Olin

P. O. BOX 248, 1186 LOWER RIVER ROAD, NW, CHARLESTON, TN 37310-0248

(423) 336-4000 FAX: (423) 336-4166

PL

July 31, 2007

Mr. Alex Czuhanich
New York State Dept. of Environmental. Conservation
Division of Hazardous Waste
625 Broadway
Albany , NY 12233

re: Quarterly Report: Olin Chemicals
Buffalo Ave. Facility, Niagara Falls, NY

Dear Mr. Czuhanich:

This is the 39th Quarterly report as required by Olin's Administrative Order on Consent (AOC) for our Niagara Falls Plant, (Index #R9-4171-94-08, Site Registry #9-32-051A, and B). The timeframe for this report covers the period from April 1, 2007 through June 30, 2007.

Operation / Maintenance issues :
Details of the implementation of routine maintenance tasks and trouble shooting activities are included for the most recent quarter in the monthly memoranda from Olin's consultant, Mactec Engineering and Consulting, (***Attachment 1***). The most significant metrics of system performance are the tracking of downtime and of target drawdown levels. Historically, when the system is running and operating efficiently, hydraulic capture is achieved. The monthly O&M reports document the details of all issues.

We experienced a permit exceedance on June 11,, 2007.for our City sewer discharge loading for BHC. The permitted daily maximum of 0.07 pounds per day was exceeded with a total of 0.09 pounds per day. The source of BHC is likely the groundwater collection system. BHC does not strip out in the treatment system and has been discharged according to permit to the Niagara Falls City sewer system. In an effort to eliminate that exceeded loading, Olin reduced the pumped groundwater volume, per my email to you of June 29, 2007, notifying you of our need to reduce pump rates. We are tracking piezometric levels to determine whether this reduced pump rate has impacted our hydraulic containment. We are also tracking system effluent and recovery well header inflow to pinpoint the cause of the exceedance. The notification memo is included in ***Attachment 6***.

Transducers have been replaced in several wells, as detailed in the monthly Memoranda.

The re-drilling of the recovery well OBA9AR has been completed and that well is now back online.

Hydraulic Capture:
Attachment 2 includes piezometric maps for each hydraulic zone representing the most recent quarter. That attachment also includes tables and hydrographs documenting empirical monthly hydraulic capture comparisons. Data for piezometric levels are included electronically on the CD in ***Attachment 3.***

A-zone: The A-zone groundwater capture criterion is via empirical comparison to Gill Creek stage. In general, A-zone capture is being achieved over most of the 300 foot boundary with Gill Creek, and relative to potential northward flow toward Buffalo Avenue. Gill Creek average

elevation remains predominantly greater than local groundwater elevation along its boundary. Well PR11 was measured higher than the Gill Creek average elevation. However, the steep lateral gradient to either side of PR11 suggests that the isolated elevation high point is likely to represent a divide between recovery wells' cones of depression rather than representing a bypass flow lane.

B-zone: Plots from quarterly piezometric measurements suggest that B-zone capture is being achieved.. Capture has been consistently achieved, as evidenced by cones of depression around the recovery wells along Gill Creek and by the gradient toward the recovery wells from Buffalo Avenue.

C-zone: C and CD-zone capture is achieved, with flow gradients consistent over time, per the pumping at the high volume Production well in Plant 1. This groundwater is captured by the Olin production well, and is demonstrated by piezometric plots showing gradients consistent with historic gradients toward the production well. Some easterly groundwater flow is possibly influenced by pumping from the Solvent site to the east.

Groundwater Quality:

The second quarter recovery well header groundwater data are included on the CD in ***Attachment 3***. This attachment also includes piezometric data and system flow data. The first half semiannual monitoring data are also included on the CD in ***Attachment 3***.

Overview of extracted groundwater volume and contaminant mass:

The volume of pumped groundwater for this quarter was approximately 8.2 million gallons. The total volume of groundwater extracted and treated since system startup is approximately 232 million gallons. Since startup the system has extracted over 50,000 pounds of organics, 231 pounds of pesticides and 3 pounds of mercury.

Attachment 4 contains data and tables to support calculations of mass removed during the currently reported quarter and for the entire project duration. Included are recovery well flow data, recovery well header contaminant concentrations, estimated mass removed for each quarter by parameter group and a table of groundwater flow and mass removed since start-up. ***Attachment 4*** also contains tables of chemical analysis data for discharge headers.

Accelerated Remediation Program:

Olin continues to implement the Bioremediation Pilot Study. Olin has installed eight additional wells at the southern end of the Plant 2 area. Of these, six are ORC (oxygen release compound) wells and two are monitoring wells.. ORC "socks" have been installed in the new ORC wells (ORC 1-6), plus in existing wells PN21B, PN12B, OBA5B. The socks are intended to deliver oxygen to the saturated soil and bedrock substrate in a manner that is more efficient and continuous than the previous method of "bubbling" air into the aquifer via a compressor. The wells with ORC socks are located to span the southernmost upgradient area to attain maximum coverage for oxygen delivery. These and other wells are sampled monthly to track oxygen consumption plus other indicator parameters, and to track trends in constituent degradation. ***Attachment 5*** contains maps showing all well locations.

We believe that we are continuing to make significant progress in removing contaminant mass from Olin's Niagara Falls Plant site via our remediation system. We will continue to improve the system and monitor its effectiveness. Please direct any questions or comments to me at 423/336-4587.

Sincerely,

Michael J. Bellotti

Michael J. Bellotti
OLIN CORPORATION

List of Attachments

Attachment 1:
Monthly Operation and Maintenance Status Reports:

Attachment 2:
Piezometric maps, hydrographs and supporting data

Attachment 3:
Data CD:

- Piezometric data
- Groundwater Quality Data:
- Groundwater collection system flow data

Attachment 4:

- Quarterly Contaminant mass removed
- Groundwater flow and mass removed since project start-up
- Recovery well header and constituent concentrations (hard copy)
- Mass removal trend graphs

cc:
Pat Concannon - NYSDEC Buffalo, NY
Gina Senia: Olin Niagara Falls, NY
Dale Carpenter: USEPA: Region II, New York, NY
Rick Marotte: Mactec Engineering: Kennesaw, GA

Attachment 1

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Gil Doucet, Jose Reyes, Gina Senia @ Olin-Niagara; Margaret Tanner and Rick Marotte @ MACTEC.

From: Tony Englund

Date: May 17, 2007

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for April 2007**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6100070001

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 April 2007:

Ground-Water Collection and Treatment System Status April 2007				
Recovery Well	**Average Flowrate (gpm)**	**Average GW Elevation (ft MSL)**	**Target Drawdown Level (ft MSL)**	**Days Meeting Target Drawdown**
RW-1	1.8	557.32	559	30
RW-2	31.1	557.43	556	0
RW-3	6.8	557.14	558.3	29
RW-4	8.4	556.85	558.1	30
PR-4	1.1	555.22	556.7	29
RW-5	0.2	553.28	557.5	30
PR-12	6.9	557.50	558.9	30
OBA-9AR	0.06	557.29	559.8	28

All wells but RW-2 met their target drawdown levels for at least 28 of the 30 days in April 2007. The exceedances were caused by minor system upsets and routine maintenance. RW-2 operated consistently at a flowrate averaging 31 gpm but the water level continued to be higher than the target drawdown level. This flowrate provided capture in based on the February 2007 potentiometric surface evaluation. The potentiometric surface and the capture of RW-2 will be evaluated again in May 2007.

RW-5 has been down since April 11 due to a faulty transducer and a pump overload. The water level remained below target level for the entire month despite the pump failure. The cause of the pump overload was determined to be 2+ feet of sediment at the bottom of the well that clogged the pump. The well is scheduled to be flushed the week of May 14th. RW-1 was down for three days from April 30th to May 2nd due to an electrical problem that was corrected.

DOWNTIMES

	Date	Duration (hrs:min)	Reason
System	4/23/2007	3:00	High pH in sump
System	4/27/2007	4:50	Wells turned off to clean the stripper
RW-1	4/27/2007 – 4/28/2007	17:35	Pump plugged – pulled and replaced.
	4/30/2007 – 5/2/2007	3 days	Electrical problem – corrected.
RW-5	4/11/2007	20+ days	2+ feet of mud at well bottom

WELL INSPECTIONS

Each week, the recovery wells are inspected for well loss and transducer calibration. Differences of a foot or greater between the well and the piezometer indicate unacceptable well loss and is generally corrected by acid washing the well. Differences of 0.25 feet or more between the piezometer and the transducer reading in OMNX indicate that the transducer should be recalibrated. The following table summarizes the results of those inspections and any actions taken to correct problems:

	Date	Piez/OMNX Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	4/3/2007	0.03	0.24	
	4/9/2007	-0.08	0.14	
	4/16/2007	-0.12	-0.04	
	4/24/2007	-0.11	-0.09	
RW-2	4/3/2007	-0.15	-0.07	
	4/9/2007	-0.20	-0.03	
	4/16/2007	-0.23	-0.05	
	4/24/2007	-0.12	-0.06	Pump pulled this day; transducer also went down this day
RW-3	4/3/2007	0.03	-0.06	
	4/9/2007	-0.03	-0.05	
	4/16/2007	-0.07	-0.06	
	4/24/2007	0.07	-0.04	
RW-4	4/3/2007	0.10	0.07	
	4/9/2007	0.01	0.04	
	4/16/2007	-0.01	0.08	
	4/24/2007	0.15	0.06	
PR-4	4/3/2007	-0.18	0.53	
	4/9/2007	0.15	2.80	
	4/16/2007	0.27	0.65	
	4/24/2007	-0.18	0.43	
RW-5	4/3/2007	-15.89	2.38	Bad transducer/well down
	4/9/2007	-15.70	0.23	Bad transducer/well down
	4/16/2007	-6.63	-0.05	Bad transducer/well down
	3/27/2007	-7.44	0.08	Bad transducer/well down
PR-12	4/3/2007	-0.09	NA	
	4/9/2007	-0.19	NA	
	4/16/2007	-0.09	NA	
	4/24/2007	0.08	NA	
OBA-9AR	4/3/2007	0.15	-0.03	
	4/9/2007	0.15	0.00	
	4/16/2007	0.15	-0.12	
	4/24/2007	0.18	-0.05	

DNAPL INSPECTION

On April 3, 2007, seven recovery wells and six monitoring wells were inspected for the presence of DNAPL. The following table presents the results of the inspection:

Recovery Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
RW-1	1	NO		
RW-2	1	NO		
RW-3	1	NO		
RW-4	1	NO		
RW-5	1	NO		
PR-4	1	YES	125 ml	
PR-5	1	NO		
OBA-9AR	1	NO		
PN-11B	1	NO		
PN-12B	1.5	YES	100 mL	
PN-14B	1	YES	40 mL	
PN-15B	1	NO		
OBA-10A	1	NO		

Bellotti, Mike CHAS

From: Brown, Jim CHAS

Sent: Thursday, May 31, 2007 5:06 PM

To: Elmore, Allison CHAS; Anderson, Steve CHAS; Bellotti, Mike CHAS; 'Burns, John'; Cashwell, James M CHAS; Goodner, Angela CHAS; Haynes, Stanley CHAS; Hazlett, Rhonda S CHAS; Hilliard, Garland CHAS; Horn, Ray CHAS; McClure, Rick CHAS; Miller, Lorraine CHAS; Morrow, Steve G. CHAS; Richards, Curt CHAS; Roberts, Keith CHAS; Share, David M CHAS; Turner, Dennis CHAS; Turner, Susan M CHAS; Wallace, Shiela R CHAS; Walsh, Stephen CHAS; Young, Jimmy CHAS

Subject: New Contact Info for Jim Brown

Thanks for all the well wishes and the great relationships through the years. Here's my new contact info:

136 Melville Lane SW
Aiken, SC 29803

Home: (803) 648-7870
Cell: (803) 522-0382

Personal email: jcbrown@alumni.clemson.edu
Business email: james.c.brown@gmail.com

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Gil Doucet, Greg Moslow, Gina Senia @ Olin-Niagara; Margaret Tanner and Rick Marotte @ MACTEC.

From: Tony Englund

Date: June 8, 2007

Subject: Monthly O&M Status Update for Ground-Water Collection and Treatment System for May 2007
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6100070001

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 May 2007:

Ground-Water Collection and Treatment System Status
May 2007

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	2.6	556.99	559	31
RW-2	32.0	557.27	556	0
RW-3	6.4	556.69	558.3	31
RW-4	7.5	556.29	558.1	31
PR-4	1.2	555.76	556.7	27
RW-5	6.6	553.74	557.5	31
PR-12	5.2	557.53	558.9	31
OBA-9AR	0.025	556.93	559.8	31

All wells but RW-2 and RW-5 consistently met their target drawdown levels in May 2007. The few exceedances were caused by minor system upsets and routine maintenance.

RW-2 operated consistently at a flowrate averaging 32 gpm but the water level continued to be higher than the target drawdown level. This flowrate and resulting drawdown provided capture based on the May 2007 potentiometric surface evaluation.

RW-5 had been down since April due to sediment fouling of the well. The well was cleaned and brought back online by May 15, 2007. The well operated consistently at 12 gpm for the remainder of the month. Manual water level measurements showed that the drawdown target was not exceeded during May despite the downtime.

OBA-9AR and PR-12 appeared to have a flowmeter problem from May 17 until May 31st. It was likely because of a tripped breaker found in PR-4. The flow reported to OMNX low to zero for both wells over the time period, but there was no significant rise in water levels or drawdown level exceedances for either well. This fact was confirmed with manual water level measurements.

A number of downtimes occurred between May 15 and May 16 for which Olin plant personnel were unable to determine the cause but no significant drawdown level exceedances resulted.

DOWNTIMES

	Date	Duration (hrs:min)	Reason
PR-4	5/10/2007	13:20	OMNX control system malfunction
System	5/15/2007	2:45	OMNX control system malfunction
RW-5	5/15/2007	9:20	OMNX control system malfunction
System	5/16/2007	3:10	OMNX control system malfunction
RW-5	5/16/2007	8:25	OMNX control system malfunction
System	5/16/2007	0:20	OMNX control system malfunction

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 and is generally corrected by acid washing the well. Any differences seen between the

OMNX 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/OMNX Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	5/1/2007	-0.04	-0.05	
	5/8/2007	0.09	0.23	
	5/15/2007	0.21	0.17	
	5/22/2007	0.07	0.47	
	5/29/2007	0.11	0.57	
RW-2	5/1/2007	-0.21	-0.05	
	5/8/2007	-0.15	-0.03	
	5/15/2007	-0.16	-0.05	
	5/22/2007	-0.11	-0.03	
	5/29/2007	-0.13	-0.03	
RW-3	5/1/2007	-0.15	-1.40	
	5/8/2007	0.03	0.49	
	5/15/2007	-0.06	-0.06	
	5/22/2007	-0.02	-0.04	
	5/29/2007	0.00	-0.08	
RW-4	5/1/2007	-0.13	0.17	
	5/8/2007	0.03	0.21	
	5/15/2007	0.02	0.07	
	5/22/2007	-0.04	-0.23	
	5/29/2007	-0.03	-0.02	
PR-4	5/1/2007	-0.01	0.65	
	5/8/2007	-0.35	0.36	
	5/15/2007	-0.16	0.42	
	5/22/2007	-0.01	0.83	
	5/29/2007	0.15	1.06	
RW-5	5/1/2007	NA	-0.04	bad transducer
	5/8/2007	NA	-0.65	bad transducer
	5/15/2007	NA	-0.06	bad transducer
	5/22/2007	NA	-0.05	bad transducer
	5/29/2007	NA	-0.05	bad transducer
PR-12	5/1/2007	-0.10	NA	
	5/8/2007	-0.09	NA	
	5/15/2007	-0.11	NA	
	5/22/2007	-0.11	NA	
	5/29/2007	0.01	NA	
OBA-9AR	5/1/2007	0.25	-0.32	
	5/8/2007	0.17	-0.02	
	5/15/2007	0.20	-0.04	
	5/22/2007	-0.44	0.58	
	5/29/2007	0.26	-0.04	

DNAPL INSPECTION

On May 1, 2007, seven recovery wells and seven monitoring wells were inspected for the presence of DNAPL. The following table presents the results of the inspection:

Recovery Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
RW-1	1	NO		
RW-2	1	NO		
RW-3	1	NO		
RW-4	1	NO		
RW-5	1	NO		
PR-4	1	YES	Trace	
PR-12	1	NO		
OBA-9AR	1	NO		
PR-1	1	NO		
PR-2	1	NO		
PR-3	1	NO		
PR-5	1	NO		
PR-6	1	NO		
PR-7	1	NO		
PR-8	1	NO		
PR-9	1	YES	Trace	
PR-10	1	YES	Trace	
PR-11	1	NO		
PR-13	1	YES	Trace	
PN-11B	1	NO		
PN-12B	1	YES	80 mL	
PN-14B	1	YES	1000 mL	
PN-15B	1	NO		
PN-21B	1	NO		
OBA-10A	1	NO		

MACTEC

MEMORANDUM

To: Mike Bellotti @ Olin-Charleston; Don Greer, Gil Doucet, Greg Moslow, Gina Senia @ Olin-Niagara; Margaret Tanner and Rick Marotte @ MACTEC.

From: Tony Englund

Date: July 13, 2007

Subject: **Monthly O&M Status Update for Ground-Water Collection and Treatment System for June 2007**
Olin Corporation, Niagara Falls, New York
MACTEC Job # 6100070001

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 June 2007:

Ground-Water Collection and Treatment System Status
June 2007

Recovery Well	Average Flowrate (gpm)	Average GW Elevation (ft MSL)	Target Drawdown Level (ft MSL)	Days Meeting Target Drawdown
RW-1	2.6	557.18	559	30
RW-2	31.0	557.56	556	0
RW-3	5.8	557.34	558.3	30
RW-4	6.7	557.01	558.1	29
PR-4	1.8	557.72	556.7	26
RW-5	10.7	417.72	557.5	30
PR-12	5.9	557.77	558.9	30
OBA-9AR	0.0	204.37	559.8	30

All wells but RW-2, RW-4, and PR-4 consistently met their target drawdown levels in June 2007. The few exceedances were caused by minor system upsets and routine maintenance. PR-4 was intentionally shut down as part of an investigation of pesticide concentrations in captured GW.

RW-2 operated consistently at a flowrate averaging 31 gpm but the water level continued to be higher than the target drawdown level. This flowrate and resulting drawdown provided capture based on the May 2007 potentiometric surface evaluation.

