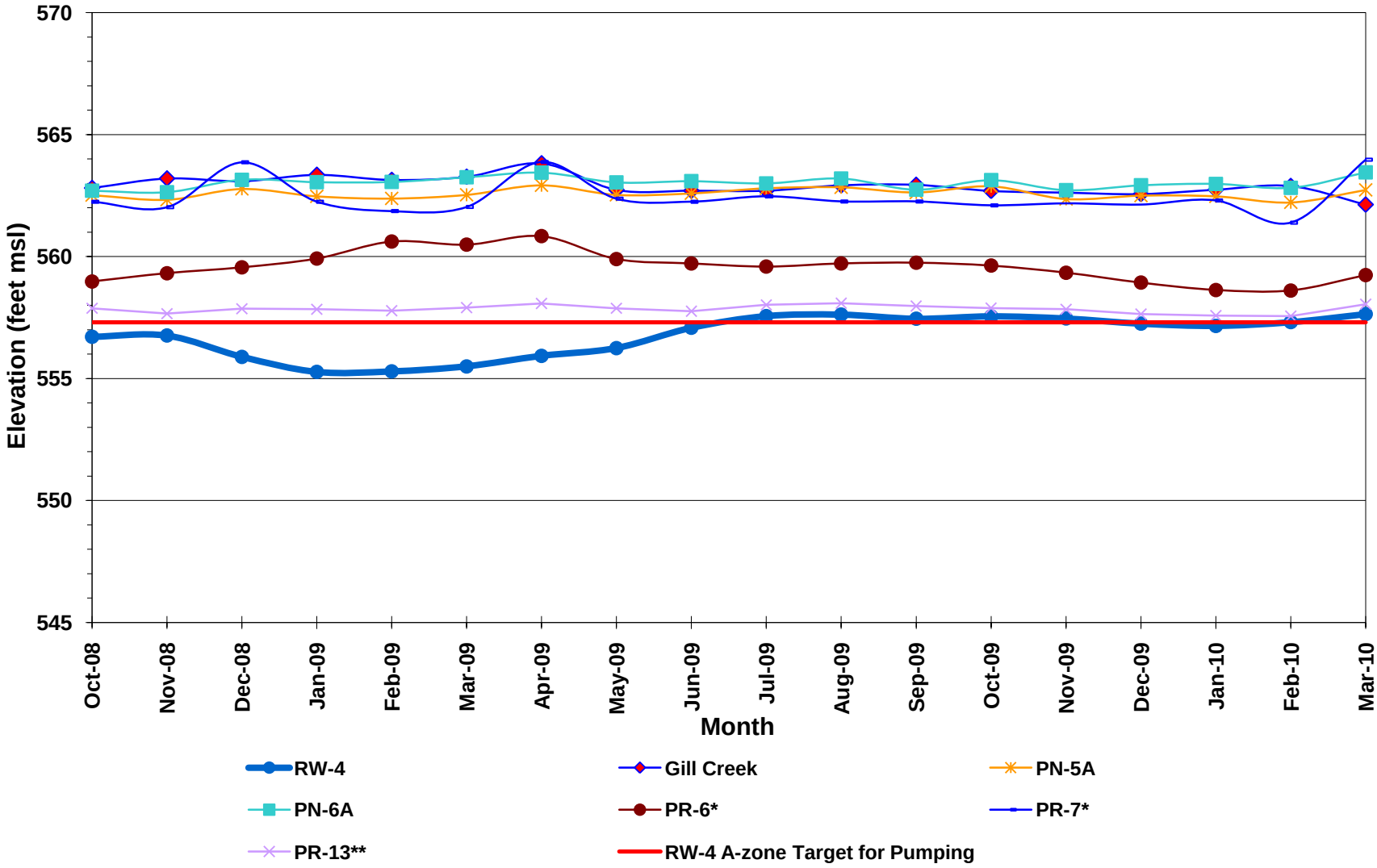
** Passive relief well Installed June 2003

NI - Not Installed

Prepared by : AWE 4/1/2010

Checked by: BSA 4/1/2010

Figure A-4
RW-4 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

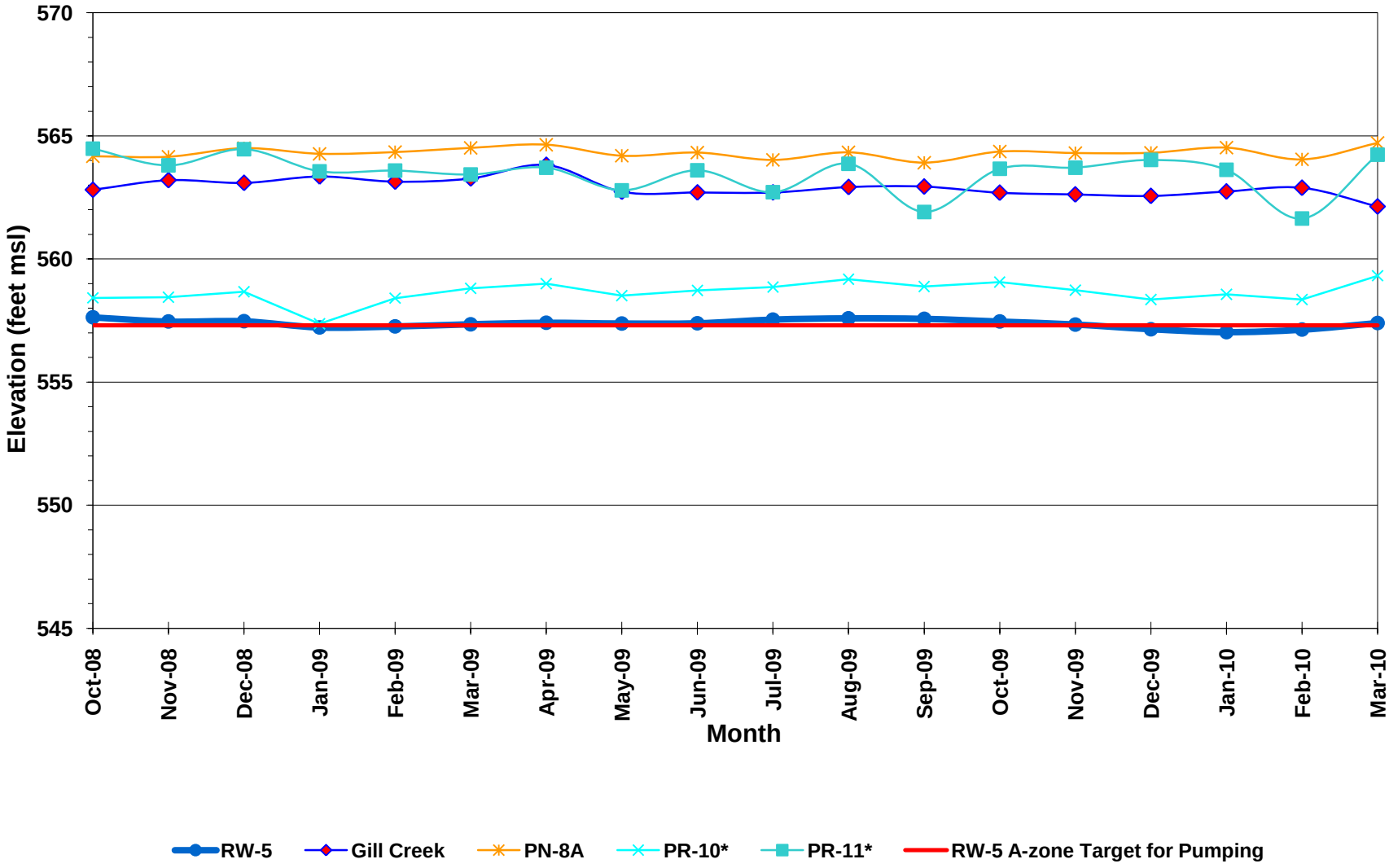
Table A-5
A-Zone
RW-5 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
RW-5	557.63	557.46	557.47	557.22	557.26	557.35	557.41	557.38	557.39	557.54	557.59	557.57	557.46	557.34	557.15	557.03	557.13	557.40
PN-8A	564.17	564.15	564.50	564.27	564.34	564.51	564.64	564.19	564.32	564.02	564.33	563.91	564.36	564.30	564.31	564.52	564.04	564.71
PR-10*	558.42	558.45	558.67	557.37	558.41	558.81	559.00	558.51	558.72	558.86	559.18	558.88	559.06	558.73	558.35	558.56	558.35	559.32
PR-11*	564.48	563.80	564.46	563.56	563.59	563.43	563.71	562.79	563.60	562.71	563.87	561.91	563.66	563.71	564.02	563.62	561.64	564.24
RW-5 A-zone Target	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30	557.30

Notes:
Elevations are reported in feet above mean seal level (msl)
*Passive relief well installed September 2002.
NI - Not Installed

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-5
RW-5 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

