



August 30, 2010

Mr. Maurice Moore  
Division of Hazardous Waste Management  
New York State Department of Environmental Protection  
270 Michigan Ave.  
Buffalo, NY 14203-2999

**Re: 2010 Semi-Annual Performance Monitoring Report  
Essex/Hope Site, Jamestown, New York  
URS Project No. 41568652**

Dear Mr. Moore:

This letter report is a summary of the January through June 2010 operation performance for the remedial system at the above-referenced site. This report is submitted in accordance with the revised Performance Monitoring Plan (PMP) prepared by URS Corporation (URS) dated February 2008. During the period approximately 921,700 gallons of water were treated and discharged to the City of Jamestown POTW. The following sections discuss the data on groundwater quality sampling and groundwater flow.

### ***GROUNDWATER FLOW EVALUATION***

Water level measurements were taken on March 24 and June 29, 2010. Water level data is provided in Appendix A of this report. Groundwater contour maps illustrating pumping conditions during the reporting period are provided as Figures 1 through 4. Shallow groundwater was extracted at an average rate of 0.732 gallon per minute (gpm) from the NPL Area and 0.0002 gpm from the AST/UST Area. Groundwater was extracted from the deep zone at an average rate of 3.15 gpm. Recovery Well RW-6D was offline for an extended period of time due to silt accumulation in the well. Once well redevelopment was conducted and the well pump motor was replaced, normal pumping operations resumed on May 21, 2010. Pumping conditions for other recovery wells were typical of previous data for the site.

### ***WATER QUALITY RESULTS***

Performance monitoring included semi-annual sampling of the recovery wells during the 2<sup>nd</sup> Quarter 2010 and monthly influent and effluent sampling of the treatment system. Recovery Well sampling was conducted on June 24, 2010. Samples were analyzed by Pace Analytical of Greensburg, Pennsylvania for volatile organic compounds (VOC's) by US EPA Method 8260B. The recovery well analytical results are summarized in Table 1.

In accordance with the City of Jamestown Board of Public Utilities (BPU) Industrial Wastewater Discharge Permit Number 26 (Permit), the treatment system is monitored for pH and VOCs to ensure compliance with the discharge requirements. Sampling points include the influent, primary carbon effluent and secondary carbon effluent (discharge to POTW). These

URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220  
Phone: 412.503.4700  
Fax: 412.503.4704

points are sampled each month and reported to the Jamestown BPU on a semi-annual basis. Groundwater treatment system data for January through June 2010 is summarized on Tables 2 through 4. These tables represent the system influent, individual carbon vessel effluent and post carbon (system discharge to POTW) concentrations. There were no discharge exceedances during this reporting period.

This letter report has been prepared to satisfy the reporting requirements stipulated in the Performance Monitoring Plan and to evaluate remediation effectiveness on a semi-annual basis. If you have any questions or desire additional information, please do not hesitate to call me at (412) 503-4672.

Sincerely,

**URS**

Mark Dowiak, P.E.  
Project Manager  
URS Dow Business Unit

Enclosure

cc: Tim King – The Dow Chemical Company  
Valerie Sibeto – URS  
Cameron O'Conner – New York State Department of Health  
Joe Hausbeck – Division of Environmental Enforcement  
Carlo J. Montisano – Custom Production Manufacturing, Inc.

## TABLES

**Table 1**  
**Semi-Annual Recovery Well Sampling**  
**2<sup>nd</sup> Quarter Analytical Results**  
**June 24, 2010**

<b>Volatile Organic Compounds (Method 8260A) - mg/L</b>	<b>Site GW RAOs</b>	<b>RW-1S</b>	<b>RW-2S</b>	<b>RW-2D</b>	<b>RW-6D</b>	<b>RW-3S</b>
Acetone		ND	ND	ND	<b>21,100</b>	ND
Benzene		ND	ND	<b>10.1</b>	<b>82.3</b>	<b>45.1</b>
2-Butanone		ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)		ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	<b>25.4</b>	<b>48.1</b>	ND
cis-1,2-Dichloroethene		<b>180</b>	<b>10.4</b>	<b>4,120</b>	<b>16,900</b>	<b>6.9</b>
trans-1,2-Dichloroethene	<b>5</b>	ND	ND	<b>40.6</b>	<b>85.6</b>	ND
Ethylbenzene	<b>5</b>	ND	ND	ND	ND	ND
4-Methyl-2-pentanone		ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene	<b>5</b>	ND	ND	ND	ND	ND
Trichloroethene	<b>5</b>	<b>160</b>	<b>10.4</b>	<b>2,450</b>	<b>3,090</b>	<b>18.8</b>
Vinyl Chloride	<b>5</b>	<b>3.3</b>	ND	<b>591</b>	<b>1,060</b>	ND
Xylenes (total)	<b>5</b>	ND	ND	ND	ND	ND