DOWNTIMES

	Date	Duration (hrs:min)	Reason
System	6/3/2007-6/4/2007	9:00	High Rain Event
System	6/11/2007-6/12/2007	9:00	Sediment from drilling equipment washdown clogging stripper
System	6/12/2007	1:25	Power outage
System	6/19/2007	3:10	Chlorine release on other side of plant
System	6/23/2007-6/24/2007	5:30	Investigation of presence of pesticides in captured GW
PR-4	6/30/2007-7/1/2007	20:00	Investigation of presence of pesticides in captured GW

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 and is generally corrected by acid washing the well. Any differences seen between the OMNX 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:

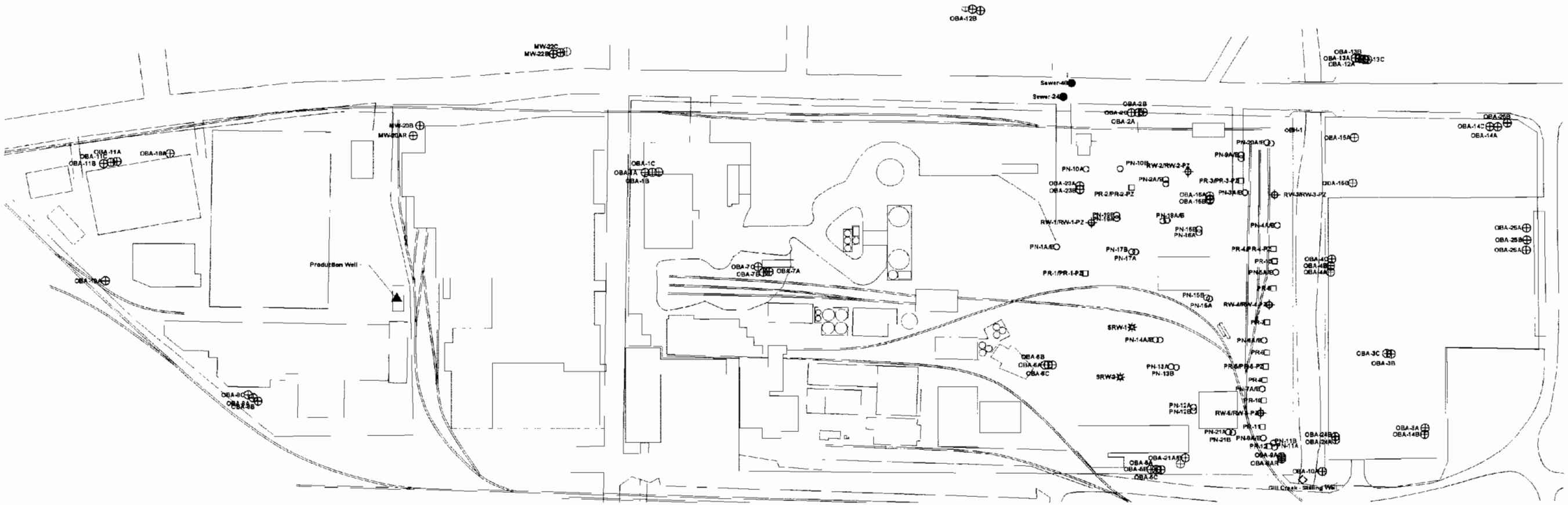
	Date	Piez/OMNX Difference (ft)	Piez/Well Difference (ft)	Comment
RW-1	6/5/2007	0.19	0.78	
	6/12/2007	0.03	0.59	
	6/19/2007	0.05	-0.24	
	6/26/2007	0.09	0.47	
RW-2	6/5/2007	-0.11	-0.04	
	6/12/2007	-0.18	-0.02	
	6/19/2007	-0.11	-0.03	
	6/26/2007	-0.14	-0.05	
RW-3	6/5/2007	-0.03	0.00	
	6/12/2007	0.01	-0.01	
	6/19/2007	-0.11	-0.06	
	6/26/2007	0.00	-0.01	
RW-4	6/5/2007	-0.03	0.10	
	6/12/2007	-0.14	0.09	
	6/19/2007	0.03	0.04	
	6/26/2007	0.02	0.10	
PR-4	6/5/2007	0.21	0.96	
	6/12/2007	-0.45	0.23	
	6/19/2007	-0.66	-0.07	
	6/26/2007	-0.71	0.39	
RW-5	6/5/2007	NA	-0.05	Bad transducer
	6/12/2007	NA	-0.05	Bad transducer
	6/19/2007	NA	-0.05	Bad transducer
	6/26/2007	NA	-0.06	Bad transducer
PR-12	6/5/2007	-0.01	NA	
	6/12/2007	-0.13	NA	
	6/19/2007	-0.71	NA	
	6/26/2007	-0.39	NA	
OBA-9AR	6/5/2007	0.15	-0.02	
	6/12/2007	NM	NM	OMNX problem
	6/19/2007	NM	-0.02	OMNX problem
	6/26/2007	NM	-0.03	OMNX problem

The RW-5 transducer was replaced at the end of June 2007. The PR-4 transducer was investigated and a replacement was ordered. No water level for OBA-9AR is being reported by OMNX; the problem is being investigated.

DNAPL INSPECTION

On June 11, 2007, seven recovery wells and seven monitoring wells were inspected for the presence of DNAPL. The following table presents the results of the inspection:

Recovery Well	Volume Purged (gallons)	DNAPL Presence	DNAPL Quantity Removed (mL)	Comment
RW-1	1	NO		
RW-2	1	NO		
RW-3	1	NO		
RW-4	1	NO		
RW-5	1	NO		
PR-4	1	YES	Trace	
PR-12	1	NO		
OBA-9AR	1	NO		
PR-1	1	NO		
PR-2	1	NO		
PR-3	1	NO		
PR-5	1	NO		
PN-11B	1	NO		
PN-12B	1	YES	50 mL	
PN-14B	1	YES	300 mL	
PN-15B	1	NO	40 mL	
PN-21B	1	NO		
OBA-10A	1	Yes	Trace	



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 MET 06/19/2006
Checked By AWE 06/20/2006

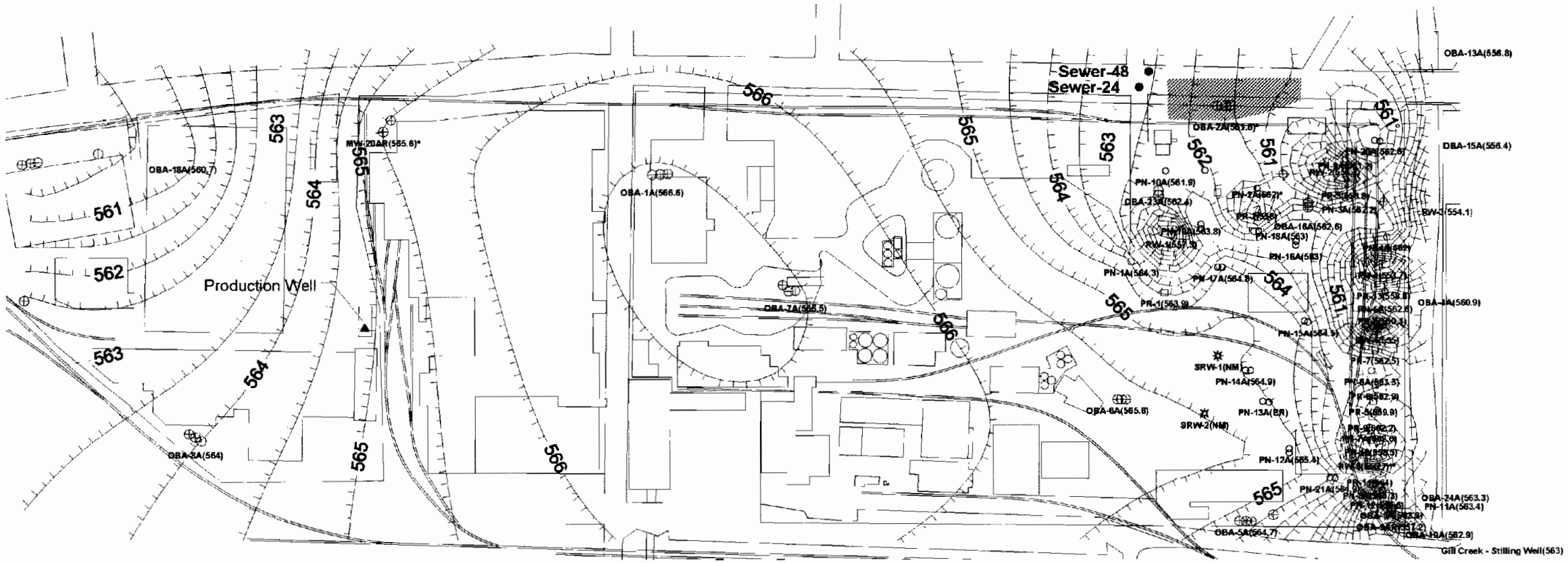
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

WELL LOCATION MAP

Job No.: 6300-06-0005

POTENTIOMETRIC SURFACE MAPS



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
- ● SEWER INVERT
- ✲ SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES (CONTOUR INTERVAL: 0.5 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION
- ESTIMATED DRY AREA IN ZONE A

Extraction Well	Average Flow Rate (gpm)***
RW-1	0.0
RW-2	33.9
RW-3	6.8
RW-4	8.1
RW-5	0.0
PR-4	0.9
PR-12	7.0
OBA-9AR	0.057

*** : Average daily flow rates for May 1, 2007.
: RW-1 and RW-5 were down for repair on May 1, 2007
: 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, elevation of bottom of A-Zone used in contouring.

** : Lid on pro-casing is broken.

ER :Elevation not used for contouring due to suspected anomalous measurement.

● : 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. Due to technical difficulty, the transducer data is unavailble for May 2007. A discrete measurement from Gill Creek Stilling was used in contouring the A-Zone

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

Prepared By VJO 06/05/2007
Checked By AWE 06/06/2007

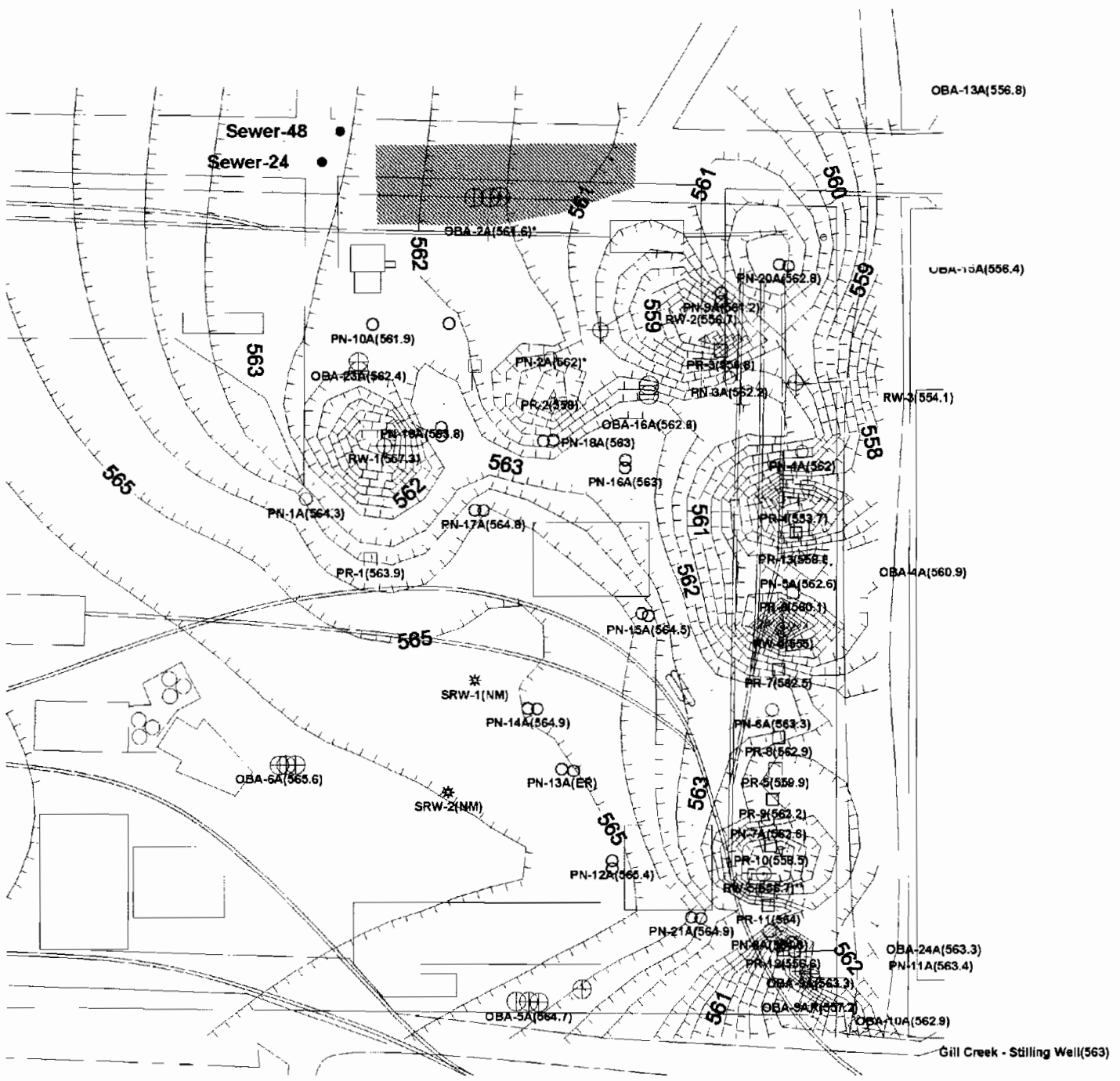
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- A ZONE (MAY 1, 2007)

Job No.: 6100-07-0001

Figure 1



Extraction Well	Average Flow Rate (gpm)***
RW-1	0.0
RW-2	33.9
RW-3	6.8
RW-4	8.1
RW-5	0.0
PR-4	0.9
PR-12	7.0
OBA-9AR	0.057

*** : Average daily flow rates for May 1, 2007.
: RW-1 and RW-5 were down for repair on May 1, 2007
: 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

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
- SEWER INVERT
- SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 — ESTIMATED GROUNDWATER CONTOUR LINES (CONTOUR INTERVAL: 0.5 FOOT)
- EQUIPOTENTIAL CONTOUR EQUIVALENT TO GILL CREEK ELEVATION
- ESTIMATED DRY AREA IN THE A-ZONE

0 120 240
Scale 1 inch = 120 feet

NOTES

* : Well dry, elevation of bottom of A-Zone used in contouring.

** : Lid on pro-casing is broken.

ER :Elevation not used for contouring due to suspected anomalous measurement.

● : 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.
Due to technical difficulty, the transducer data is unavailble for May 2007.
A discrete measurement from Gill Creek Stilling was used in contouring the A-Zone

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

Prepared By: VUO 06/05/2007
Checked By: AWE 06/05/2007

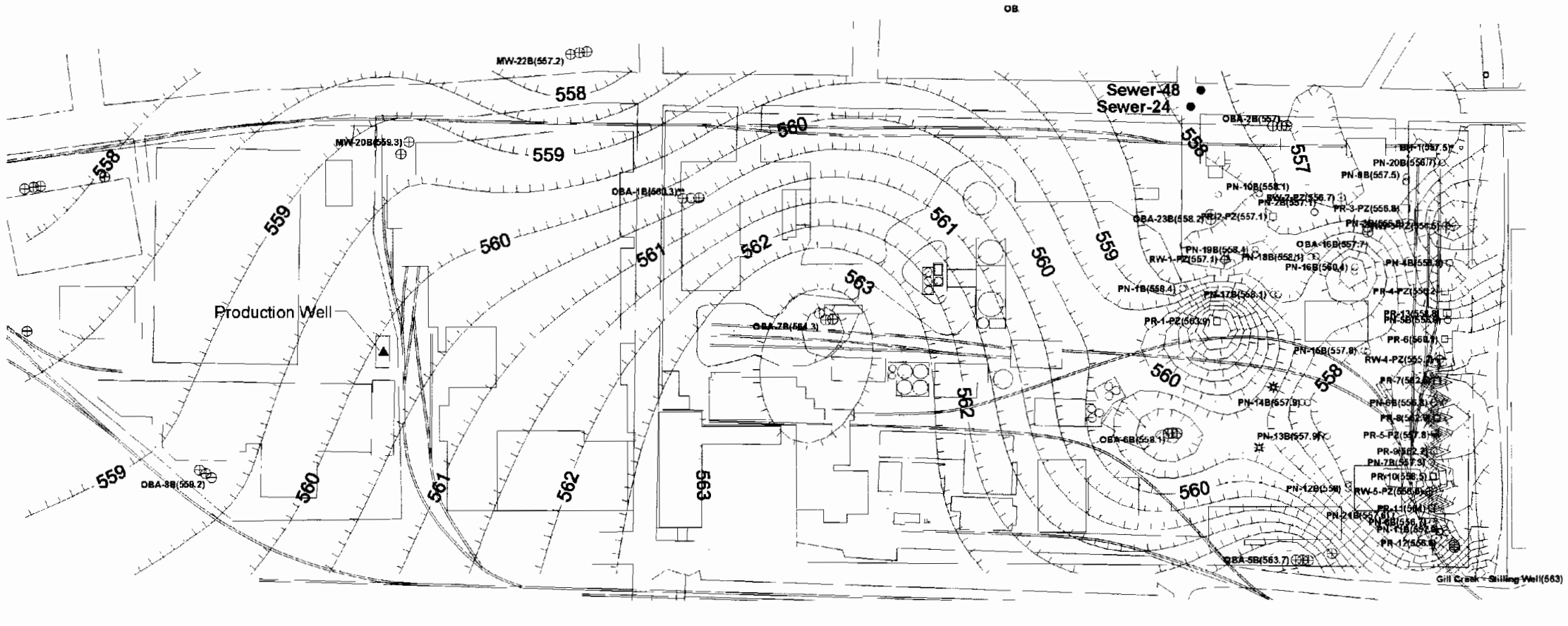
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- A ZONE
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 1A



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
- ● SEWER INVERT
- ✲ SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES (CONTOUR INTERVAL: 0.5 FOOT)

Extraction Well	Average Flow Rate (gpm)***
RW-1	0.0
RW-2	33.9
RW-3	6.8
RW-4	8.1
RW-5	0.0
PR-4	0.9
PR-12	7.0
OBA-9AR	0.057

*** : Average daily flow rates for May 1, 2007.
: RW-1 and RW-5 were down for repair on May 1, 2007
: 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

▲ : 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. PN-2B elevation used as dummy points north of RW-2.
: 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
: Hypothetical data points (563.4 feet msl) added along southern portion of Gill Creek in area without monitoring wells to account for leakage.

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

Prepared By VUO 06/05/2007
Checked By AWE 06/06/2007

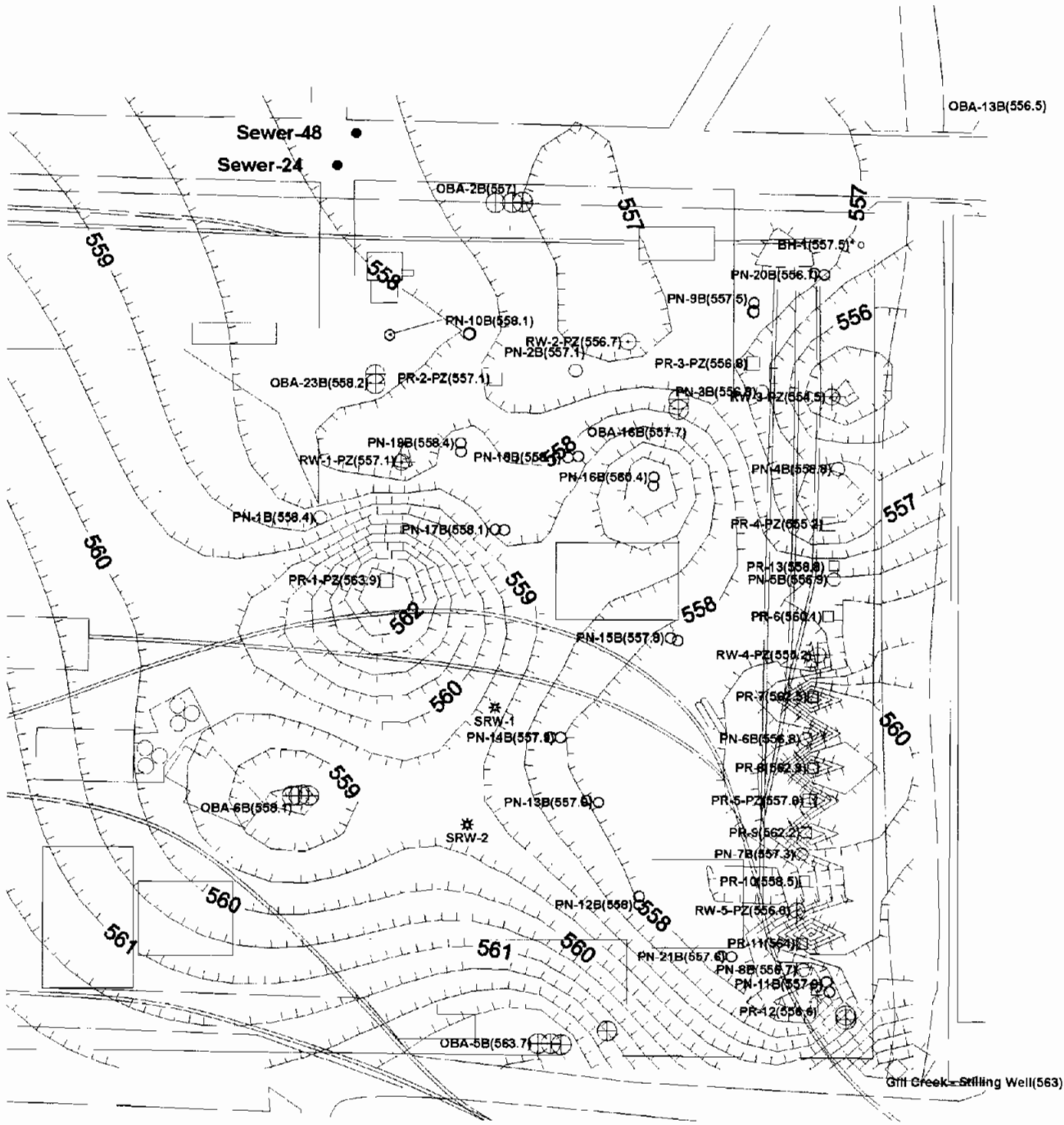
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- B ZONE
(MAY 1, 2007)

Job No.. 6100-07-0001

Figure 2



Extraction Well	Average Flow Rate (gpm)***
RW-1	0.0
RW-2	33.9
RW-3	6.8
RW-4	8.1
RW-5	0.0
PR-4	0.9
PR-12	7.0
OBA-9AR	0.057

*** : Average daily flow rates for May 1, 2007.
: RW-1 and RW-5 were down for repair on May 1, 2007
: 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
- ● SEWER INVERT
- ✲ SUPPLEMENTAL REMEDIATION WELL
- PROPERTY LINE
- 565 ESTIMATED GROUNDWATER CONTOUR LINES (CONTOUR INTERVAL: 0.5 FEET)

0 120 240

Scale: 1 inch = 120 feet

NOTES

* : Elevation not used in contouring.
▲ : 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. PN-2B elevation used as dummy points north of RW-2.
. 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
: Hypothetical data points (563.4 feet msl) added along southern portion of Gill Creek in area without monitoring wells to account for leakage.