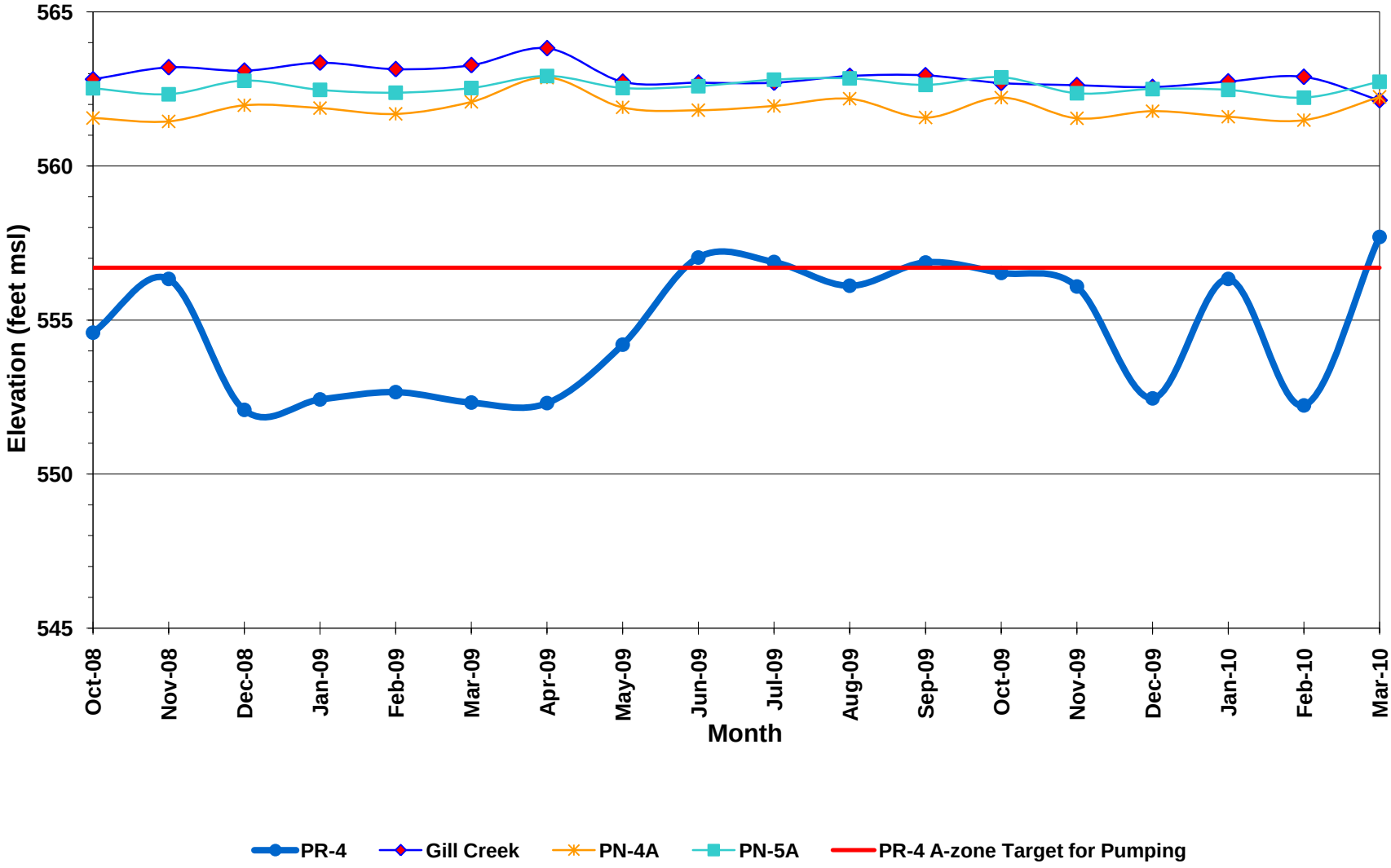
Table A-6
A-Zone
PR-4 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PR-4	554.59	556.33	552.08	552.42	552.66	552.32	552.30	554.20	557.03	556.88	556.11	556.87	556.53	556.09	552.46	556.33	552.23	557.70
PN-4A	561.56	561.45	561.97	561.88	561.69	562.08	562.87	561.90	561.81	561.95	562.18	561.57	562.22	561.55	561.78	561.60	561.49	562.24
PN-5A	562.52	562.33	562.77	562.47	562.38	562.53	562.92	562.53	562.59	562.80	562.84	562.63	562.88	562.36	562.50	562.47	562.22	562.73
PR-4 A-zone Target	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70	556.70

Notes:
Elevations are reported in feet above mean seal level (msl)

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-6
PR-4 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

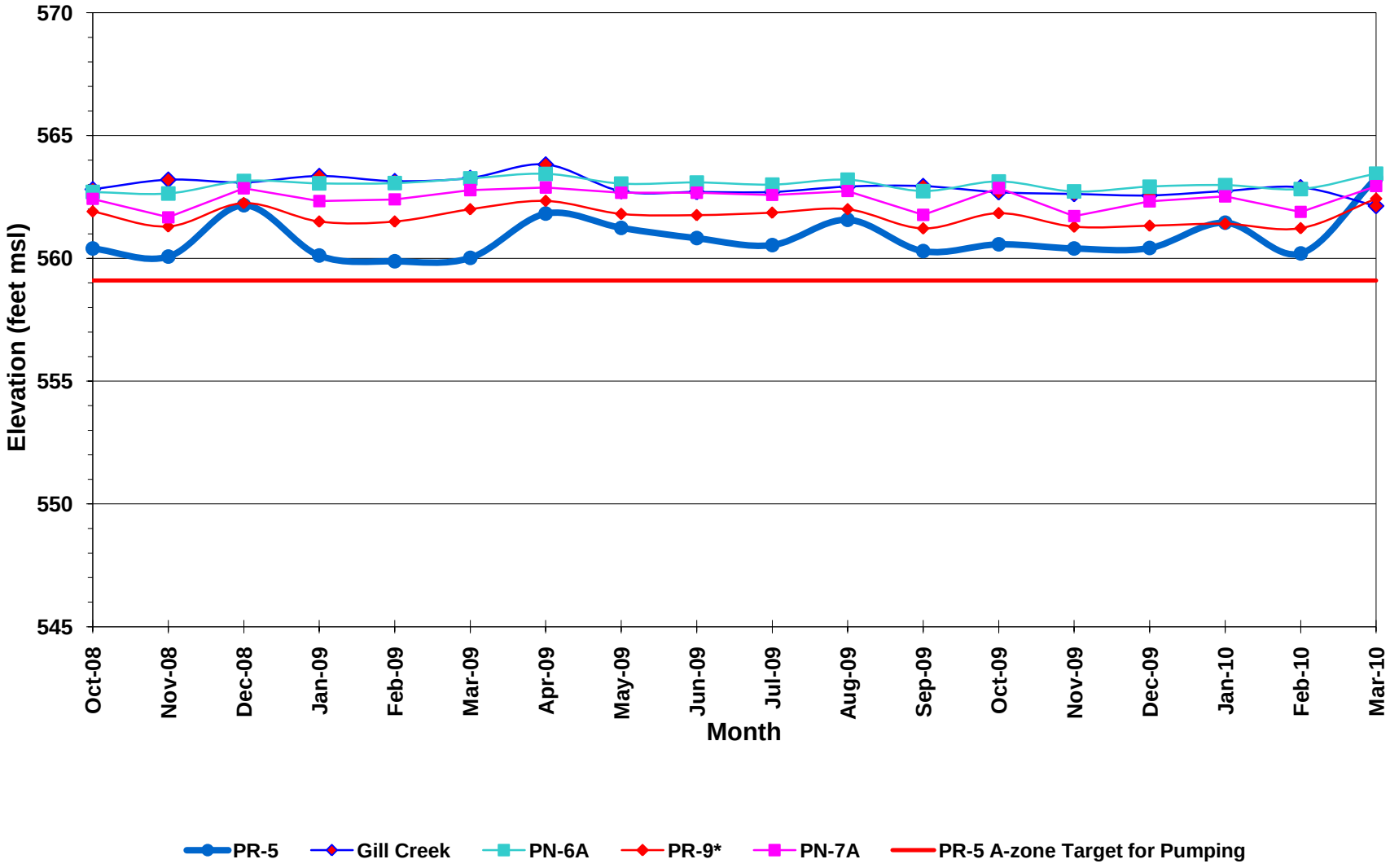
Table A-7
A-Zone
PR-5 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PR-5	560.40	560.07	562.16	560.11	559.88	560.02	561.82	561.24	560.82	560.54	561.57	560.29	560.57	560.40	560.42	561.45	560.20	563.27
PN-7A	562.42	561.67	562.85	562.33	562.40	562.78	562.88	562.67	562.67	562.58	562.74	561.77	562.86	561.72	562.32	562.52	561.89	562.94
PR-9*	561.91	561.30	562.25	561.50	561.50	562.00	562.34	561.81	561.76	561.86	562.00	561.22	561.84	561.29	561.33	561.41	561.23	562.43
PN-6A	562.70	562.64	563.15	563.05	563.06	563.25	563.44	563.04	563.09	563.00	563.20	562.74	563.13	562.72	562.92	562.98	562.82	563.45
PR-5 A-zone Target	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10

Notes:
Elevations are reported in feet above mean seal level (msl)
* Passive relief well installed September 2002.
NM - Not Measured

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-7
PR-5 Drawdown and Adjacent A-Zone Water Table Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

