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2010 ANNUAL GROUNDWATER MONITORING PROGRAM EVALUATION REPORT

**AKZO NOBEL POLYMER CHEMICALS LLC
2153 LOCKPORT-OLCOTT ROAD
BURT, NEW YORK**

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2010 ANNUAL GROUNDWATER MONITORING PROGRAM EVALUATION REPORT

AKZO NOBEL POLYMER CHEMICALS LLC
2153 LOCKPORT-OLCOTT ROAD
BURT, NEW YORK

JANUARY 2011
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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION.....	1
2.0 GROUNDWATER QUALITY DATA.....	3
3.0 COMPARISON OF 2010 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS.....	4
4.0 MONITORED NATURAL ATTENUATION EVALUATION.....	7
5.0 GROUNDWATER HYDRAULICS	8
6.0 CONCLUSIONS	9

LIST OF FIGURES (Following Text)

FIGURE 1	SITE LOCATION MAP
FIGURE 2	MONITORING WELL LOCATIONS

LIST OF APPENDICES

APPENDIX A	ANALYTICAL REPORTS - 2010
APPENDIX B	OVERBURDEN GROUNDWATER CONTOURS - 2010
APPENDIX C	BEDROCK GROUNDWATER CONTOURS - 2010
APPENDIX D	FIELD MEASUREMENTS - 2010
APPENDIX E	EVALUATION OF NATURAL ATTENUATION DATA
APPENDIX F	COMPARISON OF 2006, 2007, 2008 AND 2009 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS
APPENDIX G	WATER LEVEL MEASUREMENTS - 2010

1.0 INTRODUCTION

Akzo Nobel Polymer Chemicals, LLC (Akzo Nobel) has a Part 373 Permit, Number 9-02928-00001/0003, which required a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) and a RCRA Facility Investigation (RFI) to determine the nature and extent of contamination associated with the Site (Site). These studies were conducted from 1994 to 2002. Based on the findings of the RFI, groundwater impacts were identified at the Site. A Corrective Measures Study (CMS) was conducted to evaluate remedial alternatives. Monitored Natural Attenuation (MNA) and institutional controls were selected as the final corrective measures for the Site. Akzo Nobel's Part 3 Permit was renewed in December 2005. The Permit authorized Akzo Nobel to implement corrective action measures to address the groundwater contamination at the Site.

The remedial goals of the corrective action are:

- i) eliminate the future risk to human health posed by the contaminated soil and remaining source materials present within the industrialized area of the Facility
- ii) eliminate the future risk to human health posed by the contaminated overburden groundwater present beneath the industrialized area of the Facility
- iii) control migration of the contaminated groundwater

The remedial criteria of the correction action are:

- i) maintain a long-term Groundwater Monitoring Program (GMP) to ensure that the concentration of contaminants continues to decline in the central area of the Facility
- ii) continue groundwater monitoring in the perimeter wells to ensure that there is no off-Site contaminant migration

The GMP and the effectiveness of the MNA as the selected remedy for the Site will be evaluated annually. The GMP Evaluation Report will evaluate the contaminant concentration trends and natural attenuation parameters to determine if the remedy is effective in meeting the remedial goals and permit criteria. If an annual review shows that any well or wells consistently has results of non-detect for all parameters for at last four sampling events, Akzo Nobel may request that the New York State Department of Environmental Conservation (NYSDEC) allow Akzo Nobel to modify this GMP to reduce the sampling frequency for those wells.

If concentrations of Site contaminants are observed to be increasing at any of the source area wells or contaminants are detected at any of the perimeter wells at concentrations above the 6 New York Code of Rules and Regulations (NYCRR) Part 703.5 Standards, Akzo Nobel will develop and implement an Interim Corrective Measures (ICM) as required by Module II Section 1(a)(ii).

As required in the GMP, this annual report evaluates the performance of the remedial system at the Site. This performance evaluation includes:

- i) a comparison of 2010 monitoring data to determine remediation trends
- ii) an evaluation of water level data to determine overburden and bedrock groundwater flow

Conestoga-Rovers & Associates (CRA) was notified by Akzo Nobel on February 6, 2009, that the NYSDEC had agreed to reduce groundwater monitoring from four times per year (quarterly) to three times per year. This report, therefore, summarizes three groundwater monitoring events for 2010.

Figure 1 presents a Site Plan and Figure 2 presents the monitoring well locations. This is the fifth annual report prepared for the Site, and summarizes data collected for 2010.

2.0 GROUNDWATER QUALITY DATA

The existing monitoring well network consists of 17 groundwater monitoring wells. All monitoring wells were sampled in March, July, and November 2010. Groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), general chemistry, and specific field parameters. The TCL VOCs were analyzed by United States Environmental Protection Agency (USEPA) SW-846 Method 8260. Analyzing for the TCL VOC list of parameters indicates if the contaminants identified at the Site were decreasing in concentration as well as if daughter-products were being produced, providing an indication of degradation of contaminants by natural attenuation. Additionally, the following natural attenuation parameters were analyzed to assess whether conditions continue to be favorable for continued degradation or if enhancement of the natural attenuation may be necessary:

- i) dissolved oxygen (field measurement)
- ii) iron (II) (field measurement)
- iii) dissolved iron (USEPA Method SW-846 200.7 Series)
- iv) manganese, dissolved (USEPA Method SW-846 200.7 Series)
- v) nitrate (USEPA Method SW-846 300.0)
- vi) nitrite (USEPA Method SW-846 354.1)
- vii) sulfate (USEPA Method SW-846 300.0)
- viii) methane (Method RSK 175)

Analytical reports are summarized in Appendix A. Appendix D contains field measurement data.

3.0 COMPARISON OF 2010 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

The analytical results comparing TCL VOCs in groundwater with NYCRR 703.5 Groundwater Standards obtained in 2010 for the 17 monitoring wells are summarized briefly below.

<i>Well</i>	<i>Comparison of TCL VOCs in Groundwater with NYCRR 703.5 Groundwater Standards</i>	
MW-1	No results above action limits	
MW-1B	No results above action limits.	
MW-2	Benzene (50 µg/L [52 µg/L duplicate] versus action limit of 1 µg/L)	3/25/10
	Benzene (1.6 µg/L versus action limit of 1 µg/L)	7/07/10
	Chlorobenzene (6.7 µg/L [7.3 µg/L duplicate] versus action limit of 5 µg/L)	3/25/10
	Chloroethane (280 µg/L [290 µg/L duplicate] versus action limit of 5 µg/L)	3-25-10
	Chloroethane (45 µg/L versus action limit of 5 µg/L)	7-07-10
	Chloroethane (10 µg/L versus action limit of 5 µg/L)	11/03/10
	Ethylbenzene (23 µg/L [24 µg/L duplicate] versus action limit of 5 µg/L)	3/25/10
	Toluene (3700 µg/L [3900 µg/L duplicate] versus action limit of 5 µg/L)	3/25/10
	Xylene (70 µg/L [73 µg/L duplicate] versus action limit of 5 µg/L)	3/25/10
MW-3*	No results above action limits	
MW-3B*	No results above action limits	
MW-4*	No results above action limits	
MW-4B*	No results above action limits	
MW-5	Acetone (85 µg/L versus action limit of 50 µg/L)	7/06/10
	Acetone (109 µg/L versus action limit of 50 µg/L)	11/03/10
MW-6	No results above action limits	
MW-7	No results above action limits	
MW-8	No results above action limits	
MW-9*	1,1,1-Trichloroethane (17 µg/L versus action limit of 5 µg/L)	3/24/10
	1,1,1-Trichloroethane (14 µg/L versus action limit of 5 µg/L)	7/06/10
	1,1,1-Trichloroethane (19 µg/L [18 µg/L duplicate] versus action limit of 5 µg/L)	11/03/10
MW-9B*	No results above action limits	
MW-10*	No results above action limits	
MW-10B*	No results above action limits	
MW-11*	1,1,1-Trichloroethane (5.2 µg/L versus action limit of 5 µg/L)	3/24/10
MW-11B*	No results above action limits	

Notes:

- * Denotes downgradient boundary well
- J Estimated value
- µg/L Micrograms per liter

A summary of the analytical reports for 2010 can be found in Appendix A.

A comparison of 2006, 2007, 2008 and 2009 TCL VOCs in groundwater data with NYCRR 703.5 groundwater standards can be found in Appendix F.

With the exception of MW-9 and MW-11, none of the specified boundary wells exceeded 6 NYCRR Part 703.5 standards during 2010. 1,1,1-Trichloroethane was detected in MW-9 above the 6 NYCRR Part 703.5 action limit of 5 µg/L during all sampling events. A boundary well cluster designated MW-11 and MW-11B, downgradient of MW-9, depicted on Figure 2, was installed in February 2007 and was sampled during all 2010 sampling programs. 1,1,1-Trichloroethane was detected in MW-11 at a concentration of 5.2 µg/L versus the 6 NYCRR Part 703.5 action limit of 5 µg/L. All other sampling results for boundary wells MW-11 and MW-11B were below NYCRR 703.5 New York State groundwater standards. Performance at downgradient boundary wells, including MW-9, will continue to be tracked through scheduled monitoring programs.

Acetone was detected in MW-5 at a concentration of 85 µg/L and 190 µg/L versus the 6 NYCRR Part 703.5 action limit of 50 µg/L during the July and November sampling events respectively.

Interior monitoring well MW-2 has historically had concentrations of several groundwater monitoring constituents above 6 NYCRR Part 703.5 standards. Data for 2010, summarized below, continues to illustrate a pronounced decrease in measured concentrations for the 2010 data.

MW-2 ANALYTICAL RESULTS HIGHER THAN 6 NYCRR PART 703.5 STANDARDS

<i>Parameter</i>	<i>Action Limits for 6NYCRR Part 703.5 (µg/L)</i>	<i>March 2010 (µg/L)</i>	<i>July 2010 (µg/L)</i>	<i>November 2010 (µg/L)</i>
Benzene	1	50	1.6	ND at associated value for sample
Chlorobenzene	5	6.7	Below action limit for sample	Below action limit for sample
Chloroethane	5	280	45	10
Ethyl Benzene	5	23	ND at associated value for sample	ND at associated value for sample
Toluene	5	3700	ND at associated value for sample	ND at associated value for sample
Xylene (Total)	5	70	ND at associated value for sample	ND at associated value for sample

ND - **Not** detected.

4.0 MONITORED NATURAL ATTENUATION EVALUATION

Based on the findings of the RFI conducted from 1994 to 2002, groundwater impacts were identified at the Site. A CMS was conducted to evaluate remedial alternatives. MNA and institutional controls were subsequently selected as the final corrective measures at the Site.

Site groundwater MNA data were evaluated to determine whether conditions suitable for reductive dechlorination exist at the Site.

Several indicators of anaerobic conditions were measured during the groundwater sampling at the Site. Dissolved oxygen is a direct measurement of oxygen in the groundwater. Oxidation Reduction Potential (ORP) was also measured. Methane gas was analyzed. Dissolved metals such as iron and manganese were also measured. An assessment of current groundwater conditions is presented below.

1,1, dichloroethane and chloroethane are formed when 1,1,1- trichloroethane (1,1,1, TCA) is degraded by reductive dechlorination. The presence of these compounds in well MW-2 suggests that reductive dechlorination of 1,1,1, TCA has occurred in this area.

The 1,1,1-TCA present in the source area has been degraded to chloroethane to the point where the parent compound is no longer detected in the source area. The chloroethane is either continuing to degrade under anaerobic conditions in the source area or degrading aerobically as it migrates towards the Site boundary. Some anaerobic degradation of the BTEX compounds present in the source area appears to be occurring. Any BTEX not degraded in the source area will be degraded after they migrate to the aerobic area west of the source area. Therefore, off-Site migration of BTEX should not occur. 1,1,1-TCA is already present in the aerobic boundary area. The data indicate that natural attenuation of the 1,1,1-TCA is occurring in this area and that concentrations continue to decrease. Please see Appendix E of this report for the detailed evaluation of MNA.

5.0 GROUNDWATER HYDRAULICS

Appendix B presents the overburden groundwater contours for 2010 and Appendix C presents the bedrock groundwater contours for 2010. Based on the assessment of 2010 groundwater monitoring data, the direction of overburden groundwater flow was generally west-northwest. The direction of bedrock groundwater flow was generally west-southwest.