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

Prepared By VJO 06/05/2007
Checked By AWE 06/06/2007

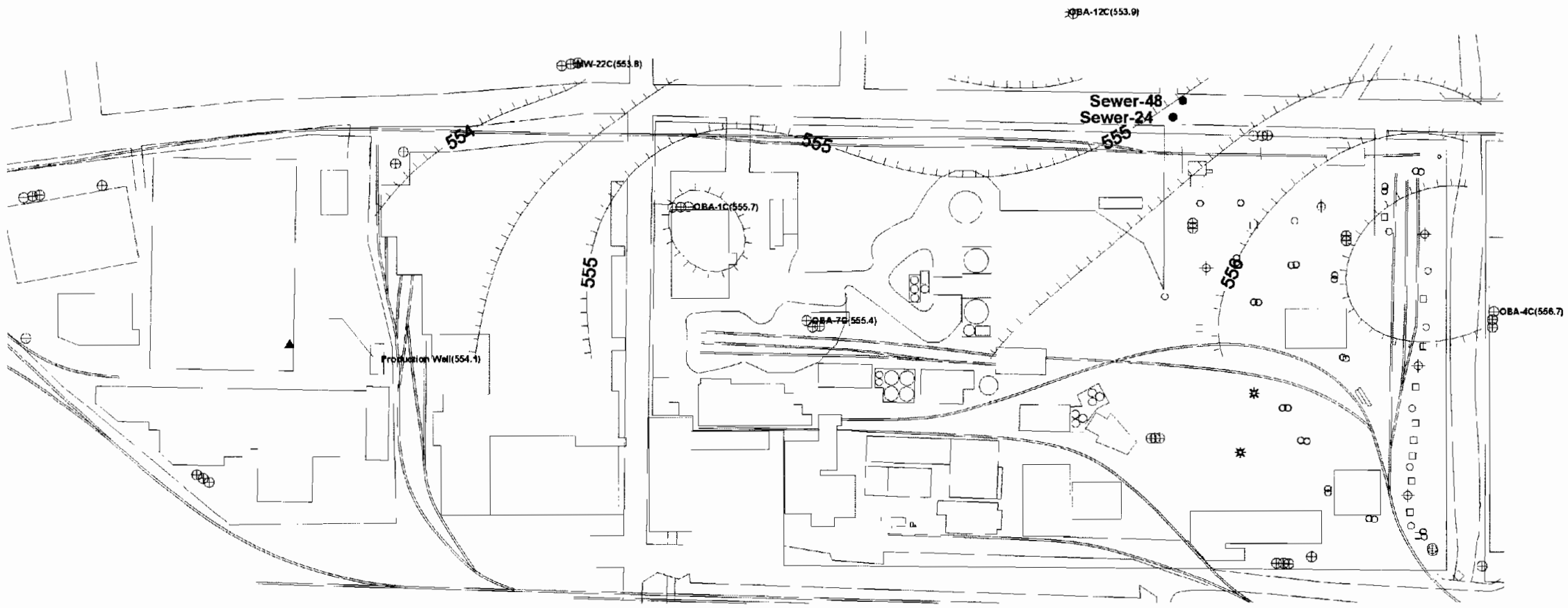
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

ARGC AREA
POTENTIOMETRIC SURFACE -- B ZONE
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 2A



LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- ⊖ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⊕ GROUNDWATER RECOVERY WELLS (FLOW RATE FROM OMNX SYSTEM)
- □ PASSIVE RELIEF WELLS
- ● SEWER INVERT
- ——— PROPERTY LINE
- 555 ——— ESTIMATED GROUNDWATER CONTOUR LINES (CONTOUR INTERVAL: 0.5 FOOT)

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

Well	Average Flow Rate (gpm)
Olin Production Well	632

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

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

0 200 400
Scale 1 inch = 200 feet

Prepared By VUO 06/05/2007
Checked By AWE 06/06/2007

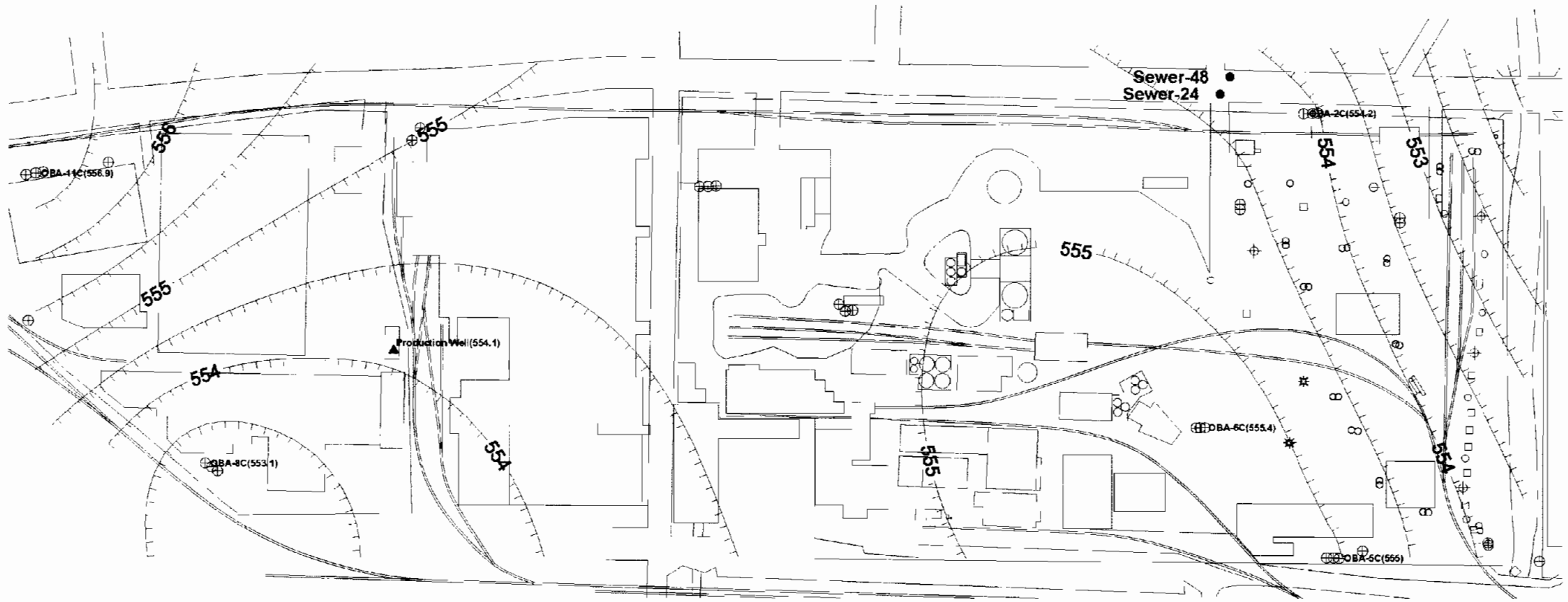
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

POTENTIOMETRIC SURFACE -- C ZONE
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 3



N

LEGEND

- ◇ GILL CREEK MONITORING POINT
- ▲ OLIN PRODUCTION WELL (FLOW RATE FROM DUPONT)
- ⊖ WATER QUALITY MONITORING WELLS
- ○ A/B ZONE PIEZOMETER NESTS
- ⊖ GROUNDWATER RECOVERY WELLS (FLOW RATE FROM OMNX SYSTEM)
- □ PASSIVE RELIEF WELLS
- ● SEWER INVERT

PROPERTY LINE

565 ESTIMATED GROUNDWATER CONTOUR LINES

Well	Average Flow Rate (gpm)
Olin Production Well	632

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

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

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 06/05/2007
Checked By AWE 06/06/2007

OLIN CORPORATION
NIAGARA FALLS, NEW YORK

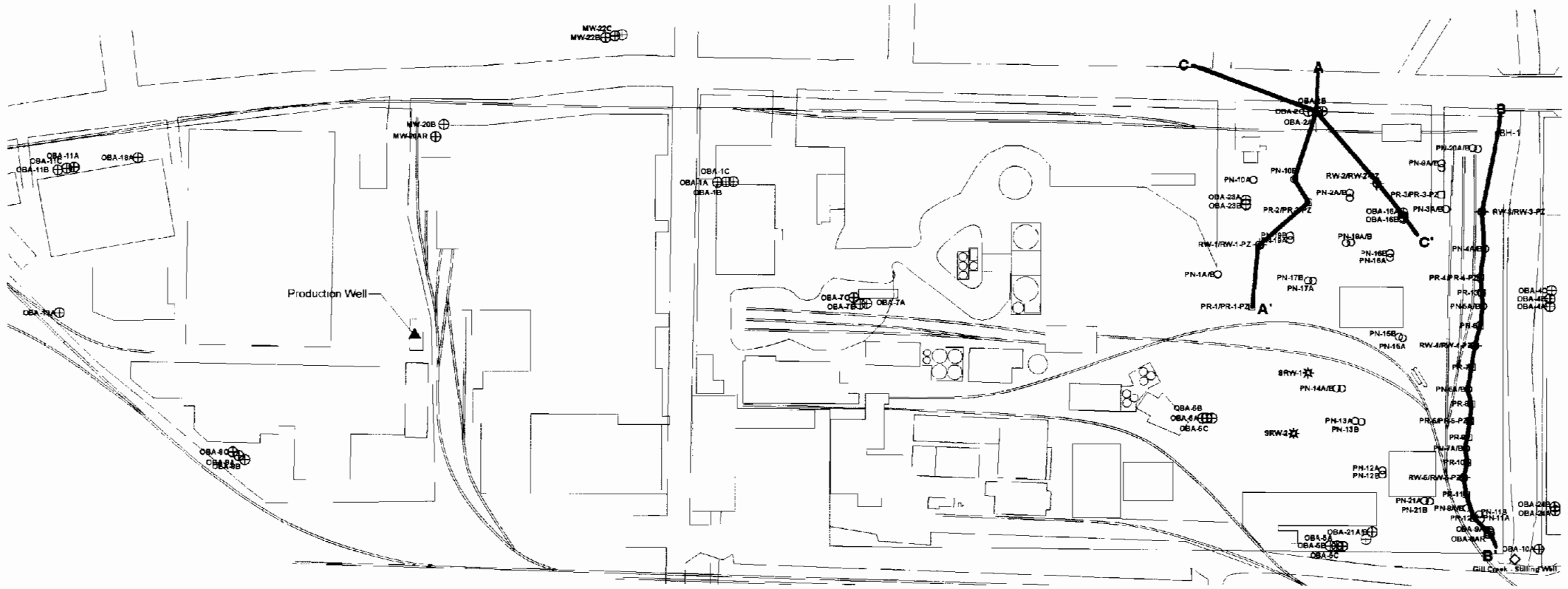
MACTEC

POTENTIOMETRIC SURFACE -- CD ZONE
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 4

CROSS SECTIONS



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

Prepared By: LMS 01/03/2007
Checked By: AWE 01/05/2007

OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

CROSS SECTION LOCATION MAP
(FEBRUARY 6, 2006)

Job No.: 6100-07-0001

Figure 5

A
North

A'
South

Buffalo Avenue

OBA-2A
OBA-2B
OBA-2C
PN-10B
PR-2
RW-1
PN-1A
PN-1B
PR-1

Ground Surface

Fill:
Brown-black gravel sand and silt with some clay, coal and brick fragments

Clay(CL):
Brown-tan and Brown-gray mottled with little silt

Top of Dolostone

48" Sewer Invert

24" Sewer Invert

561.6
564.3
563.9
557.0
558.1
558.0
557.3
558.4
554.2

A-ZONE
B-ZONE
B-ZONE FRACTURES
Fractured
C-ZONE

BT

ELEVATION (FT)
570
566
562
558
554
550
546
542
538

SCALE IN FEET
4
0
40

Vertical Exaggeration 10x

Down to 520.3

NOTES

▽ : Groundwater elevation measured on 05/01/2007

: 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.

Prepared By: VUO 06/05/2007
Checked By: AWE 06/06/2007

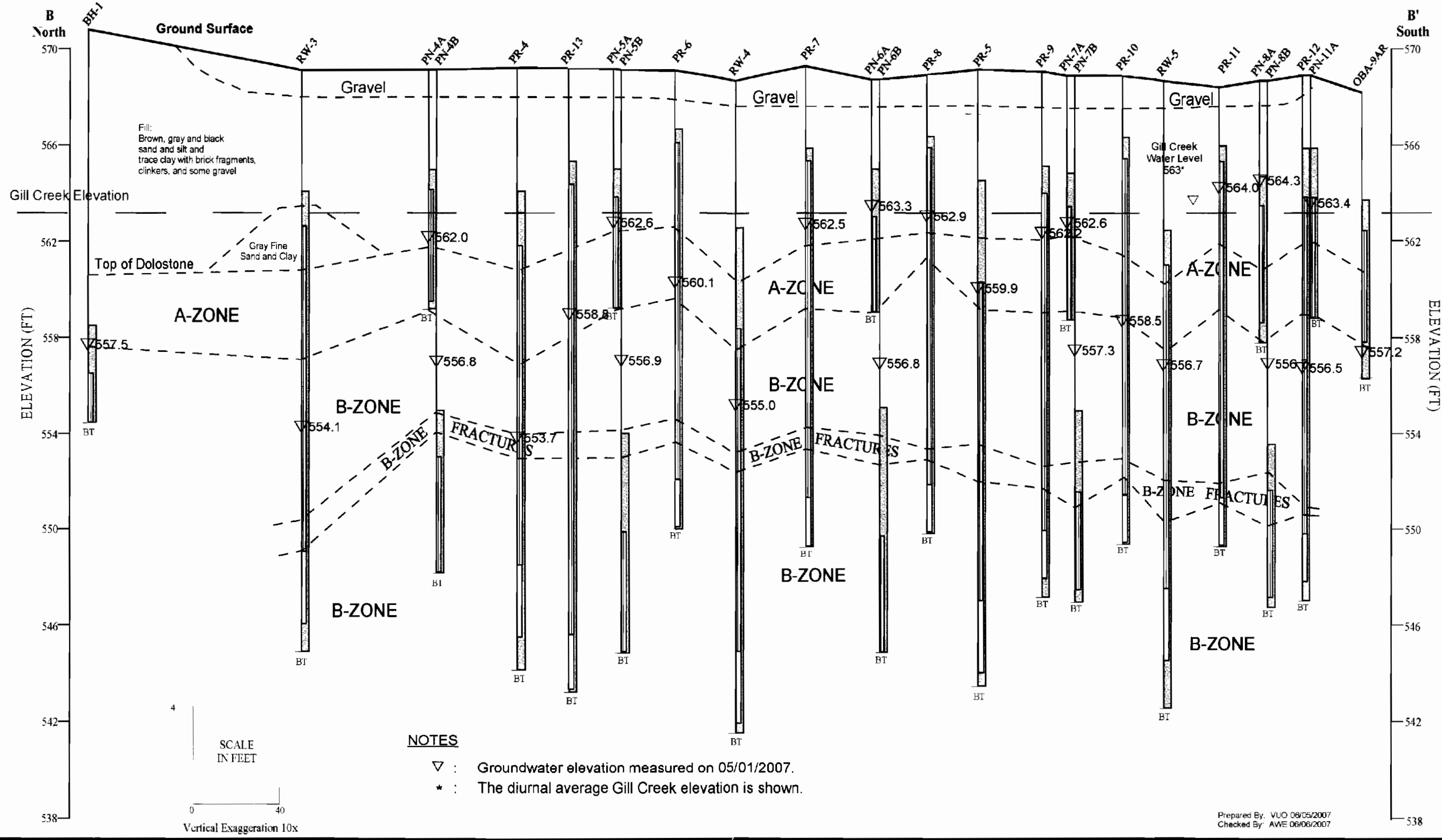
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION AA'
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 6



NOTES

▽ : Groundwater elevation measured on 05/01/2007.

* : The diurnal average Gill Creek elevation is shown.

Prepared By: VUO 06/05/2007
Checked By: AWE 06/06/2007

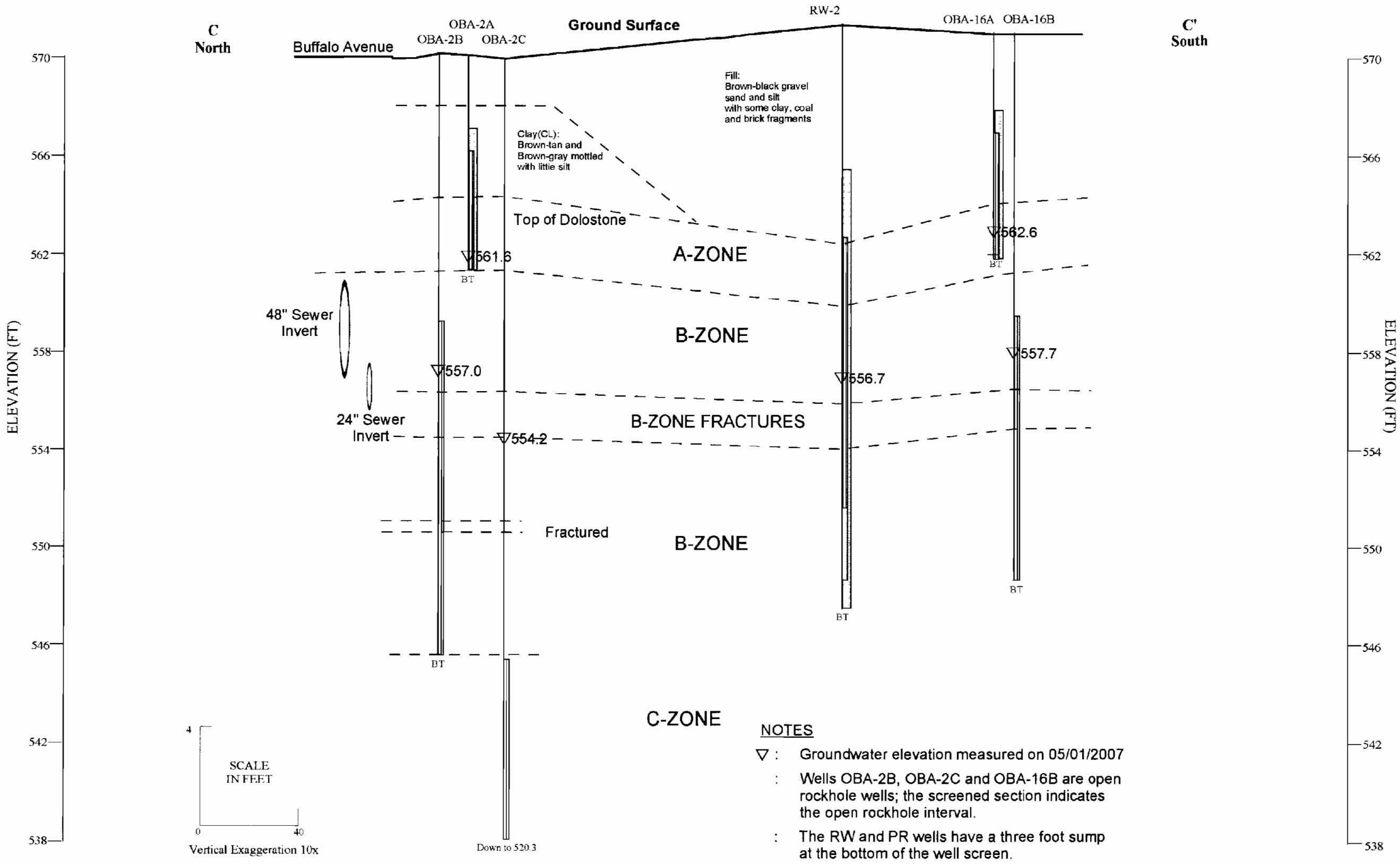
OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION BB'
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 7



NOTES

▽ : Groundwater elevation measured on 05/01/2007

: 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.

