



DuPont Corporate Remediation Group  
Buffalo Avenue & 26<sup>th</sup> Street  
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Niagara Falls, NY 14302  
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May 26, 2011

Ms. Gloria Sosa  
Western New York Remediation Section  
New York Remediation Branch  
Emergency and Remediation Response Division  
U.S. Environmental Protection Agency – Region 2  
290 Broadway, 20<sup>th</sup> Floor  
New York, NY 10007-1866

Dear Ms. Sosa:

**NECCO PARK FIRST QUARTER 2011 DATA PACKAGE**

Enclosed are three copies of the *First Quarter 2011 (1Q11) Data Package* for the E. I. du Pont de Nemours and Company (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 1Q11 monitoring summary for dense non-aqueous phase liquid (DNAPL).

Pumping system uptime for 1Q11 was 94.6 percent. The total volume of groundwater treated was 3,679,957 gallons. DNAPL was observed at Recovery Well-5 (RW-5) in March of 1Q11. A total of 70 gallons of DNAPL was removed during 1Q11.

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

Sincerely,

CORPORATE REMEDIATION GROUP

A handwritten signature in black ink, appearing to read "Paul F. Mazierski".

Paul F. Mazierski  
Project Director

PFM/ddt  
Enc.

cc: M. Hinton/NYSDEC  
D. Taylor/Parsons  
Carol Luttrell/DuPont

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**SOURCE AREA HYDRAULIC CONTROL  
FIRST QUARTER 2011  
GROUNDWATER MONITORING DATA PACKAGE  
DUPONT NECCO PARK  
NIAGARA FALLS, NIAGARA COUNTY, NEW YORK**

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**EPA ID No. NYD980532162**

*Prepared For:*

**DuPont Corporate Remediation Group**

Buffalo Avenue & 26th Street  
Niagara Falls, NY 14302

*Prepared By:*

**PARSONS**

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Phone: (716) 541-0760

**May 2011**

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APPENDIX A GROUNDWATER ELEVATION DATA - FIRST QUARTER 2011

APPENDIX B GWTF PROCESS SAMPLING RESULTS - FIRST QUARTER 2011

ATTACHMENT 1

ELECTRONIC COPY OF GROUNDWATER ELEVATION DATA - FIRST QUARTER 2011

## SECTION 1

### DATA PACKAGE SUMMARY

#### 1.1 INTRODUCTION

This data package presents a summary of operating and monitoring data collected during the first quarter of 2011 (1Q11) for groundwater remediation measures at the E. I. du Pont de Nemours and Company (DuPont) Necco Park Site (Necco Park) in Niagara Falls, New York. Submission of this data package meets the reporting requirements defined in the agency approved Long Term Groundwater Monitoring Plan (LTGMP) and the Sampling, Analysis, and Monitoring Plan (SAMP; CRG, 2005).

This data package is the 23rd submitted since the 2005 startup of the Necco Park Hydraulic Control System (HCS) and includes a summary of operations for the pumping wells and the Groundwater Treatment Facility (GWTF). Included are figures depicting groundwater elevation contours for seven groundwater flow zones (Figures 1, 4, and 7 through 11) 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, 3, 5, and 6).

Figures 2 and 5 present the vertical gradient (in feet per foot [ft/ft]) for selected well pairs between the AT-Zone 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 the AT-Zone and A-Zones wells) or the center of the open rock zone (for B-Zone wells).

Figures 3 and 6 present potentiometric contours of net drawdown in selected wells between April 5, 2005 (immediately prior to HCS startup) and the groundwater elevation in each well on February 16, 2011.

#### 1.2 OPERATIONAL SUMMARY

A summary of average HCS uptime, total gallons of groundwater treated, and gallons of dense non-aqueous phase liquid (DNAPL) removed for 1Q11 is as follows:

|                   | HCS Uptime<br>(%) | Groundwater Treated<br>(gallons) | DNAPL Removed<br>(gallons) |
|-------------------|-------------------|----------------------------------|----------------------------|
| January           | 89.8%             | 1,148,422                        | 0                          |
| February          | 97.5%             | 1,187,681                        | 0                          |
| March             | 96.9%             | 1,343,854                        | 70                         |
| <b>1Q11 Total</b> | <b>94.6%</b>      | <b>3,679,957</b>                 | <b>70</b>                  |

DNAPL – dense non-aqueous phase liquid

System downtime is categorized into two groups: individual recovery well downtime and complete HCS system downtime. Table 1 summarizes individual recovery well downtimes that exceeded a 24-hour period during 1Q11.

The following three unscheduled recovery well downtime events occurred during the first quarter:

1. Unscheduled downtime of the GWTF in January due to freezing of emissions stack leading to two days of downtime for wells RW-4, RW-5, RW-11, RW-8 and RW-9
2. Unscheduled maintenance and repair of pump at RW-5 in February, with a 2-day downtime
3. Unscheduled maintenance and repair of pump at RW-5 in March, with a 3-day downtime

There were no scheduled well downtime events for 1Q11.

Table 2 provides an historical operational summary by quarter since HCS operations began. There were approximately 52 hours of unscheduled HCS downtime in January due to freezing of the emissions stack. No other unscheduled HCS downtime occurred during 1Q11. There were no scheduled HCS downtime events during the first quarter.

Monthly DNAPL monitoring was completed on January 27, February 16, and March 24. DNAPL was not observed in any wells in January or February, but was noted in RW-5 in March. Seventy gallons of DNAPL were recovered during 1Q11.

### **1.3 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 1Q11. Samples were collected by TestAmerica Laboratories of Amherst, New York, on February 8, 2011, and shipped to the TestAmerica Laboratories in North Canton, Ohio, for analysis. Sample results for the process sampling are included in Appendix B.

### **1.4 POTW COMPLIANCE**

As required by the publicly-owned treatment works (POTW) discharge permit for the site, the Necco GWTF discharge is sampled and reported quarterly to the Niagara Falls Water Board. The Necco Park 1Q11 wastewater samples were collected on January 12, 2011. There were no permit limit exceedances in 1Q11. The Necco POTW discharge permit was renewed in May 2009 and remains valid through May 1, 2014.

## **SECTION 2**

### **REFERENCES**

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

## TABLES

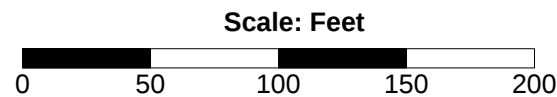
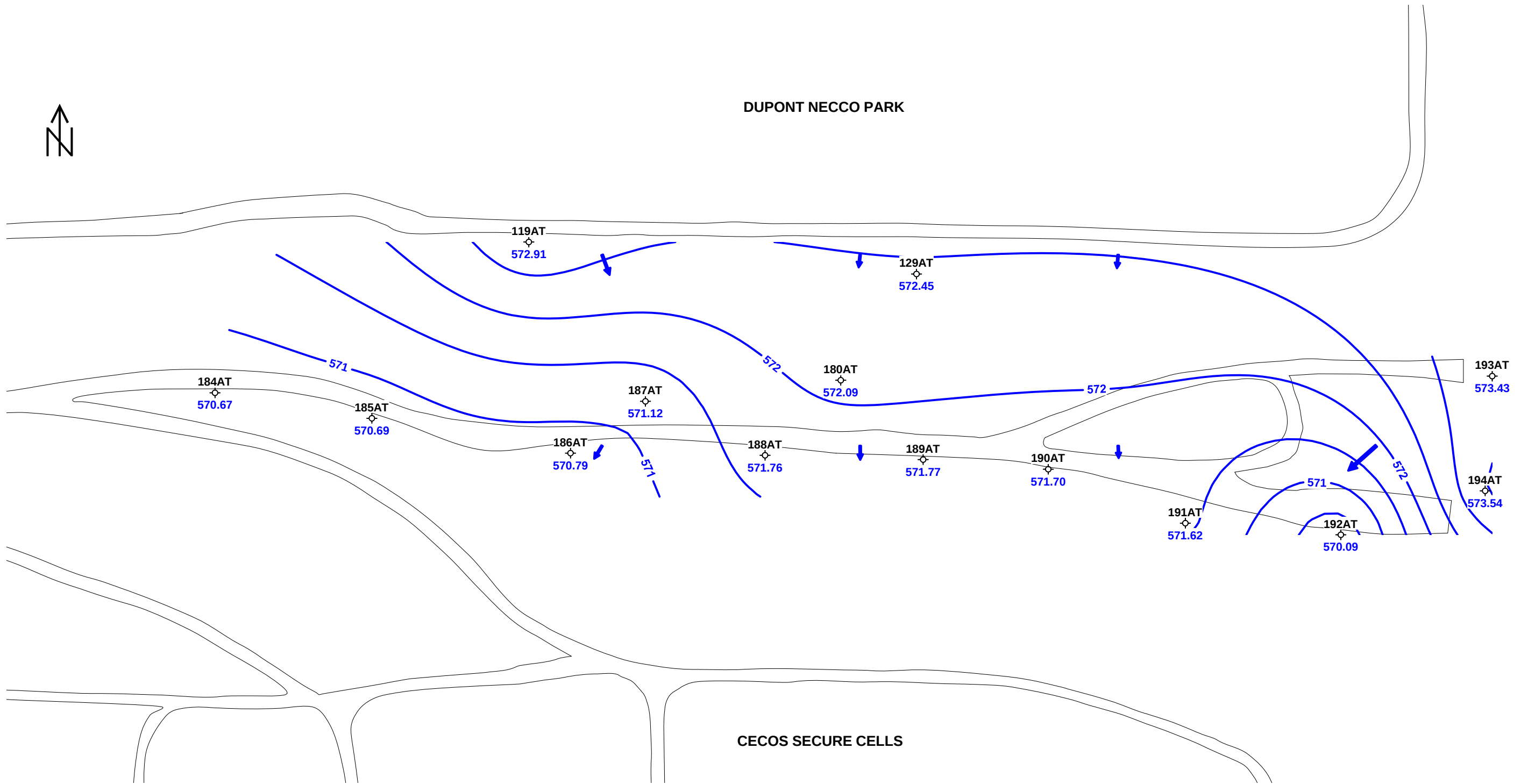
**Table 1**  
**Individual Well Shutdown Summary 1Q11**  
**DuPont Necco Park**

|          | Well ID                           | Date(s)     | Length of Shutdown (hours) | Reason for Shutdown                               | Remarks     |
|----------|-----------------------------------|-------------|----------------------------|---------------------------------------------------|-------------|
| January  | RW-4, RW-5, RW-8, RW-9, and RW-11 | January 24  | 52                         | Shutdown of GWRF and wells due to stack freezing. | Unscheduled |
| February | RW-5                              | February 19 | 50                         | Maintenance, pump repairs                         | Unscheduled |
| March    | RW-5                              | March 28    | 68                         | Maintenance, pump repairs                         | Unscheduled |

