2015 Annual Corrective Measures Summary Report Eastman Kodak Company – Eastman Business Park Rochester, New York Site No. 828177

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List of Abbreviations and Acronyms

EBP	Eastman Business Park
EEEPC	Ecology and Environment Engineering, P.C.
GQ	Grimsby-Queenston
GSAP	Groundwater Sampling and Analysis Plan
Kodak	Eastman Kodak Company
Lot 50 MCS	Parking Lot 50 Migration Control System
mg/L	milligrams per liter
NEBPM MCS	Northern EBPM Migration Control System
NE-EBPX MCS	Northeast EBPX Overburden Migration Control System
NFCS	North Fenceline Containment System
NYSDEC	New York State Department of Conservation
TOR	top-of-rock
VOC	volatile organic compounds
WRLF	Weiland Road Landfill

1 Introduction

1.1 General

Ecology and Environment Engineering, P.C. (EEEPC) is currently conducting site management activities for remedies that have been implemented under the Kodak Park Corrective Action Program for the Eastman Business Park (EBP) facility in Rochester, New York (Site No. 828177). EEEPC began performing these activities in May 2014, as tasked by the New York State Department of Conservation (NYSDEC) under contract number D007617, Work Assignment No. 28. For the time period covered by this report (January 1 through December 31, 2015), 38 groundwater remediation systems were operated at the site.

The systems and associated pumping wells collectively represent components of the final corrective measures implemented by Eastman Kodak Company (Kodak) with NYSDEC approval to address groundwater hydraulic control and contaminant mass removal. This report presents summarized data on the operation and performance of groundwater remedial measures conducted at the EBP facility during 2015.

The pumping wells that comprise the remediation systems each extract groundwater using downhole pumps. There are 37 pumping wells in 10 remediation areas plus one dual-phase extraction system (see Table 1). Each system/well is physically inspected weekly. The weekly physical checks are made to ensure that the pumping and control systems function and maintain the prescribed groundwater control elevation (set-point). There are currently no remote monitoring features available for these systems. A system is considered to be non-functional when it is not pumping or is unable to maintain the desired set-point elevation. When a system is non-functional, maintenance is performed to return the system to operational status.

Table 1 identifies the name of each active remediation system, the individual pumping wells that comprise each system, and the purpose of the system. Figure 1 shows the location of the pumping wells. Section 1.2 describes the methods by which performance data was collected and reported. Section 2 provides an overview of the operational condition of each system and any associated maintenance performed during the reporting period along with an overall summary of performance.

1.2 System Performance Measurement

This report presents three measures of system performance: 1) the volume of groundwater extracted by each well; 2) the potentiometric groundwater surface near the respective well; and 3) the concentration of organic constituents in the well water. Extraction rates for the systems are monitored by magnetic or mechanical flow meter instrumentation. These instruments monitor flow rates and record totalized flow values for each system.

The total volume of groundwater extracted by the individual pumping wells for the period of January 1 through December 31, 2015, is summarized monthly in Table 2 and the annual volume of groundwater extracted is summarized in Table 3 for the years 1988 to 2015.

The potentiometric surface for the principal hydrostratigraphic flow zones at EBP (overburden, top-of-rock [TOR], and Grimsby-Queenston [GQ]) was determined based on a sitewide water-level measurement event conducted in spring/summer 2015. Maps illustrating these respective flow-zone surfaces are presented in Figures 2, 3, and 4. The hydraulic capture zones created by the pumping systems are illustrated on these maps if the original system specification was based on a capture zone objective. The capture zones depicted for the time of measurement in spring 2015 show that the systems met remedial objectives for containment.

Groundwater samples were collected from each pumping well by EEEPC between May and December 2015. Pumping wells that were not in operation during the initial round of sampling in May-June were sampled throughout the remainder of the year as they became operational. All samples were analyzed for volatile organic compounds (VOCs) and samples from wells in the EBPM section of the EBP and Weiland Road Landfill (WRLF) area were also tested for semivolatile organic compounds, specifically 1,4-dioxane, as described in the 2015 Groundwater Sampling and Analysis Report (EEEPC 2016a) and WRLF 2015 Environmental Monitoring Report (EEEPC 2016b). A summary of the compounds detected in each pumping well is presented in Table 4. These data and the respective volumes of water extracted were used to calculate the mass of organic contaminants removed from each pumping well during 2015. A summary of the 2015 contaminant mass extracted and comparison to previous year's data is presented in Table 5.

The 2015 Groundwater Sampling and Analysis Report also contains the results of monitoring well sampling conducted in May and June 2015 (EEEPC 2016a). That report was prepared as a requirement of the Eastman Business Park Groundwater Sampling and Analysis Plan (GSAP) (Kodak 2012). Monitoring well data from that report is not presented herein.

2 Operational Performance

2.1 WIA-EBPW North Fenceline Containment System

Eight pumping wells comprise the WIA-EBPW North Fenceline Containment System (NFCS). The NFCS is designed to prevent migration of groundwater contaminants beyond the EBP property line in the overburden and TOR flow zones in WIA-EBPW. The eight pumping wells are:

1. PL54E
2. PL54NE
3. PL54NE2
4. PL54W
5. PB119ER
6. PB119NER
7. PB135ER
8. PB143NW

2.1.1 Operation Summary

A summary of maintenance activities for 2015 for the NFCS is provided below.

