



REPORT

# KPX INDUSTRIAL SEWER RCRA FACILITY INVESTIGATION AND PRESUMPTIVE REMEDY REPORT – KODAK PARK CORRECTIVE ACTION PROGRAM

Eastman Kodak Company  
Rochester, New York

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## EXECUTIVE SUMMARY

Eastman Kodak Company (Kodak) is currently implementing a Corrective Action Program (CAP) for the Facility now known as the Eastman Business Park (EBP) in Rochester, New York. As required by the CAP, Kodak must develop a Resource Conservation and Recovery Act Facility Investigation (RFI) report for investigating whether releases from the facility's hazardous waste or hazardous constituent conveying industrial sewers and building wastewater collection systems (BWCS) require additional corrective action to protect human health and the environment. These requirements are inclusive of the industrial sewers and BWCS located in the KPX section of the business park. An inspection of the sewers in the XIA-218 area revealed three (3) pipe segments that were deemed Not-Fit-For-Use (NFFU) based on past hazardous waste sewer inspections. Recent inspections of BWCS and hazardous constituent carrying sewers did not identify any additional sewer integrity issues in this section of EBP. Each of these sewer systems are listed as a Further Action (FA) Solid Waste Management Unit (SWMU) as part of the CAP (identified site wide as SWMU X-001).

This report evaluates the KPX XIA-218 area industrial sewers, surrounding hydrogeology, and existing remedies for the KPX XIA-218 area, in terms of meeting corrective action objectives and serving as the final corrective measures for the investigation area.

The three (3) NFFU pipe segments that are the focus of this report are within the XIA-218 Investigation Area boundary. The following engineering and institutional controls are already in place in the XIA-218 area:

- Continued operation and maintenance of the B-206 groundwater migration control system (MCS), which would capture any groundwater that may have been impacted by releases from the NFFU sewers;
- Continued groundwater monitoring in accordance with the NYSDEC-approved Kodak Park Groundwater Sampling and Analysis Plan (KPGSAP);
- Continued implementation of the 48-inch storm sewer water quality program (sampled bi-annually) in the XIA-218 area;
- Continued implementation of existing institutional controls (i.e., site access restrictions, and property use restrictions limiting XIA-218 to a commercial/industrial area); and
- Continued implementation of Kodak Park Excavation Master Plan (EMP) II and project-specific health and safety protocols as appropriate for future excavations within XIA-218.

Due to the typical water table elevations above the NFFU sewer invert elevations, the close proximity and the effectiveness of the KPX migration control system (MCS), and the institutional controls already in place, no additional action is required to protect human health and the environment for the KPX sewers.



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## 1.0 INTRODUCTION

Eastman Kodak Company (Kodak) is currently implementing a Corrective Action Program (CAP) for the Facility now known as the Eastman Business Park (EBP) in Rochester, New York. The CAP requirements for the facility are included in the Hazardous Waste Management Facility Permit (DEC Permit No. 8-2614-00205/00104). Included in this permit are requirements for the development of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) work plan for investigating whether releases from the facility's hazardous waste or hazardous constituent conveying industrial sewers and building wastewater collection systems (BWCS) require additional corrective action to protect human health and the environment. This includes sewers and the BWCS located in the KPE, KPW, KPM, and KPX sections of the business park. Each of these sewer systems is listed as a Further Action (FA) Solid Waste Management Unit (SWMU) (collectively SWMU X-001) as part of the CAP. This report will focus on the sewers and BWCS in KPX (Figure 1). The approved RFI work plan was completed by Golder Associates Inc. (Golder) in July 2010 (Golder, 2010).

Kodak has completed an Industrial Sewer Integrity Assessment Program pursuant to an EPA Enforcement Action (Civil Action No. 94-CV-6503T). This program addressed the inspection and physical upgrade of those portions of the Facility's industrial sewers which are in hazardous waste service. The program identified approximately 95 sewer structures and pipe segments that were determined to be in a Not Fit For Use (NFFU) condition and therefore required repair and/or upgrade to a "verifiably non-leaking" (VNL) status in all of EBP (three of which are located in the KPX Section of EBP). These locations had the potential for a release. In addition, permit condition D.4.b required an assessment of the Hazardous Constituent Conveying Sewers and BWCS to determine if releases of hazardous waste or hazardous constituents from these systems resulted in impacts that require corrective action. This assessment has been completed. No additional locations of potential releases were identified as a part of recent BWCS and hazardous constituent sewer inspections.

At the conclusion of the sewer and BWCS assessment, a total of three (3) sewer pipe segments were found to be in NFFU condition in Section KPX of Eastman Business Park, and these areas are the focus of this combined RCRA Facility Investigation (RFI)/Presumptive Remedy (PR) Report. The RFI work plan stated that there was one (1) manhole and three (3) pipe segments that were determined to be in NFFU conditions. It was later determined that the sewer assessment had identified three (3) pipe segments only - no manholes are required to be addressed as part of this report.