An upward gradient was observed at the MW-1/MW-1B cluster. A downward vertical gradient was observed at the MW-3/MW-3B, MW-4/MW-4B, MW-9/MW-9B and MW-11/MW-11B clusters. The downward vertical gradient observed on the western boundary of the Site may be the result of a nearby bedrock groundwater discharge area (Eighteen Mile Creek northwest of the Site).

The Site monitoring wells were initially surveyed in 2006 with a reference elevation of 100.00'. The wells were resurveyed in the spring of 2007 in State Plane NY West NAD83, Vertical Datum NAVD88. Water level measurements used to assess groundwater hydraulics for 2010 are found in Appendix G.

6.0 CONCLUSIONS

The three reports issued for 2010 included a summary of groundwater monitoring field activities, a summary of the analytical data compared to the New York State Groundwater Standards in 6NYCRR 703.5, groundwater contour maps for both the overburden groundwater and bedrock groundwater, and an interpretation of the data.

A review of the 2010 data has concluded that:

- concentrations of TCL VOC analytes in groundwater collected from the Site monitoring well network in most cases were either not detected or detected below NYCRR 703.5 Groundwater Standards
- due to the slightly elevated levels of 1,1,1-trichloroethane above NYCRR 703.5 Groundwater Standards observed in MW-9 in all 2006 quarterly sampling programs, a new boundary well cluster designated MW-11 and MW-11B was installed in February 2007 downgradient of MW-9, as depicted in Figure 2. During the March, 2010 monitoring event, 1,1,1-trichloroethane was detected in MW-11, slightly above groundwater standards, but it was not detected in MW-11B and was not detected in MW-11 or 11-B during the July and November sampling events
- the direction of overburden groundwater flow was generally west-northwest. The direction of bedrock groundwater flow was generally west-southwest

An upward gradient was observed at the MW-1/MW-1B cluster. A downward vertical gradient was observed at the MW-3/MW-3B, MW-4/MW-4B, MW-9/MW-9B and MW-11/MW-11B clusters. The downward vertical gradient observed on the western boundary of the Site may be the result of a nearby bedrock groundwater discharge area (Eighteen Mile Creek northwest of the Site)

- the 1,1,1-TCA present in the source area has been degraded to chloroethane to the point where the parent compound is no longer detected in the source area. The chloroethane is either continuing to degrade under anaerobic conditions in the source area or degrading aerobically as it migrates towards the Site boundary. Some anaerobic degradation of the BTEX compounds present in the source area appears to be occurring. Any BTEX not degraded in the source area will be degraded after they migrate to the aerobic area west of the source area. Therefore, off-Site migration of BTEX should not occur. 1,1,1-TCA is already present in the aerobic boundary area. The data indicate that natural attenuation of the 1,1,1-TCA is occurring in this area and that concentrations continue to decrease
- acetone was detected at well MW-5 during the August and November 2009 sampling events and during the July and November 2010 sampling events. Acetone is a common laboratory contaminant; therefore, a single detection would likely be

attributed to laboratory error, however, acetone was detected in the same well at two successive sampling events each year. Therefore, it appears likely that this acetone is present at the Site. Acetone degrades under the aerobic conditions present in the area of well MW-5

- the remedial goals of the corrective action that continue to be addressed are:
 - eliminate the future risk to human health posed by the contaminated soil and remaining source materials present within the industrialized area of the Facility
 - eliminate the future risk to human health posed by the contaminated overburden groundwater present beneath the industrialized area of the Facility
 - control migration of the contaminated groundwater

Additionally, as noted in this report, monitoring wells MW-1/1B, MW-3/3B, MW-4/4B, MW-6, MW-7, MW-8 and MW-10/10B had no analytical results above action limits for the 2010 monitoring period. These wells have demonstrated the same results for the monitoring events in 2009, with some dating back to the start of this monitoring program in 2006. Therefore CRA and Akzo Nobel would like to remove the following wells from the monitoring program:

- MW-1/1B
- MW-3/3B
- MW-6
- MW-7
- MW-8
- MW-10/10B

We propose keeping MW-4/4B in the monitoring program to be utilized as a down-gradient boundary well. Upon receipt of NYSDEC approval, CRA and Akzo Nobel will continue monitoring the remaining wells three times per year.



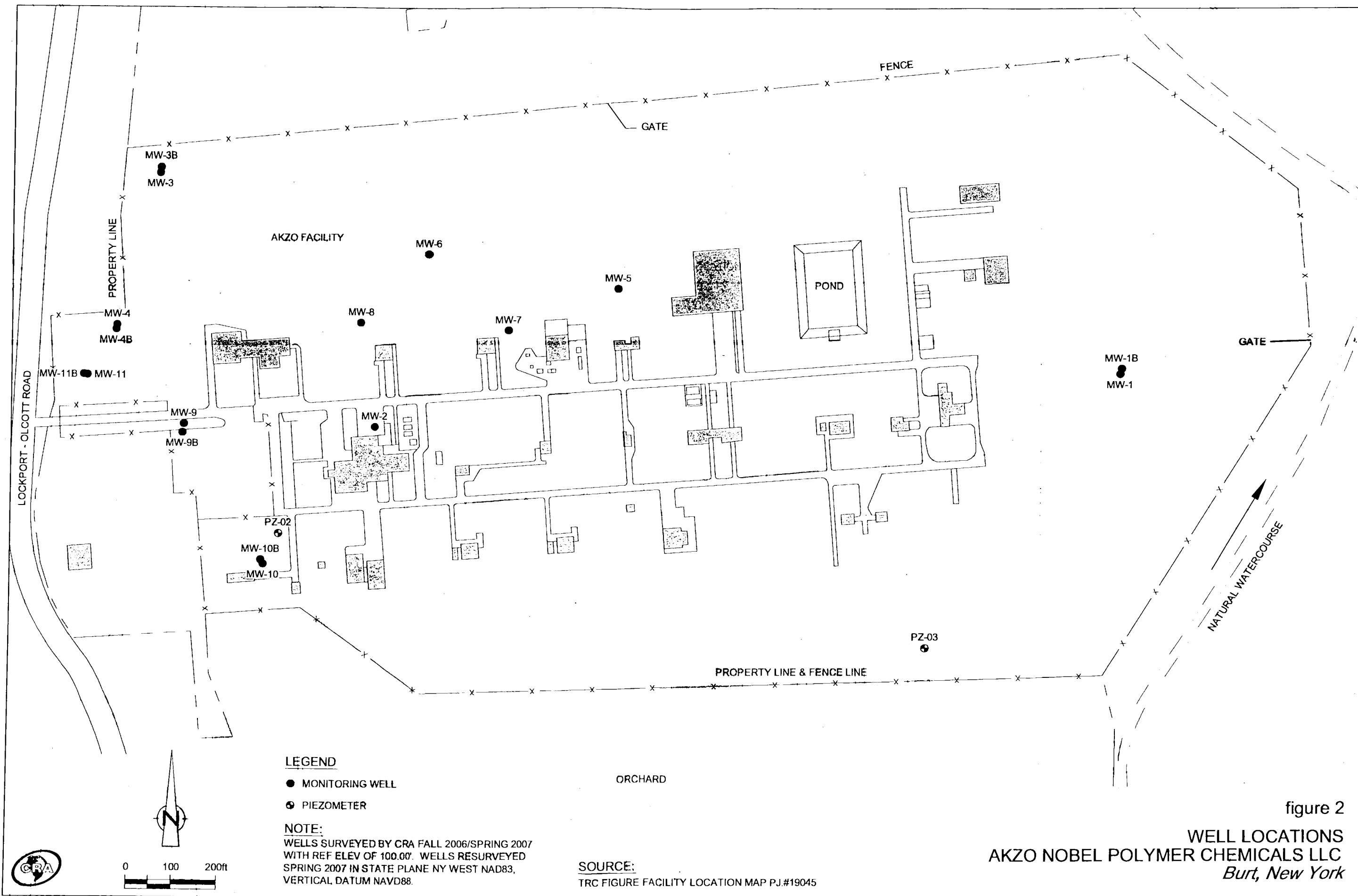
SOURCE REFERENCE

NEW YORK STATE GIS CLEARINGHOUSE, 2008

figure 1

SITE LOCATION MAP
AKZO NOBEL POLYMER CHEMICALS LLC
Burt, New York







APPENDIX A
ANALYTICAL REPORTS - 2010

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

	Location ID:		MW-1	MW-1B	MW-2	MW-2	MW-3
	Sample Name:		WG-44016-032410-008	WG-44016-032410-001	WG-44016-032510-014	WG-44016-032510-014DUP	WG-44016-032410-002
	Sample Date:		3/24/2010	3/24/2010	3/25/2010	3/25/2010	3/24/2010
	Action Limits						
	6NYCRR Part						
	703.5 Stds. For						
	Analyte Samples						
Parameters	Units					Duplicate	
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	5	0.26 U	0.26 U	1.1 U	1.1 U	0.26 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.85 U	0.85 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.92 U	0.92 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	3.7 J	3.8 J	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	1.2 U	1.2 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.86 U	0.86 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	2.8 U	2.8 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.33 U	0.33 U	1.3 U	1.3 U	0.33 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	5.3 U	5.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	5.0 U	5.0 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	0.91 U	0.91 U	3.6 U	3.6 U	0.91 U
Acetone	µg/L	50	1.3 U	1.3 U	5.4 U	5.4 U	1.3 U
Benzene	µg/L	1	0.41 U	0.41 U	30	32	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	1.5 U	1.5 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	1.0 U	1.0 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.28 U	0.28 U	1.1 U	1.1 U	0.28 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.78 U	0.78 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	1.1 U	1.1 U	0.27 U
Chlorobenzene	µg/L	5	0.32 U	0.32 U	6.7	7.3	0.32 U
Chloroethane	µg/L	5	0.32 U	0.32 U	280	290	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	1.3 U	1.3 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	1.4 U	1.4 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	1.4 U	1.4 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	1.3 U	1.3 U	0.32 U
Ethylbenzene	µg/L	5	0.18 U	0.18 U	23	24	0.18 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	1.8 U	1.8 U	0.44 U
Styrene	µg/L	5	0.18 U	0.18 U	0.74 U	0.74 U	0.18 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	1.5 U	1.5 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	3700	3900	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	1.5 U	1.5 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	1.8 U	1.8 U	0.46 U
Vinyl chloride	µg/L	2	0.24 U	0.24 U	0.97 U	0.97 U	0.24 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	70	73	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

Location ID:		MW-1	MW-1B	MW-2	MW-2	MW-3
Sample Name:		WG-44016-032410-008	WG-44016-032410-001	WG-44016-032510-014	WG-44016-032510-014DUP	WG-44016-032410-002
Sample Date:		3/24/2010	3/24/2010	3/25/2010	3/25/2010	3/24/2010
Action Limits						
6NYCRR Part						
Units					Duplicate	
703.5 Stds. For						
<i>Parameters</i>						
<i>Dissolved Gas</i>						
Methane	µg/L	18	1.0 U	7400	—	1.0 U
<i>Metals (Dissolved)</i>						
Iron (Dissolved)	µg/L	50 U	672	5050	—	50 U
Manganese (Dissolved)	µg/L	17.3	227	2180	—	10.8
<i>Wet Chemistry</i>						
Nitrate (as N)	mg/L	0.050 U	0.170	0.050 U	—	0.050 U
Nitrite (as N)	mg/L	0.050 U	0.398	0.050 U	—	0.050 U
Sulfate	mg/L	45.2	1450	5.0 U	—	191

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK

Location ID:			MW-3B	MW-4	MW-4B	MW-5	MW-6
Sample Name:			WG-44016-032410-003	WG-44016-032410-005	WG-44016-032410-004	WG-44016-032510-015	WG-44016-032510-016
Sample Date:			3/24/2010	3/24/2010	3/24/2010	3/25/2010	3/25/2010
Action Limits							
6NYCRR Part							
703.5 Stds. For							
Analyte Samples							
Parameters	Units						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	5	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Acetone	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK

