



DuPont Corporate Remediation Group  
Buffalo Avenue & 26<sup>th</sup> Street  
Building 35 3<sup>rd</sup> Floor  
Niagara Falls, NY 14302  
(716) 278-5100

February 4, 2009

Ms. Gloria Sosa  
Western New York Remediation Section  
New York Remediation Branch  
Emergency and Remediation Response Division  
U.S. EPA – Region II  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

Dear Ms. Sosa:

**NECCO PARK FOURTH QUARTER 2008 DATA PACKAGE**

Enclosed are three copies of the *Fourth Quarter 2008 (4Q08) Data Package* for the DuPont Necco Park Hydraulic Control System (HCS) in accordance with the approved Long Term Groundwater Monitoring Plan. The data package includes an operational summary, process sample analytical data, and figures showing potentiometric surface contours, vertical gradients, and drawdown contours. The data package also includes a DNAPL removal summary for 4Q08 and a summary of activities associated with the replacement of recovery well RW-10.

Pumping system uptime for 4Q08 was 70.3 percent. The lower than usual uptime is primarily attributed to equipment malfunctions at recovery well RW-5 that have since been rectified and one scheduled maintenance shutdown in December. Total volume of groundwater treated was 3,468,710 gallons. Approximately 44 gallons of DNAPL was removed in 4Q08.

Please contact me at (716) 278-5496 if you have any questions or comments regarding this submittal.

Sincerely,

CORPORATE REMEDIATION GROUP

Paul F. Mazierski  
Project Director

PFM/mac

Enc.

T:\\\\Necco Park\\\\7537 Long Term GW Mon\\\\Reports\\\\Quarterly Data Packets\\\\2008\\\\3Q\\\\necco 4Q08 data pkg cvr ltr.doc

cc: J. Kaczor/Earth Tech  
M. Hinton/NYSDEC  
G. Shanahan/NYSDEC

SOURCE AREA HYDRAULIC CONTROL  
SYSTEM  
FOURTH QUARTER 2008 GROUNDWATER  
MONITORING DATA PACKAGE  
DUPONT NECCO PARK

Date: February 4, 2009

DuPont Project No. 7537  
URSD Project No. 18985651



CORPORATE REMEDIATION GROUP  
*An Alliance between*  
*DuPont and URS Diamond*

Barley Mill Plaza, Building 19  
Wilmington, Delaware 19805

Buffalo Avenue & 26th Street  
Niagara Falls, NY 14302

## **TABLE OF CONTENTS**

1.0	Data Package Summary .....	1
1.1	Operational Summary .....	1
1.2	GWTF Process Sampling.....	2
1.3	POTW Compliance.....	2
1.4	Recovery Well RW-10 Replacement.....	2
2.0	References.....	3

### **TABLES**

Table 1	Individual Recovery Well Shutdown Summary - 4Q08
Table 2	Historical HCS Operational Summary

### **FIGURES**

Figure 1	Potentiometric Surface Contour Map: AT-Zone, November 13, 2008
Figure 2	Vertical Gradient: AT-Zone to A-Zone, November 13, 2008
Figure 3	Drawdown Contour Map: AT-Zone, November 13, 2008
Figure 4	Potentiometric Surface Contour Map: A-Zone November 13, 2008
Figure 5	Vertical Gradient Map: A-Zone to B-Zone, November 13, 2008
Figure 6	Drawdown Contour Map: A-Zone, November 13, 2008
Figure 7	Potentiometric Surface Contour Map: B-Zone, November 13, 2008
Figure 8	Potentiometric Surface Contour Map: C-Zone, November 13, 2008
Figure 9	Potentiometric Surface Contour Map: D-Zone, November 13, 2008
Figure 10	Potentiometric Surface Contour Map: E-Zone, November 13, 2008
Figure 11	Potentiometric Surface Contour Map: F-Zone, November 13, 2008

### **APPENDICES**

Appendix A	Groundwater Elevation Data – Fourth Quarter 2008
Appendix B	GWTF Process Sampling Results –Fourth Quarter 2008

### **ATTACHMENTS**

Attachment 1	Electronic Copy of Groundwater Elevation Data – Fourth Quarter 2008
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## 1.0 DATA PACKAGE SUMMARY

This data package presents a summary of operating and monitoring data collected during the fourth quarter of 2008 (4Q08) for groundwater remediation measures at the DuPont Necco Park Site (Necco Park) in Niagara Falls, New York. Submission of this data package meets reporting requirements defined in the Long Term Groundwater Monitoring Plan (LTGMP) and the Sampling, Analysis, and Monitoring Plan (SAMP) (CRG, 2005). A summary of the installation of new B/C-Zone recovery well RW-11 is also provided in this data package. The well was installed to replace recovery well RW-10 which has exhibited diminished hydraulic efficiency.

This data package is the fourteenth subsequent to the 2005 startup of the Necco Park Hydraulic Control System (HCS) and includes a summary of operations for the pumping wells and Groundwater Treatment Facility (GWT). Included are figures depicting monthly groundwater elevation contours for seven groundwater flow zones and groundwater elevation data (Appendix A). An electronic copy of the groundwater elevation data is provided as Attachment 1. Figures illustrating drawdown for the AT and A-Zone and vertical gradients between the AT and A-Zone and A- and B-Zone are also included.

Figures 2 and 5 present the vertical gradient (ft/ft) for selected well pairs between the AT and A-Zone and the A-Zone and B-Zones, respectively. Vertical gradients are calculated by subtracting the elevation of the upper zone from the elevation of the lower zone and dividing the result by the difference in the elevation of the center of the well screen (for AT and A-Zones wells) or the center of open rock zone (for B-Zone wells).

Figures 3 and 6 exhibit potentiometric contours of net drawdown in selected wells between April 5, 2005 (immediately prior to system startup) and the current groundwater elevation in each well.

In accordance with a recommendation of the 2007 Annual Report, a new C-Zone well (204C) was installed in 4Q08 to replace well 112C. Quarterly hydraulic monitoring at well 204C will begin in 1Q09. Well installation details will be provided in the 2008 Annual Report.

### 1.1 Operational Summary

A summary of HCS uptime, total gallons of groundwater treated, and gallons of DNAPL removed for 4Q08 is as follows:

	HCS Uptime (%)	Groundwater Treated (Gallons)	DNAPL Removed (Gallons)
October	74.4	1,068,530	44
November	73.9	1,225,187	0
December	62.7	1,174,993	0
<b>4Q8 Total</b>	<b>70.3</b>	<b>3,468,710</b>	<b>44</b>

Individual recovery well downtime which exceeded a 24-hour time period during 4Q08 is summarized in Table 1. Most of the downtime occurred in December and is attributed to equipment malfunction or failures at recovery well RW-5 and a scheduled maintenance shutdown from December 17<sup>th</sup> to December 19<sup>th</sup>. The entire system was not operational from December 28<sup>th</sup> to December 30<sup>th</sup> due to a failure of the process control system module. Recovery well RW-5 was not operating from November 1<sup>st</sup> to November 7<sup>th</sup> for completion of scheduled well cleaning. A historical operational summary by quarter since HCS operations began is provided in Table 2.

All DNAPL removed in 4Q08 was derived from pumping well RW-5. Monthly DNAPL monitoring was completed on October 24<sup>th</sup>, November 24<sup>th</sup>, and December 23<sup>rd</sup>. RW-5 was the only location where DNAPL was observed in 4Q08. DNAPL removal was conducted three times in October; October 10<sup>th</sup>, October 24<sup>th</sup>, and October 31<sup>st</sup>. DNAPL was not observed in RW-5, or any other monitoring location, in November and December.

## 1.2 GWTF Process Sampling

In accordance with the SAMP, GWTF influent samples (B/C and D/E/F-Zone) and a combined effluent sample were collected in 4Q08. Samples were collected by TestAmerica Laboratories of Amherst, NY on November 13<sup>th</sup> and shipped to TestAmerica Laboratories in North Canton, Ohio for analysis. Sample results for the process sampling is included in Appendix B.

## 1.3 POTW Compliance

As required by our discharge permit, the Necco GWTF discharge is sampled and reported quarterly to the Niagara Falls Water Board. The Necco Park 4Q08 wastewater samples were collected on September 12, 2008. The 3Q08 results for Hexachlorobutadiene exceeded the daily maximum limit and Hexachloroethane exceeded the calculated annual average limit. In compliance with SIU Permit #64, DuPont re-sampled for these compounds on September 4 and 5, 2008. The additional sampling results for Hexachlorobutadiene indicated that the current daily maximum limit for this compound is adequate.

