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Municipal Brownfields - B
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Spills - SP
ERP - E
VCP - V
BCP - C

TRC

Customer-Focused Solutions

RCRA Facility Investigation

Addendum

Prepared for:

AKZO NOBEL

Akzo Nobel Polymer Chemicals LLC
2153 Lockport-Olcott Road
Burt, New York

Prepared by:
TRC Environmental Corporation
Boott Mills South
Foot of John Street
Lowell, Massachusetts 01852
(978) 970-5600

July 2002

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1. INTRODUCTION

1.1 Purpose of this RCRA Facility Investigation (RFI) Report Addendum

The purpose of this report is to finalize the RFI performed at the Akzo Nobel Polymer Chemicals LLC. (Akzo Nobel) facility located in Burt, New York.

1.2 Status of the RCRA Facility Investigation (RFI)

The RFI was performed at the Akzo Nobel facility to investigate the nature and extent of contamination, if any, associated with SWMUs and AOCs, as described in detail in the facility's Part 373 Permit. TRC Environmental Corporation (TRC) was retained by Akzo Nobel to develop and implement the RCRA Facility Investigation. The Phase I RFI field work was completed in 1996. The Phase II RFI field work was completed in 1999-2000. Akzo Nobel submitted the Phase II RCRA Facility Investigation Report to NYSDEC in December 2000. Akzo Nobel completed supplemental RFI field work in November 2001-April 2002.

The goal of the RFI was to fully characterize the extent of identified releases and to gather the data necessary to support a Corrective Measures Study (CMS), if needed. Akzo Nobel's stated goal for the RFI process was to complete all investigative work necessary to move forward under the Corrective Action protocol, with the exception of SWMUs for which investigations are deferred due to access.

NYSDEC commented on the Phase II RCRA Facility Investigation Report by letter dated March 8, 2001. NYSDEC indicated in this letter that the RFI was substantially complete. NYSDEC further indicated in this letter that the work conducted to date generated sufficient data to proceed to the corrective measures stage of the RCRA corrective action process. NYSDEC

requested a Corrective Measures Study (CMS) work plan be prepared and submitted, and that Akzo Nobel complete the additional investigations needed to close out the RFI in conjunction with field work required for the CMS.

NYSDEC (by letter dated August 24, 2001) added a requirement for Akzo Nobel to complete and submit an addendum to the Phase II RFI Report after two additional rounds of ground water sampling were completed.

This RFI Addendum Report has been prepared by TRC on behalf of Akzo Nobel in accordance with the requirements set forth in Akzo Nobel's 6 New York Code of Rules and Regulations (NYCRR) Part 373 Permit (Module II) and the May 2002 Corrective Measures Study Work Plan Scope of Work, as amended by the NYSDEC August 24, 2001 letter.

1.3 Report Organization

This RFI Addendum Report contains six sections: (1) Introduction; (2) Background; (3) Facility Conditions Requiring Additional Investigation; (4) Additional Investigations Completed; and (5) Revised RFI Conclusions and Recommendations.

Section 2, Background, briefly describes the various studies completed and presents a synopsis of the findings of investigations completed to date.

Section 3, Facility Conditions Requiring Additional Investigation, discusses the scope of additional investigations completed at the Akzo Nobel facility in Burt, New York concurrent with the CMS field work.

Section 4, Additional Investigations Completed, discusses the findings of the recent supplemental investigations completed during the CMS field work, and provides revisions to the

RFI analysis of environmental conditions which warrant corrective action, based on all studies completed to date.

Section 5, Revised RFI Conclusions and Recommendations, presents the revised conclusions and recommendations of the RFI.

2. BACKGROUND

2.1 Facility Background

Akzo Nobel Polymer Chemicals LLC (Akzo Nobel) is currently operating its Burt, New York, facility under a 6 New York Code of Rules and Regulations (NYCRR) Part 373 Permit; therefore, it is subject to Corrective Action (CA) under 6 NYCRR Section 373 - 2.6. The CA module (Module II) of the 6 NYCRR Part 373 Permit requires corrective action to evaluate releases to the environment that have or may have occurred from past waste management activities.

The 350 acre Akzo Nobel property is located at 2153 Lockport-Olcott Road in the Hamlet of Burt, Niagara County, New York. Akzo Nobel produces organic peroxides including benzoyl peroxide, methyl ethyl ketone peroxide, actyl acetone peroxide, and 2,4-dichlorobenzoyl peroxide at the Burt, New York facility.

The production portion of the facility encompasses approximately 30 acres, and approximately 80 acres of the property are fenced. Areas associated with Akzo Nobel operations include: buildings, hazardous waste container storage pads, inactive landfills, an inactive burning cage, a closed clay storage pad storage area, venturi scrubbers, a fume scrubber, drum storage areas, a closed waste sulfuric acid storage tank, closed underground storage tank (UST) locations, a fire pond, and numerous structures associated with the wastewater treatment facility and process sewer.

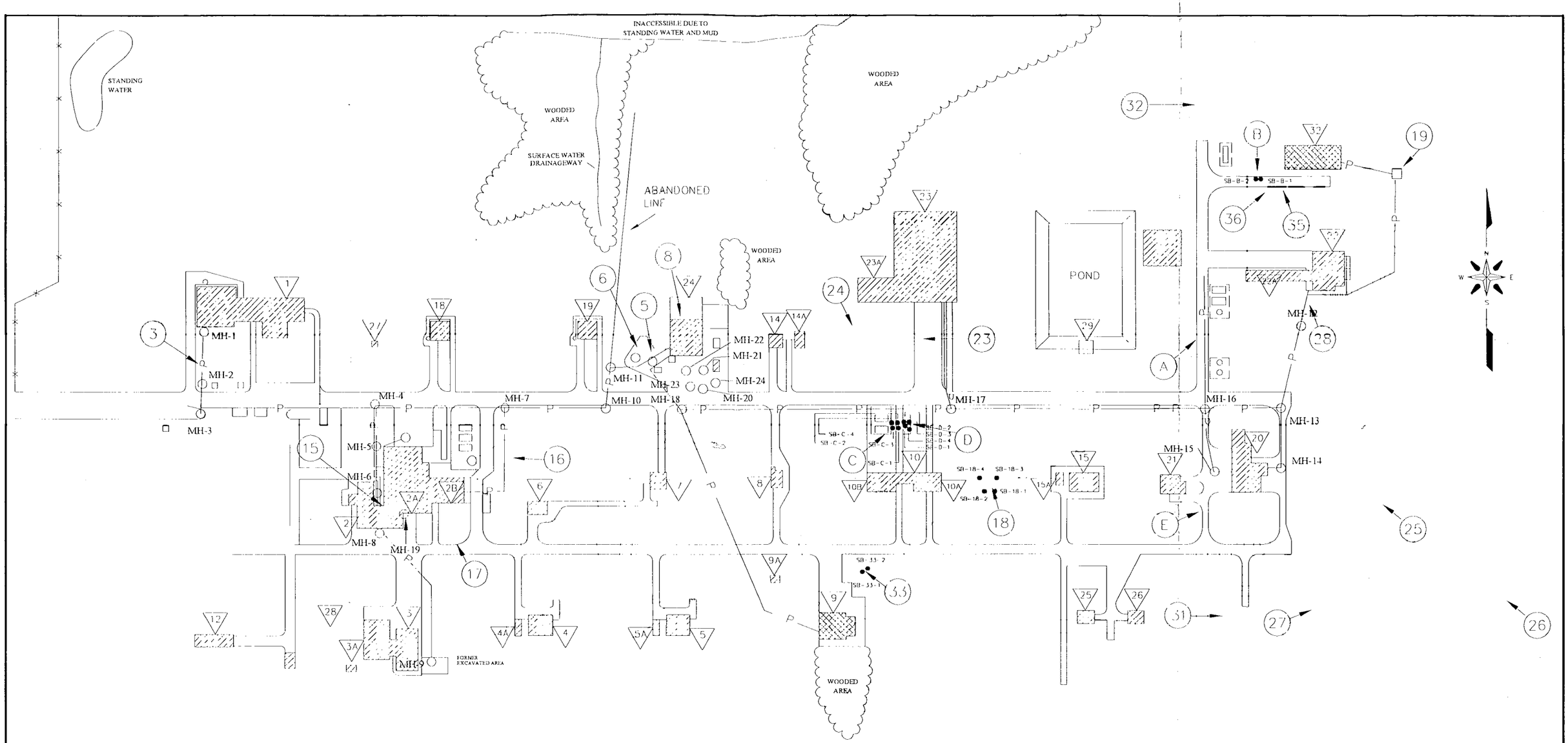
Akzo Nobel announced on April 6, 2001 that all manufacturing operations at the Burt, NY facility will be phased out by the end of 2003. The Burt facility will remain in operation as a warehouse and distribution center following the phase out of production activities.

2.2 Documents, Studies, and Investigations

Prior Investigations were summarized in the previous submittals listed below.

- RCRA Facility Assessment - Sampling Visit Work Plan, September 22, 1994,
- RCRA Facility Assessment - Sampling Visit Report, December 1994,
- RCRA Facility Investigation Description of Current Conditions Report, September 1995,
- RCRA Facility Investigation Pre-Investigation Evaluation of Corrective Measures Report, September 1995,
- RCRA Facility Investigation Work Plan, June 1996,
- RCRA Facility Investigation Report, April 1997,
- RCRA Facility Assessment Sampling Visit Addendum, April 1997,
- RCRA Facility Investigation Report Addendum, October 1998,
- Phase II RFI Work Plan, March 1999,
- Phase II RFI Work Plan Addendum, June, 1999,
- Phase II RFI Report, December 2000, and
- Corrective Measures Study Work Plan, May 2001.

Figure 1 illustrates SWMU and AOC locations. Table 1 provides a list of all SWMUs identified for further action during the VSI and their current status as of the date of submittal of this report.



LEGEND

- PROCESS SEWER
- BUILDING NUMBER
- APPROXIMATE SWMU/ AOC LOCATION AND IDENTIFICATION NUMBER
- MANHOLE LOCATION
- 1994 SOIL BORING
- REMOVED BUILDINGS

GRAPHIC SCALE

150 0 150 300

(IN FEET)

TRC	Boott Mills South Foot of John Street Lowell, MA. 01852 (978) 970-5600
AKZO NOBEL POLYMER CHEMICALS LLC BURT, NEW YORK	
FIGURE 1 SWMU/AOC LOCATIONS	
Date: 5/01	Project No. 19045

19045\PHASE II REI\REV 3\SWMU AOC_2

TABLE 1. REGULATORY STATUS OF SWMUs AND AOCs		
SWMU/ AOC	Description	Akzo Nobel Determination[a]
1	Hazardous Waste Container Storage Pad -Area 1	No Action –VSI
2	Hazardous Waste Container Storage Pad -Area 2	No Action –VSI
3 [b,e,f]	Process Sewer	RFI done; CMS
4	Destruction Tank	No Action –VSI
5 [b,e,f]	East Influent Well	RFI done; CMS[c]
6 [b,e,f]	West Influent Well	RFI done; CMS[c]
7	Holding Tank	No Action –VSI
8 [b]	Equalization Basin	RFI Deferred until scheduling permits
9	Settling Channel	No Action –VSI
10	Filter Carts	No Action –VSI
11	Primary Clarifier	No Action –VSI
12	East Sludge Tank	No Action –VSI
13	West Sludge Tank	No Action –VSI
14	Process Reactor	No Action –VSI
15 [b]	Building 2 Sump	RFI Deferred until scheduling permits
16 [b,e]	Building 2B Separator	RFI done; CMS
17 [b,e,f]	Former UST No. 2 Area	RFI done; CMS deferred until scheduling permits
18 [b,d]	Former UST No. 9 Area	No Action-RFA-SV
19 [b,d]	Sewer Pre-Treatment Pit	RFI done; CMS
20	Inside Building 2B Accumulation Area	No Action –VSI
21	Outside Building 2B Accumulation Area	No Action –VSI

TABLE 1. REGULATORY STATUS OF SWMUs AND AOCs		
22	QC Laboratory Accumulation Area	No Action –VSI
23 ([b,e])	Burning Cage	RFI done; CMS
24 ([b,e])	Landfill Site No. 1	RFI done; CMS
25 ([b])	Landfill Site No. 2	No Action - RFA-SV
26 ([b])	Landfill Site No. 3	No Action - RFA-SV
27 ([b])	Former Clay Pad Storage Area	No. Action - RFA-SV
28 ([b])	Dimethyl Phthalate Meter Leak	No Action - RFA-SV
29	Venturi Scrubber	No Action –VSI
30	Fume Scrubber	No Action –VSI
31 ([b,e])	Building 16 Drum Storage Area	RFI done; CMS
32 ([b])	Debris Pile	No Action - RFA-SV
33 ([b,d])	Former Waste Sulfuric Acid Tank Area	No Action-RFA-SV
34	Empty Drum Storage Area No. 1	No Action –VSI
35 ([b])	Empty Drum Storage Area No. 2	No Action - RFA-SV
36 ([b])	Empty Drum Storage Area No. 3	No Action - RFA-SV
37	Truck Trailer Storage Area	No Action –VSI
A ([b])	Dimethyl Phthalate Spill Area	No Action - RFA-SV
B ([b,d])	Building 32 Fuel Line Leak	No Action-RFA-SV
C ([b,d])	Former Underground Storage Tank No. 11 Area	No Action-RFA-SV
D ([b,d])	Former Underground Storage Tank No. 12 Area	No Action-RFA-SV
E ([b,e])	Former Underground Storage Tank No. 20 Area	No Action-RFI

([a])Original determination based on Akzo Nobel's July 10, 1995 responses to NYSDEC comments from Thaddeus Moskal, P.E. dated June 13, 1995, updated in RFI reports completed to date.

([b])Evaluated during RFA-SV.

([c])Added to RFI scope voluntarily by Akzo Nobel in July 1996 following preliminary RFA work.

([d])Resampled during TRC RFA-SV; see April 1997 SV report addendum.

([e])Characterization completed during TRC RFI; see April 1997 report.

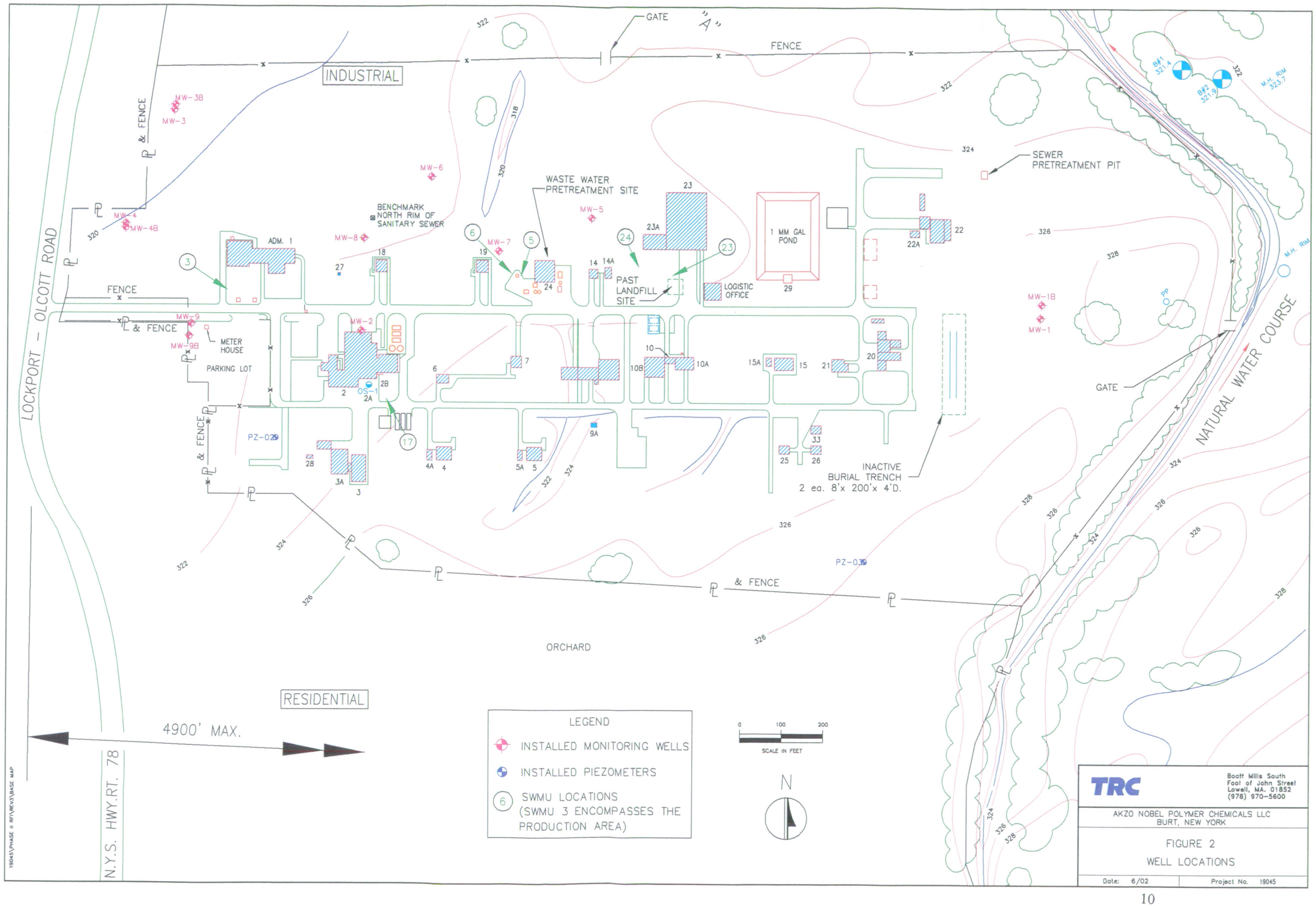
([f]) See Akzo Nobel October 1998 RFI Addendum

3. FACILITY CONDITIONS REQUIRING ADDITIONAL INVESTIGATION

Additional ground water information was required by NYSDEC to complete the RFI. The additional information required included both ground water quality and flow information. Three new wells MW-4B, MW-9 and MW-9B were installed in order to address NYSDEC concerns regarding ground water quality to the west of MW-2 and to definitively determine the direction of ground water flow in the upper bedrock. The expanded monitoring well network was used to sample ground water, measure field parameters, and determine ground water elevations for two quarterly sampling events. The additional investigations required by NYSDEC are briefly summarized below.

3.1 Bedrock Ground Water Flow Direction Determination

Prior investigations determined the presence of ground water in the upper bedrock at the location of the MW-1, MW-1B and MW-3, MW-3B clusters. The information gathered via determination of water elevations in these wells, along with the data regarding overburden ground water and the site geologic setting were interpreted to indicate a most probable direction of ground water flow in the bedrock towards the eighteenmile creek gorge located west of the Akzo Nobel facility. To confirm the direction of ground water flow in bedrock, NYSDEC required additional bedrock groundwater investigations. The requirement included installation, development, survey and ground water elevation determination at two additional bedrock ground water monitoring wells (MW-4B, MW-9B) installed at the locations illustrated in Figure 2. Additional stratigraphic and hydrologic data gathering were required, to supplement the information previously used for developing the conceptual model for the facility environmental conditions.


INDUSTRIAL
GATE
A
FENCE
MW-3B
MW-3
MW-4
MW-4B
MW-6
MW-5
MW-8
MW-7
MW-9
MW-9B
MW-2
MW-1B
MW-1
BENCHMARK
NORTH RIM OF
SANITARY SEWER
WASTE WATER
PRETREATMENT SITE
SEWER
PRETREATMENT PIT
ADM. 1
METER
HOUSE
PARKING LOT
PAST
LANDFILL
SITE
LOGISTIC
OFFICE
1 MM GAL
POND
LOCKPORT - OLCOTT ROAD
NATURAL WATER COURSE
M.H. RIM
PP
B#1
321.4
B#2
321.9
M.H. RIM
323.7
PZ-02S
PZ-03S
OS-1
INACTIVE
BURIAL TRENCH
2 ea. 8'x 200'x 4'D.
ORCHARD
RESIDENTIAL
4900' MAX.
N.Y.S. HWY.RT. 78
LEGEND
INSTALLED MONITORING WELLS
INSTALLED PIEZOMETERS
6 SWMU LOCATIONS
(SWMU 3 ENCOMPASSES THE
PRODUCTION AREA)
0 100 200
SCALE IN FEET
N
19045\PHASE II RFI\REV3\BASE MAP
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Lowell, MA. 01852
(978) 970-5600
AKZO NOBEL POLYMER CHEMICALS LLC
BURT, NEW YORK
FIGURE 2
WELL LOCATIONS
Date: 6/02
Project No. 19045

3.2 Overburden Ground Water Quality determination

One new well was installed (MW-9) in order to address NYSDEC concerns regarding ground water quality to the west of MW-2 (see Figure 2). Additional stratigraphic and hydrologic data gathering were required, to supplement the information previously used for developing the conceptual model for the facility environmental conditions.

3.3 Site-Wide Ground Water Quality And Flow Determinations

Ground water monitoring was conducted from the three newly installed and all pre-existing ground water monitoring wells at the Akzo Nobel Burt, NY facility during two sampling events, the first conducted in December 2001, and the second completed in April 2002. Ground water elevations were determined, and ground water samples were analyzed for VOCs. NYSDEC required the additional ground water elevation and quality monitoring of the expanded well network to demonstrate sufficiency of this monitoring well network to adequately monitor overburden and upper bedrock ground water. While not required to finalize the RFI, ground water samples were also analyzed for additional parameters (i.e., temperature, dissolved oxygen, conductivity, redox, pH, carbon dioxide, etc.) to support development and analysis of the feasibility of a natural attenuation remedial action alternative in the CMS. For the CMS, additional monitoring of ground water over time was needed to determine if a trend of stable or decreasing contaminant mass and/or concentration over time at appropriate monitoring locations is occurring.

3.4 *Indoor Air Volatile Organic Compound Risk Assessment*

Akzo Nobel planned to determine the need for further indoor air risk pathway evaluation after review of additional ground water sampling results (as discussed in the May 2001 CMS Work Plan and NYSDEC letter dated August 24, 2001) generated during the CMS. The results from the two quarterly ground water monitoring events were required to assess the RFI conclusions regarding the potential indoor air risk from vinyl chloride.

Since only vinyl chloride holds the potential for an indoor air risk and no other compound poses any potential for an indoor air risk via inter-media transfer from ground water at concentrations detected to date at the site (and only one detection of vinyl chloride had been recorded), additional testing to confirm that vinyl chloride is absent in ground water at the site was warranted.

4. ADDITIONAL INVESTIGATIONS COMPLETED

This section discusses the findings of the recent supplemental investigations completed during the CMS field work, and provides revisions/updates to the RFI analysis of environmental conditions that warrant corrective action, based on the CMS field work completed to date. See Appendix A for detailed documentation.

4.1 Additional Field Work Completed

4.1.1 Ground Water Elevation Data Collection

The CMS field work generated additional ground water elevation data needed to further define the hydraulic gradient in the uppermost aquifer via installation of additional ground water elevation determination points, and completion of ground water elevation determinations on a quarterly basis from December 2001 to April 2002. Reference elevations were established via survey to a known elevation benchmark (Rte. 78 manhole Rim El. =320.79). Measurements were made from top of casing reference points, using an electronic water level indicator during each ground water sampling round.

4.1.2 Installation And Monitoring Of Down Gradient Wells

Akzo Nobel installed three wells (MW-9, MW-9B, and MW-4B) at locations relatively far removed from the SWMUs and, for MW-4B, proximate to the facility property line in locations down gradient of all SWMUs, based on the RFI ground water elevation determinations. MW-9 was screened in the overburden. These wells were sampled on a quarterly basis for two quarters, with analysis of samples for field parameters plus VOCs. Akzo Nobel installed one additional well cluster (MW-9, MW-9B). The MW-4B well was installed within the bedrock, adjacent to previously installed MW-4, to form a well

cluster. MW-4B and MW-9B were installed with screen and riser due to poor rock quality, as a precaution against cave-in/hole loss.

4.1.3 Ground Water Sampling

All newly installed wells were fully developed and allowed to equilibrate from the date of completion in November 2001 until sampling in December 2001. All wells and OS-1 were evaluated for LNAPL presence with an interface probe prior to purging. Monitoring wells were purged using a submersible (Whale) pump prior to sampling (excepting MW-4, which exhibited poor recharge and was manually purged via dedicated bailer). Dedicated purge tubing and bailers were deployed, in order to minimize the need for field decontamination of sampling equipment.