Prepared By: VUO 06/05/2007
Checked By AWE 06/06/2007

OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC

HYDROGEOLOGIC CROSS SECTION CC'
(MAY 1, 2007)

Job No.: 6100-07-0001

Figure 8

HYDROGRAPHS

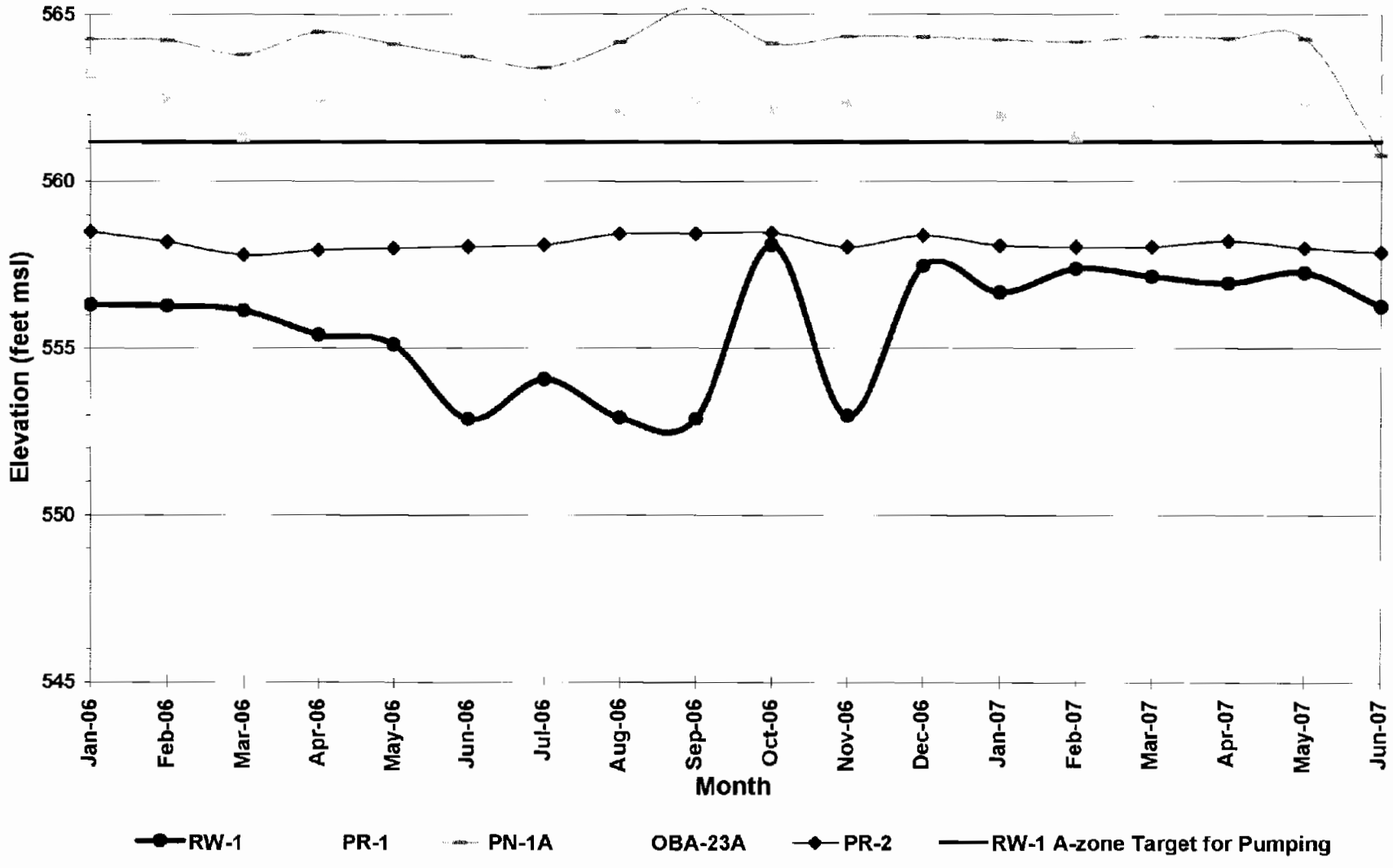
Table A-1
A-Zone
RW-1 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
PR-1	563 58	563 26	562.55	563.26	562 98	562.66	562 51	563.49	563.61	563.33	563 63	563.91	563 60	563.39	563 92	564 00	563 90	563 40
PN-1A	564.28	564 24	563 82	564 49	564 13	563 75	563 40	564 18	565.19	564.13	564.34	564.33	564 25	564 19	564 34	564.29	564 27	560 80
RW-1	556 31	556.28	556.14	555.41	555 11	552.87	554 07	552.92	552.88	558.10	552.97	557.47	556 68	557 38	557 15	556 95	557 26	556.26
OBA-23A	563 19	562.50	561 40	562 46	561 76	561.89	562.46	562 05	562.44	562 16	562.34	562.28	561 98	561 40	562.36	562.41	562 36	561 81
PR-2	558 50	558 20	557 81	557 95	558 00	558.05	558 10	558 44	558.44	558 46	558.04	558.38	558 08	558 04	558.04	558.21	558 00	557 88
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by . AWE 7/17/2007
Checked by CMB 7/18/2007

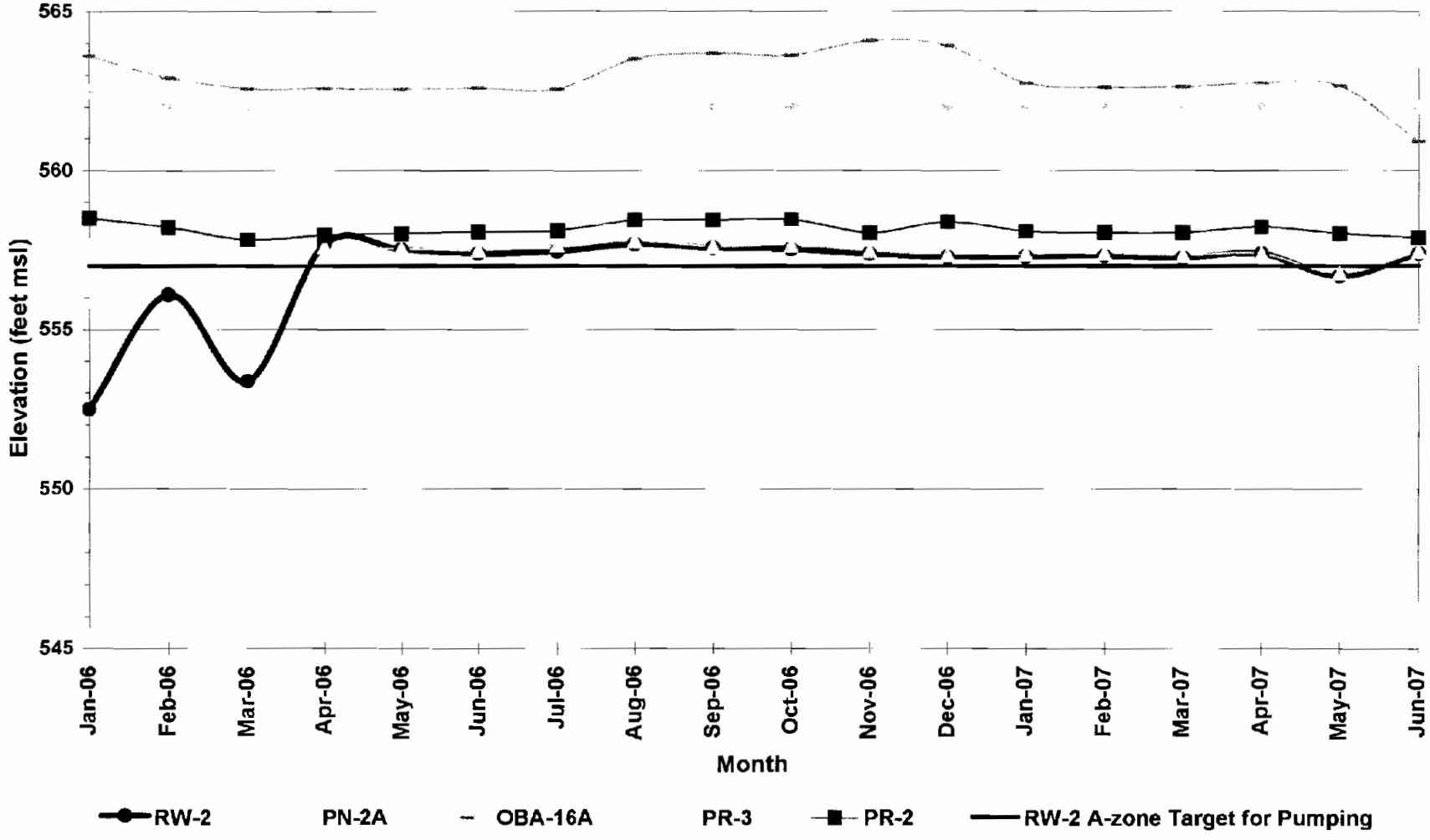
Table A-2
A-Zone
RW-2 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
PN-2A*	562.49	562.00	562.00	562.00	562.00	562.00	562.00	562.40	562.00	562.00	562.44	562.00	562.00	562.00	562.00	562.00	562.00	562.00
RW-2	552.50	556.09	553.38	557.66	557.51	557.39	557.45	557.68	557.56	557.52	557.38	557.28	557.29	557.31	557.25	557.38	556.68	557.39
OBA-16A	563.60	562.92	562.57	562.58	562.54	562.58	562.55	563.51	563.68	563.62	564.07	563.92	562.74	562.60	562.62	562.74	562.64	560.90
PR-3	557.51	557.42	557.29	557.59	557.54	557.49	557.55	557.79	557.61	557.66	557.47	557.36	557.38	557.40	557.34	557.38	556.78	557.45
PR-2	558.50	558.20	557.81	557.95	558.00	558.05	558.10	558.44	558.44	558.46	558.04	558.38	558.08	558.04	558.04	558.21	558.00	557.88
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 7/17/2007
Checked by CMB 7/18/2007

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



Prepared by AWE 7/17/2007
Checked by CMB 7/18/2007

msl - mean sea level

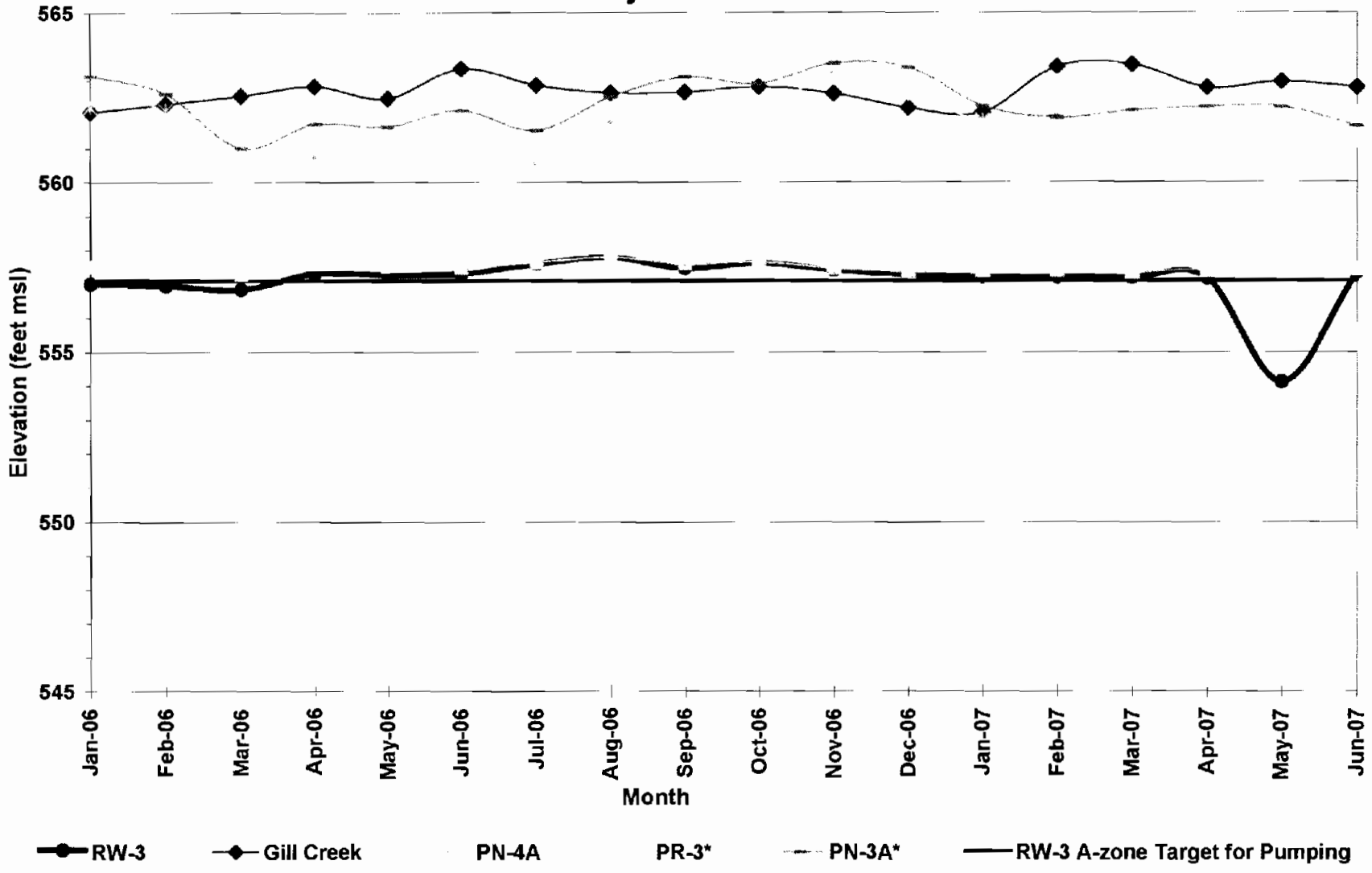
Table A-3
A-Zone
RW-3 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
PN-3A	563.15	562.61	561.01	561.73	561.65	562.12	561.54	562.52	563.10	562.91	563.52	563.39	562.26	561.92	562.12	562.23	562.23	561.67
RW-3	557.00	556.95	556.84	557.30	557.27	557.30	557.60	557.79	557.46	557.63	557.41	557.27	557.20	557.20	557.18	557.17	554.11	557.33
PN-4A	562.23	562.13	559.74	560.78	561.02	561.37	560.52	561.82	562.08	561.96	563.26	562.60	561.84	561.96	561.33	561.96	561.98	561.26
PR-3	557.51	557.42	557.29	557.59	557.54	557.49	557.65	557.79	557.61	557.66	557.47	557.36	557.38	557.40	557.34	557.48	556.78	557.45
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 7/17/2007
Checked by: CMB 7/18/2007

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



Prepared by : AWE 7/17/2007
Checked by CMB 7/18/2007

msl - mean sea level

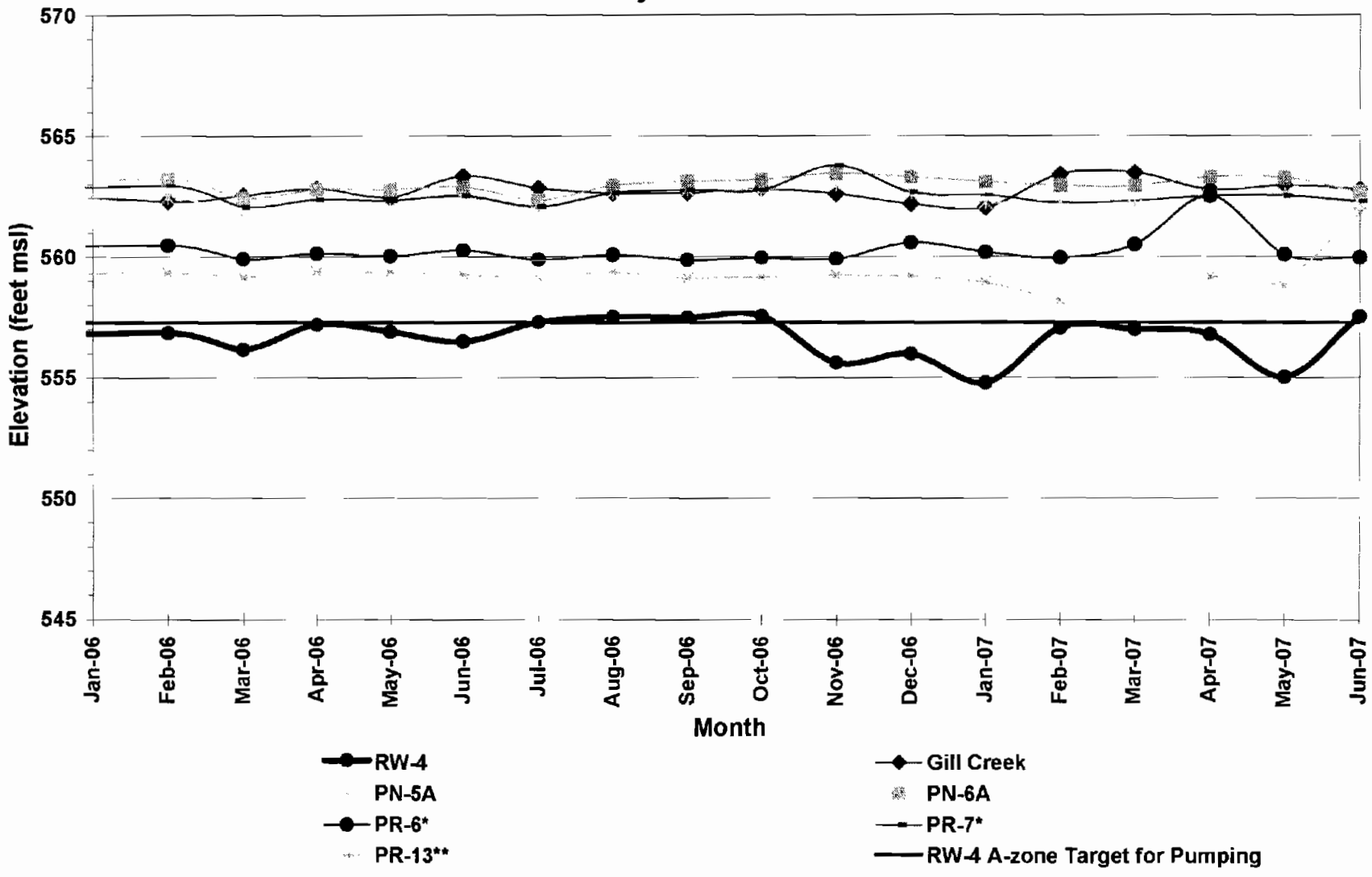
Table A-4
A-Zone
RW-4 and Adjacent Monitoring Point Water Elevations

Location ID	Oct-05	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek - Stilling Well	563.04	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
PN-5A	562.37	562.48	561.74	562.06	562.03	562.44	562.06	562.68	562.79	562.80	562.99	562.68	562.27	562.29	562.08	562.50	562.58	562.20
PR-13**	559.20	559.34	559.14	559.37	559.35	559.24	559.14	559.36	559.10	559.16	559.24	559.20	558.95	558.20	NM	559.17	558.80	561.82
RW-4	556.49	556.85	556.16	557.19	556.90	556.49	557.30	557.52	557.49	557.56	555.61	555.99	554.79	557.06	557.00	556.79	555.02	557.54
PN-6A	562.72	563.23	562.44	562.80	562.80	562.90	562.36	562.97	563.13	563.21	563.46	563.31	563.11	562.96	562.95	563.30	563.27	562.69
PR-6*	560.25	560.49	559.91	560.15	560.04	560.28	559.89	560.10	559.88	559.97	559.93	560.59	560.20	559.97	560.52	562.53	560.11	559.99
PR-7*	562.41	562.95	562.09	562.38	562.34	562.54	562.10	562.65	562.78	562.78	563.80	562.69	562.56	562.25	562.33	562.53	562.53	562.31
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 7/17/2007
Checked by CMB 7/18/2007