**Table 2**  
**Historical HCS Operational Summary - 1Q11**  
**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                             |
| 1Q09                    | 88.7                  | 89.6                                                           | 4,442,026                            | 0                              |
| 2Q09                    | 95.0                  | 95.0                                                           | 4,117,084                            | 0                              |
| 3Q09                    | 95.3                  | 95.3                                                           | 4,069,280                            | 0                              |
| 4Q09                    | 95.8                  | 95.8                                                           | 3,663,740                            | 0                              |
| 1Q10                    | 98.3                  | 98.3                                                           | 3,921,478                            | 90                             |
| 2Q10                    | 77.0                  | 100.0                                                          | 3,259,485                            | 0                              |
| 3Q10                    | 100.0                 | 100.0                                                          | 3,398,078                            | 0                              |
| 4Q10                    | 93.8                  | 99.1                                                           | 3,195,727                            | 0                              |
| 1Q11                    | 94.6                  | 97.6                                                           | 3,679,957                            | 70                             |
| <b>TOTALS</b>           | <b>---</b>            | <b>---</b>                                                     | <b>79,744,603</b>                    | <b>1,080</b>                   |
| <b>AVERAGE</b>          | <b>91.6</b>           | <b>93.7</b>                                                    | <b>---</b>                           | <b>---</b>                     |

## FIGURES



Contour Interval = 0.5 feet

Elevation datum feet AMSL

**PARSONS**

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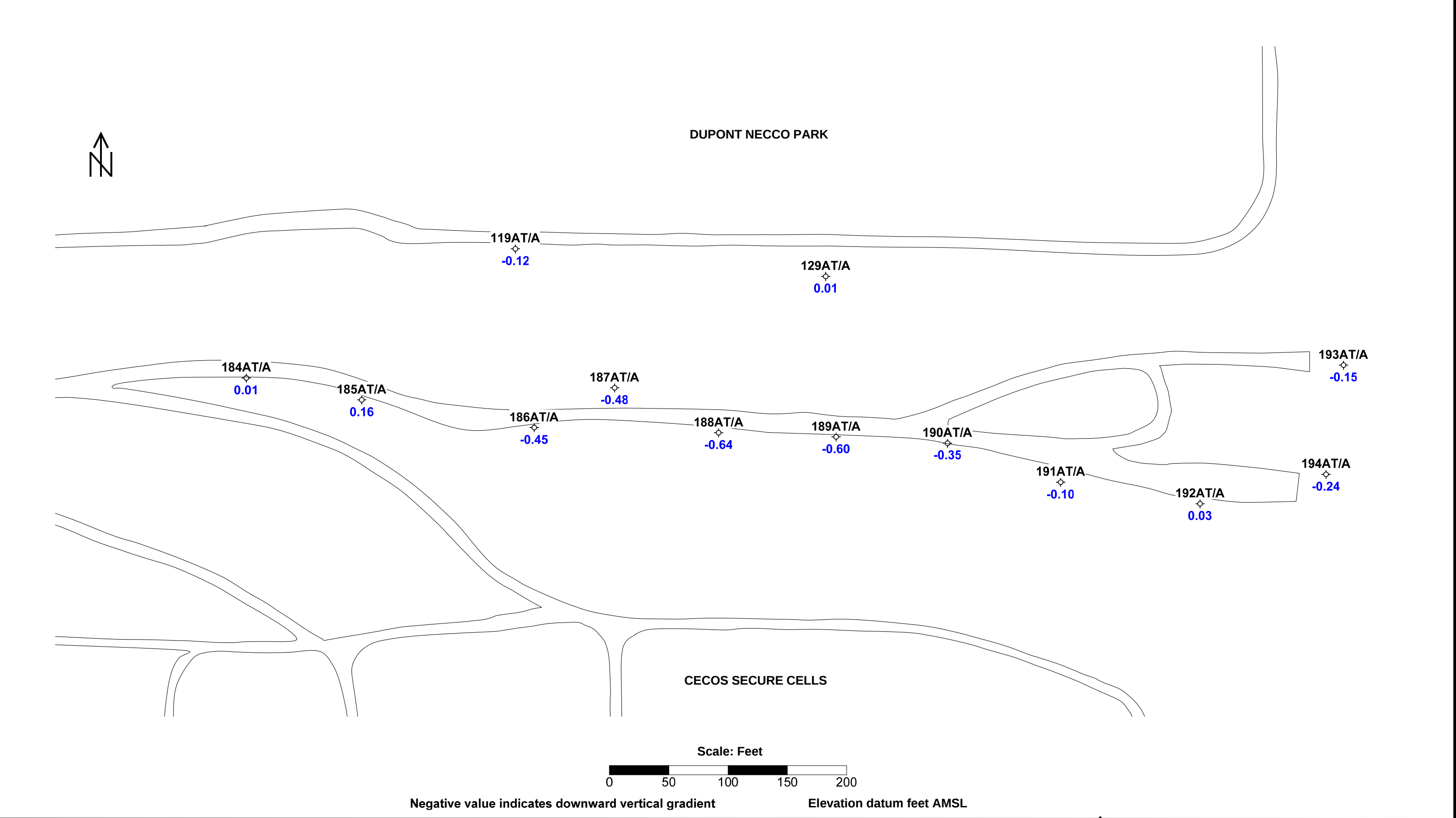
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| Created by      | RBP/JWS      |
| Checked by      | EAF/LJM      |
| Project Manager | DDT          |
| Job number:     | 445357.02022 |

- 3B**
- Well ID
- Monitoring Well
- Pumping Well

**LEGEND**

- Potentiometric Contour
- Structure
- Road

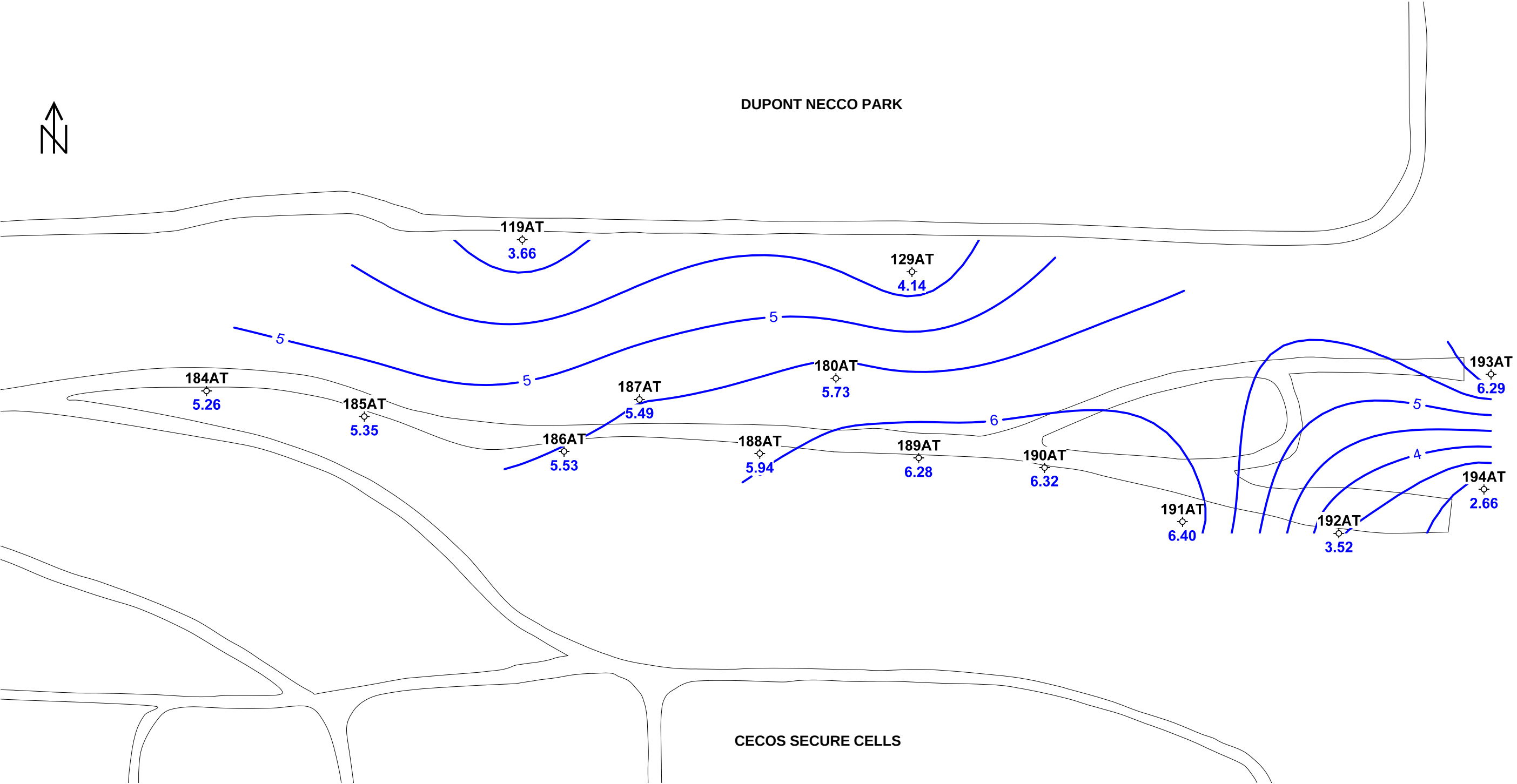
**Figure 1**  
**Potentiometric Surface Map**  
**DuPont Necco Park: AT-Zone**  
**February 16, 2011**