## 1.4 Recovery Well RW-10 Replacement

Following RW-10 well house and acid line modifications, replacement B/C-Zone recovery well RW-11 was put into operation on November 12<sup>th</sup>. Pumping at an average rate of 15 gpm, improved hydraulic control in the upper bedrock in the western portion of the site has been observed. Uptime for the well was 78.7 % from startup to the end of the quarter. A detailed summary of the RW-11 installation including construction, hydraulic influence, and O&M requirements, will be provided in the 2008 Annual Report.

## 2.0 REFERENCES

DuPont Corporate Remediation Group (CRG). 2005. *DuPont Necco Park Operations and Maintenance Plan*. November 11, 2005.

## **TABLES**

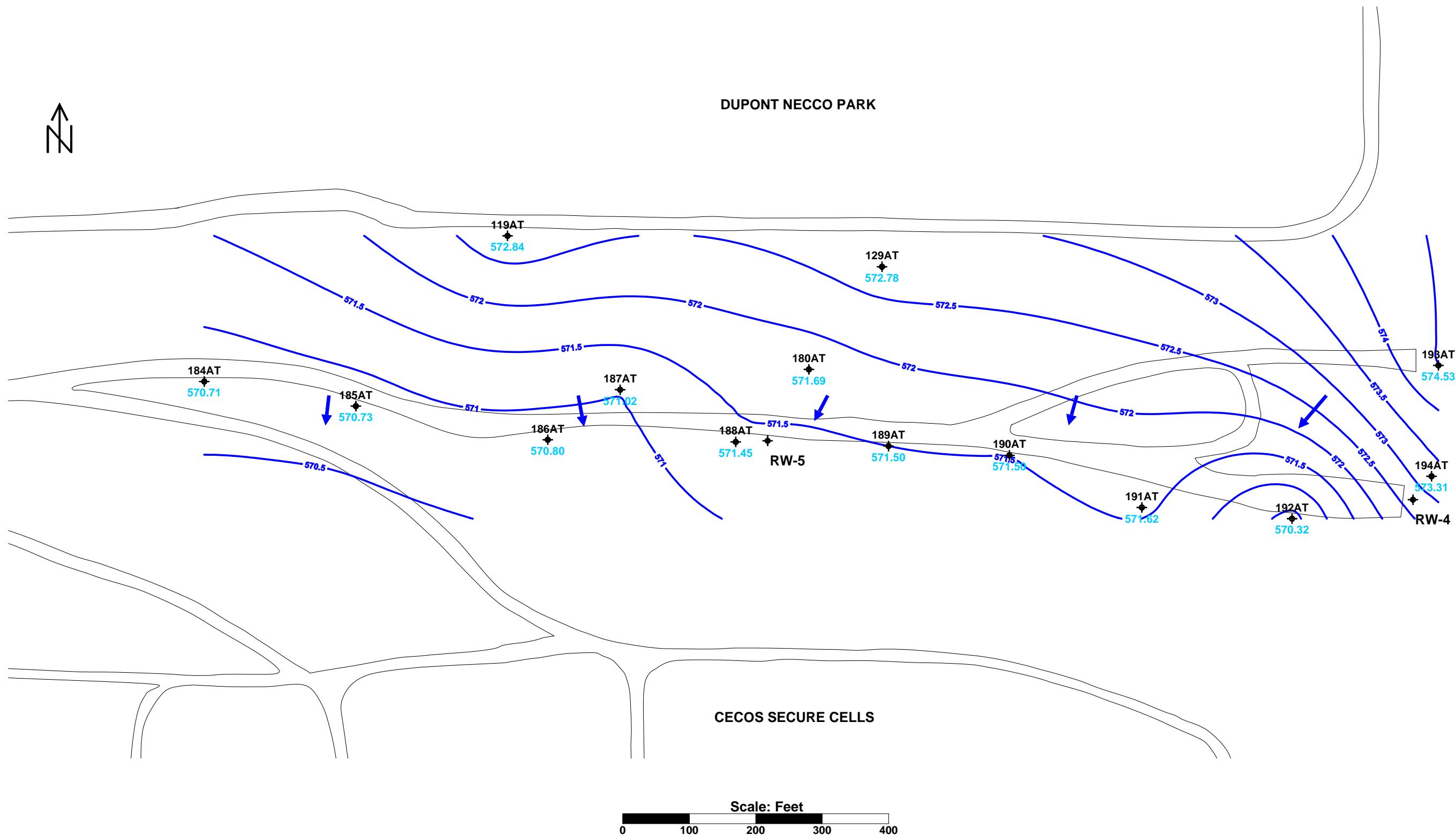
**Table 1**  
**Individual Recovery Well Shutdown Summary - 4Q08**  
**DuPont Necco Park**

	<u>Well ID</u>	<u>Date(s)</u>	<u>Length of Shutdown</u> (hours)	<u>Reason for Shutdown</u>	<u>Remarks</u>
OCTOBER	RW-5	10/6-10/8	71.1	Pump failed	None
	RW-9	10/6	24	Level control failure	Pump shutdown
	RW-10	10/1-10/31	744	Complete well shutdown	Continued process of bringing replacement RW-11 online
NOVEMBER	RW-5	11/2-11/7 &11/20	168	Mandatory maintenance and pump failure	None
	RW-10	11/1-11/12	288	Complete well shutdown	Well RW-11 brought online on 11/12/2008
DECEMBER	RW-4	12/18-12/19 & 12/28-12/30	120	Header line maintenance and system shutdown	The Experian system hard-drive malfunctioned during 12/28-12/30
	RW-5	12/3, 12/7-12/8, 12/14-12/19 & 12/26-12/31	336	Pump failure, header line blockage and maintenance, and system shutdown	The Experian system hard-drive malfunctioned during 12/28-12/30
	RW-8	12/18 & 12/28-12/30	96	Header line maintenance and system shutdown	The Experian system hard-drive malfunctioned during 12/28-12/30
	RW-9	12/18 & 12/28-12/30	96	Header line maintenance and system shutdown	The Experian system hard-drive malfunctioned during 12/28-12/30
	RW-11	12/15, 12/18-12/19, 12/26 and 12/28-12/30	190.1	Header line blockage and maintenance and system shutdown	The Experian system hard-drive malfunctioned during 12/28-12/30

**Table 2**  
**Historical HCS Operational Summary - 4Q08**  
**DuPont Necco Park**

<b>Reporting Period</b>	<b>HCS Uptime (%)</b>	<b>HCS Uptime Excluding Scheduled Maintenance Downtime (%)</b>	<b>Groundwater Treated (Gallons)</b>	<b>DNAPL Removed (Gallons)</b>
2Q05	97.3	97.6	3,349,590	73.5
3Q05	89.3	91.4	3,117,280	30
4Q05	93.6	96.5	3,225,819	0
1Q06	99.4	99.4	2,889,134	24
2Q06	97.5	98.1	3,486,835	74
3Q06	88.7	90.9	3,181,365	28
4Q06	91.0	93.8	2,787,745	25
1Q07	91.2	91.2	2,638,005	15
2Q07	93.8	94.2	2,882,064	52
3Q07	92.0	92.5	3,497,149	51
4Q07	91.2	92.0	2,697,915	35
1Q08	92.6	93.5	2,761,674	65
2Q08	95.9	95.9	2,902,261	279
3Q08	77.2	80.0	3,112,202	124
4Q08	70.3	72.2	3,468,710	44
<b>TOTALS</b>	---	---	<b>45,997,748</b>	<b>920</b>
<b>AVERAGE</b>	<b>90.7</b>	<b>91.9</b>	---	---