This RFI/PR report includes the following components:

- A summary of the XIA-218 background, An evaluation of the existing remedial/control systems (e.g. Building 206 groundwater migration control system (MCS) and the KPX industrial sewer network), and a summary of XIA-218 geology and hydrogeology;



- A summary of historical site investigations at XIA-218 and the extent of soil and groundwater contamination;
- An overview of the current sewer and BWCS RFI, a summary of the results of the sewer investigation in XIA-218, and an evaluation of the potential risks associated with detected soil and groundwater constituents in XIA-218 soil and groundwater risk review; and
- A discussion and evaluation of the sewer and BWCS presumptive remedy.

## 1.1 Purpose

The purpose of this RFI/PR is to determine if potential releases from NFFU sewers in the KPX area have resulted in impacts to the environment that warrant additional action. In addition, the RFI/PR will evaluate if the existing Building 206 (B-206) groundwater MCS would capture the flow of potentially impacted groundwater resulting from the NFFU pipe segments of the industrial sewers.



## 2.0 SITE BACKGROUND

The three (3) NFFU sewer segments located within the KPX section of the facility within the XIA-218 Investigation Area (IA) are shown in Figure 2. The XIA-218 IA was part of a RCRA Facility Investigation (RFI) performed by Blasland, Bouck & Lee, Inc. (BBL) (BBL, 1998) and a Corrective Measure Study (CMS) (BBL, 1999). The conclusions from this report stated that maintaining existing conditions (i.e., continued operation and maintenance of existing Northeast KPX Overburden Migration Control System (MCS), groundwater monitoring within KPX in accordance with Kodak Park Groundwater Sampling and Analysis Plan (KPGSAP) (Kodak, 2002), and maintenance of existing institutional controls and continued use of the IA as industrial/commercial and exclusion of unauthorized personnel) proved to be protective of human health and the environment. A Statement of Basis dated March 2001 was prepared by the New York State Department of Environmental Conservation (NYSDEC) confirming that maintaining existing conditions for the site satisfied the selection criteria and would serve as the final corrective measure for the XIA-218 IA. A Corrective Measures Implementation (CMI) Work Plan, dated December 19, 2002 was then completed by Golder Associates Inc. (Golder) (Golder, 2002) which outlined the process and proper implementation in order to maintain existing conditions.

### 2.1 KPX Groundwater Migration Control System

As noted in the CMS, the Northeast KPX Overburden Migration Control System (MCS) collects contaminated overburden groundwater in XIA-218 and prevents off-site migration of overburden contaminants originating from the B-218 area. The MCS was installed in 1992 and has been in continuous operation since. The MCS consists of a 264-foot long trench and pumping system installed in the overburden on the west side of former B-206. The MCS has altered groundwater flow in the surrounding area and has resulted in a capture zone surrounding XIA-218 in the overburden zone as shown in Figure 3. Groundwater collected by the trench is discharged to the industrial sewer by a groundwater recovery pump, located in the subsurface collection sump identified as PB218N. The recovered groundwater is subsequently treated at the King's Landing Wastewater Treatment Plant (KLWTP), which discharges to the Genesee River in accordance with the terms and conditions of Kodak's State Pollutant Discharge Elimination System (SPDES) permit.

### 2.2 Site Geology and Hydrogeology

A detailed description of the XIA-218 geology and hydrogeology can be found in the XIA-218 RFI conducted by BBL in 1998. The main subsurface zone where the NFFU sewer segments are located is the overburden.



### **3.0 SUMMARY OF PAST XIA-218 INVESTIGATIONS**

#### **3.1 General**

The KPX XIA-218 IA was the focus of a RFI Report by BBL in 1998. The Subsequent CMS Report (BBL, 1999), Statement of Basis (NYSDEC, 2001), and CMI Report (Golder, 2002) outline the methodology for the selection of the site remediation and the eventual implementation of the selection. These reports ultimately concluded that while extraction wells could be used for contaminant mass removal, maintaining existing conditions and controls in the XIA-218 area would also be successful in contaminant mass removal and be more cost effective.

#### **3.2 Soil Constituents**

The XIA-218 CMS Report, dated April 1999, exhaustively details the contamination present throughout the XIA-218 IA. All volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), pesticides, and semi-volatile organic compounds (SVOCs) were below the commercial/industrial potentially applicable remediation levels (PARLs) for soils (as applicable in 1999). The only inorganic constituent detected above the commercial/industrial PARLs in the soils was arsenic. However, the detected concentration for arsenic was considered to be indicative of background conditions at EBP. An exposure pathway evaluation was performed and found that with existing physical restrictions and institutional controls, remediation of the soils was not required for protection of human health.

#### **3.3 Groundwater Constituents**

The CMS Report also detailed the findings of a groundwater quality evaluation in XIA-218. VOCs were detected in elevated concentrations primarily within the B-218 courtyard area. However, reductions in on-site groundwater VOC concentrations noted since the early 1990's were found to be attributed to many factors including operation of the KPX MCS, natural degradation of contaminants, and removal of contaminated soils during replacement/upgrade of hazardous waste storage tanks and transfer stations located in the area. The evaluation also found that existing on-site industrial sewers serve to provide hydraulic control and some degree of contaminant mass removal for site groundwater. Groundwater at, and downgradient of, XIA-218 is not used as a potable water source. A potentially complete exposure pathway through the County 48-inch storm sewer was discounted after an evaluation/sampling was conducted which found no quantifiable concentrations of contaminants.