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



Prepared by : AWE 7/17/2007
Checked by: CMB 7/18/2007

msl - mean sea level

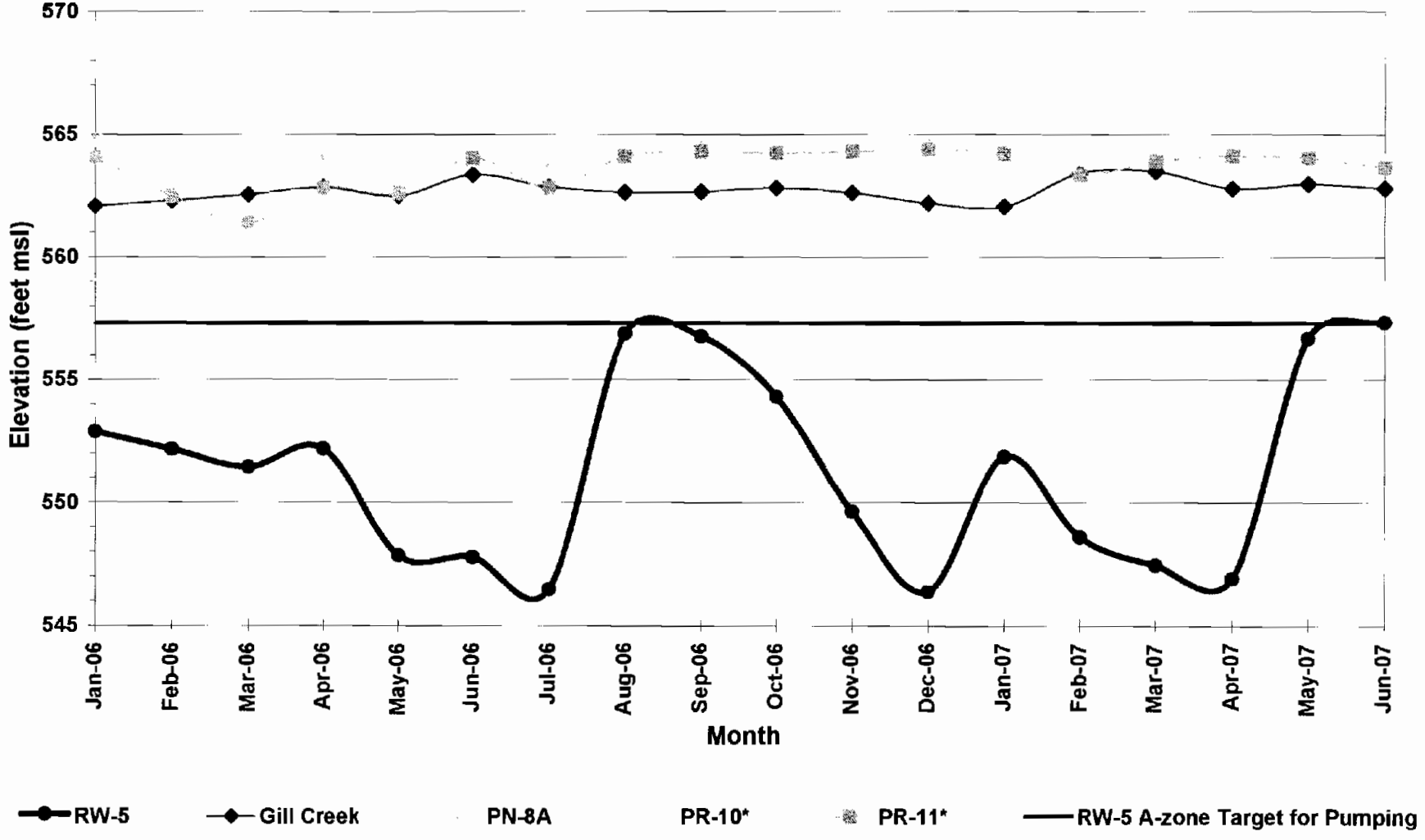
Table A-5
A-Zone
RW-5 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
RW-5	552.87	552.17	551.45	552.19	547.85	547.77	546.47	556.88	556.77	554.31	549.65	546.38	551.87	548.60	547.47	546.92	556.68	557.35
PN-8A	564.77	564.53	563.94	564.06	563.96	563.93	563.76	564.25	564.56	564.42	564.60	564.57	564.45	563.92	564.26	564.33	564.33	563.98
PR-10*	559.06	559.17	558.91	559.27	559.26	559.61	559.21	559.22	559.07	559.32	559.42	558.37	558.42	558.57	NM	558.72	558.52	558.97
PR-11*	564.07	562.50	561.39	562.80	562.61	564.04	562.82	564.10	564.29	564.24	564.30	564.37	564.19	563.33	563.90	564.13	564.03	563.66
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by: AWE 7/17/2007
Checked by: CMB 7/18/2007

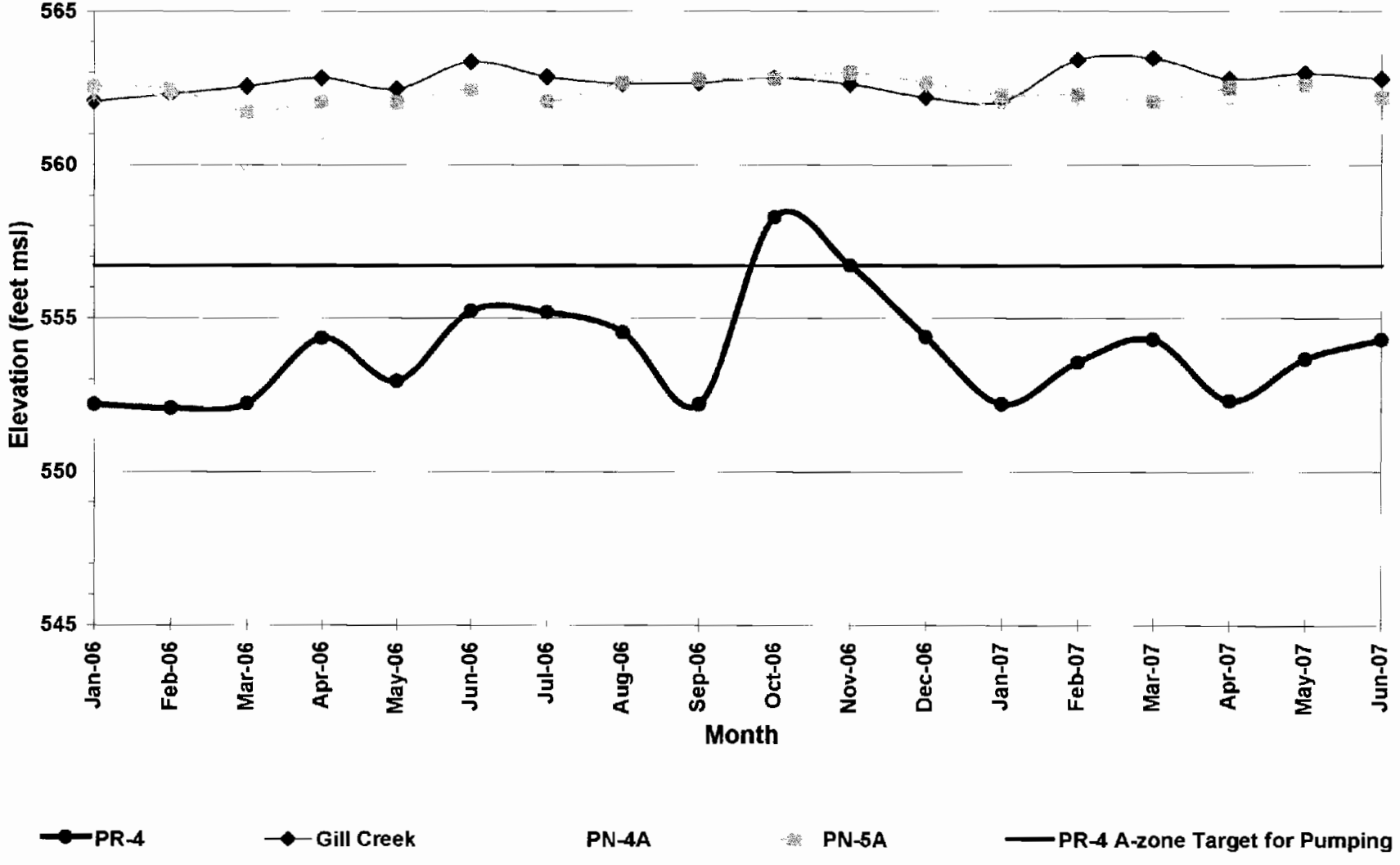
Table A-6
A-Zone
PR-4 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek - Stilling Well	562 08	562.31	562 55	562.83	562.48	563 35	562 86	562.64	562 66	562 82	562.62	562 20	562 06	563.42	563 48	562 79	562 97	562 80
PR-4	552 19	552 06	552 21	554.34	552.93	555 23	555 19	554 53	552 19	558.29	556.71	554 38	552.20	553.55	554 30	552.30	553 66	554 30
PN-4A	562.23	562.13	559.74	560 78	561 02	561.37	560.52	561.82	562.08	561.96	563.26	562.60	561.84	561 96	561.33	561.96	561 98	561.26
PN-5A	562 57	562 48	561.74	562.06	562 03	562 44	562.06	562 68	562.79	562.80	562 99	562.68	562 27	562.29	562 08	562.50	562 58	562.20
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 AWB 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by AWE 7/17/2007
Checked by CMB 7/18/2007

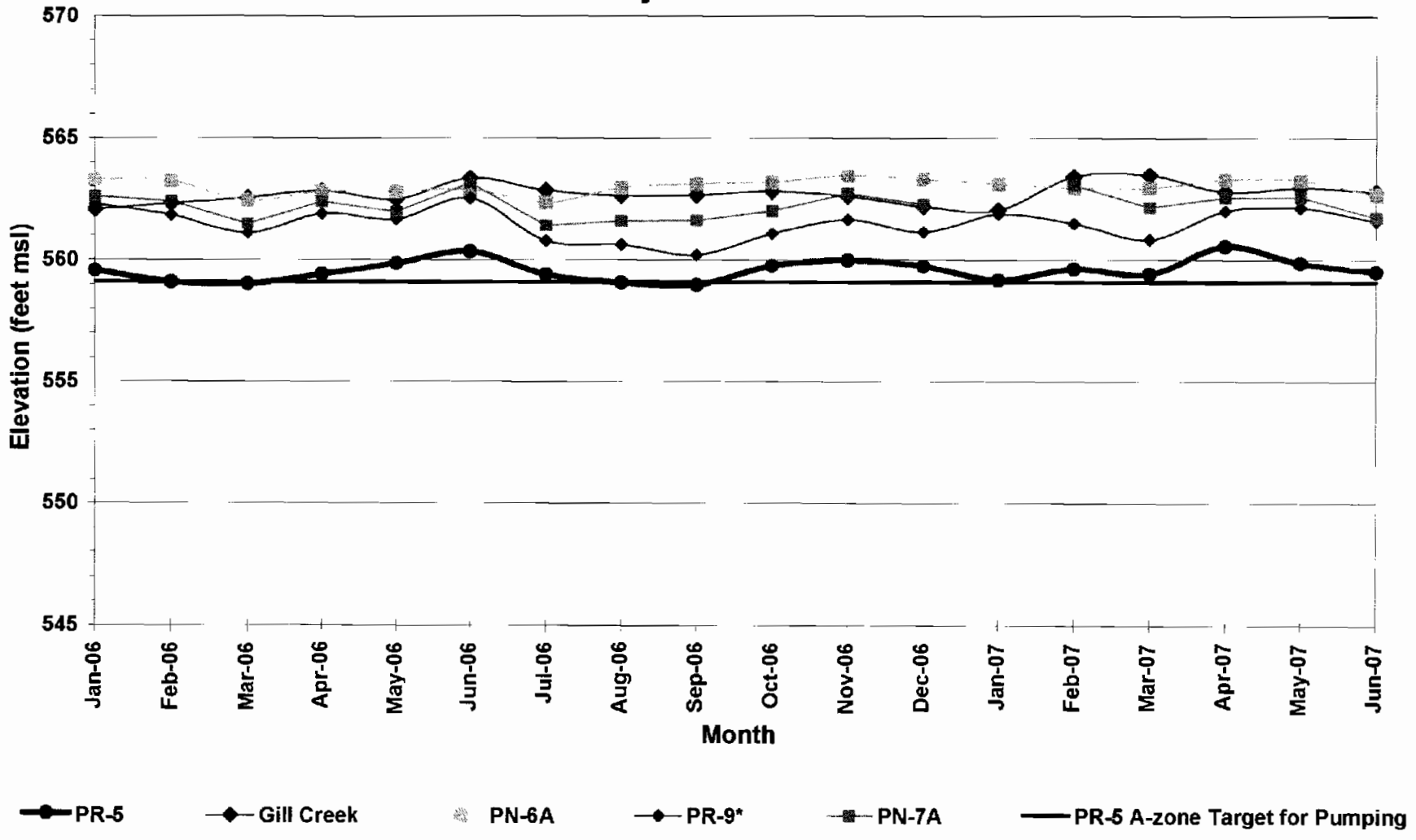
Table A-7
A-Zone
PR-5 and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
PR-5	559.56	559.09	559.01	559.41	559.85	560.35	559.40	559.07	558.97	559.77	560.00	559.75	559.17	559.64	559.42	560.56	559.87	559.51
PN-7A	562.61	562.40	561.49	562.39	561.97	563.15	561.42	561.61	561.64	562.03	562.73	562.29	NM	563.08	562.17	562.57	562.58	561.76
PR-9*	562.29	561.85	561.10	561.90	561.68	562.54	560.79	560.64	560.21	561.08	561.67	561.15	561.89	561.51	560.84	562.02	562.16	561.60
PN-6A	563.31	563.23	562.44	562.80	562.80	562.90	562.36	562.97	563.13	563.21	563.46	563.31	563.11	562.96	562.95	563.30	563.27	562.69
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 AWB 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by: AWE 7/17/2007
Checked by: CMB 7/18/2007

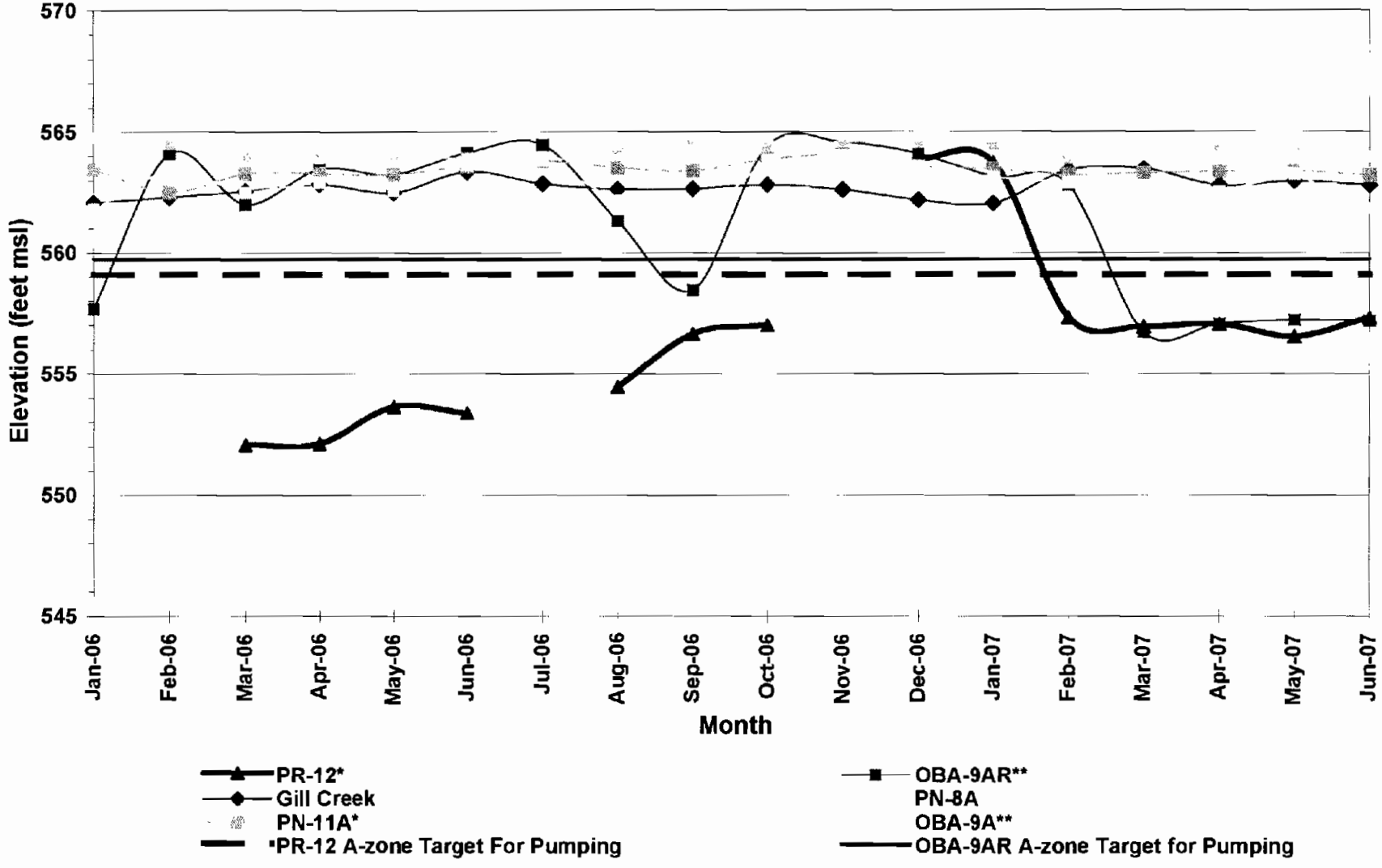
Table A-8
A-Zone
PR-12 and OBA-9AR and Adjacent Monitoring Point Water Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
Gill Creek -Stilling Well	562.08	562.31	562.55	562 83	562 48	563.35	562.86	562 64	562 66	562 82	562 62	562 20	562 06	563.42	563.48	562 79	562.97	562.80
PN-8A	564 77	564 53	563.94	564 06	563 96	563.93	563.76	564.25	564 56	564 42	564.60	564.57	564 45	563.92	564 26	564 33	564 33	563.98
PR-12*	NM	NM	552 08	552.12	553 65	553 39	DRY	554.47	556 65	557 02	NM	563.89	563.74	557 34	556 96	557 07	556 55	557.33
PN-11A*	563.46	562.53	563 27	563.28	563.23	563 59	563.81	563.52	563.39	563 88	564 06	563.59	563.46	563 22	563 30	563.36	563 39	563 20
OBA-9A**	561.82	563.55	562 49	562.92	562.59	563.63	563 83	562.16	561 18	563.85	564 04	563.58	563 12	562.91	561 14	562.53	563.26	561 84
OBA-9AR**	557 70	564.11	562.02	563.46	563 24	564.15	564 48	561 33	558 47	564.42	564.58	564.11	563 15	562 80	556.73	557 08	557 22	557 19
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	559.75	559 75	559.75	559.75	559.75	559 75	559 75	559.75	559.75	559 75	559 75	559 75	559.75	559 75	559.75	559.75	559.75	559 75

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 7/17/2007
Checked by CMB 7/18/2007