**Notes:**

Site GW RAOs = Site Groundwater Remedial Action Objectives

µg/l = Micrograms per liter

ND = Not Detected/Below minimum laboratory reporting limit

**Table 2**  
**POTW Monthly Monitoring Summary**  
**2010 System Pre-Carbon**  
**Volatile Organic Compounds (mg/L)**

Sample Date	19-Jan-10	28-Feb-10	31-Mar-10	30-Apr-10	27-May-10	24-Jun-10						
Acetone	128	ND	ND	ND	1,540	4,350						
Benzene	10.2	8.3	5.9	6.1	12.7	17.8						
2-Butanone	ND	ND	ND	ND	10	16.9						
Carbon Disulfide	ND	ND	ND	ND	ND	ND						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	18.8	17.8	13.8	12.5	19.8	31.1						
cis-1,2-Dichloroethene	5,980	4,310	3,380	3,670	4,530	6,990						
trans-1,2-Dichloroethene	65.1	54.3	26.9	24.8	26.7	74.7						
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	2,160	2,560	1,720	1,760	2,610	2,670						
Vinyl Chloride	586	572	525	543	661	796						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Pre-Carbon TOTAL VOCs</b>	<b>8,948</b>	<b>7,522</b>	<b>5,672</b>	<b>6,016</b>	<b>9,410</b>	<b>14,947</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit

µg/L = micrograms per liter

Pre-Carbon sample results represent system influent.

System Carbon was changed out on March 23, 2010.

**Table 3**  
**POTW Monthly Monitoring Summary**  
**2010 System Primary Carbon Effluent**  
**Volatile Organic Compounds (mg/L)**

Sample Date	19-Jan-10	28-Feb-10	31-Mar-10	30-Apr-10	27-May-10	24-Jun-10						
Acetone	ND	ND	ND	ND	951	3,820						
Benzene	ND	ND	ND	ND	ND	ND						
2-Butanone	ND	ND	ND	ND	ND	ND						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	ND	8.1	ND	ND	ND	ND						
cis-1,2-Dichloroethene	1,140	3,730	157	68.6	90.9	1,980						
trans-1,2-Dichloroethene	ND	19.8	ND	ND	ND	ND						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	16.7	105	ND	ND	ND	32.9						
Vinyl Chloride	725	701	22.9	465	727	1,080						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Primary-Carbon TOTAL VOCs</b>	<b>1,882</b>	<b>4,564</b>	<b>180</b>	<b>534</b>	<b>1,769</b>	<b>6,913</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit

µg/L = micrograms per liter

Primary Carbon sample results represent effluent from the first carbon vessel in the two (2) carbon vessel system.

System Carbon was changed out on March 23, 2010.

**Table 4**  
**POTW Monthly Monitoring Summary**  
**2010 System Post Carbon Effluent**  
**Volatile Organic Compounds (mg/L)**

Sample Date	19-Jan-10	28-Feb-10	31-Mar-10	30-Apr-10	27-May-10	24-Jun-10						
Acetone	ND	ND	ND	ND	56.0	928						
Benzene	ND	ND	ND	ND	ND	ND						
2-Butanone	ND	ND	ND	ND	ND	ND						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND						
cis-1,2-Dichloroethene	144	109	19.4	18.1	12.3	16.5						
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	6.1	5.7	ND	ND	ND	ND						
Vinyl Chloride	137	731	22.7	9.7	46.1	463						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Post-Carbon TOTAL VOCs</b>	<b>287</b>	<b>846</b>	<b>42</b>	<b>28</b>	<b>114</b>	<b>1,408</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit

µg/L = micrograms per liter

**POTW Discharge Limit = 2,130 ug/L Total Toxic Organics (VOCs)**

Post-Carbon sample results represent system effluent from the secondary carbon vessel (or the third carbon vessel if used) to the POTW.