	Location ID:	MW-3B	MW-4	MW-4B	MW-5	MW-6
	Sample Name:	WG-44016-032410-003	WG-44016-032410-005	WG-44016-032410-004	WG-44016-032510-015	WG-44016-032510-016
	Sample Date:	3/24/2010	3/24/2010	3/24/2010	3/25/2010	3/25/2010
	Action Limits					
	6NYCRR Part					
Parameters	Units	703.5	Std. For			
Dissolved Gas						
Methane	µg/L	1.0	1.0 U	3.0	1.0 U	3.8 J
Metals (Dissolved)						
Iron (Dissolved)	µg/L	50 U	50 U	44 J	50 U	23 J
Manganese (Dissolved)	µg/L	8.5	31.9	99.4	2.5 J	63.3
Wet Chemistry						
Nitrate (as N)	mg/L	0.175	0.079	0.386	7.77	0.050 U
Nitrite (as N)	mg/L	0.022 J	0.050 U	0.355	0.050 U	0.050 U
Sulfate	mg/L	46.1	34.3	1160	58.0	45.1

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

Location ID:			MW-7	MW-8	MW-9	MW-9B	MW-10
Sample Name:			WG-44016-032510-017	WG-44016-032410-011	WG-44016-032410-012	WG-44016-032410-007	WG-44016-032410-013
Sample Date:			3/25/2010	3/24/2010	3/24/2010	3/24/2010	3/24/2010
Action Limits							
6NYCRR Part							
703.5 Stds. For							
Analyte Samples							
Parameters	Units						
<i>Volatile Organic Compounds</i>							
1,1,1-Trichloroethane	µg/L	5	0.26 U	0.26 U	17	0.26 U	0.26 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	1.2	0.94 J	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	1.5	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Acetone	µg/L	50	2.7 J	1.3 U	1.3 U	1.3 U	1.3 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.32 U	0.82 J	0.32 U	0.32 U	0.32 U
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.54 J	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

	Location ID:	MW-7	MW-8	MW-9	MW-9B	MW-10
	Sample Name:	WG-44016-032510-017	WG-44016-032410-011	WG-44016-032410-012	WG-44016-032410-007	WG-44016-032410-013
	Sample Date:	3/25/2010	3/24/2010	3/24/2010	3/24/2010	3/24/2010
	Action Limits					
	6NYCRR Part					
Parameters	Units					
703.5 Std. For						
Dissolved Gas						
Methane	µg/L	140	13	1.1	2.4	1.0 U
Metals (Dissolved)						
Iron (Dissolved)	µg/L	2910	1080	21 J	50 U	42 J
Manganese (Dissolved)	µg/L	1470	939	99.1	31.4	3.0
Wet Chemistry						
Nitrate (as N)	mg/L	0.050 U	0.050 U	4.39	0.196	3.89
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.032 J	0.050 U
Sulfate	mg/L	102	79.2	74.9	681	68.8

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK

	Location ID:		MW-10B	MW-11	MW-11B
	Sample Name:		WG-44016-032410-006	WG-44016-032410-010	WG-44016-032410-009
	Sample Date:	Action Limits	3/24/2010	3/24/2010	3/24/2010
		6NYCRR Part			
Parameters	Units	703.5 Stds. For			
		Analyte Samples			
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	5	0.26 U	5.2	0.26 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	1.9	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.33 U	0.33 U	0.33 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	0.91 U	0.91 U	0.91 U
Acetone	µg/L	50	1.3 U	1.3 U	1.3 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.28 U	0.28 U	0.28 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.32 U	0.32 U	0.32 U
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.18 U	0.18 U	0.18 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.18 U	0.18 U	0.18 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.24 U	0.24 U	0.24 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

	Location ID:	MW-10B	MW-11	MW-11B
	Sample Name:	WG-44016-032410-006	WG-44016-032410-010	WG-44016-032410-009
	Sample Date:	3/24/2010	3/24/2010	3/24/2010
	Action Limits			
	6NYCRR Part			
Parameters	Units	703.5 Stds. For		
Dissolved Gas				
Methane	µg/L	66	1.0 U	10
Metals (Dissolved)				
Iron (Dissolved)	µg/L	50 U	50 U	31 J
Manganese (Dissolved)	µg/L	47.9	8.5	63.4
Wet Chemistry				
Nitrate (as N)	mg/L	0.050 U	0.844	0.032 J
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U
Sulfate	mg/L	108	53.7	449

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- ☐ Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-1	MW-1B	MW-2	MW-2	MW-3
		Sample Name:		WG-70075-070710-008	WG-70075-070710-007	WG-70075-070710-017	WG-70075-070710-018	WG-70075-070610-006
		Sample Date:		7/7/2010	7/7/2010	7/7/2010	7/7/2010	7/6/2010
				Duplicate				
		Action Limits						
		6NYCRR Part						
Parameters	Units	703.5 Stds. For						
		Analyte Samples						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	1.6	1.6		0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.75 U	0.75 U	1.3	1.3		0.75 U
Chloroethane	µg/L	5	0.32 U	0.32 U	45	44		0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-1	MW-1B	MW-2	MW-2	MW-3
		Sample Name:	WG-70075-070710-008	WG-70075-070710-007	WG-70075-070710-017	WG-70075-070710-018	WG-70075-070610-006
		Sample Date:	7/7/2010	7/7/2010	7/7/2010	7/7/2010	7/6/2010
						Duplicate	
		Action Limits					
		6NYCRR Part					
Parameters	Units	703.5 Stds. For					
<i>Dissolved Gas</i>							
Methane	µg/L	-	39	1.0 U	4000	--	1.0 U
<i>Metals (Dissolved)</i>							
Iron (Dissolved)	µg/L	-	91	94	2450	--	50 U
Manganese (Dissolved)	µg/L	-	61.5	193	1620	--	344
<i>Wet Chemistry</i>							
Nitrate (as N)	mg/L	-	0.050 U	0.151	0.050 U	--	0.050 U
Nitrite (as N)	mg/L	-	0.050 U	0.380	0.050 U	--	0.050 U
Sulfate	mg/L	-	55.5 U	1510	63.5 U	--	186

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-3B	MW-4	MW-4B	MW-5	MW-6
		Sample Name:		WG-70075-070710-009	WG-70075-070710-010	WG-70075-070710-011	WG-70075-070610-004	WG-70075-070610-002
		Sample Date:		7/7/2010	7/7/2010	7/7/2010	7/6/2010	7/6/2010
		Action Limits						
		6NYCRR Part						
Parameters	Units	703.5 Stds. For						
		Analyte Samples						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U	85	3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	1.8
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

			Location ID:	MW-3B	MW-4	MW-4B	MW-5	MW-6
			Sample Name:	WG-70075-070710-009	WG-70075-070710-010	WG-70075-070710-011	WG-70075-070610-004	WG-70075-070610-002
			Sample Date:	7/7/2010	7/7/2010	7/7/2010	7/6/2010	7/6/2010
			Action Limits					
			6NYCRR Part					
			703.5 Stds. For					
Parameters	Units							
Dissolved Gas								
Methane	µg/L	-	8.2	1.0 U	2.6	1.0 U	91	
Metals (Dissolved)								
Iron (Dissolved)	µg/L	-	45 J	148	19 J	95	277	
Manganese (Dissolved)	µg/L	-	16.8	83.7	111	11.1	2180	
Wet Chemistry								
Nitrate (as N)	mg/L	-	0.150	0.037 J	0.579	8.72	0.050 U	
Nitrite (as N)	mg/L	-	0.050 U	0.050 U	0.191	0.050 U	0.050 U	
Sulfate	mg/L	-	47.6 U	49.8 U	1170	65.2	103	

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-7	MW-8	MW-9	MW-9B	MW-10
		Sample Name:	WG-70075-070610-003	WG-70075-070610-001	WG-70075-070610-005	WG-70075-070710-014	WG-70075-070710-016
		Sample Date:	7/6/2010	7/6/2010	7/6/2010	7/7/2010	7/7/2010
		Action Limits					
		6NYCRR Part					
Parameters	Units	703.5 Stds. For					
Analyte Samples							
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	14	0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.72 J	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	µg/L	50	3.4 J	3.0 U	3.0 U	3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.75 U	0.97 J	0.75 U	0.75 U	0.75 U
Chloroethane	µg/L	5	0.32 U	0.78 J	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.81 J	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-7	MW-8	MW-9	MW-9B	MW-10
		Sample Name:	WG-70075-070610-003	WG-70075-070610-001	WG-70075-070610-005	WG-70075-070710-014	WG-70075-070710-016
		Sample Date:	7/6/2010	7/6/2010	7/6/2010	7/7/2010	7/7/2010
		Action Limits					
		6NYCRR Part					
		703.5 Stds. For					
<i>Parameters</i>	<i>Units</i>						
<i>Dissolved Gas</i>							
Methane	µg/L	-	380	110	1.0 U	9.6	1.0 U
<i>Metals (Dissolved)</i>							
Iron (Dissolved)	µg/L	-	2670	1410	154	50 U	375
Manganese (Dissolved)	µg/L	-	1280	1220	103	40.8	18.5
<i>Wet Chemistry</i>							
Nitrate (as N)	mg/L	-	0.050 U	0.050 U	4.22	0.224	4.44
Nitrite (as N)	mg/L	-	0.050 U	0.050 U	0.050 U	0.029 J	0.050 U
Sulfate	mg/L	-	108	88.1	77.9	710	56.1 U

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-10B	MW-11	MW-11B
		Sample Name:	WG-70075-070710-015	WG-70075-070710-012	WG-70075-070710-013
		Sample Date:	7/7/2010	7/7/2010	7/7/2010
		Action Limits			
		6NYCRR Part			
Parameters	Units	703.5 Stds. For			
Analyte Samples					
Volatile Organic Compounds					
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	2.0	1.3	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.75 U	0.75 U	0.75 U
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		<i>Location ID:</i>	MW-10B	MW-11	MW-11B
		<i>Sample Name:</i>	WG-70075-070710-015	WG-70075-070710-012	WG-70075-070710-013
		<i>Sample Date:</i>	7/7/2010	7/7/2010	7/7/2010
		<i>Action Limits</i>			
		<i>6NYCRR Part</i>			
		<i>703.5 Stds. For</i>			
<i>Parameters</i>	<i>Units</i>				
<i>Dissolved Gas</i>					
Methane	µg/L	-	4.7	70	19
<i>Metals (Dissolved)</i>					
Iron (Dissolved)	µg/L	-	75	1250	50 U
Manganese (Dissolved)	µg/L	-	55.1	268	17.8
<i>Wet Chemistry</i>					
Nitrate (as N)	mg/L	-	0.050 U	0.050 U	0.016 J
Nitrite (as N)	mg/L	-	0.050 U	0.050 U	0.050 U
Sulfate	mg/L	-	107	88.1	173

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-1	MW-1B	MW-2	MW-3	MW-3B
		Sample Name:		WG-70075-110310-004	WG-70075-110310-003	WG-70075-110310-015	WG-70075-110310-009	WG-70075-110310-010
		Sample Date:		11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
		Action Limits						
		6NYCRR Part						
Parameters	Units	703.5 Stds. For						
		Analyte Samples						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.61 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	2.5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Chlorobenzene	µg/L	5	0.75 U	0.75 U	0.92 J	0.75 U	0.75 U	0.75 U
Chloroethane	µg/L	5	0.32 U	0.32 U	10	0.32 U	0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-1	MW-1B	MW-2	MW-3	MW-3B
		Sample Name:	WG-70075-110310-004	WG-70075-110310-003	WG-70075-110310-015	WG-70075-110310-009	WG-70075-110310-010
		Sample Date:	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
		Action Limits					
		6NYCRR Part					
		703.5 Stds. For					
Parameters	Units						
<i>Dissolved Gas</i>							
Methane	µg/L	-	15	1.0 U	840	1.0 U	2.5
<i>Metals (Dissolved)</i>							
Iron (Dissolved)	µg/L	-	50 U	150	2190	72	62
Manganese (Dissolved)	µg/L	-	45.0	189	1470	4.9	15.1
<i>Wet Chemistry</i>							
Nitrate (as N)	mg/L	-	0.050 U	0.277 J	0.050 U	0.070 J	0.061 J
Nitrite (as N)	mg/L	-	0.050 U	0.560	0.050 U	0.050 U	0.260
Sulfate	mg/L	-	61.8	1270	53.4	28.8	29.1

