

August 19, 2013

Kathleen Emery  
New York State Department of  
Environmental Conservation, Region 9  
270 Michigan Avenue  
Buffalo, New York 14203

Dear Ms. Emery:

Enclosed please find the 2013 Annual Groundwater Monitoring Report for the Honeywell Buffalo Research Laboratory in Buffalo, New York (see Figure 1). The report is a requirement of the Site Management Plan (SMP) (CRA, May 2013) for the facility. The annual sampling was conducted on July 9, 2013.

Based on the results of the annual groundwater monitoring over the last several years, including the current year, the monitoring will be continued on an annual schedule as defined in the SMP. The monitoring schedule will be re-evaluated as additional results are collected. The detailed rationale for these recommendations is provided in the Recommendations/Conclusions section of this report.

### **Well Inspection**

In accordance with the SMP, the condition of each monitoring well (MW-2, MW-3, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10) was inspected. MW-1 and MW-4 could not be found and may have been covered by asphalt. The depth to groundwater was also measured in each well during the inspection (see Groundwater Flow Direction below). The results of the well inspections are presented below.

#### **MW-2, Stick-up Protective Casing**

- Well cover hinge was broken off.
- Stick-up protective metal casing was in good condition.
- PVC well cap was secure.
- Concrete pad was in good condition.

#### **MW-3, Stick-up Protective Casing**

- Protective casing was rusted.
- Well was locked.
- PVC well cap was secure.
- Concrete pad was in good condition.

#### **MW-5, Flush-mounted Protective Casing**

- Curb box and cover were in place and in good condition, except for missing bolts that hold cover down.
- Well was locked.

- Water-tight well cap was secure. Water had filled vault but had not entered the well.
- Surrounding asphalt was in good condition.

#### **MW-6, Flush-mounted Protective Casing**

- Curb box and flange were able to be lifted out without unbolting. Could not turn bolts on well cover.
- Well was locked.
- Water-tight well cap was secure.
- Surrounding asphalt was in good condition.

#### **MW-7, Flush-mounted Protective Casing**

- Curb box and flange were able to be lifted out without unbolting. Could not turn bolts (possibly stripped) on well cover.
- Well was locked.
- Water-tight well cap was destroyed.
- Surrounding asphalt was in good condition.

#### **MW-8, Stick-up Protective Casing**

- Well cover hinge was broken.
- Well was locked but due to broken cover hinge could be accessed even when locked.
- No PVC well cap or expandable plug present on well.
- Surrounding asphalt was in good condition.

#### **MW-9, Flush-mounted Protective Casing**

- Curb box and flange were able to be lifted out without unbolting.
- Well was locked.
- Water-tight well cap was secure.
- Surrounding asphalt was in good condition.

#### **MW-10, Stick-up Protective Casing**

- Protective cover was rusted, but in good condition.
- Well was locked.
- PVC well cap was secure.
- Concrete pad was in good condition.

#### **Groundwater Sampling**

Groundwater samples were collected from MW-3 and MW-5 for laboratory analysis, as specified in the SMP. During this sampling event, samples were collected using dedicated disposable high density polyethylene (HDPE) bailers.

Prior to collecting groundwater samples, each well was purged of a minimum of three well volumes of groundwater. During purging, field parameters, including pH, temperature, specific conductivity, and turbidity, were measured. After purging and allowing the well to return to static conditions, the groundwater samples were collected.

Samples were submitted for analysis using Method EPA 8260 for volatile organic compounds (VOCs) and EPA 200.7 for metals (arsenic and barium). In addition to the two groundwater samples, the trip blank that accompanied the bottle set from the laboratory, into the field, and back to the laboratory, was submitted for VOC analysis. Field parameters and other monitoring data were recorded on the Well Sampling Records provided in Attachment A.

### **Summary of Analytical Results**

Table 1 presents a summary of the detected chemical constituents for this sampling event, and Table 2 provides the historical analytical results from 1994 through the current (2013) annual sampling event. A data summary table and the laboratory data report for the current samples are provided in Attachment B. Sample results were compared to the NYSDEC Ambient Water Quality Standards and Guidance Values (AWQS), contained in 6 NYCRR Part 703.

**VOCs:** Four VOCs were identified in the groundwater sample from MW-3 (1,2-dichlorobenzene at 4.2 µg/L, 1,1-dichloroethene [1,1-DCE] at 2.1 µg/L, 1,1,1-trichloroethane [1,1,1-TCA] at 5.9 µg/L and 1,1-dichloroethane [1,1-DCA] at 8.5 µg/L). 1,1,1-TCA, 1,1-DCA, and 1,2-dichlorobenzene exceeded their respective AWQS. No VOCs were identified in the groundwater sample from MW-5. The analytical results for the trip blank (VOCs) were all below the analytical detection limits.

**Metals:** Total arsenic exceeded the AWQS (25 µg/L) in MW-3 (145 µg/L) as did soluble arsenic (69 µg/L). Total and soluble arsenic were both below the AWQS in MW-5. Total barium and soluble barium were below the AWQS in both wells.

### **Discussion of Historical Analytical Results**

#### **VOCs**

Table 2 provides a summary of the historical analytical results. 1,1,1-TCA and 1,1-DCA have typically been identified above the respective AWQS in groundwater from MW-3. The concentrations of 1,1-DCA ranged from below the analytical detection limits to 26 µg/L between 1999 and April 2013. The concentrations of 1,1,1-TCA ranged from below the analytical detection limits to 36 µg/L between 1999 and April 2013. 1,1-DCE, which was identified below the AWQS, has occasionally been identified in MW-3, but is typically below the analytical detection limits. 1,2-dichlorobenzene has not previously been detected in MW-3. Future annual sampling events will determine if the observation of 1,2-dichlorobenzene in MW-3 in 2013 is anomalous.

No VOCs were identified in MW-3 in the November 2003 and May 2004 sampling rounds. During the April 2009 sampling event, 1,1-dichloroethene (1,1-DCE) was detected but 1,1-DCA was not. 1,1,1-TCA, 1,1-DCA, and 1,1-DCE have not been identified in groundwater samples from other wells. 1,1-DCA is a common breakdown product of 1,1,1-TCA, when degraded through biotic processes such as reductive dechlorination, while 1,1-DCE is a common breakdown product of 1,1,1-TCA when degraded through abiotic processes. The current sampling event (July 2013) identified not only 1,1,1-TCA, 1,1-DCA, and 1,1-DCE in MW-3 but also 1,2-dichlorobenzene, which had not previously been identified.

In summary, the analytical results from the current sampling event, consistent with the previous sampling events, showed three VOCs (1,1,1-TCA, 1,1-DCA, and 1,2-dichlorobenzene) above the AWQS by only a small margin in a single well (MW-3). 1,2-dichlorobenzene had not been observed previously in MW-3. Additionally, 1,1-DCE was observed below the AWQS. Consistent with previous sampling events, no VOCs were identified in the sample from MW-5.