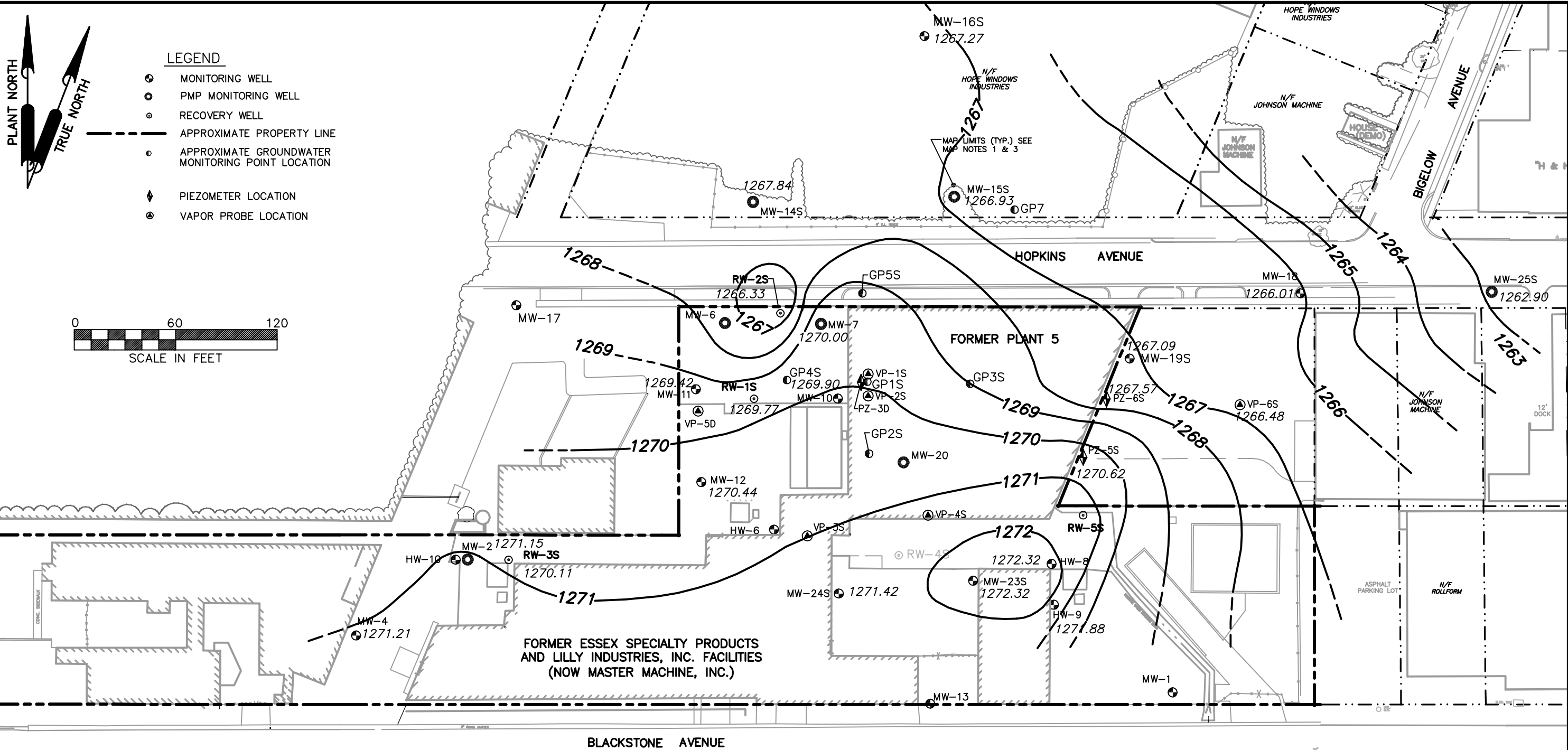
Post-Carbon sample is a laboratory prepared composite of four (4) grab samples taken at 30-minute intervals.

System Carbon was changed out on March 23, 2010.

## FIGURES



00883005110066  
FILE: \\ESSEX\\HOP\\2006-MAP\\PMP-2010\\2010-SA-JUL-2009-PMP-BASE-MAP



CONFIDENTIAL - ALL RIGHTS RESERVED - PROPERTY OF

**URS**

PITTSBURGH, PENNSYLVANIA

**2010 SEMI-ANNUAL PERFORMANCE MONITORING REPORT**  
**SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 24, 2010**

ESSEX/HOPE SITE

JAMESTOWN, NY

CLIENT: ESSEX SPECIALTY PRODUCTS, INC.