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-4	MW-4B	MW-5	MW-6	MW-7
		Sample Name:	WG-70075-110310-005	WG-70075-110310-006	WG-70075-110310-018	WG-70075-110310-016	WG-70075-110310-017	
		Sample Date:	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
		Action Limits						
		6NYCRR Part						
Parameters	Units	703.5 Stds. For						
Analyte Samples								
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	
1,1-Dichloroethane	µg/L	5	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	
Acetone	µg/L	50	3.0 U	3.0 U	190	3.0 U	3.0 U	
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	
Chlorobenzene	µg/L	5	0.75 U	0.75 U	0.75 U	1.3 J	0.75 U	
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	0.66 U	0.66 U	

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

			Location ID:	MW-4	MW-4B	MW-5	MW-6	MW-7
			Sample Name:	WG-70075-110310-005	WG-70075-110310-006	WG-70075-110310-018	WG-70075-110310-016	WG-70075-110310-017
			Sample Date:	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
			Action Limits					
			6NYCRR Part					
Parameters	Units	703.5 Stds. For						
<i>Dissolved Gas</i>								
Methane	µg/L	-	0.56 J	1.9	1.0 U	120	160	
<i>Metals (Dissolved)</i>								
Iron (Dissolved)	µg/L	-	221	50 U	333	296	1920	
Manganese (Dissolved)	µg/L	-	355	45.5	30.9	2310	1120	
<i>Wet Chemistry</i>								
Nitrate (as N)	mg/L	-	0.052 J	0.058 J	2.76 J	0.629 J	0.050 U	
Nitrite (as N)	mg/L	-	0.050 U	0.038 J	0.050 U	0.050 U	0.050 U	
Sulfate	mg/L	-	700	82.1	83.6	80.7	96.1	

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-8	MW-9	MW-9	MW-9B	MW-10
		Sample Name:		WG-70075-110210-002	WG-70075-110310-011	WG-70075-110310-012	WG-70075-110310-013	WG-70075-110210-001
		Sample Date:		11/2/2010	11/3/2010	11/3/2010	11/3/2010	11/2/2010
						(Duplicate)		
		Action Limits						
		6NYCRR Part						
Parameters		Units	703.5 Stds. For					
		Analyte Samples						
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	5	0.82 U	19	18		0.82 U	0.82 U
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U		0.21 U	0.21 U
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U		0.23 U	0.23 U
1,1-Dichloroethane	µg/L	5	0.38 U	1.4	1.4		0.38 U	0.38 U
1,1-Dichloroethene	µg/L	5	0.29 U	1.2	1.0		0.29 U	0.29 U
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U		0.21 U	0.21 U
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U		0.70 U	0.70 U
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U		0.72 U	0.72 U
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U		1.3 U	1.3 U
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U		1.2 U	1.2 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U		2.1 U	2.1 U
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U		3.0 U	3.0 U
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U		0.41 U	0.41 U
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U		0.39 U	0.39 U
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U		0.26 U	0.26 U
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U		0.69 U	0.69 U
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U		0.19 U	0.19 U
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U		0.27 U	0.27 U
Chlorobenzene	µg/L	5	1.4	0.75 U	0.75 U		0.75 U	0.75 U
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U		0.32 U	0.32 U
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U		0.34 U	0.34 U
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U		0.35 U	0.35 U
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U		0.36 U	0.36 U
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U		0.32 U	0.32 U
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U		0.74 U	0.74 U
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U		0.44 U	0.44 U
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U		0.73 U	0.73 U
Tetrachloroethene	µg/L	5	0.36 U	0.92 J	0.94 J		0.36 U	0.36 U
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U		0.51 U	0.51 U
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U		0.37 U	0.37 U
Trichloroethene	µg/L	5	0.46 U	0.68 J	0.64 J		0.46 U	0.46 U
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U		0.90 U	0.90 U
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U		0.66 U	0.66 U

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:	MW-8	MW-9	MW-9	MW-9B	MW-10
		Sample Name:	WG-70075-110210-002	WG-70075-110310-011	WG-70075-110310-012	WG-70075-110310-013	WG-70075-110210-001
		Sample Date:	11/2/2010	11/3/2010	11/3/2010 (Duplicate)	11/3/2010	11/2/2010
		Action Limits					
		6NYCRR Part					
Parameters	Units	703.5 Stds. For					
<i>Dissolved Gas</i>							
Methane	µg/L	-	38	1.0 U	--	2.9	1.0 U
<i>Metals (Dissolved)</i>							
Iron (Dissolved)	µg/L	-	1650	196	--	50 U	50 U
Manganese (Dissolved)	µg/L	-	1270	57.6	--	31.0	99.3
<i>Wet Chemistry</i>							
Nitrate (as N)	mg/L	-	0.050 U	3.25 J	--	0.176 J	3.37
Nitrite (as N)	mg/L	-	0.252	0.050 U	--	0.052	0.050 U
Sulfate	mg/L	-	89.7	79.3	--	571	52.8

Notes:

- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

		Location ID:		MW-10B	MW-11	MW-11B
		Sample Name:		WG-70075-110310-014	WG-70075-110310-007	WG-70075-110310-008
		Sample Date:		11/3/2010	11/3/2010	11/3/2010
		Action Limits				
		6NYCRR Part				
Parameters	Units	703.5 Stds. For				
Analyte Samples						
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	5	0.82 U	0.82 U	0.82 U	
1,1,2,2-Tetrachloroethane	µg/L	5	0.21 U	0.21 U	0.21 U	
1,1,2-Trichloroethane	µg/L	1	0.23 U	0.23 U	0.23 U	
1,1-Dichloroethane	µg/L	5	1.6	1.7	0.38 U	
1,1-Dichloroethene	µg/L	5	0.29 U	0.29 U	0.29 U	
1,2-Dichloroethane	µg/L	0.6	0.21 U	0.21 U	0.21 U	
1,2-Dichloroethene (total)	µg/L	5	0.70 U	0.70 U	0.70 U	
1,2-Dichloropropane	µg/L	1	0.72 U	0.72 U	0.72 U	
2-Butanone (Methyl Ethyl Ketone)	µg/L	50	1.3 U	1.3 U	1.3 U	
2-Hexanone	µg/L	50	1.2 U	1.2 U	1.2 U	
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	µg/L	-	2.1 U	2.1 U	2.1 U	
Acetone	µg/L	50	3.0 U	3.0 U	3.0 U	
Benzene	µg/L	1	0.41 U	0.41 U	0.41 U	
Bromodichloromethane	µg/L	50	0.39 U	0.39 U	0.39 U	
Bromoform	µg/L	50	0.26 U	0.26 U	0.26 U	
Bromomethane (Methyl Bromide)	µg/L	5	0.69 U	0.69 U	0.69 U	
Carbon disulfide	µg/L	-	0.19 U	0.19 U	0.19 U	
Carbon tetrachloride	µg/L	5	0.27 U	0.27 U	0.27 U	
Chlorobenzene	µg/L	5	0.75 U	0.75 U	0.75 U	
Chloroethane	µg/L	5	0.32 U	0.32 U	0.32 U	
Chloroform (Trichloromethane)	µg/L	7	0.34 U	0.34 U	0.34 U	
Chloromethane (Methyl Chloride)	µg/L	-	0.35 U	0.35 U	0.35 U	
cis-1,3-Dichloropropene	µg/L	0.4	0.36 U	0.36 U	0.36 U	
Dibromochloromethane	µg/L	50	0.32 U	0.32 U	0.32 U	
Ethylbenzene	µg/L	5	0.74 U	0.74 U	0.74 U	
Methylene chloride	µg/L	5	0.44 U	0.44 U	0.44 U	
Styrene	µg/L	5	0.73 U	0.73 U	0.73 U	
Tetrachloroethene	µg/L	5	0.36 U	0.36 U	0.36 U	
Toluene	µg/L	5	0.51 U	0.51 U	0.51 U	
trans-1,3-Dichloropropene	µg/L	0.4	0.37 U	0.37 U	0.37 U	
Trichloroethene	µg/L	5	0.46 U	0.46 U	0.46 U	
Vinyl chloride	µg/L	2	0.90 U	0.90 U	0.90 U	
Xylene (total)	µg/L	5	0.66 U	0.66 U	0.66 U	

**ANALYTICAL RESULTS SUMMARY
AKZO NOBEL GROUNDWATER SAMPLING
BURT, NEW YORK**

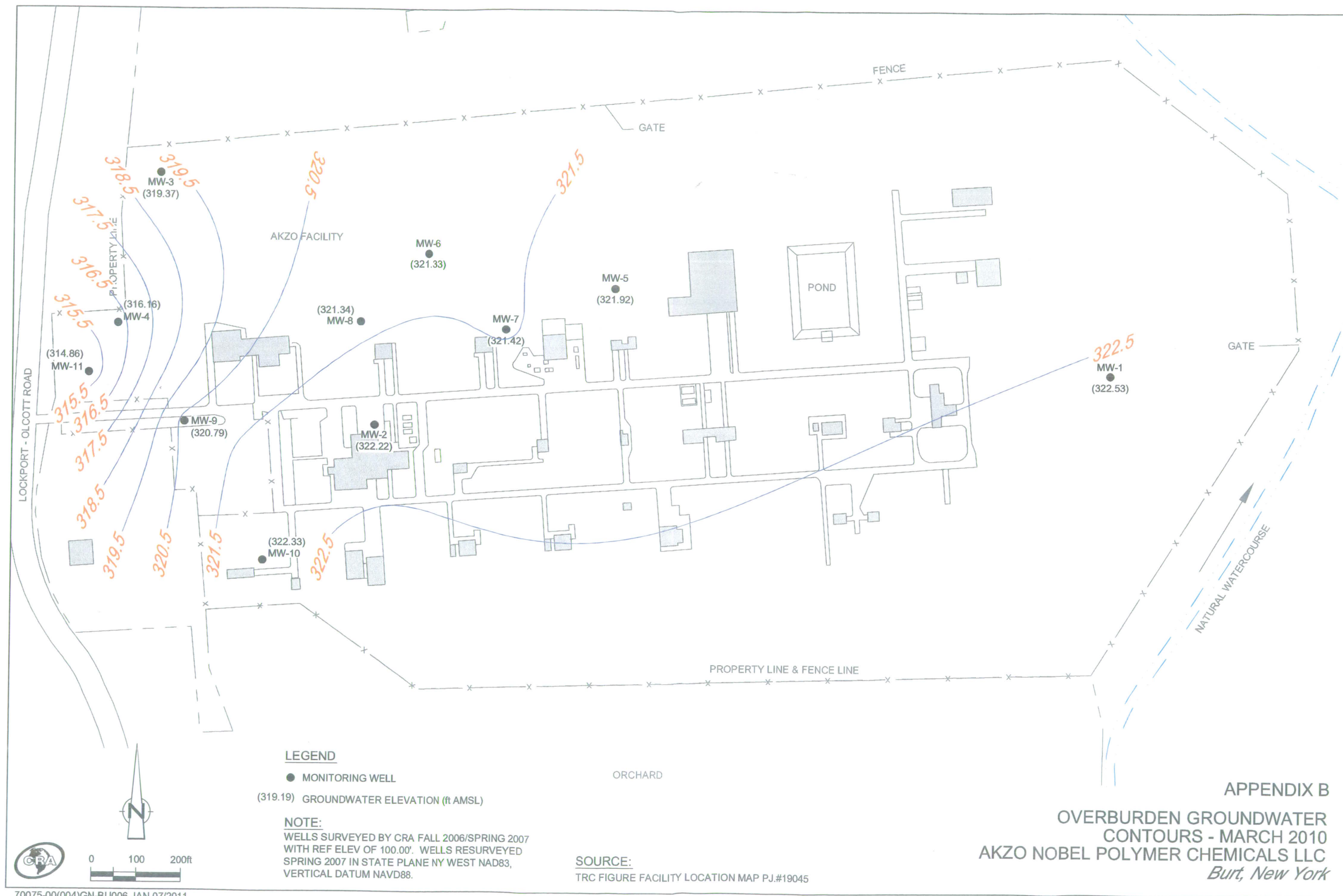
		Location ID:	MW-10B	MW-11	MW-11B
		Sample Name:	WG-70075-110310-014	WG-70075-110310-007	WG-70075-110310-008
		Sample Date:	11/3/2010	11/3/2010	11/3/2010
Action Limits					
6NYCRR Part					
Parameters	Units	703.5 Stds. For			
Dissolved Gas					
Methane	µg/L	•	11	96	11
Metals (Dissolved)					
Iron (Dissolved)	µg/L	•	68	548	40 J
Manganese (Dissolved)	µg/L	-	52.4	222	26.6
Wet Chemistry					
Nitrate (as N)	mg/L	-	0.058 J	0.050 U	0.073 J
Nitrite (as N)	mg/L	-	0.033 J	0.050 U	0.050 U
Sulfate	mg/L	-	102	293	156