## **FIGURES**



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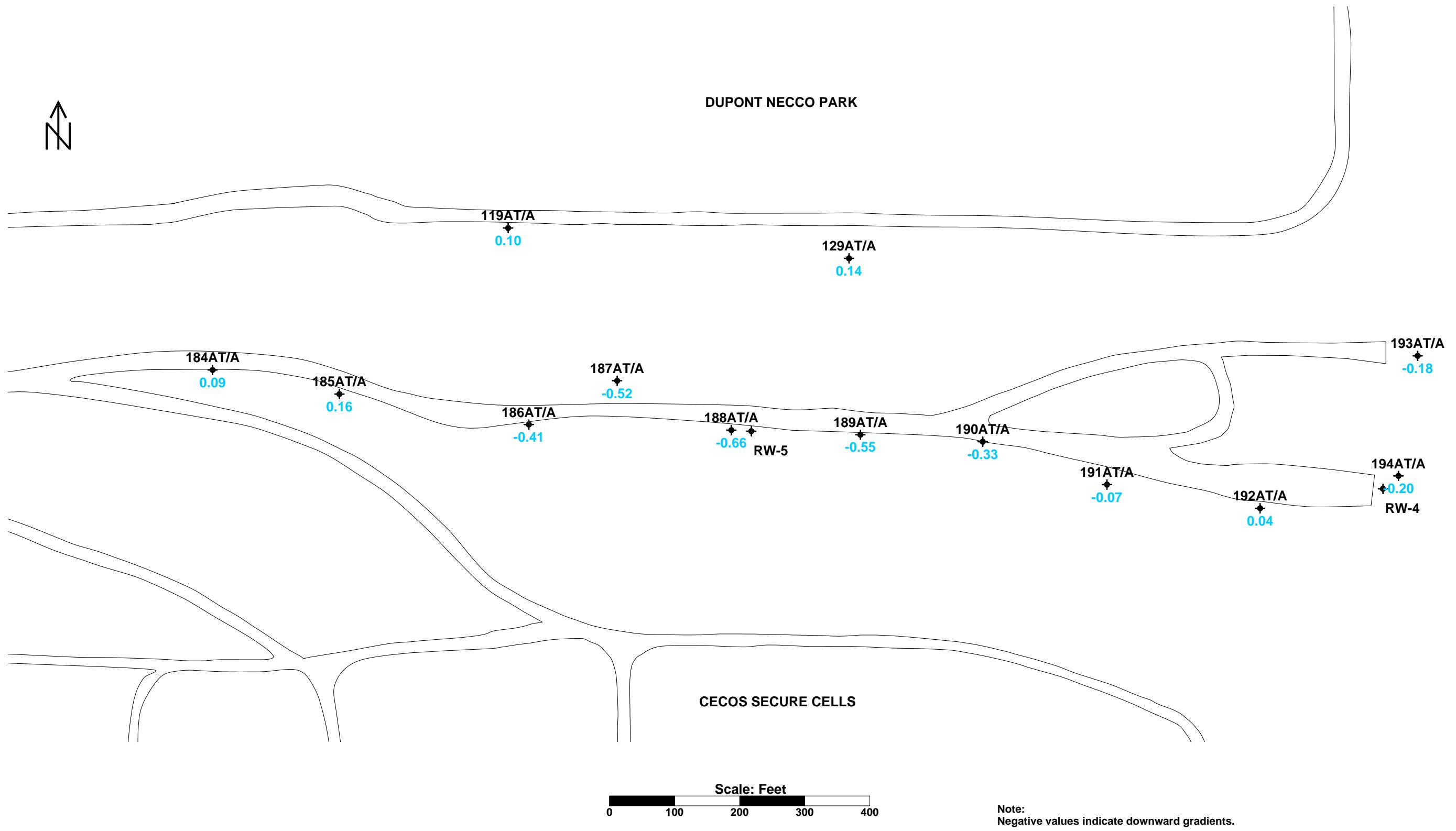


- 3B Well ID
- Monitoring Well
- Pumping Well

**LEGEND**

- Potentiometric Contour
- Structure
- Road

**Figure 1**  
**Potentiometric Surface Map**  
**DuPont Necco Park: AT-Zone**  
**November 13, 2008**



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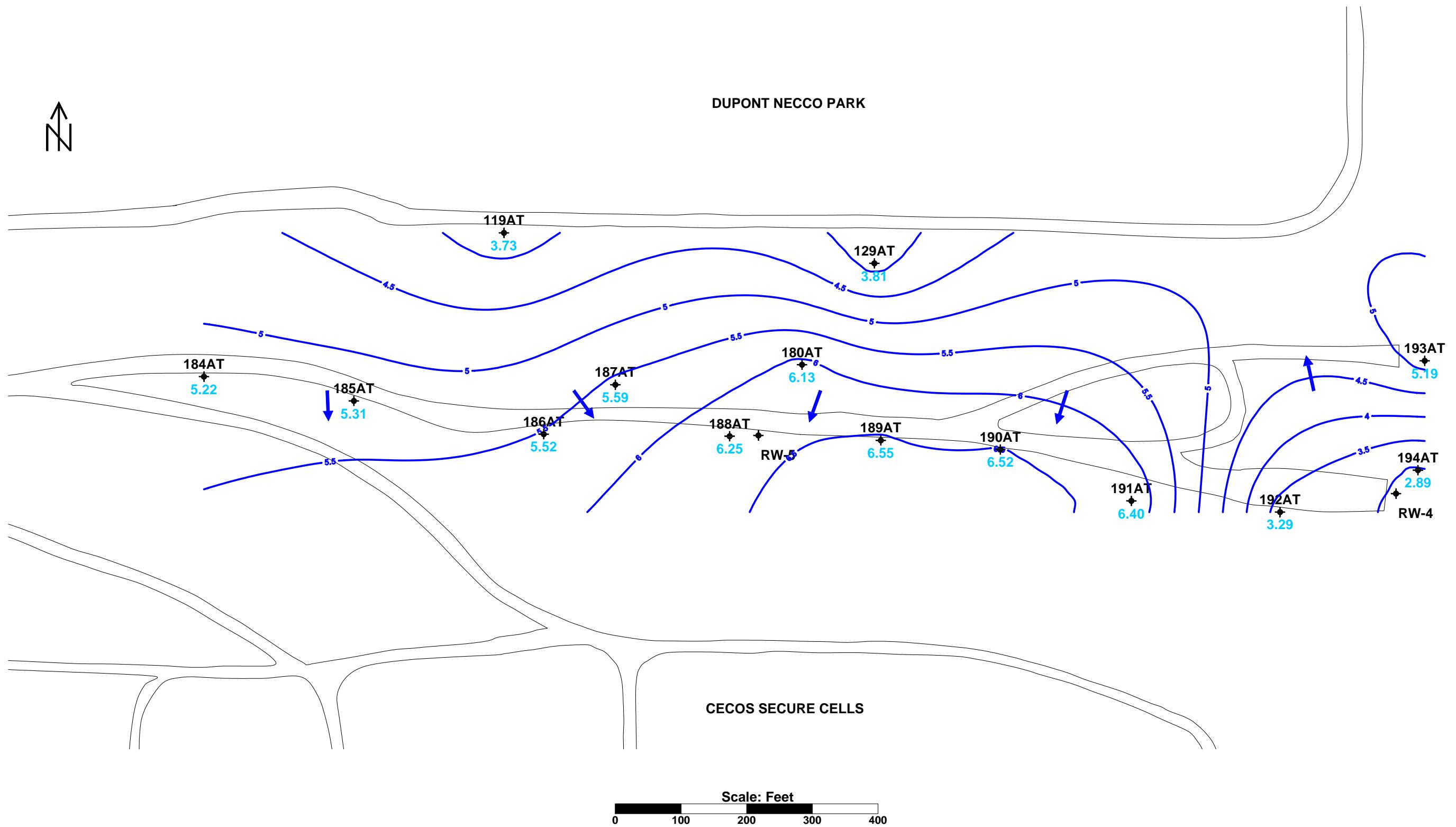