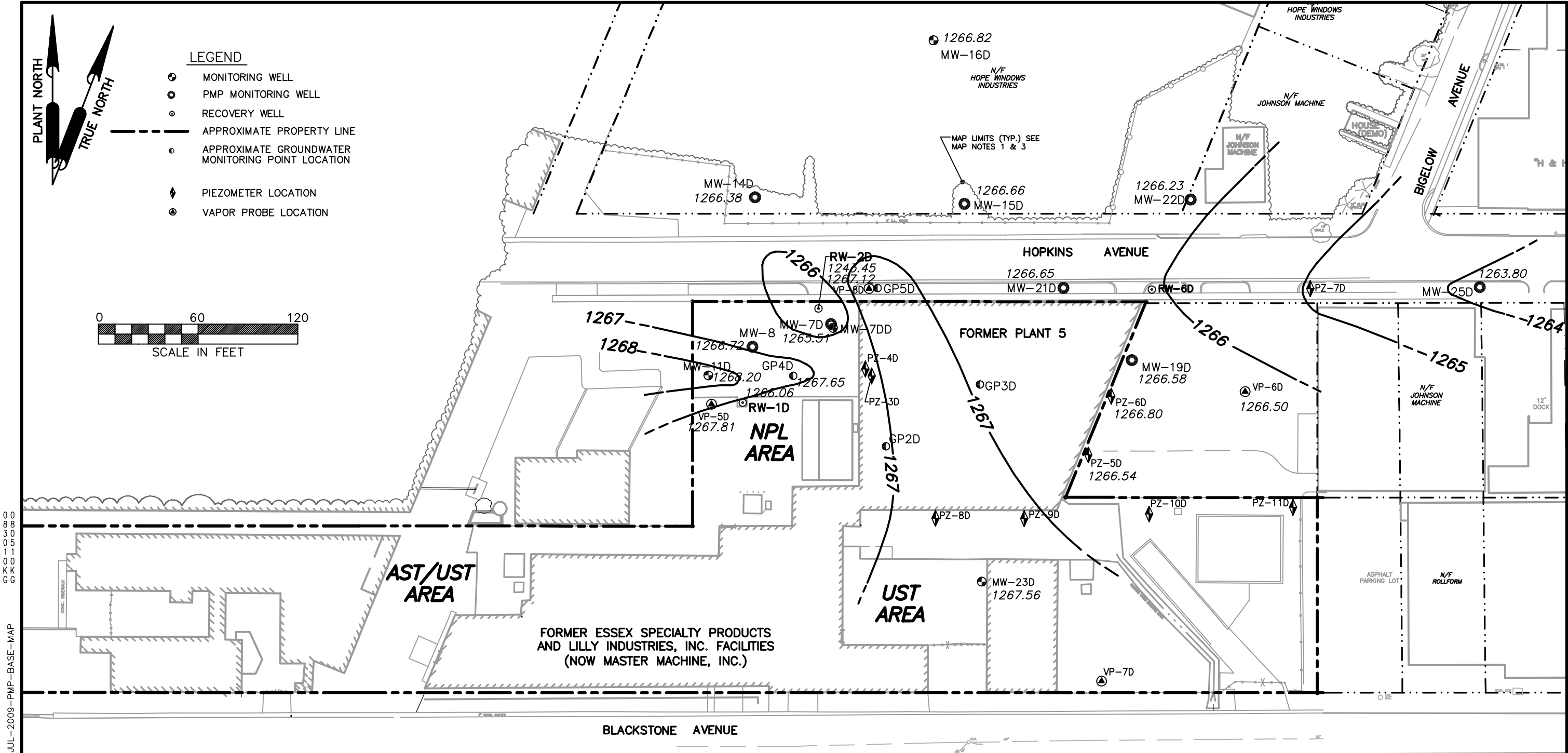
JOB NUMBER: 41568652

SCALE: AS SHOWN

FIGURE  
NUMBER

1

REV  
0



**MAP REFERENCE AND CONTROL NOTES:**

1. BASE MAPPING INCLUDING THE LOCATIONS OF SOME OF THE BUILDINGS, ROADS, CURBS/SIDEWALKS, FENCING, PAVED AREAS, ALL UTILITIES (UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE), AND PROPERTY BOUNDARY WAS PROVIDED BY MICHAEL J. RODGERS AND ASSOCIATES, LAND SURVEYORS, BEMUS POINT, NEW YORK, N.Y.S. LICENSE No. 49232. THE BASE MAP WAS A SEPIA HARD COPY AT A SCALE OF 1"=20', DATED APRIL 15, 1992, LAST REVISION DATE MARCH 10, 1993. RECOVERY WELLS, SPARGE WELLS, AND SVE WELLS WERE SURVEYED AUGUST, 1997. MONITORING WELLS IN THE VICINITY OF THE REMEDIAL ACTION CONSTRUCTION WERE SURVEYED AUGUST, 1997, MONITORING WELLS MW-18, MW-21D, MW-22D, MW-23S, MW-23D, MW-24S, ALL RECOVERY WELLS (RW), ALL GEOPROBES (GP) (EXCEPT GP-4S), ALL PIEZOMETERS (PZ), AND ALL VAPOR PROBES (VP) (EXCEPT VP-3S) WERE LOCATED BY URS FIELD SURVEY AUGUST 2006, RW-6 PIPELINE LOCATED BY FIELD MEASUREMENTS ON 10/17/2008, RW-6, MW-25S AND MW-25D LOCATED BY URS FIELD SURVEY JUNE 30, 2009. COORDINATE INFORMATION SHOWN AT THE BUILDING CORNERS CAME FROM THE MICHAEL J. RODGERS SURVEY DONE ON JANUARY 9, 1998. ALL OTHER BUILDING CORNERS ARE APPROXIMATE. THE SITE AREA BEYOND THE 1998 SURVEY WAS MAPPED BY URS CORPORATION IN AUGUST 2006. THIS MAPPING USED THE SAME VERTICAL AND HORIZONTAL REFERENCE DATA AS THE PREVIOUS SURVEY. THE MAPPING WAS MERGED WITH THE 1998 DATA TO PRODUCE A COMPOSITE SITE BASE MAP. THE LIMITS OF THE COMPOSITE SURVEY MAP ARE SHOWN ON THE DRAWING. SEE MAP REFERENCE 3.

2. VERTICAL BENCH MARK INFORMATION CAME FROM U.S.G.S. PLAQUE U-88-S.E. ABUTT. ERIE R.R. BRIDGE OVER BUFFALO ST., ELEV.=1296.034 (NATIONAL GEODETIC VERTICAL DATUM, 1929). HORIZONTAL COORDINATES PROVIDED FOR THE MONITORING WELLS AND THE PROPERTY CORNERS ARE BASED ON A LOCAL GRID ESTABLISHED BY THE SURVEYOR. N10000, E10000 IS A PK NAIL SET IN THE CONCRETE CURB/GUTTER AND IS PART OF THE ORIGINAL TRAVERSE. IRON STAKES WERE SET AT THE PROPERTY CORNERS.