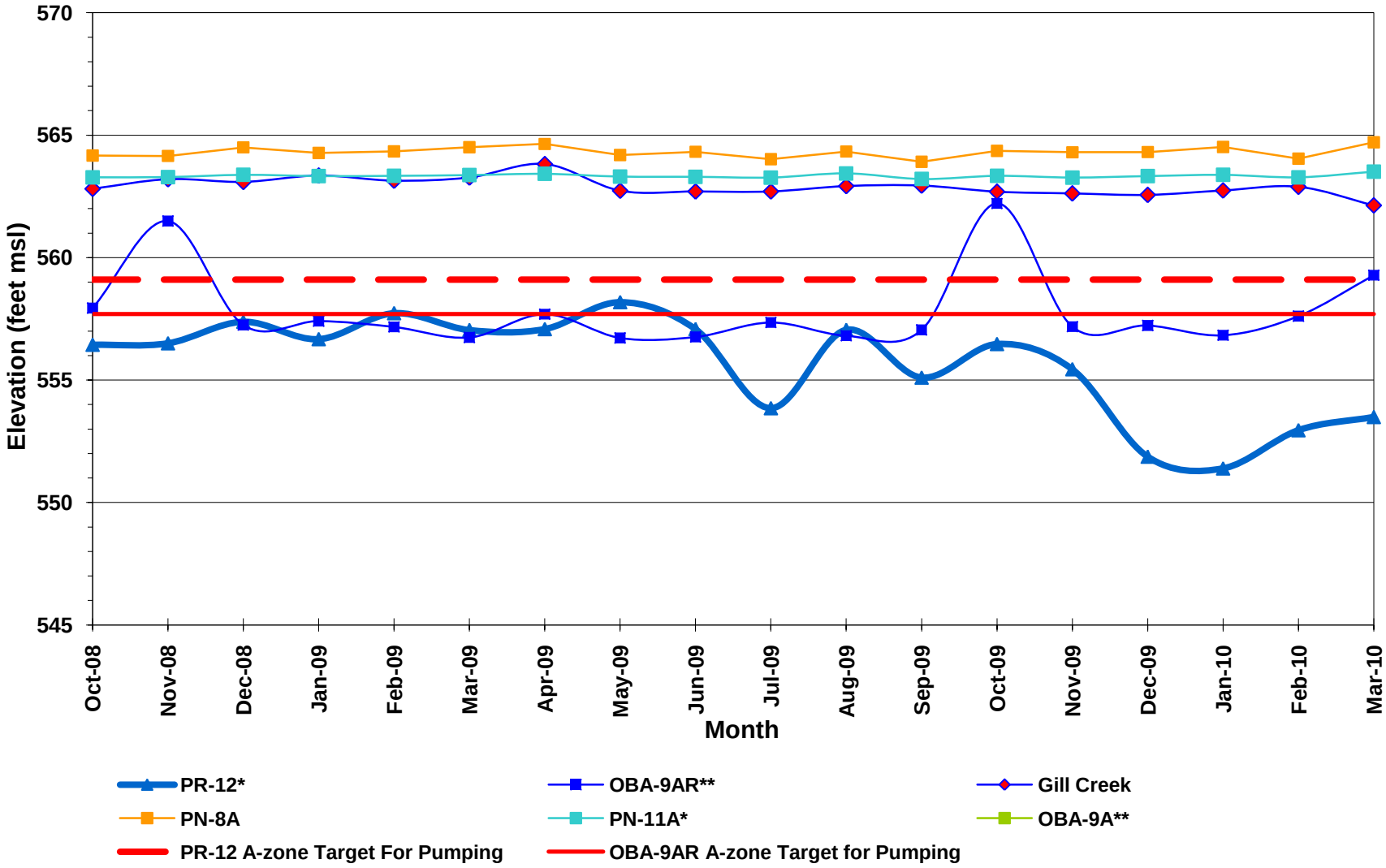
Table A-8
A-Zone
PR-12 and OBA-9AR and Adjacent Monitoring Point Water Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
Gill Creek -Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PN-8A	564.17	564.15	564.50	564.27	564.34	564.51	564.64	564.19	564.32	564.02	564.33	563.91	564.36	564.30	564.31	564.52	564.04	564.71
PR-12*	556.44	556.50	557.38	556.67	557.73	557.04	557.08	558.18	557.08	553.85	557.05	555.10	556.47	555.44	551.87	551.39	552.95	553.49
PN-11A*	563.28	563.29	563.38	563.33	563.34	563.37	563.42	563.31	563.30	563.27	563.44	563.21	563.34	563.27	563.33	563.38	563.28	563.51
OBA-9AR**	557.94	561.49	557.25	557.41	557.17	556.74	557.69	556.72	556.76	557.35	556.81	557.05	562.21	557.18	557.23	556.83	557.61	559.28
PR-12 A-zone Target	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10	559.10
OBA-9AR A-zone Target	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70	557.70

Notes:
Elevations are reported in feet above mean seal level (msl)
* Passive relief well installed September 2002.
** Well added to quarterly monitoring program in October 2002.
NM - Not Measured

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure A-8
PR-12 and OBA-9AR Drawdown and Adjacent A-Zone Water Table Surface



Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

msl - mean sea level

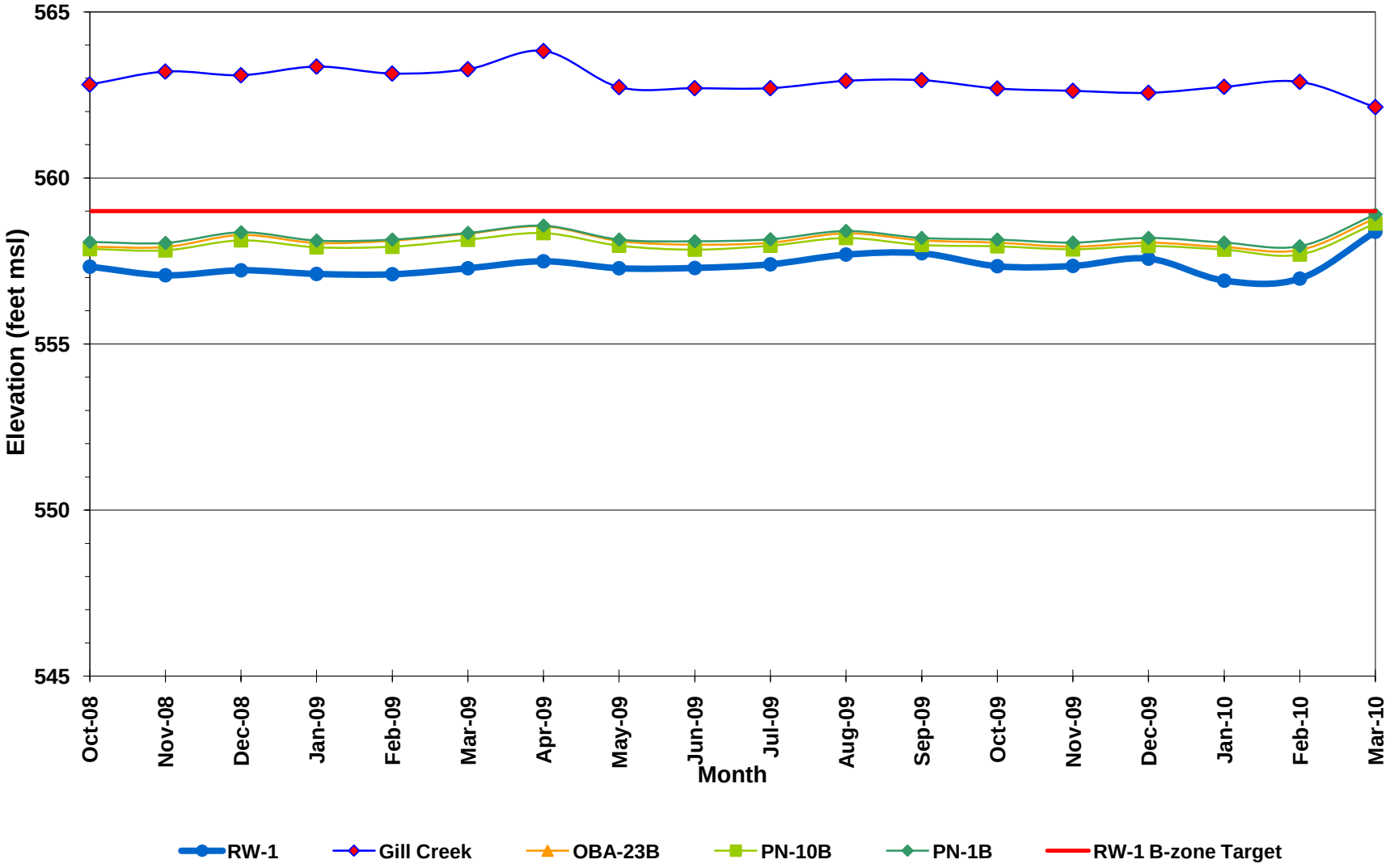
Table B-1
B-Zone
RW-1 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
RW-1	557.33	557.07	557.22	557.11	557.10	557.28	557.49	557.28	557.29	557.40	557.69	557.73	557.34	557.35	557.57	556.91	556.97	558.38
Gill Creek -Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
OBA-23B	557.93	557.92	558.28	558.04	558.11	558.32	558.54	558.10	557.99	558.05	558.33	558.12	558.05	557.93	558.05	557.92	557.83	558.78
PN-10B	557.86	557.82	558.12	557.91	557.93	558.14	558.34	557.96	557.84	557.96	558.19	557.98	557.94	557.85	557.95	557.84	557.69	558.63
PN-1B	558.07	558.04	558.36	558.11	558.14	558.34	558.56	558.14	558.09	558.15	558.40	558.19	558.14	558.05	558.19	558.05	557.94	558.90
RW-1 B-zone Target	559	559	559	559	559	559	559	559	559	559	559	559	559	559	559	559	559	559

Notes:
Elevations are reported in feet above mean seal level (msl)
Gill Creek level data is provided only for reference and does not effect B-zone capture.