4.1.4 Geologic Data Collection

Akzo Nobel gathered additional geologic data during the course of installation of the monitoring wells described above. Soils were sampled continuously and classified/logged by TRC's experienced field geologists, and borings were advanced to refusal per ASTM D 1586-84 (Reapproved 1992).

4.1.5 Aquifer Tests

Akzo Nobel conducted slug tests on MW-9 to determine hydraulic conductivity of the this unconsolidated stratigraphic unit, and also performed slug tests of MW-4B and MW-9B bedrock wells in accordance with ASTM D-4044-96, Standard Test Method (Field Procedure) for Instantaneous Change in Head (Slug) Tests for Determining Hydraulic Properties of Aquifers.

4.1.6 Evaluation Of Vertical Ground Water Gradients

Akzo Nobel installed wells MW-4B and MW-9B, within the upper bedrock, as paired wells to MW-4 and MW-9. Ground water elevations were recorded at well pairs during each quarterly ground water sampling round, prior to purging.

4.2 Site Geology Addendum

Based on 1994 RFA-SV and 1996 RFI/RFA-SV drilling activities, unconsolidated sediments were encountered in borings advanced from 3 to 16 feet below grade. The 1999 RFI drilling activities determined the extent of overburden at 3 locations (MW-1B, MW-3B, and MW-6). The western locations confirmed depth to bedrock of 13-16 feet below grade, consistent with the earlier investigation findings. The eastern MW-1 location revealed bedrock at 25 feet below grade, considerably deeper than depth to bedrock at other locations of the facility investigated to date. Unconsolidated sediments varied across the site, but consisted primarily of silty sands, silts, silty clays in the upper horizons (consistent with the Galen and Arkport series), clays and gravels of lacustrine origin, and a thin glacial till layer at the bedrock-overburden interface (see Figure 5 of the December 2000 Phase II RFI Report). The thin till unit was identified above the bedrock surface at both the MW-9B and MW-4B locations during the 2001 CMS field work.

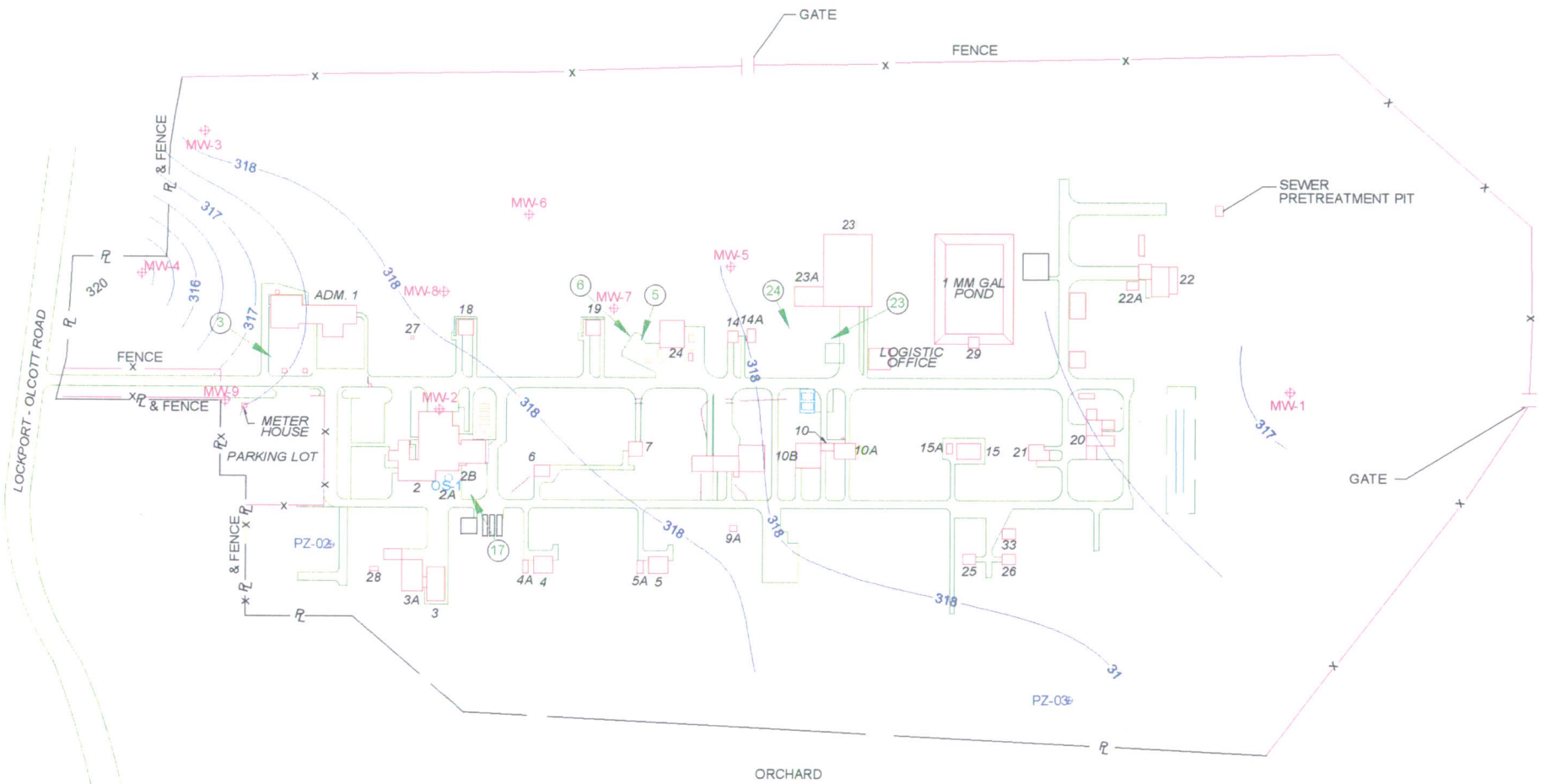
The 1999 Phase II RFI included bedrock coring at two locations; MW-1B, located east of Building 20, and MW-3B, located northwest of Building 1. The 2001 CMS field work included the installation of two additional bedrock wells on the western perimeter of the facility. MW-9B was installed at the western edge of the property boundary and south of the main service road. MW-4B was installed to create a well cluster with existing well MW-4. At the MW 9B location, bedrock was encountered at a depth of 19.5 ft. BGS. At the MW-4B location, bedrock was encountered at 15.8 ft. BGS. At the MW-1B location, bedrock was encountered at 25 ft. BGS. At the MW-3B location, bedrock was

encountered at 16 ft. BGS. Based on the observed depth to bedrock on the western site boundary as encountered in bedrock wells MW-9B, MW-4B and MW-3B, and surface elevations at these locations, confirmed bedrock depth data from 4 bedrock corehole locations MW-9B, MW-4B, MW-3B, and MW-1B, and subsurface elevations, suggest a bedrock surface slope to the east.

Rock core logs for MW-1B and MW-3B revealed the presence of a very fine-grained Queenstone shale, with a marked increase in rock competency with depth over the 15 ft. core runs. Upper weathered bedrock zones were primarily the intervals in which higher fracture counts and water loss was noted. The rock core logs for wells MW-4B and MW-9B are included in this RFI Addendum Appendix A. The rock cores retrieved from these locations were consistent with those encountered previously at the Akzo site and the bedrock consisted of fine grained Queenstone shale and siltstone. However, in contrast to the two existing bedrock locations (MW-1B and 3B), rock competency was determined to decrease with depth in the MW-4B and MW-9B locations, with weathered fractures encountered at the lower extent of bedrock core runs.

4.3 Hydrogeology Addendum

Based on the RFI data, the direction of overburden ground water flow was in general west-northwest. The most pronounced overburden ground water gradient was to the west-northwest of the developed portion of the Akzo Nobel facility, with a low horizontal overburden ground water gradient across the remainder of the site. Based on the 1999-2000 data, a slight overburden ground water divide may be in evidence at the approximate location of the on site pond. Overburden ground water gradients to the west of the pond slope to the west-northwest. A lesser gradient to the north and north-east from this slight divide indicate the potential for overburden ground water flow in these secondary directions as well. Overburden ground water elevation contours measured during the CMS field work are presented in Figures 3 and 4.



Well ID	GW Elevation
MW-1	316.81
MW-2	317.74
MW-3	318.51
MW-4	314.63
MW-5	317.95
MW-6	318.23
MW-7	318.35
MW-8	318.16
MW-9	317.46
OS-1	317.72
PZ-02	317.68
PZ-03	318.18

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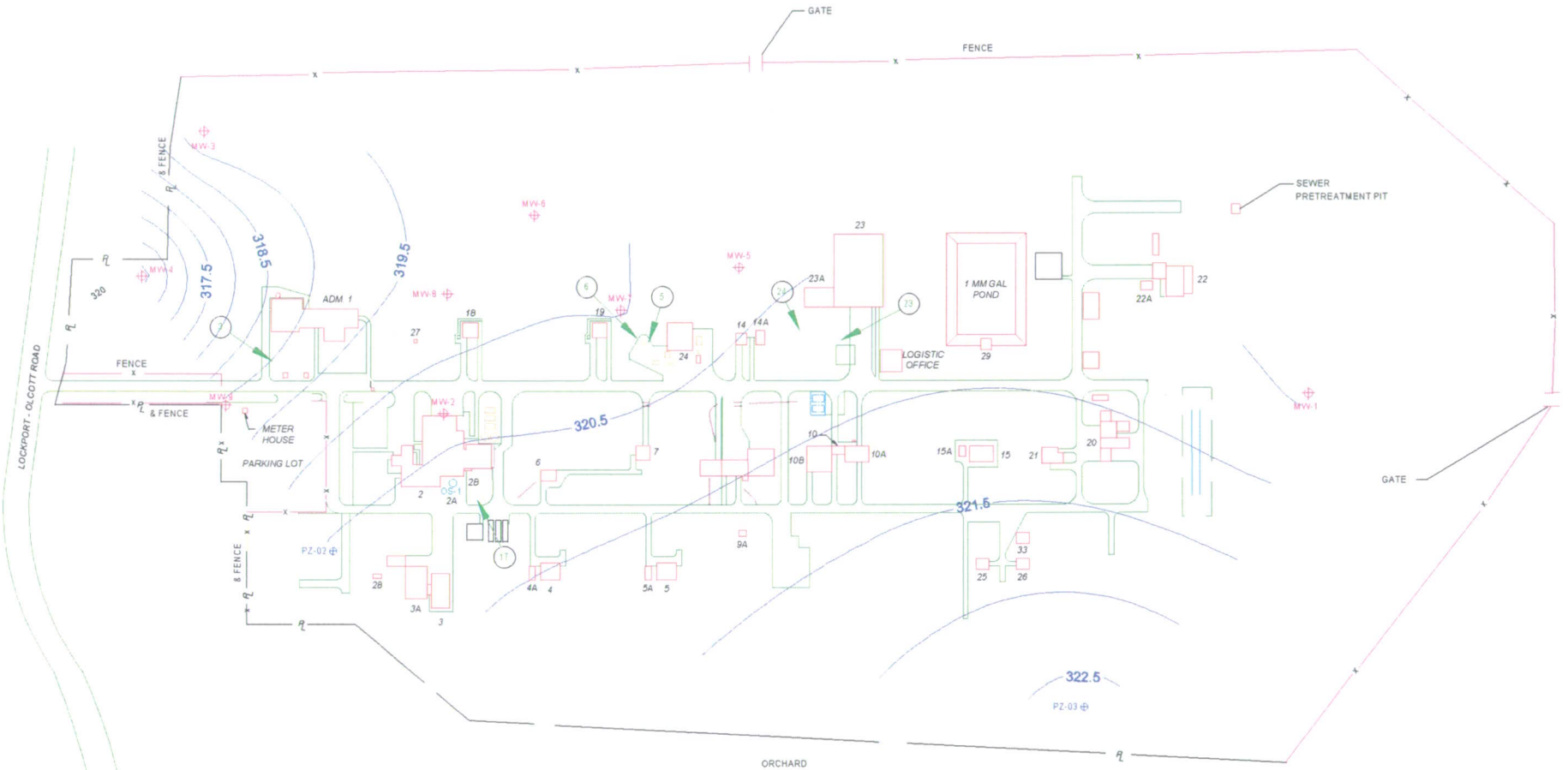
Figure 3
Overburden Ground Water Elevation Contours
December 2001

Date: 06/02 | Project No. 19045



Well ID	GW Elevation
MW-1	320.41
MW-2	320.37
MW-3	319.46
MW-4	315.79
MW-5	320.36
MW-6	319.89
MW-7	319.97
MW-8	319.64
MW-9	319.14
OS-1	320.63
PZ-02	320.59
PZ-03	322.72

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Figure 4
Overburden Ground Water Elevation Contours
April 2002

Date: 6/02 | Project No. 19045

The addition of MW-9 did not appreciably change the direction of inferred overburden ground water flow from prior interpretations. MW-9 appears up gradient of MW-4. The data confirm the predominant west-northwest flow conclusions of earlier studies, and the relatively flat overburden water table condition across the area of the facility centered around the on site pond. Overburden ground water flow, based on the 1996 ground water elevation determinations, indicated an eastern ground water high (as determined from numerous temporary small diameter sampling ports). It should also be noted that during the 1996 investigations, there was a localized overburden ground water low in the vicinity of the ground water screening location 45 feet SE of the pond (GWS-11W) that was likely influenced by a pumping well associated with the fire pond. The effect of intermittent water withdrawal at the southern edge of the pond likely influences ground water elevations locally in this area. This may be the cause of differing overburden ground water elevation interpretations seen in the 1999-2002 data set regarding the flat horizontal gradient within the developed section of the site.

Horizontal gradients within the overburden were calculated for all portions of the site, over the eight rounds of ground water elevation measurements taken at the facility to date. These calculated horizontal gradients are presented in Table 2.

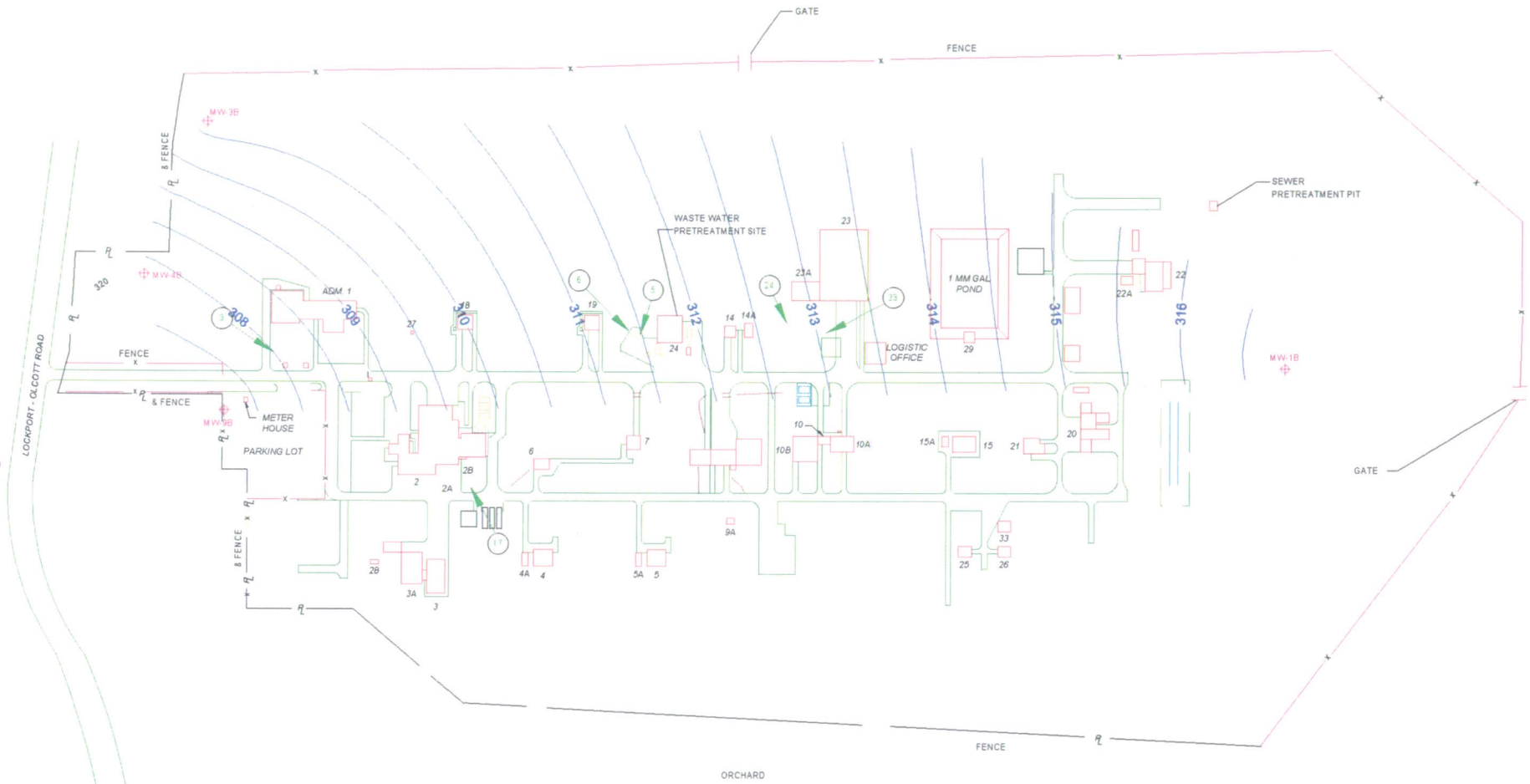
TABLE 2. MEASURED HORIZONTAL GRADIENTS

Date	Area of facility	Reference points	Distance, ft.	Head difference, ft.	Gradient
October 1996	Central portion of the site	P-H to P-1	905	0.57	0.0006
October 1996	Southwest portion of the site	GWS-4 to GWS-PA	300	2.94	0.01
October 1996	Northeast portion of the site	PK to GWS-12W60	195	1.31	0.007
October 1996	Southeast portion of the site	B-12 to GWL-6AW60	125	3.69	0.03
March 2000	Central portion of the site	MW-8 to MW-5	550	0.76	0.001
September 1999	West portion of the site	MW-2 to MW-4	630	8.46	0.01
September	Northwest portion of	MW-3 to MW-8	550	4.86	0.009

1999	the site				
December 1999	Southeast portion of the site	MW-3 to MW-7	1150	2.96	0.003
December 2001	West portion of the site	MW-9 to MW-4	245	2.83	0.01

The most consistently pronounced gradients were recorded at the western extremity of the site.

During the CMS field work, bedrock ground water flow determinations were made via the four bedrock wells installed at the site. The direction of bedrock ground water flow was inferred west-southwest; bedrock ground water elevation interpretations from data generated in December 2001 and April 2002 are illustrated in Figures 5 and 6.



Well ID	GW Elevation
MW-1B	316.84
MW-3B	310.18
MW-4B	307.76
MW-9B	307.11

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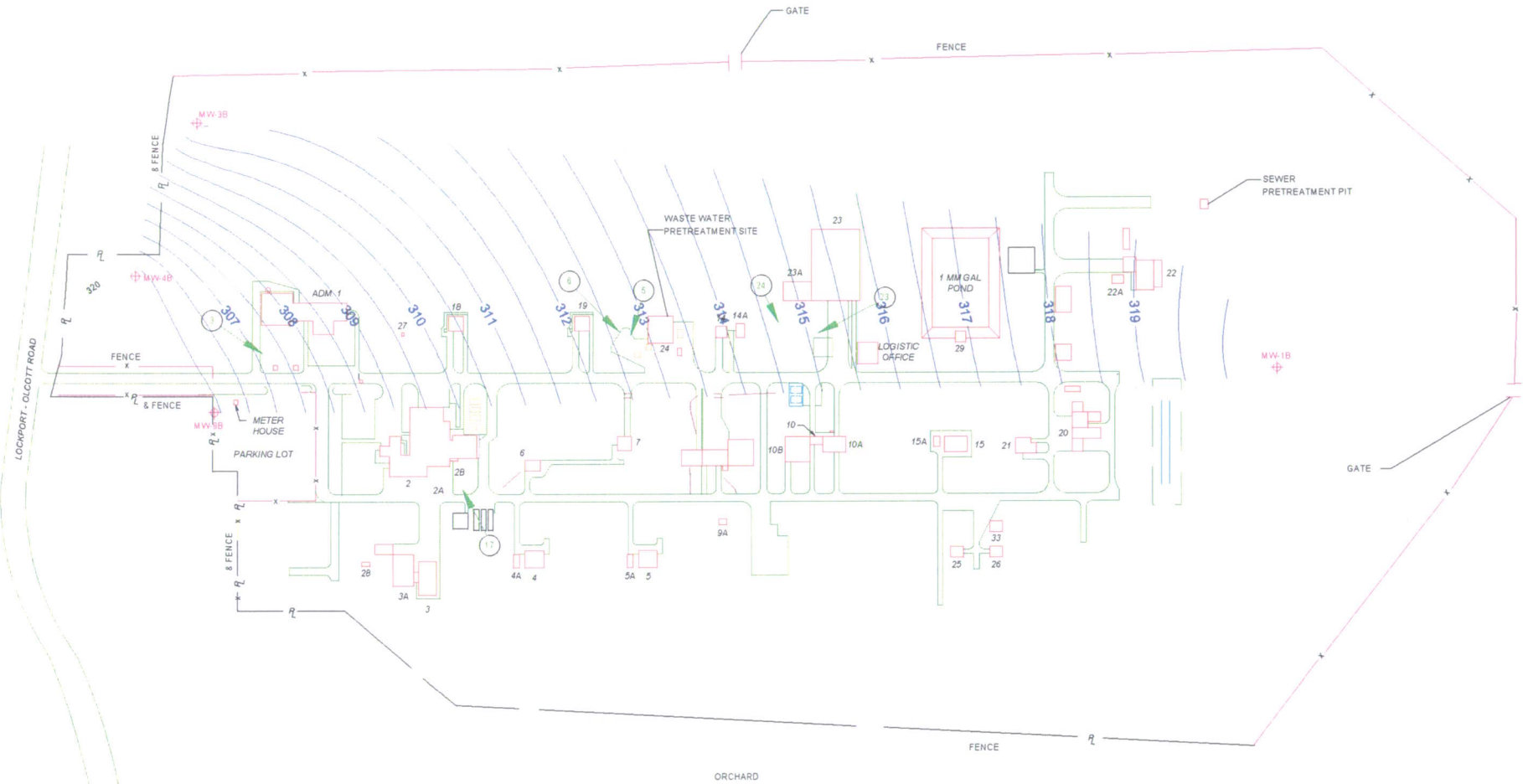
Figure 5
Bedrock Ground Water Elevation Contours
December 2001

Date: 6/02 | Project No. 19045



Well ID	GW Elevation
MW-1B	320.64
MW-3B	311.10
MW-4B	305.71
MW-9B	305.88

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BURT, NEW YORK

Figure 6
Bedrock Ground Water Elevation Contours
April 2002

Date: 6/02 | Project No. 19045

Vertical gradients were examined via the installation of the MW-1, MW-1B cluster to the east of, and the MW-3, MW-3B cluster to the west of the developed portion of the facility. Data generated during the four elevation rounds of the Phase II RFI plus the two elevation rounds of the CMS field work are presented in Table 3.

TABLE 3. MEASURED VERTICAL GRADIENTS

Date	Cluster	Gradient, ft.
9/14/99	MW-1,1B	0.53
	MW-3,3B	-2.53
12/5/99	MW-1,1B	0.28
	MW-3,3B	-6.83
3/28/00	MW-1,1B	0.49
	MW-3,3B	-8.55
7/16/00	MW-1,1B	0.84
	MW-3,3B	-6.87
12/18/01	MW-1,1B	0.03
	MW-3,3B	-8.33
	MW-4,4B	-6.87
	MW-9,9B	-10.35
4/8/02	MW-1,1B	0.23
	MW-3,3B	-8.36
	MW-4,4B	-10.08
	MW-9,9B	-13.26

A constant upward vertical gradient continued to be detected at the MW-1, MW-1B cluster, with the CMS field work data consistent in gradient direction with the Phase II RFI data, but the magnitude of the upward gradient was slightly reduced from that previously measured. The data suggest recharge, possibly associated with the ground water divide noted above, occurs up gradient of the MW-1 cluster location.