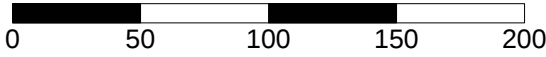
|                                                                    |                  |              |                                                                                                                        |
|--------------------------------------------------------------------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------|
| <b>PARSONS</b><br>40 La Riviere Dr, Suite 350<br>Buffalo, NY 14202 | Created by:      | RBP/JWS      | <b>Figure 2</b><br><b>Vertical Gradient: AT-Zone to A-Zone</b><br><b>DuPont Necco Park</b><br><b>February 16, 2011</b> |
|                                                                    | Checked by:      | EAJ/LJM      |                                                                                                                        |
|                                                                    | Project Manager: | DDT          |                                                                                                                        |
|                                                                    | Job number:      | 445357.02022 |                                                                                                                        |



DUPONT NECCO PARK



Scale: Feet



Contour Interval = 0.5 feet

Elevation datum feet AMSL

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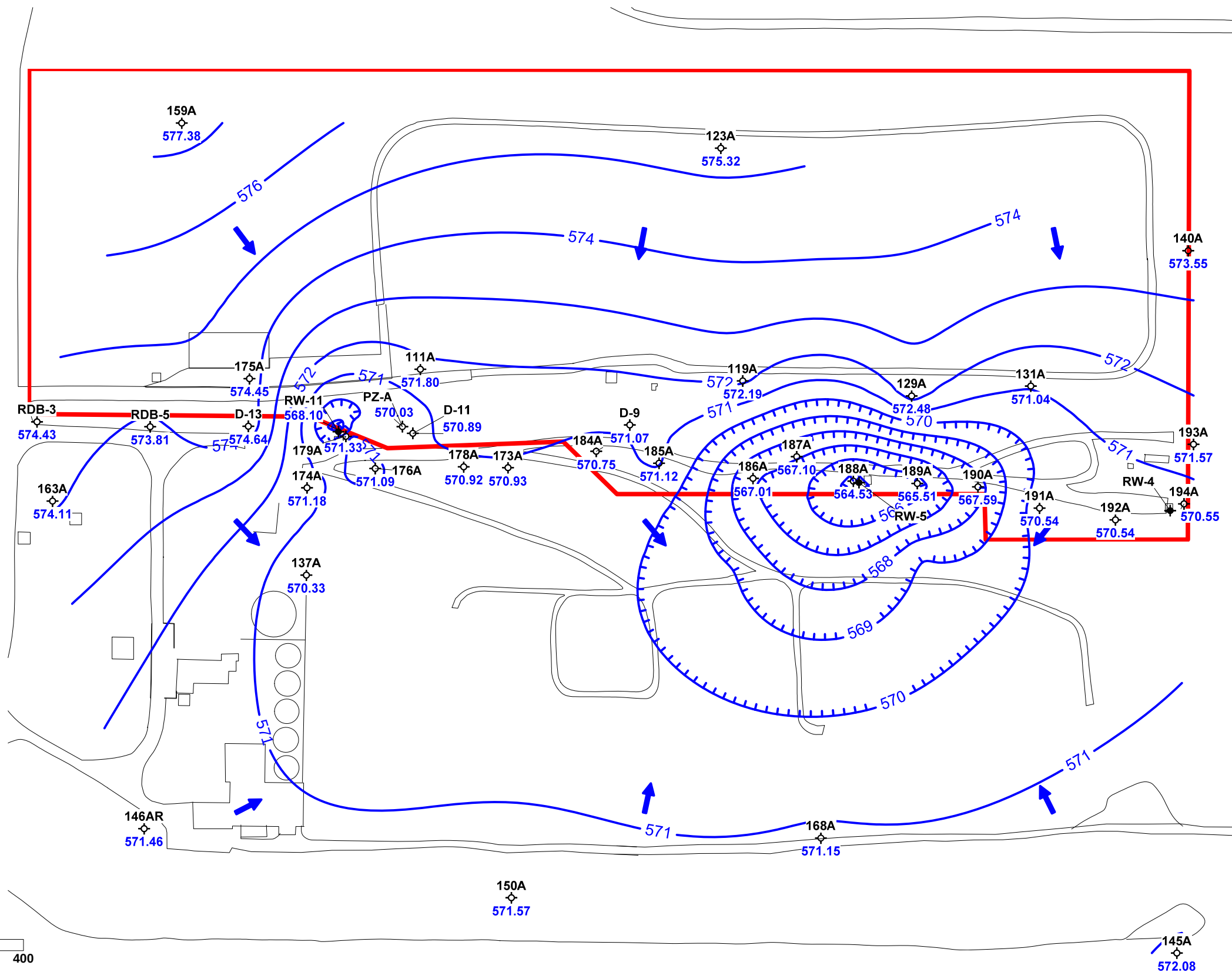
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| Checked by:      | EAF/LJM      |
| Project Manager: | DDT          |
| Job number:      | 445357.02022 |

- 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 February 16, 2011**



Scale: Feet



Contour Interval = 1 foot Elevation datum feet AMSL

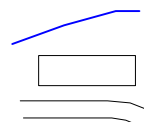
Note: Wells 117A and 139A were not used in the contouring.

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|                          |                |
|--------------------------|----------------|
| Created by: RBP/JWS      | Date: 05-10-11 |
| Checked by: EAF/LJM      | Date: 05-11-11 |
| Project Manager: DDT     | Date: 05-26-11 |
| Job number: 445237.02022 |                |

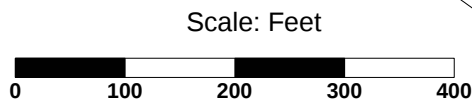
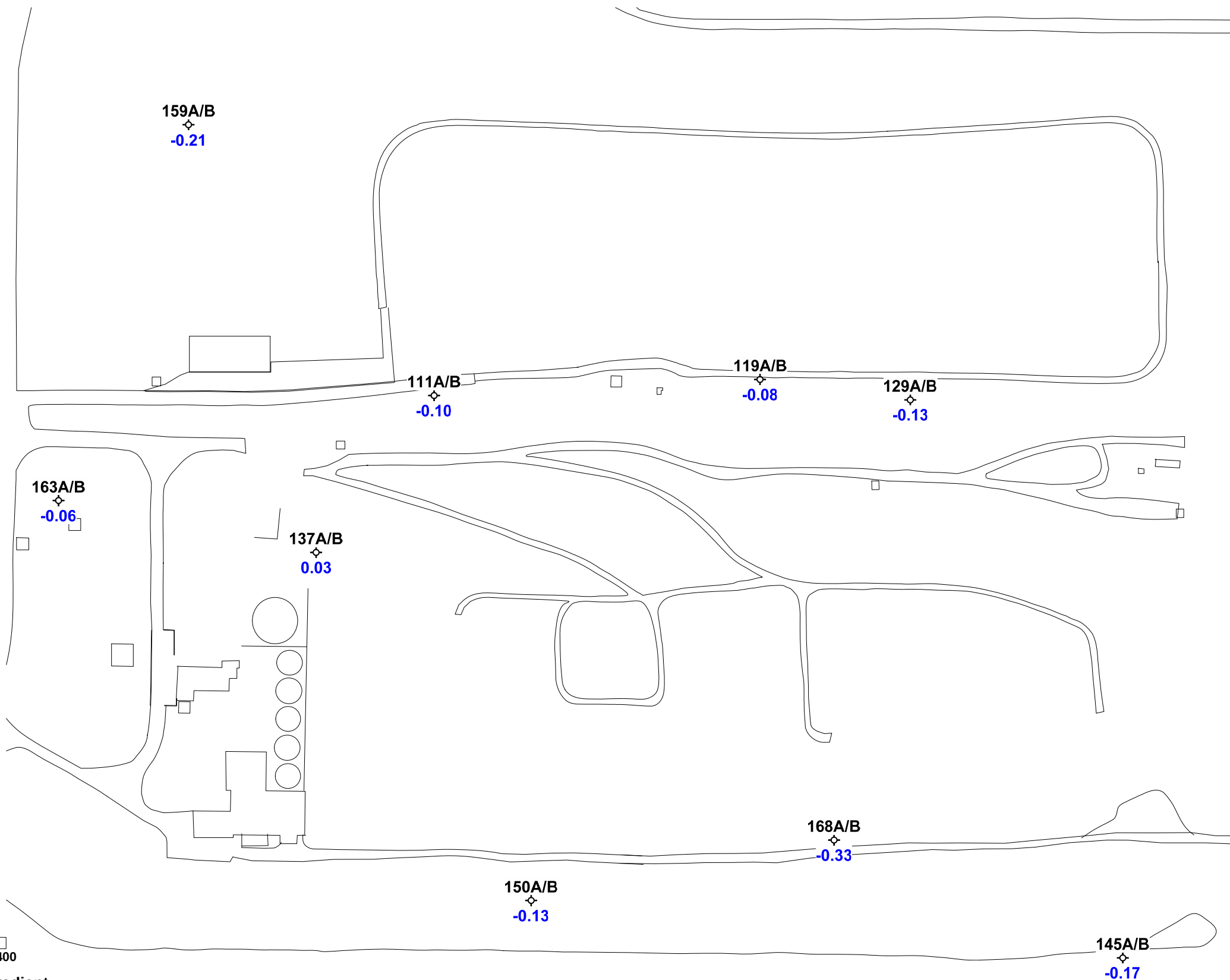
- 3B Well ID
- ◇ Monitoring Well
- ★ Pumping Well



**LEGEND**

- Potentiometric Contour
- Structure
- Road
- Source Area Extent

**Figure 4**  
**Potentiometric Surface Map**  
**DuPont Necco Park: A-Zone**  
**February 16, 2011**



Negative value indicates downward gradient  
Elevation datum feet AMSL

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|                          |                |
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| Project Manager: DDT     | Date: 05-26-11 |
| Job number: 445237.02022 |                |