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure B-1
RW-1 Drawdown and Adjacent B-Zone Potentiometric Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

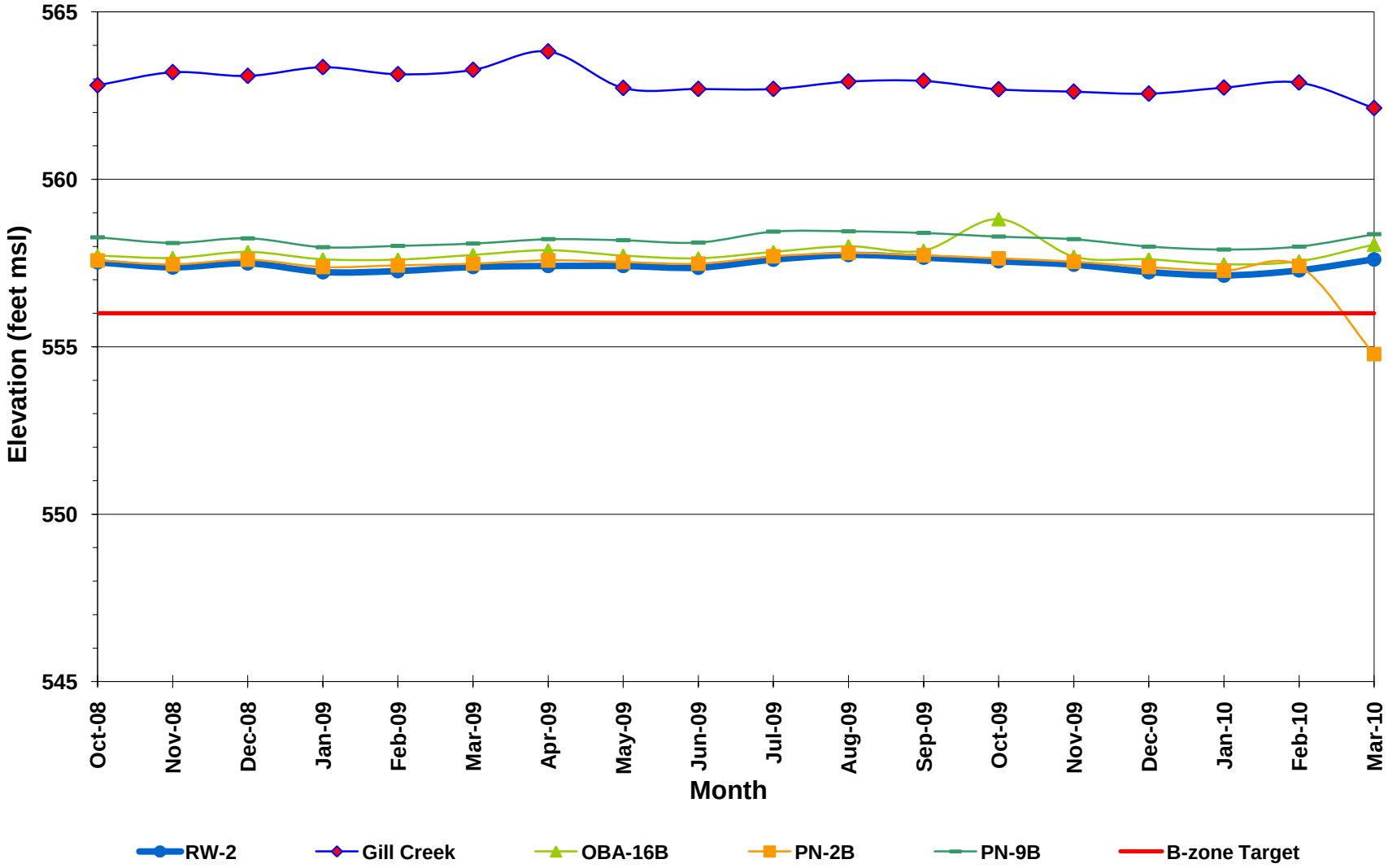
Table B-2
B-Zone
RW-2 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
RW-2	557.52	557.37	557.49	557.23	557.26	557.38	557.41	557.41	557.36	557.60	557.74	557.66	557.55	557.45	557.23	557.13	557.28	557.61
Gill Creek -Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
OBA-16B	557.72	557.65	557.83	557.61	557.60	557.74	557.88	557.72	557.64	557.83	558.00	557.87	558.81	557.69	557.61	557.46	557.55	558.05
PN-2B	557.58	557.46	557.60	557.38	557.43	557.48	557.58	557.53	557.48	557.70	557.80	557.73	557.64	557.54	557.38	557.27	557.41	554.78
PN-9B	558.27	558.10	558.24	557.97	558.01	558.08	558.21	558.18	558.11	558.44	558.45	558.40	558.29	558.21	557.99	557.90	557.99	558.36
RW-2 B-zone Target	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556

Notes:
Elevations are reported in feet above mean seal level (msl)
Gill Creek level data is provided only for reference and does not effect B-zone capture.

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure B-2
RW-2 Drawdown and Adjacent B-Zone Potentiometric Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

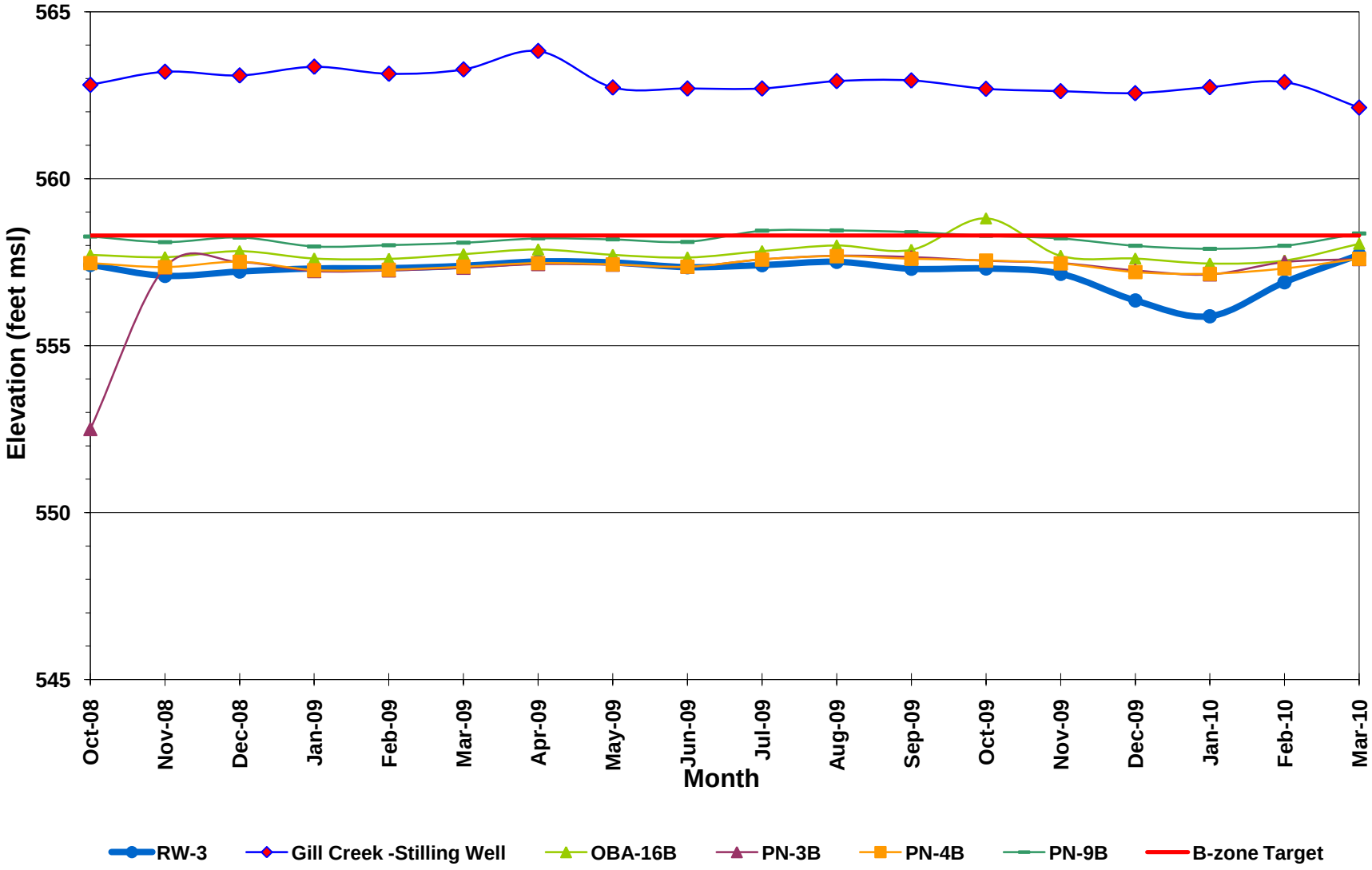
Table B-3
B-Zone
RW-3 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
RW-3	557.42	557.09	557.22	557.31	557.32	557.39	557.52	557.49	557.35	557.41	557.51	557.30	557.31	557.15	556.35	555.88	556.90	557.72
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
OBA-16B	557.72	557.65	557.83	557.61	557.60	557.74	557.88	557.72	557.64	557.83	558.00	557.87	558.81	557.69	557.61	557.46	557.55	558.05
PN-3B	552.50	557.34	557.50	557.23	557.25	557.33	557.44	557.42	557.36	557.58	557.69	557.65	557.54	557.47	557.25	557.13	557.50	557.59
PN-4B	557.47	557.35	557.51	557.26	557.27	557.36	557.47	557.43	557.36	557.58	557.68	557.60	557.55	557.46	557.20	557.15	557.31	557.60
PN-9B	558.27	558.10	558.24	557.97	558.01	558.08	558.21	558.18	558.11	558.44	558.45	558.40	558.29	558.21	557.99	557.90	557.99	558.36
B-zone Target	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3