A pronounced downward vertical gradient was previously detected at the MW-3, MW-3B cluster. The addition of the MW-4, MW-4B and MW-9, MW-9B clusters during the CMS field work provided additional confirmation that a pronounced downward vertical

gradient is in effect on the western boundary of the site. This downward vertical gradient may be the result of a nearby bedrock ground water discharge area (the eighteenmile creek downstream of the base of the dam immediately NW of the site) west of the MW-3B, MW-4B, and MW-9B line of wells, and the drop in the apparent bedrock (and overlying fine lacustrine sediments and thin till layer) surface to the east. The degree of hydraulic communication thus may be limited, based upon measured ground water gradients, and observations of a dry and dense till layer at the bedrock/overburden interface at MWs-3,3B; MWs-4,4B; and MWs-9,9B cluster locations. The 2001 CMS drilling activity identified glacial till materials at the MW-9B location from 10 to 19.6 ft BGS where bedrock was encountered. This represents a larger thickness of till than was observed in previous borings at the site. The till unit observed at MW-4B exists from 12 to 15.8 ft. In both the MW-9B and 4B locations a dry, dense till unit exists at the bedrock /overburden interface. These findings are consistent with the findings at MW-3B installed during the Phase II RFI.

Hydraulic conductivities were evaluated by conduct of slug tests on wells installed during the 1999 Phase II RFI and the 2001 CMS field work. Seven overburden wells were tested, and the four bedrock coreholes were also tested. The hydraulic conductivities are summarized in Table 4.

TABLE 4. HYDRAULIC CONDUCTIVITY SLUG TEST RESULTS

Well	Strata	K, ft/min
MW-01	Fine Sand and silt	5.2E-4
MW-01B	Queenstone Shale	2.0E-5
MW-03	Fine Sand and silt, some gravel	8.9E-5
MW-03B	Queenstone Shale	4.2E-5
MW-04	Fine Sand and silt, some gravel	1.1E-5
MW-05	Fine Sand and gravel	4.9E-3

MW-07	Sand and gravel	2.3E-3
MW-08	Fine Sand, some silt	6.0E-4
MW-9	Fine Sand and silt	1.2 E-4
MW-9B	Queenstone Shale	1.4 E-5
MW-4B	Queenstone Shale	3.7 E-5

Hydraulic conductivities at the MW-01, MW-1B and MW-3, MW-3B clusters indicate the overburden is more conductive than the upper bedrock. Overburden conductivities exhibit a wide range, consistent with the saturated strata tested, with the highest conductivity encountered at the location of MW-5. It is likely the sand and gravel lacustrine unit presents the most transmissive strata on site. Well MW-4 exhibited poor recharge during ground water purging for sampling. Overburden hydraulic conductivities reported in Table 4 above are consistent with typical hydraulic conductivities reported for these formation materials in the literature.

Slug tests were conducted during the CMS field work on the three new wells (MW-9/MW-9B and MW-4B on the western site boundary) following well installation and development in November 2001. The hydraulic conductivity estimates generated from analysis of slug test data (which is included in appendix E of this report) are provided in Table 4 above. Hydraulic conductivities obtained from the 2001 slug tests are consistent with the results from the 1999 Phase II RFI. With the exception of the aforementioned MW-4, overburden hydraulic conductivities are more transmissive than the underlying Queenstone shale formation and are consistent with expected conductivities in these formation materials.

4.4 Ground Water Quality Addendum

Ground water investigations were conducted in the Phase I, Phase II, and CMS field work efforts.

4.4.1 Ground Water Monitoring To Date

Phase I ground water investigations consisted of an in-depth field screening characterization that consisted of 247 temporary ground water monitoring points. The screening level chemical data (and limited commercial fixed lab analytical data) obtained from the temporary wells were used to construct the preliminary VOC plume map for the entire developed portion of the subject property. The extent of contaminated ground water was not fully defined by ground water lab analysis during the Phase I RFI; however, ground water headspace isocontours were consistent with lab VOC data, and were a useful conservative indicator of potential ground water VOC contamination. The Phase I RFI data indicated the existence of localized ground water VOC exceedances at the Akzo Nobel Burt, N.Y. facility and formed the basis for the Phase II RFI ground water investigation.

The Phase II RFI generated the ground water elevation and water quality data needed to define the hydraulic gradient in the uppermost aquifer, the extent of ground water contamination in the uppermost aquifer, and its lateral extent within the facility boundary. Ground water was evaluated via installation, and testing for VOC contamination, of a monitoring well network comprised of wells MW-1 through MW-8, plus MW-1B and MW-3B. These wells were sampled and tested on a quarterly basis from September 1999 to September 2000.

Three new wells were installed during the CMS field work efforts in order to address NYSDEC concerns regarding ground water quality to the west of MW-2 (Wells MW-9, MW-9B) and to definitively determine the direction of ground water flow in the upper bedrock (Wells MW-4B and MW-9B).

Thus the nature and extent of contamination in the uppermost aquifer ground water was evaluated via installation, and testing for VOC contamination, of a monitoring well network, illustrated in Figure 2, comprised of the wells listed in Table 5.

Table 5 Ground Water Monitoring Wells Installed			
Well	**Depth or Unit**	**Slug Tested**	**Analytical Parameters and Sampling Frequency**
Background wells MW-1, MW-1B	MW-1, overburden; MW-1B Bedrock	MW-1, overburden; MW-1B Bedrock	Water quality testing via EPA Method 8260B, field parameters, One sample each well per quarter for one year in Phase II RFI, plus 2 quarters in CMS
Source Area wells MW-2, MW-5, MW-7, And MW-8	MW-2, MW-5, MW-7, MW-8 overburden	MW-5, MW-7, MW-8 overburden	Water quality testing via EPA Method 8260B, field parameters, One sample each well per quarter for one year in Phase II RFI, plus 2 quarters in CMS
Down gradient offset well MW-6	MW-6 overburden	Not Tested	Water quality testing via EPA Method 8260B, field parameters, Three samples for one year in Phase II RFI, plus 2 quarters in CMS
Downgradient boundary wells MW-3, MW-3B, MW-4, MW-4B, MW-9, MW-9B	MW-3, MW-4, MW-9 overburden; MW-3B, MW-4B, MW-9B Bedrock	MW-3, MW-4, MW-9 overburden; MW-3B, MW-4B, MW-9B Bedrock	Water quality testing via EPA Method 8260B, field parameters, One sample each well per quarter for one year in Phase II RFI, plus 2 quarters in CMS

All wells were fully developed and allowed to equilibrate for a period of not less than two weeks from the date of completion. The new wells installed during the CMS field work were fully developed and allowed to equilibrate from the date of completion in November 2001 until sampling in December 2001. All wells and OS-1 (installed at SWMU 17, see Figure 2) were evaluated for LNAPL presence with an interface probe prior to purging. No LNAPL was found. Table 6 summarizes the results of analysis of ground water samples collected during the Phase II RFI and CMS field work.

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01
Lab Sample ID	GW	992342A-07	993238A-11	367935	E73162-11	519592	543922
Date Sampled	Standards	09/14/99	12/5/99	3/28/00	7/16/00	12/19/01	4/11/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	< 5.4 UJ	< 6 UJ	R	< 5.0 U	< 10 U	< 10 U
Benzene	1	0.2	< 0.2 U	< 0.70 UJ	< 0.50 U	< 1.0 U	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 5.7 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	< 0.4 U	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 1 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	1.5 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	1.6 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	0.4	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	0.2	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	0.4	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-1B	MW-1B	MW-1B	MW-1B	MW-1B	MW-1B
Lab Sample ID	GW	992342A-06	993238A-10	367936	E73162-12	519591	543923
Date Sampled	Standards	09/14/99	12/5/99	3/28/00	7/16/00	12/19/01	4/11/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	< 26 UJ	< 22 UJ	28 J	6.7	< 10 U	< 10 U
Benzene	1	1.1	0.9	1.7	0.57	1.2	2.6
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 16 U	< 8 U	6.2 J	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	< 0.4 U	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 0.7 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 1.5 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	2.3 J	0.3	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	0.4	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	< 0.2 U	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-02	MW-02	MW-02	MW-02	MW-02	MW-02	MW-02
Lab Sample ID	GW	992342A-15	993238A-12	387934	E73162-3	519604	543924	543924
Date Sampled	Standards	09/15/99	12/5/99	3/28/00	7/16/00	12/20/01	4/11/02	4/11/02
Dilution	Revised 3/22/99	1.00	1.00	100	1.00	1.00	1.00	20
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C	C
Compound								
Acetone	50	< 2.5 UJ	< 8 UJ	< 1000 UJ	< 5.0 U	< 10 U	< 10 U	< 200 U
Benzene	1	6.6	4	66 J	23.9	16	32	34
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Bromoform	5	< 0.1 U	< 0.1 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Bromomethane	5	< 1 U	< 1 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
2-Butanone	50	< 3.3 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Chlorobenzene	5	1.6	3	< 100 U	2.7	10	5.8	< 20 U
Chloroethane	5	5.7	6	59 J	9.3	8.6	120	110
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 100 U	< 1.0 U	< 10 U	< 10 U	< 200 U
Chloroform	7	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
1,2-Dichlorobenzene	3	2.1	1	< 100 U	3.0	3.3	4.8	< 20 U
1,3-Dichlorobenzene	3	1.6	0.9	< 100 U	2.4	2.6	4.3	< 20 U
1,4-Dichlorobenzene	3	0.9	0.5	< 100 U	1.4	1.3	1.8	< 20 U
1,1-Dichloroethane	5	< 0.1 U	0.5	630	1.3	1.3	4.3	< 20 U
1,2-Dichloroethane	0.6	< 0.6 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	70 J	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 100 U	< 1.0 U	21	2.8	< 20 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 100 U	3.8	1.9	16	< 20 U
2-Hexanone	50	< 0.4 UJ	< 0.4 U	< 500 U	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 500 U	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U
Styrene	5	< 0.3 U	< 0.3 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Toluene	5	< 0.2 U	0.3	9800	8.0	7.7	1100 E	2000
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 100 U	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 100 U	< 1.0 U	< 2.0 U	< 2.0 U	< 40 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	62 J	< 1.0 U	< 1.0 U	< 1.0 U	< 20 U
Xylene (total)	5	0.5	0.4	72 J	2.4	2.9	40.2	31

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-03	MW-03	MW-03	MW-03	MW-03	MW-03
Lab Sample ID	GW	992342A-03	993238A-04	367927	E73162-6	519593	543925
Date Sampled	Standards	09/13/99	12/5/99	3/28/00	7/16/00	12/19/01	4/11/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	< 4.2 UJ	< 6 UJ	< 10 UJ	< 5.0 U	< 10 U	< 10 U
Benzene	1	**0.5**	**< 0.2** U	< 0.7 **UJ**	**< 0.5** U	< 1.0 **U**	**< 1.0** U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 3.4 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	< 0.4 U	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	**0.6**	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	**0.4**	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	**2.1**
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	**0.4**	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	< 0.2 U	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B	MW-3B
Lab Sample ID	GW	992342A-04	993238A-03	367928	E73162-7	519594	543542
Date Sampled	Standards	09/13/99	12/5/99	3/28/00	7/16/00	12/19/01	4/10/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	< 2.8 UJ	< 6 UJ	< 10 UJ	< 5.0 U	< 10 U	< 10 U
Benzene	1	< 0.2 U	< 0.2 U	< 0.7 UJ	< .50 U	< 1.0 U	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 2 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	< 0.4 U	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	R	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	0.4	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	0.5	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	< 0.2 U	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-04	MW-04	MW-04	MW-04	MW-04	MW-04
Lab Sample ID	GW	992342A-16	993238A-02	367926	E73162-5	519596	543543
Date Sampled	Standards	09/15/99	12/5/99	3/28/00	7/16/00	12/19/01	4/10/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	< 4.9 UJ	< 6 UJ	< 10 UJ	< 5.0 U	< 10 U	< 10 U
Benzene	1	< 0.2 U	< 0.2 U	< .70 UJ	< 0.5 U	< 1.0 U	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 3.8 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	< 0.4 U	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 1.2 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 1.3 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 U	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	0.4	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-04B	MW-04B
Lab Sample ID	GW	519595	543544
Date Sampled	Standards	12/19/01	4/10/02
Dilution	Revised 3/22/99	1.00	1.00
Units		ug/L	ug/L
Lab Identity		C	C
Compound			
Acetone	50	< 10 U	< 10 U
Benzene	1	< 1.0 U	< 1.0 U
Bromodichloromethane	50	< 1.0 U	< 1.0 U
Bromoform	5	< 1.0 U	< 1.0 U
Bromomethane	5	< 1.0 U	< 1.0 U
2-Butanone	50	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 1.0 U	< 1.0 U
Chloroethane	5	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 10 U	< 10 U
Chloroform	7	< 1.0 U	< 1.0 U
Chloromethane	5	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 1.0 U	< 1.0 U
Dichloromethane	5	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 1.0 U	< 1.0 U
2-Hexanone	50	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 5.0 U	< 5.0 U
Styrene	5	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 1.0 U	< 1.0 U
Toluene	5	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 1.0 U	< 1.0 U
Trichloroethene	5	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 1.0 U	< 1.0 U
Xylene (total)	5	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05
Lab Sample ID	GW	992342A-08	993238A-09	367933	E73162-10	519605	543545
Date Sampled	Standards	09/14/99	12/5/99	3/28/00	7/16/00	12/20/01	4/10/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	130 J	< 86 UJ	10 J	65.4	< 10 U	< 10 U
Benzene	1	< 0.2 U	< 0.2 U	< 0.7 UJ	< 0.5 U	< 1.0 U	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 6.1 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	5	0.6	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 1.3 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,3-Dichlorobenzene	3	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	0.4	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 0.7 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	2.2 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	3.5 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	1 J	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	< 0.2 U	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-06	MW-06	MW-06	MW-06	MW-06
Lab Sample ID	GW	992342A-09	993238A-06	367930	519600	543546
Date Sampled	Standards	09/14/99	12/5/99	3/28/00	12/19/01	4/09/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	C	S	C	C
Compound						
Acetone	50	< 5.8 UJ	< 6 UJ	< 10 UJ	< 10 U	< 10 U
Benzene	1	9.4	5	< 0.7 UJ	5	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 3.4 U	< 2 U	R	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	6.6	5	< 1.0 U	7.8	< 1.0 U
Chloroethane	5	2.1	4	< 1.0 U	3.7	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	1.6	1	< 1.0 U	1.4	< 1.0 U
1,3-Dichlorobenzene	3	0.6	0.4	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	1	0.7	< 1.0 U	1.2	< 1.0 U
1,1-Dichloroethane	5	1.3	1	< 1.0 U	1.5	< 1.0 U
1,2-Dichloroethane	0.6	< 0.6 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	0.3	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	1.2 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	0.2 J	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 UJ	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	0.5	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	1.1	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
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UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-07	MW-7D	MW-07	MW-7D	MW-07	MW-07D
Lab Sample ID	GW	992342A-11	992342A-12	993238A-07	993238A-08	367931	367932
Date Sampled	Standards	09/14/99	09/14/99	12/5/99	12/5/99	3/28/00	3/28/00
Dilution	Revised 3/22/99	20.0	20.0	10.0	10.0	1.00	20
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	S	S	C	C
Compound							
Acetone	50	2100 J	1600 J	< 990 UJ	< 1200 UJ	1300 J	1400 J
Benzene	1	100	74	23	26	29 J	30 J
Bromodichloromethane	50	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Bromoform	5	< 1.6 U	< 1.6 U	< 0.8 U	< 0.8 U	< 1.0 U	< 20 U
Bromomethane	5	< 19 U	< 19 U	< 10 U	< 10 U	< 1.0 U	< 20 U
2-Butanone	50	2900	2300	460	460	660 J	660 J
Carbon Disulfide	50	9.3 J	4.8 J	< 4 U	< 4 U	< 5.0 U	< 100 U
Carbon Tetrachloride	5	< 3.8 U	< 3.8 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Chlorobenzene	5	44	34	6	9	1.1 J	1.1 J
Chloroethane	5	17 J	< 7.6 UJ	< 4 U	< 4 U	.65 J	< 20 U
2-Chloroethylvinylether	5	< 6.8 UJ	< 6.8 UJ	< 3 U	< 3 U	< 1.0 U	< 20 U
Chloroform	7	< 4.6 U	< 4.6 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Chloromethane	5	12	< 11 U	< 6 U	< 6 U	< 1.0 U	< 20 U
Dibromochloromethane	50	< 2.8 U	< 2.8 U	< 1 U	< 1 U	< 1.0 U	< 20 U
1,2-Dichlorobenzene	3	25 J	7.2 J	< 2 U	< 2 U	1.8 J	< 20 U
1,3-Dichlorobenzene	3	17 J	< 5 UJ	< 2 U	< 2 U	0.5 J	< 20 U
1,4-Dichlorobenzene	3	19 J	< 5.4 UJ	< 3 U	< 3 U	< 1.0 U	< 20 U
1,1-Dichloroethane	5	< 2.4 U	< 2.4 U	< 1 U	< 1 U	< 1.0 U	< 20 U
1,2-Dichloroethane	0.6	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
1,1-Dichloroethene	5	< 5.4 U	< 5.4 U	< 3 U	< 3 U	< 1.0 U	< 20 U
cis-1,2-Dichloroethene	5	8.6 J	< 3.8 UJ	< 2 U	< 2 U	0.68 J	< 20 U
trans-1,2-Dichloroethene	5	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Dichloromethane	5	< 2 UJ	< 2 UJ	< 13 U	< 14 U	1.8	< 20 U
1,2-Dichloropropane	1	< 3.4 U	< 3.4 U	< 2 U	< 2 U	< 1.0 U	< 20 U
cis-1,3-Dichloropropene	0.4*	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
trans-1,3-Dichloropropene	0.4*	< 3.4 U	< 3.4 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Ethylbenzene	5	11	< 5.6 U	< 3 U	< 3 U	0.66 J	< 20 U
2-Hexanone	50	< 7.6 UJ	< 7.6 UJ	< 4 U	< 4 U	< 5.0 U	< 100 U
4-Methyl-2-Pentanone	50	44 J	23 J	9	< 4 U	10	< 100 U
Styrene	5	8.9	< 5.6 U	< 3 U	< 3 U	< 1.0 U	< 20 U
1,1,2,2-Tetrachloroethane	5	< 4.4 U	< 4.4 UJ	< 2 UJ	< 2 UJ	< 1.0 U	< 20 U
Tetrachloroethene	5	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Toluene	5	18 J	10 J	5	4	4.9 J	< 20 U
1,1,1-Trichloroethane	5	< 4 U	< 4 U	< 2 U	< 2 U	< 1.0 U	< 20 U
1,1,2-Trichloroethane	1	< 4.2 U	< 4.2 U	< 2 U	< 2 U	< 1.0 U	< 20 U
Trichloroethene	5	8.8	< 5.4 U	< 3 U	< 3 U	< 1.0 U	< 20 U
Vinyl Acetate	5	< 24 UJ	< 24 UJ	< 12 U	< 12 U	< 1.0 U	< 20 U
Vinyl Chloride	2	< 6.8 U	< 6.8 U	< 3 U	< 3 U	< 1.0 U	< 20 U
Xylene (total)	5	34 J	< 4.8 UJ	< 2 U	< 2 U	< 1.1 J	< 20 U

Data validation qualifiers applied by TRC; CMS data not validated
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NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-07	MW-07D	MW-07	MW-07D	MW-07	MW-07D
Lab Sample ID	GW	E73162-8	E73162-9	E73162-8	E73162-9	519601	519602
Date Sampled	Standards	7/16/00	7/16/00	7/16/00	7/16/00	12/19/01	12/19/01
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		A	A	A	A	C	C
Compound							
Acetone	50	10.3	10.4	10.3	10.4	< 10 U	< 10 U
Benzene	1	18.8	18.8	18.8	18.8	21	22
Bromodichloromethane	50	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	9.7	9.3	9.7	9.3	9.0	8.9
Chloroethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	1.7	1.5	1.7	1.5	1.5	1.4
1,3-Dichlorobenzene	3	0.35 J	0.32 J	0.35 J	0.32 J	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	0.42 J	0.40 J	0.42 J	0.40 J	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	0.6	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	0.34 J	< 1.0 J	0.34 J	< 1.0 J	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloropropane	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	0.52 J	0.51 J	0.52 J	0.51 J	< 1.0 U	< 1.0 U
2-Hexanone	50	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	5	1.3	1.3	1.3	1.3	1.8	1.8
1,1,1-Trichloroethane	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	0.81 J	0.68 J	0.81 J	0.68 J	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
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NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-07		MW-07D	
Lab Sample ID	GW	543926		543927	
Date Sampled	Standards	4/11/02		4/11/02	
Dilution	Revised 3/22/99	1.00		1.00	
Units		ug/L		ug/L	
Lab Identity		C		C	
Compound					
Acetone	50	< 10	U	< 10	U
Benzene	**1**	**6.2**		**6.3**	
Bromodichloromethane	50	< 1.0	U	< 1.0	U
Bromoform	5	< 1.0	U	< 1.0	U
Bromomethane	5	< 1.0	U	< 1.0	U
2-Butanone	50	< 5.0	U	< 5.0	U
Carbon Disulfide	50	< 5.0	U	< 5.0	U
Carbon Tetrachloride	5	< 1.0	U	< 1.0	U
Chlorobenzene	5	**4.2**		**4.3**	
Chloroethane	5	< 1.0	U	< 1.0	U
2-Chloroethylvinylether	5	< 10	U	< 10	U
Chloroform	7	< 1.0	U	< 1.0	U
Chloromethane	5	< 1.0	U	< 1.0	U
Dibromochloromethane	50	< 1.0	U	< 1.0	U
1,2-Dichlorobenzene	3	< 1.0	U	< 1.0	U
1,3-Dichlorobenzene	3	< 1.0	U	< 1.0	U
1,4-Dichlorobenzene	3	< 1.0	U	< 1.0	U
1,1-Dichloroethane	5	< 1.0	U	< 1.0	U
1,2-Dichloroethane	0.6	< 1.0	U	< 1.0	U
1,1-Dichloroethene	5	< 1.0	U	< 1.0	U
cis-1,2-Dichloroethene	5	< 1.0	U	< 1.0	U
trans-1,2-Dichloroethene	5	< 1.0	U	< 1.0	U
Dichloromethane	5	< 1.0	U	< 1.0	U
1,2-Dichloropropane	1	< 1.0	U	< 1.0	U
cis-1,3-Dichloropropene	0.4*	< 1.0	U	< 1.0	U
trans-1,3-Dichloropropene	0.4*	< 1.0	U	< 1.0	U
Ethylbenzene	5	< 1.0	U	< 1.0	U
2-Hexanone	50	< 5.0	U	< 5.0	U
4-Methyl-2-Pentanone	50	< 5.0	U	< 5.0	U
Styrene	5	< 1.0	U	< 1.0	U
1,1,2,2-Tetrachloroethane	5	< 1.0	U	< 1.0	U
Tetrachloroethene	5	< 1.0	U	< 1.0	U
Toluene	5	**1.0**		< 1.0	U
1,1,1-Trichloroethane	5	< 1.0	U	< 1.0	U
1,1,2-Trichloroethane	1	< 1.0	U	< 1.0	U
Trichloroethene	5	< 1.0	U	< 1.0	U
Vinyl Acetate	5	< 2.0	U	< 2.0	U
Vinyl Chloride	2	< 1.0	U	< 1.0	U
Xylene (total)	5	< 1.0	U	< 1.0	U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-08	MW-08	MW-08	MW-08	MW-08	MW-08
Lab Sample ID	GW	992342A-10	993238A-05	367929	E73162-4	519599	543547
Date Sampled	Standards	09/14/99	12/5/99	3/28/00	7/16/00	12/19/01	4/9/02
Dilution	Revised 3/22/99	1.00	1.00	1.00	1.00	1.00	1.00
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lab Identity		S	S	C	A	C	C
Compound							
Acetone	50	3.7 J	< 32 UJ	< 10 UJ	< 5.0 U	170	< 10 U
Benzene	1	1.1	< 0.2 U	< 0.7 UJ	0.62	6.2	< 1.0 U
Bromodichloromethane	50	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromoform	5	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Bromomethane	5	< 1 U	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	50	< 6.5 U	< 2 U	R	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Disulfide	50	< 0.4 U	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Carbon Tetrachloride	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chlorobenzene	5	17	< 0.3 U	< 1.0 U	1.8	6.8	1.1
Chloroethane	5	3	< 0.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Chloroethylvinylether	5	< 0.3 UJ	< 0.3 U	< 1.0 U	< 1.0 U	< 10 U	< 10 U
Chloroform	7	< 0.2 U	0.4	0.55 J	0.57 J	1.5	< 1.0 U
Chloromethane	5	< 0.6 U	< 0.6 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dibromochloromethane	50	< 0.1 U	< 0.1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichlorobenzene	3	3.7	< 0.2 U	< 1.0 U	< 1.0 U	2.1	< 1.0 U
1,3-Dichlorobenzene	3	1.3	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	3	1.9	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	5	2	11	19	22.7	12	16
1,2-Dichloroethane	0.6	1	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	5	< 0.3 U	0.6	1.3	2.0	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Dichloromethane	5	< 0.1 UJ	< 0.3 U	< 1.0 U	< 1.0 U	29	< 1.0 U
1,2-Dichloropropane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,3-Dichloropropene	0.4*	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Hexanone	50	0.4 J	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
4-Methyl-2-Pentanone	50	< 0.4 UJ	< 0.4 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
Styrene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,2,2-Tetrachloroethane	5	< 0.2 U	< 0.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Tetrachloroethene	5	< 0.2 U	< 0.2 U	< 1.0 U	0.35 J	4.6	< 1.0 U
Toluene	5	0.9	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	5	0.6	11	16	21.5	9.0	14
1,1,2-Trichloroethane	1	< 0.2 U	< 0.2 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	5	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Vinyl Acetate	5	< 1.2 UJ	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 2.0 U
Vinyl Chloride	2	< 0.3 U	< 0.3 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Xylene (total)	5	0.4	< 0.2 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