Notes:

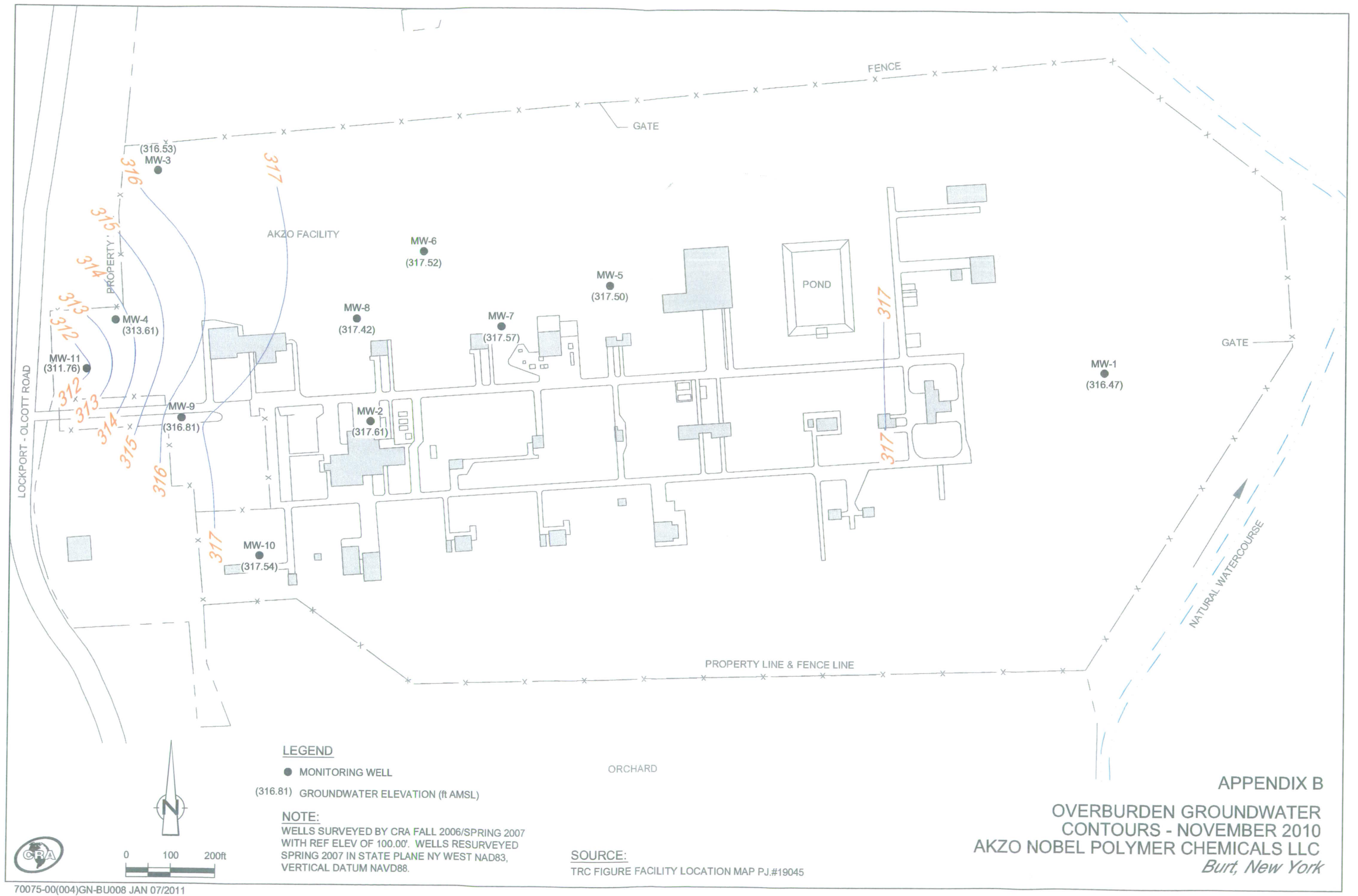
- Not analyzed.
- J Estimated.
- U Not present at or above the associated value.
- Above 6 NYCRR Part 703.5 Standards.

APPENDIX B

OVERBURDEN GROUNDWATER CONTOURS - 2010

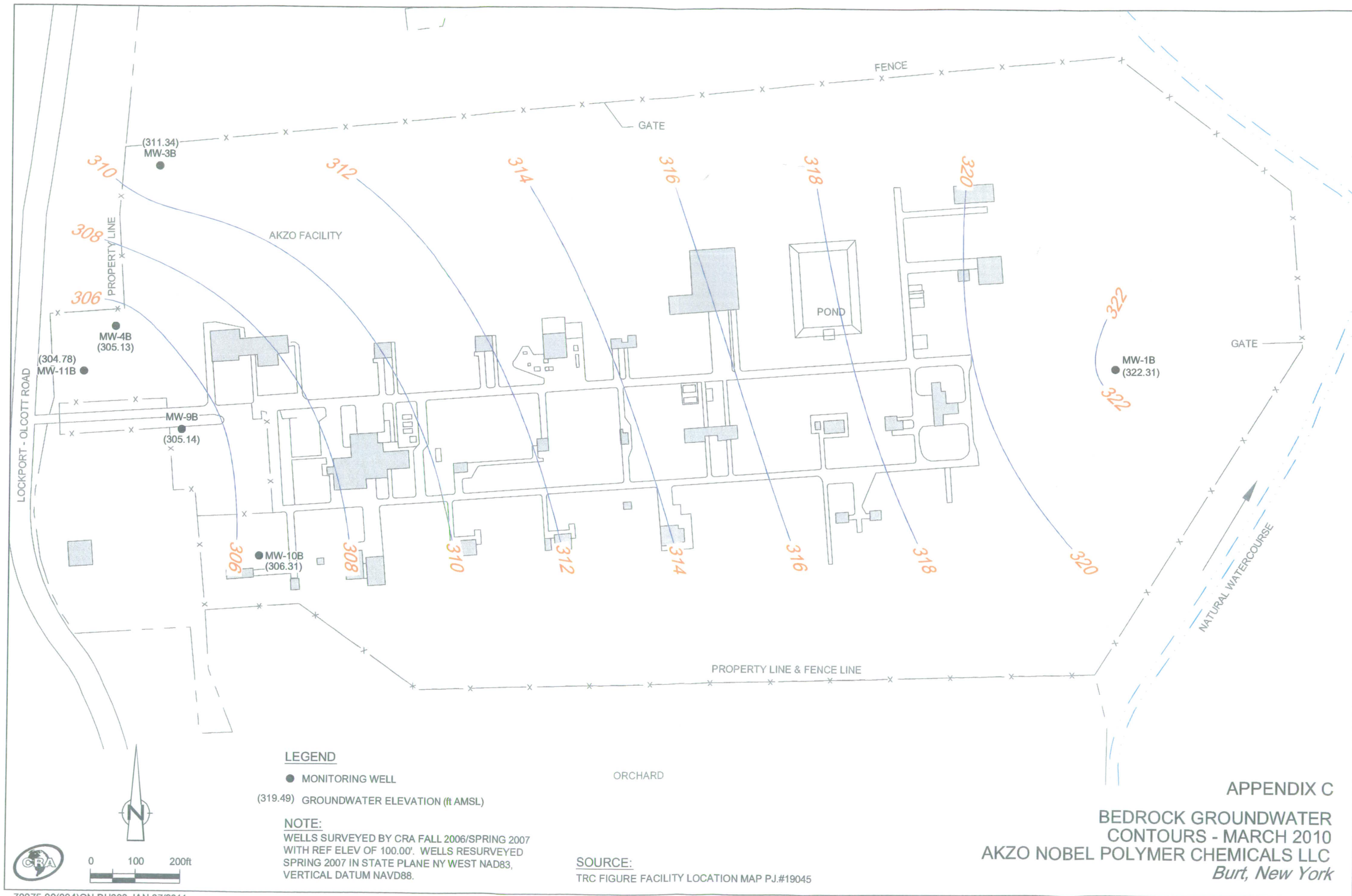


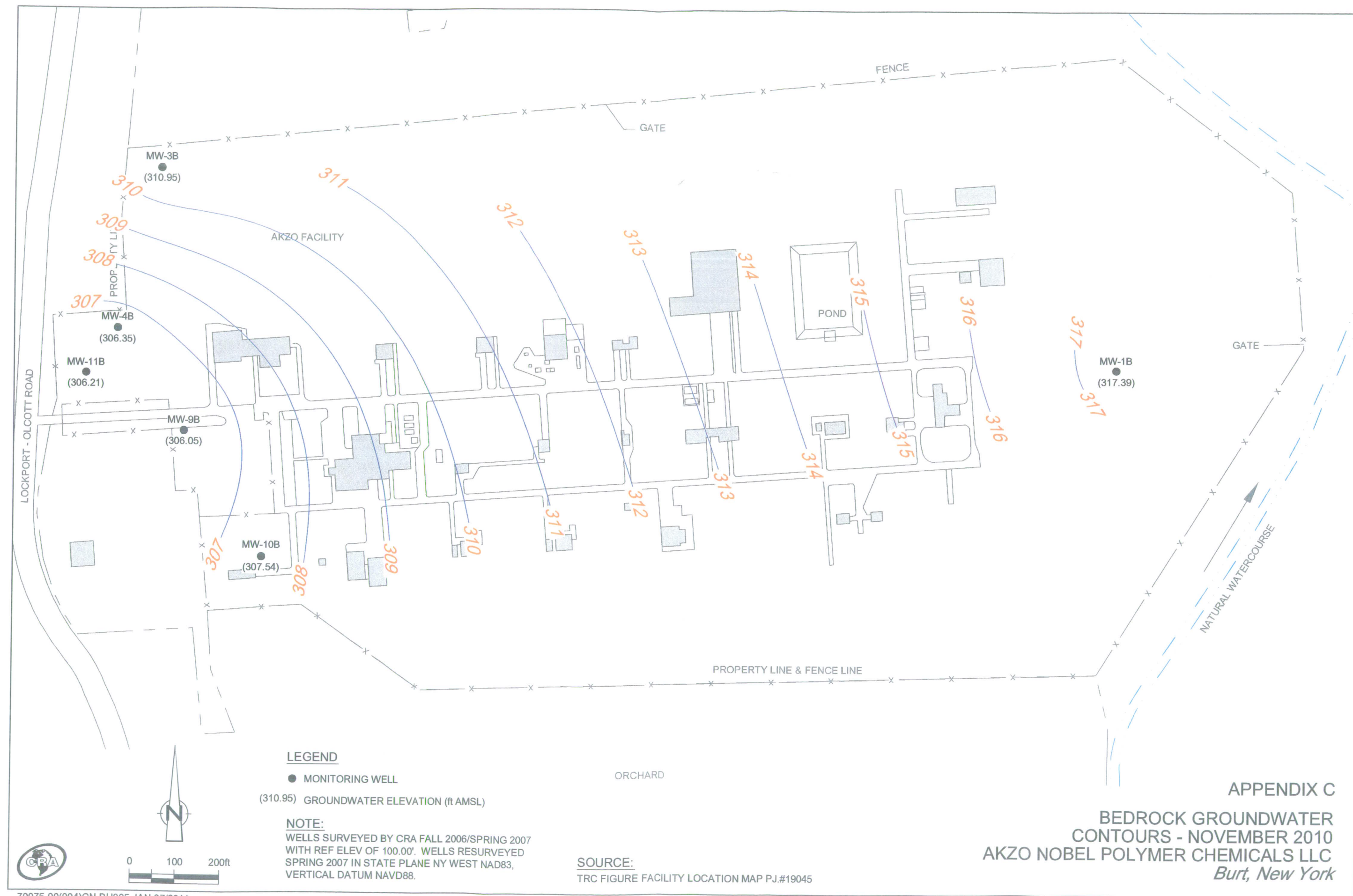
APPENDIX B
 OVERBURDEN GROUNDWATER
 CONTOURS - NOVEMBER 2010
 AKZO NOBEL POLYMER CHEMICALS LLC
 Burt, New York