- 3B Well ID
- Monitoring Well
- Pumping Well

**LEGEND**

- Potentiometric Contour
- Structure
- Road

**Figure 2**  
**Vertical Gradient: AT-Zone to A-Zone**  
**DuPont Necco Park**  
**November 13, 2008**



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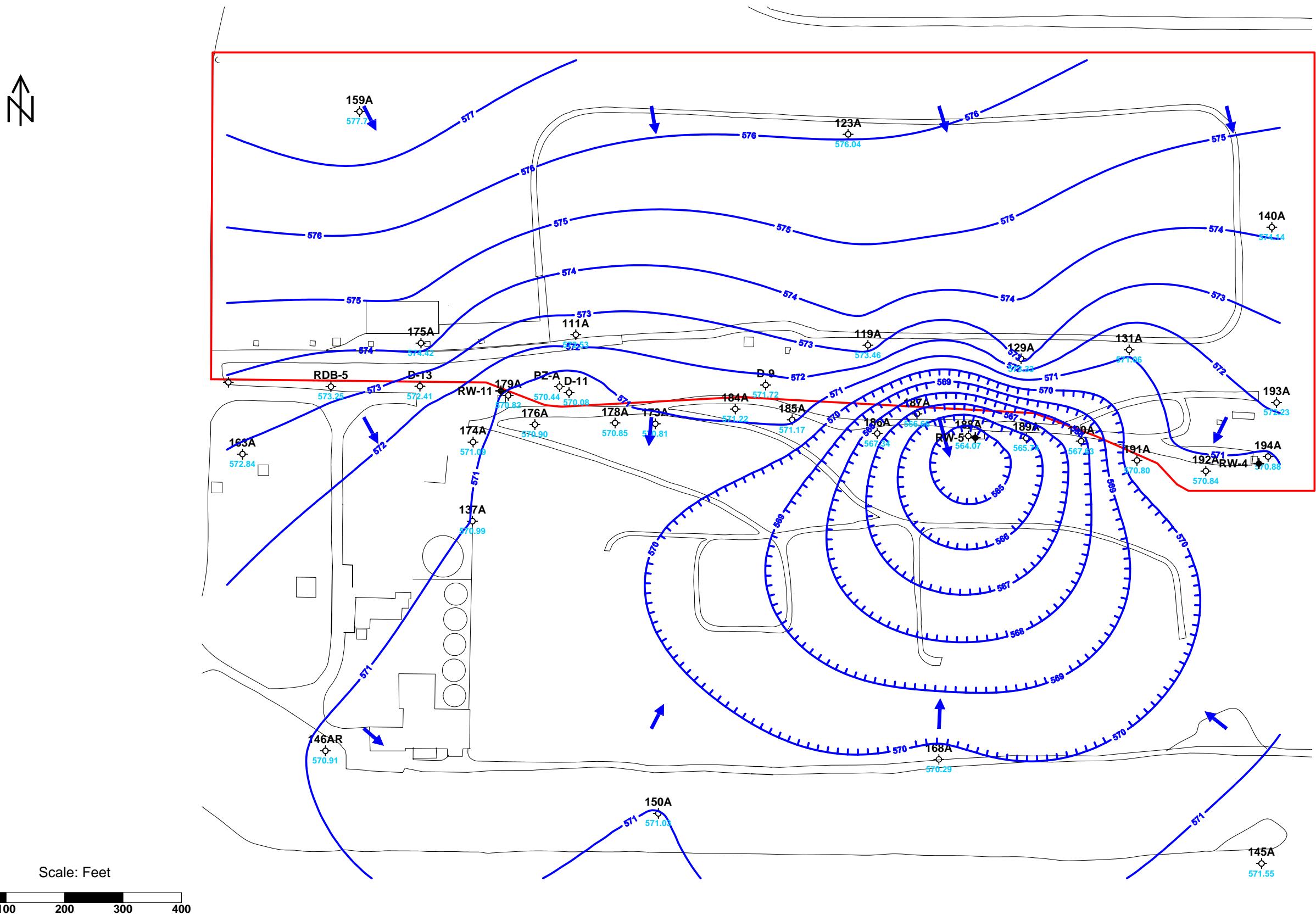


- 3B Well ID
- Monitoring Well
- Pumping Well

LEGEND

- Potentiometric Contour
- Structure
- Road

**Figure 3**  
**Drawdown Contour Map**  
**DuPont Necco Park: AT-Zone**  
**April 5, 2005 (Static) to November 13, 2008**



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3B Well

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Pumping Well

## LEGEND

## Potentiometric Contour

Struct

Road

## Source Area Delineation

**Figure 4**  
**Potentiometric Surface Map**  
**DuPont Necco Park: A-Zone**  
**November 13, 2008**



159A/B  
-0.21

111A/B  
-0.17

119A/B  
-0.16  
129A/B  
-0.20

RW-11  
137A/B  
-0.09

RW-5  
RW-4

150A/B  
-0.10

145A/B  
-0.10

Scale: Feet

0 100 200 300 400

Note: Negative values indicate downward gradients.

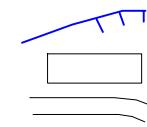


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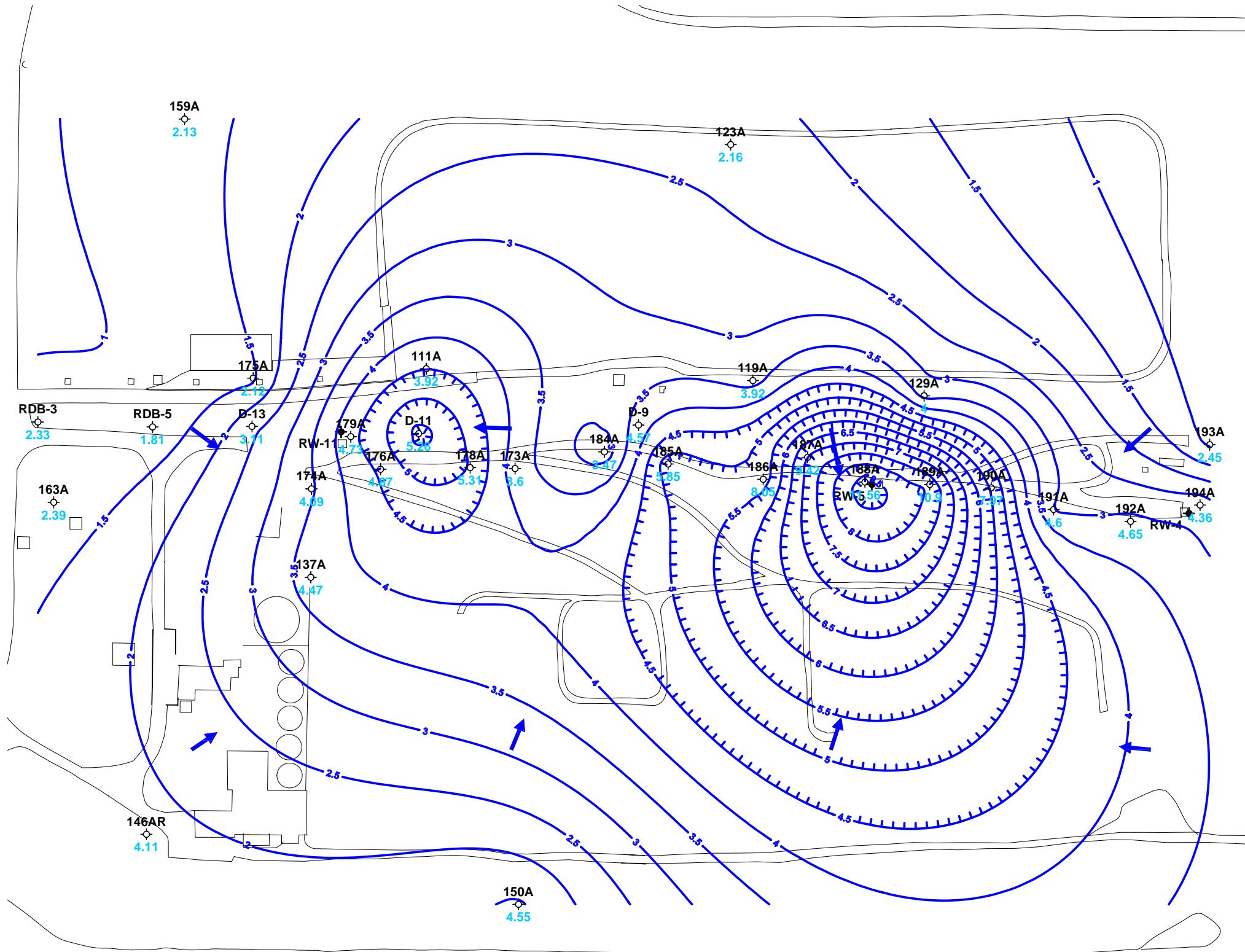
- 3B Well ID  
◇ Monitoring Well  
◆ Pumping Well