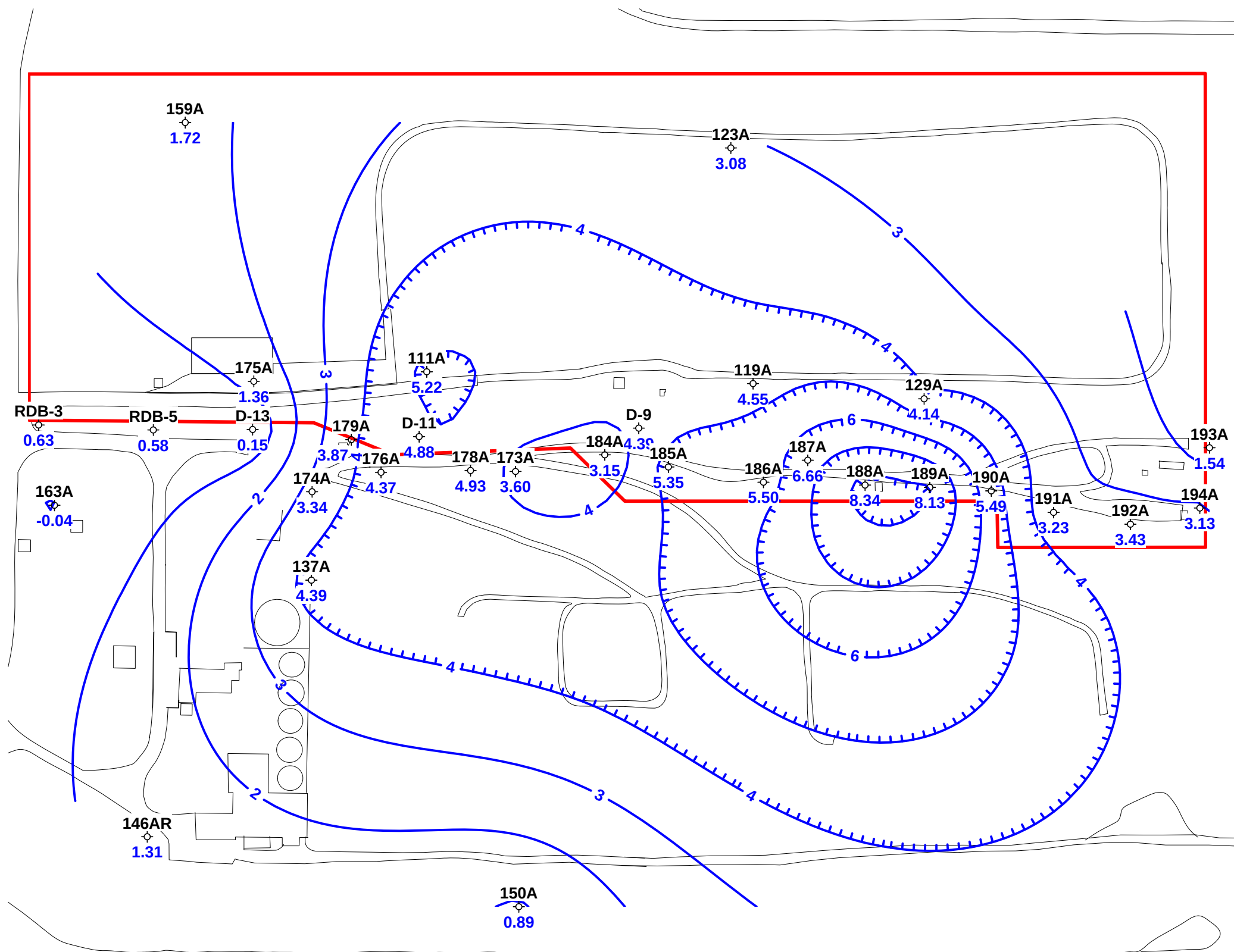
**LEGEND**

- 3B Well ID
- ◇ Monitoring Well
- ★ Pumping Well

- Potentiometric Contour
- Road

- Structure

**Figure 5**  
**Vertical Gradient: A-Zone to B-Zone**  
**DuPont Necco Park**  
**February 16, 2011**



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| Created by: RBP/JWS      | Date: 05-11-11 |
| Checked by: EAF/LJM      | Date: 05-11-11 |
| Project Manager:         | Date: 05-26-11 |
| Job number: 445237.02022 |                |

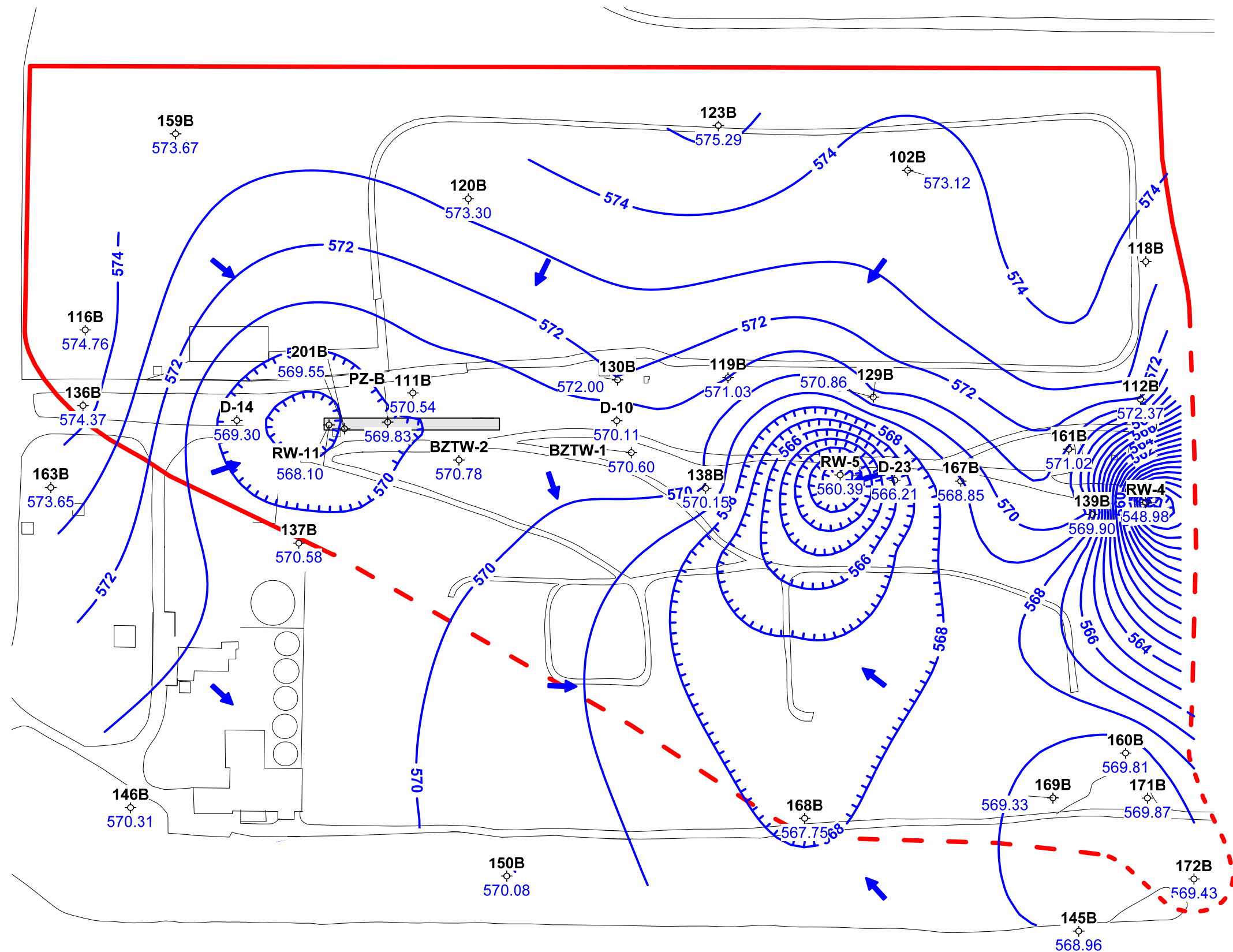
**LEGEND**

3B Well ID  
Monitoring Well

Potentiometric Contour  
Road

Source Area Extent  
Structure

**Figure 6**  
**Drawdown Contour Map**  
**DuPont Necco Park: A-Zone**  
**April 5, 2005 (Static) to February 16, 2011**



**Wells 149B and 151B are outside the area shown, but were used in the contouring.  
Wells 118B, 170B, TRW-6 and TRW-7 were not used in the contouring.**

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### LEGEND

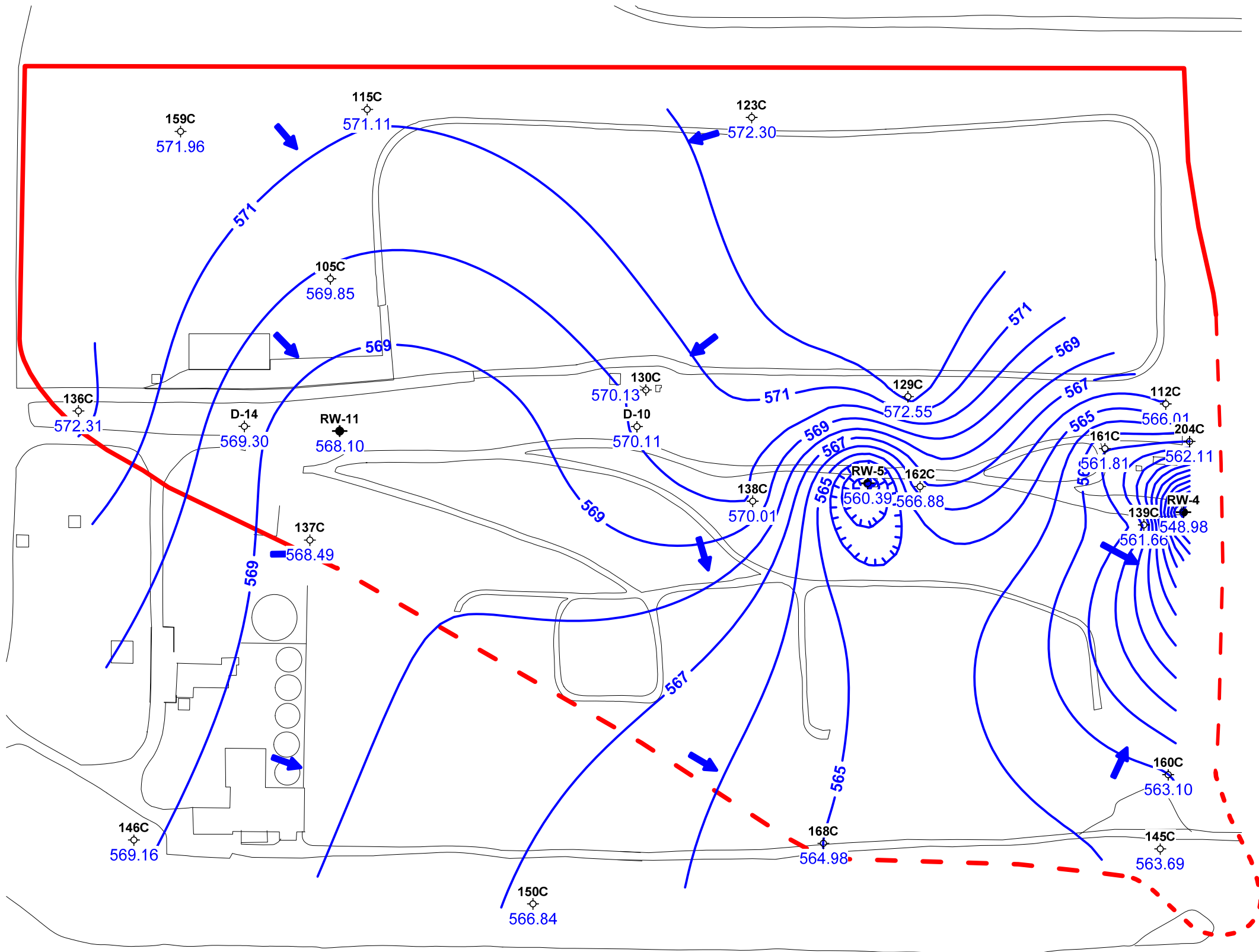
Potentiometric Contour  
Structure  
Road