Notes:
Elevations are reported in feet above mean seal level (msl)
Gill Creek level data is provided only for reference and does not effect B-zone capture.

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure B-3
RW-3 Drawdown and Adjacent B-Zone Potentiometric Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

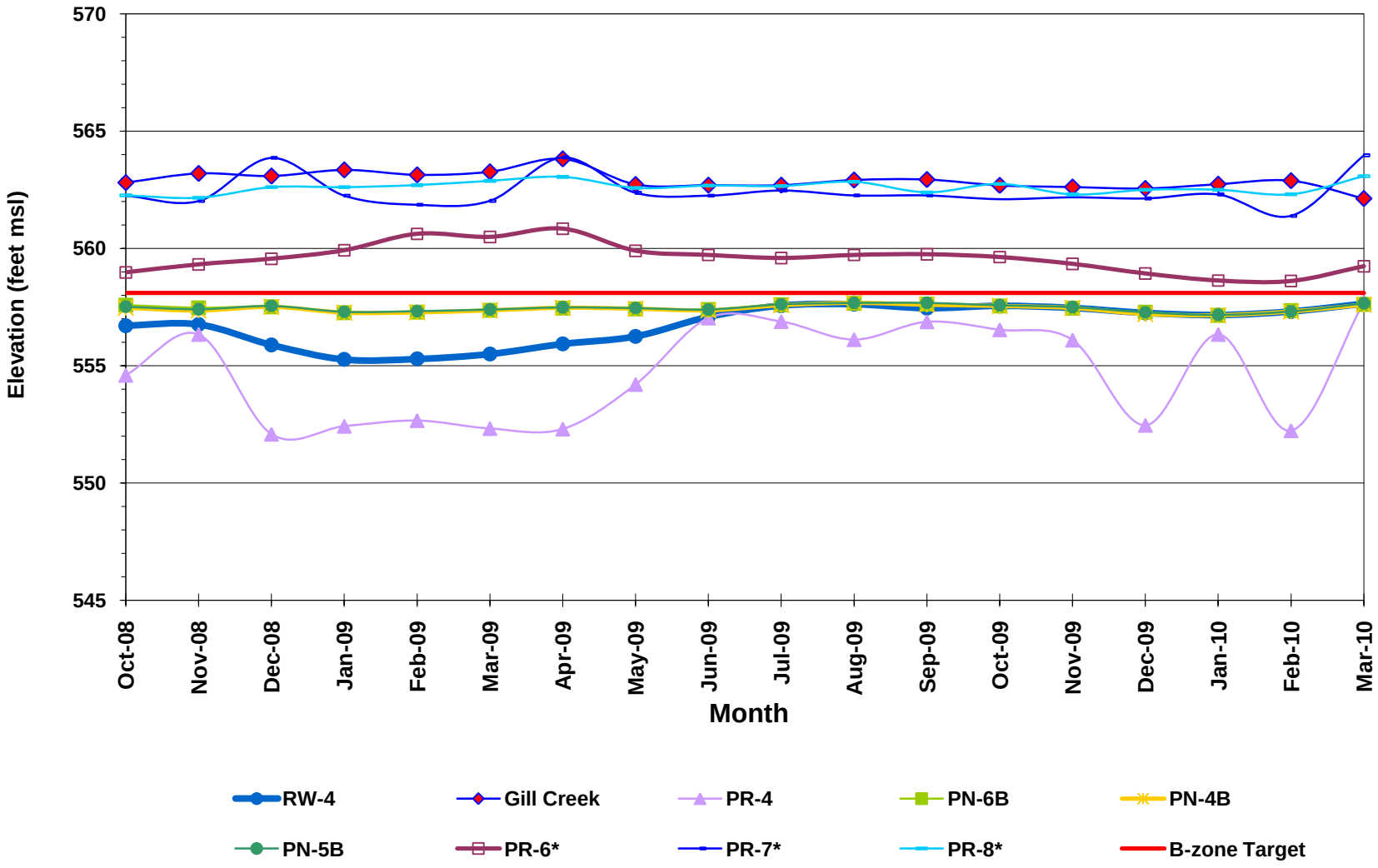
Table B-4
B-Zone
RW-4, PR-4 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
RW-4	556.71	556.76	555.89	555.27	555.29	555.50	555.93	556.25	557.08	557.56	557.62	557.45	557.55	557.46	557.25	557.16	557.31	557.64
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PR-4	554.59	556.33	552.08	552.42	552.66	552.32	552.30	554.20	557.03	556.88	556.11	556.87	556.53	556.09	552.46	556.33	552.23	557.70
PN-6B	557.58	557.47	557.51	557.26	557.28	557.36	557.45	557.42	557.40	557.60	557.66	557.63	557.55	557.46	557.28	557.15	557.35	557.61
PN-4B	557.47	557.35	557.51	557.26	557.27	557.36	557.47	557.43	557.36	557.58	557.68	557.60	557.55	557.46	557.20	557.15	557.31	557.60
PN-5B	557.52	557.41	557.55	557.30	557.33	557.40	557.49	557.46	557.40	557.62	557.68	557.68	557.58	557.50	557.28	557.17	557.32	557.66
PR-6*	558.98	559.32	559.56	559.92	560.62	560.49	560.84	559.90	559.72	559.59	559.72	559.75	559.63	559.34	558.93	558.63	558.61	559.24
PR-7*	562.25	562.02	563.86	562.25	561.86	562.03	563.88	562.37	562.25	562.47	562.26	562.26	562.10	562.18	562.13	562.30	561.39	563.97
PR-8*	562.26	562.16	562.61	562.61	562.70	562.88	563.05	562.58	562.68	562.66	562.84	562.39	562.75	562.30	562.50	562.50	562.31	563.08
B-zone Target	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10	558.10

Notes:
Elevations are reported in feet above mean seal level (msl)
Gill Creek level data is provided only for reference and does not effect B-zone capture.
*Installed September 2002

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure B-4
RW-4 and PR-4 Drawdown and Adjacent B-Zone Potentiometric Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