**LEGEND**

- Potentiometric Contour  
Structure  
Road

**Figure 5**  
**Vertical Gradient: A-Zone to B-Zone**  
**DuPont Necco Park**  
**November 13, 2008**



Scale: Feet

0 100 200 300 400



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3B Well ID

◇ Monitoring Well

◆ Pumping Well

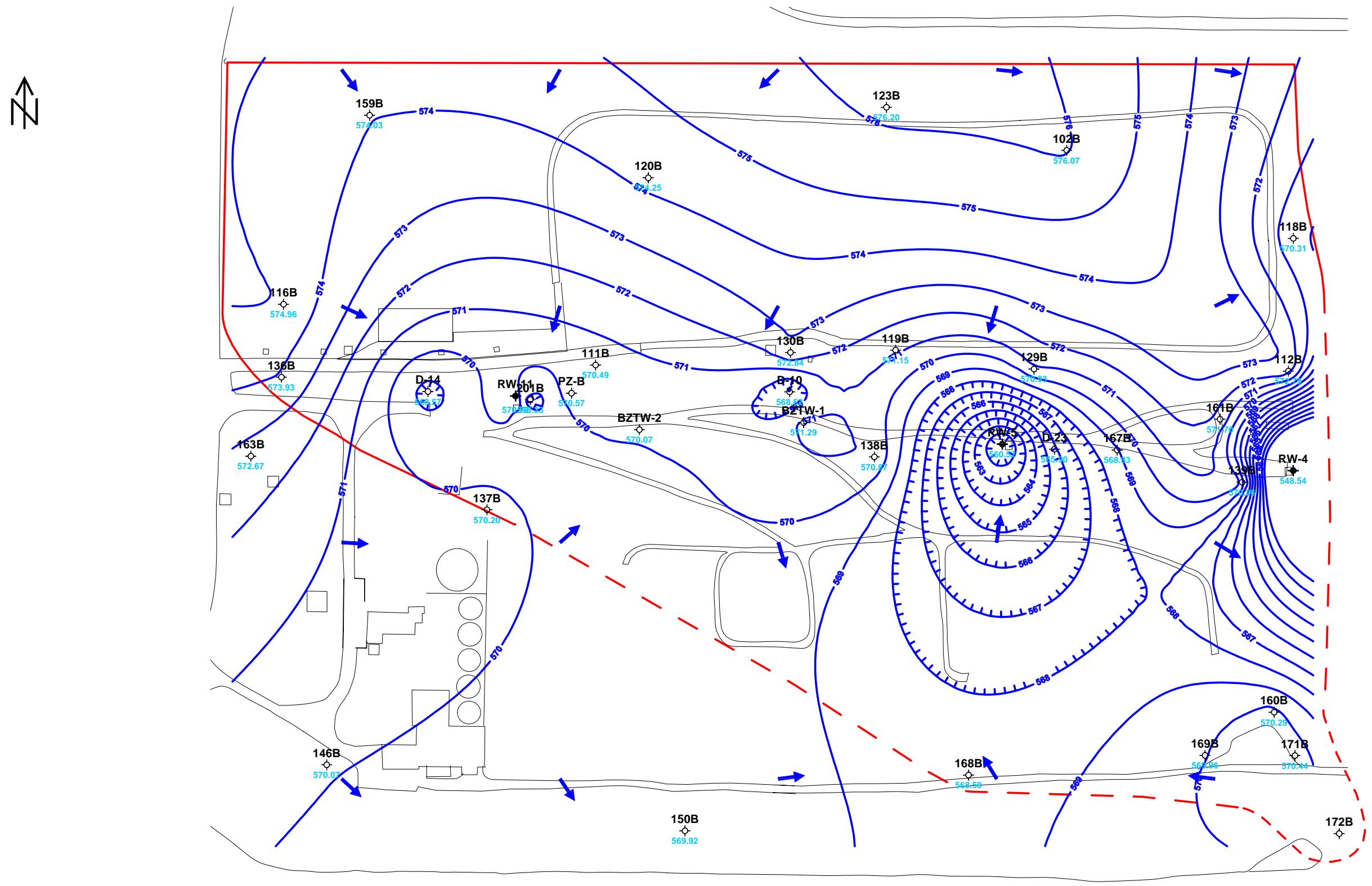
**LEGEND**

Potentiometric Contour

Structure

Road

**Figure 6**  
**Drawdown Contour Map**  
**DuPont Necco Park: A-Zone**  
**April 5, 2005 (Static) to November 13, 2008**



Scale: Feet

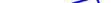


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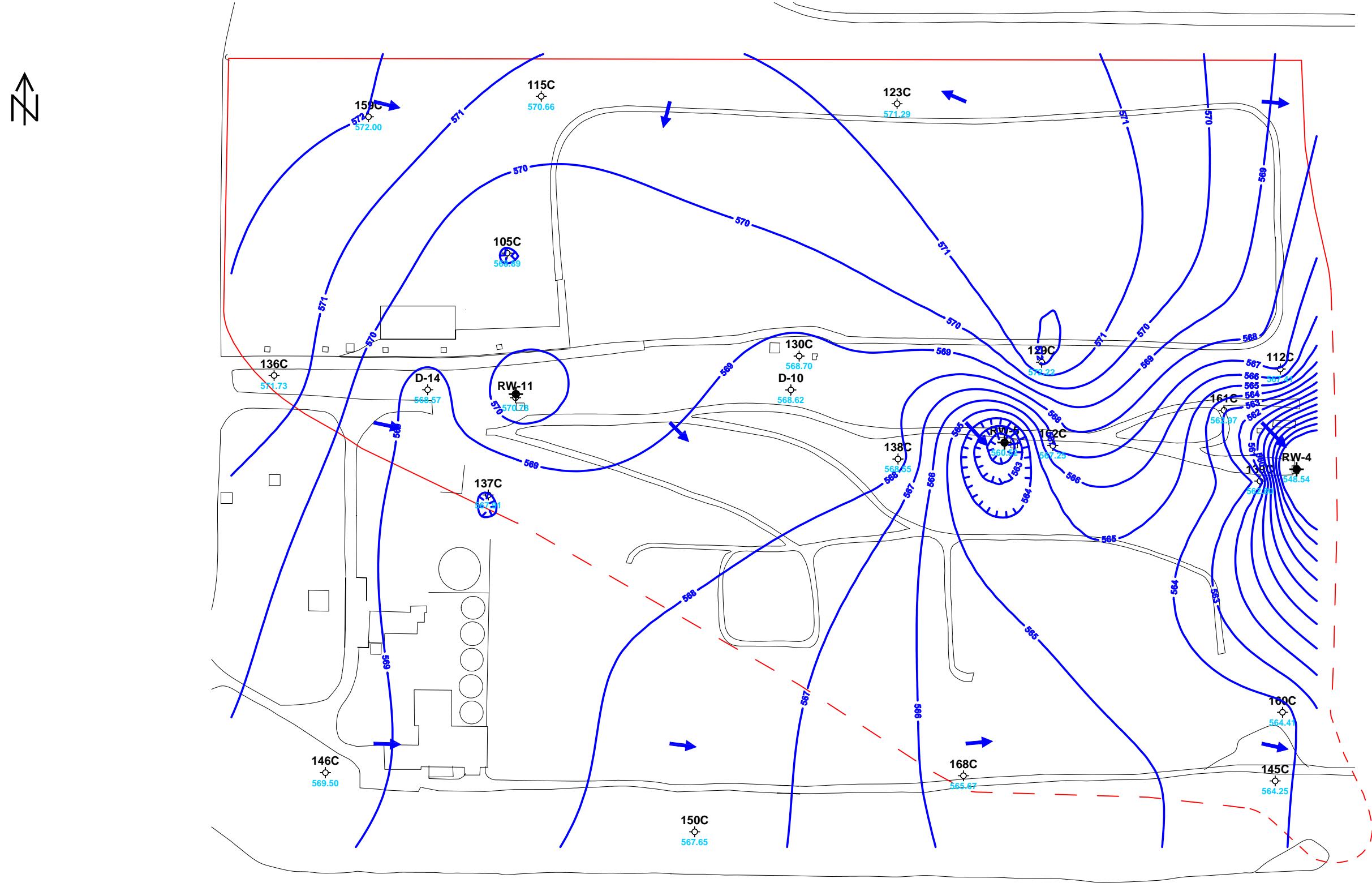
**Buffalo Avenue & 26th Street  
Niagara Falls, NY 14302**

## LEGEND

- |   |                        |   |              |
|---|------------------------|---|--------------|
| <b>3B</b>   | <b>Well ID</b>         |  | <b>Pote</b>  |
|  | <b>Monitoring Well</b> |  | <b>Struc</b> |
|  | <b>Pumping Well</b>    |  | <b>Road</b>  |