Date	Well Name	Description of Issues/Maintenance
5/8/2015	PL54NE PL54NE2 PB119NER	Wells cleaned by National Vacuum
5/18/2015	PB119NER	Replaced pump and motor
5/18/2015	PB143NW	Replaced level transducer
5/19/2015	PL54NE	Replaced pump and motor
5/20/2015	PB119ER PB143NW	Well cleaned by National Vacuum
5/21/2015	PL54E PB135ER	Wells cleaned by National Vacuum
5/21/2015	PB135ER	Replaced pump and motor
6/24/2015	PL54NE2	Replaced motor starter
6/30/2015	PB135ER	Replaced motor starter

Date	Well Name	Description of Issues/Maintenance
8/21/2015	PL54NE2	Changed hysteresis from 5 feet to 8.5 feet to reduce pump cycling and amperage draw
8/21/2015	PB119ER PB119NER	Replaced VEGA control box for level transducer
9/24/2015	PL54NE2	Voltage filter disconnected to decrease pump amperage
11/18/2015	PL54NE2	Replaced pump, motor, and wire lead
11/23/2015	PB119ER	Replaced motor starter
12/1/2015	PL54NE	Replaced motor, pump, and wire lead
12/11/2015	PB135ER	Replaced motor and wire lead

2.1.2 Water Level Measurements

Contours of the overburden and the TOR potentiometric surface in the EBPW area are presented on Figures 2 through 4. The effect of the NFCS on groundwater is visually demonstrated by the hydraulic depressions around the pumping wells. Within these capture zones, groundwater in the overburden and TOR flows to the pumping wells within the NFCS. The extent of capture in the TOR zone, as shown on Figure 3, extends beyond the property boundary to the north indicating that groundwater is pulled back to the site by this system. Although no GQ pumping wells are present with this system, there appears to be drawdown and capture within the GQ zone in the vicinity of pumping well PL54W around monitoring well GQWN1.

2.1.3 Water Quality Monitoring

Groundwater samples were collected from the NFCS pumping wells in spring 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each well in the system during 2015. These values are presented in Table 5. In addition, concentration-time series plots were prepared for each well, and are presented in Appendix A.

The concentration-time series plots for the majority of these wells show a general decrease in total organic concentrations. Total VOC concentrations in PL54NE2, PB119ER, and PB119NER increased in 2015 compared to 2014. Total organic concentrations in PL54E which had been variable through 2014, were non-detect in 2015. Total organic concentrations in PL54NE2 have been variable, with the highest level of organics (approximately 30 milligrams per liter [mg/L]) observed in 2002. Total organic concentrations in this well were at the lowest in 2014 (0.001 mg/L), but rebounded in 2015 (0.043 mg/L). Historic total organic concentrations in PB119ER have been highly variable ranging from 12 mg/L in 2002 to 0.093 mg/L in 2008. The total organic concentration was lowest in 2013 at 0.0183 mg/L, and increased in 2014 and 2015. Total organic concentrations in PB119NER have been variable and show only a slight decreasing trend, within increased concentrations in 2014 and 2015.

2.2 Parking Lot 50 Migration Control System

Four pumping wells comprise the Parking Lot 50 Migration Control System (Lot 50 MCS). The system is designed to prevent the migration of groundwater contaminants in the GQ flow zone in the WIA-EBPW area beyond the southern EBPW property line. The four wells are:

1. PL50N2
2. PL50N3
3. PL50NW3
4. PL50W

2.2.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below.

Date	Well Name	Description of Issues/Maintenance
5/27/2015	PL50NW	Well Cleaned
7/7/2015	PL50NW3	Replaced wiring to motor
7/28/2015	PL50NW3	Replaced pump and motor
10/23/2015	PL50NW3	Replaced VEGA control box for level transducer
11/17/2015	PL50N3	Level transducer replaced

2.2.2 Water Level Measurements

Contours of the GQ flow zone potentiometric surface in EBPW area are presented in Figure 4. The hydraulic capture zone exerted by the Lot 50 MCS is illustrated on this figure as evidenced by the depressions in the contour lines. Within the capture zone, groundwater in the GQ flows to the wells within the Lot 50 MCS. This includes capture of groundwater outside of the park boundary to the south.

2.2.3 Water Quality Monitoring

Groundwater samples were collected from Lot 50 MCS pumping wells in summer 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each pumping well in the system during 2015. These values are presented in Table 5. In addition, concentration-time series plots were prepared for each well, and are presented in Appendix A. Total organic concentrations have decreased when compared to historical maximums in all of these wells through 2015 except for PL50N2. Overall concentrations in PL50N2 indicate an increasing trend from inception through 2015; although concentrations have been steady since 2012 at approximately 300 mg/L.

2.3 Building 329/349 Area Remedial systems

Two fractured rock trenches and related pumping wells comprise the Building 329/349 area remedial systems. The system is designed to prevent the migration of groundwater contaminants in the overburden and TOR flow zones in the

northwestern portion of EBPM area across the northern EBPM property line. The associated wells are:

1. PB329E2
2. PB349N

2.3.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below.

Date	Well Name	Description of Issues/Maintenance
5/26/2015	PB329E2 PB349N	Wells cleaned
6/30/2015	PB349N	Replaced motor wiring
9/28/2015	PB329E2	Installed new flowmeter

2.3.2 Water Level Measurements

Contours of the TOR flow zone potentiometric surfaces in EBPM area are presented in Figure 3. The hydraulic capture zone exerted by the Building 329/349 Area Remediation System is illustrated on these maps. Within the capture zone, groundwater flows to the two trenches/pumping wells within the system.