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



msl - mean sea level

Prepared by : AWE 7/17/2007
Checked by: CMB 7/18/2007

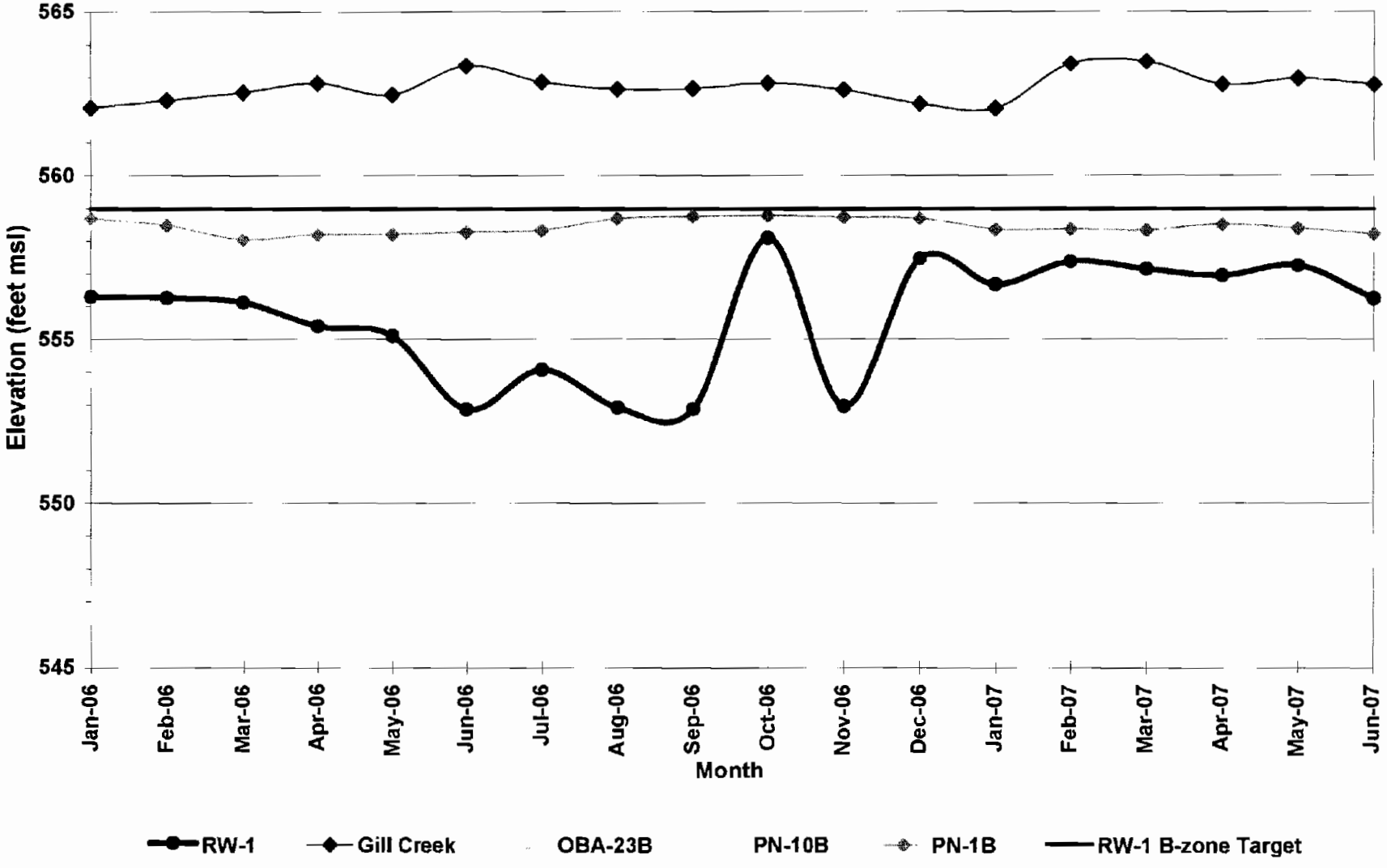
Table B-1
B-Zone
RW-1 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
RW-1	556.31	556.28	556.14	555.41	555.11	552.87	554.07	552.92	552.88	558.10	552.97	557.47	556.68	557.38	557.15	556.95	557.26	556.26
Gill Creek -Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
OBA-23B	558.62	558.34	557.90	558.02	558.07	558.13	558.22	558.56	558.63	558.68	558.59	558.60	558.28	558.23	558.18	558.37	558.23	557.99
PN-10B	558.53	558.24	557.85	557.95	558.02	558.11	558.15	558.49	558.50	558.56	558.47	558.39	558.10	558.05	558.09	558.21	558.07	557.89
PN-1B	558.71	558.49	558.06	558.21	558.21	558.28	558.34	558.70	558 77	558.80	558.75	558.71	558.36	558.37	558.34	558.52	558.39	558.23
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by AWE 7/17/2007
Checked by: CMB 7/18/2007

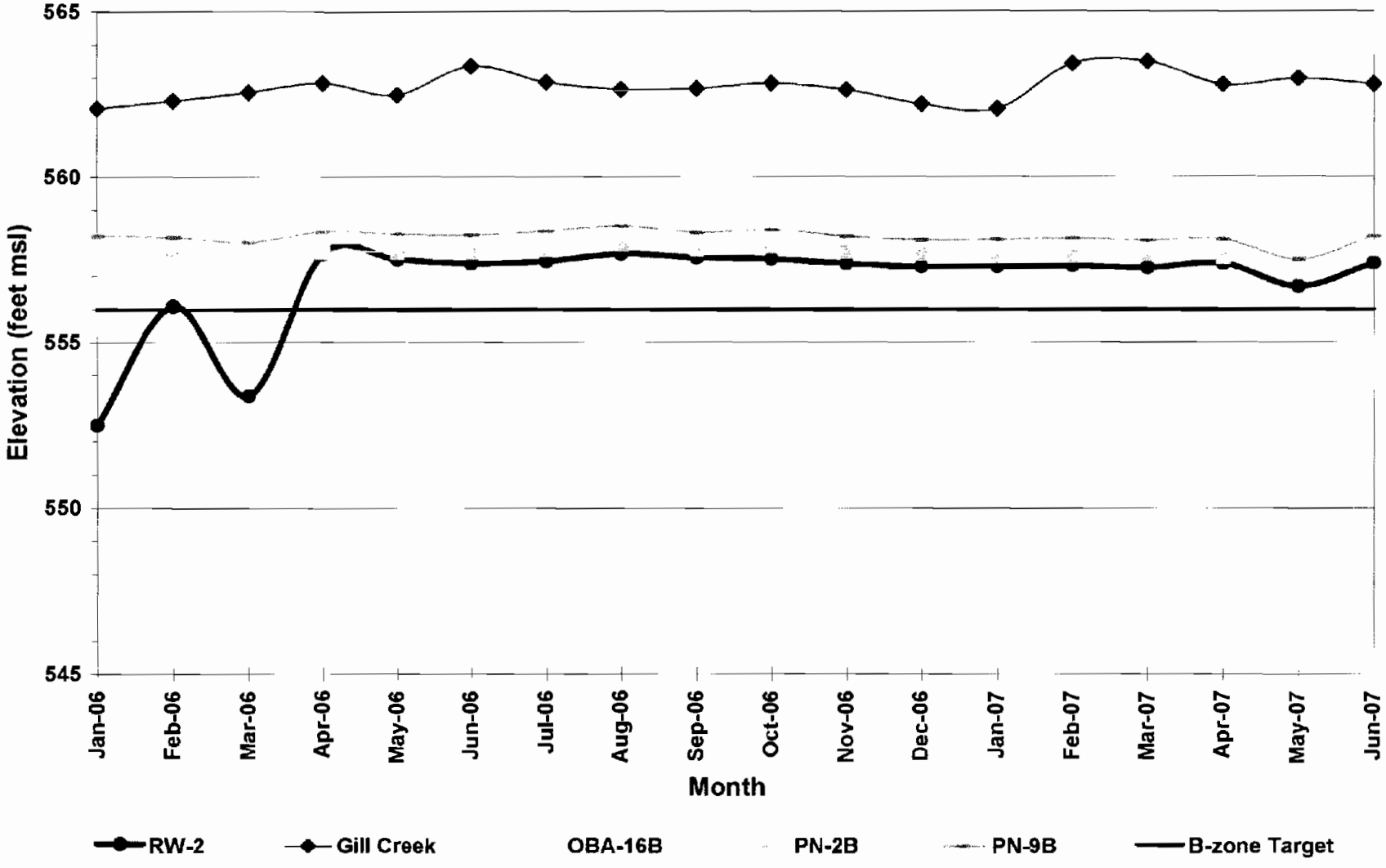
Table B-2
B-Zone
RW-2 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
RW-2	552.50	556.09	553.38	557.66	557.51	557.39	557.45	557.68	557.56	557.52	557.38	557.28	557.29	557.31	557.25	557.38	556.68	557.39
Gill Creek -Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
OBA-16B	558.10	558.02	557.77	558.00	558.00	558.05	558.09	558.31	558.23	558.26	558.18	558.10	557.88	557.82	557.86	557.97	557.71	557.82
PN-2B	557.77	557.68	557.45	557.73	557.73	557.71	557.80	557.97	557.81	557.90	557.75	557.69	557.61	557.60	557.67	557.55	557.11	557.87
PN-9B	558.22	558.17	558.02	558.34	558.27	558.24	558.37	558.52	558.32	558.41	558.20	558.09	558.10	558.14	558.07	558.11	557.50	558.20
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by : AWE 7/17/2007
Checked by CMB 7/18/2007

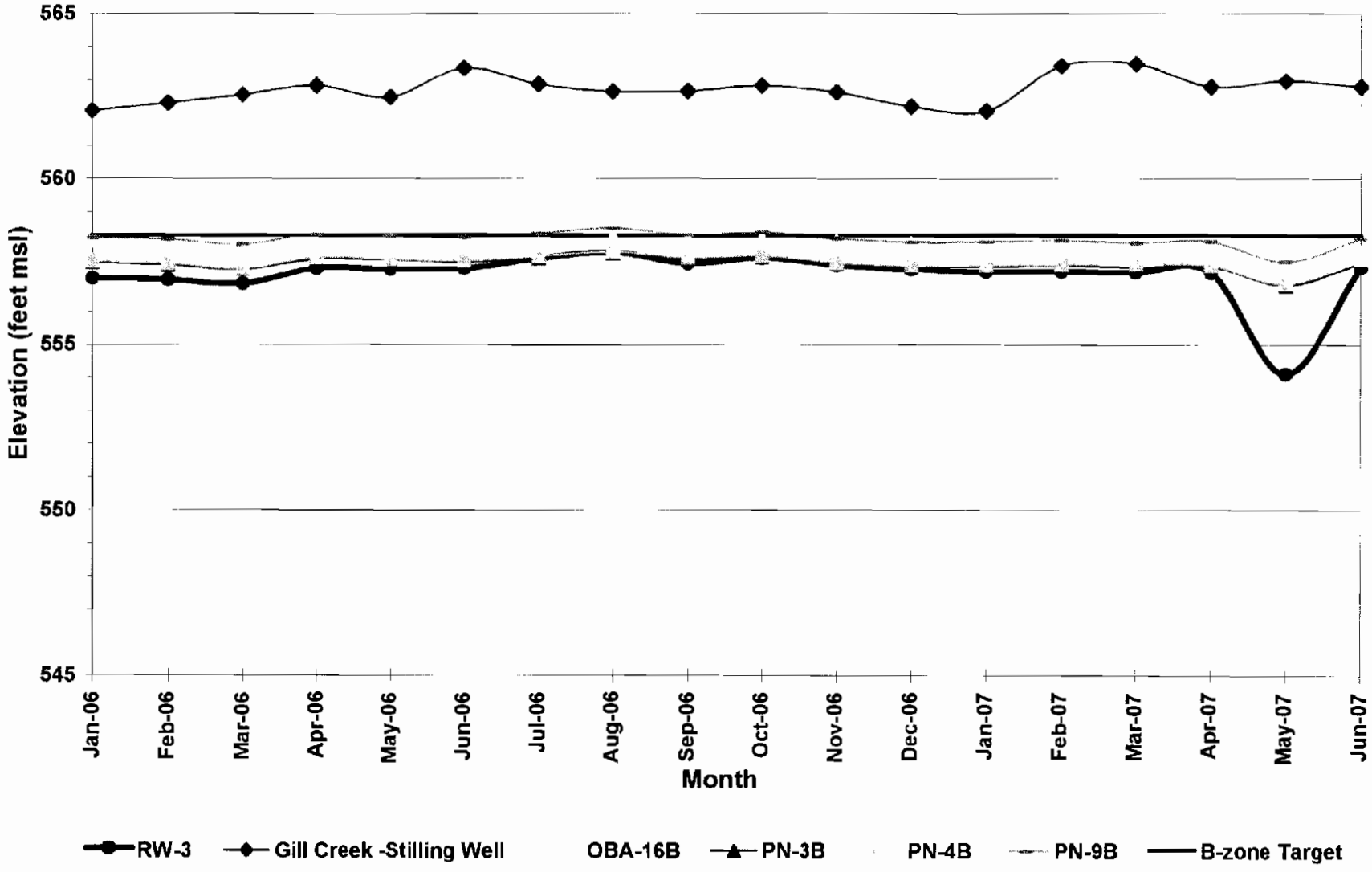
Table B-3
B-Zone
RW-3 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
RW-3	557.00	556.95	556.84	557.30	557.27	557.30	557.60	557.79	557.46	557.63	557.41	557.27	557.20	557.20	557.18	557.17	554.11	557.33
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
OBA-16B	558.10	558.02	557.77	558.00	558.00	558.05	558.09	558.31	558.23	558.26	558.18	558.10	557.88	557.82	557.86	557.97	557.71	557.82
PN-3B	557.49	557.41	557 28	557.57	557.56	557.49	557.61	557.77	557.59	557.65	557.45	557.35	557.35	557.39	557.33	557.36	556.78	557.46
PN-4B	557.53	557.46	557.31	557.64	557.58	557.54	557.67	557.80	557.63	557.69	557.48	557.38	557.40	557.42	557.43	557.39	556.83	557.59
PN-9B	558.22	558.17	558 02	558.34	558.27	558.24	558.37	558.52	558.32	558.41	558.20	558.09	558.10	558.14	558.07	558.11	557.50	558.20
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by : AWE 7/17/2007
Checked by CMB 7/18/2007

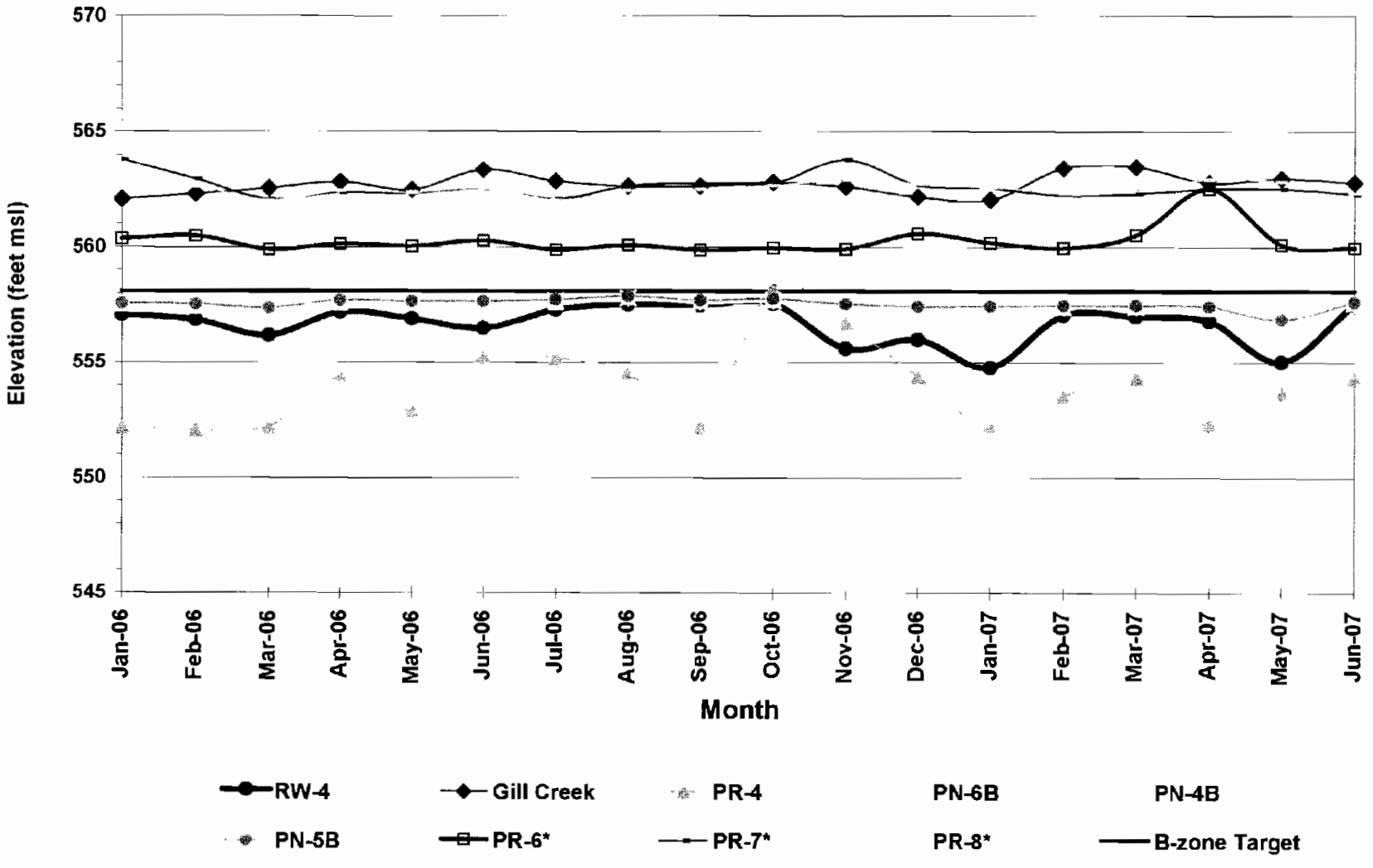
Table B-4
B-Zone
RW-4, PR-4 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
RW 4	557.08	556.85	556.16	557.19	556.90	556.49	557.30	557.52	557.49	557.56	555.61	555.99	554.79	557.06	557.00	556.79	555.02	557.54
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
PR-4	552.19	552.06	552.21	554.34	552.93	555.23	555.19	554.53	552.19	558.29	556.71	554.38	552.20	553.55	554.30	552.30	553.66	554.30
PN-6B	557.50	557.41	557.30	557.55	557.56	557.49	557.60	557.80	557.64	557.68	557.44	557.36	557.37	557.39	557.42	557.34	556.75	557.59
PN-4B	557.53	557.46	557.31	557.64	557.58	557.54	557.67	557.80	557.63	557.69	557.48	557.38	557.40	557.42	557.43	557.39	556.83	557.59
PN-5B	557.57	557.54	557.39	557.71	557.66	557.66	557.73	557.89	557.70	557.76	557.54	557.44	557.46	557.48	557.49	557.43	556.87	557.64
PR-6*	560.36	560.49	559 91	560.15	560.04	560.28	559.89	560.10	559.88	559.97	559.93	560.59	560.20	559.97	560.52	562.53	560.11	559.99
PR-7*	563.79	562.95	562.09	562.38	562.34	562.54	562.10	562.65	562.78	562.78	563.80	562.69	562.56	562.25	562.33	562.53	562.53	562.31
PR-8*	562.66	562.63	562.03	562.45	562.38	562.55	562.05	562.46	562.52	562.69	562.92	562.76	562.60	562.45	562.51	562.94	562.85	562.37
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by : AWE 7/17/2007
Checked by CMB 7/18/2007

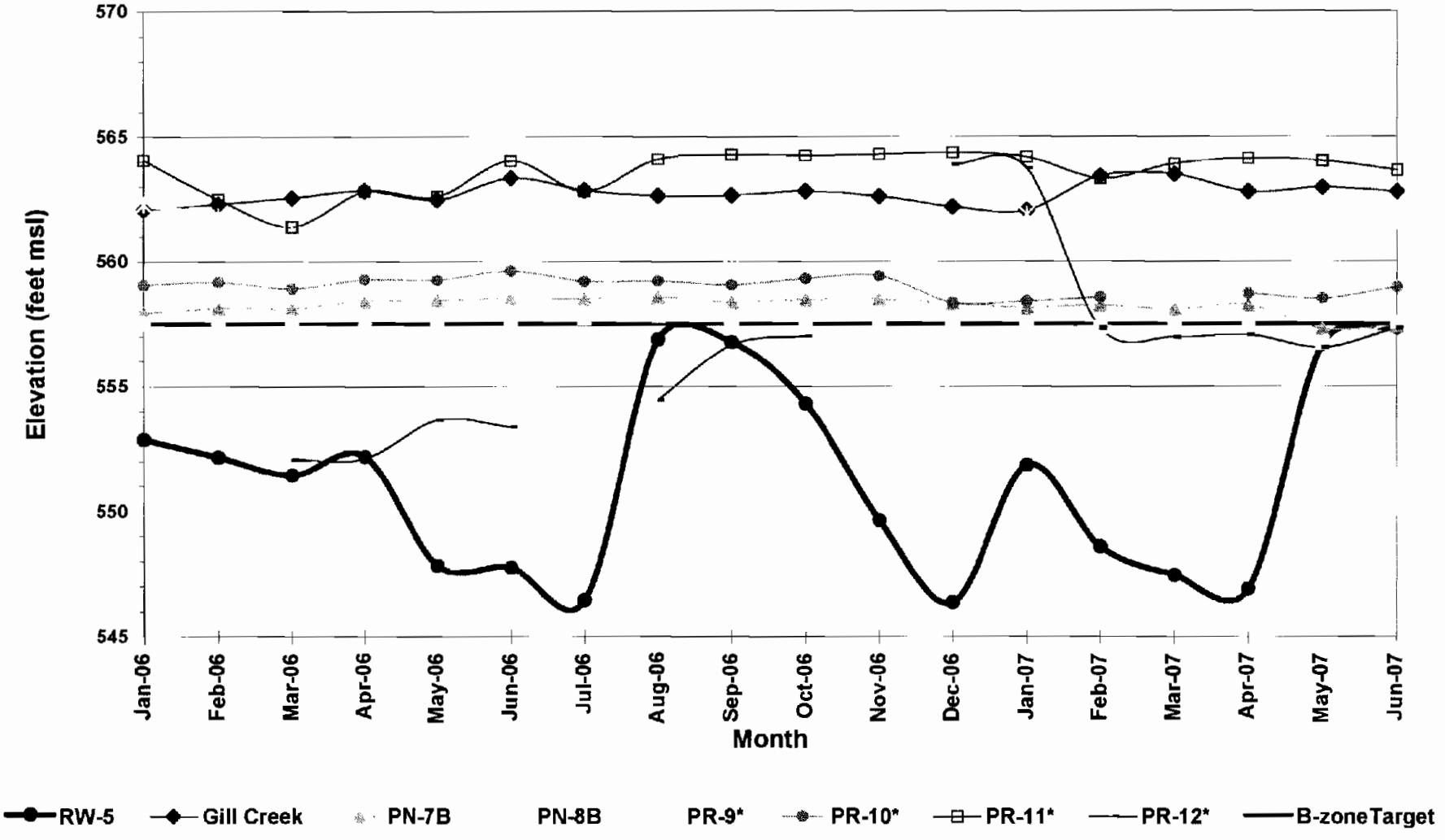
Table B-5
B-Zone
RW-5 and Adjacent Monitoring Point Peizometric Elevations