#### - Source Area Delineation

**Figure 7**  
**Potentiometric Surface Map**  
**DuPont Necco Park: B-Zone**  
**November 13, 2008**



Scale: Feet

0 100 200 300 400



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3B Well ID

◇ Monitoring Well

◆ Pumping Well

#### LEGEND

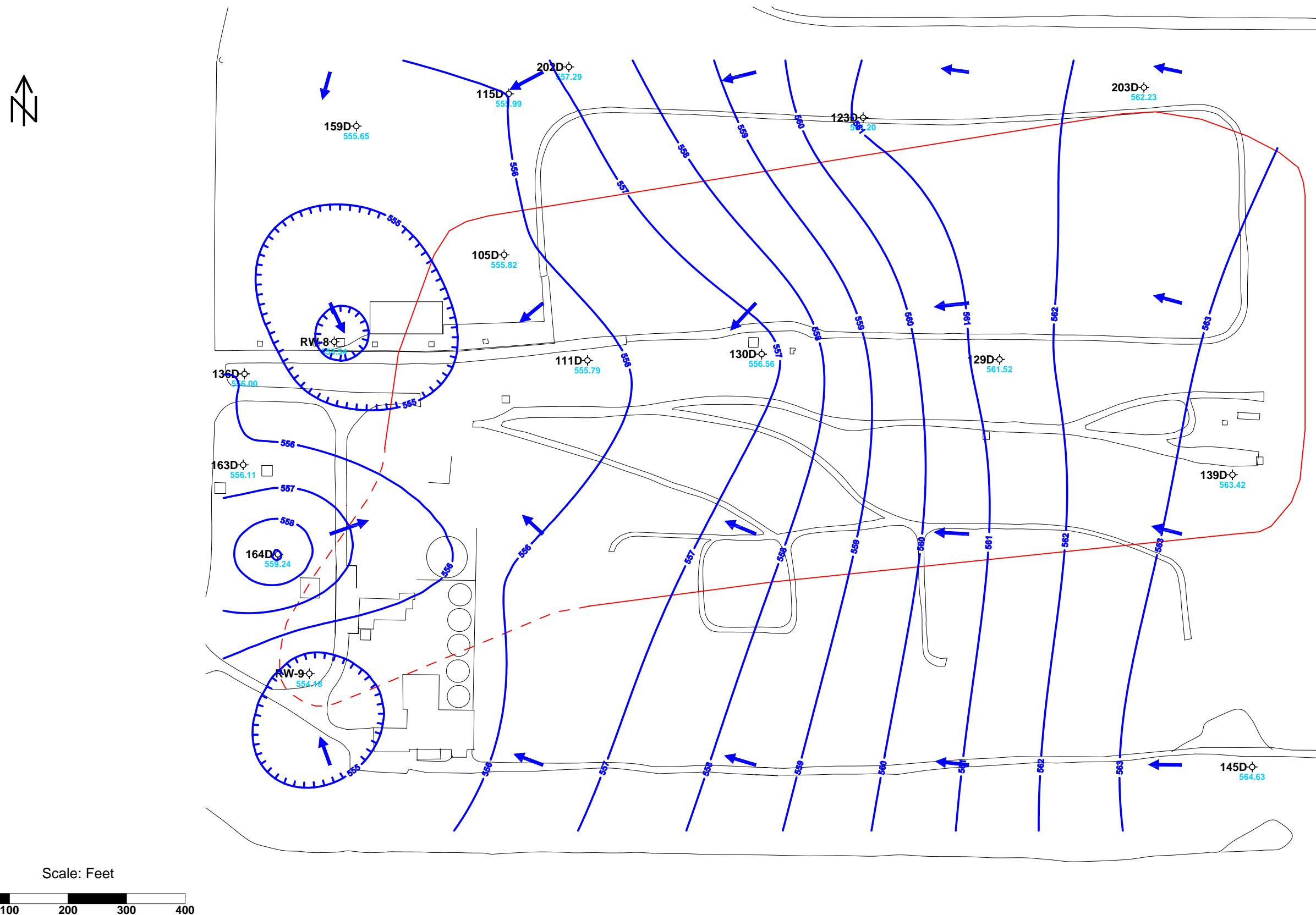
Potentiometric Contour

Source Area Delineation

Structure

Road

**Figure 8**  
**Potentiometric Surface Map**  
**DuPont Necco Park: C-Zone**  
**November 13, 2008**



Scale: Feet

0 100 200 300 400



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3B Well ID

◇ Monitoring Well

◆ Pumping Well

#### LEGEND

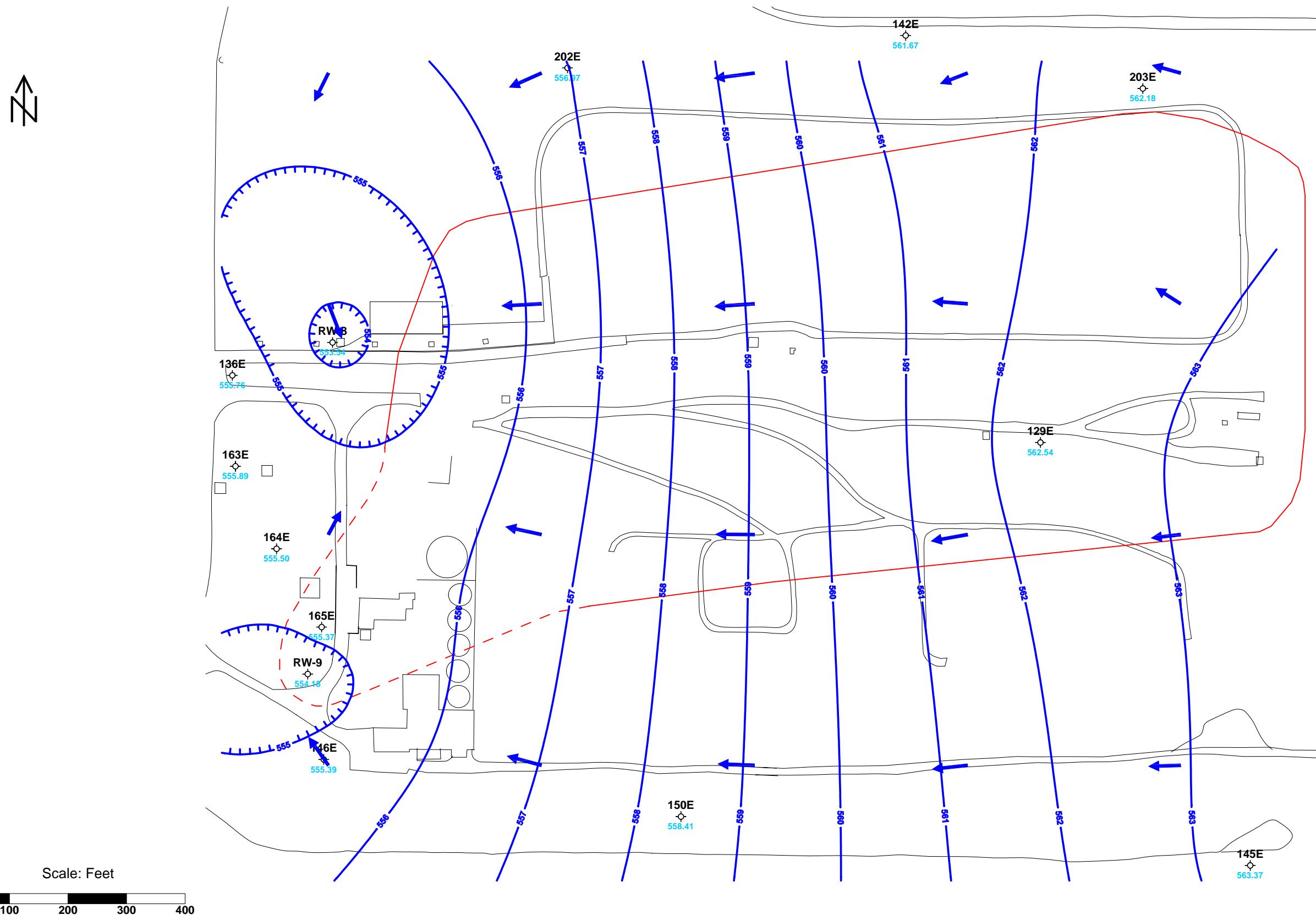
Potentiometric Contour

Source Area Delineation

Structure

Road

**Figure 9**  
**Potentiometric Surface Map**  
**DuPont Necco Park: D-Zone**  
**November 13, 2008**



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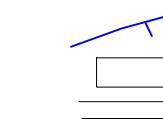
Buffalo Avenue & 26th Street  
Niagara Falls, NY 14302