2.3.3 Water Quality Monitoring

Groundwater samples were collected from each of the two pumping wells in 2015 for the GSAP. No organic compounds (identified in the GSAP Protocol – site specific compounds) were detected in PB349N, while low levels were detected in PB329E2. The concentration-time series plots prepared for the two wells in this system are presented in Appendix A. The total organic concentration in PB329E2 has generally increased since 2010, but showed a slight decrease in 2015. Concentrations in PB349N have remained undetected since 2007.

2.4 Northern EBPM Migration Control System

One overburden French drain and pumping well, and two fractured rock trench wells with related pumping wells comprise the Northern EBPM Migration Control System (NEBPM MCS). The system is designed to prevent the migration of groundwater contaminants in the overburden and TOR flow zones in the northern portion of the EBPM area across the northern EBPM area property line. The pumping wells are designated as:

1. PB319N
2. PB350NE2
3. PB350NW

2.4.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
5/21/2015	PB319N	Cleaned well and installed new pump and motor

2.4.2 Water Level Measurements

Contours of the overburden and TOR flow zone potentiometric surfaces in EBPM area are presented in Figures 2 and 3. The hydraulic capture zones exerted by the NEBPM MCS are illustrated on these maps. Within the capture zones, groundwater flows to the two trenches within the system.

2.4.3 Water Quality Monitoring

Groundwater samples were collected from each of the three NEBPM MCS pumping wells in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each of the three pumping wells during 2015. These values are presented in Table 5. The concentration-time series plots prepared for the wells in this system are presented in Appendix A. The total organics concentration in PB319N increased from 2004 to 2011, but has remained relatively steady since 2011 at 0.008 mg/L. Total organic concentrations in PB350NE2 and PB350NW are decreasing.

2.5 MIA-301 (EBPM) Groundwater Remediation System

This system consists of three groundwater pumping wells that were installed to recover groundwater contaminants from the interior area of EBPM in the vicinity of a former drum storage pad west of the Building 301 – 304 complex. The three pumping wells are:

1. PB303SW
2. PB303W2
3. PB323SE2

2.5.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
7/28/2015	PB303SW PB303W2	Repaired leak in main air supply line
9/24/2015	PB303SW PB303W2	Repaired leak in main air supply line

2.5.2 Water Level Measurements

Contours of the overburden and TOR flow zone potentiometric surfaces in the EBPM area are presented in Figures 2 and 3. The hydraulic capture zones exerted by the MIA-301 Groundwater Remediation System are illustrated on these maps. Within the capture zones, groundwater flows to the three wells within the system.

2.5.3 Water Quality Monitoring

Groundwater samples were collected from each of the three MIA-301 pumping wells in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each of the three pumping wells during 2015. These values are presented in Table 5. The concentration-time series plots prepared for the two wells in this system are presented in Appendix A. All three wells generally show an overall decreasing trend in total organic concentrations except that concentrations in PB303SW has shown relatively high variability with an overall decreasing trend and the concentrations in PB303W2 have increased slightly since 2011.

2.6 Northeast EBPX Overburden Migration Control System

One overburden French drain (with extraction by pumping well) comprises the Northeast EBPX Overburden Migration Control System (NE-EBPX MCS). This system is designed to prevent the migration of groundwater contaminants in the overburden in XIA-218 from leaving northeastern EBPX. The pumping well is designated as PB218N.

2.6.1 Operation Summary

There were no maintenance activities needed for this system in 2015.

2.6.2 Water Level Measurements

Contours of the overburden flow zone potentiometric surface in EBPX are presented in Figure 2. The hydraulic capture zone exerted by the NE-EBPX MCS is illustrated on the figure. Groundwater within the capture zone flows to the drain system.

2.6.3 Water Quality Monitoring

Groundwater for this system was sampled in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by the system during 2015. These values are presented in Table 5. In addition, a concentration-time series plot for the groundwater extracted at PB218N is presented in Appendix A. In general, the total organics concentration in groundwater extracted at this location has steadily decreased over time. The total concentration showed a slight increase in 2015 compared to 2014 but remains very low (only 0.00054 mg/L of trichloroethylene was present in 2015).

2.7 Parking Lot 73 Remedial System

One overburden French drain (with extraction by pumping well) comprises the Parking Lot 73 Remedial System. The system is designed to prevent surface seepage and to afford some control over the migration of groundwater contaminants in the shallow overburden in this area. The pumping well is designated as PL73N.

2.7.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below. PL73N went offline in May 2015 due to a break in the piping between the flow meter and the pump, and required a replacement flow tube sensor. A new motor, pump, flow tube sensor, and piping was installed on September 25, 2015. After installation of replacement parts, the system was operational. On October 2, 2015, during the next weekly inspection, PL73N was no longer functioning. The wire lead was severely corroded and had caused the system to short out. A new wire lead was installed on November 17, 2015, but the system was still not functioning. Troubleshooting revealed that the motor had been burned out due to the previous faulty wire lead and needed to be replaced. On December 11, 2015, while on site replacing the motor, EEEPC's subcontractor found that the rubber connector at the end of the new wire lead had also deteriorated, similar to the faulty wire lead. The new motor was not installed and the well has remained offline until a determination of why the wire leads are continually corroding can be made.