APPENDIX C

BEDROCK GROUNDWATER CONTOURS - 2010





APPENDIX D

FIELD MEASUREMENTS - 2010

APPENDIX D - MARCH 2010

FIELD MEASUREMENTS AKZO NOBEL GROUNDWATER MONITORING BURT, NEW YORK

Well ID	Type	pH	Temp. °C	Conductivity mS/cm	ORP Millivolts	Turbidity NTU	Dissolved Oxygen mg/L	Ferrous Iron mg/L
MW-1	Background - Overburden	7.25	6.01	0.641	117	8.98	2.94	0.00
MW-1B	Background - Bedrock	7.76	9.98	3.88	54	13.7	6.61	0.04
MW-2	Source Area - Overburden	7.08	7.45	0.965	-122	7.74	2.66	0.43
MW-3	Downgradient Boundary - Overburden	7.31	5.82	1.015	130	17.4	7.55	0.06
MW-3B	Downgradient Boundary - Bedrock	7.72	8.72	0.597	104	20.4	4.47	0.00
MW-4	Downgradient Boundary - Overburden	7.40	5.33	0.695	134	4.81	8.60	0.00
MW-4B	Downgradient Boundary - Bedrock	7.63	8.39	4.40	103	11.3	4.63	0.05
MW-5	Source Area - Overburden	7.26	5.99	0.914	-28	1.10	4.94	0.00
MW-6	Downgradient Offset - Overburden	7.16	5.48	0.669	7	1.67	4.60	0.00
MW-7	Source Area - Overburden	7.09	5.60	1.415	-85	4.38	3.83	2.04
MW-8	Source Area - Overburden	7.34	7.15	1.081	-14	3.41	2.85	0.51
MW-9	Downgradient Boundary - Overburden	7.17	8.05	1.295	128	6.39	4.28	0.00
MW-9B	Downgradient Boundary - Bedrock	8.07	11.47	2.00	55	9.39	3.12	0.00
MW-10	Downgradient Offset - Overburden	6.99	6.74	0.657	142	2.08	4.29	0.00
MW-10B	Downgradient Offset - Bedrock	7.81	10.76	1.470	88	8.25	3.05	0.00
MW-11	Downgradient Boundary - Overburden	7.30	6.98	0.989	141	28.2	6.89	0.00
MW-11B	Downgradient Boundary - Bedrock	8.06	4.70	1.438	103	6.34	4.71	0.00

Notes:

mg/L Milligram/liter.
mS/cm Millisiemens/centimeter.
NTU Nephelometric Turbidity Unit.
ORP Oxygen Release Potential

APPENDIX D - JULY 2010

FIELD MEASUREMENTS AKZO NOBEL GROUNDWATER MONITORING BURT, NEW YORK

<i>Well ID</i>	<i>Type</i>	<i>pH</i>	<i>Temp.</i> °C	<i>Conductivity</i> mS/cm	<i>ORP</i> Millivolts	<i>Turbidity</i> NTU	<i>Dissolved Oxygen</i> mg/L	<i>Ferrous Iron</i> mg/L
MW-1	Background - Overburden	7.01	11.32	0.72	-0.7	4.8	1.99	0.14
MW-1B	Background - Bedrock	7.07	11.37	4.05	-43.7	20.6	2.26	0.02
MW-2	Source Area - Overburden	7.21	17.93	0.86	-167.1	8.0	1.47	2.57
MW-3	Downgradient Boundary - Overburden	7.36	17.42	1.03	70.9	21.3	4.52	0.29
MW-3B	Downgradient Boundary - Bedrock	7.62	14.62	0.64	43.2	12.6	1.89	0.16
MW-4	Downgradient Boundary - Overburden	7.05	13.49	1.02	59.3	5.5	2.05	0.00
MW-4B	Downgradient Boundary - Bedrock	7.39	12.69	4.90	48.6	18.3	2.58	0.13
MW-5	Source Area - Overburden	7.37	15.95	1.12	66.3	3.6	3.69	0.00
MW-6	Downgradient Offset - Overburden	7.39	18.67	1.38	-99.2	4.1	3.12	0.14
MW-7	Source Area - Overburden	7.48	16.40	1.40	-167	13.2	3.32	1.22
MW-8	Source Area - Overburden	7.52	15.89	1.15	-139	6.2	3.14	1.15
MW-9	Downgradient Boundary - Overburden	7.41	17.11	1.37	77.5	9.0	4.61	0.01
MW-9B	Downgradient Boundary - Bedrock	8.10	14.05	2.17	30.2	13.2	1.58	0.13
MW-10	Downgradient Offset - Overburden	7.23	14.92	0.85	78.3	28.1	1.56	0.22
MW-10B	Downgradient Offset - Bedrock	7.19	12.09	1.67	63.2	7.9	1.78	0.00
MW-11	Downgradient Boundary - Overburden	6.86	14.04	2.11	-55.0	105.5	1.75	0.16
MW-11B	Downgradient Boundary - Bedrock	8.00	12.04	1.19	-21.9	5.7	1.58	0.00

Notes:

mg/L Milligram/liter.

mS/cm Millisiemens/centimeter.

NTU Nephelometric Turbidity Unit.

ORP Oxygen Release Potential

APPENDIX B - NOVEMBER 2010

FIELD MEASUREMENTS AKZO NOBEL GROUNDWATER MONITORING BURT, NEW YORK

<i>Well ID</i>	<i>Type</i>	<i>pH</i>	<i>Temp.</i> °C	<i>Conductivity</i> mS/cm	<i>ORP</i> Millivolts	<i>Turbidity</i> NTU	<i>Dissolved Oxygen</i> mg/L	<i>Ferrous Iron</i> mg/L
MW-1	Background - Overburden	7.88	10.53	0.65	45.0	276.0	5.16	0.13
MW-1B	Background - Bedrock	8.08	8.69	4.02	42.0	17.2	7.44	0.04
MW-2	Source Area - Overburden	7.95	16.23	0.81	-158.0	113.0	5.02	1.77
MW-3	Downgradient Boundary - Overburden	7.82	13.57	1.10	36.0	6.39	6.54	0.03
MW-3B	Downgradient Boundary - Bedrock	8.24	13.48	0.57	26.0	11.20	5.69	0.08
MW-4	Downgradient Boundary - Overburden	7.93	11.70	0.89	31.0	11.7	8.92	0.19
MW-4B	Downgradient Boundary - Bedrock	8.32	11.21	2.75	27.0	32.8	6.79	0.13
MW-5	Source Area - Overburden	7.85	13.46	1.34	10.0	75.4	5.01	0.25
MW-6	Downgradient Offset - Overburden	8.05	14.02	1.29	-94.0	66.5	4.97	0.58
MW-7	Source Area - Overburden	7.84	13.17	1.56	-125.0	32.6	5.13	1.75
MW-8	Source Area - Overburden	7.72	13.08	1.32	-89.0	11.2	5.09	1.49
MW-9	Downgradient Boundary - Overburden	7.87	14.05	1.26	47.0	3.15	6.41	0.00
MW-9B	Downgradient Boundary - Bedrock	8.52	13.35	1.91	26.0	17.1	5.31	0.01
MW-10	Downgradient Offset - Overburden	7.81	12.85	0.83	28.0	231.0	5.33	0.18
MW-10B	Downgradient Offset - Bedrock	8.32	11.45	1.28	36.0	12.10	6.24	0.06
MW-11	Downgradient Boundary - Overburden	7.77	12.00	2.05	-45.0	65	6.70	0.61
MW-11B	Downgradient Boundary - Bedrock	8.57	10.95	1.30	-40.0	11.0	5.37	0.00

Notes:

mg/L Milligram/liter.

mS/cm Millisiemens/centimeter.

NTU Nephelometric Turbidity Unit.

ORP Oxygen Release Potential

APPENDIX E

EVALUATION OF NATURAL ATTENUATION DATA .



MEMORANDUM

Sent via email

TO: Jeff Wind

FROM: Alan Weston/Sophia Dore/adh/6

RE: Evaluation of 2010 Natural Attenuation Data
Akzo Nobel Polymer Chemicals, LLC, Burt, New York

REF. NO.: 070075

DATE: December 23, 2010

1.0 INTRODUCTION

Groundwater at the Akzo Nobel Polymer Chemicals, LLC Site in Burt, New York (Site) contains volatile organic compound (VOC) in some areas. Monitored Natural Attenuation (MNA) is currently in progress at this Site.

The Conestoga-Rovers & Associates' (CRA's) Innovative Technology Group (ITG) was requested to review the 2010 MNA data and assess the current groundwater conditions.

2.0 BACKGROUND

1,1,1-trichloroethane (1,1,1-TCA), chloroethane, and benzene have been detected above regulatory criteria at the Site. 1,1,1-TCA degrades under anaerobic conditions by reductive dechlorination to form chloroethane. During this reductive dechlorination, bacteria with the necessary enzymes are able to utilize the chlorinated compounds as an electron acceptor. 1,1,1-TCA can also be degraded aerobically, although bacteria that perform this degradation pathway are rare. Chloroethane itself can be further degraded under anaerobic conditions to ethane and, under aerobic conditions, through 1-chloroethanol to acetaldehyde. Benzene can be degraded under aerobic conditions and also under anaerobic sulfate reducing conditions. In both cases, the benzene is degraded to carbon dioxide and water.

Several indicators of anaerobic conditions were measured during the groundwater sampling at the Site. Dissolved oxygen (DO) is a direct measurement of oxygen in the groundwater. Oxidation reduction potential (ORP) was also measured. A negative ORP indicates that groundwater conditions are anaerobic, while a positive ORP indicates that conditions are aerobic. Reductive dechlorination occurs best at an ORP of less than -200 millivolts (mV). Methane gas was analyzed. The production of methane by anaerobic biodegradation can only occur under highly anaerobic conditions when the ORP is less than -200 mV. Therefore, when methane is produced, it can be assumed that conditions are favorable for reductive dechlorination. Dissolved metals such as iron and manganese were also measured. These metals are soluble only in their reduced forms, which suggest that groundwater conditions are anaerobic (ORP less than 0 mV). Nitrate and nitrite were also measured. At ORP values of less than +300 mV, nitrate is converted to nitrite and then to nitrogen gas. Therefore, under conditions favorable for reductive dechlorination, nitrate levels are likely to be low, since any nitrate present would have been converted to nitrogen gas.

3.0 EVALUATION OF SITE MNA DATA

2010 Site groundwater MNA data were evaluated to determine whether conditions suitable for reductive dechlorination exist at the Site.

Redox Conditions

In most of the wells monitored, the MNA data showed that conditions were likely aerobic. Methane gas is produced only under highly anaerobic conditions, and significant levels of methane gas were found only in wells MW-2 and MW-7 during all three of the 2010 sampling events. Methane was also detected in well MW-8 during the July sampling event and in wells MW-6 and MW-11 during the November sampling event. Similarly high levels of dissolved iron and manganese were found in the same wells during the same sampling events. Therefore, it appears that an anaerobic zone exists in the source area stretching from well MW-2 to well MW-7 to the northeast. However, well MW-6 is less anaerobic than previously, and the anaerobic zone does not now appear to extend to well MW-6 in the north. The 2007, 2008, and 2009 monitoring data showed similar trends. Conditions at well MW-5 were aerobic during the July and November sampling events, although a slightly negative ORP was measured in MW-5 during the March sampling event. This suggests that the anaerobic zone may extend past well MW-7. Another anaerobic zone appears to be developing in the area of MW-11. Conditions in the anaerobic zone appear to be sulfate reducing/methanogenic. Reductive dechlorination occurs at sulfate reducing and methanogenic reduction potentials; therefore, conditions in this zone are favorable for the degradation of the chloroethanes.