## **Metals**

Total arsenic and total barium have been analyzed in the groundwater samples from MW-3 and MW-5 over the past fourteen years. Total arsenic has occasionally exceeded the AWQS (25 µg/L) in the samples from MW-3 and MW-5. Total arsenic was above the AWQS in MW-3 during this sampling event, while total arsenic was also detected in MW-5, the concentration was below the AWQS. Total barium did not exceed the AWQS in either well during this sampling event, or in the previous sampling events.

Soluble arsenic and soluble barium have typically been analyzed since 2001. As required in the SMP, soluble arsenic and barium are measured when the sample turbidity is in excess of 50 NTU. Historically, soluble arsenic and soluble barium have been below the AWQS in both wells. The current analyses show soluble arsenic in MW-3 exceeded the AWQS while below the analytical detection limits in MW-5. Soluble barium was identified below the AWQS in both MW-3 and MW-5.

## **Groundwater Flow Direction**

The water level measurements recorded on July 9, 2013 (see Table 3) are consistent with previous measurements. The groundwater elevation contour map (Figure 2) indicates that the direction of groundwater flow is generally to the southeast across the site, which is consistent with previously observed flow directions.

## **Recommendations/Conclusions**

Based on the current sampling results, groundwater flow direction, and the following points, groundwater monitoring should continue on an annual schedule:

- The detected concentrations of three VOCs (1,1,1-TCA, 1,1-DCA, and 1,2-dichlorobenzene) were low, although slightly exceeding the AWQS in MW-3. 1,2-dichlorobenzene had not been detected previously. Future annual sampling events will determine if the detection of 1,2-dichlorobenzene during this sampling round is anomalous. One other VOC was detected (1,1-DCE) in MW-3 but was below the AWQS. No VOCs were detected in MW-5;
- At these concentrations, the VOCs would likely be naturally attenuated through processes such as reductive dechlorination, aerobic cometabolism, and hydrolysis, prior to reaching the facility boundary. The lack of VOCs in MW-5, down-gradient from MW-3, supports this statement;

- Total arsenic has been below the AWQS during the last four out of 11 sampling events in MW-3, and below the AWQS during the last seven out of 11 sampling events in MW-5;
- Total barium has been below the AWQS during all previous sampling events in MW-3 and MW-5; and
- Groundwater transport of barium and arsenic is often limited due to adsorption to soil particles.

If you need additional information or would like to discuss the results of this Annual Groundwater Monitoring Report, please contact me at (716) 809-9140.

Sincerely,



Eric A. Felter  
Project Manager



Jay Kelly  
Site Leader – Honeywell Buffalo Research  
Laboratory

cc: Mr. Timothy I. DiGiulio, P.E - NYSDEC

**TABLE 1**  
**Summary of Groundwater Analytical Results (7/9/13)**

Analytical Parameters	NYSDEC AWQS µg/L	MW-3 µg/L	MW-5 µg/L	Trip Blank µg/L
Total Arsenic	25	<b>145</b>	12	NA
Soluble Arsenic	25	<b>69</b>	ND	NA
Total Barium	1,000	289	70	NA
Soluble Barium	1,000	226	57	NA
1,1-Dichloroethene	5	2.1	ND	ND
1,1-Dichloroethane	5	<b>8.5</b>	ND	ND
1,1,1-Trichloroethane	5	<b>5.9</b>	ND	ND
1,2-Dichlorobenzene	3	<b>4.2</b>	ND	ND

Note: Only detected analytes are shown.

Boxed and bold analytical results exceed NYSDEC Ambient Water Quality Standards (AWQS).

ND = Not detected.

NA = Not analyzed.

**Table 2**

**Honeywell Speciality Chemicals**  
**Historical Analytical Results**

Compound	NYSDEC AWQS (ug/L)	MW-1 10/17/94	MW-1 1/18/95	MW-2 10/17/94	MW-2 1/18/95	MW-2 5/27/03	MW-3 10/17/94	MW-3 1/18/95	MW-3 8/23/99	MW-3 10/19/00	MW-3 12/10/01	MW-3 11/19/02	MW-3 5/27/03	MW-3 11/13/03	MW-3 5/25/04	MW-3 4/28/05	MW-3 4/25/06	MW-3 5/1/07	MW-3 5/6/08
Total Arsenic	25	3 B	-	-	2.9 B	8.80 J	-	3 B	18	34	23 J	<b>63.3</b>	13.2 J	13.4 J	8.38 J	<b>33.0</b>	<b>39.0</b>	<b>39.0</b>	<b>34.0</b>
Soluble Arsenic	25	NA	NA	NA	NA	6.41 J	NA	NA	NA	NA	13 J	16 J	9.2 J	13.1 J	NA	NA	24	-	13
Total Barium	1,000	102 B	67.6	197 B	157 B	130	111 B	129 B	166	135	140	194	197	262	279	357	302	394	361
Soluble Barium	1,000	NA	NA	NA	NA	129	NA	NA	NA	NA	140	177	191	245	NA	NA	361	324	360
Acetone	50	12	-	11	6 J	-	7	<b>59</b>	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	50	-	-	-	-	-	-	6 J	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	-	-	-	-	-	<b>36</b>	<b>10</b>	<b>20</b>	<b>17.1</b>	<b>7.62</b>	<b>16.2</b>	<b>12.3</b>	-	-	-	<b>10</b>	<b>12.3</b>	<b>11.2</b>
Tetrachloroethylene (PCE)	5	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	2.11 J	-	-	-
Trichloroethene (TCE)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>5.20 J</b>	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	4	-	-	<10	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	<b>11</b>	-	<b>8</b>	-	-	<b>8</b>	-	-	<10	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	<b>42</b>	<b>11</b>	<b>20</b>	<b>20.7</b>	<b>7.73</b>	<b>26.0</b>	<b>17.3</b>	-	-	<b>6.42 J</b>	<b>14</b>	<b>17.1</b>	<b>17.1</b>
1,2-Dichloroethane	0.6	<b>11</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	2.86	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	5	-	-	-	3 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Bold data exceed NYSDEC Ambient Water

Quality Standards (AWQS).

- = Compound not detected above analytical detection limits.

J = Analytical result is an estimate.

NA = Not analyzed.

B = Compound also identified in blank.