## 4.0 KPX SEWER AND BWCS RFI

### 4.1 Industrial Sewers and BWCS

Kodak operates a vast system of industrial sewers and BWCSs throughout EBP that ultimately flow to the KLWTP. The locations of the NFFU pipe segments within KPX, which are the focus of this report, are located within the XIA-218 IA boundary as shown in Figure 2. The NFFU segments were found during an investigation of EBP hazardous waste industrial sewers. Recent BWCS and hazardous constituent sewer inspections did not identify any locations of concern. The CAP required the inspection of the sewer systems to determine if there were significant leaks which could result in soil or groundwater contamination.

#### 4.1.1 Sewer and BWCS Investigation Results

The three (3) NFFU pipe segments (PS) in KPX are designated as PS4082, PS4090, and PS4061, and are shown on Figure 2. PS4061 had two faults which caused the segment to be deemed NFFU. The investigation found a moderately broken joint along PS4082 which is a 12-inch pipe that runs between manholes 2016 and 2190. The investigation also found a severely misaligned/offset joint in PS4090 which is a 6-inch pipe that runs between manhole 2190 and the Ash House. The two issues that the investigation discovered within PS4061 (a 10-inch pipe that runs between manholes 2140 and 2155) were a section of moderate circumference cracks and a severe hole. All of these pipe segments were associated with water discharges from the Rotary Kiln Incinerator (RKI) Ash House shown on Figure 2 (conveying post incineration process water containing inorganics). With approved closure of the RKI, the pipes currently convey water/rainwater with no process discharges.

All of these issues were discovered between 1996 and 2001. The pipes were repaired per the EPA Consent Decree that Kodak entered into in 1994, which required Kodak to repair pipes prior to placing them back into service upon discovery of a break.

#### 4.1.2 KPX Storm Sewer Sampling

The XIA-218 CMI instituted an additional sampling program to the NYSDEC-approved KPGSAP within the B-218 area. Two (2) storm sewer manholes (MH2009 and MH2017) are sampled bi-annually to test for volatiles. The bi-annual results since November 2006 from these manholes are found in Table 1 appended to this report. As shown in Table 1, all detections are well below the water quality standards (TOGS 1.1.1, and TAGM 3028). Table 1 also shows a decrease in the frequency of detections throughout the years.

### 4.2 Soil and Groundwater Risk Review

The XIA-218 CMS (BBL, 1999) provided an extensive description of the nature and extent of the soil contamination of the B-218 area. The CMS concluded that all VOCs and PCBs/pesticides were detected



at concentrations below the residential and industrial/commercial Potentially Applicable Remediation Levels (PARLs) for direct contact. Only three (3) SVOCs were detected at low, non-quantifiable concentrations that were just slightly above the residential PARLs. However, these concentrations were below the industrial/commercial PARLs. These SVOCs consist of polycyclic aromatic hydrocarbons (PAHs) that are ubiquitous, particularly in industrial areas such as EBP. Arsenic was the only inorganic constituent in the soil at concentrations in excess of its respective industrial/commercial PARL. The 95% Upper Confidence Limit concentration of arsenic detected in the soil samples collected from XIA-218 (6.96 mg/kg) was, however, well within the range of background arsenic concentrations cited in TAGM 4046. The detected concentrations of arsenic are considered indicative of background for EBP.

The continued implementation of the KPGSAP, which is required by the CAP, will monitor the groundwater elevations along with VOC and SVOC levels.

There are several monitoring wells already in place in the surrounding area where water levels are recorded each spring and fall as shown on Figure 2. Appendix A-1 shows the spring and fall water elevations during the past five years for the two (2) nearest monitoring wells. Appendix A-2 shows the NFFU pipe segment elevations compared to the surrounding average groundwater elevations.

As shown in Appendix A-2, the average water elevations are above all the NFFU pipe segments. Since the water table is higher than the pipe segments in most cases, infiltration would occur primarily, rather than a release, thus reducing the potential for contamination of the surrounding soils and groundwater from the sewer. In the few instances where groundwater elevations were below the pipe elevations, however, the KPX MCS would capture any leakage from the pipe segments.



## 5.0 SEWER AND BWCS PRESUMPTIVE REMEDY

Given the depth and scope of the previously mentioned reports regarding the same area, no further field investigation is required. The data from these earlier reports is sufficient to demonstrate that the existing engineering and institutional controls are satisfactory in protecting human health and the environment from potential releases from the aforementioned industrial sewer segments. These controls include:

- Continued operation and maintenance of the B-206 groundwater migration control system (MCS);
- Continued groundwater monitoring in accordance with the NYSDEC-approved KPGSAP;
- The continued practice of the water quality program for the 48-inch storm sewer in the XIA-218 area;
- Continued implementation of existing institutional controls (i.e., site access restrictions, and property use restrictions limiting XIA-218 to a commercial/industrial area; and
- Continued implementation of Kodak Park Excavation Master Plan (EMP) II and project-specific health and safety protocols as appropriate for future excavations within XIA-218.