Date	Well Name	Description of Issues/Maintenance
9/25/2015	PL73N	Replaced flow tube portion of flowmeter
11/17/2015	PL73N	New wire lead to motor installed

2.7.2 Water Level Measurements

Contours of the overburden flow zone potentiometric surface in EBPM are presented in Figure 2. The Parking Lot 73 system was not designed based on a hydraulic capture zone specification, and as such, a hydraulic capture zone is not illustrated.

2.7.3 Water Quality Monitoring

Groundwater for this system was sampled in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by the system during 2015. These values are presented in Table 5. In addition, a concentration-time series plot for the groundwater extracted at PL73N is presented in Appendix A. In general, the total organics concentration in groundwater extracted at this location has generally decreased over time. Concentrations increased from 2011 to 2014, but decreased in 2015.

2.8 Weiland Road Landfill TOR Remedial System

A single fractured rock trench (with extraction by pumping well) comprises the WRLF TOR Remedial System. This system is designed to prevent groundwater contaminants in the overburden and TOR flow zones from the landfill from migrating across the western EBPM property line. The pumping well for this system is designated as PWRNW3.

2.8.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
5/26/2015	PWRNW3	Well cleaned
7/28/2015	PWRNW3	Replaced level transducer

2.8.2 Water Level Measurements

Contours of the overburden and TOR flow zone potentiometric surfaces in EBPM are presented in Figure 2 and 3. They hydraulic capture zones exerted by the WRLF Remedial System are illustrated on these figures. Groundwater within these capture zones flows to the pumping well and is extracted by the system.

2.8.3 Water Quality Monitoring

Groundwater for this system was sampled in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by the system during 2015. These values are presented in Table 5. In addition, a concentration-time series plot for the groundwater extracted at PRNW3 is presented in Appendix A. In general, the total organics concentration in groundwater extracted at this location has steadily decreased over time and is very low compared to other remedial systems at EBP. The only compounds detected in 2015 were low concentrations (less than 0.003 mg/L each) of isopropyl ether and tetrahydrofuran.

2.9 Individual Systems

Ten pumping wells fall into the category of individual remedial systems. These wells were installed for the purpose of groundwater contaminant mass removal within the EBP. These wells include:

1. PB53N2
2. PB54NW
3. PB54SE
4. PB57W
5. PB115N
6. PB136S
7. PB307E2
8. PB307N3
9. PB322NE2
10. PB322NE4

2.9.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
5/27/2015	PB53N2	Well cleaned
6/24/2015	PB53N2	Replaced fuses
10/12/2015	PB307E2	Repaired leak in air tubing
10/12/2015	PB322NE2	An object appeared to be stuck in the well casing, pumping volume has decreased, but the pump is still operational. Attempts to remove the object have been unsuccessful.
11/18/2015	PB307E2	Discharge pipe fittings replaced
12/1/2015	PB53N2	Replaced pump, motor, and wire lead

2.9.2 Water Level Measurements

Contours of the TOR flow zone potentiometric surface in EBPE, EBPM, and EBPW are presented in Figure 3. These systems were not designed based on a hydraulic capture zone specification, so a hydraulic capture zone is not illustrated for the individual systems.

2.9.3 Water Quality Monitoring

Groundwater samples were collected from each of the 10 pumping wells in this group in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each well in the system during 2015. These values are presented in Table 5. In addition, a concentration-time series plots for these wells are presented in Appendix A. Total organic concentrations in the majority of these wells are decreasing with the following exceptions:

- Total organic concentrations in PB54NW showed a high degree of variability prior to 2001, were relatively stable from 2001 to 2007, then showed variability with an increasing trend until 2013. In 2014, the total organic concentration dropped to a 14-year low of approximately 10 mg/L but rebounded in 2015 to 470 mg/L, entirely due to methylene chloride.
- Concentrations in PB57W hit a historical minimum in 2005 (approximately 0.26 mg/L total organics) and have increased through 2015 (to approximately 412 mg/L).
- In PB307E2, the total organic concentrations are variable but have remained below approximately 0.7 mg/L.
- In PB307N3, concentrations declined from 2001 to a minimum in 2014 but rebounded in 2015.
- In PB322NE2, concentrations have remained relatively stable but with a slightly increasing trend.

2.10 Northeast EBPE Migration Control System

Two fractured-rock trenches and four associated pumping wells, located in Parking Lots 41 and 42, comprise the Northeast EBPE Migration Control System. This system was installed to prevent the migration of contaminants in the bedrock

groundwater (TOR and GQ flow zones) from migrating beyond the northeast EBPE area. The pumping wells are designated as:

1. PL41N
2. PL41S
3. PL42E
4. PL42W

2.10.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
6/24/2015	PL41N	Installed new level transducer
8/31/2015	PL41N	Replaced pump and motor
12/4/2015	PL41N	Electrical problems diagnosed, requires larger motor, new contactor, and motor protection circuit breaker.

2.10.2 Water Level Measurements

Contours of the TOR and GQ flow zone potentiometric surfaces in the northeast EBPE area are presented in Figures 3 and 4. The hydraulic capture zones exerted by the system are illustrated on these maps. Groundwater within the capture zones flows to the system pumping wells.