**Table 2**

Honeywell Speciality Chemicals  
Historical Analytical Results

Compound	NYSDEC AWQS (ug/L)	MW-3 4/21/09	MW-3 4/29/10	MW-3 4/19/11	MW-3 4/17/12	MW-3 7/9/13	MW-4 10/17/94	MW-4 1/18/95	MW-5 10/17/94	MW-5 1/18/95	MW-5 8/23/99	MW-5 10/19/00	MW-5 12/10/01	MW-5 11/19/02	MW-5 5/27/03	MW-5 11/13/03	MW-5 5/25/04	MW-5 4/28/05	MW-5 4/25/06	MW-5 5/1/07	MW-5 5/6/08	
Total Arsenic	25	13	<b>58</b>	20	<b>36</b>	<b>145</b>	-	5.6 B	-	-	<b>113</b>	<b>37</b>	20 J	24.1 J	15.1 J	<b>106</b>	8.17 J	13.3 J	-	-	<b>28.0</b>	
Soluble Arsenic	25	NA	ND	ND	18	<b>69</b>	NA	NA	NA	NA	NA	NA	6 J	14.0 J	8.18 J	9.1 J	NA	8.85	10	-	14	
Total Barium	1,000	206	147	313	204	289	183 B	243	71 B	74 B	170	100	80	95.1	83.8	214	63.9	94.9	92	58	56	
Soluble Barium	1,000	NA	136	331	128	226	NA	NA	NA	NA	NA	NA	80	76	70.2	63.8	NA	86.4	71	21	63	
Acetone	50	-	-	-	-	-	6	-	5	-	-	-	-	-	-	-	-	-	-	-	-	
2-Butanone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,1-Trichloroethane	5	<b>17.7</b>	<b>8.22</b>	<b>7.3</b>	<b>11.4</b>	<b>5.9</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloroethene (PCE)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trichloroethene (TCE)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethene	5	<b>23.3</b>	-	-	2.54	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methylene Chloride	5	-	-	-	-	-	<b>8</b>	-	<b>12</b>	-	-	<b>31.1</b>	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	<b>12.1</b>	<b>10.6</b>	<b>21.1</b>	<b>8.5</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethane	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichlorobenzene	3	-	-	-	-	-	<b>4.2</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Toluene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vinyl chloride	2	-	-	-	-	<b>13.7</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Bold data exceed NYSDEC Ambient Water Quality Standards (AWQS).

- = Compound not detected above analytical detection limits.

J = Analytical result is an estimate.

NA = Not analyzed.

B = Compound also identified in blank.

**Table 2**

**Honeywell Speciality Chemicals**  
**Historical Analytical Results**

Compound	NYSDEC AWQS (ug/L)	MW-5 4/21/09	MW-5 4/29/10	MW-5 4/19/11	MW-5 4/17/12	MW-5 7/9/13	MW-6 10/17/94	MW-6 1/18/95	MW-6 5/27/03	MW-7 10/17/94	MW-7 1/18/95	MW-8 10/17/94	MW-8 1/18/95	MW-9 10/17/94	MW-9 1/18/95	MW-9 5/25/04	MW-10 10/17/94	MW-10 1/18/95	MW-10 5/27/03
Total Arsenic	25	20	<b>31</b>	11	<b>34</b>	12	-	-	5.64 J	-	2.7 B	-	-	-	-	<b>28.1</b>	4 B	-	19.7 J
Soluble Arsenic	25	NA	19	ND	17	ND	NA	NA	7.34 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Barium	1,000	50	61	56	56	70	84 B	61.5 B	65.2	176 B	204 B	90 B	77.2 B	149 B	134 B	205	33 B	22.3 B	16.5
Soluble Barium	1,000	NA	57	71	67	57	NA	NA	69.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	50	-	-	-	-	-	4	-	-	9	-	6	-	27	18	-	21	5 J	-
2-Butanone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene (PCE)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene (TCE)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	-	-	-	-	-	5	-	-	<b>8</b>	-	<b>8</b>	-	<b>19</b>	-	-	<b>16</b>	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-	-	-	<b>26</b>	-	-	-	-	-	-	-
Toluene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Bold data exceed NYSDEC Ambient Water Quality Standards (AWQS).

- = Compound not detected above analytical detection limits.

J = Analytical result is an estimate.

NA = Not analyzed.

B = Compound also identified in blank.

**Table 3**

**Honeywell Speciality Chemicals**  
**Groundwater Elevation Data**

Monitoring Well ID	Water Level Measurement Date	Top of Well Casing Elevation (Feet)	Depth to Water (Feet TOC)	Water Table Elevation (Feet)
MW-1	10/17/1994	585.69	3.26	<b>582.43</b>
MW-1	11/8/1994	585.69	5.04	<b>580.65</b>
MW-1	11/15/1994	585.69	3.59	<b>582.10</b>
MW-1	1/17/1995	585.69	2.55	<b>583.14</b>
MW-2	10/17/1994	587.32	5.09	<b>582.23</b>
MW-2	11/8/1994	587.32	4.38	<b>582.94</b>
MW-2	11/15/1994	587.32	4.73	<b>582.59</b>
MW-2	1/17/1995	587.32	4.43	<b>582.89</b>
MW-2	8/23/1999	587.32	5.95	<b>581.37</b>
MW-2	10/19/2000	587.32	5.05	<b>582.27</b>
MW-2	12/10/2001	587.32	4.88	<b>582.44</b>
MW-2	11/19/2002	587.32	4.45	<b>582.87</b>
MW-2	5/27/2003	587.32	4.56	<b>582.76</b>
MW-2	11/13/2003	587.32	4.56	<b>582.76</b>
MW-2	5/25/2004	587.32	4.21	<b>583.11</b>
MW-2	4/28/2005	587.32	4.10	<b>583.22</b>
MW-2	4/25/2006	587.32	4.80	<b>582.52</b>
MW-2	5/1/2007	587.32	4.58	<b>582.74</b>
MW-2	5/6/2008	587.32	4.80	<b>582.52</b>
MW-2	4/21/2009	587.32	4.56	<b>582.76</b>
MW-2	4/29/2010	587.32	4.63	<b>582.69</b>
MW-2	4/19/2011	587.32	4.28	<b>583.04</b>
MW-2	4/17/2012	587.32	5.10	<b>582.22</b>
MW-2	7/9/2013	587.32	4.47	<b>582.85</b>
MW-3	10/17/1994	587.55	5.41	<b>582.14</b>
MW-3	11/8/1994	587.55	5.13	<b>582.42</b>
MW-3	11/15/1994	587.55	5.30	<b>582.25</b>
MW-3	1/17/1995	587.55	5.20	<b>582.35</b>
MW-3	8/23/1999	587.55	5.90	<b>581.65</b>
MW-3	10/19/2000	587.55	6.20	<b>581.35</b>
MW-3	12/10/2001	587.55	6.18	<b>581.37</b>
MW-3	11/19/2002	587.55	6.11	<b>581.44</b>
MW-3	5/27/2003	587.55	6.09	<b>581.46</b>
MW-3	11/13/2003	587.55	6.43	<b>581.12</b>
MW-3	5/25/2004	587.55	6.57	<b>580.98</b>
MW-3	4/28/2005	587.55	6.40	<b>581.15</b>
MW-3	4/25/2006	587.55	6.10	<b>581.45</b>
MW-3	5/1/2007	587.55	6.08	<b>581.47</b>
MW-3	5/6/2008	587.55	6.12	<b>581.43</b>
MW-3	4/21/2009	587.55	6.00	<b>581.55</b>
MW-3	4/29/2010	587.55	6.20	<b>581.35</b>
MW-3	4/19/2011	587.55	5.94	<b>581.61</b>
MW-3	4/17/2012	587.55	6.00	<b>581.55</b>
MW-3	7/9/2013	587.55	5.89	<b>581.66</b>
MW-4	10/17/1994	583.87	3.18	<b>580.69</b>
MW-4	11/8/1994	583.87	4.30	<b>579.57</b>
MW-4	11/15/1994	583.87	2.96	<b>580.91</b>
MW-4	1/17/1995	583.87	2.86	<b>581.01</b>