3. AREAS OUTSIDE OF CLOUD LINE: PROPERTY LINES AND MAPPING ADJACENT TO BIGELOW AVENUE, NORTH & SOUTH OF HOPKINS AVENUE & EAST OF BIGELOW AVENUE, AND SOUTH OF BLACKSTONE AVENUE WERE TAKEN FROM A VARIETY OF SOURCES INCLUDING SEPIA MYLAR SITE MAP (SEE REFERENCE 1), USGS 7.5 MINUTE TOPOGRAPHIC MAP - JAMESTOWN, NY, CITY OF JAMESTOWN TAX MAP RECORDS, AND URS FIELD RECONNAISSANCE. LOCATIONS AND DIMENSIONS IN THESE AREAS ARE APPROXIMATE.

CONFIDENTIAL - ALL RIGHTS RESERVED - PROPERTY OF

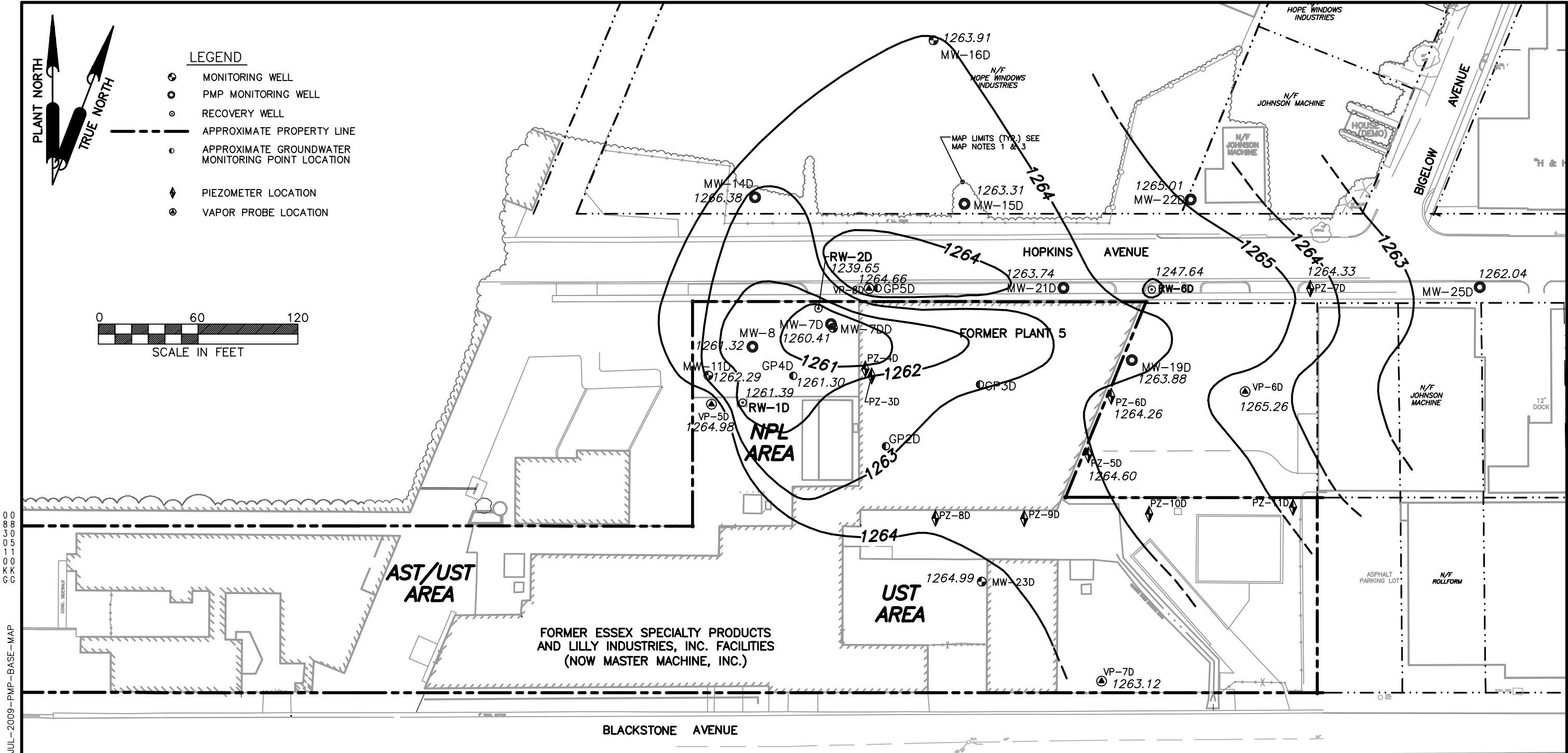


PITTSBURGH, PENNSYLVANIA

**2010 SEMI-ANNUAL PERFORMANCE MONITORING REPORT  
DEEP GROUNDWATER POTENTIOMETRIC SURFACE - MARCH 24, 2010**

ESSEX/HOPE SITE		JAMESTOWN, NY	
CLIENT: ESSEX SPECIALTY PRODUCTS, INC.		JOB NUMBER: 41568652	
SCALE: AS SHOWN	FIGURE NUMBER 2	REV 0	