Location ID	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07
RW-5	552.87	552.17	551.45	552.19	547.85	547.77	546.47	556.88	556.77	554.31	549.65	546.38	551.87	548.60	547.47	546.92	556.68	557.35
Gill Creek - Stilling Well	562.08	562.31	562.55	562.83	562.48	563.35	562.86	562.64	562.66	562.82	562.62	562.20	562.06	563.42	563.48	562.79	562.97	562.80
PN-7B	557.93	558.15	558.12	558.42	558.44	558.53	558.51	558.58	558.39	558.47	558.49	558.33	558.16	558.25	558.09	558.25	557.30	557.43
PN-8B	557.49	557.42	557.34	557.58	557.61	557.57	557.73	557.84	557.67	557.68	557.53	557.43	557.41	557.36	557.37	557.50	556.73	557.57
PR-9*	562.29	561.85	561.10	561.90	561.68	562.54	560.79	560.64	560.21	561.08	561.67	561.15	561.89	561.51	560.84	562.02	562.16	561.60
PR-10*	559.06	559.17	558.91	559.27	559.26	559.61	559.21	559.22	559.07	559.32	559.42	558.37	558.42	558.57	NM	558.72	558.52	558.97
PR-11*	564.07	562.50	561.39	562.80	562.61	564.04	562.82	564.10	564.29	564.24	564.30	564.37	564.19	563.33	563.90	564.13	564.03	563.66
PR-12*	NM	NM	552.08	552.12	553.65	553.39	DRY	554.47	556.65	557.02	NM	563.89	563.74	557.34	556.96	557.07	556.55	557.33
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 7/17/2007
Checked by: CMB 7/18/2007

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



msl - mean sea level

Prepared by : AWE 7/17/2007
Checked by: CMB 7/18/2007

Attachment 3

Attachment 4

Olin Niagara Falls Plant Site: Plant 2 Area Remediation
Groundwater Contaminant Mass Removed
Q2-07

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	25.870	3.8	2.20E-06	0.00021627	1190476.19	315,022	68
RW2	0.720	3.8	2.20E-06	0.00000602	1190476.19	4,223,328	25
RW3	2.317	3.8	2.20E-06	0.00001937	1190476.19	860,906	17
RW4	10.490	3.8	2.20E-06	0.00008770	1190476.19	1,020,942	90
PR4	8.630	3.8	2.20E-06	0.00007215	1190476.19	181,683	13
RW5	49.410	3.8	2.20E-06	0.00041307	1190476.19	784,434	324
PR12	169.200	3.8	2.20E-06	0.00141451	1190476.19	812,447	1149
OBA9AR	142.300	3.8	2.20E-06	0.00118963	1190476.19	4,659	5.54
TOTAL							**1,692**

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	315,022	0.004
RW2	0.0005	3.8	2.20E-06	0.00000000	1190476.19	4,223,328	0.017
RW3	0.0000	3.8	2.20E-06	0.00000000	1190476.19	860,906	0.000
RW4	0.0007	3.8	2.20E-06	0.00000001	1190476.19	1,020,942	0.006
PR4	0.0060	3.8	2.20E-06	0.00000005	1190476.19	181,683	0.009
RW5	0.0007	3.8	2.20E-06	0.00000001	1190476.19	784,434	0.005
PR12	0.0005	3.8	2.20E-06	0.00000000	1190476.19	812,447	0.004
OBA9AR	0.0002	3.8	2.20E-06	0.00000000	1190476.19	4,659	0.000
TOTAL							**0.04**

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	0.0250	3.8	2.20E-06	0.00000021	1190476.19	315,022	0.07
RW2	0.0030	3.8	2.20E-06	0.00000003	1190476.19	4,223,328	0.11
RW3	0.0500	3.8	2.20E-06	0.00000042	1190476.19	860,906	0.36
RW4	0.1230	3.8	2.20E-06	0.00000103	1190476.19	1,020,942	1.05
PR4	0.4060	3.8	2.20E-06	0.00000339	1190476.19	181,683	0.62
RW5	0.1140	3.8	2.20E-06	0.00000095	1190476.19	784,434	0.75
PR12	0.1860	3.8	2.20E-06	0.00000155	1190476.19	812,447	1.26
OBA9AR	0.6530	3.8	2.20E-06	0.00000546	1190476.19	4,659	0.03
TOTAL							**4.2**

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

8,203,421
total flow (gal)

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	
	lb	Ann. Tot.	lb	Ann. Tot	lb	Ann. Tot.	gal	Ann. Tot.
Startup/Q1-98 [est]	27.81		0.02		0.2		210,000	
Q2-98	154.5		0.1		1.3		1,175,799	
Q3-98	595.5		0.6		4.9		2,583,159	
Q4-98	1273.1		0.1		5.2		4,054,996	
		2,051		1		12		8,023,954
Q1-99	817.3		0.05		8.5		4,233,521	
Q2-99	1034.7		0.05		7.1		3,991,584	
Q3-99	1188.2		0.1		8.7		5,219,207	
Q4-99	976.3		0.02		6.9		6,366,935	
		4,017		0.22		31		19,811,247
Q1-00	1422.9		0.06		6.2		6,757,602	
Q2-00	1514.9		0.06		10.3		6,663,345	
Q3-00	1071.6		0.06		18.6		6,007,756	
Q4-00	1260.7		0.03		9.7		6,803,495	
		5,270		0.21		45		26,232,198
Q1-01	1406.2		0.06		8.9		7,379,548	
Q2-01	2704.8		0.04		11.9		8,474,363	
Q3-01	1576.8		0.05		9.5		7,607,539	
Q4-01	637.0		0.05		8.4		5,642,388	
		6,325		0.20		39		29,103,838
Q1-02	1319.8		0.06		6.9		6,781,550	
Q2-02	530.7		0.08		7.2		8,693,727	
Q3-02	1251.8		0.07		6.0		5,950,649	
Q4-02	490.8		0.07		3.5		5,385,584	
		3,593		0.28		24		26,811,510
Q1-03	922.6		0.58		3.6		5,151,629	
Q2-03	1884.7		0.06		5.2		7,276,723	
Q3-03	1611		0.1		0.0		6,598,467	
Q4-03	1954.4		0.1		8.5		6,735,421	
		6,373		0.84		17		25,762,240
Q1-04	1479.6		0.04		4.8		5,846,144	
Q2-04	2158.2		0.08		5.7		6,826,643	
Q3-04	1880.3	[a]	0.05	[a]	5.6	[a]	6,262,226	
Q4-04	3665.6		0.18		5.5		7,152,900	
		9,184		0.35		22		26,087,913
Q1-05	2648.9	[a]	0.14	[a]	4.3	[a]	5,870,533	
Q2-05	1168		0.04		3.5		5,910,496	
Q3-05	860.2	[a]	0.04	[a]	2.8	[a]	7,113,517	
Q4-05	887.8		0.09		6.7		5,271,114	
		5,565		0.31		17		24,165,660
Q1-06	1056		0.02		3.2		5,139,061	
Q2-06	1160		0.04		4.5		8,872,651	
Q3-06	1169		0.02		4.2		8,253,471	
Q4-06	1175.0		0.04		4.9		8,959,291	
		4,560		0.12		17		31,224,474
Q1-07	1409.0		0.02		4.0		7,250,389	
Q2-07	1692.0		0.04		4.2		8,203,421	
Q3-07								
Q4-07								
		3,101		0.06		8		15,453,810
TOTAL		**50,038**		**3**		**231**		**232,676,844**

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

Organic Compounds Header Data May-07

LocationID	AnalyticalMethod	ParameterName	Result	LabFlag	Detect Flag	DetectionLimit	SampleDate	SampleType	Units	Total or Dissolved	Result	total organics
OBA-9AR	SW8260B	1,1,1-TRICHLOROETHANE		U	N	180	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	1,1,2,2-TETRACHLOROETHANE	2900		Y	800	5/3/2007	Normal	ug/l	N	2900	
OBA-9AR	SW8260B	1,1,2-TRICHLOROETHANE		U	N	200	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	1,1-DICHLOROETHYLENE		U	N	90	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	1,2,4-TRICHLOROBENZENE	5100		Y	180	5/3/2007	Normal	ug/l	N	5100	
OBA-9AR	SW8260B	1,2-DICHLOROBENZENE	6900		Y	90	5/3/2007	Normal	ug/l	N	6900	
OBA-9AR	SW8260B	1,4-DICHLOROBENZENE	6900		Y	120	5/3/2007	Normal	ug/l	N	6900	
OBA-9AR	SW8260B	BENZENE	3400		Y	62	5/3/2007	Normal	ug/l	N	3400	
OBA-9AR	SW8260B	CARBON TETRACHLORIDE		U	N	140	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	CHLOROBENZENE		U	N	100	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	CHLOROMETHANE		U	N	160	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	CIS-1,2-DICHLOROETHENE	5100		Y	90	5/3/2007	Normal	ug/l	N	5100	
OBA-9AR	SW8260B	DICHLOROMETHANE		U	N	180	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	M-DICHLOROBENZENE		U	N	110	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	TETRACHLOROETHENE	15000		Y	130	5/3/2007	Normal	ug/l	N	15000	
OBA-9AR	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	100	5/3/2007	Normal	ug/l	N	0	
OBA-9AR	SW8260B	TRICHLOROETHYLENE	97000		Y	110	5/3/2007	Normal	ug/l	N	97000	
OBA-9AR	SW8260B	VINYL CHLORIDE		U	N	220	5/3/2007	Normal	ug/l	N	0	**142,300**
PR-12	SW8260B	1,1,1-TRICHLOROETHANE		U	N	230	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	1,1,2,2-TETRACHLOROETHANE	19000		Y	1100	5/3/2007	Normal	ug/l	N	19000	
PR-12	SW8260B	1,1,2-TRICHLOROETHANE		U	N	260	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	1,1-DICHLOROETHYLENE		U	N	120	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	1,2,4-TRICHLOROBENZENE		U	N	250	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	1,2-DICHLOROBENZENE		U	N	120	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	1,4-DICHLOROBENZENE		U	N	160	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	BENZENE		U	N	83	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	CARBON TETRACHLORIDE		U	N	180	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	CHLOROBENZENE		U	N	140	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	CHLOROMETHANE		U	N	210	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	CIS-1,2-DICHLOROETHENE	9200		Y	120	5/3/2007	Normal	ug/l	N	9200	
PR-12	SW8260B	DICHLOROMETHANE		U	N	230	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	M-DICHLOROBENZENE		U	N	140	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	TETRACHLOROETHENE	31000		Y	170	5/3/2007	Normal	ug/l	N	31000	
PR-12	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	130	5/3/2007	Normal	ug/l	N	0	
PR-12	SW8260B	TRICHLOROETHYLENE	110000		Y	140	5/3/2007	Normal	ug/l	N	110000	
PR-12	SW8260B	VINYL CHLORIDE		U	N	290	5/3/2007	Normal	ug/l	N	0	**169,200**
PR-4	SW8260B	1,1,1-TRICHLOROETHANE		U	N	7	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	1,1,2,2-TETRACHLOROETHANE		U	N	32	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	1,1,2-TRICHLOROETHANE		U	N	7.9	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	1,1-DICHLOROETHYLENE		U	N	3.6	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	1,2,4-TRICHLOROBENZENE	2900		Y	7.4	5/3/2007	Normal	ug/l	N	2900	
PR-4	SW8260B	1,2-DICHLOROBENZENE		U	N	3.6	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	1,4-DICHLOROBENZENE	150		Y	4.9	5/3/2007	Normal	ug/l	N	150	
PR-4	SW8260B	BENZENE		U	N	2.5	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	CARBON TETRACHLORIDE		U	N	5.4	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	CHLOROBENZENE		U	N	4.1	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	CHLOROMETHANE		U	N	6.4	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	CIS-1,2-DICHLOROETHENE	790		Y	3.6	5/3/2007	Normal	ug/l	N	790	
PR-4	SW8260B	DICHLOROMETHANE		U	N	7	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	M-DICHLOROBENZENE	230		Y	4.3	5/3/2007	Normal	ug/l	N	230	
PR-4	SW8260B	TETRACHLOROETHENE	1400		Y	5.1	5/3/2007	Normal	ug/l	N	1400	
PR-4	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	4	5/3/2007	Normal	ug/l	N	0	
PR-4	SW8260B	TRICHLOROETHYLENE	3000		Y	4.3	5/3/2007	Normal	ug/l	N	3000	
PR-4	SW8260B	VINYL CHLORIDE	160		Y	8.8	5/3/2007	Normal	ug/l	N	160	**8,630**
PR-4	SW8260B	1,1,1-TRICHLOROETHANE		U	N	5.6	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	1,1,2,2-TETRACHLOROETHANE		U	N	26	5/3/2007	Duplicate	ug/l	N	0	

Organic Compounds Header Data May-07

LocationID	AnalyticalMethod	ParameterName	Result	LabFlag	Detect Flag	DetectionLimit	SampleDate	SampleType	Units	Total or Dissolved	Result	total organics
PR-4	SW8260B	1,1,2-TRICHLOROETHANE		U	N	6.4	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	1,1-DICHLOROETHYLENE		U	N	2.9	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	1,2,4-TRICHLOROBENZENE	2700		Y	6	5/3/2007	Duplicate	ug/l	N	2700	
PR-4	SW8260B	1,2-DICHLOROBENZENE		U	N	2.9	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	1,4-DICHLOROBENZENE	150		Y	3.9	5/3/2007	Duplicate	ug/l	N	150	
PR-4	SW8260B	BENZENE		U	N	2	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	CARBON TETRACHLORIDE		U	N	4.4	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	CHLOROBENZENE	89		Y	3.3	5/3/2007	Duplicate	ug/l	N	89	
PR-4	SW8260B	CHLOROMETHANE		U	N	5.2	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	CIS-1,2-DICHLOROETHENE	750		Y	2.9	5/3/2007	Duplicate	ug/l	N	750	
PR-4	SW8260B	DICHLOROMETHANE		U	N	5.6	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	M-DICHLOROBENZENE	230		Y	3.5	5/3/2007	Duplicate	ug/l	N	230	
PR-4	SW8260B	TETRACHLOROETHENE	1300		Y	4.1	5/3/2007	Duplicate	ug/l	N	1300	
PR-4	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	3.2	5/3/2007	Duplicate	ug/l	N	0	
PR-4	SW8260B	TRICHLOROETHYLENE	2900		Y	3.5	5/3/2007	Duplicate	ug/l	N	2900	
PR-4	SW8260B	VINYL CHLORIDE	160		Y	7.1	5/3/2007	Duplicate	ug/l	N	160	8,279
RW-1	SW8260B	1,1,1-TRICHLOROETHANE		U	N	14	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	1,1,2,2-TETRACHLOROETHANE		U	N	64	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	1,1,2-TRICHLOROETHANE		U	N	16	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	1,1-DICHLOROETHYLENE		U	N	7.2	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	1,2,4-TRICHLOROBENZENE	5400		Y	15	5/3/2007	Normal	ug/l	N	5400	
RW-1	SW8260B	1,2-DICHLOROBENZENE		U	N	7.2	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	1,4-DICHLOROBENZENE		U	N	9.8	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	BENZENE		U	N	5	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	CARBON TETRACHLORIDE		U	N	11	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	CHLOROBENZENE		U	N	8.2	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	CHLOROMETHANE		U	N	13	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	CIS-1,2-DICHLOROETHENE	2600		Y	7.2	5/3/2007	Normal	ug/l	N	2600	
RW-1	SW8260B	DICHLOROMETHANE		U	N	14	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	M-DICHLOROBENZENE	290		Y	8.6	5/3/2007	Normal	ug/l	N	290	
RW-1	SW8260B	TETRACHLOROETHENE	3000		Y	10	5/3/2007	Normal	ug/l	N	3000	
RW-1	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	8	5/3/2007	Normal	ug/l	N	0	
RW-1	SW8260B	TRICHLOROETHYLENE	14000		Y	8.6	5/3/2007	Normal	ug/l	N	14000	
RW-1	SW8260B	VINYL CHLORIDE	580		Y	16	5/3/2007	Normal	ug/l	N	580	25,870
RW-2	SW8260B	1,1,1-TRICHLOROETHANE		U	N	0.56	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	1,1,2,2-TETRACHLOROETHANE	27		Y	2.6	5/2/2007	Normal	ug/l	N	27	
RW-2	SW8260B	1,1,2-TRICHLOROETHANE		U	N	0.63	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	1,1-DICHLOROETHYLENE		U	N	0.29	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	1,2,4-TRICHLOROBENZENE	23		Y	0.59	5/2/2007	Normal	ug/l	N	23	
RW-2	SW8260B	1,2-DICHLOROBENZENE		U	N	0.29	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	1,4-DICHLOROBENZENE		U	N	0.39	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	BENZENE		U	N	0.2	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	CARBON TETRACHLORIDE		U	N	0.43	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	CHLOROBENZENE		U	N	0.33	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	CHLOROMETHANE		U	N	0.51	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	CIS-1,2-DICHLOROETHENE	100		Y	0.29	5/2/2007	Normal	ug/l	N	100	
RW-2	SW8260B	DICHLOROMETHANE		U	N	0.56	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	M-DICHLOROBENZENE		U	N	0.34	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	TETRACHLOROETHENE	210		Y	0.41	5/2/2007	Normal	ug/l	N	210	
RW-2	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	0.32	5/2/2007	Normal	ug/l	N	0	
RW-2	SW8260B	TRICHLOROETHYLENE	350		Y	0.34	5/2/2007	Normal	ug/l	N	350	
RW-2	SW8260B	VINYL CHLORIDE	10		Y	0.7	5/2/2007	Normal	ug/l	N	10	720
RW-3	SW8260B	1,1,1-TRICHLOROETHANE		U	N	1.6	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	1,1,2,2-TETRACHLOROETHANE		U	N	8	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	1,1,2-TRICHLOROETHANE		U	N	2	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	1,1-DICHLOROETHYLENE		U	N	0.9	5/3/2007	Normal	ug/l	N	0	