TABLE 6
GROUND WATER DATA SUMMARY

Client ID	6 NYCRR 703.5	MW-09		MW-09		MW-09B		MW-09B	
Lab Sample ID	GW	519598		543548		519597		543549	
Date Sampled	Standards	12/19/01		4/9/02		12/19/01		4/9/02	
Dilution	Revised 3/22/99	1.00		1.00		1.00		1.00	
Units		ug/L		ug/L		ug/L		ug/L	
Lab Identity		C		C		C		C	
Compound									
Acetone	50	< 10	U	< 10	U	< 10	U	< 10	U
Benzene	1	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Bromodichloromethane	50	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Bromoform	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Bromomethane	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
2-Butanone	50	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U
Carbon Disulfide	50	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U
Carbon Tetrachloride	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Chlorobenzene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Chloroethane	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
2-Chloroethylvinylether	5	< 10	U	< 10	U	< 10	U	< 10	U
Chloroform	7	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Chloromethane	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Dibromochloromethane	50	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,2-Dichlorobenzene	3	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,3-Dichlorobenzene	3	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,4-Dichlorobenzene	3	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,1-Dichloroethane	5	< 1.0	U	1.3		< 1.0	U	< 1.0	U
1,2-Dichloroethane	0.6	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,1-Dichloroethene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
cis-1,2-Dichloroethene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
trans-1,2-Dichloroethene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Dichloromethane	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,2-Dichloropropane	1	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
cis-1,3-Dichloropropene	0.4*	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
trans-1,3-Dichloropropene	0.4*	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Ethylbenzene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
2-Hexanone	50	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U
4-Methyl-2-Pentanone	50	< 5.0	U	< 5.0	U	< 5.0	U	< 5.0	U
Styrene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,1,2,2-Tetrachloroethane	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Tetrachloroethene	5	4.9		< 1.0	U	< 1.0	U	< 1.0	U
Toluene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
1,1,1-Trichloroethane	5	4.6		5.4		< 1.0	U	< 1.0	U
1,1,2-Trichloroethane	1	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Trichloroethene	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Vinyl Acetate	5	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Vinyl Chloride	2	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U
Xylene (total)	5	< 1.0	U	< 1.0	U	< 1.0	U	< 1.0	U

Data validation qualifiers applied by TRC; CMS data not validated
S=STL; C=CAS; A=Accutest
NS=NOT SAMPLED
NA=NOT APPLICABLE
*=Applies to sum of cis and trans

U=Not Detected
J = Estimated
UJ = Not Detected, Detection Limit Estimated
R=Rejected

4.4.2 Ground Water Quality In Newly Installed Bedrock Wells MW-4B And MW-9B

Data presented in Table 6 indicate that no volatile organic contaminants were detected in ground water in the upper bedrock at locations monitored by MW-4B and MW-9B. These results are consistent with the findings of the last 5 sampling rounds conducted at bedrock well MW-3B, which is also located on the down gradient western edge of the facility monitoring well network. Thus the additional data confirm the prior conclusions regarding the absence of site contaminants in the upper bedrock ground water down gradient of the contaminated overburden ground water areas within the central portions of the facility.

4.4.3 Ground Water Quality In Newly Installed Overburden Well MW-9

Data presented in Table 6 indicate that ground water quality in the overburden at the location monitored by MW-9 (west and hydraulically down gradient of the previously installed MW-2) had detections of volatile organic contaminants limited to three volatile organic compounds during the two rounds of ground water monitoring conducted during the CMS field work. These chlorinated aliphatic hydrocarbon compounds were present at trace concentrations below the ground water standards, except for the detection of 1,1,1-trichloroethane at 5.4 ppb, which slightly exceeded the 6NYCRR 703.5 ground water standard of 5 ppb. Of the three compounds detected at MW-9, only 1,1-dichloroethane has been detected at MW-2. However, all three compounds (tetrachloroethene, 1,1-dichloroethane, and 1,1,1-trichloroethane) were detected at higher concentrations during respective quarterly sampling events at MW-8, which is also up gradient of MW-9. Thus the additional data support the conclusion that MW-9 is an appropriately placed down gradient monitoring well, and that ground water at this location contained a reduced number, at equivalent or reduced concentration, of site contaminants in the uppermost ground water down gradient of the contaminated overburden ground water areas within the central portions of the site. The wells MW-3,

MW-4, and MW-9 represent a series of down gradient boundary monitoring wells that effectively provide for down gradient extent monitoring of ground water contamination detected in the central portion of the facility.

4.4.4 Ground Water Quality Trends

Data presented in Table 6 indicate that, in general, ground water quality determined via conduct of two quarterly sampling rounds during the CMS field work are consistent with the ground water quality data generated during the Phase II RFI. Ground water quality is essentially the same or improved since 1999 in wells MW-1, MW-3, MW-3B, MW-4, MW-5, MW-6, and MW-7. The ground water quality at MW-7 has shown a marked improvement since the early monitoring rounds. For example, 2-Butanone was not detected in ground water from MW-7 in the last three sampling events. For well MW-1B, benzene remains the sole detected VOC in ground water, with concentrations restricted to a narrow range of from < 1 ppb to 2.6 ppb over the six rounds of sampling conducted to date.

MW-8 ground water methylene chloride and acetone concentrations exceeded their respective 6NYCRR 703.5 ground water standards for the first time at this location during the December 2001 sampling round. However, both compounds were not detected in ground water from MW-8 in the April 2002 sampling round.

MW-2 ground water quality from the 2001 and 2002 sampling events was generally consistent with past sampling rounds, with the spring (April) 2002 sampling event data indicating the recurrence of toluene and chloroethane at concentrations comparable to those reported from the spring (late March) 2000 sampling round. Other BTEX compounds (xylenes, ethylbenzene, and benzene) were also detected present above their respective 6NYCRR 703.5 ground water standards during the April 2002 sampling event. Methylene chloride was detected in both CMS field work sampling rounds, as was chlorobenzene; exceedances of their respective 6NYCRR 703.5 ground water standards were noted for each of these compounds.

4.4.5 Vinyl Chloride

Vinyl chloride was not detected in any monitoring well during the two sampling rounds conducted during the CMS field work. An updated health assessment of potential exposures that may be associated with impacted ground water at the Akzo Nobel facility in Burt, New York, using all relevant available data, including data generated during the RFI, was previously completed and reported in the Phase II RFI. The assessment was made with the assumption that Akzo Nobel will implement activities and uses restrictions on the industrialized portion of the facility. Results of the quantitative risk assessment indicated that, under current site conditions no non-carcinogenic risks to public health were identified. However, one contaminant detected once in site ground water (vinyl chloride) could theoretically approach a significant risk (a carcinogenic risk greater than 10^{-4}) under modeled exposures to current administrative workers and future site residents outside of the industrialized portion of the facility. It is important to note that during the additional 2 rounds of site-wide ground water sampling, vinyl chloride was not detected. This further evidence supports the conclusion that vinyl chloride is not a contaminant of concern at the site.

4.4.6 Ground Water Contaminants of Concern Summary

Table 6 presents ground water standards to which detected sample concentrations are compared. Ground water standards are from 6YCRR 703.5. Integrated results of the RFI field investigations including the supplemental ground water sampling conducted during the CMS field work were compared to the current ground water standard presented in Table 6 to identify contaminants of concern and SWMUs/AOCs with which ground water standards exceedances are associated. Results of that comparison are presented below in Table 7. Table 7 presents contaminants for which an exceedance in ground water was noted on more than one occasion during the studies completed to date; additions to this evaluation due to data generated since the Phase II RFI was completed are indicated in bold. Compounds detected only once to date (chloromethane, styrene and vinyl chloride) have been removed from the table since no re-detects have been noted

in the data. TCE was detected twice in the first sampling round, and has not been detected since, so it has also been removed from Table 7.

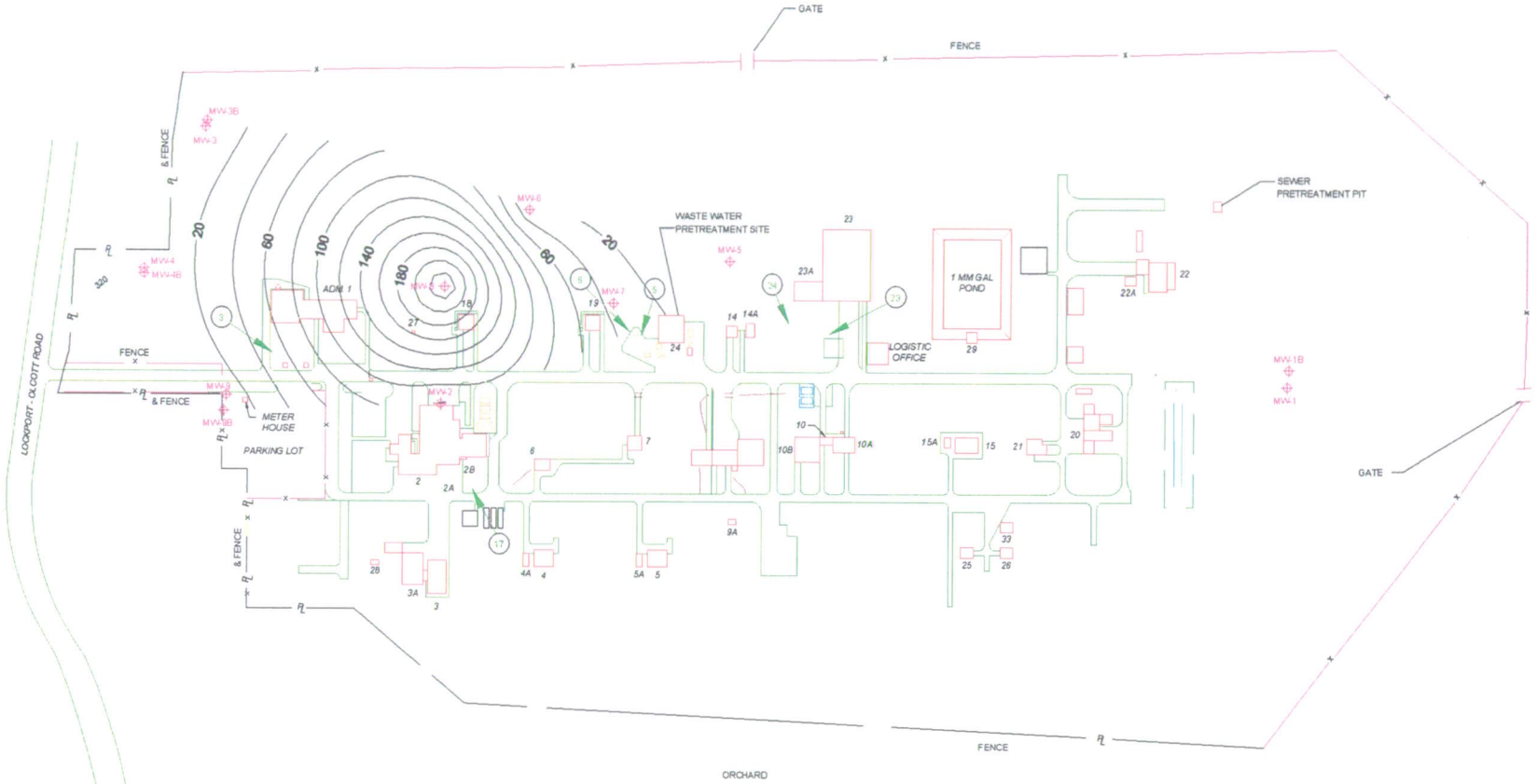
TABLE 7 CONTAMINANTS OF CONCERN IN GROUND WATER	
Contaminant of Concern	**SWMU/AOC Where Contaminant Detected Above 6 NYCRR 703.5 Standards**
Acetone	Phase 1-SWMU 3 (Eastern ground water depression)
	Phase 1-SWMU 24 and downgradient area
	Phase 2-MW-5 down gradient of SWMU 24
	Phase 2-MW-7 down gradient of SWMU 5/6
	CMS-MW-8 down gradient of western developed portion of site
Benzene	Phase 1-SWMU 5/6 hotspot between Bldgs. 18 and 19
	Phase 1-SWMU 17
	Phase 2-Bedrock well MW-1B
	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2-MW-6 and MW-8 down gradient of western developed portion of site
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
2-Butanone	Phase 2-MW-7 down gradient of SWMU 5/6
Chlorobenzene	Phase 1-SWMU 5/6 hotspot between Bldgs. 18 and 19
	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2-MW-6 and MW-8 down gradient of western developed portion of site
	CMS-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B

TABLE 7 CONTAMINANTS OF CONCERN IN GROUND WATER	
Contaminant of Concern	**SWMU/AOC Where Contaminant Detected Above 6 NYCRR 703.5 Standards**
1,1-Dichloroethane	Phase 1-Western end of SWMU 5/6 hotspot
	Phase 2- MW-8 down gradient of western developed portion of site
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
1,2-Dichloroethane	Phase 2- MW-8 down gradient of western developed portion of site
	Phase 2- MW-3 down gradient of western developed portion of site, one detection at the action level
1,2-Dichlorobenzene	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2- MW-8 down gradient of western developed portion of site
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
1,3-Dichlorobenzene	Phase 1-East of Building 3
	Phase 2-MW-7 down gradient of SWMU 5/6
1,4-Dichlorobenzene	Phase 2-MW-7 down gradient of SWMU 5/6
1,2-Dichloroethene (cis)	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
Ethylbenzene	Phase 1-SWMU 17
	Phase 2-MW-7 down gradient of SWMU 5/6
	CMS-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B

TABLE 7 CONTAMINANTS OF CONCERN IN GROUND WATER	
Contaminant of Concern	**SWMU/AOC Where Contaminant Detected Above 6 NYCRR 703.5 Standards**
Toluene	Phase 1-SWMU 17
	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
1,1,1-Trichloroethane	Phase 1-Downgradient of SWMU 5/6
	Phase 2- MW-8 down gradient of western developed portion of site
	CMS-MW-9 down gradient of western developed portion of site
Xylenes	Phase 1-SWMU 17
	Phase 2-MW-7 down gradient of SWMU 5/6
	Phase 2-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B
Naphthalene	Phase 1-SWMU 17
Methylene Chloride	**CMS-MW-2 down/cross gradient of SWMU 17 and building 2,2A,2B**
	CMS-MW-8 down gradient of western developed portion of site

The extent of ground water contamination was previously illustrated in Figures 17-26 of the Phase II RFI. In all cases, ground water contamination appeared limited to within the Akzo Nobel, Burt, NY parcel. Additional information regarding the ground water elevations and inferred direction of ground water flow presented in the Phase II RFI report supported this conclusion. The additional data generated during the CMS field work is generally consistent with that developed during the Phase II RFI, and continue to

support the conclusions regarding ground water flow patterns, and that ground water contamination appears limited to within the Akzo Nobel, Burt, NY parcel. As indicated in Table 6, and summarized in Table 7 above, only one additional compound was found present in ground water above its applicable ground water standard (methylene chloride). Additional detections of previously identified contaminants of concern above applicable ground water standards were limited to monitoring wells located within the industrialized portion of the site. Total VOC isopleths for the December 2001 and April 2002 sampling rounds are presented in Figures 7 and 8. Revised highest concentration isopleths for contaminants of concern acetone and chlorobenzene are presented in Figures 9 and 10, which illustrate the negligible change (from Phase II RFI figures 22 and 25) the additional two rounds of sampling, and the sampling of three new wells during the CMS field work has had on extent of ground water contamination for these contaminants of concern.



Well ID	Total VOC (ppm)
MW-01	0
MW-1B	1.2
MW-02	76.6
MW-03	0
MW-3B	0
MW-04	0
MW-04B	0
MW-05	0
MW-06	20.6
MW-07	33.3
MW-08	241.7
MW-09	9.5
MW-09B	0

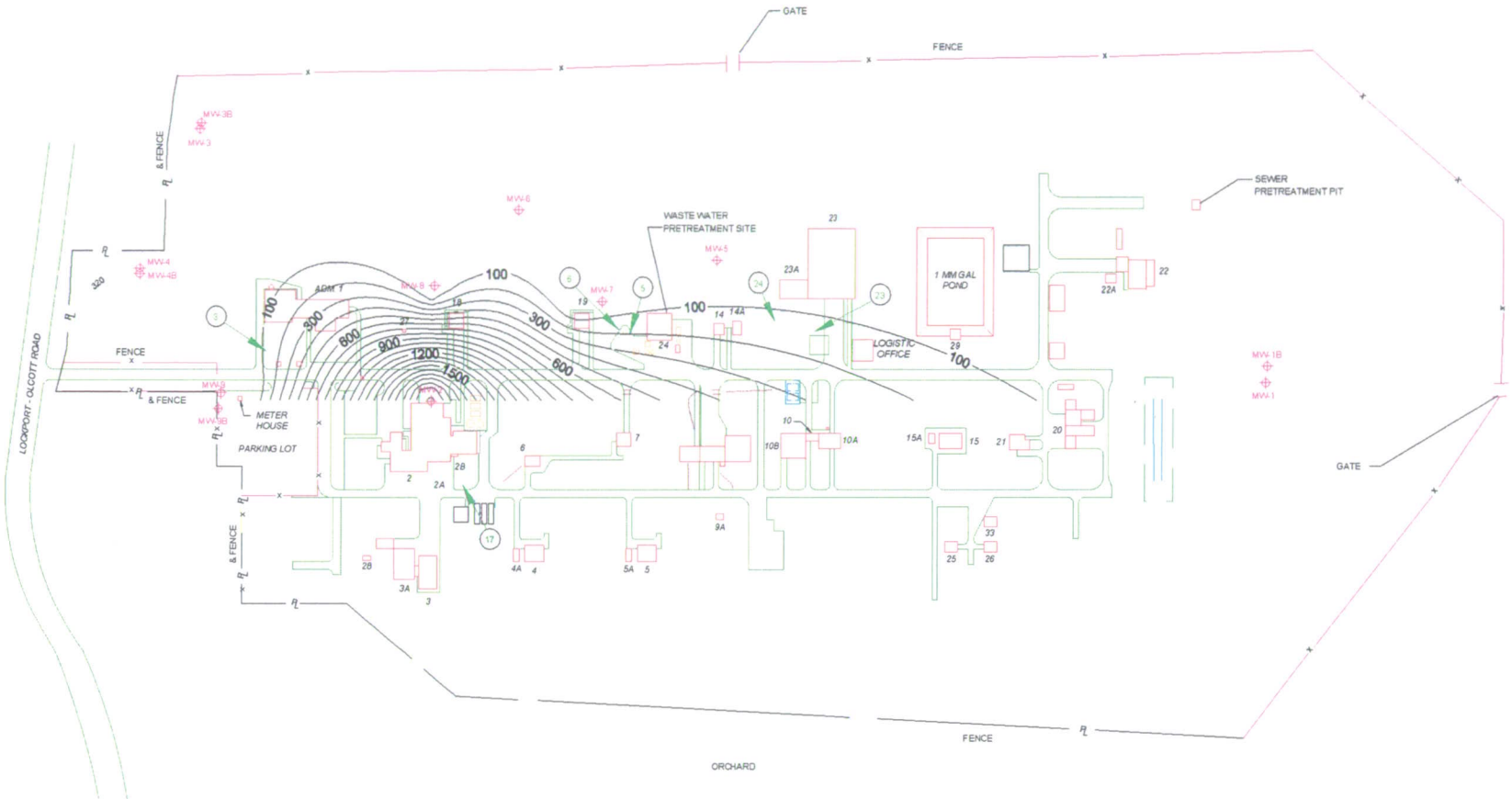
TRC

Boott Mills South
Foot of John Street
Lowell, MA 01852
(978) 970-5600

AKZO NOBEL CHEMICAL, INC.
BURT, NEW YORK

Figure 7
Total Volatile Organic Compound Isopleth
December 2001

Date: 6/02 | Project No.19045



Well ID	Total VOC (ppm)
MW-01	0
MW-1B	2.6
MW-02	2175
MW-03	2.1
MW-3B	0
MW-04	0
MW-04B	0
MW-05	0
MW-06	0
MW-07	11.4
MW-08	33.1
MW-09	6.7
MW-09B	0

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Foot of John Street
Lowell, MA. 01852
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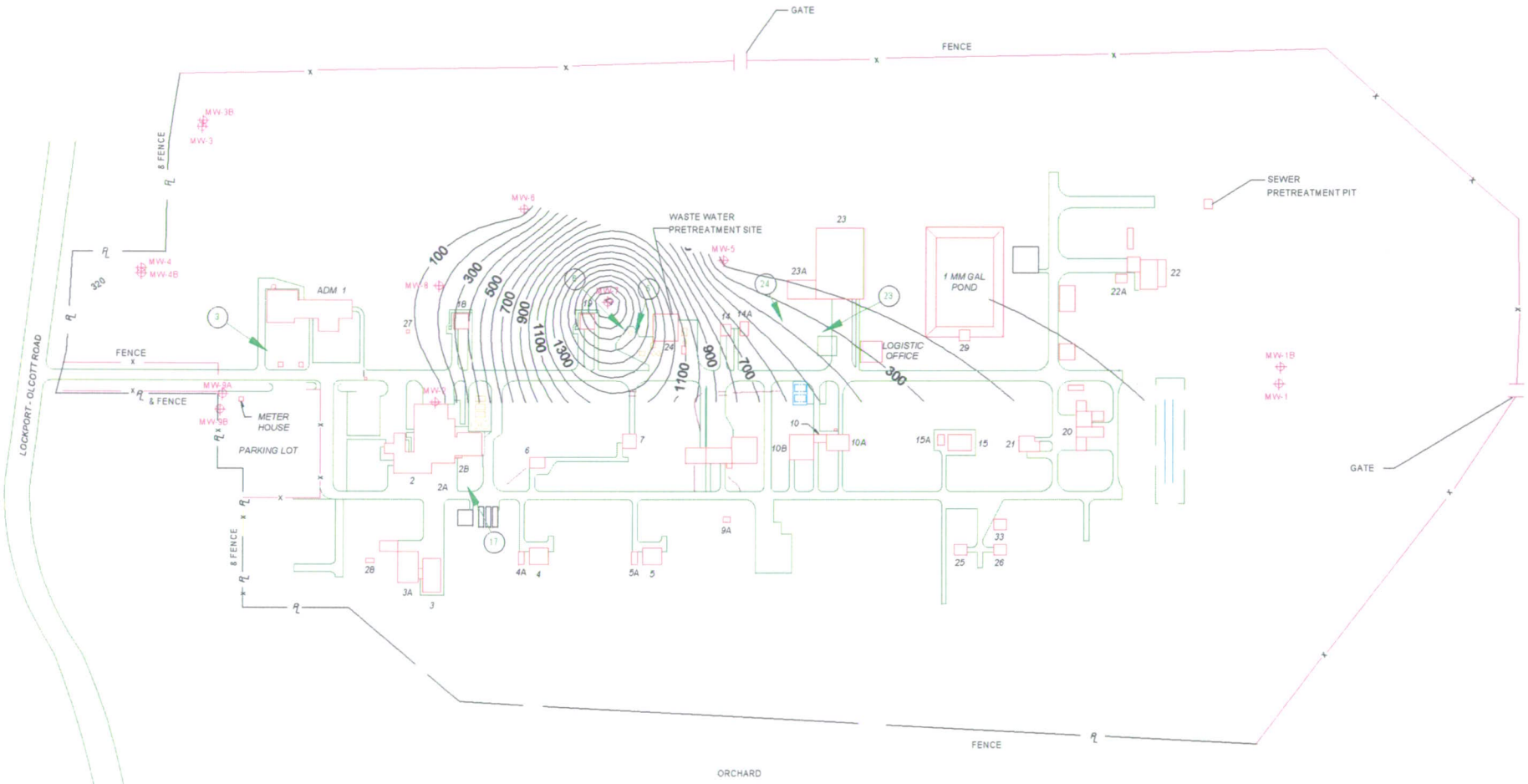
AKZO NOBEL CHEMICAL, INC.
BURT, NEW YORK