**Table 3**

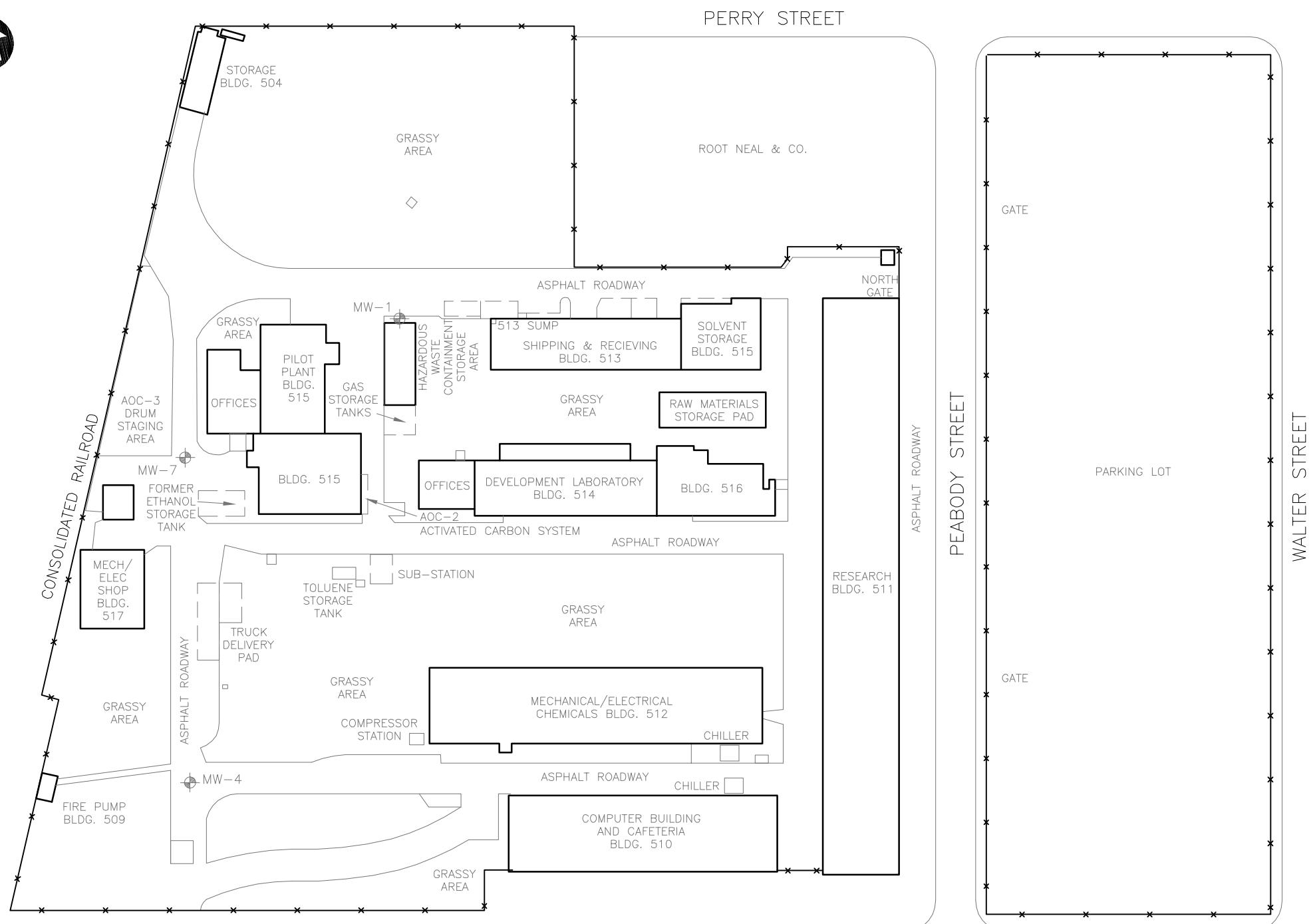
**Honeywell Speciality Chemicals**  
**Groundwater Elevation Data**

Monitoring Well ID	Water Level Measurement Date	Top of Well Casing Elevation (Feet)	Depth to Water (Feet TOC)	Water Table Elevation (Feet)
MW-5	10/17/1994	583.47	4.96	<b>578.51</b>
MW-5	11/8/1994	583.47	4.65	<b>578.82</b>
MW-5	11/15/1994	583.47	4.76	<b>578.71</b>
MW-5	1/17/1995	583.47	4.77	<b>578.70</b>
MW-5	8/23/1999	583.47	4.82	<b>578.65</b>
MW-5	10/19/2000	583.47	4.55	<b>578.92</b>
MW-5	12/10/2001	583.47	4.86	<b>578.61</b>
MW-5	11/19/2002	583.47	5.02	<b>578.45</b>
MW-5	5/27/2003	583.47	5.27	<b>578.20</b>
MW-5	11/13/2003	583.47	8.46	<b>575.01</b>
MW-5	5/25/2004	583.47	6.30	<b>577.17</b>
MW-5	4/28/2005	583.47	4.82	<b>578.65</b>
MW-5	4/25/2006	583.47	5.12	<b>578.35</b>
MW-5	5/1/2007	583.47	5.62	<b>577.85</b>
MW-5	5/6/2008	583.47	6.32	<b>577.15</b>
MW-5	4/21/2009	583.47	8.72	<b>574.75</b>
MW-5	4/29/2010	583.47	9.02	<b>574.45</b>
MW-5	4/19/2011	583.47	8.29	<b>575.18</b>
MW-5	4/17/2012	583.47	8.28	<b>575.19</b>
MW-5	7/9/2013	583.47	8.30	<b>575.17</b>
MW-6	10/17/1994	585.22	2.68	<b>582.54</b>
MW-6	11/8/1994	585.22	2.49	<b>582.73</b>
MW-6	11/15/1994	585.22	2.55	<b>582.67</b>
MW-6	1/17/1995	585.22	2.54	<b>582.68</b>
MW-6	5/27/2003	585.22	2.48	<b>582.74</b>
MW-6	10/17/1994	585.22	2.68	<b>582.54</b>
MW-6	11/8/1994	585.22	2.49	<b>582.73</b>
MW-6	11/15/1994	585.22	2.55	<b>582.67</b>
MW-6	1/17/1995	585.22	2.54	<b>582.68</b>
MW-6	5/27/2003	585.22	2.48	<b>582.74</b>
MW-6	7/9/2013	585.22	2.75	<b>582.47</b>
MW-7	10/17/1994	585.42	3.71	<b>581.71</b>
MW-7	11/8/1994	585.42	3.36	<b>582.06</b>
MW-7	11/15/1994	585.42	3.62	<b>581.80</b>
MW-7	1/17/1995	585.42	3.38	<b>582.04</b>
MW-7	7/9/2013	585.42	3.38	<b>582.04</b>