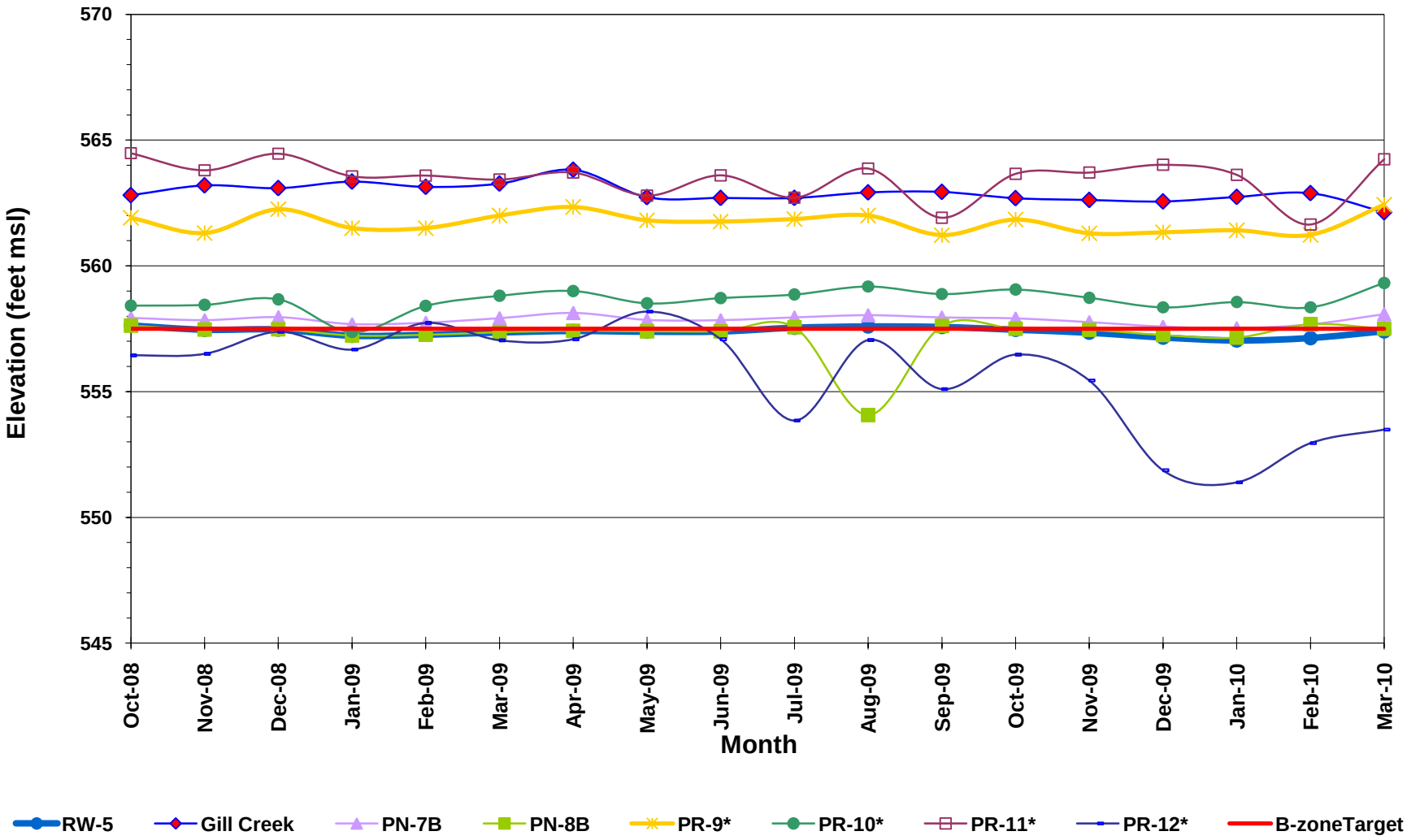
Table B-5
B-Zone
RW-5 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10
RW-5	557.63	557.46	557.47	557.22	557.26	557.35	557.41	557.38	557.39	557.54	557.59	557.57	557.46	557.34	557.15	557.03	557.13	557.40
Gill Creek - Stilling Well	562.81	563.20	563.09	563.35	563.14	563.27	563.82	562.73	562.70	562.70	562.92	562.94	562.69	562.62	562.56	562.74	562.89	562.13
PN-7B	557.93	557.84	557.96	557.68	557.74	557.92	558.13	557.85	557.84	557.95	558.04	557.95	557.91	557.76	557.58	557.52	557.67	558.08
PN-8B	557.62	557.47	557.48	557.23	557.26	557.36	557.42	557.40	557.40	557.56	554.07	557.61	557.50	557.46	557.25	557.15	557.68	557.50
PR-9*	561.91	561.30	562.25	561.50	561.50	562.00	562.34	561.81	561.76	561.86	562.00	561.22	561.84	561.29	561.33	561.41	561.23	562.43
PR-10*	558.42	558.45	558.67	557.37	558.41	558.81	559.00	558.51	558.72	558.86	559.18	558.88	559.06	558.73	558.35	558.56	558.35	559.32
PR-11*	564.48	563.80	564.46	563.56	563.59	563.43	563.71	562.79	563.60	562.71	563.87	561.91	563.66	563.71	564.02	563.62	561.64	564.24
PR-12*	556.44	556.50	557.38	556.67	557.73	557.04	557.08	558.18	557.08	553.85	557.05	555.10	556.47	555.44	551.87	551.39	552.95	553.49
B-zoneTarget	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5

Notes:
Elevations are reported in feet above mean seal level (msl)
Gill Creek level data is provided only for reference and does not effect B-zone capture.
*Installed September 2002
NI - Not Installed

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

Figure B-5
RW-5 Drawdown and Adjacent B-Zone Potentiometric Surface



msl - mean sea level

Prepared by : AWE 4/1/2010
Checked by: BSA 4/1/2010

		Reference	11/3/2009		2/8/2010	
	Bottom of	Point	Water	Water	Water	Water
Well I.D.	A-Zone	Elevation	Level	Elevation	Level	Elevation
	Elevation	(Feet msl)	(Feet BTOC)	(Feet msl)	(Feet BTOC)	(Feet msl)
BH-1	557.53	574.38	16.86	557.5	17.05	557.3
OBA-1A	562.8	571.02	4.57	566.4	5.00	566.0
OBA-1B	563.3	570.9	10.49	560.4	9.44	561.5
OBA-1C		570.96	15.18	555.8	15.82	555.1
OBA-2A	561.6	572.93	Dry	561.6	Dry	561.6
OBA-2B	561.7	573.07	15.63	557.4	15.74	557.3
OBA-2C		573.12	17.91	555.2	18.09	555.0
OBA-3A	552.6	572.5	15.11	557.4	15.44	557.1
OBA-3B	552.9	572.17	18.00	554.2	18.06	554.1
OBA-3C		573.14	16.74	556.4	17.22	555.9
OBA-4A	558.7	572.88	13.21	559.7	12.06	560.8
OBA-4B	558.3	573.49	15.59	557.9	15.17	558.3
OBA-4C		573.54	16.13	557.4	16.27	557.3
OBA-5A	558.2	572.21	7.47	564.7	7.39	564.8
OBA-5B	558.4	572.7	14.19	558.5	14.28	558.4
OBA-5C		572.46	16.98	555.5	18.03	554.4
OBA-6A	561.4	570.75	6.46	564.3	5.64	565.1
OBA-6B	561.7	570.71	5.61	565.1	6.22	564.5
OBA-6C		569.49	14.43	555.1	14.98	554.5
OBA-7A	563	573.97	8.06	565.9	7.49	566.5
OBA-7B	560	574.47	10.61	563.9	10.27	564.2
OBA-7C		574.85	19.50	555.4	20.66	554.2
OBA-8A	560.2	573.52	10.64	562.9	10.92	562.6
OBA-8B	560.1	573.24	14.87	558.4	15.14	558.1
OBA-8C		573.26	20.79	552.5	22.38	550.9
OBA-9A	558.3	569.88	8.30	561.6	7.99	561.9
OBA-9AR	557.7	570.68	13.50	557.2	13.07	557.6
OBA-10A	552.5	568.92	6.32	562.6	6.23	562.7
OBA-11A	559.2	573.22	12.98	560.2	13.00	560.2
OBA-11B	559.5	573.29	16.11	557.2	16.27	557.0
OBA-11C		573.37	17.03	556.3	17.22	556.2
OBA-12A	563.9	573.89	9.36	564.5	9.31	564.6
OBA-12B	563.9	574.04	15.92	558.1	15.99	558.1
OBA-12C		574.31	20.20	554.1	20.47	553.8
OBA-13AOB	554	574.29	16.55	557.7	11.83	562.5
OBA-13A	553.6	573.98	16.61	557.4	16.74	557.2
OBA-13B	552.1	574.26	17.00	557.3	17.24	557.0
OBA-13C		574.08	22.55	551.5	22.23	551.9
OBA-14A	552.5	571.1	13.34	557.8	13.41	557.7
OBA-14B	552.3	571.26	13.81	557.4	14.07	557.2
OBA-14C		570.61	13.66	557.0	14.24	556.4
OBA-15A	551	573.08	15.62	557.5	15.96	557.1
OBA-15B	550.4	573.58	16.13	557.5	16.37	557.2
OBA-16A	560.9	573.55	10.97	562.6	10.98	562.6
OBA-16B	560.9	573.47	15.78	557.7	15.92	557.5
OBA-18A	559.9	573.85	13.20	560.7	13.17	560.7
OBA-19A	558.6	574.34	12.31	562.0	12.27	562.1
OBA-21AB	559	572.46	7.95	564.5	8.00	564.5
OBA-23A	561.4	570.72	8.63	562.1	8.73	562.0
OBA-23B	561.3	570.54	12.61	557.9	12.71	557.8
OBA-24A	558.23	569.45	6.59	562.9	6.41	563.0
OBA-24B	558.23	569.28	11.49	557.8	11.62	557.7
OBA-25A	558.44	569.47	5.46	564.0	5.27	564.2
OBA-25B	558.44	569.45	11.62	557.8	11.72	557.7
OBA-26A	556.2	570.04	6.56	563.5	6.29	563.8
OBA-26B	556.2	570.04	12.22	557.8	12.36	557.7
RW-1	561.2	573.69	16.34	557.3	16.72	557.0
PR-1	561.8	572.82	9.11	563.7	8.82	564.0
PN-1A	560.8	571.01	7.03	564.0	6.84	564.2
PN-1B	560.8	570.87	12.82	558.1	12.93	557.9
RW-2	557	572.49	15.04	557.5	15.21	557.3
PR-2	561.7	572.72	14.92	557.8	15.08	557.6
PN-2A	562	571.20	Dry	562.0	Dry	562.0
PN-2B	562	571.01	13.47	557.5	13.60	557.4
RW-3	557.1	570.09	12.94	557.2	13.19	556.9
PR-3	558.2	572.79	15.32	557.5	15.54	557.3
PN-3A	559.7	571.43	9.31	562.1	9.55	561.9
PN-3B	559.7	571.36	13.89	557.5	13.86	557.5
RW-4	557.3	569.77	12.31	557.5	12.46	557.3
PR-4	556.7	570.21	14.12	556.1	17.98	552.2
PN-4A	559.1	568.78	7.23	561.5	7.29	561.5
PN-4B	559.1	568.89	11.43	557.5	11.58	557.3
RW-5	557.3	569.79	12.45	557.3	12.66	557.1
PR-5	559.1	570.68	10.28	560.4	10.48	560.2
PN-5A	559.1	569.10	6.74	562.4	6.88	562.2
PN-5B	559.1	569.10	11.60	557.5	11.78	557.3
PN-6A	559.2	568.93	6.21	562.7	6.11	562.8
PN-6B	559.2	569.07	11.61	557.5	11.72	557.3
PN-7A	558.9	568.70	6.98	561.7	6.81	561.9
PN-7B	558.9	568.95	11.19	557.8	11.28	557.7
PN-8A	557.8	568.83	4.53	564.3	4.79	564.0
PN-8B	557.8	568.38	10.92	557.5	10.70	557.7
PN-9A	559.47	571.26	Dry	559.5	10.78	560.5
PN-9B	560.22	571.90	13.69	558.2	13.91	558.0
PN-10A	561.5	570.57	Dry	561.5	8.69	561.9
PN-10B	561.5	571.63	13.78	557.9	13.94	557.7
PN-11A	558.9	567.99	4.73	563.3	4.72	563.3
PN-11B	559.05	568.21	10.49	557.7	10.56	557.6
PN-12A	559.33	570.54	5.43	565.1	5.31	565.2
PN-12B	558.81	570.43	12.51	557.9	12.61	557.8
PN-13A	560.46	573.7	9.14	564.6	8.86	564.8
PN-13B	560.45	573.73	15.80	557.9	15.91	557.8
PN-14A	561.05	573.79	9.09	564.7	8.84	564.9
PN-14B	560.06	573.76	15.72	558.0	15.73	558.0