## 6.0 SUMMARY AND CONCLUSIONS

As discussed above, the groundwater surrounding the NFFU pipe segments would flow into the industrial sewers and BWCS rather than flow out. If the water table were to drop below the industrial sewers, the MCS would capture any material released. As shown in Table 1, the concentrations of contaminants within the storm sewer in this area are well below the applicable groundwater quality standards.

The groundwater on-site, and downgradient of the site, is not used as a potable drinking source. Exposure pathways to groundwater impacted by the industrial sewer are mitigated due to the physical and institutional controls in place at the site.

Due to the water table elevations with respect to industrial sewer elevations, the close proximity and the effectiveness of the KPX MCS, and the institutional controls already in place, no further action to address potential previous releases from the NFFU pipe segments is required to protect human health and the environment.



## 7.0 CLOSING

Golder Associates appreciates this opportunity to provide professional services to Eastman Kodak Company. Please do not hesitate to contact the undersigned if you have any questions or concerns.

### GOLDER ASSOCIATES INC.

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Associate/Office Manager

AML/EMM:dml



## 8.0 REFERENCES

- Blasland, Bouck & Lee, Inc. (BBL), 1998, "XIA-218 RCRA Facility Investigation Report; Kodak Park Corrective Action Program", May 1998.
- Blasland, Bouck & Lee, Inc. (BBL), 1999, "XIA-218 Corrective Measure Study Report; Kodak Park Corrective Action Program", April 1999.
- Eastman Kodak Company (Kodak), 2002, "Kodak Park Groundwater Sampling and Analysis Plan, Eastman Kodak Company, Kodak Park Facility, Rochester, New York, Revised January 2002".
- Golder Associates Inc. (Golder), 2002, "XIA-218 Corrective Measures Implementation Work Plan; Kodak Park, Rochester, New York", December 2002.
- Golder Associates Inc. (Golder), 2010, "Final RCRA Facility Investigation Work Plan: Industrial Sewers and Building Wastewater Collection Systems – Revision 2", July 2010.
- New York State Department of Environmental Conservation (NYSDEC), 2001, "Statement of Basis for Kodak Park Investigation Area XIA-218 Final Corrective Measures Selection", March 2001.

## **TABLES**

48-INCH SEWER SAMPLE RESULTS

EASTMAN KODAK COMPANY  
 KPX SEWER RFI  
 CORRECTIVE ACTION PROGRAM  
 ROCHESTER, NEW YORK

Well Name Sample Frequency Sample I.D. Sample Date	NYS Ambient Water Quality Standards/ Guidance Values (TOGS 1.1.1) (June 1998)	Groundwater Action Level TAGM 3028 (August 26, 1997)	MH 2009 ST								MH 2017 ST										
			Spring/Fall								Spring/Fall										
			A6E03801	A7480301	A7D49901	A8546602	A8D83402	RSF0981-02	RSJ1440-01	RTE0705-02	RTK1065-01	A6E03802	A7480302	A7D49902	A8546603	A8D83403	RSF0981-01	RSJ1440-02	RTE0705-01	RTK1065-02	
			11/22/2006	5/4/2007	11/19/2007	5/14/2008	10/31/2008	6/24/2009	10/27/2009	5/11/2010	11/12/2010	11/22/2006	5/4/2007	11/19/2007	5/14/2008	10/31/2008	6/24/2009	10/27/2009	5/11/2010	11/12/2010	
<b>Volatiles</b>																					
Acetone	0.05	0.05		0.003 J			0.0034 J			0.0044 J			0.0035 J			0.0044 J					
Acetonitrile	NV	0.05																			
Benzene	0.001	0.0007																			
bis(2-ethylhexyl)phthalate	0.005	0.05																			
Bromodichloromethane	0.05	0.05		0.0017 J	0.0014 J								0.0021 J	0.0018 J							
Bromoform	0.05	0.05																			
Bromomethane	0.005	0.005																			
N-Butanol	NV	0.05																			
2-Butanone	0.05	0.05																			
Carbon disulfide	NV	0.005																			
Carbon tetrachloride	0.005	0.005																			
Chlorobenzene	0.005	0.005																			
Chloroethane	0.005	0.005																			
Chloroform	0.007	0.007		0.0042 J	0.0016 J	0.00059 J							0.0065 J	0.0053	0.0022 J	0.00069 J					
Chloromethane	NV	NV																			
Cyclohexane	NV	NV																			
Dibromochloromethane	0.05	0.005		0.00057 J	0.00099 J								0.0065 J	0.0012 J							
1,1-Dichloroethane	0.005	0.005																			
1,2-Dichloroethane	0.0006	0.005																			
1,2-Dichloroethene (total)	0.005	0.005																			
1,1-Dichloroethene	0.005	0.005																			
1,2-Dichloropropane	0.001	0.005																			
cis-1,3-Dichloropropene	0.0004	0.005																			
trans-1,3-Dichloropropene	0.0004	0.005																			
Diethylene glycol	NV	NV																			
N,N-Dimethylformamide	0.05	0.05																			
1,1-Dimethoxyethane	NV	NV																			
1,4-Dioxane	NV	0.05					0.001 J		0.00093 J	0.0014 J											
Ethyl acetate	NV	0.05																			
Ethyl alcohol	NV	NV																			