0088305110066

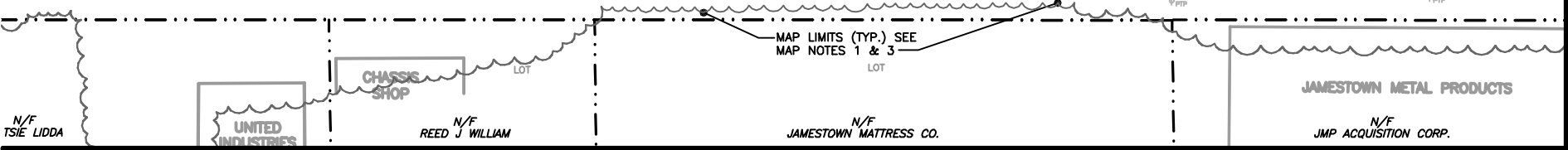
FILE: \ESSEX\HOP\2006-MAP\PM-2010\2010-SA-JUL-2009-PM-PM-BASE-MAP

MAP REFERENCE AND CONTROL NOTES:

1. BASE MAPPING INCLUDING THE LOCATIONS OF SOME OF THE BUILDINGS, ROADS, CURBS/SIDEWALKS, FENCING, PAVED AREAS, ALL UTILITIES (UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE), AND PROPERTY BOUNDARY WAS PROVIDED BY MICHAEL J. RODGERS AND ASSOCIATES, LAND SURVEYORS, BEMUS POINT, NEW YORK, N.Y.S. LICENSE No. 49232. THE BASE MAP WAS A SEPIA HARD COPY AT A SCALE OF 1"=20', DATED APRIL 15, 1992, LAST REVISION DATE MARCH 10, 1993. RECOVERY WELLS, SPARGE WELLS, AND SVE WELLS WERE SURVEYED AUGUST, 1997. MONITORING WELLS IN THE VICINITY OF THE REMEDIAL ACTION CONSTRUCTION WERE SURVEYED AUGUST, 1997, MONITORING WELLS MW-18, MW-21D, MW-22D, MW-23S, MW-23D, MW-24S, ALL RECOVERY WELLS (RW), ALL GEOPROBES (GP) (EXCEPT GP-4S), ALL PIEZOMETERS (PZ), AND ALL VAPOR PROBES (VP) (EXCEPT VP-3S) WERE LOCATED BY URS FIELD SURVEY AUGUST 2006, RW-6 PIPELINE LOCATED BY FIELD MEASUREMENTS ON 10/17/2008, RW-6, MW-25S AND MW-25D LOCATED BY URS FIELD SURVEY JUNE 30, 2009. COORDINATE INFORMATION SHOWN AT THE BUILDING CORNERS CAME FROM THE MICHAEL J. RODGERS SURVEY DONE ON JANUARY 9, 1998. ALL OTHER BUILDING CORNERS ARE APPROXIMATE. THE SITE AREA BEYOND THE 1998 SURVEY WAS MAPPED BY URS CORPORATION IN AUGUST 2006. THIS MAPPING USED THE SAME VERTICAL AND HORIZONTAL REFERENCE DATA AS THE PREVIOUS SURVEY. THE MAPPING WAS MERGED WITH THE 1998 DATA TO PRODUCE A COMPOSITE SITE BASE MAP. THE LIMITS OF THE COMPOSITE SURVEY MAP ARE SHOWN ON THE DRAWING. SEE MAP REFERENCE 3.

2. VERTICAL BENCH MARK INFORMATION CAME FROM U.S.G.S. PLAQUE U-88-S.E. ABUTT. ERIE R.R. BRIDGE OVER BUFFALO ST., ELEV.=1296.034 (NATIONAL GEODETIC VERTICAL DATUM, 1929). HORIZONTAL COORDINATES PROVIDED FOR THE MONITORING WELLS AND THE PROPERTY CORNERS ARE BASED ON A LOCAL GRID ESTABLISHED BY THE SURVEYOR. N10000, E10000 IS A PK NAIL SET IN THE CONCRETE CURB/GUTTER AND IS PART OF THE ORIGINAL TRAVERSE. IRON STAKES WERE SET AT THE PROPERTY CORNERS.

3. AREAS OUTSIDE OF CLOUD LINE: PROPERTY LINES AND MAPPING ADJACENT TO BIGELOW AVENUE, NORTH & SOUTH OF HOPKINS AVENUE & EAST OF BIGELOW AVENUE, AND SOUTH OF BLACKSTONE AVENUE WERE TAKEN FROM A VARIETY OF SOURCES INCLUDING SEPIA MYLAR SITE MAP (SEE REFERENCE 1), USGS 7.5 MINUTE TOPOGRAPHIC MAP - JAMESTOWN, NY, CITY OF JAMESTOWN TAX MAP RECORDS, AND URS FIELD RECONNAISSANCE. LOCATIONS AND DIMENSIONS IN THESE AREAS ARE APPROXIMATE.