**Table 3**

**Honeywell Speciality Chemicals**  
**Groundwater Elevation Data**

<b>Monitoring Well ID</b>	<b>Water Level Measurement Date</b>	<b>Top of Well Casing Elevation (Feet)</b>	<b>Depth to Water (Feet TOC)</b>	<b>Water Table Elevation (Feet)</b>
MW-8	10/17/1994	587.94	5.55	<b>582.39</b>
MW-8	11/8/1994	587.94	5.40	<b>582.54</b>
MW-8	11/15/1994	587.94	5.53	<b>582.41</b>
MW-8	1/17/1995	587.94	5.82	<b>582.12</b>
MW-8	8/23/1999	587.94	5.40	<b>582.54</b>
MW-8	10/19/2000	587.94	5.30	<b>582.64</b>
MW-8	12/10/2001	587.94	5.35	<b>582.59</b>
MW-8	11/19/2002	587.94	5.25	<b>582.69</b>
MW-8	5/27/2003	587.94	5.21	<b>582.73</b>
MW-8	11/13/2003	587.94	5.09	<b>582.85</b>
MW-8	5/25/2004	587.94	4.91	<b>583.03</b>
MW-8	4/28/2005	587.94	4.99	<b>582.95</b>
MW-8	4/25/2006	587.94	5.3	<b>582.64</b>
MW-8	5/1/2007	587.94	5.23	<b>582.71</b>
MW-8	5/6/2008	587.94	5.25	<b>582.69</b>
MW-8	4/21/2009	587.94	4.68	<b>583.26</b>
MW-8	4/29/2010	587.94	5.32	<b>582.62</b>
MW-8	4/19/2011	587.94	5.12	<b>582.82</b>
MW-8	4/17/2012	587.94	5.43	<b>582.51</b>
MW-8	7/9/2013	587.94	4.86	<b>583.08</b>
MW-9	10/17/1994	584.48	2.39	<b>582.09</b>
MW-9	11/8/1994	584.48	1.83	<b>582.65</b>
MW-9	11/15/1994	584.48	2.09	<b>582.39</b>
MW-9	1/17/1995	584.48	2.02	<b>582.46</b>
MW-9	10/19/2000	584.48	0.00	<b>584.48</b>
MW-9	5/27/2003	584.48	1.91	<b>582.57</b>
MW-9	5/25/2004	584.48	2.90	<b>581.58</b>
MW-9	4/19/2011	584.48	2.26	<b>582.22</b>
MW-9	4/17/2012	584.48	1.86	<b>582.62</b>
MW-9	7/9/2013	584.48	2.26	<b>582.22</b>
MW-10	10/17/1994	587.85	5.31	<b>582.54</b>
MW-10	11/8/1994	587.85	3.44	<b>584.41</b>
MW-10	11/15/1994	587.85	3.98	<b>583.87</b>
MW-10	1/17/1995	587.85	3.40	<b>584.45</b>
MW-10	8/23/1999	587.85	7.83	<b>580.02</b>
MW-10	10/19/2000	587.85	5.01	<b>582.84</b>
MW-10	12/10/2001	587.85	4.13	<b>583.72</b>
MW-10	11/19/2002	587.85	4.23	<b>583.62</b>
MW-10	5/27/2003	587.85	3.85	<b>584.00</b>
MW-10	11/13/2003	587.85	3.63	<b>584.22</b>
MW-10	5/25/2004	587.85	3.00	<b>584.85</b>
MW-10	4/28/2005	587.85	3.53	<b>584.32</b>
MW-10	4/25/2006	587.85	4.65	<b>583.20</b>
MW-10	5/1/2007	587.85	6.89	<b>580.96</b>
MW-10	5/6/2008	587.85	4.02	<b>583.83</b>
MW-10	4/21/2009	587.85	6.82	<b>581.03</b>
MW-10	4/29/2010	587.85	4.40	<b>583.45</b>
MW-10	4/19/2011	587.85	3.42	<b>584.43</b>
MW-10	4/17/2012	587.85	5.84	<b>582.01</b>
MW-10	7/9/2013	587.85	3.49	<b>584.36</b>



LEGEND:  
● MW-2 MONITORING WELL LOCATION

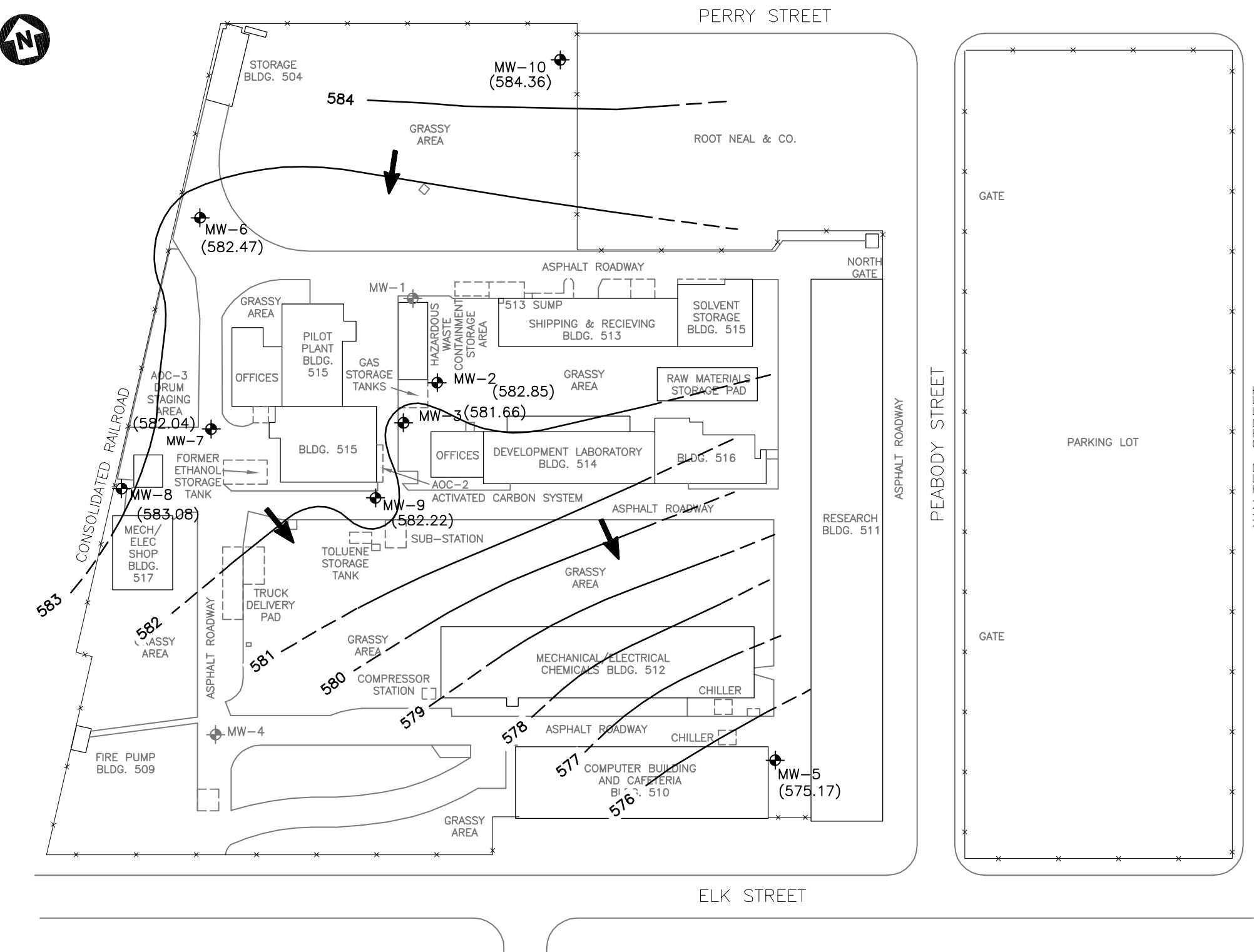
100 50 0 100 200  
SCALE: 1"=100'