3B Well ID

◇ Monitoring Well

◆ Pumping Well



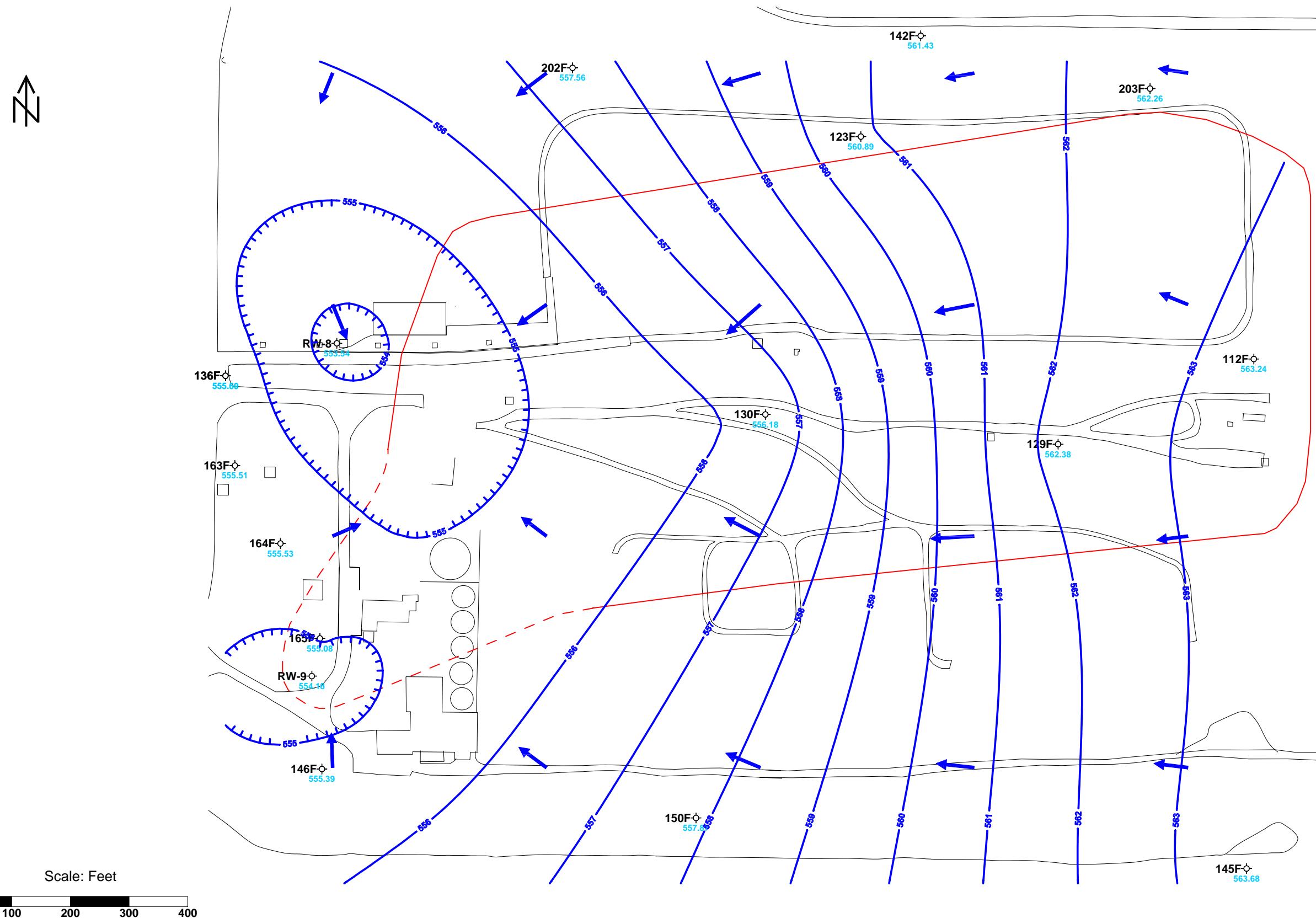
#### LEGEND

Potentiometric Contour

Structure

Road

**Figure 10**  
**Potentiometric Surface Map**  
**DuPont Necco Park: E-Zone**  
**November 13, 2008**



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Niagara Falls, NY 14302**

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## Potentiometric Contour

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## Source Area Delineation

**Figure 11**  
**Potentiometric Surface Map**  
**DuPont Necco Park: F-Zone**  
**November 13, 2008**

## **APPENDICES**

## **Appendix A**

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### **Groundwater Elevation Data**

**APPENDIX A**  
**GROUNDWATER ELEVATION DATA**  
**4Q08**  
**DUPONT NECCO PARK**

Location	Depth to Water	Casing Elevation	Groundwater Elevation	Date	Time	Comment
102B	22.94	599.01	576.07	11/13/2008	12:36	
105C	26.39	595.28	568.89	11/13/2008	13:00	
105D	38.95	594.77	555.82	11/13/2008	13:01	
111A	14.36	586.89	572.53	11/13/2008	12:01	
111B	14.45	584.94	570.49	11/13/2008	12:02	
111D	28.51	584.30	555.79	11/13/2008	12:03	
112B	9.11	581.90	572.79	11/13/2008	12:23	
112C	15.52	582.93	567.41	11/13/2008	12:24	
112F	20.05	583.29	563.24	11/13/2008	12:25	
115C	25.27	595.93	570.66	11/13/2008	13:05	
115D	40.63	596.62	555.99	11/13/2008	13:06	
116B	15.09	590.05	574.96	11/13/2008	11:54	
118B	13.59	583.90	570.31	11/13/2008	12:27	
119A	12.88	586.34	573.46	11/13/2008	12:10	
119AT	13.78	586.62	572.84	11/13/2008	12:11	
119B	15.62	586.77	571.15	11/13/2008	12:12	
120B	24.93	599.18	574.25	11/13/2008	12:46	
123A	21.89	597.93	576.04	11/13/2008	12:40	
123B	19.78	595.98	576.20	11/13/2008	12:41	
123C	24.13	595.42	571.29	11/13/2008	12:42	
123D	35.31	596.51	561.20	11/13/2008	12:43	
129A	11.47	584.80	573.33	11/13/2008	12:19	
129AT	12.16	584.94	572.78	11/13/2008	12:18	
129B	14.31	585.24	570.93	11/13/2008	12:17	
129C	13.46	585.68	572.22	11/13/2008	12:16	
129D	24.51	586.03	561.52	11/13/2008	12:15	
129E	18.34	580.88	562.54	11/13/2008	12:25	
129F	18.98	581.36	562.38	11/13/2008	12:26	
130B	12.79	585.63	572.84	11/13/2008	12:05	
130C	16.81	585.51	568.70	11/13/2008	12:06	
130D	28.40	584.96	556.56	11/13/2008	12:07	
130F	25.31	581.49	556.18	11/13/2008	12:01	
130G	24.79	580.79	556.00	11/13/2008	12:00	
131A	14.37	585.43	571.06	11/13/2008	12:20	
136B	7.76	581.69	573.93	11/13/2008	11:35	
136C	9.89	581.62	571.73	11/13/2008	11:34	
136D	23.68	579.68	556.00	11/13/2008	11:33	
136E	23.83	579.59	555.76	11/13/2008	11:32	
136F	24.73	580.33	555.60	11/13/2008	11:30	
136F	24.74	580.33	555.59	11/13/2008	13:07	
136G	20.29	579.76	559.47	11/13/2008	13:06	
137A	8.10	579.09	570.99	11/13/2008	11:41	
137B	8.11	578.31	570.20	11/13/2008	11:39	
137C	10.56	578.47	567.91	11/13/2008	11:38	
138B	13.11	583.98	570.87	11/13/2008	12:09	
138C	18.51	587.06	568.55	11/13/2008	12:10	
139B	15.13	585.39	570.26	11/13/2008	12:34	
139C	22.47	585.27	562.80	11/13/2008	12:36	
139D	22.07	585.49	563.42	11/13/2008	12:37	
140A	7.29	581.43	574.14	11/13/2008	12:28	
141G	26.61	582.53	555.92	11/13/2008	12:31	
142E	24.33	586.00	561.67	11/13/2008	12:54	
142F	24.26	585.69	561.43	11/13/2008	12:55	
143G	36.33	591.34	555.01	11/13/2008	13:17	
145A	4.29	575.84	571.55	11/13/2008	12:19	
145B	5.80	575.48	569.68	11/13/2008	12:16	
145C	11.65	575.90	564.25	11/13/2008	12:56	
145D	11.42	576.05	564.63	11/13/2008	12:58	
145E	12.61	575.98	563.37	11/13/2008	12:14	
145F	12.37	576.05	563.68	11/13/2008	12:12	
146AR	6.01	576.92	570.91	11/13/2008	12:32	
146B	6.83	576.90	570.07	11/13/2008	12:25	
146C	6.85	576.35	569.50	11/13/2008	12:26	
146E	20.69	576.08	555.39	11/13/2008	12:27	
146F	20.65	576.04	555.39	11/13/2008	12:28	