The ORP measurements taken in the field are in basic agreement with the findings described above. Negative ORP values were measured at all three sampling events in wells MW-2, MW-7, and MW-8. Negative ORP values were also recorded for well MW-5 during the March sampling event, wells MW-1, MW-6, and MW-11 during the July sampling event, and wells MW-6 and MW-11 during the November sampling event. Positive ORP values were measured at the remaining wells. DO levels were generally high for all the wells at all three sampling events and often appeared incompatible with the methane, dissolved metals, and ORP data. These data are suspect because DO levels of greater than 5 milligrams per liter (mg/L) were measured with ORP values of less than -100 mV. It would be very unusual for some conditions to exist together in the subsurface. The measurement of ORP and DO is conducted with a probe that is submersed in the well. The probes are sensitive to motion in the water and to particulate matter. The detection of degradation products such as methane and dissolved metals, however, is less sensitive to transient conditions in the wells. Therefore, the degradation product and metals data are typically more representative of actual conditions and were used to assess anaerobic conditions rather than the DO and ORP data.

Degradation Products

1,1-dichloroethane and chloroethane are formed when 1,1,1-TCA is degraded by reductive dechlorination. These compounds have both been detected in MW-2 during previous sampling events. The presence of these compounds in well MW-2 suggests that reductive dechlorination of 1,1,1-TCA has occurred in this area.

Both 1,1-dichloroethane and chloroethane were present in MW-2 during the March sampling event. 1,1-dichloroethane was present at 3.7 micrograms per liter ($\mu\text{g/L}$) and chloroethane was present at 280 $\mu\text{g/L}$. Benzene, chlorobenzene, ethylbenzene, toluene, and xylenes were also present in well MW-2 during the March sampling event. By the July sampling event, however, only chloroethane and benzene

were detected in MW-2 (at 45 µg/L and 1.6 µg/L, respectively). No other VOCs were detected above their analytical detection limits in MW-2. By the November sampling event, benzene was no longer detected in well MW-2 and chloroethane had dropped to 10 µg/L. No other VOCs were detected in well MW-2.

During 2007, 2008, and 2009, chloroethane levels generally decreased at well MW-2. These data suggested that levels of 1,1,1-TCA upgradient of well MW-2 had decreased significantly, resulting in much lower concentrations of degradation products being detected at well MW-2. This hypothesis is supported by the 2010 data. 1,1,1-TCA and 1,1-dichloroethane were not detected in well MW-2 at either the July or November sampling events and chloroethane levels continued to drop. Conditions at well MW-2, which is located in the source area, appeared to be highly anaerobic as discussed above. Therefore, it is likely that the 1,1,1-TCA was degraded to chloroethane by reductive dechlorination. The chloroethane also degraded over time by an anaerobic mechanism. Since the flow of groundwater from the source area is towards the aerobic areas to the west, it is likely that any residual chloroethane will be degraded by the faster, aerobic mechanisms once it migrates further west. Since aerobic degradation of chloroethane is a faster mechanism, it is expected that chloroethane will not be detected at the boundary wells, and the analytical data supports this conclusion, since chloroethane has not been detected in any of the boundary wells.

Benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in groundwater from well MW-2 during the April and June 2008 sampling events and during the May 2009 sampling event. In March 2010, BTEX compounds and chlorobenzene were detected in well MW-2. Benzene was detected at 50 µg/L, toluene at 3,700 µg/L, ethylbenzene at 23 µg/L, xylenes at 70 µg/L, and chlorobenzene at 6.7 µg/L. By July 2010, only a small amount of benzene was detected, and by November 2010, no BTEX compounds or chlorobenzene were detected in well MW-2. Similar trends were observed in 2007, 2008, and 2009, when BTEX compounds present during the spring sampling events were not detected during later sampling events. The seasonality of the data suggests that groundwater level fluctuations may contribute to the apparent decline in BTEX concentrations. In all 4 years, groundwater levels were high during the spring sampling events and lower during subsequent sampling events. BTEX compounds are not highly water soluble and will tend to adsorb on soil. During the spring when the groundwater is high, BTEX adsorbed to the soil may be solubilized into groundwater; however, when the groundwater is lower, this does not occur and, therefore, the measured levels are lower. These data suggest that there is some BTEX adsorbed to the soil in the source area and that it is slowly degrading under the anaerobic conditions present in the area. As discussed above, anaerobic conditions appear to exist around well MW-2, and BTEX compounds can degrade under anaerobic conditions by nitrate or sulfate reduction. Aerobic degradation of BTEX compounds is much faster than anaerobic degradation. Like the chloroethane migration described above, any benzene not degraded in the source area is likely to migrate with the groundwater into the aerobic area to the west and be degraded there by aerobic microorganisms. Therefore, benzene should also not be detected at the boundary wells. The analytical data supports this conclusion, since benzene has not been detected in any of the boundary wells.

The groundwater level fluctuations are less likely to affect chloroethane concentrations in groundwater since chloroethane is an order of magnitude more water soluble than the BTEX compounds, and, therefore, is not likely to become sorbed to soil but will remain dissolved in the groundwater as the groundwater levels rise and fall.

At the November 2009 sampling event, a small amount of 1,1-dichloroethane was detected at MW-8. It was hypothesized that the 1,1-dichloroethane detected in well MW-8 traveled with the groundwater from well MW-2. It was thought that the 1,1-dichloroethane would degrade in the area of well MW-8 since

conditions are anaerobic in this area. In March 2010, the 1,1-dichloroethane had been reduced to 1.2 µg/L and by July 2010, no 1,1-dichloroethane was detected at well MW-8, therefore, degradation was confirmed.

1,1,1-TCA was detected in samples from well MW-9, one of the downgradient boundary wells, during all three sampling events. As discussed above, conditions at well MW-9 are highly aerobic. 1,1,1-TCA degrades most readily under anaerobic conditions, but aerobic degradation of 1,1,1-TCA to carbon dioxide is possible. 1,1,1-TCA concentrations in 2007 ranged from 32-40 µg/L; in 2008, ranged from 9-19 µg/L; and in 2009, ranged from 12-17 µg/L. In 2010, 1,1,1-TCA concentration ranged from 14-19 µg/L. Therefore, it appears that some natural attenuation of 1,1,1-TCA, either by aerobic degradation or abiotic processes, has occurred in this area. In November 2010, small amounts of the 1,1,1-TCA degradation products 1,1-dichloroethane and 1,1-dichloroethene were detected in MW-9, which support the conclusion that some degradation is occurring in this area.

During the May 2009 sampling event, 1,1,1-TCA was detected at 6.8 µg/L at well MW-11. This level had fallen to 1.3 µg/L during the August and November 2009 sampling events. At the March 2010 sampling event, a small amount of 1,1,1-TCA (5.2 µg/L) was detected at well MW-11, but no 1,1,1-TCA and small amounts (1.3 and 1.7 µg/L) of 1,1-dichloroethane were detected at well MW-11 during the July and November 2010 monitoring events. The 1,1,1-TCA detected in the spring of both years likely moved downgradient from well MW-9 due to the spring high water events. The fact that the 1,1,1-TCA dropped between MW-9 and well MW-11 and declined at well MW-11 over time producing the breakdown product 1,1-dichloroethane is further evidence that natural attenuation of 1,1,1-TCA is occurring even in the aerobic zone.

Acetone was detected at well MW-5 during the August and November 2009 sampling events and during the July and November 2010 sampling events. Acetone is a common laboratory contaminant; therefore, a single detection would likely be attributed to laboratory error, however, acetone was detected in the same well at two successive sampling events each year. Therefore, it appears likely that this acetone is present at the Site. Acetone degrades under the aerobic conditions present in the area of well MW-5.

4.0 CONCLUSIONS

The 1,1,1-TCA present in the source area has been degraded to chloroethane to the point where the parent compound is no longer detected in the source area. The chloroethane is either continuing to degrade under anaerobic conditions in the source area or degrading aerobically as it migrates towards the Site boundary. Some anaerobic degradation of the BTEX compounds present in the source area appears to be occurring. Any BTEX not degraded in the source area will be degraded after they migrate to the aerobic area west of the source area. Therefore, off-Site migration of BTEX should not occur. 1,1,1-TCA is already present in the aerobic boundary area. The data indicate that natural attenuation of the 1,1,1-TCA is occurring in this area and that concentrations continue to decrease.

APPENDIX F

COMPARISON OF 2006, 2007, 2008 AND 2009 TCL VOCs IN
GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

COMPARISON OF 2006 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

Well	Comparison of TCL VOCs in Groundwater with NYCRR 703.5 Groundwater Standards	
MW-1	No results above action limits.	
MW-1B	No results above action limits.	
MW-2	Benzene (4.8 µg/L versus action limit of 1 µg/L)	05/26/06
	Benzene (16 µg/L versus action limit of 1 µg/L)	11/30/06
	Chloroethane (38 µg/L versus action limit of 5 µg/L)	05/26/06
	Chloroethane (30 µg/L versus action limit of 5 µg/L)	08/29/06
	Chloroethane (100 µg/L versus action limit of 5 µg/L)	11/30/06
MW-3*	No results above action limits	
MW-3B*	No results above action limits	
MW-4*	No results above action limits	
MW-4B*	No results above action limits	
MW-5	Acetone (100 µg/L versus action limit of 50 µg/L)	08/29/06
MW-6	No results above action limits	
MW-7	No results above action limits	
MW-8	Chloroethane (8.0 µg/L [8.1 µg/L duplicate] versus action limit of 5 µg/L)	05/26/06
MW-9*	1,1,1-Trichloroethane (21 µg/L versus action limit of 5 µg/L)	05/26/06
	1,1,1-Trichloroethane (31 µg/L [resample])	07/12/06
	1,1,1-Trichloroethane (34 µg/L versus action limit of 5 µg/L)	08/29/06
	1,1,1-Trichloroethane (19 µg/L [resample])	10/10/06
MW-9B*	No results above action limits	
MW-10*	No results above action limits	
MW-10B*	No results above action limits	
Notes:		
*	Denotes downgradient boundary well	
µg/L	Micrograms per liter	

COMPARISON OF 2007 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

Well	Comparison of TCL VOCs in Groundwater with NYCRR 703.5 Groundwater Standards	
MW-1	1,2 Dichloroethane (1.0 µg/L versus permit limit of 0.6 µg/L)	10/30/07
MW-1B	No results above action limits.	
MW-2	Benzene (33 µg/L [33 µg/L duplicate] versus action limit of 1 µg/L)	04/19/07
	Benzene (7.8 µg/L versus action limit of 1 µg/L)	06/07/07
	Benzene (5.7 µg/L [6.4 µg/L duplicate] versus action limit of 1 µg/L)	08/13/07
	Chloroethane (600 µg/L [560 µg/L duplicate] versus action limit of 5 µg/L)	04/19/07
	Chloroethane (56 µg/L versus action limit of 5 µg/L)	06/07/07
	Chloroethane (74 µg/L [78 µg/L duplicate] versus action limit of 5 µg/L)	08/14/07
	Chloroethane (73 µg/L [73 µg/L duplicate] versus action limit of 5 µg/L)	10/31/07
	1,1 Dichloroethane (11 µg/L [11 µg/L duplicate] versus action limit of 5 µg/L)	04/19/07
	Toluene (150 µg/L [140 µg/L duplicate] versus action limit of 5 µg/L)	04/19/07
	Toluene (5.9 µg/L versus action limit of 5 µg/L)	06/07/07
	Xylene (13 µg/L [13 µg/L duplicate] versus action limit of 5 µg/L)	04/19/07
MW-3*	No results above action limits	
MW-3B*	No results above action limits	
MW-4*	No results above action limits	
MW-4B*	No results above action limits	
MW-5	Acetone (450 µg/L versus action limit of 50 µg/L)	08/14/07
	Acetone (170 µg/L versus action limit of 50 µg/L)	10/31/07
MW-6	No results above action limits	
MW-7	No results above action limits	
MW-8	No results above action limits	
MW-9*	1,1,1-Trichloroethane (38 µg/L versus action limit of 5 µg/L)	04/20/07
	1,1,1-Trichloroethane (34 µg/L [33 µg/L duplicate] versus action limit of 5 µg/L)	06/06/07
	1,1,1-Trichloroethane (40 µg/L versus action limit of 5 µg/L)	08/14/07
	1,1,1-Trichloroethane (32 µg/L versus action limit of 5 µg/L)	10/31/07
MW-9B*	No results above action limits	
MW-10*	No results above action limits	
MW-10B*	No results above action limits	
MW-11*	1,1,1 - Trichloroethane (16 µg/L versus action limit of 5 µg/L)	04/23/07
MW-11B*	No results above action limits	
Notes:		
*	Denotes downgradient boundary well	
µg/L	micrograms per liter	