**FIGURE 1**  
**SITE PLAN**

**HONEYWELL SPECIALTY CHEMICALS**  
**BUFFALO, NEW YORK**

**PARSONS**

40 LARMERE DRIVE, SUITE 350, BUFFALO, N.Y. 14202, PHONE: (716) 809-9140



## FIGURE 2

**Honeywell**

**SPECIALTY CHEMICALS  
BUFFALO, NEW YORK**

# GROUNDWATER ELEVATION CONTOUR MAP (JULY 9, 2013)

**PARSONS**

40 LA RIVERE DRIVE \* SUITE 350 \* BUFFALO, NY 14202 \* 716/541-0730  
OFFICES IN PRINCIPAL CITIES

**ATTACHMENT A**

**Well Sampling Records**

# WELL SAMPLING RECORD

Site Name Honeywell Speciality Chemicals Well ID MW-3

Samplers Robert Piurek

Total Well Depth (TOC)	18.50	feet
Initial Static Water Level (TOC)	5.89	feet
Well Diameter	2.0	inches

## Purging Data

Method Disposable Bailer Date/Time 7/9/13 13:10

Water Volume = (Total Depth of Well - Depth To Water ) x Casing Volume per Foot

$$= \frac{18.50}{2.02} - \frac{5.89}{0.16}$$

Casing Volumes (gal/ft.):					
1-inch	0.041	1.5-inch	0.092	2-inch	0.16
3-inch	0.36	4-inch	0.64	6-inch	1.4
8-inch	2.5			10 inch	4

Volume of Purge Water Removed 6.0 gallons

## Sampling Data

Method Disposable Bailer Date/Time 7/9/13 13:25

Parameters	Bottle	Pres.	Method
VOCs - TCL	2- 40mL vials	HCl	8260
Ar & Ba	1- 250mL Plastic Bottle	HNO 3	206.2/200.7
Ar & Ba (soluble)	1- 250mL Plastic Bottle	none	
Turbidity	1- 100mL Plastic Bottle	none	

## Field Parameters

pH  
Temp. (C)  
Spec. Cond. (mS/cm)  
Turbidity (NTU)  
DO (mg/L)  
Time

1 Volume	2 Volume	3 Volume	Sample
6.97	6.96	6.97	7.37
19.00	17.80	17.00	19.00
19.80	2.13	2.09	2.46
42.10	34.60	49.40	15.20
-	-	-	-
13:10	13:16	13:23	13:25

Comments: Well ID: HBRL-MW-3-0713. Collected Soluble Ar & Ba.

## WELL SAMPLING RECORD

Site Name Honeywell Speciality Chemicals Well ID MW-5

Samplers Robert Piurek

Total Well Depth (TOC)	16.5	feet
Initial Static Water Level (TOC)	8.3	feet
Well Diameter	2.0	inches

### Purging Data

Method Disposable Bailer Date/Time 7/9/13 13:50

Water Volume = (Total Depth of Well - Depth To Water ) x Casing Volume per Foot

$$\begin{array}{r}
 = \quad \quad \quad 16.50 \quad - \quad \quad \quad 8.3 \quad \times \quad \quad \quad 0.16 \\
 \hline
 \quad \quad \quad 1.312 \text{ gallons}
 \end{array}$$

Casing Volumes (gal/ft.):					
1-inch	0.041	1.5-inch	0.092	2-inch	0.16
3-inch	0.36	4-inch	0.64	6-inch	1.4
8-inch	2.5			10 inch	4

Volume of Purge Water Removed 4.0 gallons

### Sampling Data

Method Disposable Bailer Date/Time 7/9/13 14:10

Parameters	Bottle	Pres.	Method
VOCs - TCL	2- 40mL vials	HCl	8260
Ar & Ba	1- 250mL Plastic Bottle	HNO 3	206.2/200.7
Ar & Ba (soluble)	1- 250mL Plastic Bottle	none	
Turbidity	1- 100mL Plastic Bottle	none	

### Field Parameters

	1 Volume	2 Volume	3 Volume	Sample
pH	7.34	7.35	7.42	7.44
Temp. (C)	19.20	16.60	15.90	16.00
Spec. Cond. (mS/cm)	1.48	1.32	1.40	1.41
Turbidity (NTU)	12.80	19.80	39.50	55.60
DO (mg/L)	-	-	-	-
Time	13:57	14:02	14:06	14:10

Comments: Sample ID: HBRL-MW-5-0713.

## **ATTACHMENT B**

### **Groundwater Analytical Results**

**Sample ID: Monitoring Well 3****Sample Date: 07/09/13**

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limits	Method
Total Arsenic	0.145	mg/L	0.025	EPA 200.7
Soluble Arsenic	0.069	mg/L	0.025	EPA 200.7
Total Barium	0.289	mg/L	0.010	EPA 200.7
Soluble Barium	0.226	mg/L	0.010	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
Trichlorofluoromethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	2.1	µg/L	10	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
Trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	8.5	µg/L	10	SW 846 8260
Bromochloromethane	ND	µg/L	10	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	5.9	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
2-Chloroethylvinyl ether	ND	µg/L	10	SW 846 8260
Cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
Dibromochloromethane	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,2-Dichlorobenzene	4.2	µg/L	10	SW 846 8260

**Sample ID: Monitoring Well 5****Sample Date: 07/09/13**

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limits	Method
Total Arsenic	0.012	mg/L	0.025	EPA 200.7
Soluble Arsenic	ND	mg/L	0.025	EPA 200.7
Total Barium	0.070	mg/L	0.010	EPA 200.7
Soluble Barium	0.057	mg/L	0.010	EPA 200.7
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
Trichlorofluoromethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
Trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
2-Chloroethylvinyl ether	ND	µg/L	10	SW 846 8260
Cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
Dibromochloromethane	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8260