PN-15A	559.93	571.15	7.12	564.0	6.88	564.3
PN-15B	559.96	571.14	13.41	557.7	13.46	557.7
PN-16A	560.67	570.92	7.99	562.9	8.02	562.9
PN-16B	560.15	570.85	9.35	561.5	10.32	560.5
PN-17A	560.81	571.04	6.36	564.7	6.17	564.9
PN-17B	560.94	571.07	13.21	557.9	13.32	557.8
PN-18A	562.03	570.77	7.76	563.0	7.78	563.0
PN-18B	562.1	570.83	13.00	557.8	13.12	557.7
PN-19A	562.43	571.2	7.37	563.8	7.31	563.9
PN-19B	562.45	571.11	12.21	558.9	13.07	558.0
PN-20A	558.82	570.49	9.81	560.7	10.22	560.3
PN-20B	557.49	570.21	12.76	557.4	13.00	557.2
PN-21A	559.19	569.88	5.10	564.8	5.09	564.8
PN-21B	559.17	569.85	12.12	557.7	12.20	557.7
PR-6	559.7	568.70	9.36	559.3	10.09	558.6
PR-7	558.9	569.06	6.88	562.2	7.67	561.4
PR-8	559.2	568.42	6.12	562.3	6.11	562.3
PR-9	557.6	568.72	7.43	561.3	7.49	561.2
PR-10	558.9	568.44	9.71	558.7	10.09	558.3
PR-11	558.8	568.01	4.30	563.7	6.37	561.6
PR-12	558.9	569.77	14.33	555.4	16.82	553.0
PR-13	562.4	569.07	11.23	557.8	11.51	557.6
RW-1-PZ	561.2	572.73	15.41	557.3	15.78	557.0
PR-1-PZ	561.8	571.58	7.86	563.7	7.62	564.0
RW-2-PZ	557	572.22	14.81	557.4	14.97	557.2
PR-2-PZ	561.7	572.70	15.13	557.6	15.32	557.4
RW-3-PZ	557.1	570.03	12.93	557.1	12.90	557.1
PR-3-PZ	558.2	572.16	14.71	557.4	14.87	557.3
RW-4-PZ	557.3	569.81	12.32	557.5	12.57	557.2
PR-4-PZ	556.7	570.14	14.23	555.9	15.31	554.8
RW-5-PZ	557.3	569.74	12.41	557.3	12.01	557.7
PR-5-PZ	559.1	569.69	10.54	559.2	10.66	559.0
MW-20AR	565.61	570.51	Dry	565.6	NM	NM
MW-20B		570.09	12.24	557.9	11.62	558.5
MW-22B		569.86	12.97	556.9	12.88	557.0
MW-22C		570.09	16.21	553.9	17.10	553.0
MW-22D		570.67	NM	NM	NM	NM
SRW-1	558.6	572.57	9.02	563.5	9.02	563.5
SRW-2	556	573.04	12.88	560.2	13.63	559.4
Gill Creek - Still Well		571.49	9.41	562.1	8.56	562.9
Gill Creek - Buff. Ave		575.78	13.32	562.5	13.35	562.4
Notes:						
1 -Bottom of screen elev. used in contouring				Prepared By: AWE 4/2/2010		
2 - Top of transducer wire.				Checked By: BSA 4/2/2010		
* - GC-2 from performance monitoring test						
** - GC-1 from performance monitoring test						
*** - Gill Creek - Stilling well data anomalous; Well re						
*** - Gill Creek - Stilling well data anomalous; Well re						
NI - Not Installed						
NM - Not Measured						
Note - For 2/5/99, switched OBA-5B/OBA-5C						
Note - For 1/6/00, used 10.46 ft. BTOC						
for OBA-6B, instead of 16.46 ft.						
Note - The 3/2/00, measurement for RW-1 was dete						
Note - The 6/15/00 data for OBA-02A and OBA-02B						
Note - For 1/03/01, an entry of NM~ means the poi						
Note - For 3/06/01 data, the A and B zone measurer						
Note - The 12/03/00 data for PN-7A and PN-7B were						

Table 1
Summary of A-Zone Water Levels
Olin Chemical
Niagara Falls, NY

Well I.D.	Bottom of A-Zone Elevation (Feet msl)	Reference Point Elevation (Feet msl)	11/03/09		02/08/10	
			Water Level (Feet BTOC)	Water Elevation (Feet msl)	Water Level (Feet BTOC)	Water Elevation (Feet msl)
Gill Creek - Still Well	NM	571.49	9.41	562.1	8.56	562.9
MW-20AR	565.61	570.51	Dry	565.6	NM	NM
OBA-1A	562.8	571.02	4.57	566.4	5.00	566.0
OBA-2A	561.6	572.93	Dry	561.6	Dry	561.6
OBA-3A	552.6	572.50	15.11	557.4	15.44	557.1
OBA-4A	558.7	572.88	13.21	559.7	12.06	560.8
OBA-5A	558.2	572.21	7.47	564.7	7.39	564.8
OBA-6A	561.4	570.75	6.46	564.3	5.64	565.1
OBA-7A	563	573.97	8.06	565.9	7.49	566.5
OBA-8A	560.2	573.52	10.64	562.9	10.92	562.6
OBA-9A	558.3	569.88	8.30	561.6	7.99	561.9
OBA-9AR	557.7	570.68	13.50	557.2	13.07	557.6
OBA-10A	552.5	568.92	6.32	562.6	6.23	562.7
OBA-11A	559.2	573.22	12.98	560.2	13.00	560.2
OBA-12A	563.9	573.89	9.36	564.5	9.31	564.6
OBA-13A	553.6	573.98	16.61	557.4	16.74	557.2
OBA-14A	552.5	571.10	13.34	557.8	13.41	557.7
OBA-15A	551	573.08	15.62	557.5	15.96	557.1
OBA-16A	560.9	573.55	10.97	562.6	10.98	562.6
OBA-18A	559.9	573.85	13.20	560.7	13.17	560.7
OBA-19A	558.6	574.34	12.31	562.0	12.27	562.1
OBA-23A	561.4	570.72	8.63	562.1	8.73	562.0
OBA-24A	558.23	569.45	6.59	562.9	6.41	563.0
OBA-25A	558.44	569.47	5.46	564.0	5.27	564.2
OBA-26A	556.2	570.04	6.56	563.5	6.29	563.8
PN-1A	560.8	571.01	7.03	564.0	6.84	564.2
PN-2A	562	571.20	Dry	562.0	Dry	562.0
PN-3A	559.7	571.43	9.31	562.1	9.55	561.9
PN-4A	559.1	568.78	7.23	561.5	7.29	561.5
PN-5A	559.1	569.10	6.74	562.4	6.88	562.2
PN-6A	559.2	568.93	6.21	562.7	6.11	562.8
PN-7A	558.9	568.70	6.98	561.7	6.81	561.9
PN-8A	557.8	568.83	4.53	564.3	4.79	564.0
PN-10A	561.5	570.57	Dry	561.5	8.69	561.9
PN-11A	558.9	567.99	4.73	563.3	4.72	563.3
PN-12A	559.33	570.54	5.43	565.1	5.31	565.2
PN-13A	560.46	573.70	9.14	564.6	8.86	564.8
PN-14A	561.05	573.79	9.09	564.7	8.84	564.9
PN-15A	559.93	571.15	7.12	564.0	6.88	564.3
PN-16A	560.67	570.92	7.99	562.9	8.02	562.9
PN-17A	560.81	571.04	6.36	564.7	6.17	564.9
PN-18A	562.03	570.77	7.76	563.0	7.78	563.0
PN-19A	562.43	571.20	7.37	563.8	7.31	563.9
PN-20A	558.82	570.49	9.81	560.7	10.22	560.3
PN-21A	559.19	569.88	5.10	564.8	5.09	564.8
PR-13	562.4	569.07	11.23	557.8	11.51	557.6

NOTES:

* - From 1997 performance monitoring test.