**APPENDIX A**  
**GROUNDWATER ELEVATION DATA**  
**4Q08**  
**DUPONT NECCO PARK**

Location	Depth to Water	Casing Elevation	Groundwater Elevation	Date	Time	Comment
148D	8.79	576.38	567.59	11/13/2008	11:30	
148F	21.98	576.21	554.23	11/13/2008	11:32	
149B	4.13	572.87	568.74	11/13/2008	11:40	
149C	5.44	573.26	567.82	11/13/2008	11:41	
149D	16.07	572.86	556.79	11/13/2008	11:43	
150A	4.83	575.86	571.03	11/13/2008	11:55	
150B	6.07	575.99	569.92	11/13/2008	11:56	
150C	8.48	576.13	567.65	11/13/2008	11:57	
150E	17.74	576.15	558.41	11/13/2008	11:58	
150F	18.11	575.98	557.87	11/13/2008	12:00	
151B	6.93	573.36	566.43	11/13/2008	11:18	
151C	7.28	573.18	565.90	11/13/2008	11:20	
159A	18.39	596.16	577.77	11/13/2008	13:10	
159B	22.34	596.37	574.03	11/13/2008	13:11	
159C	25.36	597.36	572.00	11/13/2008	13:12	
159D	42.02	597.67	555.65	11/13/2008	13:13	
160B	12.46	582.75	570.29	11/13/2008	12:50	
160C	18.31	582.72	564.41	11/13/2008	12:51	
161B	11.14	582.84	571.70	11/13/2008	12:47	
161C	19.67	582.64	562.97	11/13/2008	12:48	
162C	13.75	581.00	567.25	11/13/2008	12:21	
163A	5.30	578.14	572.84	11/13/2008	11:50	
163B	5.27	577.94	572.67	11/13/2008	11:49	
163D	22.71	578.82	556.11	11/13/2008	11:48	
163E	23.17	579.06	555.89	11/13/2008	11:47	
163F	23.25	578.76	555.51	11/13/2008	11:46	
164D	18.18	577.42	559.24	11/13/2008	11:44	
164E	21.82	577.32	555.50	11/13/2008	11:43	
164F	21.74	577.27	555.53	11/13/2008	11:42	
165E	22.19	577.56	555.37	11/13/2008	12:37	
165F	22.64	577.72	555.08	11/13/2008	12:35	
167B	12.00	580.93	568.93	11/13/2008	12:29	
168A	8.43	578.72	570.29	11/13/2008	12:29	
168B	10.40	578.90	568.50	11/13/2008	12:42	
168C	13.54	579.21	565.67	11/13/2008	12:43	
169B	10.47	580.43	569.96	11/13/2008	12:47	
171B	9.10	579.54	570.44	11/13/2008	12:53	
172B	7.01	576.95	569.94	11/13/2008	12:10	
173A	9.90	580.71	570.81	11/13/2008	11:55	
174A	6.53	577.62	571.09	11/13/2008	11:36	
175A	12.39	586.81	574.42	11/13/2008	11:59	
176A	9.13	580.03	570.90	11/13/2008	11:46	
178A	9.07	579.92	570.85	11/13/2008	11:53	
179A	8.19	579.01	570.82	11/13/2008	11:49	
180AT	7.78	579.47	571.69	11/13/2008	12:21	
184A	8.66	579.88	571.22	11/13/2008	11:59	
184AT	8.98	579.69	570.71	11/13/2008	11:58	
185A	9.67	580.84	571.17	11/13/2008	12:06	
185AT	9.96	580.69	570.73	11/13/2008	12:07	
186A	12.42	579.76	567.34	11/13/2008	12:11	
186AT	9.30	580.10	570.80	11/13/2008	12:12	
187A	13.28	579.94	566.66	11/13/2008	12:14	
187AT	8.28	579.30	571.02	11/13/2008	12:13	
188A	16.84	580.91	564.07	11/13/2008	12:17	
188AT	9.14	580.59	571.45	11/13/2008	12:16	
189A	14.08	579.82	565.74	11/13/2008	12:23	
189AT	8.90	580.40	571.50	11/13/2008	12:24	
190A	12.95	580.58	567.63	11/13/2008	12:27	
190AT	9.42	580.92	571.50	11/13/2008	12:28	
191A	9.82	580.62	570.80	11/13/2008	12:30	
191AT	9.44	581.06	571.62	11/13/2008	12:31	
192A	13.24	584.08	570.84	11/13/2008	12:32	
192AT	14.14	584.46	570.32	11/13/2008	12:33	
193A	11.90	584.13	572.23	11/13/2008	12:43	
193AT	8.56	583.09	574.53	11/13/2008	12:44	

**APPENDIX A**  
**GROUNDWATER ELEVATION DATA**  
**4Q08**  
**DUPONT NECCO PARK**

Location	Depth to Water	Casing Elevation	Groundwater Elevation	Date	Time	Comment
194A	13.47	584.35	570.88	11/13/2008	12:40	
194AT	11.62	584.93	573.31	11/13/2008	12:41	
201B	10.92	579.25	568.33	11/13/2008	11:50	
202D	36.44	593.73	557.29	11/13/2008	11:29	
202E	36.76	593.73	556.97	11/13/2008	11:30	
202F	36.17	593.73	557.56	11/13/2008	11:31	
203D	31.63	593.86	562.23	11/13/2008	11:25	
203E	31.68	593.86	562.18	11/13/2008	11:26	
203F	31.60	593.86	562.26	11/13/2008	11:27	
BZTW-1	8.38	579.67	571.29	11/13/2008	12:05	
BZTW-2	9.31	579.38	570.07	11/13/2008	11:54	
D-10	11.40	580.02	568.62	11/13/2008	12:04	
D-11	7.99	578.07	570.08	11/13/2008	11:52	
D-13	6.66	579.07	572.41	11/13/2008	11:43	
D-14	10.44	579.01	568.57	11/13/2008	11:42	
D-23	14.65	580.55	565.90	11/13/2008	12:22	
D-9	8.43	580.15	571.72	11/13/2008	12:03	
PZ-A	8.62	579.06	570.44	11/13/2008	11:21	
PZ-B	8.90	579.47	570.57	11/13/2008	11:24	
RDB-3	5.41	579.31	573.90	11/13/2008	11:36	
RDB-5	5.32	578.57	573.25	11/13/2008	11:37	

## **Appendix B**

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### **GWTF Process Sampling Results**

**Appendix B: 4Q08 Summary of Analytical Results**  
**DuPont Necco Park**

Sample Date 11/13/08	Sample ID	BC-INFLUENT	DEF-INFLUENT	COMB-EFFLUENT	TBLK
<b>Field Parameters</b>					
COLOR QUALITATIVE (FIELD)	NS	GREY	GREY	GREY	NS
ODOR (FIELD)	NS	MODERATE	MODERATE	MODERATE	NS
PH (FIELD)	STD UNITS	6.57	6.92	6.99	NS
REDOX (FIELD)	MV	-134	-206	-100	NS
SPECIFIC CONDUCTANCE (FIELD)	UMHOS/CM	9865	4389	6651	NS
TEMPERATURE (FIELD)	DEGREES C	13.4	11.5	13.5	NS
TURBIDITY QUANTITATIVE (FIELD)	NTU	120	143	154	NS
<b>Volatile Organics</b>					
1,1,2,2-TETRACHLOROETHANE	UG/L	1800 J	1600 J	1000 J	0.23 J
1,1,2-TRICHLOROETHANE	UG/L	3000	2900	870	<0.27
1,1-DICHLOROETHENE	UG/L	550	380 J	<7.6	<0.19
1,2-DICHLOROETHANE	UG/L	490	220 J	60	<0.22
CARBON TETRACHLORIDE	UG/L	1100	1300	29 J	<0.13
CHLOROFORM	UG/L	13000	5300	370	<0.16
CIS-1,2 DICHLOROETHENE	UG/L	4500	12000	260	<0.17
METHYLENE CHLORIDE	UG/L	1600 J	3800 J	83 J	<0.33 UJ
TETRACHLOROETHYLENE	UG/L	4300	1900	70	<0.29
TRANS-1,2-DICHLOROETHENE	UG/L	280 J	800	<7.6	<0.19
TRICHLOROETHENE	UG/L	14000	8400	220	<0.17
VINYL CHLORIDE	UG/L	1400	2400	<8.8 UJ	<0.22
<b>Other Organics</b>					
2,4,5-TRICHLOROPHENOL	UG/L	62 J	390	170 J	NS
2,4,6-TRICHLOROPHENOL	UG/L	23 J	180	74 J	NS
3- AND 4- METHYLPHENOL	UG/L	200	24 J	110 J	NS
HEXACHLOROBENZENE	UG/L	<1	<1	12 J	NS
HEXACHLOROBUTADIENE	UG/L	390	33 J	730	NS
HEXACHLOROETHANE	UG/L	95 J	13 J	110 J	NS
PENTACHLOROPHENOL	UG/L	360 J	700	380 J	NS
PHENOL	UG/L	290	58 J	150 J	NS
Tentatively Identified Compound 01	UG/L	4000 J	870 J	1700 J	NS
<b>Inorganics</b>					
BARIUM, DISSOLVED	UG/L	33200	100 J	620	NS
BARIUM, TOTAL	UG/L	109000	91 J	37500	NS
SULFATE	UG/L	9100	914000	287000	NS
<b>Total Volatiles</b>		46020J	41000J	2962J	0.23J

< and ND = Non detect at stated reporting limit

UJ - Not detected. Reporting limit may not be accurate or precise.

NS - Not Sampled

J - Estimated value.