2.10.3 Water Quality Monitoring

Groundwater samples were collected from each of the four pumping wells in this system in 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. These data and the total annual flow were used to calculate the mass of contaminants removed by each well in the system during 2015. These values are presented in Table 5. In addition, a concentration-time series plot for total organic concentrations at these locations are presented in Appendix A. The total organics concentration in groundwater extracted at these locations has fluctuated significantly since 2007, and is possibly seasonal (generally lower in the fall and higher in the spring). However, concentrations in all four wells have decreased significantly since 2012 and earlier historical maxima.

2.11 MIA-333 Dual Phase Remediation System (M95)

This system includes four dual-phase extraction wells (and a dual-phase extraction unit and related equipment). The wells are installed to depths that interface with the overburden and TOR. Two of the four original dual-phase extraction wells are in operation and one nearby monitoring well was previously altered to be used as a pumping well. The active pumping wells are designated as:

1. PB326SW5
2. PB326SW9

3. GB326SWR

2.11.1 Operation Summary

A summary of maintenance activities for 2015 for this system is provided below:

Date	Well Name	Description of Issues/Maintenance
7/17/2015	M95	Installed new heat exchanger, solenoid valve, thermostatic valve, and filled vacuum pump oil
9/4/2015	M95	Pipe burst causing oil spill (see discussion below)

The M95 system was inoperable through the first half of 2015 while EEEPC diagnosed equipment failures and discussed options for the system with NYSDEC. Equipment was replaced in July 2015 and the system was put back in operation. The system operated intermittently until September 4, 2015, when, following a system shutdown and restart, a pipe connecting the vacuum pump to the oil reservoir burst and caused an oil leak. The oil is a mineral oil (Kinney LR liquid ring pump oil) that spilled to the floor of the trailer and some leaked out to the stones below the trailer. The spill was cleaned up with sorbents and by removing some stones. The incident was reported to NYSDEC as spill number 1506003. The spill report was closed the same day it was opened and no further action is required.

Upon further discussion with NYSDEC, it was decided that the system would be shutdown indefinitely. Sample results from the individual pumping wells that are part of the system were collected and will be evaluated to determine what further remediation is needed in this area and if decommissioning of the dual-phase system and replacement of pumping wells with pneumatic extraction systems is required and feasible.

2.11.2 Water Level Measurements

Contours of the overburden flow zone potentiometric surface are presented in Figure 2. As the system was down for the majority of 2015, the hydraulic capture zone was not determined for this system.

2.11.3 Water Quality Monitoring

Groundwater samples were collected from two of the pumping wells (GB326SWR and PB326SW5) in October 2015 for the GSAP. A summary of the detected compounds is presented in Table 4. Due to this system being down for the majority of 2015, the mass of contaminants removed by the system was not determined. Analytical results from the 2015 GSAP sampling will be used to determine future changes to this system.

3 Protective Cover Integrity Program

Soil protective covers are part of the final corrective measures for a number of EBP investigation areas and provide physical barriers to subsurface soils that may contain elevated contaminant concentrations. Potential exposures are controlled through a observation and maintenance of soil covers in areas where exceedances of industrial/commercial soil cleanup objectives or site-specific criteria have been identified. Currently, the following investigation areas are subject to an annual inspection of protective cover conditions:

1. MIA-WRL
2. MIA-329
3. MIA-351
4. MIA-301
5. XIA-218
6. WIA-EBPW
7. NE-EBPE
8. EIA-KL
9. MIA-317
10. XIA-202/208
11. B-642 Area

Protective cover evaluation maps (with corresponding investigation area numbers) are included in Appendix B. These maps depict the areas inspected as well as the date and results of the most recent inspection. Areas annotated “ND” and “OK” on the maps indicated that no discrepancies, such as vector holes, ruts, or other surficial damage, were observed. No maintenance needs were noted during the inspections.

4 Conclusions

4.1 Remedial Pumping Well Systems

The maintenance, volumetric, analytical, and potentiometric surface data, as presented in this report, demonstrate that the systems generally perform according to the design objectives and remain effective components of the Corrective Action Program for the EBP Site, subject to addressing the required maintenance. There are maintenance issues that affect individual pumping wells that remain to be addressed to improve system performance. This includes complete reevaluation of the MIA-333 Dual-Phase Remediation System. These issues and preventive maintenance issues will be addressed in 2016. Maintenance issues are discussed in monthly status reports.

4.2 Protective Cover Systems

The inspections completed in 2015 and presented in this report demonstrate that the protective cover systems remain in place as designed with no observed surficial damage as components of the Corrective Action Program for the EBP Site. Inspections will continue in 2016.

5 References

Eastman Kodak Company (Kodak). 2012. *Eastman Business Park Groundwater Sampling and Analysis Plan*, Rochester, New York, revised August 2012.

Ecology and Environment Engineering, P.C. (EEEPC). 2016a. *2015 Groundwater Sampling and Analysis Report, Eastman Kodak Company - Eastman Business Park*, March 2016.