**Source Area Extent**


**Bedrock Fractured Blast Trench**

**Figure 7**  
**Potentiometric Surface Map**  
**DuPont Necco Park: B-Zone**  
**February 16, 2011**



Scale: Feet  
0 100 200 300 400  
Contour interval = 1.0 foot  
Elevation datum feet AMSL

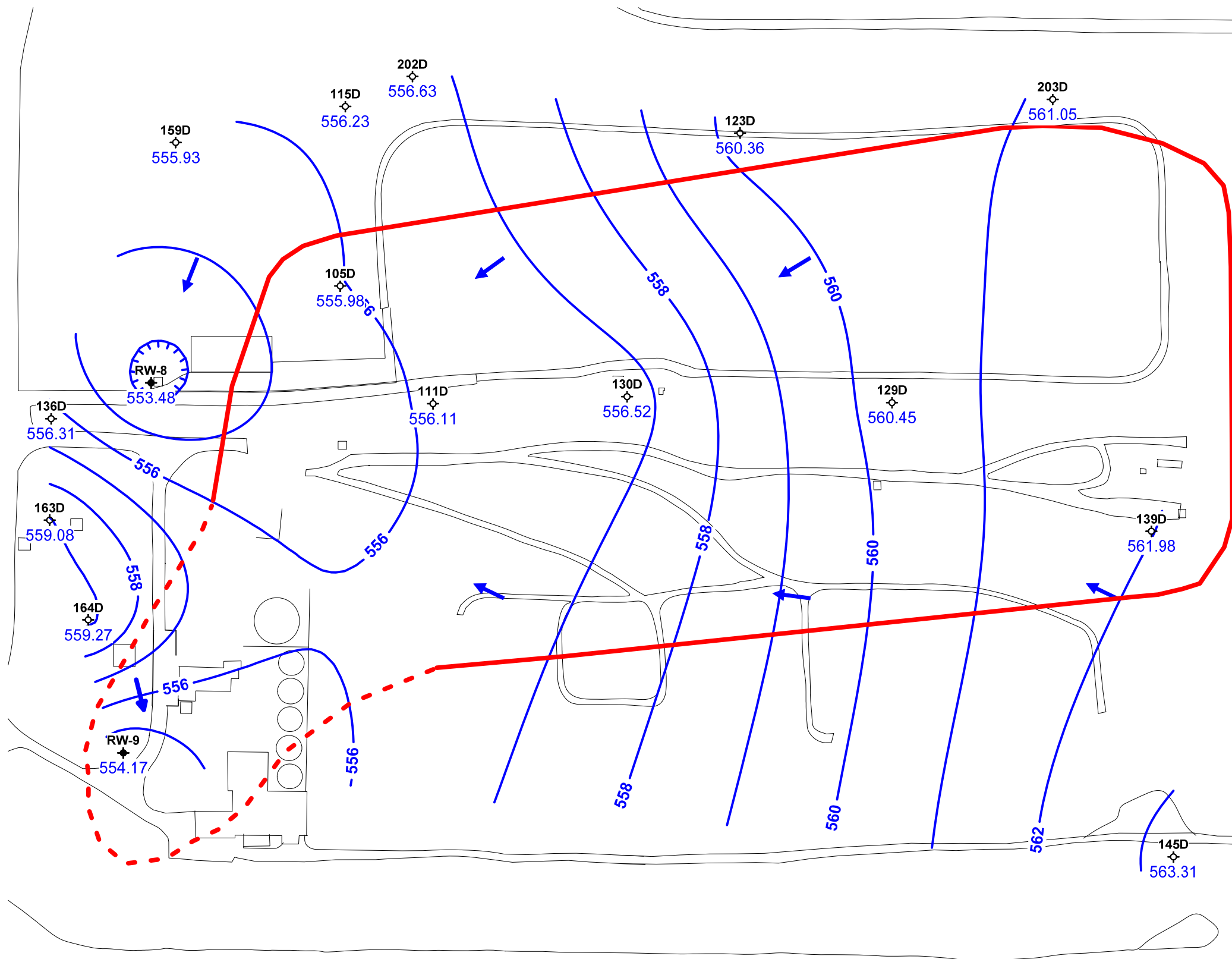
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|                          |                |
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| Checked by: EAF/LJM      | Date: 05-11-11 |
| Project Manager: DDT     | Date: 05-26-11 |
| Job number: 445237.02022 |                |

**LEGEND**

|    |                 |  |                        |  |                    |
|----|-----------------|--|------------------------|--|--------------------|
| 3B | Well ID         |  | Potentiometric Contour |  | Source Area Extent |
|    | Monitoring Well |  | Structure              |  |                    |
|    | Pumping Well    |  | Road                   |  |                    |

**Figure 8**  
**Potentiometric Surface Map**  
**DuPont Necco Park: C-Zone**  
**February 16, 2011**



Scale: Feet



Contour interval = 1.0 feet

Elevation datum feet AMSL

Well 149, located outside the map area, was used in the contour interpolation.

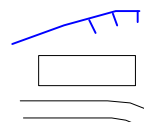
Well 137D, 148D, 158D, and 165D, were not used in the interpolation.

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|                          |                |
|--------------------------|----------------|
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| Job number: 445237.02022 |                |

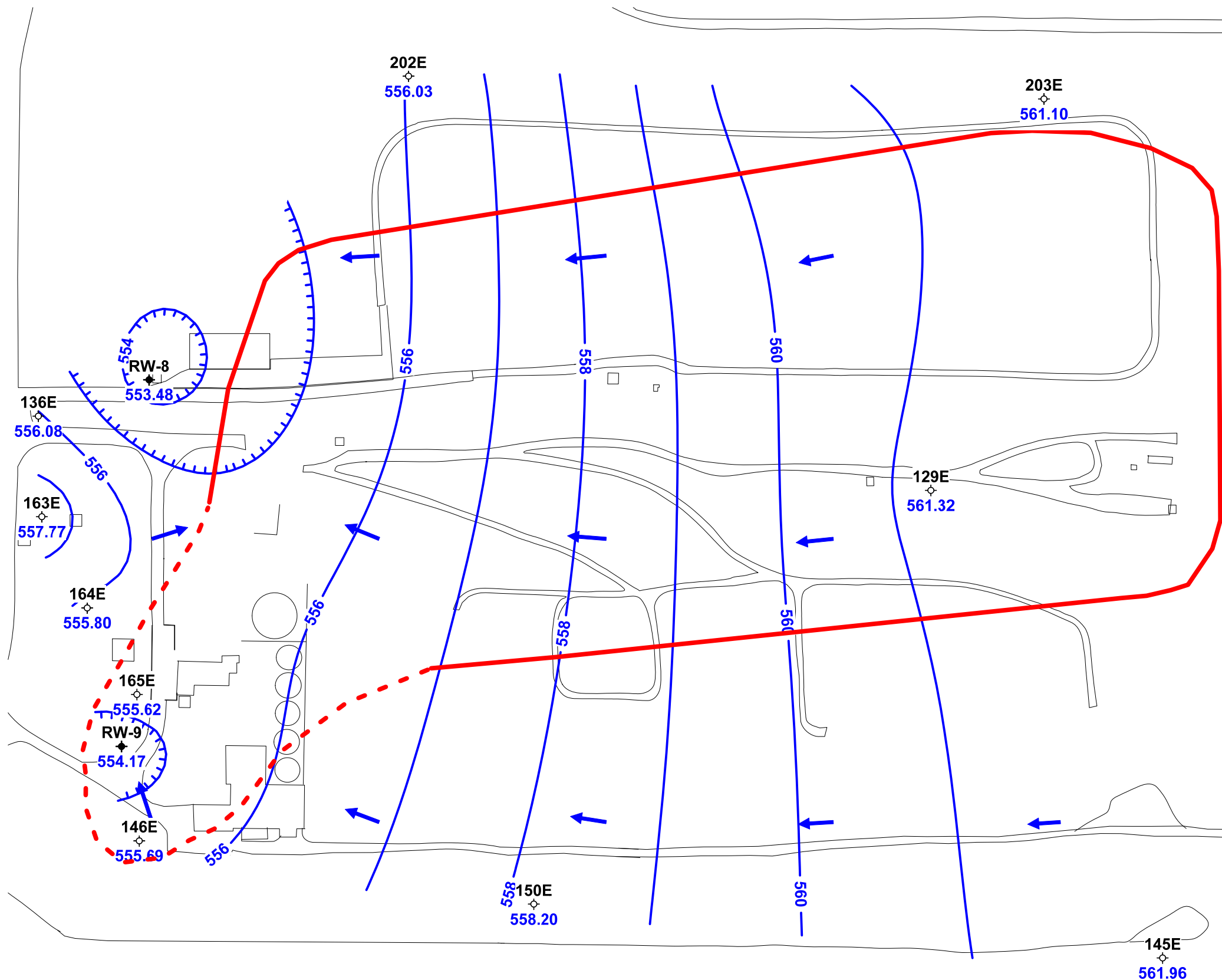
3B Well ID  
Monitoring Well  
Pumping Well