48-INCH SEWER SAMPLE RESULTS

EASTMAN KODAK COMPANY  
 KPX SEWER RFI  
 CORRECTIVE ACTION PROGRAM  
 ROCHESTER, NEW YORK

Well Name	NYS Ambient Water Quality Standards/ Guidance Values (TOGS 1.1.1) (June 1998)	Groundwater Action Level TAGM 3028 (August 26, 1997)	MH 2009 ST								MH 2017 ST											
			Spring/Fall								Spring/Fall											
			A6E03801	A7480301	A7D49901	A8546602	A8D83402	RSF0981-02	RSJ1440-01	RTE0705-02	RTK1065-01	A6E03802	A7480302	A7D49902	A8546603	A8D83403	RSF0981-01	RSJ1440-02	RTE0705-01	RTK1065-02		
Sample Frequency	Sample I.D.	Sample Date	11/22/2006	5/4/2007	11/19/2007	5/14/2008	10/31/2008	6/24/2009	10/27/2009	5/11/2010	11/12/2010	11/22/2006	5/4/2007	11/19/2007	5/14/2008	10/31/2008	6/24/2009	10/27/2009	5/11/2010	11/12/2010		
Ethyl ether	NV	0.05																				
Ethylbenzene	0.005	0.005																				
Ethylene glycol	0.05	0.05																				
Ethylene glycol monomethyl ether	NV	NV																				
Heptane	NV	NV																				
Hexane	NV	0.05																				
2-Hexanone	0.05	0.05																				
Isobutanol	NV	0.05																				
Isopropanol	NV	NV																				
Isopropyl ether	NV	NV																				
2-Methoxyethanol	NV	0.05																				
Methyl acetate	NV	NV																				
Methyl alcohol	NV	0.05																				
Methylene chloride	0.005	0.005																				
4-Methyl-2-pentanone	NV	0.05																				
Propylene Oxide	NV	0.05																				
Pyridine	0.05	0.05																				
Styrene	0.005	0.005																				
1,1,2,2-Tetrachloroethane	0.005	0.005																				
Tetrachloroethene	0.005	0.005																				
Tetrahydrofuran	0.05	0.05																				
Toluene	0.005	0.005																				
1,1,1-Trichloroethane	0.005	0.005																				
1,1,2-Trichloroethane	0.001	0.005																				
Trichloroethene	0.005	0.005																				
Triethylene glycol	NV	NV																				
Vinyl acetate	NV	0.05																				
Vinyl chloride	0.002	0.002																				
Xylene (total)	0.005	0.005																				

**Notes:**

All groundwater analytical results reported in milligrams per liter (mg/L).

blank = Not detected above the practical quantitation limits (PQL) or lower limit of quantitation (LLQ); not analyzed; or not sampled.

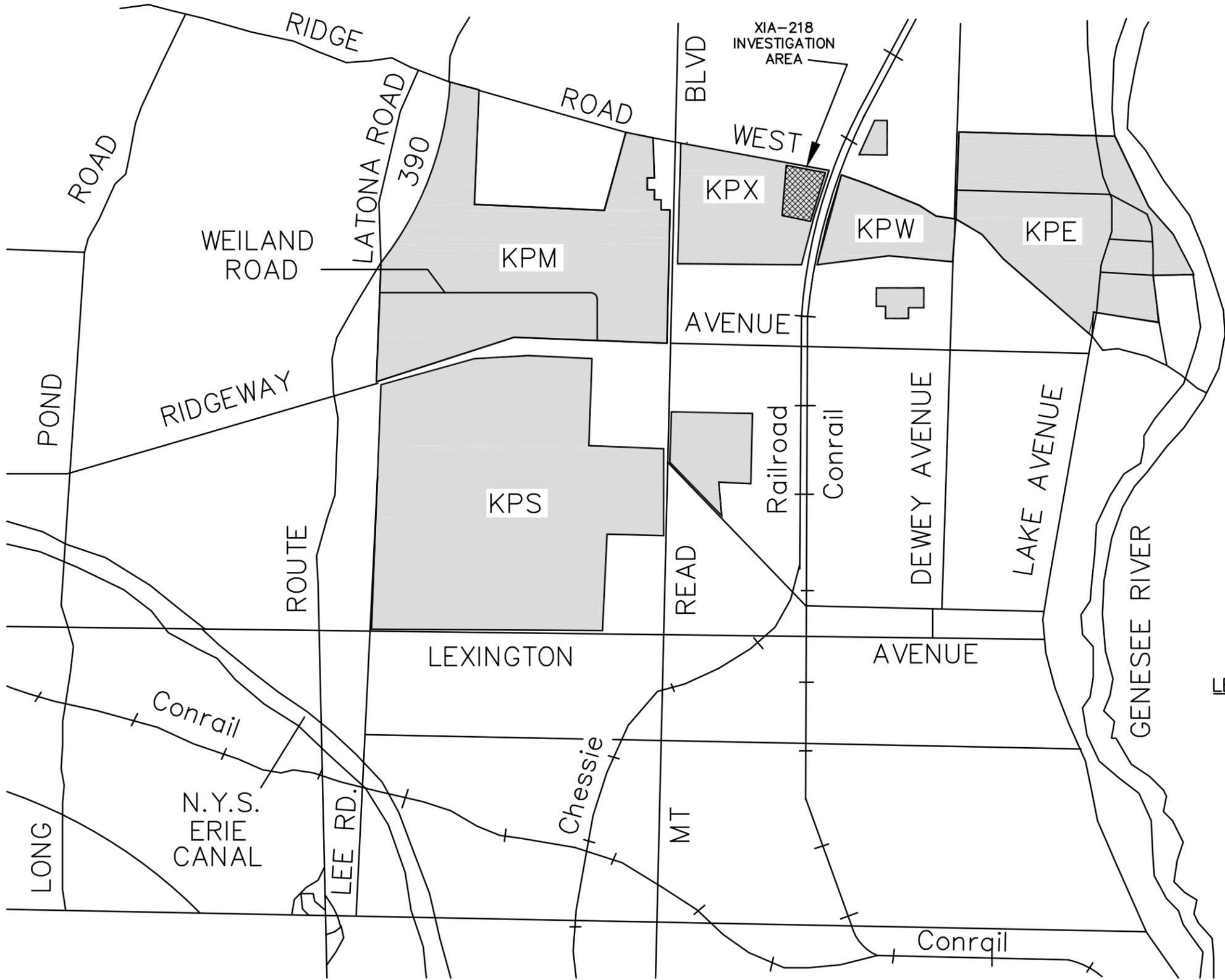
0.79 = Sample concentration below both TAGM 3028 and TOGS 1.1.1 Groundwater Quality Standards/  
Guidance Values.