CONFIDENTIAL - ALL RIGHTS RESERVED - PROPERTY OF		2010 SEMI-ANNUAL PERFORMANCE MONITORING REPORT	
URS		DEEP GROUNDWATER POTENTIOMETRIC SURFACE - JUNE 29, 2010	
PITTSBURGH, PENNSYLVANIA		JAMESTOWN, NY	
ESSEX/HOPE SITE		CLIENT: ESSEX SPECIALTY PRODUCTS, INC.	
SCALE: AS SHOWN		JOB NUMBER: 41568652	
FIGURE NUMBER 4		REV 0	

## **APPENDIX A**

### **Water Level Measurement Data**

# APPENDIX A

## 2010 Water Level Data Essex/Hope Site Jamestown, NY

Well No.	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 24, 2010			June 29, 2010		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
MW-1	9758.7161	10383.6499	1280.48		20.0	Shallow	NA	NA	NA	NA	NA	NA
MW-2	9837.1531	9959.6857	1279.87		16.0	Shallow	8.72	NA	1271.15	9.25	NA	1270.62
MW-4	9792.3277	9900.7631	1281.02	13.0	18.0	Shallow	9.81	NA	1271.21	9.97	NA	1271.05
MW-5	9789.6222	9631.761	1280.82	9.5	20.0	Shallow	NA	NA	NA	NA	NA	NA
MW-6	9977.1197	10118.8762	1277.98			Shallow	NA	NA	NA	10.55	NA	1267.43
MW-7	9976.6467	10175.6797	1277.73	10.0	20.0	Shallow	7.73	NA	1270.00	8.87	NA	1268.86
MW-7D	9973.2593	10174.8524	1277.8	35.0	45.0	Deep	12.29	NA	1265.51	17.39	NA	1260.41
MW-7DD	9970.8547	10176.2698	1277.74	90.0	100.0	Glacial Till	NA	NA	NA	NA	NA	NA
MW-8	9959.6089	10127.6898	1277.97	39.6	49.6	Deep	11.25	NA	1266.72	16.65	NA	1261.32
MW-10	9932.4702	10185.7078	1277.94	8.5	18.5	Shallow	NA	NA	NA	8.23	NA	1269.71
MW-11	9937.9912	10101.7016	1277.75	5.0	15.0	Shallow	8.33	NA	1269.42	11.34	NA	1266.41
MW-11D	9942.3792	10101.1482	1277.85	35.0	45.0	Deep	9.65	NA	1268.20	15.56	NA	1262.29
MW-12	9883.0874	10104.9278	1278.18	4.0	14.0	Shallow	7.74	NA	1270.44	9.29	NA	1268.89
MW-13	9752.0619	10240.2934	1278.12	8.0	18.0	Shallow	NA	NA	NA	NA	NA	NA
MW-14S	10048.7753	10135.5198	1280.25	10.0	20.0	Shallow	12.41	NA	1267.84	14.72	NA	1265.53
MW-14D	10049.5051	10129.1897	1280.01	40.0	50.0	Deep	13.63	NA	1266.38	17.10	NA	1262.91
MW-15S	10051.8272	10254.4862	1279.55	10.0	20.0	Shallow	12.62	NA	1266.93	13.78	NA	1265.77
MW-15D	10045.5611	10255.205	1279.46	34.0	44.0	Deep	12.80	NA	1266.66	16.15	NA	1263.31
MW-16S	10146.7788	10236.8582	1279.32	7.0	17.0	Shallow	12.05	NA	1267.27	13.10	NA	1266.22
MW-16D	10143.9497	10236.6005	1279.05	36.0	46.0	Deep	12.23	NA	1266.82	15.14	NA	1263.91
MW-17	9987.6315	9995.5207	1278.7			Deep	NA	NA	NA	NA	NA	NA
MW-18	9994.6655	10459.2207	1275.49		20.0	Shallow	9.48	NA	1266.01	10.39	NA	1265.10
MW-19S	9956.1454	10358.207	1276.82	9.0	19.0	Shallow	9.73	NA	1267.09	10.77	NA	1266.05
MW-19D	9951.569	10355.9748	1276.21	34.0	44.0	Deep	9.63	NA	1266.58	12.33	NA	1263.88
MW-20	9894.7336	10224.5128	1278.56	6.5	11.5	Shallow	NA	NA	NA	NA	NA	NA
MW-21D	9995.0094	10314.801	1276.12	31.5	41.0	Deep	9.47	NA	1266.65	12.38	NA	1263.74
MW-22D	10048.1687	10391.3548	1276.04	32.5	42.0	Deep	9.81	NA	1266.23	11.03	NA	1265.01
MW-23S	9824.696	10265.6365	1277.85	5.0	14.5	Shallow	5.53	NA	1272.32	6.55	NA	1271.30
MW-23D	9818.3152	10265.6675	1277.89	28.0	37.5	Deep	10.33	NA	1267.56	12.90	NA	1264.99