Figure 8
Total Volatile Organic Compound Isopleth
April 2002

Date: 6/02 | Project No.19045



Well ID	Concentration (ppm)
MW-01	0
MW-1B	28
MW-02	0
MW-03	0
MW-3B	0
MW-04	0
MW-04B	0
MW-05	130
MW-06	0
MW-07	2100
MW-08	170
MW-09	0
MW-09B	0

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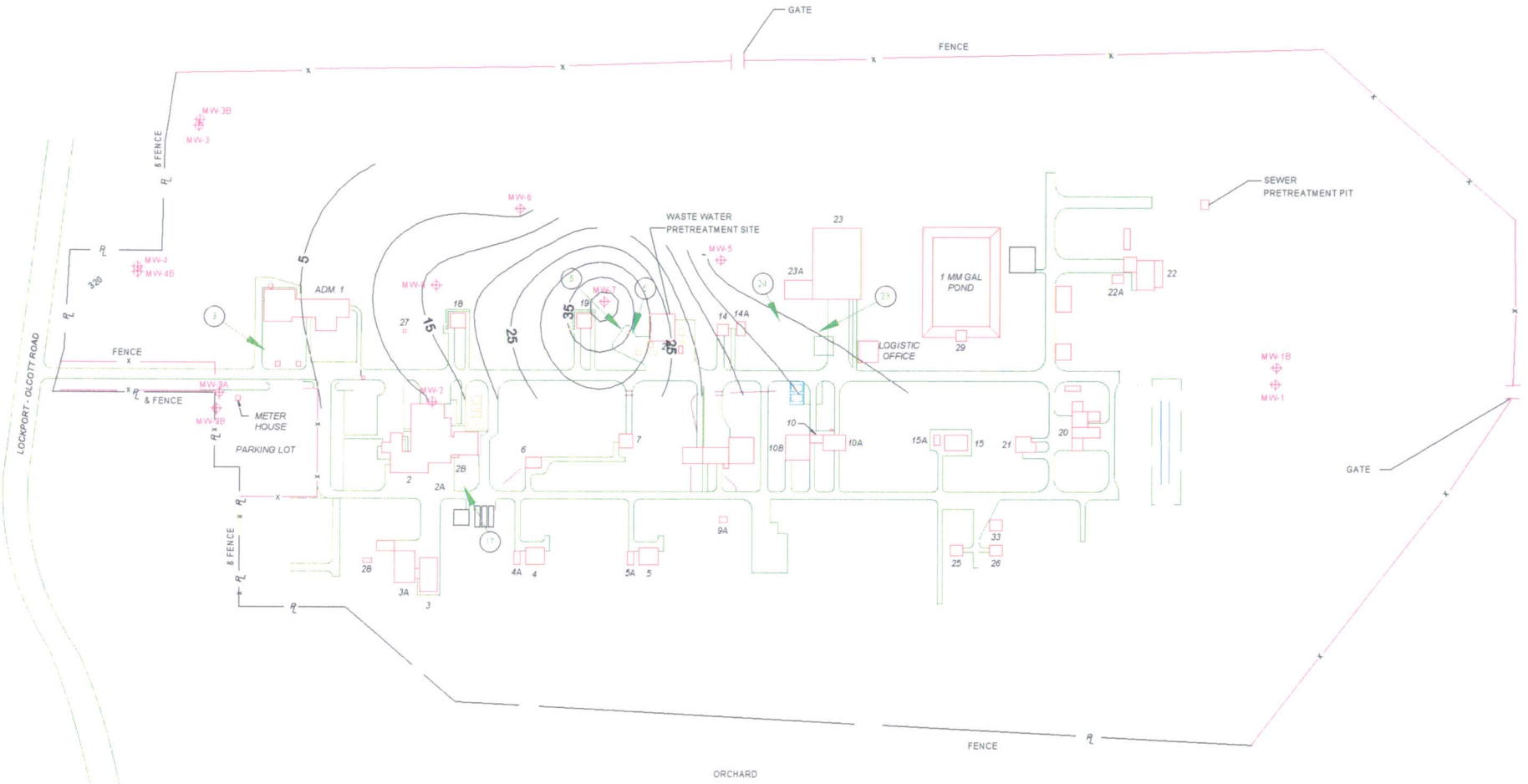
Boott Mills South
Foot of John Street
Lowell, MA. 01852
(978) 970-5600

AKZO NOBEL CHEMICAL, INC.
BURT, NEW YORK

Figure 9
Acetone Highest Concentration Isopleth

Date: 6/02 | Project No. 19045



Well ID	Concenttration (ppm)
MW-01	0
MW-1B	0
MW-02	10
MW-03	0
MW-3B	0
MW-04	0
MW-04B	0
MW-05	0
MW-06	7.8
MW-07	44
MW-08	17
MW-09	0
MW-09B	0

TRC
Boott Mills South
Foot of John Street
Lowell, MA. 01852
(978) 970-5600

AKZO NOBEL CHEMICAL, INC.
BURT, NEW YORK

Figure 10
Chlorobenzene Highest Concentration
Isopleth

Date: 6/02 | Project No. 19045

4.5 Conceptual Model Addendum

The May 2001 Corrective Measures Study Work Plan presented a discussion of the conceptual model of contamination within soil and ground water at the Akzo Nobel, Burt, NY facility. This conceptual model included the remaining source areas and soil contamination locations, and the resultant ground water contamination as defined in the RFI. The conceptual model was based on a quantitative analysis of the fate and transport of contaminants in the subsurface environment, via the application of an equilibrium fate model, a steady state ground water flow model, and a contaminant transport/reaction model (see the December 2000 RFI Report).

The December 2000 analysis provided a conceptual model of contaminant behavior in the subsurface. The actual subsurface environment is considerably more complex than that assumed in the model, and the impact of vertical flow, local anisotropic and hetergeneous conditions can only be determined by ground water monitoring over a suitable time frame. However, on a site-wide basis, the application of the transport model is useful in assessing probable contaminant behavior. The model illustrated that, based on currently available data, contaminant migration will likely remain relatively near source zones modeled. Lateral migration of contaminants was not appreciable (given the current conditions and model assumptions).

The data collected during the CMS field work for the Akzo Nobel facility are consistent with that of the transport model output in that data indicate that ground water impacts are limited to localized source areas with a lateral extent confined to within the boundaries of the Akzo Nobel facility.

Thus the persistence of contaminants in ground water at the site (w/o consideration of biodegradation) are anticipated to be relatively long term. Mobility of contaminants will be largely controlled by advective transport, and the extent of a contaminant plume is

likely to be limited to within the facility boundaries. However, the presence of lowered oxygen content, the presence of reducing conditions, and elevated carbon dioxide content (see Appendix A for updated data) in near-source wells provides hydrogeologic and geochemical evidence of biological degradation processes in effect at the facility.

Data gathered during the CMS field work, including additional data gathering under the CMS conducted to address NYSDEC comments regarding potential contaminant migration in ground water in a western direction, continue to support the conclusion that impacted ground water at the Akzo Nobel, Burt, NY facility has not migrated off site.

One aspect of the conceptual model that is of importance under RCRA corrective action is assessing if the subsurface vapor intrusion to indoor air pathway for human exposure is complete under current site conditions. Under RCRA Environmental Indicator (EI) RCRIS Code (CA725), "Current Human Exposures Under Control", it is imperative to determine if site conditions have been stabilized, and, if not, to take action to achieve stabilization. This assessment is required to answer Question 3 (Are there complete pathways?) of the Human Exposures EI determinations under RCRA as specified in the February 5, 1999 EI Guidance Document. Recently published supplemental guidance provided a protocol for consistent evaluation of this pathway (see Draft for Comment version dated 10/23/2001). This recently published guidance provides a tiered approach to evaluation. Under the secondary screening tier, this guidance states *If measured or reasonably estimated media concentrations are judged to be less than the target numerical criteria, the pathway can be considered to be incomplete.* For the Akzo facility, consideration of potential indoor air exposure resulting from vinyl chloride in ground water under the secondary screening tier can be ruled out on the basis of the weight of evidence from the over 80 ground water samples collected to date.

5. REVISED RFI CONCLUSIONS AND RECOMMENDATIONS

This section presents the conclusions and recommendations of the RFI, revised as necessary to incorporate the new data generated during the CMS field work.

Conclusions and recommendations for which revisions are warranted based on the CMS field work completed were previously presented in:

- Section 9.4, Facility-wide ground water quality, in the December 2000 RFI Report, and
- Section 9. 5 Human Health Assessment.

These RFI conclusions and recommendations are repeated in this section, with revisions added due to additional data generated during the CMS field work presented **in bold.**

5.1 Facility-Wide Ground Water Flow Field And Quality

Data presented support the conclusion that the uppermost aquifer and upper bedrock ground water flow regime has been characterized. The Phase II RFI **and CMS field work** generated additional ground water elevation data and aquifer characterization data needed to define the flow field in the uppermost aquifer. Data generated from six rounds of ground water elevation determinations indicate that ground water flow for portions of the facility west of the on site pond is W-NW. A slight ground water divide may exist at the pond location, and a limited portion of the site ground water flow to the N-NE is possible. Vertical gradients to the west of the facility are downward, based on data collected from the MW-3, MW-3B; **MW-4, MW-4B; and MW-9, MW-9B clusters.** Vertical gradients are upward in the east portion of the facility, as established from data collected from the MW-1, MW-1B cluster.

Data presented support the conclusion that ground water quality has been locally impacted by releases of certain volatile organic compounds at the Akzo Nobel Burt, NY facility. The extent of impact is generally limited to within the facility property. Down gradient water table wells MW-3 and MW-4 confirm the general absence of volatile organic contaminants down gradient of the main portion of the facility. The MW-1 location was found to not be up gradient of the entire facility, but in fact down gradient of a limited part of the industrialized portion of the property lying to the west of MW-1. Ground water samples from this water table well confirm the general absence of volatile organic contaminants down gradient of this limited western portion of the facility.

Ground water quality data were generated via installation, development, and sampling of monitoring wells at the Akzo Nobel facility in Burt, New York. In no instance was evidence of NAPL encountered in monitoring wells.

Upper bedrock ground water quality data was obtained from MW-3B, **MW-4B, MW-9B** and MW-1**B**. While the relationship (i.e. degree of communication, location of recharge/discharge, etc) of the bedrock to overburden has not been fully established, ground water samples from the MW-3B, **MW-4B, and MW-9B wells** confirm the general absence of volatile organic contaminants down gradient from the facility. The presence of consistently elevated pH, and certain volatile organic compounds at trace concentrations, notably benzene, at MW-1B suggest that some degree of communication exists from the overburden to bedrock at a location hydraulically up gradient to that of MW-1B, given the positive vertical gradient at the MW-1 cluster.

Akzo Nobel installed **four** wells (MW-3, MW-3B, MW-4 **and MW-4B**) at locations relatively far removed from the SWMUs and proximate to the facility property line in locations down gradient of the facility's W-NW flow component. One volatile organic compound (1,2-dichloroethane) was detected at the ground water quality standard in the initial sampling of MW-3; this compound was not detected in subsequent sampling of MW-3. **Only one target analyte was detected (toluene, which was detected below the 6NYCRR 703.5 ground water standard)** in ground water from MW-3, MW-3B, and

MW-4 in the five sampling events subsequent to the initial sampling event. Indicator parameters as recorded in the field (i.e. pH, Eh, DO, CO2, temperature) are indicative of an absence of adverse impact to ground water quality at these monitoring well locations.

Akzo Nobel installed two wells (MW-1, MW-1B) at a location down gradient of a limited number of SWMUs for which further ground water investigation is not required (SWMUs 25,26,27,31 and AOC E). For MW-1, no analytes were detected present at or above 6NYCRR 703.5 ground water standards (revised 3/22/99). While six compounds were detected at trace concentrations in the first sampling event, no analytes were detected present in ground water at MW-1 in any of the five subsequent sampling events.

For MW-1B, benzene was detected in excess of the 1 ppb ground water standard in four of the six sampling events. No other analytes were detected present at or above 6NYCRR 703.5 ground water standards (revised 3/22/99). Acetone, 2-butanone, 2-hexanone, and toluene were detected infrequently at concentrations well below applicable ground water standards.

Source area monitoring wells are adequately situated to monitor ground water quality down gradient of SWMUs 5,6,8, 23, and 24. Three wells (MW-5,7,8) were installed within the overburden at locations with ground water contamination in close proximity down gradient from SWMUs 17, 23/24 and 5/6. Phase II ground water elevation contours confirm that these wells are located down gradient of SWMUs 17, 23/24 and 5/6. Both indicator parameters and observed volatile organic analytes indicate a localized adverse impact to ground water in near-source wells. Volatile organic compounds, most notably acetone, benzene, 2-butanone, dichlorobenzenes, chlorobenzene, 1,1-dichloroethane, 1,1,1-trichloroethane, and methylene chloride were detected present in excess of ground water quality standards. The distribution of impact was consistent with that determined in the 1996 RFI ground water headspace screening data set. On an individual contaminant basis, and on a total VOC basis, contamination is limited to the vicinity of known source locations within the current and historically developed portion of the facility. Ground water in these source area wells was found to contain elevated conductance, reducing

conditions, and elevated carbon dioxide levels, which are indicators of a release to ground water that may be undergoing biodegradation in the near-source locations.

Hydrogeochemical data from the Akzo Nobel facility was integrated into a concept model for contaminant behavior at the facility. Contaminant fate was assessed via environmental equilibrium partitioning calculations that support the conclusion that low residual contaminant concentrations in soil can result in concentrations of contaminants in ground water (i.e. concentrations similar to those reported for the facility to date) in excess of contaminant-specific ground water standards. A steady state, two-dimensional assessment of contaminant fate and transport in ground water at a sub-area of the Akzo Nobel facility was performed, using the Phase II RFI aquifer characterization data to model ground water flow in a sub-area of the facility. This preliminary assessment was based on hydraulic gradients and conductivities measured at the facility (historic gradients may have differed), and completed for illustrative purposes only. Benzene was selected for the illustrative assessment. Benzene, if it were to remain in soil at the facility in known source locations and continuously release to ground water, was illustrated to persist in the ground water in the immediate vicinity of known source areas, with negligible migration, over time frames typically applied to remediation decision-making. This would be the case both with no reactive degradation of contaminants considered, as well as with aerobic degradation.

While data gathered to date support a preliminary conclusion that ground water contamination is generally limited to near-source locations, and the potential for any substantial migration of contaminants in overburden ground water away from source areas under current hydraulic gradients is low, additional study is underway as necessary to demonstrate a clear and meaningful trend of contaminant behavior at monitoring locations over time. Preliminary geochemical field data indirectly indicate contaminant biological degradation is likely occurring in near-source locations. Additional facility-wide ground water characterization is underway to confirm that monitored natural attenuation is a viable corrective measure for facility ground water corrective action.

5.2 Human Health Assessment

An updated health assessment of potential exposures which may be associated with impacted soils and ground water at the Akzo Nobel facility in Burt, New York, using all relevant available data including data generated during the Phase II RFI has been completed. The assessment was made with the assumption that Akzo Nobel will implement activities and uses restrictions on the industrialized portion of the facility. Results of the quantitative risk assessment indicated that, under current site conditions no non-carcinogenic risks to public health were identified. **Additional sampling completed during the CMS field work confirmed the absence of vinyl chloride in ground water. Thus the potential for vinyl chloride in ground water to pose a theoretically significant indoor air risk (a carcinogenic risk greater than 10^{-4}) under modelled exposures to current administrative workers and future site residents outside of the industrialized portion of the facility does not exist. It is important to note that, prior to the CMS field work,** vinyl chloride was detected only once in site ground water, and quantification was not achieved (i.e. the value was estimated).

Appendix A

Additional RFI Field-Acquired Data Documentation

TRC

Soil Boring Log

Project/Client: Phase II RFI/CMS-Akzo Nobel	Project No.: 19045-007	Boring No. MW-04B / Well No. MW-04B	Sheet: 1 of 1
Location Description: Western edge of site adjacent to Route 78, 9.7 ft S of MW-4.		TRC Geologist: Charles Foster	
Drilling Contractor/Foreman: SJB/ Randy Steiner	Drill Rig Make/Model: CME 85	Auger/Drive Casing Size/Type: 6 1/4 " ID HSA/ 4-inch casing	
Sampler Description: 2 ft split spoon/HQ rock coring	Drilling Method: HSA continuous from 14'	Coordinates: X= Y=	
Filter Seal Amount/Type:	Drill Bit/Auger Diameter: 5 7/8 RB	Ref. El.:	
Sand Pack Amount/Type:	Hammer Weight/Fall: 140/30	Riser Stick Up:	
Screen Length/Type:	Water Table Depth: 31 ft. (in rock)	Surface Elevation:	
Riser Length/Type:	Total Depth: 38' bgs.	Date Start: 11/13/01	Date Finish: 11/16/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
				For continuous overburden geology for the MW-4/MW-4B cluster location, see the soil boring log for MW-4 completed during the Phase II RFI in July 1999				
14	S-1	12	22/14					
15		28		Red-Brown fine SAND and SILT, trace clay, some fine gravel (Till) some thin, cylindrical weathered shale pieces (weathered bedrock) Dry Spoon refusal @ 15.8 ft.				
		73						
16		57/4						
17	S-2	50/0	0/0	Augers advanced through weathered bedrock, drove spoon to verify competent rock				
18	S-3	50/0	0/0	Spoon refusal @ 17 ft. trace weathered bedrock fragments in nose of spoon, dry				
19				Spoon and auger refusal –competent rock, No Recovery.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions: trace 0-10% some 20-35% little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Competent rock at 18 ft.
2) Roller-bitted to 23 ft. to install 4 inch casing.
3) 4-inch casing grouted in rock socket 18-23 ft.
4) See rock core log for MW-4B.

TRC

Rock Core Log

Project: Akzo Nobel Phase II RFI/CMS	**Project No.** 19045-0070-00000	**Date/Time** 11/15-16/01	**Sheet** 1 of 1
Contractor Personnel: SJB Services Inc.		**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-4B	**Driller/Equipment:** Mike Kukoleca/CME-85 HQ-Core Barrel, Series 2 Bit	**Elevation:** **Orientation:** **Time Start:** 1515, 0908 **Time Finish:** 1610, 0923	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
23	3:00 min/ft, some H_2O loss at start.	120/120 100%		3	91/ 120	2		Brown to reddish brown very fine grain shale to	
24	4:00 min/ft, no H_2O loss.				76 %	3	Weathered fracture 24 & 24.5'	siltstone (Queenstone shale). Horizontally bedded. Few tight fractures	
25	4:00 min/ft, Some minor H_2O loss @ 25'.					2		Siltstone with few natural fractures and several mechanical breaks.	
26	4:30 min/ft, No H_2O loss.					1		Competent siltstone with few mechanical breaks.	
27	4:00 min/ft, No H_2O loss.					1	No minerals throughout coring run		
28	3:30 min/ft, no H_2O loss.					0			
29	4:30 min/ft, no H_2O loss.					1			
30	4:00 min/ft, some H_2O loss.					0			
31	4:00 min/ft, No H_2O loss.					1		Possible H20 bearing fracture @ 31.5'	
32	4:00 min/ft, no H_2O loss.	58/60 96.6 %	X	2	43/ 60	3	Possible core loss zone. Clipped a	Brown siltstone with 2" fracture spacing.	
33	3:00 min/ft, no H_2O loss.				71.6 %	3	vertical fracture	Blue-gray color change interior to core.	
34	3.00 min/ft, no H_2O loss.					0			
35	3:00 min/ft, no H_2O loss.					2		H20 bearing fracture, eroded fracture @ 35.2'	
36	3:00 min/ft, little H_2O loss.					2		2, weathered horizontal fractures.	
37	3:00 min/ft, no H_2O loss.					1		Low angle fracture @ 37.5 ft.	
38									

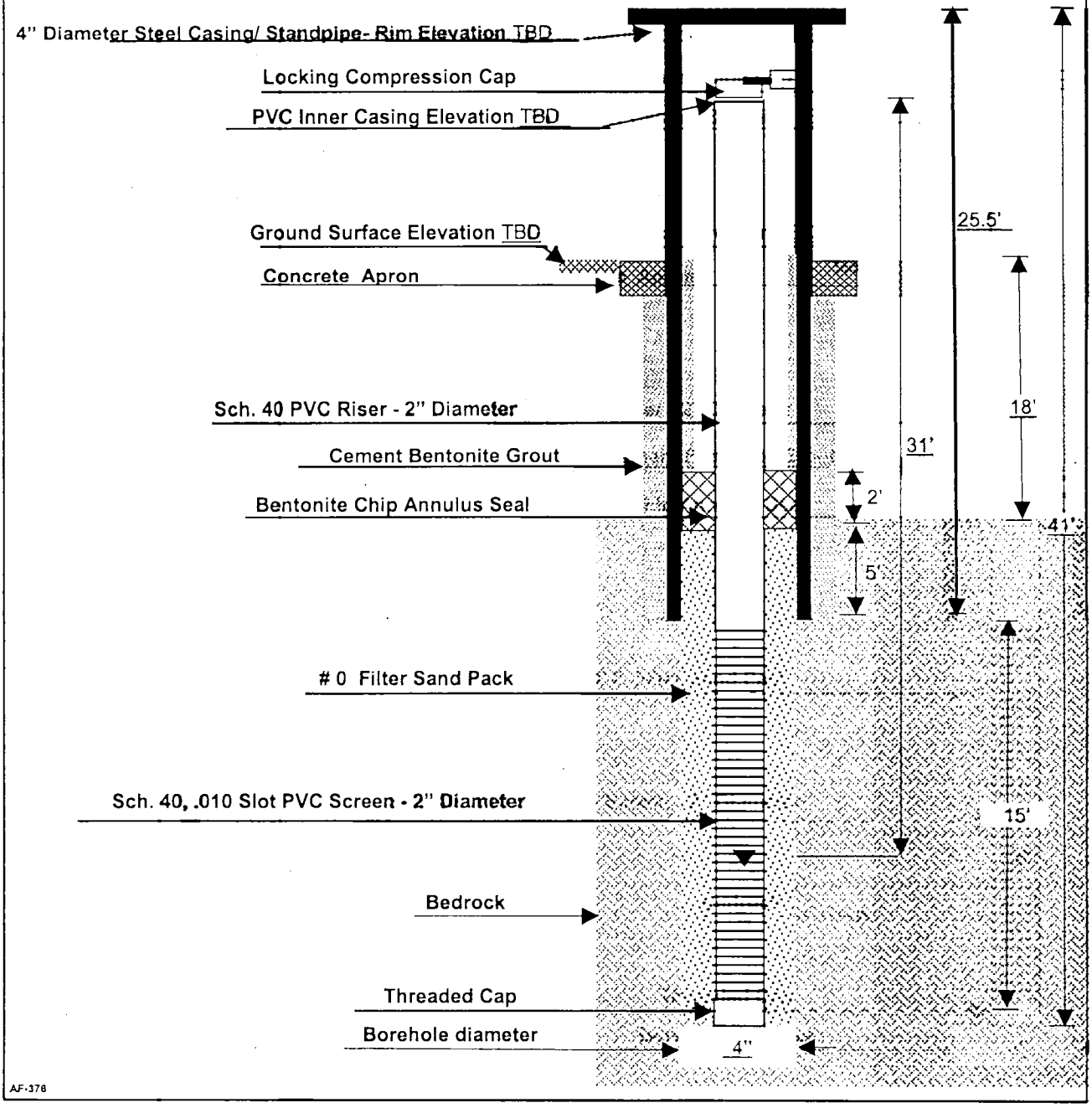
TRC

Bedrock Monitoring Well Construction Log with Protective Casing

Well No. MW-4B

Project: Akzo-Nobel Phase II REI/CMS No.: 19045-0070-00000
Client: Pam Cook Date Completed: 11/16/01
Location: 150 feet North and 120 ft East of main entrance to plant
Drilling Contractor: SJB Services Method: Casing/coring
TRC Geologist: Charles Foster

Reference Elevation:
Reference Description: Top of PVC Riser
Depth to Water: 31 ft bgs
Development Date: 11/16/01
Development Method: Whale Pump



AF-378

TRC

Slug Test Data Sheet

Project: Akzo Nobel **Project No.:** Phase II RFI/CMS 19045-007	**Date/Time:** 11/16/01, 1500	Sheet 1 of 1
Contractor Personnel:	**TRC Personnel:** Charles Foster	

Well No.: MW-4B | Weather: Clear 50 ^{0} F

WELL DATA:
(attach well construction form **and well log if available)**

Well Diameter: 2"

Filter Pack Diameter: 4 "
(same as auger/**drive** casing diameter)

Depth to Water: 30.89

From Top of: X Riser _____ Ground.