**Data Qualifiers:**

J = Result is below the PQL but ID criteria are met.

Table by: AML 3/28/11  
 Checked by: JCH 3/30/11  
 Reviewed by: DCW 4/1/11

## FIGURES



**LEGEND**

 INVESTIGATION AREA

NOTE:  
SHADED AREAS DENOTE KODAK  
PARK FACILITY

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW
PROJECT INDUSTRIAL SEWER AND BWCS RCRA FACILITY INVESTIGATION KODAK PARK CORRECTIVE ACTION PROGRAM EASTMAN KODAK COMPANY ROCHESTER, NY						
<b>SITE LOCATION MAP</b>						
 <b>Golder Associates</b> Buffalo, New York			PROJECT No. 113-89261 DESIGN AL 03/28/11 CADD GLS 03/28/11 CHECK REVIEW	FILE No. 11389261A001 SCALE AS SHOWN REV. 0	<b>FIGURE 1</b>	

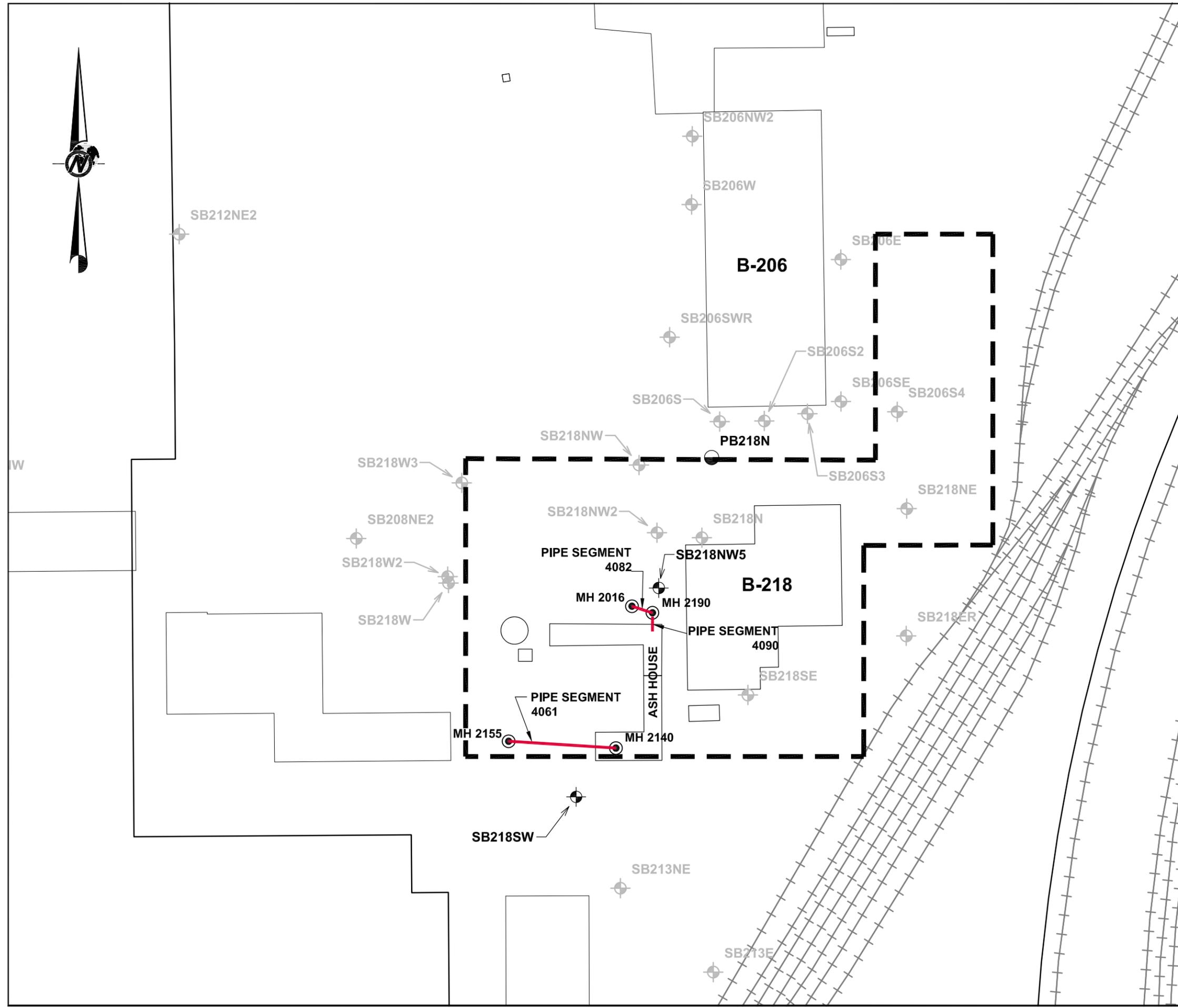