** Buffalo Avenue measurement

NM - Not measured.

NI - Not Installed

DRY - Water elevation not applicable.

Bottom of screened interval used in contouring.

MW-20AR is overburden well, 565.61 is the bottom of the well

Prepared By: AWE 4/2/2010
Checked By: BSA 4/2/2010

Table 2
Summary of B-Zone Water Levels
Olin Chemical
Niagara Falls, NY

Well I.D.	Bottom of A-Zone Elevation	Reference Point Elevation (Feet msl)	11/03/09		02/08/10	
			Water Level (Feet BTOC)	Water Elevation (Feet msl)	Water Level (Feet BTOC)	Water Elevation (Feet msl)
BH-1	557.53	574.38	16.86	557.5	17.05	557.3
OBA-1B	563.3	570.90	10.49	560.4	9.44	561.5
OBA-2B	561.7	573.07	15.63	557.4	15.74	557.3
OBA-3B	552.9	572.17	18.00	554.2	18.06	554.1
OBA-4B	558.3	573.49	15.59	557.9	15.17	558.3
OBA-5B	558.4	572.70	14.19	558.5	14.28	558.4
OBA-6B	561.7	570.71	5.61	565.1	6.22	564.5
OBA-7B	560	574.47	10.61	563.9	10.27	564.2
OBA-8B	560.1	573.24	14.87	558.4	15.14	558.1
OBA-11B	559.5	573.29	16.11	557.2	16.27	557.0
OBA-12B	563.9	574.04	15.92	558.1	15.99	558.1
OBA-13B	552.1	574.26	17.00	557.3	17.24	557.0
OBA-14B	552.3	571.26	13.81	557.4	14.07	557.2
OBA-16B	560.9	573.47	15.78	557.7	15.92	557.5
OBA-21AB	559	572.46	7.95	564.5	8.00	564.5
OBA-23B	561.3	570.54	12.61	557.9	12.71	557.8
OBA-24B	558.23	569.28	11.49	557.8	11.62	557.7
OBA-25B	558.44	569.45	11.62	557.8	11.72	557.7
OBA-26B	556.2	570.04	12.22	557.8	12.36	557.7
PN-1B	560.8	570.87	12.82	558.1	12.93	557.9
PN-2B	562	571.01	13.47	557.5	13.60	557.4
PN-3B	559.7	571.36	13.89	557.5	13.86	557.5
PN-4B	559.1	568.89	11.43	557.5	11.58	557.3
PN-5B	559.1	569.10	11.60	557.5	11.78	557.3
PN-6B	559.2	569.07	11.61	557.5	11.72	557.3
PN-7B	558.9	568.95	11.19	557.8	11.28	557.7
PN-8B	557.8	568.38	10.92	557.5	10.70	557.7
PN-9B	560.22	571.90	13.69	558.2	13.91	558.0
PN-10B	561.53	571.63	13.78	557.9	13.94	557.7
MW-20B		570.09	12.24	557.9	11.62	558.5
MW-22B		569.86	12.97	556.9	12.88	557.0
PN-11B	559.05	568.21	10.49	557.7	10.56	557.6
PN-12B	558.81	570.43	12.51	557.9	12.61	557.8
PN-13B	560.45	573.73	15.80	557.9	15.91	557.8
PN-14B	560.06	573.76	15.72	558.0	15.73	558.0
PN-15B	559.96	571.14	13.41	557.7	13.46	557.7
PN-16B	560.15	570.85	9.35	561.5	10.32	560.5
PN-17B	560.94	571.07	13.21	557.9	13.32	557.8
PN-18B	562.1	570.83	13.00	557.8	13.12	557.7
PN-19B	562.45	571.11	12.21	558.9	13.07	558.0
PN-20B	557.49	570.21	12.76	557.4	13.00	557.2
PN-21B	559.17	569.85	12.12	557.7	12.20	557.7
PR-13	562.4	569.07	11.23	557.8	11.51	557.6

NOTES:
NM - Not Measured
NI - Not Installed
N/A - Not Accessible

Prepared By: AWE 4/2/2010
Checked By: BSA 4/2/2010

Table 3
Summary of C-Zone Water Levels
Olin Chemical
Niagara Falls, NY

Well I.D.	Reference Point Elevation (Feet msl)	11/03/09		02/08/10	
		Water Level (Feet BTOC)	Water Elevation (Feet msl)	Water Level (Feet BTOC)	Water Elevation (Feet msl)
OBA-1C	570.96	15.18	555.8	15.82	555.1
OBA-4C	573.54	16.13	557.4	16.27	557.3
OBA-7C	574.85	19.50	555.4	20.66	554.2
OBA-12C	574.31	20.20	554.1	20.47	553.8
OBA-14C	570.61	13.66	557.0	14.24	556.4
OBA-15B	573.58	16.13	557.5	16.37	557.2
MW-22C	570.09	16.21	553.9	17.10	553.0

Prepared By: AWE 4/2/2010
Checked By: BSA 4/2/2010

Table 4
Summary of CD-Zone Water Levels
Olin Chemical
Niagara Falls, NY

Well I.D.	Reference Point Elevation (Feet msl)	11/3/2009		2/8/2010	
		Water Level (Feet BTOC)	Water Elevation (Feet msl)	Water Level (Feet BTOC)	Water Elevation (Feet msl)
OBA-2C	573.12	17.91	555.2	18.09	555.0
OBA-3C	573.14	16.74	556.4	17.22	555.9
OBA-5C	572.46	16.98	555.5	18.03	554.4
OBA-6C	569.49	14.43	555.1	14.98	554.5
OBA-8C	573.26	20.79	552.5	22.38	550.9
OBA-11C	573.37	17.03	556.3	17.22	556.2
OBA-13C	574.08	22.55	551.5	22.23	551.9
MW-22D	570.67	NM	NM	NM	NM

Notes:
NM - Not Measured.

Prepared By: AWE 4/2/2010
Checked By: BSA 4/2/2010

Table 5
Summary of Recovery and Passive Relief Well
Water Levels
Olin Chemical
Niagara Falls, NY

Well I.D.	Bottom of A-Zone Elevation (Feet msl)	Reference Point Elevation (Feet msl)	11/3/2009		2/8/2010	
			Water Level (Feet BTOC)	Water Elevation (Feet msl)	Water Level (Feet BTOC)	Water Elevation (Feet msl)
RW-1	561.2	573.69	16.34	557.3	16.72	557.0
RW-1-PZ	561.2	572.73	15.41	557.3	15.78	557.0
RW-2	557	572.49	15.04	557.5	15.21	557.3
RW-2-PZ	557	572.22	14.81	557.4	14.97	557.2
RW-3	557.1	570.09	12.94	557.2	13.19	556.9
RW-3-PZ	557.1	570.03	12.93	557.1	12.90	557.1
RW-4	557.3	569.77	12.31	557.5	12.46	557.3
RW-4-PZ	557.3	569.81	12.32	557.5	12.57	557.2
RW-5	557.3	569.79	12.45	557.3	12.66	557.1
RW-5-PZ	557.3	569.74	12.41	557.3	12.01	557.7
PR-1	561.8	572.82	9.11	563.7	8.82	564.0
PR-1-PZ	561.8	571.58	7.86	563.7	7.62	564.0
PR-2	561.7	572.72	14.92	557.8	15.08	557.6
PR-2-PZ	561.7	572.70	15.13	557.6	15.32	557.4
PR-3	558.2	572.79	15.32	557.5	15.54	557.3
PR-3-PZ	558.2	572.16	14.71	557.4	14.87	557.3
PR-4	556.7	570.21	14.12	556.1	17.98	552.2
PR-4-PZ	556.7	570.14	14.23	555.9	15.31	554.8
PR-5	559.1	570.68	10.28	560.4	10.48	560.2
PR-5-PZ	559.1	569.69	10.54	559.2	10.66	559.0
PR-6	559.7	568.70	9.36	559.3	10.09	558.6
PR-7	558.9	569.06	6.88	562.2	7.67	561.4
PR-8	559.2	568.42	6.12	562.3	6.11	562.3
PR-9	557.6	568.72	7.43	561.3	7.49	561.2
PR-10	558.9	568.44	9.71	558.7	10.09	558.3
PR-11	558.8	568.01	4.30	563.7	6.37	561.6
PR-12	558.9	568.54	14.33	554.2	16.82	551.7
SRW-1	558.6	572.57	9.02	563.5	9.02	563.5
SRW-2	556	573.04	12.88	560.2	13.63	559.4
PR-13	562.4	569.07	11.23	557.8	11.51	557.6

NOTES:

Below bottom of A-zone

NM - Not Measured

NR - Not Recorded

NI - Not Installed

1 - Water level from previous month with similar flow rate used for contouring.

msl - above mean sea level

Prepared By: AWE 4/2/2010

Checked By: BSA 4/2/2010