Organic Compounds Header Data May-07

LocationID	AnalyticalMethod	ParameterName	Result	LabFlag	Detect Flag	DetectionLimit	SampleDate	SampleType	Units	Total or Dissolved	Result	total organics
RW-3	SW8260B	1,2,4-TRICHLOROBENZENE	390		Y	1.8	5/3/2007	Normal	ug/l	N	390	
RW-3	SW8260B	1,2-DICHLOROBENZENE	32		Y	0.9	5/3/2007	Normal	ug/l	N	32	
RW-3	SW8260B	1,4-DICHLOROBENZENE	68		Y	1.2	5/3/2007	Normal	ug/l	N	68	
RW-3	SW8260B	BENZENE		U	N	0.62	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	CARBON TETRACHLORIDE		U	N	1.4	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	CHLOROBENZENE	68		Y	1	5/3/2007	Normal	ug/l	N	68	
RW-3	SW8260B	CHLOROMETHANE		U	N	1.6	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	CIS-1,2-DICHLOROETHENE	520		Y	0.9	5/3/2007	Normal	ug/l	N	520	
RW-3	SW8260B	DICHLOROMETHANE		U	N	1.8	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	M-DICHLOROBENZENE	89		Y	1.1	5/3/2007	Normal	ug/l	N	89	
RW-3	SW8260B	TETRACHLOROETHENE	400		Y	1.3	5/3/2007	Normal	ug/l	N	400	
RW-3	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	1	5/3/2007	Normal	ug/l	N	0	
RW-3	SW8260B	TRICHLOROETHYLENE	570		Y	1.1	5/3/2007	Normal	ug/l	N	570	
RW-3	SW8260B	VINYL CHLORIDE	180		Y	2.2	5/3/2007	Normal	ug/l	N	180	**2,317**
RW-4	SW8260B	1,1,1-TRICHLOROETHANE		U	N	7	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	1,1,2,2-TETRACHLOROETHANE		U	N	32	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	1,1,2-TRICHLOROETHANE		U	N	7.9	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	1,1-DICHLOROETHYLENE		U	N	3.6	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	1,2,4-TRICHLOROBENZENE	540		Y	7.4	5/4/2007	Normal	ug/l	N	540	
RW-4	SW8260B	1,2-DICHLOROBENZENE		U	N	3.6	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	1,4-DICHLOROBENZENE		U	N	4.9	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	BENZENE		U	N	2.5	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	CARBON TETRACHLORIDE		U	N	5.4	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	CHLOROBENZENE		U	N	4.1	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	CHLOROMETHANE		U	N	6.4	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	CIS-1,2-DICHLOROETHENE	1100		Y	3.6	5/4/2007	Normal	ug/l	N	1100	
RW-4	SW8260B	DICHLOROMETHANE		U	N	7	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	M-DICHLOROBENZENE		U	N	4.3	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	TETRACHLOROETHENE	2700		Y	5.1	5/4/2007	Normal	ug/l	N	2700	
RW-4	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	4	5/4/2007	Normal	ug/l	N	0	
RW-4	SW8260B	TRICHLOROETHYLENE	6000		Y	4.3	5/4/2007	Normal	ug/l	N	6000	
RW-4	SW8260B	VINYL CHLORIDE	150		Y	8.8	5/4/2007	Normal	ug/l	N	150	**10,490**
RW-5	SW8260B	1,1,1-TRICHLOROETHANE		U	N	44	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	1,1,2,2-TETRACHLOROETHANE	3800		Y	200	5/17/2007	Normal	ug/l	N	3800	
RW-5	SW8260B	1,1,2-TRICHLOROETHANE		U	N	49	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	1,1-DICHLOROETHYLENE		U	N	22	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	1,2,4-TRICHLOROBENZENE	910		Y	46	5/17/2007	Normal	ug/l	N	910	
RW-5	SW8260B	1,2-DICHLOROBENZENE		U	N	22	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	1,4-DICHLOROBENZENE		U	N	31	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	BENZENE		U	N	16	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	CARBON TETRACHLORIDE		U	N	34	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	CHLOROBENZENE		U	N	26	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	CHLOROMETHANE		U	N	40	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	CIS-1,2-DICHLOROETHENE	2700		Y	22	5/17/2007	Normal	ug/l	N	2700	
RW-5	SW8260B	DICHLOROMETHANE		U	N	44	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	M-DICHLOROBENZENE		U	N	27	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	TETRACHLOROETHENE	11000		Y	32	5/17/2007	Normal	ug/l	N	11000	
RW-5	SW8260B	TRANS-1,2-DICHLOROETHENE		U	N	25	5/17/2007	Normal	ug/l	N	0	
RW-5	SW8260B	TRICHLOROETHYLENE	31000		Y	27	5/17/2007	Normal	ug/l	N	31000	
RW-5	SW8260B	VINYL CHLORIDE		U	N	55	5/17/2007	Normal	ug/l	N	0	**49,410**

BHC Header Data - May-07

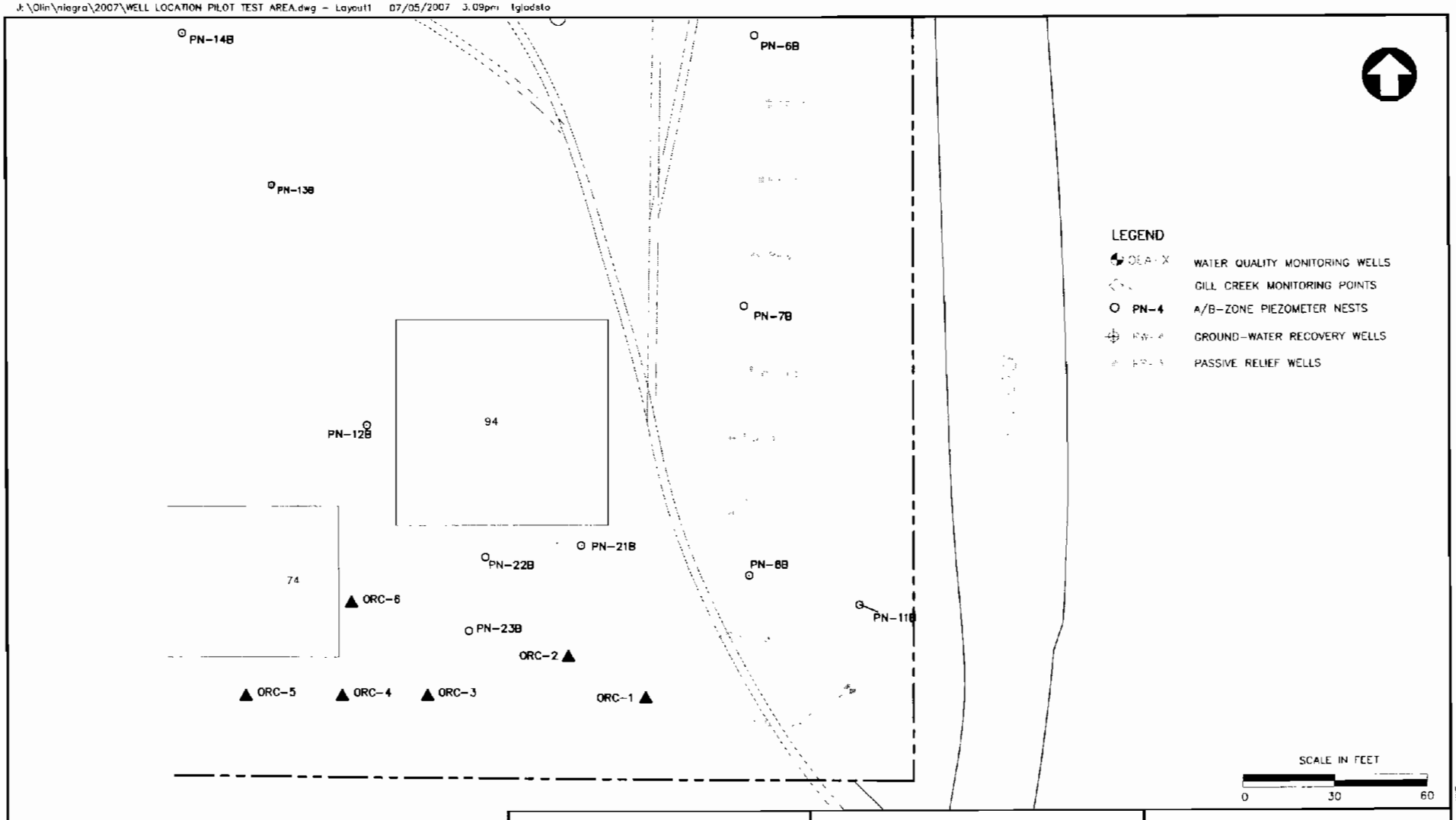
LocationID	AnalyticalMethod	ParameterName	Result	LabFlag	Detect Flag	DetectionLimit	SampleDate	SampleType	Units	Result	Total BHCs
OBA-9AR	SW8081A	alpha-BHC	290		Y	2.2	5/3/2007	Normal	ug/l	290	
OBA-9AR	SW8081A	beta-BHC	39		Y	3.8	5/3/2007	Normal	ug/l	39	
OBA-9AR	SW8081A	delta-BHC	24	J B	Y	4	5/3/2007	Normal	ug/l	24	
OBA-9AR	SW8081A	gamma-BHC	300		Y	3.4	5/3/2007	Normal	ug/l	300	**653**
PR-12	SW8081A	alpha-BHC	86		Y	0.86	5/3/2007	Normal	ug/l	86	
PR-12	SW8081A	beta-BHC	11		Y	1.5	5/3/2007	Normal	ug/l	11	
PR-12	SW8081A	delta-BHC	9.9	J B	Y	1.6	5/3/2007	Normal	ug/l	9.9	
PR-12	SW8081A	gamma-BHC	79		Y	1.4	5/3/2007	Normal	ug/l	79	**186**
PR-4	SW8081A	alpha-BHC	130		Y	2.2	5/3/2007	Normal	ug/l	130	
PR-4	SW8081A	beta-BHC	13	J	Y	3.8	5/3/2007	Normal	ug/l	13	
PR-4	SW8081A	delta-BHC	21	J B	Y	4	5/3/2007	Normal	ug/l	21	
PR-4	SW8081A	gamma-BHC	200		Y	3.4	5/3/2007	Normal	ug/l	200	**364**
PR-4	SW8081A	alpha-BHC	150		Y	2.2	5/3/2007	Duplicate	ug/l	150	
PR-4	SW8081A	beta-BHC	14	J	Y	3.8	5/3/2007	Duplicate	ug/l	14	
PR-4	SW8081A	delta-BHC	22	J B	Y	4	5/3/2007	Duplicate	ug/l	22	
PR-4	SW8081A	gamma-BHC	220		Y	3.4	5/3/2007	Duplicate	ug/l	220	**406**
RW-1	SW8081A	alpha-BHC	20		Y	0.22	5/3/2007	Normal	ug/l	20	
RW-1	SW8081A	beta-BHC	4.2		Y	0.38	5/3/2007	Normal	ug/l	4.2	
RW-1	SW8081A	delta-BHC		U	N	0.4	5/3/2007	Normal	ug/l	0	
RW-1	SW8081A	gamma-BHC	0.97	J	Y	0.34	5/3/2007	Normal	ug/l	0.97	**25**
RW-2	SW8081A	alpha-BHC	1.6	B	Y	0.013	5/2/2007	Normal	ug/l	1.6	
RW-2	SW8081A	beta-BHC	0.34		Y	0.022	5/2/2007	Normal	ug/l	0.34	
RW-2	SW8081A	delta-BHC	0.20		Y	0.024	5/2/2007	Normal	ug/l	0.2	
RW-2	SW8081A	gamma-BHC	1.2		Y	0.02	5/2/2007	Normal	ug/l	1.2	**3**
RW-3	SW8081A	alpha-BHC	23		Y	0.22	5/3/2007	Normal	ug/l	23	
RW-3	SW8081A	beta-BHC	2.2	J	Y	0.38	5/3/2007	Normal	ug/l	2.2	
RW-3	SW8081A	delta-BHC	4.6	B	Y	0.4	5/3/2007	Normal	ug/l	4.6	
RW-3	SW8081A	gamma-BHC	20		Y	0.34	5/3/2007	Normal	ug/l	20	**50**
RW-4	SW8081A	alpha-BHC	61		Y	0.43	5/4/2007	Normal	ug/l	61	
RW-4	SW8081A	beta-BHC	4.1	J	Y	0.75	5/4/2007	Normal	ug/l	4.1	
RW-4	SW8081A	delta-BHC	6.4	B	Y	0.81	5/4/2007	Normal	ug/l	6.4	
RW-4	SW8081A	gamma-BHC	51		Y	0.68	5/4/2007	Normal	ug/l	51	**123**
RW-5	SW8081A	alpha-BHC	57		Y	0.43	5/17/2007	Normal	ug/l	57	
RW-5	SW8081A	beta-BHC	5.5		Y	0.75	5/17/2007	Normal	ug/l	5.5	
RW-5	SW8081A	delta-BHC	4.6	J	Y	0.81	5/17/2007	Normal	ug/l	4.6	
RW-5	SW8081A	gamma-BHC	47		Y	0.68	5/17/2007	Normal	ug/l	47	**114**

Mercury Header Data May-07

LocationID	AnalyticalMethod	ParameterName	Result	LabFlag	Detect Flag	DetectionLimit	SampleDate	SampleType	Units	Total or Dissolved
OBA-9AR	SW7470	MERCURY	0.21		Y	0.067	5/3/2007	Normal	ug/l	T
PR-12	SW7470	MERCURY	0.53		Y	0.067	5/3/2007	Normal	ug/l	T
PR-4	SW7470	MERCURY	6.0		Y	0.067	5/3/2007	Normal	ug/l	T
PR-4	SW7470	MERCURY	15.2		Y	0.34	5/3/2007	Duplicate	ug/l	T
RW-1	SW7470	MERCURY	1.7		Y	0.067	5/3/2007	Normal	ug/l	T
RW-2	SW7470	MERCURY	0.47		Y	0.067	5/2/2007	Normal	ug/l	T
RW-3	SW7470	MERCURY		U	N	0.067	5/3/2007	Normal	ug/l	T
RW-4	SW7470	MERCURY	0.67		Y	0.067	5/4/2007	Normal	ug/l	T
RW-5	SW7470	MERCURY	0.69		Y	0.067	5/17/2007	Normal	ug/l	T
OBA-9AR	SW7470	MERCURY		U	N	0.067	5/3/2007	Normal	ug/l	D
PR-12	SW7470	MERCURY		U	N	0.067	5/3/2007	Normal	ug/l	D
PR-4	SW7470	MERCURY		U	N	0.067	5/3/2007	Normal	ug/l	D
PR-4	SW7470	MERCURY		U	N	0.067	5/3/2007	Duplicate	ug/l	D
RW-1	SW7470	MERCURY	0.69		Y	0.067	5/3/2007	Normal	ug/l	D
RW-2	SW7470	MERCURY		U	N	0.067	5/2/2007	Normal	ug/l	D
RW-3	SW7470	MERCURY		U	N	0.067	5/3/2007	Normal	ug/l	D
RW-4	SW7470	MERCURY		U	N	0.067	5/4/2007	Normal	ug/l	D
RW-5	SW7470	MERCURY		U	N	0.067	5/17/2007	Normal	ug/l	D

Attachment 5

J:\Olin\niagra\2007\WELL LOCATION PILOT TEST AREA.dwg - Layout1 07/05/2007 3:09pm lgladsto



OLIN CORPORATION
NIAGARA FALLS, NEW YORK

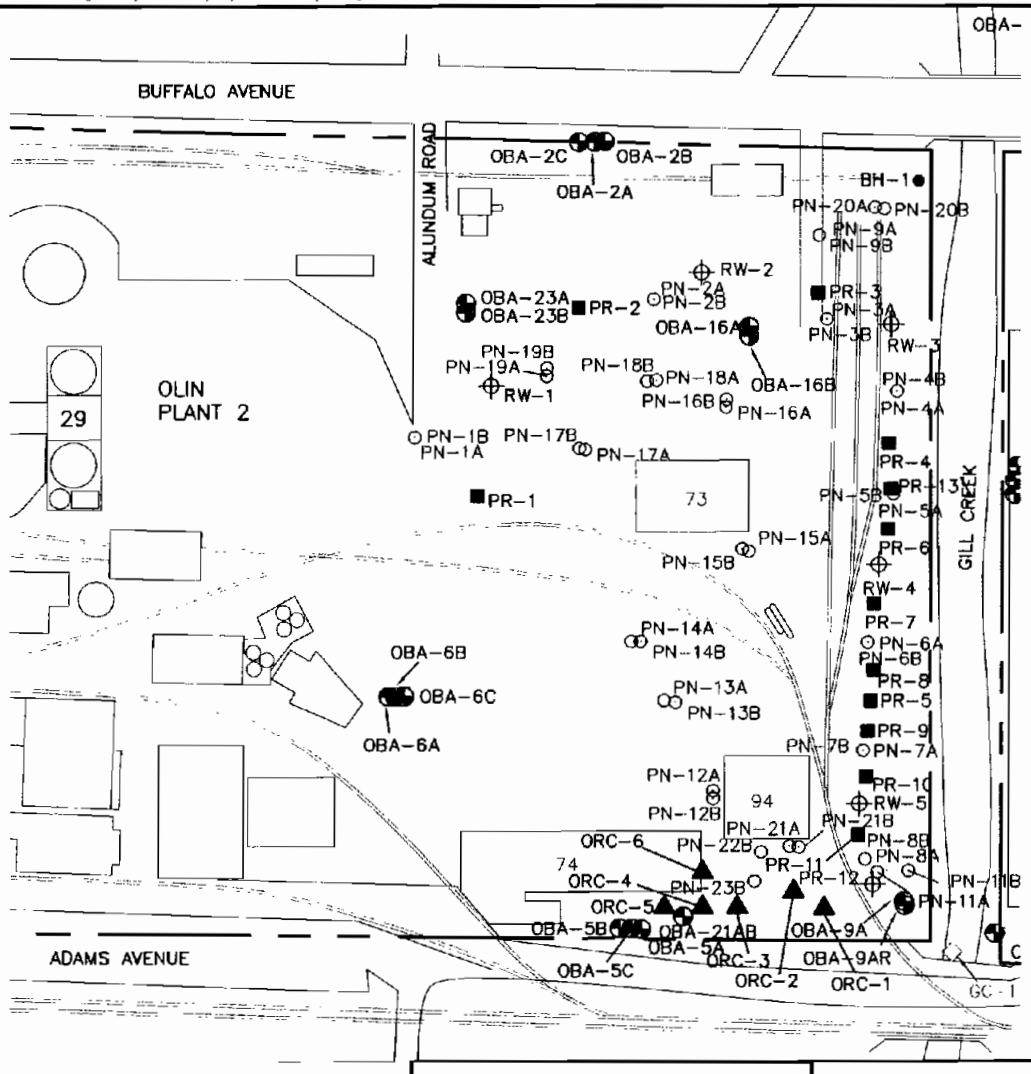
MACTEC
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

WELL LOCATION
PILOT TEST AREA

JOB NO. 6100-07-0001 FIGURE

PREPARED BY/DATE AWE
CHECKED BY/DATE

J:\Olin\niagra\2007\WELL LOCATION MAP-2.dwg — Layout1 07/05/2007 3:09pm tglodsto



LEGEND

OBA-X	WATER QUALITY MONITORING WELLS
PN-4	WATER QUALITY MONITORING WELLS
GC-1	GILL CREEK STILLING WELL
RW-4	GROUND-WATER RECOVERY WELLS
PR-3	PASSIVE RELIEF WELLS

SCALE IN FEET

0 100 200

OLIN CORPORATION
NIAGARA FALLS, NEW YORK

MACTEC
MACTEC Engineering and Consulting, Inc.
3200 TOWN POINT DRIVE, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

WELL LOCATION MAP

JOB NO. 6300-05-0005 FIGURE

PREPARED BY/DATE AWE
CHECKED BY/DATE

Attachment 6

Bellotti, Mike CHAS

From: Bellotti, Mike CHAS
Sent: Friday, June 29, 2007 1:40 PM
To: 'NYSDEC Czuhanich, Alex'
Cc: Bellotti, Mike CHAS
Subject: FW: Flow reduction at recovery wells
Importance: High
Attachments: BHC calculator.xls

Alex:
This is to inform you of a flow reduction at Olin's Niagara Falls remediation system. We have experienced a sudden increase in withdrawn pesticides from our remediation system. While this is ordinarily a positive development, in fact it has threatened to cause a permit exceedance in our sewered outflow. As a short term reaction, we are reducing our pumping rates in several key wells, as noted below. Longer term, we are sampling our recovery wells and stripper outflow weekly to determine whether this is a short term phenomenon or a longer trend. We will also monitor water table levels to determine whether this flow reduction could impact our hydraulic capture. I will keep you apprised.

Mike Bellotti
Olin Corporation
Environmental Remediation Group
423/336-4587

Current flow rates

May 2007

WELL	AVERAGE FLOWRATE (GPM)	TOTAL BHC CONC (UG/L)	BHC LOAD (LBS/DAY)
RW-1	2.6	25.2	0.0008
RW-2	32.0	3.0	0.0012
RW-3	6.4	49.8	0.0038
RW-4	7.5	122.5	0.0112
RW-5	6.6	114.1	0.0091
PR-4	1.2	364.0	0.0053
PR-12	5.2	185.9	0.0117
OBA-9AR	0.0253	653.0	0.0002
TOTAL	61.6		**0.043**

ANNUAL AVERAGE LIMIT = 0.035
DAILY MAXIMUM LIMIT = 0.07

Prep: AWE
6/29/2007
Checked KPW
6/29/2007

Reduced flowrates of RW-4, RW-5, PR-4, and PR-12

May 2007

WELL	AVERAGE FLOWRATE (GPM)	TOTAL BHC CONC (UG/L)	BHC LOAD (LBS/DAY)
RW-1	2.6	25.2	0.0008
RW-2	32.0	3.0	0.0012
RW-3	6.4	49.8	0.0038
RW-4	4.0	122.5	0.0059
RW-5	4.0	114.1	0.0055
PR-4	0.5	364.0	0.0022
PR-12	4.0	185.9	0.0090
OBA-9AR	0.0253	653.0	0.0002
TOTAL	53.5		**0.029**

ANNUAL AVERAGE LIMIT = 0.035

DAILY MAXIMUM LIMIT = 0.07

Prep: AWE
6/29/2007
Checked KPW
6/29/2007