**LEGEND**

-  SB203S WELL
-  SB140W DRY WELL
-  PL73N PUMP WELL
-  MH 2016 MANHOLE (APPROXIMATE LOCATION)
-  PIPE SEGMENT (APPROXIMATE LOCATION)

**REFERENCE**

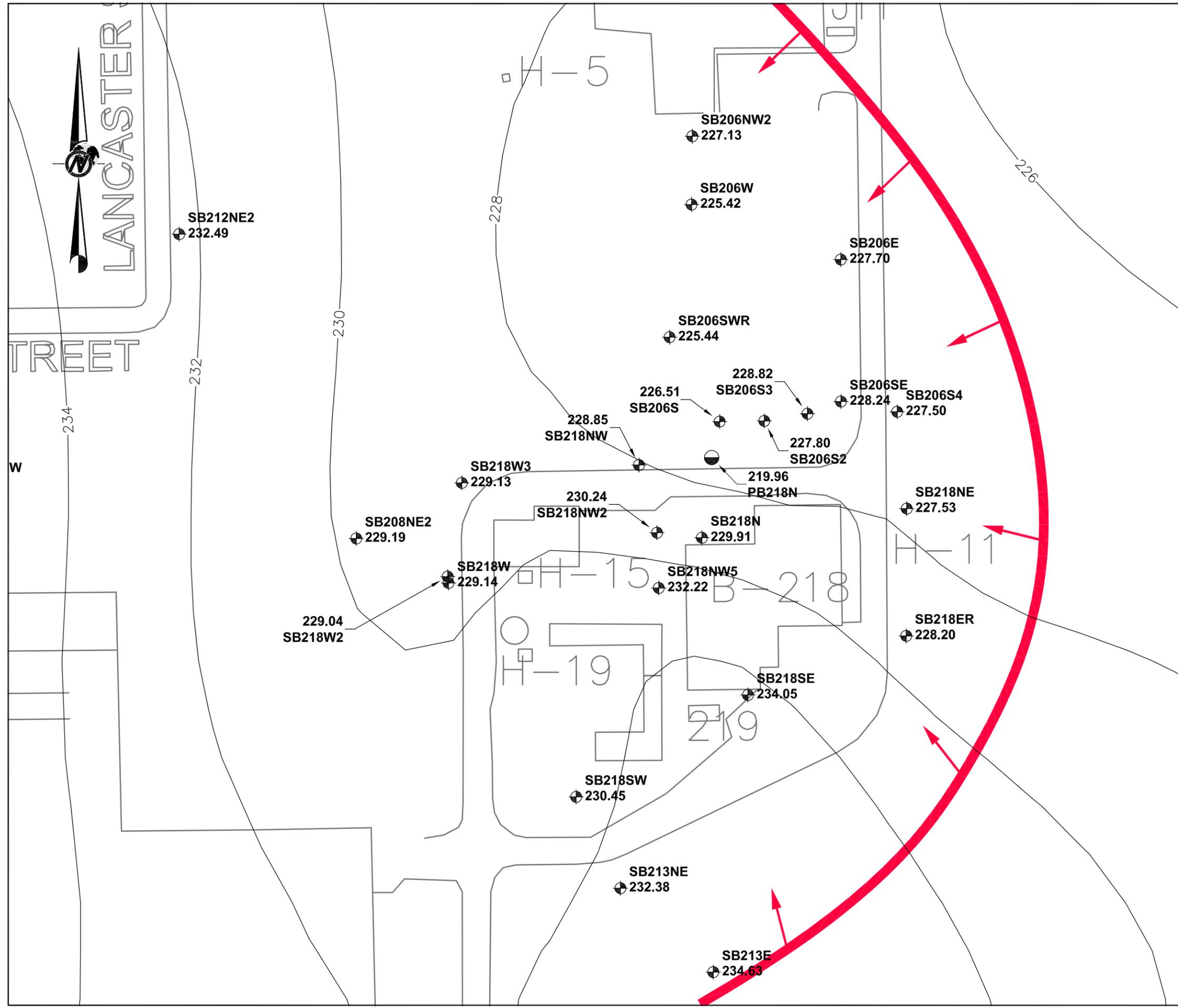
1.) MANHOLES AND ASSOCIATED PIPING TAKEN FROM HARDCOPY FILES ENTITLED "MAP OF UNDERGROUND PIPE AND DUCT LINE," PREPARED BY EASTMAN KODAK COMPANY.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW
PROJECT KPX INDUSTRIAL/SEWER AND BWCS RFI AND PRESUMPTIVE READY KODAK PARK CORRECTIVE ACTION PROGRAM EASTMAN KODAK COMPANY ROCHESTER, NY						
<b>SITE LAYOUT MAP</b>						
PROJECT No. 113-89261			FILE No. 11389261A002			
DESIGN	AML	03/28/11	SCALE	AS SHOWN	REV.	0
CADD	GLS	03/28/11				
CHECK						
REVIEW						