**LEGEND**

Potentiometric Contour  
Structure  
Road  
Source Area Extent

**Figure 9**  
**Potentiometric Surface Map**  
**DuPont Necco Park: D-Zone**  
**February 16, 2011**



Scale: Feet



Contour interval = 0.5 foot

Elevation datum feet AMSL

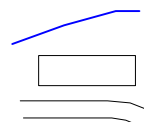
Well 142E was not used in the contouring due to anomalous measurement

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|                          |                |
|--------------------------|----------------|
| Created by: RBP/JWS      | Date: 05-11-11 |
| Checked by: EAF/LJM      | Date: 05-11-11 |
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| Job number: 445237.02022 |                |

- 3B Well ID
- Monitoring Well
  - Pumping Well

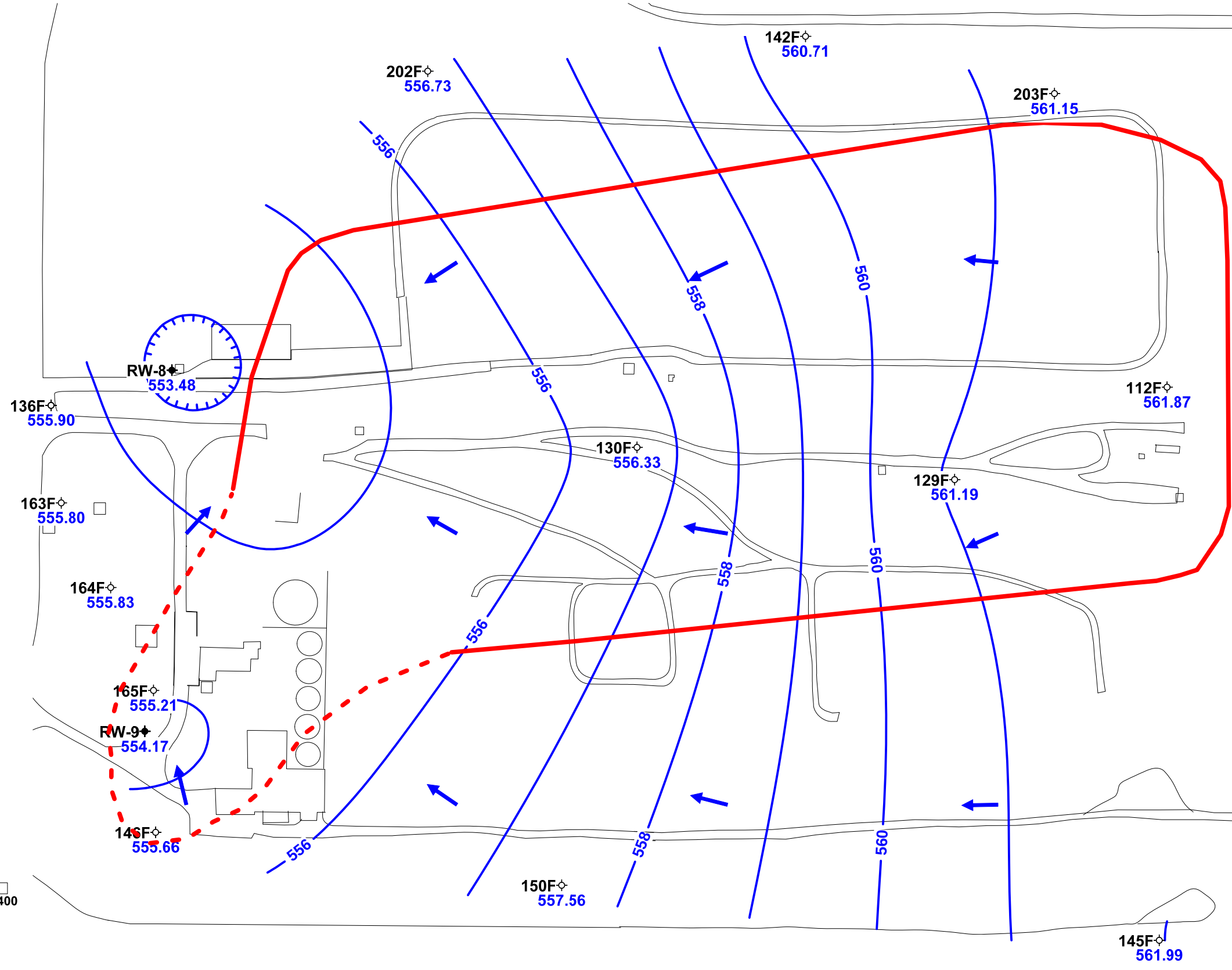


**LEGEND**

- Potentiometric Contour
- Structure
- Road

- Source Area Extent

**Figure 10**  
**Potentiometric Surface Map**  
**DuPont Necco Park: E-Zone**  
**February 16, 2011**

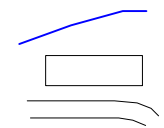


Scale: Feet  
0 100 200 300 400  
Contour interval = 1.0 foot  
Elevation datum feet AMSL  
Wells 123F and 148F were not used in the interpolation

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|                          |                |
|--------------------------|----------------|
| Created by: RBP          | Date: 04-01-11 |
| Checked by: EAF/LJM      | Date: 05-11-11 |
| Project Manager: DDT     | Date: 05-26-11 |
| Job number: 445237.02022 |                |

- 3B Well ID  
◇ Monitoring Well  
◆ Pumping Well



**LEGEND**

- Potentiometric Contour  
Structure  
Road  
- - - - - Source Area Extent

**Figure 11**  
**Potentiometric Surface Map**  
**DuPont Necco Park: F-Zone**  
**February 16, 2011**

**APPENDIX A**

**GROUNDWATER ELEVATION DATA**

**FIRST QUARTER 2011**

**APPENDIX A**  
**NECCO PARK WATER LEVELS**  
**FIRST QUARTER 2011**

| SAMPLE POINT | DATE     | DEPTH TO WATER | CASING ELEVATION | GW ELEVATION | TIME |
|--------------|----------|----------------|------------------|--------------|------|
| 53           | 02/16/11 | 2.02           | 578.20           | 576.18       | 1201 |
| 102B         | 02/16/11 | 25.89          | 599.01           | 573.12       | 1237 |
| 105C         | 02/16/11 | 25.43          | 595.28           | 569.85       | 1241 |
| 105D         | 02/16/11 | 38.79          | 594.77           | 555.98       | 1240 |
| 111A         | 02/16/11 | 15.09          | 586.89           | 571.80       | 1144 |
| 111B         | 02/16/11 | 14.40          | 584.94           | 570.54       | 1140 |
| 111D         | 02/16/11 | 28.19          | 584.30           | 556.11       | 1141 |
| 112B         | 02/16/11 | 9.53           | 581.90           | 572.37       | 1211 |
| 112C         | 02/16/11 | 16.92          | 582.93           | 566.01       | 1210 |
| 112F         | 02/16/11 | 21.42          | 583.29           | 561.87       | 1212 |
| 115C         | 02/16/11 | 24.82          | 595.93           | 571.11       | 1254 |
| 115D         | 02/16/11 | 40.39          | 596.62           | 556.23       | 1253 |
| 116B         | 02/16/11 | 15.29          | 590.05           | 574.76       | 1136 |
| 117A         | 02/16/11 | 7.65           | 580.52           | 572.87       | 1230 |
| 118B         | 02/16/11 | 14.62          | 583.90           | 569.28       | 1225 |
| 119A         | 02/16/11 | 14.15          | 586.34           | 572.19       | 1153 |
| 119AT        | 02/16/11 | 13.71          | 586.62           | 572.91       | 1154 |
| 119B         | 02/16/11 | 15.74          | 586.77           | 571.03       | 1155 |
| 120B         | 02/16/11 | 25.88          | 599.18           | 573.30       | 1250 |
| 123A         | 02/16/11 | 22.61          | 597.93           | 575.32       | 1243 |
| 123B         | 02/16/11 | 20.69          | 595.98           | 575.29       | 1244 |
| 123C         | 02/16/11 | 23.12          | 595.42           | 572.30       | 1245 |
| 123D         | 02/16/11 | 36.15          | 596.51           | 560.36       | 1246 |
| 123F         | 02/16/11 | 38.07          | 598.57           | 560.50       | 1247 |
| 129A         | 02/16/11 | 12.32          | 584.80           | 572.48       | 1203 |
| 129AT        | 02/16/11 | 12.49          | 584.94           | 572.45       | 1202 |
| 129B         | 02/16/11 | 14.38          | 585.24           | 570.86       | 1201 |
| 129C         | 02/16/11 | 13.13          | 585.68           | 572.55       | 1200 |
| 129D         | 02/16/11 | 25.58          | 586.03           | 560.45       | 1159 |
| 129E         | 02/16/11 | 19.56          | 580.88           | 561.32       | 1206 |
| 129F         | 02/16/11 | 20.17          | 581.36           | 561.19       | 1207 |
| 130B         | 02/16/11 | 13.63          | 585.63           | 572.00       | 1147 |
| 130C         | 02/16/11 | 15.38          | 585.51           | 570.13       | 1148 |
| 130D         | 02/16/11 | 28.44          | 584.96           | 556.52       | 1149 |
| 130F         | 02/16/11 | 25.16          | 581.49           | 556.33       | 1143 |
| 130G         | 02/16/11 | 23.62          | 580.79           | 557.17       | 1142 |
| 131A         | 02/16/11 | 14.39          | 585.43           | 571.04       | 1205 |
| 136B         | 02/16/11 | 7.32           | 581.69           | 574.37       | 1112 |
| 136C         | 02/16/11 | 9.31           | 581.62           | 572.31       | 1111 |