COMPARISON OF 2008 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

<i>Well</i>	<i>Comparison of TCL VOCs in Groundwater with NYCRR 703.5 Groundwater Standards</i>	
MW-1	1,2 Dichloroethane (0.69 µg/L versus action limit of 0.6 µg/L)	8/14/08
MW-1	1,2 Dichloroethane (0.68] µg/L versus action limit of 0.6 µg/L)	10/29/08
MW-1B	No results above action limits	
MW-2	Benzene (26 µg/L versus action limit of 1 µg/L)	04/21/08
	Benzene (32 µg/L versus action limit of 1 µg/L)	06/06/08
	Benzene (5.1µg/L [4.0 µg/L duplicate] versus action limit of 1 µg/L)	08/14/08
	Chloroethane (160 µg/L versus action limit of 5 µg/L)	04/21/08
	Chloroethane (96 µg/L versus action limit of 5 µg/L)	06/06/08
	Chloroethane (19 µg/L[17 µg/L duplicate] versus action limit of 5 µg/L)	08/14/08
	1,1-Dichloroethane (100 µg/L versus action limit of 5 µg/L)	09/21/08
	1,1-Dichloroethane (160 µg/L versus action limit of 5 µg/L)	06/06/08
	1,2-Dichloroethane (1.0 µg/L versus action limit of 0.6 µg/L)	04/21/08
	1,2-Dichloroethane (0.91] µg/L versus action limit of 0.6 µg/L)	06/06/08
	1,2-Dichloroethane (total) (17 µg/L versus action limit of 5 µg/L)	04/21/08
	1,2-Dichloroethene (total) (15 µg/L versus action limit of 5 µg/L)	06/06/08
	Ethylbenzene (9.8 µg/L versus action limit of 5 µg/L)	06/06/08
	Methylene chloride (76 µg/L versus action limit of 5 µg/L)	04/21/08
	Methylene chloride (86 µg/L versus action limit of 5 µg/L)	06/06/08
	Toluene (780 µg/L versus action limit of 5 µg/L)	04/21/08
	Toluene (1500 µg/L versus action limit of 5 µg/L)	06/06/08
	Trichloroethene (5.7 µg/L versus action limit of 5 µg/L)	06/06/08
	Vinyl chloride (16 µg/L versus action limit of 2 µg/L)	04/21/08
	Vinyl chloride (12 µg/L versus action limit of 2 µg/L)	06/06/08
	Xylene (total) (14 µg/L versus action limit of 5 µg/L)	04/21/08
	Xylene (total) (21 µg/L versus action limit of 5 µg/L)	06/06/08
MW-3*	No results above action limits	
MW-3B*	No results above action limits	
MW-4*	No results above action limits	
MW-4B*	No results above action limits	
MW-5	Acetone (100 µg/L versus action limit of 50 µg/L)	04/21/08
	Acetone (350 µg/L versus action limit of 50 µg/L)	08/15/08
	Acetone (270] µg/L versus action limit of 50 µg/L)	10/28/08
MW-6	No results above action limits	
MW-7	No results above action limits	
MW-8	1,1,1 Trichloroethane (7.2 µg/L versus action limit of 5 µg/L)	04/17/08
MW-9*	1,1,1-Trichloroethane (19 µg/L versus action limit of 5 µg/L)	04/21/08
	1,1,1-Trichloroethane (10 µg/L [11 µg/L duplicate] versus action limit of 5 µg/L)	06/06/08
	1,1,1-Trichloroethane (13 µg/L versus action limit of 5 µg/L)	08/14/08
	1,1,1-Trichloroethane (9.12 µg/L [8.77 µg/L duplicate] versus action limit of 5 µg/L)	10/29/08
MW-9B*	No results above action limits	
MW-10*	No results above action limits	
MW-10B*	No results above action limits	
MW-11*	No results above action limits	
MW-11B*	No results above action limits	

Notes:

* Denotes downgradient boundary well

J Estimated value

µg/L Micrograms per liter

COMPARISON OF 2009 TCL VOCs IN GROUNDWATER WITH NYCRR 703.5 GROUNDWATER STANDARDS

Well	<i>Comparison of TCL VOCs in Groundwater with NYCRR 703.5 Groundwater Standards</i>	
MW-1	No results above action limits	
MW-1B	No results above action limits.	
MW-2	1,1,1 Trichloroethane (5.7 µg/L versus action limit of 5 µg/L)	5/12/09
	1,1,1 Dichloroethane (73 µg/L versus action limit of 5 µg/L)	5/12/09
	Acetone (58 µg/L versus action limit of 50 µg/L)	5/12/09
	Benzene (58 µg/L versus action limit of 1 µg/L)	5/12/09
	Chlorobenzene (6.2 µg/L versus action limit of 5 µg/L)	5/12/09
	Chloroethane (270 µg/L versus action limit of 5 µg/L)	5/12/09
	Chloroethane (41 µg/L versus action limit of 5 µg/L)	8/20/09
	Chloroethane (15 µg/L versus action limit of 5 µg/L)	11/17/09
	Ethylbenzene (25 µg/L versus action limit of 5 µg/L)	5/12/09
	Toluene (6300 µg/L versus action limit of 5 µg/L)	5/12/09
	Xylene (67 µg/L versus action limit of 5 µg/L)	5/12/09
MW-3*	No results above action limits	
MW-3B*	No results above action limits	
MW-4*	No results above action limits	
MW-4B*	No results above action limits	
MW-5	Acetone (1500 µg/L versus action limit of 50 µg/L)	8/20/09
	Acetone (720 µg/L versus action limit of 50 µg/L)	11/17/09
MW-6	No results above action limits	
MW-7	No results above action limits	
MW-8	1,1 Dichloroethane (5.7 µg/L versus action limit of 5 µg/L)	11/17/09
MW-9*	1,1,1-Trichloroethane (12 µg/L versus action limit of 5 µg/L)	5/12/09
	1,1,1-Trichloroethane (17 µg/L [17 µg/L duplicate] versus action limit of 5 µg/L)	8/20/09
	1,1,1-Trichloroethane 14 µg/L versus action limit of 5 µg/L)	11/18/09
MW-9B*	No results above action limits	
MW-10*	No results above action limits	
MW-10B*	No results above action limits	
MW-11*	1,1,1-Trichloroethane (6.8 µg/L versus action limit of 5 µg/L)	5/13/09
MW-11B*	No results above action limits	

Notes:

- * Denotes downgradient boundary well
- J Estimated value
- µg/L Micrograms per liter

APPENDIX G

WATER LEVEL MEASUREMENTS - 2010

APPENDIX G - MARCH 2010

WATER LEVEL MEASUREMENTS

AKZO NOBEL GROUNDWATER MONITORING

AKZO NOBEL POLYMER CHEMICALS LLC

<i>Well ID</i>	<i>Type</i>	<i>Top of Casing (feet)</i>	<i>Depth to Water (feet BTOC)</i>	<i>Water Level Elevation (feet)</i>
MW-1	Background - Overburden	328.51	5.98	322.53
MW-1B	Background - Bedrock	328.29	5.98	322.31
MW-2	Source Area - Overburden	327.58	5.36	322.22
MW-3	Downgradient Boundary - Overburden	322.58	3.21	319.37
MW-3B	Downgradient Boundary - Bedrock	321.85	10.51	311.34
MW-4	Downgradient Boundary - Overburden	323.12	6.96	316.16
MW-4B	Downgradient Boundary - Bedrock	323.66	18.53	305.13
MW-5	Source Area - Overburden	324.68	2.76	321.92
MW-6	Downgradient Offset - Overburden	325.31	3.98	321.33
MW-7	Source Area - Overburden	324.10	2.68	321.42
MW-8	Source Area - Overburden	326.23	4.89	321.34
MW-9	Downgradient Boundary - Overburden	325.03	4.24	320.79
MW-9B	Downgradient Boundary - Bedrock	325.21	20.07	305.14
MW-10	Downgradient Offset - Overburden	328.39	6.06	322.33
MW-10B	Downgradient Offset - Bedrock	328.12	21.81	306.31
MW-11	Downgradient Boundary - Overburden	325.76	10.90	314.86
MW-11B	Downgradient Boundary - Bedrock	325.32	20.54	304.78

Note:

BTOC Below Top of Casing.

APPENDIX G - JULY 2010

WATER LEVEL MEASUREMENTS

AKZO NOBEL GROUNDWATER MONITORING

AKZO NOBEL POLYMER CHEMICALS LLC

<i>Well ID</i>	<i>Type</i>	<i>Top of Casing (feet)</i>	<i>Depth to Water (feet BTOC)</i>	<i>Water Level Elevation (feet)</i>
MW-1	Background - Overburden	328.51	9.73	318.78
MW-1B	Background - Bedrock	328.29	8.78	319.51
MW-2	Source Area - Overburden	327.58	8.28	319.30
MW-3	Downgradient Boundary - Overburden	322.58	5.18	317.40
MW-3B	Downgradient Boundary - Bedrock	321.85	11.56	310.29
MW-4	Downgradient Boundary - Overburden	323.12	8.92	314.20
MW-4B	Downgradient Boundary - Bedrock	323.66	21.41	302.25
MW-5	Source Area - Overburden	324.68	5.47	319.21
MW-6	Downgradient Offset - Overburden	325.31	6.32	318.99
MW-7	Source Area - Overburden	324.10	5.02	319.08
MW-8	Source Area - Overburden	326.23	7.33	318.90
MW-9	Downgradient Boundary - Overburden	325.03	6.92	318.11
MW-9B	Downgradient Boundary - Bedrock	325.21	23.34	301.87
MW-10	Downgradient Offset - Overburden	328.39	9.03	319.36
MW-10B	Downgradient Offset - Bedrock	328.12	24.71	303.41
MW-11	Downgradient Boundary - Overburden	325.76	12.79	312.97
MW-11B	Downgradient Boundary - Bedrock	325.32	23.53	301.79

Note:

BTOC Below Top of Casing.

APPENDIX G - NOVEMBER 2010
WATER LEVEL MEASUREMENTS
AKZO NOBEL GROUNDWATER MONITORING
AKZO NOBEL POLYMER CHEMICALS LLC

<i>Well ID</i>	<i>Type</i>	<i>Top of Casing (feet)</i>	<i>Depth to Water (feet BTOC)</i>	<i>Water Level Elevation (feet)</i>
MW-1	Background - Overburden	328.51	12.04	316.47
MW-1B	Background - Bedrock	328.29	10.90	317.39
MW-2	Source Area - Overburden	327.58	9.97	317.61
MW-3	Downgradient Boundary - Overburden	322.58	6.05	316.53
MW-3B	Downgradient Boundary - Bedrock	321.85	12.36	309.49
MW-4	Downgradient Boundary - Overburden	323.12	9.51	313.61
MW-4B	Downgradient Boundary - Bedrock	323.66	17.31	306.35
MW-5	Source Area - Overburden	324.68	7.18	317.50
MW-6	Downgradient Offset - Overburden	325.31	7.79	317.52
MW-7	Source Area - Overburden	324.10	6.53	317.57
MW-8	Source Area - Overburden	326.23	8.81	317.42
MW-9	Downgradient Boundary - Overburden	325.03	8.22	316.81
MW-9B	Downgradient Boundary - Bedrock	325.21	19.16	306.05
MW-10	Downgradient Offset - Overburden	328.39	10.85	317.54
MW-10B	Downgradient Offset - Bedrock	328.12	20.58	307.54
MW-11	Downgradient Boundary - Overburden	325.76	14.00	311.76
MW-11B	Downgradient Boundary - Bedrock	325.32	19.11	306.21

Note:

BTOC Below Top of Casing.