**FIGURE 2**



**LEGEND**

	SB203S 245.02	WELL
	SB140W 216.08	DRY WELL
	PL73N 244.90	PUMP WELL
	—228—	GROUNDWATER ELEVATION FEET KPD
		CM ZONE OF CAPTURE

- NOTES**
- 1.) GROUNDWATER ELEVATION CONTOURS BASED ON MEASUREMENTS COLLECTED FROM 9/21/2010 THROUGH 10/15/2010.
  - 2.) ALL ELEVATIONS UNITED STATES COASTAL AND GEODETIC SURVEY 1911 DATUM MINUS 201.75 FT. (KODAK PARK DATUM).
  - 3.) CONTOURS ARE BASED ON AVAILABLE MONITORING WELL CONTROL. CONTOURS MAY INCLUDE MINOR INTERPRETIVE REVISIONS TO SOFTWARE-GENERATED PRESENTATION.
  - 4.) CAPTURE ZONES ARE BASED ON CONTOURS FOR THIS HYDROGEOLOGIC UNIT AND THEREFORE REPRESENT OVERALL CAPTURE WHICH MAY INCLUDE THE INFLUENCE OF NATURAL AND MANMADE FEATURES IN THE VICINITY OF THE RESPECTIVE CORRECTIVE MEASURE (CM) SYSTEM.

**REFERENCES**

- 1.) BASE MAP AND DATA SOURCE FROM EASTMAN KODAK COMPANY.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW
PROJECT KPX INDUSTRIAL/SEWER AND BWCS RFI AND PRESUMPTIVE READY KODAK PARK CORRECTIVE ACTION PROGRAM EASTMAN KODAK COMPANY ROCHESTER, NY						
TITLE <b>OVERBURDEN GROUNDWATER            POTENTIOMETRIC SURFACE            - FALL 2010 -</b>						
		PROJECT No. 113-89261 FILE No. 11389261A003	SCALE AS SHOWN REV. 0			
DESIGN	AL	04/01/11				
CADD	GLS	04/01/11				
CHECK						
REVIEW						

**FIGURE 3**

**APPENDIX A  
WATER LEVELS**

**Table A-1: Water Elevations of Nearby Monitoring Wells**

	<b>SB218NW5 Water Elevation</b>	<b>SB218SW Water Elevation</b>
<b>Spring 2005</b>	233.71	231.97
<b>Fall 2005</b>	233.39	231.36
<b>Spring 2006</b>	233.5	231.28
<b>Fall 2006</b>	233.28	230.84
<b>Spring 2007</b>	233.12	231.84
<b>Fall 2007</b>	230.97	228.92
<b>Spring 2008</b>	233.4	231.83
<b>Fall 2008</b>	231.35	229.76
<b>Spring 2009</b>	232.55	230.91
<b>Fall 2009</b>	231.44	229.81
<b>Spring 2010</b>	232.64	230.84
<b>Fall 2010</b>	232.22	230.45
<b>Average Water Elevations</b>	<b>232.63</b>	<b>230.82</b>

Notes: All groundwater elevations provided by Kodak.

**Table A-2: Average Water Elevations vs. Pipe Elevations**

	<b>SB218NW5</b>	<b>SB218SW</b>	<b>Average Water Elevation Above Pipe Invert</b>	<b>Average Water Elevation Above Top of Pipe</b>
<b>Average Water Elevation</b>	232.63	230.82		
	<b>Pipe Invert Elevation</b>	<b>Top of Pipe Elevation</b>		
<b>PS4082 at MH2016</b>	230.78	231.78	1.85	0.85
<b>PS4082 at MH2190</b>	231.59	232.59	1.04	0.04
<b>PS4090 at MH2190</b>	232.05	232.55	0.58	0.08
<b>PS4060 at MH2155</b>	227.13	227.96	3.69	2.86
<b>PS4060 at MH2140</b>	229.78	230.61	1.04	0.21

Notes: All groundwater elevations and pipe elevations provided by Kodak.