**APPENDIX A**  
**NECCO PARK WATER LEVELS**  
**FIRST QUARTER 2011**

| SAMPLE POINT | DATE     | DEPTH TO WATER | CASING ELEVATION | GW ELEVATION | TIME |
|--------------|----------|----------------|------------------|--------------|------|
| 136D         | 02/16/11 | 23.37          | 579.68           | 556.31       | 1110 |
| 136E         | 02/16/11 | 23.51          | 579.59           | 556.08       | 1109 |
| 136F         | 02/16/11 | 24.43          | 580.33           | 555.90       | 1107 |
| 136F         | 02/16/11 | 24.40          | 580.33           | 555.93       | 1308 |
| 136G         | 02/16/11 | 18.48          | 579.76           | 561.28       | 1108 |
| 136G         | 02/16/11 | 18.46          | 579.76           | 561.30       | 1309 |
| 137A         | 02/16/11 | 8.14           | 578.47           | 570.33       | 1124 |
| 137B         | 02/16/11 | 7.73           | 578.31           | 570.58       | 1122 |
| 137C         | 02/16/11 | 9.90           | 578.39           | 568.49       | 1121 |
| 137D         | 02/16/11 | 12.95          | 579.09           | 566.14       | 1123 |
| 138B         | 02/16/11 | 13.83          | 583.98           | 570.15       | 1150 |
| 138C         | 02/16/11 | 17.05          | 587.06           | 570.01       | 1151 |
| 139A         | 02/16/11 | 14.07          | 585.14           | 571.07       | 1213 |
| 139B         | 02/16/11 | 15.49          | 585.39           | 569.90       | 1216 |
| 139C         | 02/16/11 | 23.61          | 585.27           | 561.66       | 1217 |
| 139D         | 02/16/11 | 23.51          | 585.49           | 561.98       | 1218 |
| 140A         | 02/16/11 | 7.88           | 581.43           | 573.55       | 1222 |
| 141C         | 02/16/11 | 15.96          | 580.05           | 564.09       | 1236 |
| 141G         | 02/16/11 | 25.44          | 582.53           | 557.09       | 1234 |
| 142E         | 02/16/11 | 25.00          | 586.00           | 561.00       | 1256 |
| 142F         | 02/16/11 | 24.98          | 585.69           | 560.71       | 1257 |
| 143G         | 02/16/11 | 34.35          | 591.34           | 556.99       | 1250 |
| 145A         | 02/16/11 | 3.76           | 575.84           | 572.08       | 1157 |
| 145B         | 02/16/11 | 6.52           | 575.48           | 568.96       | 1205 |
| 145C         | 02/16/11 | 12.21          | 575.90           | 563.69       | 1238 |
| 145D         | 02/16/11 | 12.74          | 576.05           | 563.31       | 1240 |
| 145E         | 02/16/11 | 14.02          | 575.98           | 561.96       | 1159 |
| 145F         | 02/16/11 | 14.06          | 576.05           | 561.99       | 1201 |
| 146AR        | 02/16/11 | 5.46           | 576.92           | 571.46       | 1212 |
| 146B         | 02/16/11 | 6.59           | 576.90           | 570.31       | 1213 |
| 146C         | 02/16/11 | 7.19           | 576.35           | 569.16       | 1214 |
| 146E         | 02/16/11 | 20.39          | 576.08           | 555.69       | 1215 |
| 146F         | 02/16/11 | 20.38          | 576.04           | 555.66       | 1216 |
| 148D         | 02/16/11 | 8.45           | 579.38           | 570.93       | 1109 |
| 148F         | 02/16/11 | 20.74          | 576.21           | 555.47       | 1112 |
| 149B         | 02/16/11 | 3.69           | 572.87           | 569.18       | 1137 |

**APPENDIX A**  
**NECCO PARK WATER LEVELS**  
**FIRST QUARTER 2011**

| SAMPLE POINT | DATE     | DEPTH TO WATER | CASING ELEVATION | GW ELEVATION | TIME |
|--------------|----------|----------------|------------------|--------------|------|
| 149C         | 02/16/11 | 5.48           | 573.26           | 567.78       | 1133 |
| 149D         | 02/16/11 | 15.83          | 572.86           | 557.03       | 1130 |
| 150A         | 02/16/11 | 4.29           | 575.86           | 571.57       | 1145 |
| 150B         | 02/16/11 | 5.91           | 575.99           | 570.08       | 1146 |
| 150C         | 02/16/11 | 9.29           | 576.13           | 566.84       | 1147 |
| 150E         | 02/16/11 | 17.95          | 576.15           | 558.20       | 1148 |
| 150F         | 02/16/11 | 18.42          | 575.98           | 557.56       | 1149 |
| 151B         | 02/16/11 | 3.43           | 573.36           | 569.93       | 1044 |
| 151C         | 02/16/11 | 7.27           | 573.18           | 565.91       | 1046 |
| 158D         | 02/16/11 | 37.21          | 598.20           | 560.99       | 1239 |
| 159A         | 02/16/11 | 18.78          | 596.16           | 577.38       | 1247 |
| 159B         | 02/16/11 | 22.70          | 596.37           | 573.67       | 1246 |
| 159C         | 02/16/11 | 25.40          | 597.36           | 571.96       | 1245 |
| 159D         | 02/16/11 | 41.74          | 597.67           | 555.93       | 1244 |
| 160B         | 02/16/11 | 12.94          | 582.75           | 569.81       | 1233 |
| 160C         | 02/16/11 | 19.62          | 582.72           | 563.10       | 1234 |
| 161B         | 02/16/11 | 11.82          | 582.84           | 571.02       | 1220 |
| 161C         | 02/16/11 | 20.83          | 582.64           | 561.81       | 1221 |
| 162C         | 02/16/11 | 14.12          | 581.00           | 566.88       | 1202 |
| 163A         | 02/16/11 | 4.03           | 578.14           | 574.11       | 1130 |
| 163B         | 02/16/11 | 4.29           | 577.94           | 573.65       | 1129 |
| 163D         | 02/16/11 | 19.74          | 578.82           | 559.08       | 1128 |
| 163E         | 02/16/11 | 21.29          | 579.06           | 557.77       | 1127 |
| 163F         | 02/16/11 | 22.96          | 578.76           | 555.80       | 1126 |
| 164D         | 02/16/11 | 18.15          | 577.42           | 559.27       | 1123 |
| 164E         | 02/16/11 | 21.52          | 577.32           | 555.80       | 1122 |
| 164F         | 02/16/11 | 21.44          | 577.27           | 555.83       | 1121 |
| 165D         | 02/16/11 | 11.86          | 577.52           | 565.66       | 1253 |
| 165E         | 02/16/11 | 21.94          | 577.56           | 555.62       | 1251 |
| 165F         | 02/16/11 | 22.51          | 577.72           | 555.21       | 1249 |
| 167B         | 02/16/11 | 12.08          | 580.93           | 568.85       | 1210 |
| 168A         | 02/16/11 | 7.57           | 578.72           | 571.15       | 1220 |
| 168B         | 02/16/11 | 11.15          | 578.90           | 567.75       | 1221 |
| 168C         | 02/16/11 | 14.23          | 579.21           | 564.98       | 1223 |
| 169B         | 02/16/11 | 11.10          | 580.43           | 569.33       | 1229 |
| 170B         | 02/16/11 | 12.37          | 579.10           | 566.73       | 1231 |
| 171B         | 02/16/11 | 9.67           | 579.54           | 569.87       | 1236 |
| 172B         | 02/16/11 | 7.52           | 576.95           | 569.43       | 1154 |
| 173A         | 02/16/11 | 9.78           | 580.71           | 570.93       | 1137 |

**APPENDIX A**  
**NECCO PARK WATER LEVELS**  
**FIRST QUARTER 2011**

| SAMPLE POINT | DATE     | DEPTH TO WATER | CASING ELEVATION | GW ELEVATION | TIME |
|--------------|----------|----------------|------------------|--------------|------|
| 174A         | 02/16/11 | 6.44           | 577.62           | 571.18       | 1120 |
| 175A         | 02/16/11 | 12.36          | 586.81           | 574.45       | 1138 |
| 176A         | 02/16/11 | 8.94           | 580.03           | 571.09       | 1129 |
| 178A         | 02/16/11 | 9.00           | 579.92           | 570.92       | 1136 |
| 179A         | 02/16/11 | 7.68           | 579.01           | 571.33       | 1130 |
| 180AT        | 02/16/11 | 7.38           | 579.47           | 572.09       | 1200 |
| 184A         | 02/16/11 | 9.13           | 579.88           | 570.75       | 1141 |
| 184AT        | 02/16/11 | 9.02           | 579.69           | 570.67       | 1140 |
| 185A         | 02/16/11 | 9.72           | 580.84           | 571.12       | 1147 |
| 185AT        | 02/16/11 | 10.00          | 580.69           | 570.69       | 1148 |
| 186A         | 02/16/11 | 12.75          | 579.76           | 567.01       | 1152 |
| 186AT        | 02/16/11 | 9.31           | 580.10           | 570.79       | 1153 |
| 187A         | 02/16/11 | 12.84          | 579.94           | 567.10       | 1156 |
| 187AT        | 02/16/11 | 8.18           | 579.30           | 571.12       | 1155 |
| 188A         | 02/16/11 | 16.38          | 580.91           | 564.53       | 1159 |
| 188AT        | 02/16/11 | 8.83           | 580.59           | 571.76       | 1158 |
| 189A         | 02/16/11 | 14.31          | 579.82           | 565.51       | 1203 |
| 189AT        | 02/16/11 | 8.63           | 580.40           | 571.77       | 1204 |
| 190A         | 02/16/11 | 12.99          | 580.58           | 567.59       | 1209 |
| 190AT        | 02/16/11 | 9.22           | 580.92           | 571.70       | 1208 |
| 191A         | 02/16/11 | 10.08          | 580.62           | 570.54       | 1211 |
| 191AT        | 02/16/11 | 9.44           | 581.06           | 571.62       | 1212 |
| 192A         | 02/16/11 | 13.54          | 584.08           | 570.54       | 1214 |
| 192AT        | 02/16/11 | 14.37          | 584.46           | 570.09       | 1215 |
| 193A         | 02/16/11 | 12.56          | 584.13           | 571.57       | 1224 |
| 193AT        | 02/16/11 | 9.66           | 583.09           | 573.43       | 1223 |
| 194A         | 02/16/11 | 13.80          | 584.35           | 570.55       | 1227 |
| 194AT        | 02/16/11 | 11.39          | 584.93           | 573.54       | 1226 |
| 201B         | 02/16/11 | 9.70           | 579.25           | 569.55       | 1127 |
| 202D         | 02/16/11 | 36.10          | 592.73           | 556.63       | 1255 |
| 202E         | 02/16/11 | 36.7           | 592.73           | 556.03       | 1256 |
| 202F         | 02/16/11 | 36.00          | 592.73           | 556.73       | 1257 |
| 203D         | 02/16/11 | 32.80          | 593.85           | 561.05       | 1302 |
| 203E         | 02/16/11 | 32.75          | 593.85           | 561.10       | 1303 |
| 203F         | 02/16/11 | 32.70          | 593.85           | 561.15       | 1304 |
| 204C         | 02/16/11 | 19.66          | 581.77           | 562.11       | 1222 |
| BZTW-1       | 02/16/11 | 9.07           | 579.67           | 570.60       | 1146 |
| BZTW-2       | 02/16/11 | 8.60           | 579.38           | 570.78       | 1135 |
| BZTW-4       | 02/16/11 | 4.29           | 578.18           | 573.89       | 1117 |