_____. 2016b. *Weiland Road Landfill 2015 Environmental Monitoring Report*, March 2016.

Tables

Table 1 Eastman Business Park Groundwater Remedial Systems

System	Component Pumping wells	Purpose
WIA-EBPW North Fenceline Containment System	PB119ER, PB119NER, PB135ER, PB143NW, PL54E, PL54NE, PL54NE2, PL54W	Groundwater hydraulic control
Parking Lot 50 Migration Control System	PL50N2, PL50N3, PL50NW3, PL50W	Groundwater hydraulic control
Building 329/349 Area Remedial System	PB329E2, PB349N	Groundwater hydraulic control
Northern EBPM Migration Control System	PB350NE2, PB350NW, PB319N	Groundwater hydraulic control
MIA-301 (EBPM) Groundwater Remediation System	PB323SE2, PB303SW, PB303W2	Groundwater hydraulic control/contaminant mass removal
Northeast EBPX Overburden Migration Control System	PB218N	Groundwater hydraulic control
Parking Lot 73 Remedial System	PL73N	Groundwater hydraulic control
Weiland Road Landfill TOR Remedial System	PWRNW3	Groundwater hydraulic control
Individual Systems	PB53N2, PB54NW, PB54SE, PB115N, PB136S, PB57W, PB322NE2, PB322NE4, PB307E2, PB307N3	Contaminant mass removal
Northeast EBPE Migration Control Systems	PL41N, PL41S, PL42E, PL42W	Groundwater hydraulic control
MIA-333 Dual-phase Remediation System	PB326SW5, PB326SW9, GB326SWR	Groundwater treatment unit (dual-phase)

Key:
TOR = top of rock

Table 2 Total Groundwater Volume Extracted in 2015
Eastman Business Park Remediation Systems, Rochester, New York

Pumping Well / System ID	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTALS
PB57W	887	793	1,040	803	344	1,179	899	523	487	676	477	795	8,903
PB53N2	10,182	10,727	0	0	0	0	0	0	0	0	0	66,272	87,181
PB54SE	2,111	0	3,857	2,274	926	3,321	2,395	1,966	1,868	2,587	1,846	2,421	25,573
PB54NW	11,366	0	33,803	16,816	8,023	30,370	20,754	16,653	25,028	19,798	9,328	13,316	205,256
PL42E	17,987	18,294	23,454	31,076	17,609	54,754	39,392	31,140	26,703	47,925	28,599	33,192	370,125
PL42W	20,603	19,364	19,730	20,609	10,853	32,424	20,898	15,640	14,400	29,329	22,709	29,553	256,112
PL41N	642,338	592,189	0	0	0	129,298	358,771	0	0	0	211,264	0	1,933,860
PL41S	394,016	489,847	1,430,992	1,454,284	715,005	2,458,622	1,145,200	1,512,130	160,330	2,306,922	1,298,500	1,805,702	15,171,550
EBPE TOTAL	**1,099,490**	**1,131,214**	**1,512,877**	**1,525,862**	**752,760**	**2,709,968**	**1,588,310**	**1,578,052**	**228,817**	**2,407,236**	**1,572,723**	**1,951,251**	**18,058,560**
PL50W	4,826	2,858	9,673	5,582	3,010	0	11,800	10,785	3,156	7,595	5,758	7,912	72,955
PL50NW3	4,276	4,108	8,686	3,771	6,515	0	0	10,362	21,524	16,292	18,539	11,484	105,557
PB136S	10,972	5,627	21,544	13,980	5,394	0	17,330	3,666	2,949	3,428	2,095	524	87,508
PL50N2	1,207	672	2,259	1,305	595	0	4,260	1,295	914	1,897	768	911	16,081
PL50N3	8,088	5,107	17,256	10,563	5,422	0	36,209	6,888	2,148	2,795	1,750	1,742	97,968
PB115N	2,588	3,662	3,082	3,410	1,838	7,681	5,686	4,711	4,062	5,215	3,331	4,473	49,740
PB143NW	7,479	6,279	4,029	2,791	8	9,449	12,001	571	35	82	48	4	42,776
PL54E	0	0	0	0	0	475,159	523,396	410,546	315,531	427,894	286,911	298,873	2,738,310
PL54W	24,484	21,910	23,140	25,666	12,533	41,182	25,792	20,828	18,479	25,338	16,736	5,528	261,616
PL54NE2	338,513	327,083	325,530	401,614	73,651	185,429	440,324	337,123	402,350	485,813	38,156	454,175	3,809,761
PL54NE	0	0	0	0	0	406,454	273,507	230,067	85,432	0	0	170,650	1,166,110
PB119ER	0	0	0	0	0	865	0	12,947	70,080	93,491	76,972	96,194	350,549
PB119NER	0	0	0	0	0	325,408	0	98,133	230,098	304,073	178,707	195,111	1,331,530
PB135ER	240,411	0	0	0	0	15,989	4,534	128,812	385,665	303,277	119,307	60,350	1,258,345
EBPW TOTAL	**642,843**	**377,305**	**415,199**	**468,683**	**108,966**	**1,467,616**	**1,354,838**	**1,276,734**	**1,542,423**	**1,677,190**	**749,078**	**1,307,932**	**11,388,806**
PB218N	141,035	97,778	183,828	199,325	77,503	224,343	161,215	106,068	105,022	179,627	127,080	141,494	1,744,318
EBPX TOTAL	**141,035**	**97,778**	**183,828**	**199,325**	**77,503**	**224,343**	**161,215**	**106,068**	**105,022**	**179,627**	**127,080**	**141,494**	**1,744,318**
PL73N	287,286	205,363	299,479	120,256	0	0	0	0	3,446	36,088	0	0	951,918
PWRNW3	104,816	101,448	93,602	99,168	45,750	245,989	229,511	126,081	141,378	177,183	124,560	175,266	1,664,752
MIA-333 (M95)	0	0	0	0	0	0	355	414	1,862	0	0	0	2,631
PB349N	0	0	0	0	0	0	88,995	54,774	44,890	61,122	42,404	50,982	343,167
PB329E2[2]	70,652	70,652	70,652	52,989	35,326	17,663	88,315	52,989	52,989	86,121	71,193	115,630	785,171
PB350NW	49,761	43,180	44,971	47,942	23,431	88,145	63,242	49,948	45,682	63,528	45,085	57,665	622,580
PB350NE2	215,158	110,652	402,651	541,246	160,540	590,241	314,375	184,974	209,197	314,819	186,615	229,243	3,459,711
PB319N	0	0	0	0	0	30,857	22,047	21,116	17,862	24,206	17,185	1,133	134,406
PB323SE2	10,029	0	17,492	10,685	4,769	16,907	11,716	9,199	8,338	11,678	8,035	11,433	120,282
PB303SW	15,562	11,840	12,723	15,691	7,292	22,989	6,982	5,425	3,290	24,275	15,880	19,727	161,677
PB303W2	7,943	0	12,547	482	546	18,215	5,574	1,710	1,777	8,515	7,145	5,491	69,946
PB307N3	169,357	115,923	179,381	202,393	89,152	292,594	206,813	176,032	182,006	202,517	118,135	208,242	2,142,543
PB307E2	23,005	15,674	9,780	29,581	15,247	107,464	82,995	60,931	66,652	123,831	117,952	121,758	774,870
PB322NE2	646	896	704	734	372	1,328	1,460	1,604	1,060	805	1,126	1,299	12,035
PB322NE4	6,658	5,639	5,715	5,749	2,788	9,805	6,989	5,726	5,333	7,388	5,294	6,829	73,914
EBPM TOTAL	**960,873**	**681,268**	**1,149,697**	**1,126,914**	**385,213**	**1,442,198**	**1,129,369**	**750,923**	**785,763**	**1,142,076**	**760,609**	**1,004,698**	**11,319,602**
EBP TOTALS	**2,844,241**	**2,287,565**	**3,261,601**	**3,320,784**	**1,324,442**	**5,844,124**	**4,233,732**	**3,711,777**	**2,662,025**	**5,406,129**	**3,209,490**	**4,405,375**	**42,511,286**
Precipitation (inches)[1]	1.74	2.51	1.34	2.7	3.41	6.2	3.56	4.67	4.07	2.78	0.97	2.73	36.68