Depth to Top of **Screen:** 26

Depth to Bottom of Screen: 41.0

Screen Slot Size: 10 slot

AQUIFER INFORMATION:

Aquifer Material: Bedrock - siltstone

Confined: _____ Unconfined: X **Perched**_____

Aquifer Thickness (est.) ~ 27 ft.

SLUG TEST METHOD

Withdrawal: X **Volume:** 0.734 gals

Addition: _____ **Volume:** _____

Slug Bar: X **Dimensions:** L 8 ft W 1.5"

Bailer: _____ **Dimensions:** L____ W____

Calculate Volume of Slug Bar/**Bailer:**

TEST DATA

Time Started: 1518

Time Completed: 1555

Elapsed Time: 37 minutes

Water Level at Test Completion: 31.1

TEST MEASUREMENT INFORMATION

Recording Method: Data Logger

Transducer Size (ex. 10 psi): 10 psi

Transducer Depth: ~40.0

Data Logger Model: Hermit 3000

Data Logger Test Number: Test # 4

Recording Type: Linear _____ Log X

Maximum Time Step: 10 minutes

Obtain Field Print of Data? Y _____ N X

(Note: allow time for water level to equilibrate once transducer has been introduced)

Comments:

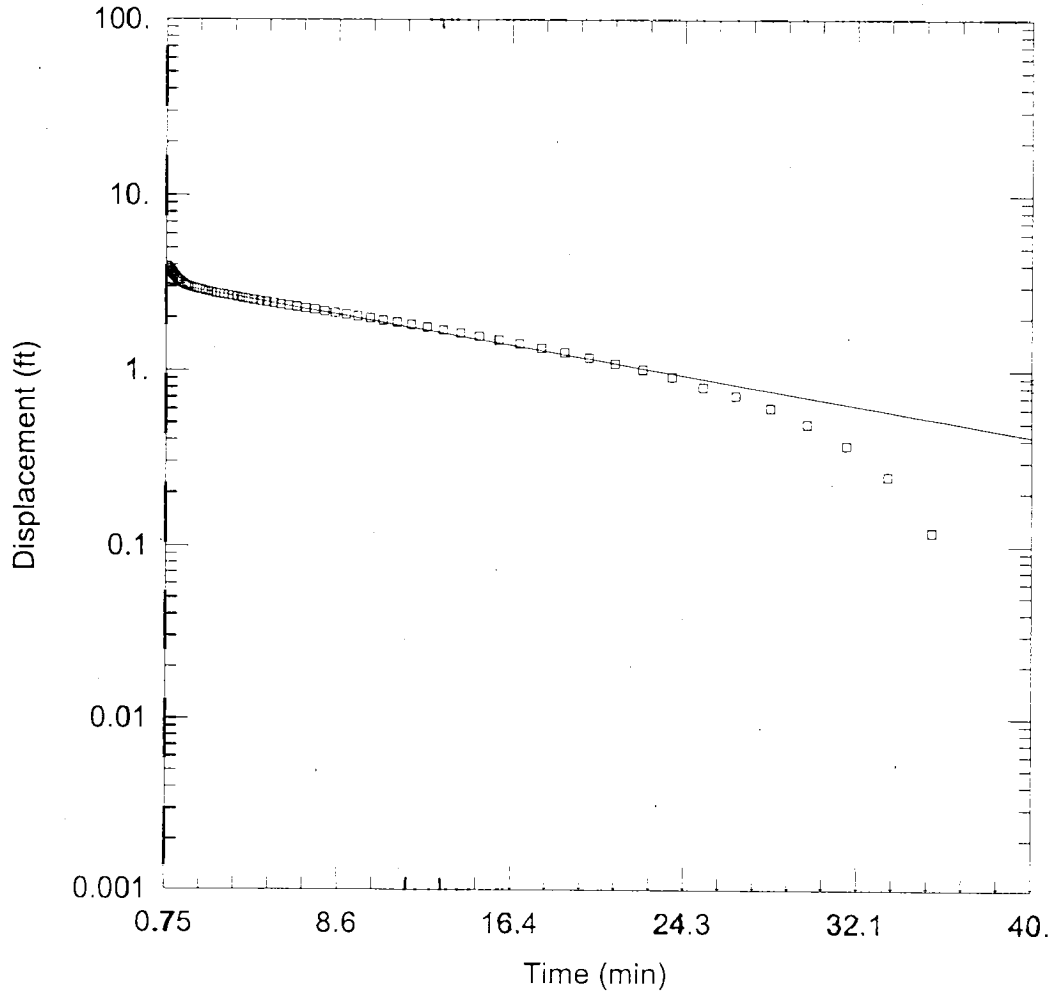
1). Installed XD and secured to casing

2) Installed slug and allowed equilibrium (Static WL conditions to return)

3) 10.11ft H20 above XD, initiated log cycle and withdrew slug at teat start.

4) Well was allowed to return to static and test # 4 was stopped after 98 % recovery.

5) Test # 4 curve showed good initial displacement and recovery data for analysis.



WELL TEST ANALYSIS

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-4B.aqt
Date: 11/30/01 Time: 09:38:51

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Test Location: BURT, NEW YORK
Test Well: MW-4B
Test Date: 11/16/01

AQUIFER DATA

Saturated Thickness: 10.11 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-4B)

Initial Displacement: 4.791 ft
Casing Radius: 0.083 ft
Screen Length: 15. ft
Water Column Height: 10.11 ft
Wellbore Radius: 0.166 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 3.757E-05 ft/min
y0 = 3.234 ft

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-4B.aqt
Date: 11/30/01
Time: 09:39:07

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Location: BURT, NEW YORK
Test Date: 11/16/01
Test Well: MW-4B

AQUIFER DATA

Saturated Thickness: 10.11 ft
Anisotropy Ratio (Kz/Kr): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-4B

X Location: 0. ft
Y Location: 0. ft

No. of observations: 98

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.154	4.791	0.9207	3.752	5.983	2.384
0.165	4.769	0.9733	3.684	6.336	2.346
0.176	4.737	1.029	3.614	6.71	2.308
0.187	4.726	1.088	3.537	7.106	2.267
0.198	4.715	1.151	3.462	7.525	2.225
0.209	4.704	1.217	3.387	7.97	2.181
0.22	4.692	1.288	3.314	8.44	2.136
0.231	4.679	1.362	3.245	8.939	2.089
0.2427	4.666	1.441	3.184	9.467	2.041
0.2552	4.65	1.525	3.129	10.03	1.99
0.2683	4.634	1.613	3.082	10.62	1.936
0.2823	4.616	1.707	3.043	11.25	1.882
0.2972	4.597	1.807	3.009	11.91	1.826
0.3128	4.578	1.912	2.978	12.62	1.764
0.3295	4.558	2.023	2.949	13.36	1.703
0.3472	4.535	2.142	2.922	14.15	1.637
0.3658	4.51	2.267	2.895	14.99	1.57
0.3857	4.484	2.399	2.868	15.87	1.498
0.4067	4.456	2.54	2.84	16.81	1.423
0.4288	4.425	2.688	2.812	17.81	1.346
0.4523	4.395	2.846	2.785	18.86	1.266

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.4772	4.361	3.013	2.758	19.98	1.181
0.5035	4.344	3.19	2.732	21.16	1.095
0.5315	4.286	3.377	2.703	22.41	1.013
0.5612	4.243	3.575	2.674	23.74	0.92
0.5925	4.201	3.785	2.645	25.14	0.802
0.6257	4.157	4.008	2.617	26.63	0.72
0.6608	4.109	4.244	2.585	28.21	0.611
0.6982	4.057	4.494	2.554	29.88	0.493
0.7377	4.003	4.758	2.521	31.65	0.372
0.7795	3.945	5.039	2.49	33.52	0.249
0.8238	3.883	5.336	2.455	35.51	0.12
0.8708	3.819	5.65	2.42		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.757E-05	ft/min
y0	3.234	ft

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	
K	6.352E-05	3.447E-06	ft/min
y0	4.252	0.06362	ft

Parameter Correlations

	K	y0
K	1.00	0.55
y0	0.55	1.00

Residual Statistics

for weighted residuals

Sum of Squares ... 15.12 ft^2
Variance ..... 0.1575 ft^2
Std. Deviation..... 0.3969 ft
Mean ..... 0.02876 ft
No. of Residuals ... 98.
No. of Estimates ... 2

TRC

Soil Boring Log

Project/Client: Phase II RFI/CMS, Akzo Nobel	Project No.: 19045-0070	Boring No. / Well No.: MW-09	Sheet: 1 of 2
Location Description: ~25 west of Gas meter house, 10 ft. south of drainage ditch		TRC Geologist: Charles Foster	
Drilling Contractor/Foreman: SJB Services / Randy Steiner	Drill Rig Make/Model: CME- 85	Auger/Drive Casing Size/Type: 4 1/4 " ID HSA	
Sampler Description: None	Drilling Method: HSA	Coordinates: X= Y=	
Filter Seal Amount/Type:	Drill Bit/Auger Diameter: 4 ¼ HSA	Ref. El.:	
Sand Pack Amount/Type:	Hammer Weight/Fall: NA	Riser Stick Up:	
Screen Length/Type:	Water Table Depth: ~ 7 ft.	Surface Elevation: NA	
Riser Length/Type:	Total Depth: 15' bgs.	Date Start: 11/15//01	Date Finish: 11/15/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1–13				See MW-9B for continuous overburden geologic descriptions for the MW-9/9B cluster location.	▼			

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions: trace 0-10% some 20-35% little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

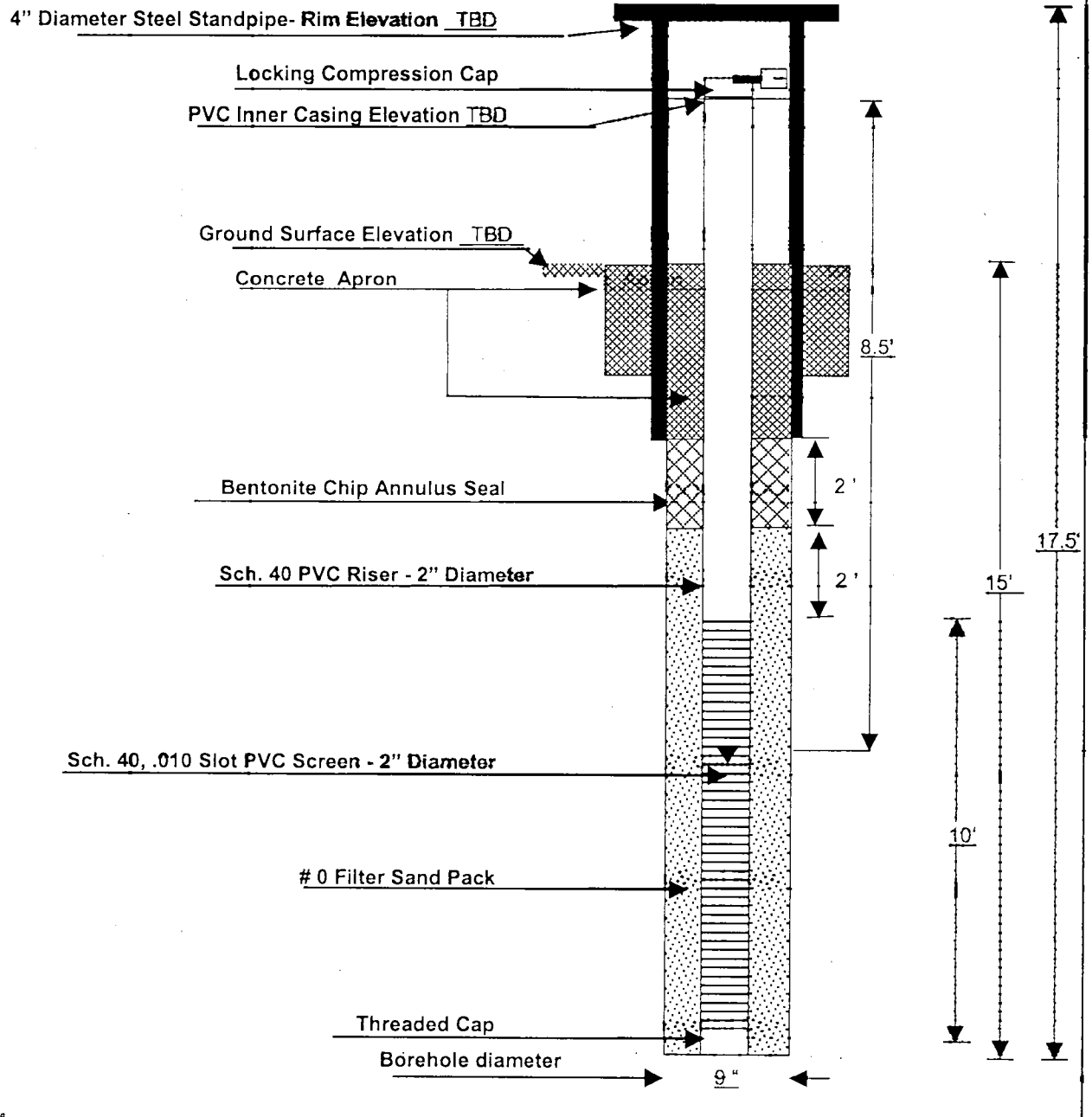
1) SEE MW-9 WELL CONSTRUCTION DIAGRAM.

TRC

Overburden Monitoring Well Construction Log with Protective Casing

Well No. MW-9

Project: Akzo-Nobel Phase II RFI/CMS No.: 19045-007-00000	Reference Elevation: TBD
Client: Pam Cook Date Completed: 11/14/01	Reference Description: Top of PVC riser
Location: ~25 west of Gas meter house, 10 ft. S of drainage ditch	Depth to Water: 8.5
Drilling Contractor: SJB Services Method: HSA	Development Date: 11/15/01
TRC Geologist: Charles Foster	Development Method: Whale pump



AF-376

TRC

Slug Test Data Sheet

Project: Akzo Nobel **Project No.:** Phase II RFI/CMS 19045-007	**Date/Time:** 11/16/01,0730	Sheet 1 of 1
Contractor Personnel:	**TRC Personnel:** Charles Foster	

Well No.: MW-9 Weather: Clear 50 ^{0} F

WELL DATA:
(attach well construction form and well log if available)

Well Diameter: 2"

Filter Pack Diameter: 9 "
(same as auger/drive casing diameter)

Depth to Water: 8.52

From Top of: X Riser _____ Ground.

Depth to Top of Screen: 7.45'

Depth to Bottom of Screen: 17.75'

Screen Slot Size: 10 slot

AQUIFER INFORMATION:

Aquifer Material: Fine Sand and Silt over till

Confined: ____ Unconfined: X Perched____

Aquifer Thickness (est.) ~18'

SLUG TEST METHOD

Withdrawal: X Volume: 0.734 gals

Addition: _____ Volume: _____

Slug Bar: X Dimensions: L 8 ft W 1.5"

Bailer: _____ Dimensions: L ____ W____

Calculate Volume of Slug Bar/Bailer:

TEST DATA

Time Started: 0745

Time Completed: 0757

Elapsed Time: 12 minutes

Water Level at Test Completion: 8.5 ft.

TEST MEASUREMENT INFORMATION

Recording Method: Data Logger

Transducer Size (ex. 10 psi): 10 psi

Transducer Depth: 17.07'

Data Logger Model: Hermit 3000

Data Logger Test Number: Test # 1

Recording Type: Linear ____ Log X

Maximum Time Step: 10 minutes

Obtain Field Print of Data? Y ____ N X

(Note: allow time for water level to equilibrate once transducer has been introduced)

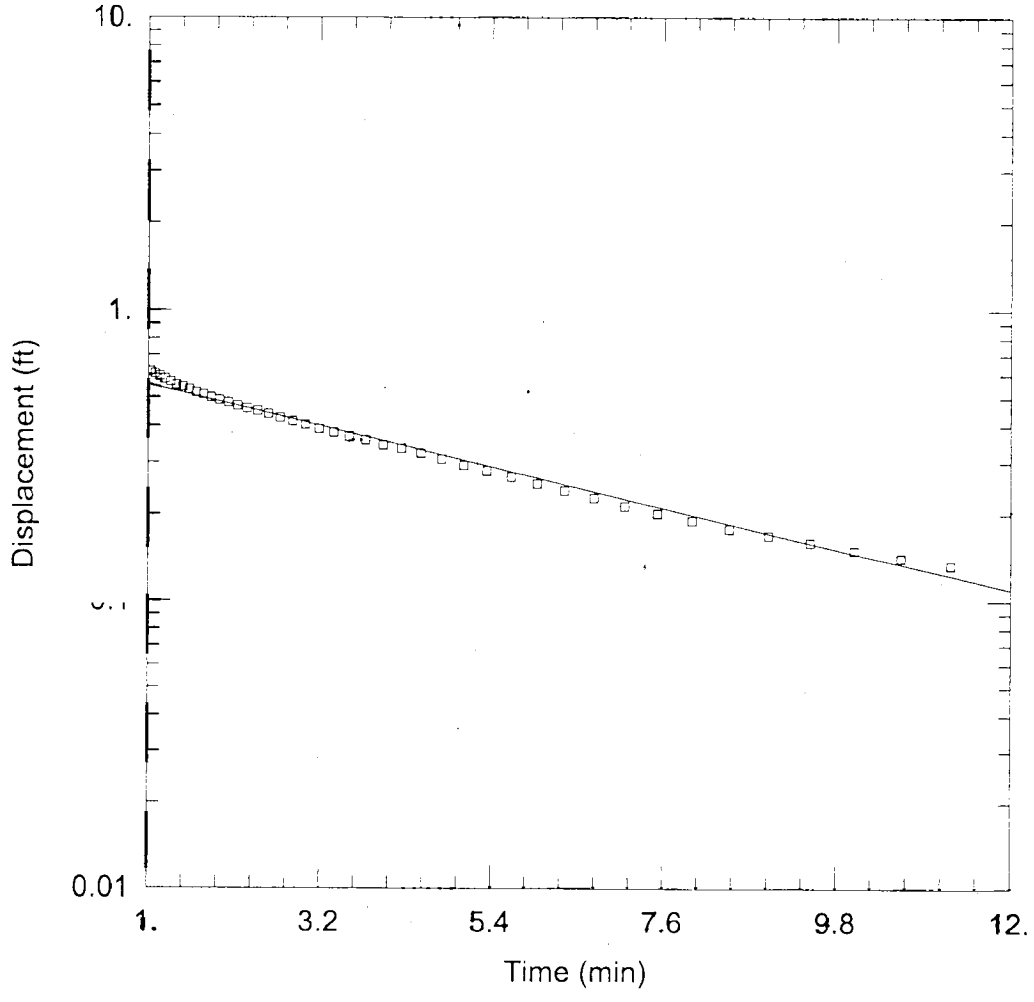
Comments:

1). Installed XD and secured to casing

2) Installed slug and allowed equilibrium (Static WL conditions to return)

3) 8.55 ft H20 above XD, initiated log cycle and withdrew slug at teat start.

4) Data review and curve show good initial displacement and recovery data for analysis. Test not repeated.



WELL TEST ANALYSIS

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-9.aqt
Date: 11/30/01 Time: 14:19:30

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Test Location: BURT, NEW YORK
Test Well: MW-9
Test Date: 11/16/01

AQUIFER DATA

Saturated Thickness: 9.23 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-9)

Initial Displacement: 3.49 ft
Casing Radius: 0.083 ft
Screen Length: 10. ft
Water Column Height: 9.23 ft
Wellbore Radius: 0.37 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0001234 ft/min
y0 = 0.6423 ft

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-9.aqt
Date: 11/30/01
Time: 14:18:48

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Location: BURT, NEW YORK
Test Date: 11/16/01
Test Well: MW-9

AQUIFER DATA

Saturated Thickness: 9.23 ft
Anisotropy Ratio (Kz/Kr): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-9

X Location: 0. ft
Y Location: 0. ft

No. of observations: 84

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.088	8.617	0.5035	1.354	2.399	0.449
0.099	4.68	0.5315	1.16	2.54	0.439
0.11	3.454	0.5612	1.052	2.688	0.426
0.121	3.497	0.5925	0.959	2.846	0.414
0.132	3.462	0.6257	0.879	3.013	0.404
0.143	3.368	0.6608	0.816	3.19	0.391
0.154	3.264	0.6982	0.768	3.377	0.379
0.165	3.155	0.7377	0.732	3.575	0.367
0.176	3.068	0.7795	0.7	3.785	0.357
0.187	2.969	0.8238	0.678	4.008	0.344
0.198	2.868	0.8708	0.659	4.244	0.335
0.209	2.765	0.9207	0.641	4.494	0.322
0.22	2.668	0.9733	0.628	4.758	0.308
0.231	2.58	1.029	0.615	5.039	0.293
0.2427	2.494	1.088	0.603	5.336	0.281
0.2552	2.403	1.151	0.592	5.65	0.268
0.2683	2.306	1.217	0.579	5.983	0.254
0.2823	2.22	1.288	0.566	6.336	0.241
0.2972	2.131	1.362	0.552	6.71	0.227
0.3128	2.049	1.441	0.544	7.106	0.213
0.3295	1.971	1.525	0.532	7.525	0.201

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.3472	1.898	1.613	0.52	7.97	0.19
0.3658	1.832	1.707	0.512	8.44	0.178
0.3857	1.769	1.807	0.5	8.939	0.169
0.4067	1.699	1.912	0.491	9.467	0.16
0.4288	1.618	2.023	0.48	10.03	0.15
0.4523	1.523	2.142	0.468	10.62	0.141
0.4772	1.414	2.267	0.459	11.25	0.133

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0001234	ft/min
y0	0.6423	ft

TRC

Soil Boring Log

Project/Client: Phase II RFI/CMS, Akzo Nobel	Project No.: 19045-0070	Boring No. MW-09B; Well No. MW-09B	Sheet: 1 of 2
Location Description: 19.5 ft. South of MW-9 along fence line		TRC Geologist: Charles Foster	
Drilling Contractor/Foreman: SJB Services / Randy Steiner	Drill Rig Make/Model: CME-55/ 85	Auger/Drive Casing Size/Type: 6 1/4 " ID HSA/ 4 inch casing	
Sampler Description: Continuous 2 ft split spoon/HQ rock coring	Drilling Method: HSA continuous sampling	Coordinates: X= Y=	
Filter Seal Amount/Type:	Drill Bit/Auger Diameter: 5 7/8 RB	Ref. El.:	
Sand Pack Amount/Type:	Hammer Weight/Fall: 140/30	Riser Stick Up:	
Screen Length/Type:	Water Table Depth: 18 ft. (in rock)	Surface Elevation: NA	
Riser Length/Type:	Total Depth: 40' bgs.	Date Start: 11/12//01	Date Finish: 11/15/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Stratigraphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	10	24/8	Angular gravel fragments (parking area)and dark brown to black top soil, some brown silt and sand				
		11						
		8						
2		7						
	S-2	4	24/14	Gray-brown fine SAND and SILT, some clay.				
3		7						
		13						
4		15						
	S-3	7	24/12	Brown fine SAND and SILT, some clay				
5		10						
		13						
6		16						
	S-4	18	24/14	8" brown fine SAND And SILT, some clay wet at bottom				
7		22		6" Red-brown and tan Fine to coarse SAND, some silt, some fine angular gravel, Moist.				
		35						
8		20						
	S-5	5	24/8	Red –brown angular GRAVEL, some fine to coarse sand , Saturated.				
9		20						
		11						
10		14						
	S-6	8	24/14	Red-brown fine to coarse SAND and SILT, some fine angular gravel throughout matrix (till), wet.				
11		12						
		18						
12		18						
	S-7	20	24/16	Red-brown fine to medium SAND, some silt, some fine angular to sub-rounded gravel (till). Wet.				
13		55						
		78						
		69						

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions: trace 0-10% some 20-35% little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1)Rig was switched to a CME -85 with an auto-Hammer on 11/13/01