**Sample ID: Trip Blank****Sample Date: 07/09/13**

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limits	Method
Chloromethane	ND	µg/L	10	SW 846 8260
Vinyl chloride	ND	µg/L	10	SW 846 8260
Bromomethane	ND	µg/L	10	SW 846 8260
Chloroethane	ND	µg/L	10	SW 846 8260
Trichlorofluoromethane	ND	µg/L	10	SW 846 8260
1,1-Dichloroethene	ND	µg/L	10	SW 846 8260
Methylene chloride	ND	µg/L	10	SW 846 8260
Trans-1,2-Dichloroethene	ND	µg/L	10	SW 846 8260
1,1-Dichloroethane	ND	µg/L	10	SW 846 8260
Bromochloromethane	ND	µg/L	10	SW 846 8260
Chloroform	ND	µg/L	10	SW 846 8260
1,2-Dichloroethane	ND	µg/L	10	SW 846 8260
1,1,1-Trichloroethane	ND	µg/L	10	SW 846 8260
Carbon tetrachloride	ND	µg/L	10	SW 846 8260
Benzene	ND	µg/L	10	SW 846 8260
1,2-Dichloropropane	ND	µg/L	10	SW 846 8260
Trichloroethene	ND	µg/L	10	SW 846 8260
2-Chloroethylvinyl ether	ND	µg/L	10	SW 846 8260
Cis-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
Trans-1,3-Dichloropropene	ND	µg/L	10	SW 846 8260
1,1,2-Trichloroethane	ND	µg/L	10	SW 846 8260
Toluene	ND	µg/L	10	SW 846 8260
Dibromochloromethane	ND	µg/L	10	SW 846 8260
Tetrachloroethene	ND	µg/L	10	SW 846 8260
Chlorobenzene	ND	µg/L	10	SW 846 8260
Ethylbenzene	ND	µg/L	10	SW 846 8260
Bromoform	ND	µg/L	10	SW 846 8260
1,1,2,2-Tetrachloroethane	ND	µg/L	10	SW 846 8260
1,3-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,4-Dichlorobenzene	ND	µg/L	10	SW 846 8260
1,2-Dichlorobenzene	ND	µg/L	10	SW 846 8260



2801 Long Road  
Grand Island, NY 14072  
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(800) 699-8606  
(716) 773-8517 (fax)  
[www.islechem.com](http://www.islechem.com)

## Analysis Report

Client Honeywell Project Water Samples For Analysis  
20 Peabody Street Groundwater Monitoring  
Buffalo, NY 14210

Report Date 7/16/2013 Contact Lana Dole  
Status Final  
ID **NY307071.0.35503**

Batch Date 7/9/2013  
Time 14:30  
Description --  
Received 7/9/2013  
15:35

Batch Contact Lana Dole

Authorized Signature

---

Richard V. Finn, Manager of Chemical Testing

*The following result table is for 3 samples received by IsleChem LLC on 7/9/2013 sampled by Client on 7/9/2013 and submitted by Client*

*Also enclosed are the Chain of Custody and Sample Receipt check list for this project.*

**Narrative:**

*Analyses were performed within the required holding times unless otherwise noted below. All quality control results were within acceptable limits unless specifically noted in the report. Quality control analyses were performed on the samples in this report or samples of similar matrix that were analyzed in the analytical batch on the dates indicated in the report.*

**Notes:**

**Sample Results**

Report ID NY307071.0.35503

Sample ID

Location

Client Honeywell

Method

Analyte

Sample Results

Units

Data Qualifiers

Analyst

Vessel ID

Date

**HBRL-MW-3-0713**

MW - 3 - Ground Water Sampled 7/9/2013

**Metals**

EPA 200.7 Rev 4.4

Field Grab

Arsenic, Soluble

0.069

mg/L

RVF

254741

2013-07-11

Arsenic, Total

0.145

mg/L

RVF

254742

2013-07-11

Barium, Soluble

0.226

mg/L

RVF

254741

2013-07-11

Barium, Total

0.289

mg/L

RVF

254742

2013-07-11

**Volatiles**

EPA 8260C

Field Grab

Chloromethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Vinyl chloride

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Bromomethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Chloroethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Trichlorofluoromethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,1-Dichloroethene

2.1

ug/L

RS

254743-254744

2013-07-10

Methylene chloride

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

trans-1,2-Dichloroethene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,1-Dichloroethane

8.5

ug/L

RS

254743-254744

2013-07-10

Bromochloromethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Chloroform

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,2-Dichloroethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,1,1-Trichloroethane

5.9

ug/L

RS

254743-254744

2013-07-10

Carbon tetrachloride

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Benzene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,2-Dichloropropane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Trichloroethene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

2-Chloroethylvinyl ether

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

cis-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

trans-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,1,2-Trichloroethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Toluene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Dibromochloromethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Tetrachloroethene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Chlorobenzene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Ethyl benzene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

Bromoform

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,1,2,2-Tetrachloroethane

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,3-Dichlorobenzene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,4-Dichlorobenzene

&lt; 2.0

ug/L

RS

254743-254744

2013-07-10

1,2-Dichlorobenzene

4.2

ug/L

RS

254743-254744

2013-07-10

**WetChem**

SM 18-21 2130 B (01)

Field Grab

**Sample Results**

Report ID NY307071.0.35503

Sample ID

Location

Client Honeywell

Method

Analyte

Sample Results

Units

Data Qualifiers

Analyst

Vessel ID

Date

**HBRL-MW-3-0713**

MW - 3 - Ground Water Sampled 7/9/2013

**WetChem**

SM 18-21 2130 B (01)

Field Grab

Turbidity

58.4

NTU

RVF

254745

2013-07-10

Time of Analysis: 1:00 pm

**HBRL-MW-5-0713**

MW - 5 - Ground Water Sampled 7/9/2013

**Metals**

EPA 200.7 Rev 4.4

Field Grab

Arsenic, Soluble

&lt; 0.01

mg/L

RVF

254747

2013-07-11

Arsenic, Total

0.012

mg/L

RVF

254748

2013-07-11

Barium, Soluble

0.057

mg/L

RVF

254747

2013-07-11

Barium, Total

0.070

mg/L

RVF

254748

2013-07-11

**Volatiles**

EPA 8260C

Field Grab

Chloromethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Vinyl chloride

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Bromomethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Chloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Trichlorofluoromethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,1-Dichloroethene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Methylene chloride

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

trans-1,2-Dichloroethene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,1-Dichloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Bromochloromethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Chloroform

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,2-Dichloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,1,1-Trichloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Carbon tetrachloride

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Benzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,2-Dichloropropane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Trichloroethene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

2-Chloroethylvinyl ether

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

cis-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

trans-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,1,2-Trichloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Toluene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Dibromochloromethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Tetrachloroethene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Chlorobenzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Ethyl benzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

Bromoform

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,1,2,2-Tetrachloroethane

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,3-Dichlorobenzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

**Sample Results**

Report ID NY307071.0.35503

Sample ID

Location

Client Honeywell

Method

Analyte

Sample Results

Units

Data Qualifiers

Analyst

Vessel ID

Date

**HBRL-MW-5-0713**

MW - 5 - Ground Water Sampled 7/9/2013

**Volatiles**

EPA 8260C

Field Grab

1,4-Dichlorobenzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

1,2-Dichlorobenzene

&lt; 2.0

ug/L

RS

254749-254750

2013-07-10

**WetChem**

SM 18-21 2130 B (01)