Notes:

1. Precipitation data from NOAA
2. Monthly volume for PB329E2 from January - March 2015 estimated due to faulty flow meter.

Key:

EBP = Eastman Business Park

Table 3 Annual Groundwater Extraction Volumes - 1988 to 2015
Eastman Business Park Remediation Systems, Rochester, New York

Pumping Well / System ID	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
PB53N2	400,000	160,000	260,000	360,000	291,733	304,171	310,801	311,992	455,591	563,726	438,201	479,490	534,364	534,654
PB54NW	64,000	280,000	1,200,000	270,000	151,289	117,767	94,059	34,616	73,362	218,909	297,911	56,580	49,960	440,146
PB54SE	150,000	29,000	32,000	26,000	25,421	25,510	21,943	17,027	14,104	45,991	54,065	32,678	342,829	356,347
PB57W	29,000	36,000	110,000	19,000	8,174	9,875	14,044	--	--	--	--	--	3,589	3,628
PB115N	44,000	120,000	390,000	920,000	659,330	260,845	150,949	199,919	205,226	224,905	1,256,912	226,800	240,480	423,293
PB119E	980,000	700,000	3,100,000	1,200,000	566,406	1,012,336	983,489	1,461,726	496,386	--	--	--	--	--
PB119NE	860,000	1,400,000	2,100,000	2,300,000	2,768,864	3,536,208	3,641,973	3,713,777	2,611,783	--	--	--	--	--
PB119SE	470,000	480,000	790,000	1,100,000	964,429	633,617	864,388	563,516	499,718	194,100	--	--	--	--
PB119W	71,000	45,000	38,000	42,000	41,277	17,816	11,327	808	4,680	--	--	--	--	--
PB135ER	1,700,000	2,400,000	3,700,000	3,800,000	2,315,972	1,182,744	820,610	1,818,093	1,723,355	1,243,010	1,574,593	3,159,722	3,758,331	4,565,976
PB136S	30,000	750,000	1,200,000	640,000	998,743	652,899	688,917	516,678	478,311	479,265	364,489	403,546	321,066	211,999
PL50N2	--	--	--	20,000	261,939	201,884	197,705	146,573	169,285	98,010	50,582	33,439	48,964	21,725
PL50N3	--	--	--	7,300	221,882	488,336	408,348	227,446	247,668	235,105	169,713	33,166	48,833	27,339
PL50NW3	--	--	--	220,000	2,426,891	1,862,707	1,311,292	869,167	556,899	724,221	367,447	601,661	1,287,587	747,727
PL50W	--	--	--	190,000	1,946,848	1,334,402	763,278	622,999	882,664	1,506,188	1,030,931	926,797	1,589,685	588,025
PB218N	--	--	--	--	1,033,459	2,524,201	2,155,336	1,782,108	2,182,780	1,741,571	947,410	1,393,007	1,097,199	1,212,259
PB329E2	--	--	--	--	--	--	--	960,509	1,429,625	1,553,221	1,530,904	1,285,934	2,132,181	1,945,825
PB349N	--	--	--	--	--	--	--	1,267,064	1,713,202	1,295,565	944,794	1,217,784	1,381,326	1,109,695
PB350NE2	--	--	--	--	1,916,144	4,970,240	4,524,716	3,962,716	5,022,512	3,056,354	2,672,765	2,122,187	4,382,135	5,657,907
PWRNW3	--	--	--	--	--	--	1,917,592	3,256,060	2,787,448	2,258,815	2,206,006	2,207,980	3,070,080	2,439,570
PL73N	--	--	--	--	--	--	--	2,402,028	19,347,120	16,816,042	13,694,890	6,890,311	5,865,811	6,020,704
PB350NW	--	--	--	--	--	--	--	--	--	982,757	1,432,503	1,462,796	1,959,415	2,332,131
PB319N	--	--	--	--	--	--	--	--	--	496,128	668,127	2,273,560	449,859	452,833
PB119ER	--	--	--	--	--	--	--	--	--	2,275,382	2,557,874	3,677,658	3,573,099	3,717,631
PB119NER	--	--	--	--	--	--	--	--	--	2,868,519	3,314,288	5,335,835	5,333,017	4,816,193
PB143NW	--	--	--	--	--	--	--	--	--	2,883,489	3,827,804	3,470,591	1,966,669	1,134,930
PL54W	--	--	--	--	--	--	--	--	--	1,095,447	662,196	2,038,270	1,889,229	1,177,282
PL54E	--	--	--	--	--	--	--	--	--	3,185,256	4,927,583	6,970,188	7,674,340	8,996,365
PL54NE	--	--	--	--	--	--	--	--	--	--	2,631,942	3,225,498	3,441,552	2,666,627
PL54NE2	--	--	--	--	--	--	--	--	--	--	2,501,077	3,676,141	4,053,574	4,166,237
PL41N	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL41S	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL42E	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL42W	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB323SE2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB303SW	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB303W2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MIA-333 (M95)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB307N3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB307E2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB322NE2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB322NE4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EBP TOTAL	**4,798,000**	**6,400,000**	**12,920,000**	**11,114,300**	**16,598,801**	**19,135,558**	**18,880,767**	**24,134,822**	**40,901,719**	**46,041,976**	**50,125,007**	**53,201,619**	**56,495,174**	**55,767,048**