# APPENDIX A

## 2010 Water Level Data Essex/Hope Site Jamestown, NY

Well No.	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 24, 2010			June 29, 2010		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
MW-24S	9817.1277	10186.2119	1278.77	5.0	14.5	Shallow	7.35	NA	1271.42	8.32	NA	1270.45
MW-25S	9995.6	10572.35	1272.76			Shallow	9.86	NA	1262.90	11.20	NA	1261.56
MW-25D	9995.46	10565.28	1273.41			Deep	9.61	NA	1263.80	11.37	NA	1262.04
HW-8	9834.664	10312.0885	1277.81	6.0	16.0	Shallow	5.49	NA	1272.32	6.85	NA	1270.96
HW-9	9810.5264	10313.3873	1280.78	6.0	16.0	Shallow	8.90	NA	1271.88	10.29	NA	1270.49
HW-10	9837.2976	9966.7406	1279.55	7.0	17.0	Shallow	NA	NA	NA	NA	NA	NA
RW-1S	9932.3606	10136.0515	1275.81	10.5	16.0	Shallow	6.04	11.50	1269.77	9.79	11.50	1266.02
RW-1D	9925.9898	10121.7689	1276.34	32.0	57.0	Deep	10.28	NA	1266.06	14.95	NA	1261.39
RW-2S	9982.9501	10151.7112	1276.33	10.0	15.5	Shallow	10.00	12.70	1266.33	9.68	12.70	1266.65
RW-2D	9982.6088	10169.3122	1276.35	27.0	42.0	Deep	32.90	36.90	1243.45	36.70	36.90	1239.65
RW-3S	9837.0894	9990.9663	1278.14	9.0	13.5	Shallow	8.03	8.80	1270.11	8.61	8.80	1269.53
RW-5S	9863.4298	10330.7462	1277.29	7.0	10.0	Shallow	NA	NA	NA	NA	NA	NA
RW-6D	9994.04	10367.91	1265.91			Deep	NA	NA	NA	18.27	NA	1247.64
GP-1S	9942.4384	10203.1085	1278.83	8.0	12.8	Shallow	NA	NA	NA	NA	NA	NA
GP-2S	9899.8775	10204.1632	1278.46	2.6	12.6	Shallow	NA	NA	NA	NA	NA	NA
GP-2D	9899.7358	10207.9807	1278.56	30.0	34.8	Deep	NA	NA	NA	NA	NA	NA
GP-3S	9941.2543	10263.8898	1278.59	4.0	14.0	Shallow	NA	NA	NA	NA	NA	NA
GP-3D	9936.9027	10264.588	1278.62	34.0	38.8	Deep	NA	NA	NA	NA	NA	NA
GP-4S	9940.86*	10154.97*	1278.06	10.8	15.8	Shallow	8.16	NA	1269.90	9.14	NA	1268.92
GP-4D	9942.1743	10152.2232	1277.95	39.0	43.8	Deep	10.30	NA	1267.65	16.65	NA	1261.30
GP-5S	9994.7299	10200.2055	1277.44	7.0	11.8	Shallow	NA	NA	NA	NA	NA	NA
GP-5D	9994.8642	10202.9906	1276.81	36.0	40.8	Deep	NA	NA	NA	NA	NA	NA
PZ-1S	9981.8469	10169.3122	1277.77			Shallow	NA	NA	NA	NA	NA	NA
PZ-1D	9980.4294	10171.2636	1277.64			Deep	NA	NA	NA	NA	NA	NA
PZ-2D	9979.5627	10172.4761	1277.55			Deep	NA	NA	NA	NA	NA	NA
PZ-3D	9942.0414	10199.2937	1278.8	20.0	40.0	Deep	NA	NA	NA	NA	NA	NA
PZ-4D	9946.2326	10195.679	1278.71			Deep	NA	NA	NA	NA	NA	NA
PZ-5S	9897.7381	10330.7876	1276.42	5.5	12.0	Shallow	5.80	NA	1270.62	6.81	NA	1269.61
PZ-5D	9894.5731	10329.7148	1276.4	21.0	42.0	Deep	9.86	NA	1266.54	11.80	NA	1264.60

## APPENDIX A

### 2010 Water Level Data Essex/Hope Site Jamestown, NY

Well No.	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 24, 2010			June 29, 2010		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
PZ-6S	9932.2079	10344.4895	1276.61	8.5	13.5	Shallow	9.04	NA	1267.57	10.06	NA	1266.55
PZ-6D	9929.8004	10343.4742	1276.62	25.5	45.5	Deep	9.82	NA	1266.80	12.36	NA	1264.26
PZ-7D	9994.5452	10463.2465	1275.68	22.0	42.0	Deep	NA	NA	NA	11.35	NA	1264.33
PZ-8D	9856.4908	10237.8118	1278.12	21.0	41.0	Deep	NA	NA	NA	NA	NA	NA
PZ-9D	9856.2398	10291.1658	1277.3	19.0	39.0	Deep	NA	NA	NA	NA	NA	NA
PZ-10D	9858.9821	10366.4236	1277.52	26.5	46.5	Deep	NA	NA	NA	NA	NA	NA
PZ-11D	9863.0677	10452.8989	1276.63	21.3	41.3	Deep	NA	NA	NA	NA	NA	NA
VP-5D	9925.1052	10103.0141	1277.88	12.5	34.3	Deep	10.07	NA	1267.81	12.90	NA	1264.98
VP-6S	9928.8123	10423.4628	1276.48	18.3	24.0	Deep upper gravel	10.00	NA	1266.48	11.03	NA	1265.45
VP-6D	9932.5744	10424.1378	1276.6	29.5	39.5	Deep	10.10	NA	1266.50	11.34	NA	1265.26
VP-7D	9758.4881	10337.7133	1278.64	20.4	39.3	Deep	NA	NA	NA	15.52	NA	1263.12
VP-8D	9994.6178	10197.8133	1277.15	20.0	39.0	Deep	10.03	NA	1267.12	12.49	NA	1264.66