Field Grab

Turbidity

86.8

NTU

RVF

254751

2013-07-10

Time of Analysis: 1:05 pm

**Trip Blank**

Trip Blank - DI Water Sampled 7/9/2013

**Volatiles**

EPA 8260C

Trip Blank

Chloromethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Vinyl chloride

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Bromomethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Chloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Trichlorofluoromethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,1-Dichloroethene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Methylene chloride

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

trans-1,2-Dichloroethene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,1-Dichloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Bromochloromethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Chloroform

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,2-Dichloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,1,1-Trichloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Carbon tetrachloride

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Benzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,2-Dichloropropane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Trichloroethene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

2-Chloroethylvinyl ether

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

cis-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

trans-1,3-Dichloropropene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,1,2-Trichloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Toluene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Dibromochloromethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Tetrachloroethene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Chlorobenzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Ethyl benzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

Bromoform

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,1,2,2-Tetrachloroethane

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,3-Dichlorobenzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,4-Dichlorobenzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

1,2-Dichlorobenzene

&lt; 2.0

ug/L

RS

254746 + 254752

2013-07-10

## Sample Results

Report ID NY307071.0.35503

Sample ID	Location	Client Honeywell			
Method	Analyte	Sample Results	Units	Data Qualifiers	Analyst
Trip Blank		Trip Blank - DI Water Sampled	7/9/2013		

### Data Qualifiers and Definitions:

#### General Disclaimer

- The test results are submitted pursuant to IsleChem LLC's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- This report is issued for the benefit of and may be relied upon by the client named above. The client bears full responsibility for deciding the level of testing for sample submitted to IsleChem LLC.
- These results pertain only to the items tested.
- This report shall not be reproduced except in full.
- If the sample(s) represented by these test results were not collected by IsleChem LLC then the test results are limited to the reported values determine by the analytical testing process. IsleChem LLC makes no representation regarding the sample's collection technique, condition, volume, homogeneity or any other aspect of the sample(s) prior to IsleChem LLC taking possession of the sample(s) and the influence it may have on the results.
- Unless notified in writing to return the samples covered by this report IsleChem LLC will store what remains of the sample(s), if anything, for a period of thirty (30) days, sixty (60) days for asbestos samples, before discarding, unless otherwise required by law. A shipping and handling fee will be charged for the return of any sample(s).
- Certain analytes may not be covered by the NYS DOH or NELAP fields of accreditation. Results for those analytes are generated by the cited method using QA/QC guidelines from IsleChem's Quality Control Manual, where applicable.

The test results in this report meet all NELAP requirements for parameters that are within IsleChem's field of accreditation. Any exceptions to NELAP requirements are noted in the comments field.

All results for solid samples are reported on a dry weight basis unless otherwise noted.

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# CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

2801 Long Road, Grand Island, NY 14072 (716)773-8401 (716)773-8517 (Fax)

Page 1 of 1

Organization Name 20 Peabody Street		Project Name Groundwater Monitoring		2 Samples / 10 Bottles + Trip Blank # of Samples / # of Bottles	
Street Address Buffalo, NY 14210		Client PO / Release # <u>7/9/13</u>		Turnaround Time/ Date Results Needed NY <u>3-7-13</u> O. 35503	
		Date Sampled		IsleChem Project #	
Lana Dole		E-mailed reporting upon request please provide e-mail below: <a href="mailto:Lana.Dole@Honeywell.com">Lana.Dole@Honeywell.com</a>		Rush Work Performed at Priority Rate (see below)	
Contact Person 827-6318 / 827-6221	Phone# / Fax#	Matrix	Comp	Grab	
Sample ID <u>H02L-MW-3-6713</u>	Sample Location <u>254741</u>	GW	X	X	Approved by Client Initials _____
	<u>254742</u>	GW	X	X	Approved by Lab Initials _____
	<u>254743</u>	GW	X	X	
	<u>254744</u>	GW	X	X	
	<u>254745</u>	GW	X	X	
	<u>254746</u>	Trisank		X	
	<u>254747</u>	GW	X	X	Date / Time / Preservative
	<u>254748</u>	GW	X	X	<u>T, 34C</u> 500 ml Poly (None)
	<u>254749</u>	GW	X	X	<u>1325</u> 500 ml Poly (HNO3)
	<u>254751</u>	GW	X	X	<u>1325</u> (2) 40 ml VOA Vials (HCl)
	<u>254752</u>	Di Water		X	<u>1325</u> 250 ml Poly (None)
Comments:					
Sampled By: <u>Roger Lanzin</u>	Date: <u>7/9/13</u>	Time: <u>1430</u>	Received by:	Date: <u>7/9/13</u>	Time: <u>1410</u>
Relinquished by: <u>Roger Lanzin</u>	Date: <u>7/9/13</u>	Time: <u>1535</u>	Relinquished by: <u>Roger Lanzin</u>	Date: <u>7/9/13</u>	Time: <u>1410</u>
Standard turnaround time is 10 days.					
RUSH WORK CHARGES: 3-6 times the standard cost for same day depending on the time needed ~ 2.5 times the standard cost for next day ~ 1.75 times the standard cost for 3 day.					
By relinquishing these samples to IsleChem, LLC, you are accepting the current IsleChem, LLC terms and conditions for the sale of services.					

By relinquishing these samples to IsleChem, LLC, you are accepting the current IsleChem, LLC terms and conditions for the sale of services.



Client Name: Honeywell

IsleChem, LLC Job Number: NY. 307071

Sample(s) received by: JYL Date: 7/9/13 Time: 3:35

Is the chain of custody identified clearly with complete documentation including:

Sample location/Identification	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Sample date	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Sample time	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Client name	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Preservation type	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Required analysis is listed on each bottle	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Are the sample labels clear and do they provide a unique identification of the sample linked to COC?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Are the sample containers appropriate?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Is the sample date within the required hold times?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Is there adequate volume available for requested analysis?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Did the customer list what sample analysis is required?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Is a chain of custody included?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Is the chain of custody complete?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Are the sample(s) free of apparent damage?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
Temperature <u>8°C</u> Has cooling begun?	<input checked="" type="checkbox"/> YES	NO	N/A	-
Is temperature 6° C or less if sample(s) were held prior to delivery date?	YES	NO	<input checked="" type="checkbox"/> N/A	-
Are samples appropriately preserved if necessary?	<input checked="" type="checkbox"/> YES	NO	N/A	Corrected
VOA sample vials do not have headspace or visible "pea-sized" <del>air bubbles</del> (1/4") in diameter.	<input checked="" type="checkbox"/> YES	+ <input checked="" type="checkbox"/> NO	N/A	Corrected
If necessary, lab management has been notified of any short hold or quick TAT samples.	YES	NO	N/A	Corrected

Comments/Actions: Air bubbles in top blank