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Phase II RFI/CMS-Akzo	19045-007	MW-9B	2 of 2
		Well No. MW-9B	

Location Description: 19.5 ft. South of MW-9 along site boundary

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
	S-8	6	24/18	Brown fine SAND some silt, some fine angular gravel throughout, some is sub-rounded, (till)wet				
15		10						
		16						
		25						
16	S-9	43	24/18	Red-brown to brown fine SAND, some silt, some angular gravel, trace sub-rounded gravel , (till)wet.				
		38						
17		60						
		83						
18	S-10	11	19/12	Red-brown to gray SILT, some clay, trace sub-rounded gravel (till), Dry				
		30						
19		35						
		50/1		Spoon refusal on bedrock at 19.6'				
20				Augered to seat casing and roller-bit				
20.5				Drove spoon to verify competent rock				
	S-11	61/1	1/0	Refusal on bedrock, Auger and spoon refusal -No recovery, competent bedrock 20.5 bgs				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Weathered bedrock at 19.6 ft. Competent 20.5ft.
2) Roller-bitted to 25 ft. to install 4 inch casing.
3) 4-inch casing grouted in rock socket 19-25 ft.
4) See Rock Core log for MW-9B

TRC

Rock Core Log

Project: Akzo Nobel Phase II RFI/CMS	**Project No.** 19045-0070-00000	**Date/Time** 11/15/01	Sheet 1 of 1
Contractor Personnel: SJB Services Inc.		**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-9B	**Driller/Equipment:** Mike Kukoleca/CME-85 HQ-Core Barrel, Series 2 Bit	**Elevation:** **Orientation:** **Time Start:** 0925 **Time Finish:** 1030	

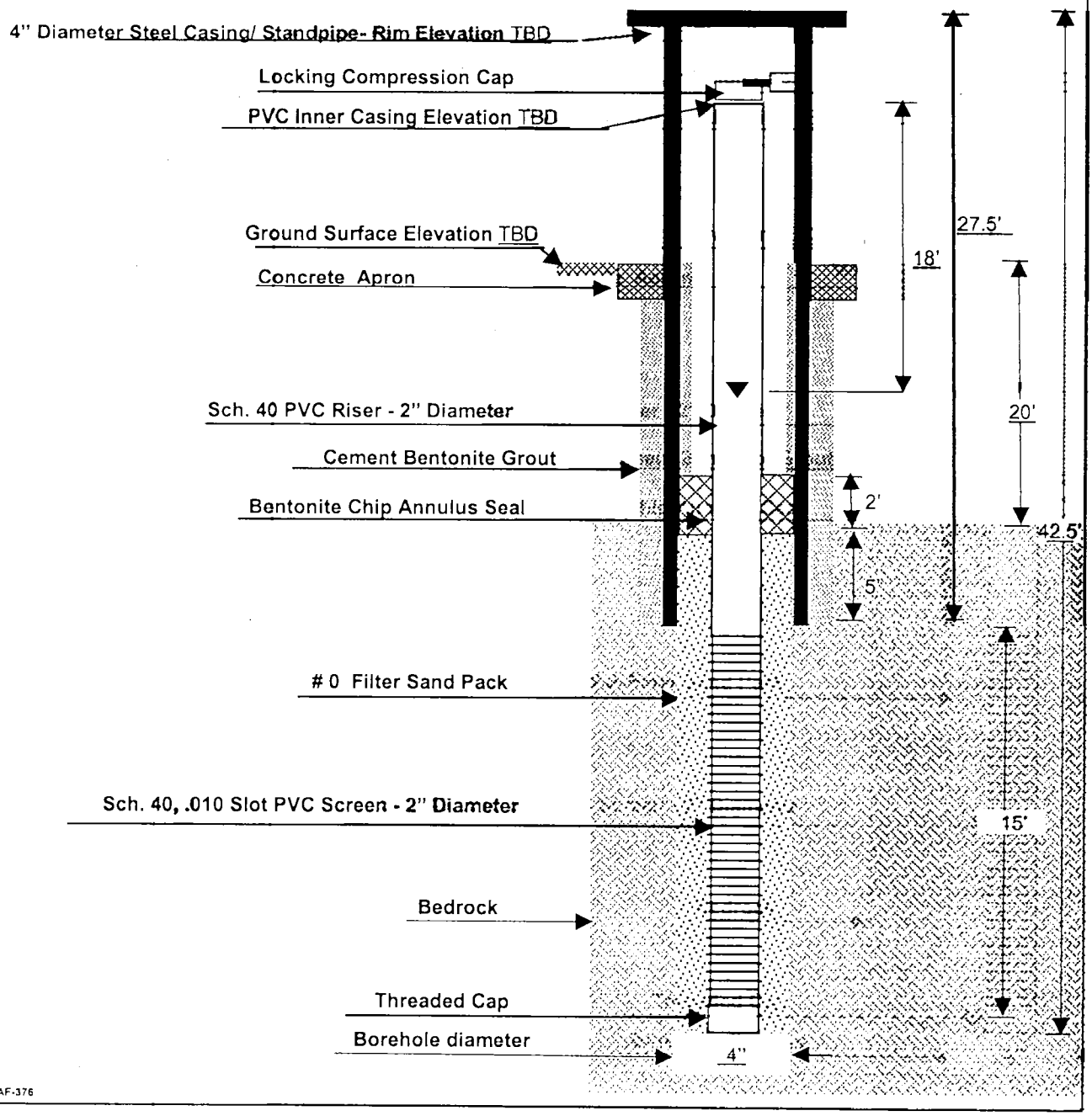
Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
25	2:20 min/ft, no H_2O loss.	120/120 100%		1	80/ 120	6	4 inch vertical Fracture at 25'2'	Brown to reddish brown very fine grain shale to siltstone (Queenstone shale).	
26	2:40 min/ft, no H_2O loss.				66.6 %	1			
27	3:00 min/ft, Some minor H_2O loss.					3	Possible clay filling	Weathered fractures from 27 to 27.5 ft.	
28	4:00 min/ft, intermittent minor H_2O loss.					0		Competent siltstone with few mechanical breaks.	
29	3:00 min/ft, minor H_2O loss.					0			
30	2:30 min/ft, no H_2O loss.					1			
31	3:00 min/ft, no H_2O loss.					0		Very fine grained siltstone.	
32	2:30 min/ft, no H_2O loss.					3		3 fractures from 32 to 32.5 ft.	
33	3:00 min/ft, trace H_2O loss.					0			
34	3:00 min/ft, no H_2O loss.					2	Possible core loss zone.	Brown siltstone with 2" fracture spacing.	
35	4:00 min/ft, no H_2O loss.	57/60 95 %	X	2	30/ 60	2		H20 bearing, eroded fracture @ 35.2'.	
36	3.30 min/ft, no H_2O loss.				50 %	3		Blue Gray color change @36.5 ' (4-inch lense).	
37	2:30 min/ft, no H_2O loss.					5		Brown siltstone with 1" fracture spacing.	
38	3:00 min/ft, no H_2O loss.					2		Low angle fracture @ 38.8 ft.	
39	2:30 min/ft, no H_2O loss.					2		H20 bearing, eroded fracture @ 39.9'.	
40									

TRC

Bedrock Monitoring Well Construction Log with Protective Casing

Well No. MW-9B

Project: Akzo-Nobel Phase II REI/CMS No.: 19045-0070-00000	Reference Elevation:
Client: Pam Cook Date Completed: 11/15/01	Reference Description: Top of PVC Riser
Location: South of MW-9, near western fence line	Depth to Water: 18 ft. bgs
Drilling Contractor: SJB Services Method: Casing/coring	Development Date: 11/15/01
TRC Geologist: Charles Foster	Development Method: Whale Pump



AF-376

TRC

Slug Test Data Sheet

Project: Akzo Nobel **Project No.:** Phase II RFI/CMS 19045-007	**Date/Time:** 11/16/01, 0810	Sheet 1 of 1
Contractor Personnel:	**TRC Personnel:** Charles Foster	
Well No.: MW-9B	Weather: Clear 50 ^{0} F	

WELL DATA:
(attach well construction form **and well log if available**)

Well Diameter: 2"

Filter Pack Diameter: 4 "
(same as auger/**drive** casing diameter)

Depth to Water: 18.30

From Top of: X Riser _____ Ground.

Depth to Top of **Screen**: 27.25'

Depth to Bottom of Screen: 42.25'

Screen Slot Size: 10 slot

AQUIFER INFORMATION:

Aquifer Material: Bedrock - siltstone

Confined: _____ Unconfined: X **Perched**_____

Aquifer Thickness (est.) ~ 25 ft.

SLUG TEST METHOD

Withdrawal: X **Volume:** 0.734 gals

Addition: _____ **Volume:** _____

Slug Bar: X **Dimensions:** L 8 ft W 1.5"

Bailer: _____ **Dimensions:** L____ W____

Calculate Volume of Slug Bar/Bailer:

TEST DATA

Time Started: 0845 (2) 1038 (3)

Time Completed: 0851 (2) 1134 (3)

Elapsed Time: 56 minutes

Water Level at Test Completion: 17.5

TEST MEASUREMENT INFORMATION

Recording Method: Data Logger

Transducer Size (ex. 10 psi): 10 psi

Transducer Depth: 30.37'

Data Logger Model: Hermit 3000

Data Logger Test Number: Test # 2 & # 3

Recording Type: Linear _____ Log X

Maximum Time Step: 10 minutes

Obtain Field Print of Data? Y _____ N X

(Note: allow time for water level to equilibrate once transducer has been introduced)

Comments:

1). Installed XD and secured to casing

2) Installed slug and allowed equilibrium (Static WL conditions to return)

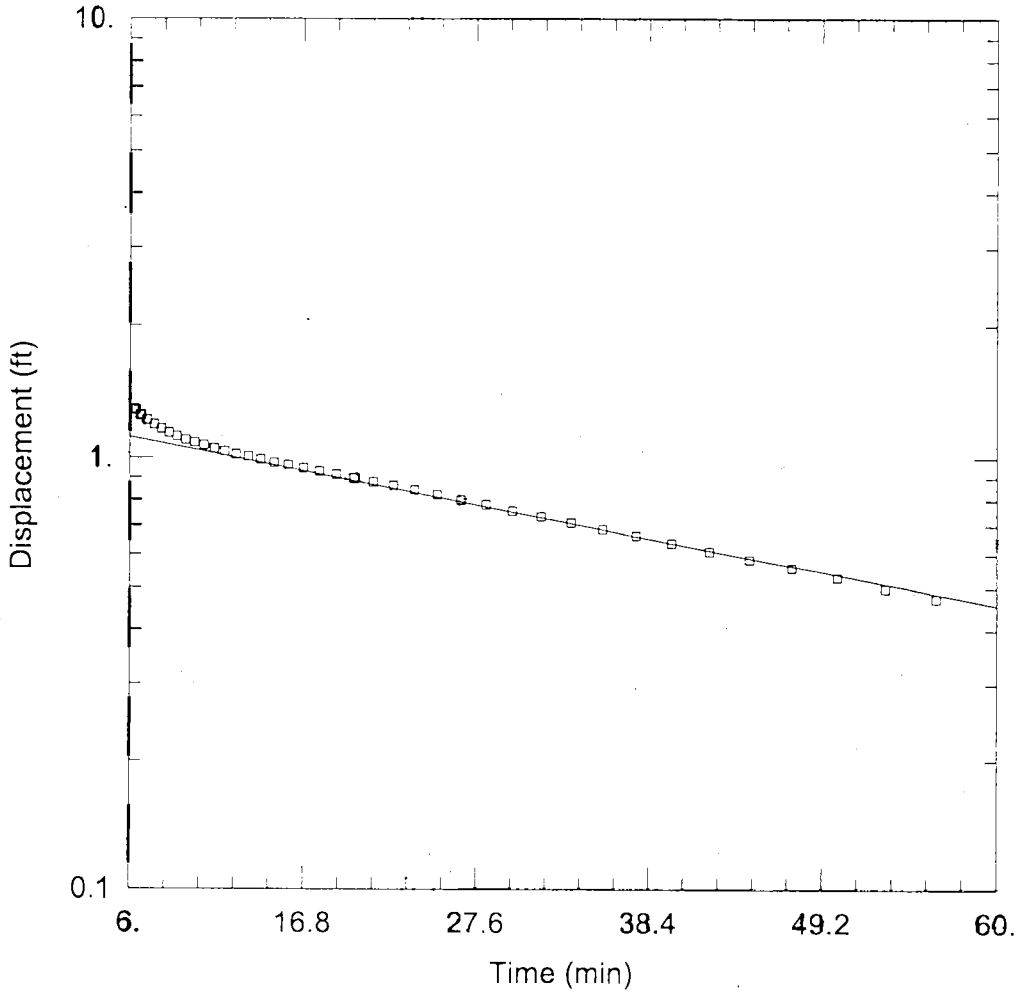
3) 15.63 ft H20 above XD, initiated log cycle and withdrew slug at teat start.

4) Poor slug withdrawal during test # 2 resulted in data which showed a spike in the early time log cycle

5) Well was allowed to return to static and test # 3 was completed after 96 % recovery and ~ 2 hours.

6) Test 3 start was 14.98 ft. above XD.

7) Test # 3 curve showed good initial displacement and recovery data for analysis.



WELL TEST ANALYSIS

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-9B.aqt
Date: 11/30/01 Time: 09:40:51

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Test Location: BURT, NEW YORK
Test Well: MW-9B
Test Date: 11/16/01

AQUIFER DATA

Saturated Thickness: 23.95 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-9B)

Initial Displacement: 4.853 ft
Casing Radius: 0.083 ft
Screen Length: 15. ft
Water Column Height: 23.95 ft
Wellbore Radius: 0.166 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 1.427E-05 ft/min
y0 = 1.231 ft

Data Set: J:\OMiscproj\Akzo PH 2 RFI\AKZO2001PHII&CMS\Slugtestdata\MW-9B.aqt
Date: 11/30/01
Time: 09:41:02

PROJECT INFORMATION

Company: TRC ENVIRONMENTAL CORPORATION
Client: AKZO-NOBEL
Project: 19045-0070
Location: BURT, NEW YORK
Test Date: 11/16/01
Test Well: MW-9B

AQUIFER DATA

Saturated Thickness: 23.95 ft
Anisotropy Ratio (Kz/Kr): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-9B

X Location: 0. ft
Y Location: 0. ft

No. of observations: 102

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.198	4.853	1.217	3.383	8.44	1.14
0.209	4.852	1.288	3.307	8.939	1.118
0.22	4.845	1.362	3.228	9.467	1.098
0.231	4.831	1.441	3.145	10.03	1.082
0.2427	4.808	1.525	3.065	10.62	1.066
0.2552	4.78	1.613	2.98	11.25	1.048
0.2683	4.751	1.707	2.897	11.91	1.034
0.2823	4.723	1.807	2.813	12.62	1.018
0.2972	4.7	1.912	2.726	13.36	1.006
0.3128	4.67	2.023	2.642	14.15	0.99
0.3295	4.643	2.142	2.554	14.99	0.974
0.3472	4.61	2.267	2.471	15.87	0.962
0.3658	4.579	2.399	2.385	16.81	0.946
0.3857	4.546	2.54	2.302	17.81	0.93
0.4067	4.511	2.688	2.219	18.86	0.914
0.4288	4.474	2.846	2.137	19.98	0.898
0.4523	4.436	3.013	2.057	21.16	0.879
0.4772	4.398	3.19	1.979	22.41	0.863
0.5035	4.375	3.377	1.903	23.74	0.844
0.5315	4.303	3.575	1.828	25.14	0.822
0.5612	4.257	3.785	1.759	26.63	0.8

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.5925	4.207	4.008	1.693	28.21	0.781
0.6257	4.156	4.244	1.631	29.88	0.756
0.6608	4.104	4.494	1.568	31.65	0.734
0.6982	4.048	4.758	1.511	33.52	0.71
0.7377	3.99	5.039	1.46	35.51	0.686
0.7795	3.932	5.336	1.41	37.61	0.663
0.8238	3.87	5.65	1.365	39.83	0.637
0.8708	3.808	5.983	1.324	42.19	0.61
0.9207	3.742	6.336	1.286	44.69	0.584
0.9733	3.673	6.71	1.25	47.34	0.558
1.029	3.603	7.106	1.217	50.14	0.53
1.088	3.532	7.525	1.19	53.11	0.499
1.151	3.457	7.97	1.163	56.26	0.473

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	1.427E-05	ft/min
y0	1.231	ft

TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/18/01 | **Sheet** 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-01 **Well Location:** MW-01

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.35 ft. (from ground)

Riser Stick-up (from ground) 2.25 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 18.15 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 11.09 ft.

Height of Water Column 7.06 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.1 gallon(s)

1.5 Total gallons to purge

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.1						
pH (Std. Units)	7.74						
Eh (millivolts)	160.6						
Conduct. (µs/cm)	420						
Temp. (C)	11.09						
Turb. (NTU)							
DO (mg/l)	10.06						
Carbon Dioxide (mg/L)	25						

Sample Description

Clear ☐ Turbid ☒

Color Reddish/Brown

Odor None

Other ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 1.5 gallons

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 0950	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 0950	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 0950	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 0950	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 0950	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1350	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/18/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-1B **Well Location:** MW-1B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 1.90 ft.

Riser Stick-up (from ground) 1.65 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 47.2 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 10.95 ft.

Height of Water Column 36.25 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 5.8 gallon(s)

21 Total gallons to purge

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	5.8	11.6	17.4				
pH (Std. Units)	9.19	9.51	10.12				
Eh (millivolts)	-422.4	-536.1	-322.9				
Conduct. (µs/cm)	2160	2083	2023				
Temp. (C)	10.44	10.68	10.93				
Turb. (NTU)							
DO (mg/l)	5.23	3.07	0.85				
Carbon Dioxide (mg/L)	5						

Sample Description

Clear ☐ Turbid ☒

Color: Cloudy/gray

Odor: Cement/grout

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 21 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 0920	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 0920	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 0920	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 0920	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 0920	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1300	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/20/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-02 **Well Location:** MW-02

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) Flushmount _____ ft.

Riser Stick-up (from ground) Flushmount _____ ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 11.08 ft. ☒ top of riser ☐ top of casing ☐ _____ ☒ measured ☐ historical

Water Depth 3.65 ft.

Height of Water Column 7.43 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.2 **gallon(s)**

6.0 **Total gallons to purge**

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.2	2.4	3.6	4.8	6.0		
pH (Std. Units)	6.19	6.32	6.35	6.37	6.38		
Eh (millivolts)	-43.9	-64.8	-69.9	-73.3	-74.7		
Conduct. (µs/cm)	19681	20979	21325	21395	21604		
Temp. (C)	12.75	12.79	12.84	12.85	12.87		
Turb. (NTU)							
DO (mg/l)	1.79	1.69	1.47	1.51	1.39		
Carbon Dioxide (mg/L)	40						

Sample Description

Clear ☐ Turbid ☒

Color Brownish/red

Odor Petroleum/sewer

Other _____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
_____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/20/01, 0845	———	———
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/20/01, 0845	———	———
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/20/01, 0845	———	———
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/20/01, 0845	———	———
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/20/01, 0845	———	———
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/20/01, 0845	———	———

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/19/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-03 **Well Location:** MW-03

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 2.61 ft.

Riser Stick-up (from ground) 2.50 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 16.80 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 3.59 ft.

Height of Water Column 13.21 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 2.1 gallon(s)

6.3 Total gallons to purge

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	2.1	4.2	6.3				
pH (Std. Units)	7.37	7.36	7.34				
Eh (millivolts)	152.8	85.3	69.8				
Conduct. (µs/cm)	648	652	650				
Temp. (C)	10.66	11.59	11.39				
Turb. (NTU)							
DO (mg/l)	3.40	2.84	2.68				
Carbon Dioxide (mg/L)	30						

Sample Description

Clear ☐ Turbid ☒

Color clear

Odor None

Other ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 6.3 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1015	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1015	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1015	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1015	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1015	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1525	----	----

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TRC

Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5	**Project No:** 19045-007	**Date/Time:** 12/18/01	Sheet 1 of 1
Contractor Personnel:		**TRC Personnel:** T. Majer	

Sample No.: MW-3B **Well Location:** MW-3B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 2.5 ft.

Riser Stick-up (from ground) 2.4 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 37.30 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 11.21 ft.

Height of Water Column 26.09 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 4.2 gallon(s)

21 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	4.2	8.4	12.6	16.8	21.0		
pH (Std. Units)	8.02	8.04	8.22	8.31	8.28		
Eh (millivolts)	-162.4	-195.4	-212.4	-210.4	-198.2		
Conduct. (µs/cm)	354	333	336	344	348		
Temp. (C)	11.67	11.88	11.89	11.90	11.91		
Turb. (NTU)							
DO (mg/l)	.54	.51	.44	.32	.31		
Carbon Dioxide (mg/L)	25						

Sample Description

Clear ☐ Turbid ☒

Color clear

Odor None

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	9x40 mL	12/19/01, 1045	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1045	----	----
☒ Divalent Manganese	YES NO	4° C	4x40 ml	12/19/01, 1045	----	----
☒ NH3, NO2, NO3	YES NO	4° C	2x250 ml poly	12/19/01, 1045	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	2x250 ml poly	12/19/01, 1045	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1500	----	----

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Signed: ___

TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/18/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-04 **Well Location:** MW-04

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 3.0 ft.

Riser Stick-up (from ground) 2.8 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 16.33 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 7.96 ft.

Height of Water Column 8.37 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 1.3 gallon(s)

1.3 Total gallons to purge

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.3						
pH (Std. Units)	7.42						
Eh (millivolts)	-49.8						
Conduct. (µs/cm)	990						
Temp. (C)	11.54						
Turb. (NTU)							
DO (mg/l)	1.90						
Carbon Dioxide (mg/L)	15						

Sample Description

Clear ☐ Turbid ☒

Color: Brown/Cloudy

Odor: None

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☐	☐
Bailer	☒	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Purged well with dedicated teflon bailer. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 1.3 gallons.

DESCRIPTION OF DECON. PROC.

No decontamination of equipment

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1150	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1150	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1150	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1150	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1150	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/19/01, 1150	----	----

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL
GW Sampling - Round 5

Project No: 19045-007

Date/Time: 12/18/01

Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-4B

Well Location: MW-4B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.7 ft. (from ground)

Riser Stick-up (from ground) 2.6 ft.

WELL DIAMETER
☒ 2 inch
☐ 4 inch
☐ 6 inch
☐ ____

WELL MATERIAL
☒ PVC ☐ SS ☐ ____

Well Depth 41.4 ft.
☒ top of riser
☐ top of casing
☐ ____

☒ measured
☐ historical

Water Depth 15.43 ft.

Height of Water Column 25.97 ft. x
☒ .16 gal/ft (2 in.)
☐ .65 gal/ft (4 in.)
☐ 1.5 gal/ft (6 in.)
☐ ____ gal/ft (__ in.)

Volume of Water in Well = 4.2 gallon(s)

7.5 Total gallons to purge

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	4.2						
pH (Std. Units)	9.50						
Eh (millivolts)	-225.3						
Conduct. (µs/cm)	1877						
Temp. (C)	11.76						
Turb. (NTU)							
DO (mg/l)	.60						
Carbon Dioxide (mg/L)	20						

Sample Description

Clear ☐ Turbid ☒

Color: Reddish/Brown

Odor: None

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 7.5 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1125	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1125	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1125	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1125	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1125	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1125	----	----

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Signed: ____

TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/20/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-05 **Well Location:** MW-05

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.12 ft. (from ground)

Riser Stick-up (from ground) 1.95 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 15.18 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 6.24 ft.

Height of Water Column 8.94 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.4 gallon(s)

7.0 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.4	2.8	4.2	5.6	7.0		
pH (Std. Units)	7.43	7.30	7.26	7.25	7.23		
Eh (millivolts)	13.6	34.8	41.5	44.2	47.1		
Conduct. (µs/cm)	1103	1120	1132	1136	1141		
Temp. (C)	11.70	11.74	11.76	11.76	11.77		
Turb. (NTU)							
DO (mg/l)	3.90	2.17	1.48	1.49	1.21		
Carbon Dioxide (mg/L)	20						

Sample Description

Clear ☐ Turbid ☒

Color clear

Odor none

Other

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/20/01, 0930	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/20/01, 0930	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/20/01, 0930	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/20/01, 0930	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/20/01, 0930	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/20/01, 0930	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/19/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-06 **Well Location:** MW-06

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.50 ft. (from ground)

Riser Stick-up (from ground) 2.40 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 17.34 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 6.57 ft.