**APPENDIX A**  
**NECCO PARK WATER LEVELS**  
**FIRST QUARTER 2011**

| SAMPLE POINT | DATE     | DEPTH TO WATER | CASING ELEVATION | GW ELEVATION | TIME  |
|--------------|----------|----------------|------------------|--------------|-------|
| D-10         | 02/16/11 | 9.91           | 580.02           | 570.11       | 1144  |
| D-11         | 02/16/11 | 7.18           | 578.07           | 570.89       | 1133  |
| D-13         | 02/16/11 | 4.43           | 579.07           | 574.64       | 1116  |
| D-14         | 02/16/11 | 9.71           | 579.01           | 569.30       | 1117  |
| D-23         | 02/16/11 | 14.34          | 580.55           | 566.21       | 1205  |
| D-9          | 02/16/11 | 9.08           | 580.15           | 571.07       | 1145  |
| PZ 195-AT    | 02/16/11 | 7.97           | 584.80           | 576.83       | 15255 |
| PZ 196-AT    | 02/16/11 | 8.89           | 585.71           | 576.82       | 1259  |
| PZ 197-AT    | 02/16/11 | 7.74           | 584.57           | 576.83       | 1301  |
| PZ 198-AT    | 02/16/11 | 7.09           | 583.93           | 576.84       | 1304  |
| PZ 199-AT    | 02/16/11 | 8.11           | 584.92           | 576.81       | 1307  |
| PZ 200-AT    | 02/16/11 | 8.63           | 586.46           | 577.83       | 1309  |
| PZ-A         | 02/16/11 | 9.03           | 579.06           | 570.03       | 1132  |
| PZ-B         | 02/16/11 | 9.64           | 579.47           | 569.83       | 1131  |
| RDB-3        | 02/16/11 | 4.88           | 579.31           | 574.43       | 1113  |
| RDB-5        | 02/16/11 | 4.76           | 578.57           | 573.81       | 1116  |
| RW-11        | 02/16/11 | 10.68          | 578.78           | 568.10       | 1128  |
| RW-4         | 02/16/11 | 32.54          | 581.52           | 548.98       | 1228  |
| RW-5         | 02/16/11 | 18.49          | 578.88           | 560.39       | 1157  |
| RW-8         | 02/16/11 | 32.04          | 585.52           | 553.48       | 1138  |
| RW-9         | 02/16/11 | 20.96          | 575.13           | 554.17       | 1245  |
| TRW-6        | 02/16/11 | 9.76           | 580.21           | 570.45       | 1138  |
| TRW-7        | 02/16/11 | 7.11           | 577.89           | 570.78       | 1119  |

**APPENDIX B**

**GWTF PROCESS SAMPLING RESULTS**

**FIRST QUARTER 2011**

**APPENDIX B**  
**GWTF PROCESS SAMPLING RESULTS**  
**1Q11 NECCO PARK**

| CAS No.         | LabAnalyte                         | Location<br>Date<br>Units | BC-INFLUENT<br>2/8/11<br>FS | DEF-INFLUENT<br>2/8/11<br>FS | COMB-EFFLUENT<br>2/8/11<br>FS | FILTER-BLK<br>2/8/11<br>FS | TBLK<br>2/8/11<br>TB |
|-----------------|------------------------------------|---------------------------|-----------------------------|------------------------------|-------------------------------|----------------------------|----------------------|
|                 | <b>Field Parameters</b>            |                           |                             |                              |                               |                            |                      |
| EVS0118         | COLOR QUALITATIVE (FIELD)          | NS                        | grey/blue                   | grey                         | grey/blue                     | NS                         | NS                   |
| EVS0125         | ODOR (FIELD)                       | NS                        | moderate                    | moderate                     | slight                        | NS                         | NS                   |
| EVS0127         | PH (FIELD)                         | STD UNITS                 | 5.55                        | 7.12                         | 8.02                          | NS                         | NS                   |
| EVS0128         | REDOX (FIELD)                      | MV                        | -201                        | -298                         | 3                             | NS                         | NS                   |
| EVS0044         | SPECIFIC CONDUCTANCE (FIELD)       | MS/CM                     | 14030                       | 4479                         | 6343                          | NS                         | NS                   |
| EVS0113         | TEMPERATURE (FIELD)                | DEGREES C                 | 10                          | 10.6                         | 10.6                          | NS                         | NS                   |
| EVS0130         | TURBIDITY QUANTITATIVE (FIELD)     | NTU                       | 76.7                        | 55.8                         | 116                           | NS                         | NS                   |
|                 | <b>Volatile Organics</b>           |                           |                             |                              |                               |                            |                      |
| 79345           | 1,1,2,2-TETRACHLOROETHANE          | UG/L                      | 3000                        | 1200                         | 700 J                         | NS                         | <0.18                |
| 79005           | 1,1,2-TRICHLOROETHANE              | UG/L                      | 2800                        | 2200                         | 530 J                         | NS                         | <0.27                |
| 75354           | 1,1-DICHLOROETHENE                 | UG/L                      | 350 J                       | 310 J                        | <4.8                          | NS                         | <0.19                |
| 107062          | 1,2-DICHLOROETHANE                 | UG/L                      | 530 J                       | 220 J                        | 34                            | NS                         | <0.22                |
| 56235           | CARBON TETRACHLORIDE               | UG/L                      | 1400                        | 1000                         | <3.2                          | NS                         | <0.13                |
| 67663           | CHLOROFORM                         | UG/L                      | 15000                       | 3500                         | 97                            | NS                         | <0.16                |
| 156592          | CIS-1,2-DICHLOROETHENE             | UG/L                      | 5800                        | 11000                        | 210                           | NS                         | <0.17                |
| 75092           | METHYLENE CHLORIDE                 | UG/L                      | 2600                        | 5200                         | 200                           | NS                         | <0.33                |
| 127184          | TETRACHLOROETHENE                  | UG/L                      | 4200                        | 1300                         | 8.4 J                         | NS                         | <0.29                |
| 156605          | TRANS-1,2-DICHLOROETHENE           | UG/L                      | 370 J                       | 670                          | <4.8                          | NS                         | <0.19                |
| 79016           | TRICHLOROETHENE                    | UG/L                      | 14000                       | 6200                         | 44                            | NS                         | <0.17                |
| 75014           | VINYL CHLORIDE                     | UG/L                      | 1900                        | 2500                         | <5.5                          | NS                         | <0.22                |
|                 | <b>Other Organics</b>              |                           |                             |                              |                               |                            |                      |
| 95954           | 2,4,5-TRICHLOROPHENOL              | UG/L                      | 28 J                        | 370                          | 270                           | NS                         | NS                   |
| 88062           | 2,4,6-TRICHLOROPHENOL              | UG/L                      | <16                         | 170                          | 120 J                         | NS                         | NS                   |
| EVS0197         | 3-METHYLPHENOL & 4-METHYLPHENOL    | UG/L                      | 150 J                       | 17 J                         | 49 J                          | NS                         | NS                   |
| 118741          | HEXACHLOROBENZENE                  | UG/L                      | <2                          | <1.2                         | <1                            | NS                         | NS                   |
| 87683           | HEXACHLOROBUTADIENE                | UG/L                      | 410                         | 31 J                         | 20 J                          | NS                         | NS                   |
| 67721           | HEXACHLOROETHANE                   | UG/L                      | 160 J                       | 10 J                         | <8                            | NS                         | NS                   |
| 87865           | PENTACHLOROPHENOL                  | UG/L                      | 110 J                       | 760                          | 560                           | NS                         | NS                   |
| 108952          | PHENOL                             | UG/L                      | 190 J                       | 41 J                         | 79 J                          | NS                         | NS                   |
| TIC01           | TENTATIVELY IDENTIFIED COMPOUND 01 | UG/L                      | 1700 J                      | 770 J                        | 900 J                         | NS                         | NS                   |
|                 | <b>Inorganics</b>                  |                           |                             |                              |                               |                            |                      |
| 7440393         | BARIUM, DISSOLVED                  | UG/L                      | 146000                      | 77 J                         | 470                           | NS                         | NS                   |
| 7440393         | BARIUM, TOTAL                      | UG/L                      | 218000                      | 63 J                         | 34400                         | 0.78 J                     | NS                   |
| 14808798        | SULFATE                            | UG/L                      | 3900                        | 885000                       | 519000 J                      | NS                         | NS                   |
| 57125           | CYANIDE, TOTAL                     | UG/L                      | 2600                        | 30                           | 360                           | NS                         | NS                   |
| Total Volatiles |                                    | UG/L                      | 51950                       | 35300                        | 1823.4                        |                            |                      |

< and ND = Non detect at stated reporting limit  
NS = Not sampled for test parameter  
J= Estimated Result

# **ATTACHMENT 1**

## **NECCO PARK 1Q11 WATER LEVELS**

**(ELECTRONIC FORMAT ONLY)**