Height of Water Column 10.77 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.7 gallon(s)

8.5 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.7	3.4	5.1	6.8	8.5		
pH (Std. Units)	7.63	7.55	7.51	7.51	7.51		
Eh (millivolts)	-68.4	-92.6	-95.2	-96.3	-96.7		
Conduct. (µs/cm)	3409	3313	3302	3298	3296		
Temp. (C)	11.57	11.53	11.54	11.55	11.55		
Turb. (NTU)							
DO (mg/l)	1.59	0.97	0.62	.50	0.41		
Carbon Dioxide (mg/L)	40						

Sample Description

Clear ☐ Turbid ☒

Color: Cloudy/brown

Odor: sewer

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1530	———	———
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1530	———	———
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1530	———	———
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1530	———	———
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1530	———	———
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/19/01, 1530	———	———

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL
GW Sampling - Round 5
Project No: 19045-007
Date/Time: 12/19/01
Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-07 / MW-7D
Well Location: MW-07

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.55 ft. (from ground)

Riser Stick-up (from ground) 2.40 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 15.52 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 5.26 ft.

Height of Water Column 10.26 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.6 gallon(s)

8.0 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.6	3.2	4.8	6.4	8.0		
pH (Std. Units)	7.37	7.31	7.30	7.30	7.31		
Eh (millivolts)	-83.5	-88.2	-92.6	-96.8	-100.5		
Conduct. (µs/cm)	4653	5668	6231	6539	6617		
Temp. (C)	11.20	11.32	11.59	11.73	11.78		
Turb. (NTU)							
DO (mg/l)	5.58	4.95	3.96	3.54	3.33		
Carbon Dioxide (mg/L)	60						

Sample Description

Clear ☐ Turbid ☒
Color: Cloudy/Orange tint
Odor: Strong sewer
Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated tefloo bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1600	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1600	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1600	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1600	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1600	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/19/01, 1600	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/19/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-08 **Well Location:** MW-08

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 2.10 ft.

Riser Stick-up (from ground) 1.95 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 18.22 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 7.60 ft.

Height of Water Column 10.62 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 1.7 gallon(s)

8.5 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.7	3.4	5.1	6.8	8.5		
pH (Std. Units)	6.49	6.43	6.41	6.41	6.41		
Eh (millivolts)	-66.2	-72.6	-77.4	-79.8	-80.6		
Conduct. (µs/cm)	32608	34450	34952	35550	35620		
Temp. (C)	13.01	13.03	13.05	13.06	13.07		
Turb. (NTU)							
DO (mg/l)	2.41	1.14	1.09	0.91	0.84		
Carbon Dioxide (mg/L)	100						

Sample Description

Clear ☐ Turbid ☒

Color: Cloudy

Odor: Strong sewer

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1450	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1450	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1450	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1450	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1450	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/19/01, 1450	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/19/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-09 **Well Location:** MW-09

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.3 ppm	

Protective Casing Stick-up 2.3 ft. (from ground)

Riser Stick-up (from ground) 2.2 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 17.1 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 7.09 ft.

Height of Water Column 10.01 ft. x ☒ .16 gal/ft (2 In.) ☐ .65 gal/ft (4 In.) ☐ 1.5 gal/ft (6 In.) ☐ ____ gal/ft (____ In.)

Volume of Water in Well = 1.6 **gallon(s)**

5 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.6	3.2	4.8				
pH (Std. Units)	7.37	7.15	7.17				
Eh (millivolts)	164.6	166.6	161.6				
Conduct. (µs/cm)	1643	1785	1799				
Temp. (C)	11.73	11.52	12.36				
Turb. (NTU)							
DO (mg/l)	3.85	0.66	0.73				
Carbon Dioxide (mg/L)	35						

Sample Description

Clear ☐ Turbid ☒

Color: Cloudy/ brown

Odor: None

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 5 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1345	----	----
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1345	----	----
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1345	----	----
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1345	----	----
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1345	----	----
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/18/01, 1345	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 5 | **Project No:** 19045-007 | **Date/Time:** 12/19/01 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: T. Majer

Sample No.: MW-9B **Well Location:** MW-9B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	1.1 ppm	

Protective Casing Stick-up ~2.3 ft. (from ground)

Riser Stick-up ~2.2 ft. (from ground)

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 42.70 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 17.67 ft.

Height of Water Column 25.03 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 4.0 gallon(s)

12 Total gallons to purge

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	4.0	8.0	12.0				
pH (Std. Units)	9.72	8.87	9.21				
Eh (millivolts)	23.0	-8.7	-6.9				
Conduct. (µs/cm)	885	1541	1648				
Temp. (C)	12.64	12.02	11.86				
Turb. (NTU)							
DO (mg/l)	.43	.35	.87				
Carbon Dioxide (mg/L)	5						

Sample Description

Clear ☐ Turbid ☒

Color: Lite brown

Odor: None

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 12 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 5-gallons of alconox/Poland spring mixture, Poland Spring rinse, 10% nitric, methanol rinse, and Poland Spring rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ TCL Volatiles	YES NO	4° C/HCl	3x40 mL	12/19/01, 1315	———	———
☒ TOC, RSK-175	YES NO	H2SO4/HCL	6x40 ml	12/19/01, 1315	———	———
☒ Divalent Manganese	YES NO	4° C	2x40 ml	12/19/01, 1315	———	———
☒ NH3, NO2, NO3	YES NO	4° C	1x250 ml poly	12/19/01, 1315	———	———
☒ Ferrous Iron, Chloride	YES NO	4° C	1x250 ml poly	12/19/01, 1315	———	———
☒ Dissolved Manganese	YES NO	4° C	1x500 ml poly	12/19/01, 1315	———	———

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/11/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-01 **Well Location:** MW-01

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	1 to 2 ppm	

Protective Casing Stick-up 2.35 ft. (from ground)

Riser Stick-up (from ground) 2.25 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 17.97 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 7.49 ft.

Height of Water Column 10.48 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 1.7 gallon(s)

8.0 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.7	3.4	7 to 8				
pH (Std. Units)	7.46	7.38	7.48				
Eh (millivolts)	128	139	191				
Conduct. (µs/cm)	478	509	496				
Temp. (C)	7.20	7.44	7.52				
Turb. (NTU)			38				
DO (mg/l)	7.80	5.41	9.00				
Carbon Dioxide (mg/L)			25				

Sample Description

Clear ☐ Turbid ☒

Color Slight Reddish/Brown

Odor None

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW laboratory sample with dedicated teflon bailer. Initially, well dry after purging 4 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3 gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOA 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/11/02, 1100	----	----
☒ TOC	YES NO	H2SO4/HCl	2x40 ml	4/11/02, 1100	----	----
☒ Total Mn and Fe	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1100	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/11/02, 1100	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/11/02, 1100	----	----
☒ Dissolved Manganese	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1100	----	----

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling – Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/11/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-1B **Well Location:** MW-1B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	1 to 2 ppm	

Protective Casing Stick-up 1.90 ft. (from ground)

Riser Stick-up 1.65 ft. (from ground)

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 47.08 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 7.15 ft.

Height of Water Column 39.93 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 6.4 gallon(s)

20 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	6.4	12.8	17	19.2			
pH (Std. Units)	8.57	8.62	8.54	8.54			
Eh (millivolts)	-135	-393	-555	-571			
Conduct. (µs/cm)	2989	2901	2881	2878			
Temp. (C)	9.89	9.31	9.09	9.13			
Turb. (NTU)				53			
DO (mg/l)	1.03	0.5	0.5	0.5			
Carbon Dioxide (mg/L)				10			

Sample Description

Clear ☐ Turbid ☒

Color: Mod. gray

Odor: None

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/11/02, 0940	———	———
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/11/02, 0940	———	———
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 0940	———	———
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/11/02, 0940	———	———
☒ Chloride	YES NO	4° C	1x250 ml poly	4/11/02, 0940	———	———
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 0940	———	———

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/11/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-02 **Well Location:** MW-02

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	2 to 3 ppm	

Protective Casing Stick-up (from ground) Flushmount _____ ft.

Riser Stick-up (from ground) Flushmount _____ ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ _____

WELL MATERIAL ☒ PVC ☐ SS ☐ _____

Well Depth 11.10 ft. ☒ top of riser ☐ top of casing ☐ _____ ☒ measured ☐ historical

Water Depth 1.02 ft.

Height of Water Column 10.08 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.6 gallon(s)

12 Total gallons purged

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.6	3.2	4.8	6.4	8.0	10	12
pH (Std. Units)	7.14	7.13	7.06	7.05	7.04	7.04	7.04
Eh (millivolts)	-12	-38.4	-58	-62	-67	-70	-72
Conduct. (µs/cm)	3829	2560	2100	2015	1970	1902	1890
Temp. (C)	11.69	11.63	11.66	11.69	11.71	11.72	11.74
Turb. (NTU)							125
DO (mg/l)	4.52	1.21	0.44	0.30	0.25	0.25	0.21
Carbon Dioxide (mg/L)							75

Sample Description

Clear ☐ Turbid ☒

Color: Black particles

Odor: Septic Odor

Other: _____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/11/02, 1500	———	———
☒ TOC	YES NO	4C/H2SO4	3x40 ml	4/11/02, 1500	———	———
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1500	———	———
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/11/02, 1500	———	———
☒ Chloride	YES NO	4° C	1x250 ml poly	4/11/02, 1500	———	———
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1500	———	———

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/11/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-03 **Well Location:** MW-03

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	1 to 2 ppm	

Protective Casing Stick-up (from ground) 2.61 ft.

Riser Stick-up (from ground) 2.50 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 16.79 ft. ☒ top of riser ☐ top of casing ☒ measured ☐ historical

Water Depth 2.64 ft.

Height of Water Column 14.15 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water In Well = 2.3 gallon(s)

10 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	2.3	5 to 6	8.0	10.0			
pH (Std. Units)	7.48	7.46	7.44	7.54			
Eh (millivolts)	167	210	225	237			
Conduct. (µs/cm)	793	791	791	774			
Temp. (C)	7.28	7.50	7.20	7.60			
Turb. (NTU)				510			
DO (mg/l)	3.06	5.85	8.25	7.45			
Carbon Dioxide (mg/L)				25			

Sample Description

Clear ☐ Turbid ☒

Color Red/Brown

Odor None

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 4 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/11/02, 1330	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/11/02, 1330	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1330	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/11/02, 1330	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/11/02, 1330	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/11/02, 1330	----	----

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/10/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-3B **Well Location:** MW-3B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.5 ft. (from ground)

Riser Stick-up 2.4 ft. (from ground)

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 37.18 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 10.29 ft.

Height of Water Column 26.89 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 4.3 gallon(s)

21.5 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	4.3	8.6	12.9	17.2	21.5		
pH (Std. Units)	8.00	7.95	7.93	7.93	7.94		
Eh (millivolts)	-105	-148.7	-149.3	-147	-148		
Conduct. (µs/cm)	465	465	465	466	466		
Temp. (C)	10.13	10.07	10.07	10.14	10.15		
Turb. (NTU)							
DO (mg/l)	0.05	0.03	0.42	0.35	0.35		
Carbon Dioxide (mg/L)					20		

Sample Description

Clear ☐ Turbid ☒

Color: Moderate

Odor: None

Other: ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/10/02, 1615	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/10/02, 1615	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1615	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/10/02, 1615	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/10/02, 1615	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1615	----	----

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TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/10/02 | **Sheet** 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-04 **Well Location:** MW-04

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up (from ground) 3.0 ft.

Riser Stick-up (from ground) 2.8 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 16.04 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 6.80 ft.

Height of Water Column 9.24 ft. x ☒ .16 gal/ft (2 In.) ☐ .65 gal/ft (4 In.) ☐ 1.5 gal/ft (6 In.) ☐ ___ gal/ft (___ In.)

Volume of Water in Well = 1.5 gallon(s)

5.0 Total gallons purged

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.5	5.0					
pH (Std. Units)	7.72	7.69					
Eh (millivolts)	98.4	161					
Conduct. (µs/cm)	560	608					
Temp. (C)	8.44	8.64					
Turb. (NTU)		V. Turbid					
DO (mg/l)	0.04	No Good					
Carbon Dioxide (mg/L)		30					

Sample Description

Clear ☐ Turbid ☒

Color Red/Brown

Odor None

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☐	☐
Bailer	☒	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Purged well with dedicated teflon bailer. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 5 gallons.

DESCRIPTION OF DECON. PROC.

No decontamination of equipment

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/10/02, 1000	———	———
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/10/02, 1000	———	———
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1000	———	———
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/10/02, 1000	———	———
☒ Chloride	YES NO	4° C	1x250 ml poly	4/10/02, 1000	———	———
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1000	———	———

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/10/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-4B **Well Location:** MW-4B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.7 ft. (from ground)

Riser Stick-up (from ground) 2.6 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 40.92 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 17.48 ft.

Height of Water Column 23.44 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 3.8 gallon(s)

11.0 Total gallons purged

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	3.8	7.6	8.0	9.0	11.0		
pH (Std. Units)	8.48	8.06	8.40	8.08	8.09		
Eh (millivolts)	-114	-10	-61	112	99		
Conduct. (µs/cm)	555	1500	1763	3232	2921		
Temp. (C)	10.36	11.20	11.03	11.12	11.02		
Turb. (NTU)					V. Turbid		
DO (mg/l)	1.39	2.4	6.3	0.13	0.14		
Carbon Dioxide (mg/L)					20		

Sample Description

Clear ☐ Turbid ☒

Color Reddish/Brown

Odor None

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 6 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture,spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/10/02, 1200	———	———
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/10/02, 1200	———	———
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1200	———	———
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/10/02, 1200	———	———
☒ Chloride	YES NO	4° C	1x250 ml poly	4/10/02, 1200	———	———
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1200	———	———

Signed: _____

TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6	**Project No:** 19045-007	**Date/Time:** 4/10/02	Sheet 1 of 1
Contractor Personnel:		**TRC Personnel:** C. Rudzinski	

Sample No.: MW-05 **Well Location:** MW-05

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	0.0 ppm	

Protective Casing Stick-up 2.12 ft. (from ground)

Riser Stick-up (from ground) 1.95 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 15.03 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 3.83 ft.

Height of Water Column 11.20 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.8 gallon(s)

13.0 Total gallons purged

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.8	3.6	5.4	7.2	9.0	11.0	13.0
pH (Std. Units)	7.44	7.12	7.07	7.04	7.03	7.02	7.02
Eh (millivolts)	162	169	167	168	168	168	168
Conduct. (µs/cm)	803	822	837	849	862	867	869
Temp. (C)	8.25	8.28	8.30	8.31	8.32	8.33	8.33
Turb. (NTU)							21
DO (mg/l)	5.69	3.59	2.55	2.05	1.51	1.25	1.20
Carbon Dioxide (mg/L)							20

Sample Description

Clear ☐ Turbid ☒

Color Clear/slight

Odor none

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/10/02, 1415	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/10/02, 1415	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1415	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/10/02, 1415	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/10/02, 1415	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/10/02, 1415	----	----

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Rev: 8 July 1991

Signed: ___

TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/9/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-06 **Well Location:** MW-06

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	2 to 4 ppm	

Protective Casing Stick-up (from ground) 2.50 ft.

Riser Stick-up (from ground) 2.40 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ___

WELL MATERIAL ☒ PVC ☐ SS ☐ ___

Well Depth 17.33 ft. ☒ top of riser ☐ top of casing ☐ ___ ☒ measured ☐ historical

Water Depth 4.91 ft.

Height of Water Column 12.42 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (___ in.)

Volume of Water in Well = 2.0 gallon(s)

12.0 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	2.0	4.0	6.0	8.0	10.0	12.0	
pH (Std. Units)	7.65	7.46	7.43	7.45	7.46	7.47	
Eh (millivolts)	89	97	97.5	95	92	89	
Conduct. (µs/cm)	540	870	1033	1160	1244	1290	
Temp. (C)	6.95	6.80	6.83	6.85	6.89	6.89	
Turb. (NTU)						33	
DO (mg/l)	7.82	4.50	3.41	2.37	1.90	1.50	
Carbon Dioxide (mg/L)						25	

Sample Description

Clear ☐ Turbid ☒

Color Slight red/brown

Odor ___

Other ___

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
___	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/9/02, 1630	___	___
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/9/02, 1630	___	___
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1630	___	___
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/9/02, 1630	___	___
☒ Chloride	YES NO	4° C	1x250 ml poly	4/9/02, 1630	___	___
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1630	___	___

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Signed: ___

TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/11/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-07 / MW-7D **Well Location:** MW-07

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

Protective Casing Stick-up 2.55 ft. (from ground)

Riser Stick-up (from ground) 2.40 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 15.22 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 3.64 ft.

Height of Water Column 11.58 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.9 gallon(s)

11.5 Total gallons purged

[Vol. = $r^2 h(0.163)$]

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	4 to 6 ppm	

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.9	3.8	5.7	7.6	9.5	11.5	
pH (Std. Units)	7.54	7.61	7.62	7.62	7.67	7.68	
Eh (millivolts)	-24.5	-47	-55	-64	-70	-77	
Conduct. (µs/cm)	2100	2391	2444	2521	2547	2555	
Temp. (C)	7.83	7.87	7.88	7.92	7.95	7.94	
Turb. (NTU)						261	
DO (mg/l)	7.53	3.28	2.98	2.87	2.01	1.50	
Carbon Dioxide (mg/L)						30	

Sample Description

Clear ☐ Turbid ☒

Color Orange/red-brown

Odor Septic Odor

Other ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	12x40 mL	4/11/02, 1700	----	----
☒ TOC	YES NO	4C/H2SO4	4x40 ml	4/11/02, 1700	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	2x250 ml poly	4/11/02, 1700	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	2x250 ml poly	4/11/02, 1700	----	----
☒ Chloride	YES NO	4° C	2x250 ml poly	4/11/02, 1700	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	2x250 ml poly	4/11/02, 1700	----	----

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Signed: ____

TRC

Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/9/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-08 **Well Location:** MW-08

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	2 to 4 ppm	

Protective Casing Stick-up 2.10 ft. (from ground)

Riser Stick-up (from ground) 1.95 ft.

WELL DIAMETER
- ☒ 2 inch
- ☐ 4 inch
- ☐ 6 inch
- ☐ ____

WELL MATERIAL
- ☒ PVC
- ☐ SS
- ☐ ____

Well Depth 18.20 ft.
- ☒ top of riser
- ☐ top of casing
- ☐ ____

- ☒ measured
- ☐ historical

Water Depth 6.12 ft.

Height of Water Column 12.08 ft. x
- ☒ .16 gal/ft (2 in.)
- ☐ .65 gal/ft (4 in.)
- ☐ 1.5 gal/ft (6 in.)
- ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.9 gallon(s)

9.5 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.9	3.8	5.7	7.6	9.5		
pH (Std. Units)	6.86	6.93	6.92	6.90	6.89		
Eh (millivolts)	113	57	40	28	17		
Conduct. (µs/cm)	9444	9100	9050	9400	9600		
Temp. (C)	9.08	8.98	8.99	9.00	9.02		
Turb. (NTU)					20		
DO (mg/l)	4.62	1.20	1.00	0.80	0.60		
Carbon Dioxide (mg/L)					150		

Sample Description

Clear ☐ Turbid ☒

Color: Slight red/brown

Odor: None

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3-gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOA 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/9/02, 1500	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/9/02, 1500	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1500	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/9/02, 1500	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/9/02, 1500	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1500	----	----

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Signed: ____

TRC
Field Data Record Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/9/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-09 **Well Location:** MW-09

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	3 to 4 ppm	

Protective Casing Stick-up (from ground) 2.3 ft.

Riser Stick-up (from ground) 2.2 ft.

WELL DIAMETER ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL ☒ PVC ☐ SS ☐ ____

Well Depth 17.35 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 5.41 ft.

Height of Water Column 11.94 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 1.9 **gallon(s)**

11 Total gallons purged

[Vol. = r^2 h(0.163)]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	1.9	3.8	5.7	7.6	9.5	11.0	
pH (Std. Units)	7.71	7.30	7.23	7.28	7.30	7.31	
Eh (millivolts)	103	112	116	115	113	110	
Conduct. (µs/cm)	1298	1606	1628	1268	1165	1180	
Temp. (C)	7.75	7.49	7.45	7.98	8.62	8.80	
Turb. (NTU)						25	
DO (mg/l)	8.0	4.74	4.24	4.14	4.12	4.10	
Carbon Dioxide (mg/L)						45	

Sample Description

Clear ☐ Turbid ☒

Color: Slight red/brown

Odor: None

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well going to dry at approximately 11 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3 gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 mL	4/9/02, 1100	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/9/02, 1100	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1100	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/9/02, 1100	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/9/02, 1100	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1100	----	----

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TRC
Field Data Record
Ground Water

Project: AKZO NOBEL GW Sampling - Round 6 | **Project No:** 19045-007 | **Date/Time:** 4/9/02 | Sheet 1 of 1

Contractor Personnel:

TRC Personnel: C. Rudzinski

Sample No.: MW-9B **Well Location:** MW-9B

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☒	☐
Concrete Collar Intact	☒	☐
PVC Stick-up Intact	☒	☐
Well Cap Present	☒	☐
Security Lock Present	☒	☐

OVA/PID SCREENING MEAS.

	Total VOC's	Methane
Background	0.0 ppm	
Well Mouth	5 to 6 ppm	

Protective Casing Stick-up (from ground) -2.3 ft.

Riser Stick-up (from ground) -2.2 ft.

WELL DIAMETER: ☒ 2 inch ☐ 4 inch ☐ 6 inch ☐ ____

WELL MATERIAL: ☒ PVC ☐ SS ☐ ____

Well Depth 42.20 ft. ☒ top of riser ☐ top of casing ☐ ____ ☒ measured ☐ historical

Water Depth 18.90 ft.

Height of Water Column 23.30 ft. x ☒ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ __ gal/ft (__ in.)

Volume of Water in Well = 3.7 gallon(s)

13 Total gallons purged

[Vol. = $r^2 h(0.163)$]

FIELD WATER QUALITY MEASUREMENTS

Purge Volume (gal)	3.7	7.4	11.1	13.0			
pH (Std. Units)	10.54	8.38	8.74	8.71			
Eh (millivolts)	59	127	77.1	56			
Conduct. (µs/cm)	840	2080	1785	1875			
Temp. (C)	11.52	11.94	12.03	12.28			
Turb. (NTU)				30			
DO (mg/l)	7.31	4.57	2.12	1.83			
Carbon Dioxide (mg/L)				10			

Sample Description

Clear ☐ Turbid ☒

Color: Slight lite brown

Odor: None

Other: ____

SAMPLE EQUIP./DECON.

	PURGE	SAMPLE
Peristaltic Pump	☐	☐
Submersible Pump	☒	☐
Bailer	☐	☒
Waterra	☐	☐
PVC/Silicon Tubing	☐	☐
Teflon/Silicon Tubing	☐	☐
Air Lift	☐	☐
In-line Filter	☐	☐
Pressure Vacuum Filter	☐	☐
Measuring Tape	☐	☐
____	☐	☐

EQUIPMENT ID

Whale pump with dedicated tubing. Collected field parameters with YSI flow-through cell. Collected GW sample with dedicated teflon bailer. Well dry after purging 6 gallons.

DESCRIPTION OF DECON. PROC.

Decontaminated whale pump by pumping 2 to 3 gallons of alconox/spring water mixture, spring water rinse, 10% nitric, methanol rinse, and distilled water rinse.

DECON. FLUID USED

Water	☒
Alconox	☒
Tap Water	☐
HNO_3 (1 or 10%)	☒
Tap Water	☐
Methanol	☒
Hexane	☐
Acetone	☐
Air Dry	☐
Water	☒
Air Dry	☐
None	☐

ANALYTICAL PARAMETERS	Filtered (circle)	Preservation Method	Volume Required	Time of Collection	CLP Sample #	CLP Case #
☒ VOAs 8260, RSK-175	YES NO	4° C/HCl	6x40 ml	4/9/02, 1200	----	----
☒ TOC	YES NO	4C/H2SO4	2x40 ml	4/9/02, 1200	----	----
☒ Total Fe and Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1200	----	----
☒ NH3, NO2, NO3	YES NO	4° C/H2SO4	1x250 ml poly	4/9/02, 1200	----	----
☒ Chloride	YES NO	4° C	1x250 ml poly	4/9/02, 1200	----	----
☒ Dissolved Mn	YES NO	4° C/HNO3	1x250 ml poly	4/9/02, 1200	----	----

AF-206/C

Rev: 8 July 1991

Signed: ____

TRC

Customer-Focused Solutions