Table 3 Annual Groundwater Extraction Volumes - 1988 to 2015
Eastman Business Park Remediation Systems, Rochester, New York

Pumping Well / System ID	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PB53N2	818,117	633,988	762,354	712,835	739,313	737,324	761,768	875,301	865,096	537,802	442,776	279,462	194,538	87,181
PB54NW	460,126	293,407	380,190	365,558	381,201	355,768	364,147	1,597,504 (1)	154,631	545,632	539,779	602,460	638,380	205,256
PB54SE	129,432	182,864	177,621	190,275	163,752	175,461	184,622	218,768	92,257	81,224	81,858	75,882	49,852	25,573
PB57W	2,585	3,565	3,884	3,416	2,173	3,134	2,907	19,029	17,711	16,256	9,934	11,065	10,817	8,903
PB115N	607,664	183,656	159,608	167,027	148,281	161,962	149,887	94,670	51,628	59,333	54,284	55,718	43,537	49,740
PB119E	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB119NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB119SE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB119W	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB135ER	4,087,584	3,187,073	2,363,554	2,288,284	2,365,621	2,362,449	2,317,769	3,631,966	2,448,784	3,644,869	4,088,352	2,975,060	2,776,622	1,258,345
PB136S	116,373	15,210	12,965	15,467	15,964	14,839	15,424	79,086	152,685	139,262	135,006	153,232	114,058	87,508
PL50N2	26,101	30,201	39,065	30,412	28,830	31,256	31,083	11,146	8,513	12,333	13,096	13,188	24,435	16,081
PL50N3	28,186	19,251	23,174	19,666	19,859	20,798	22,574	16,346	25,043	25,474	21,022	23,200	123,042	97,968
PL50NW3	502,628	255,412	244,351	288,056	264,748	273,207	274,494	126,338	183,672	329,654	225,814	125,964	67,541	105,557
PL50W	679,792	672,908	498,602	538,896	681,339	602,989	638,276	159,404	143,974	163,942	122,321	81,377	72,259	72,955
PB218N	1,619,503	1,737,570	2,072,878	1,910,862	1,880,298	1,975,760	1,933,643	1,373,621	1,361,290	1,571,412	1,669,594	1,903,957	1,957,493	1,744,318
PB329E2	1,935,262	1,639,342	1,859,235	1,823,499	1,918,330	1,848,044	1,819,600	1,655,272	1,536,266	1,551,654	1,363,797	1,433,549	1,395,081	785,171
PB349N	880,705	637,279	733,112	653,587	689,817	687,416	696,959	459,634	442,860	433,253	402,038	617,814	353,359	343,167
PB350NE2	4,295,250	3,252,147	3,831,813	2,836,998	2,735,721	2,990,357	2,959,370	2,251,590	2,680,186	3,694,087	3,023,863	3,702,632	3,484,263	3,459,711
PWRNW3	2,395,908	2,494,698	2,855,654	2,548,854	2,568,851	2,624,625	2,460,400	2,369,928	2,288,099	2,208,320	2,085,452	2,125,197	2,120,897	1,664,752
PL73N	6,777,203	6,595,636	9,288,368	9,418,492	7,879,900	8,839,818	8,808,474	6,846,013	5,241,636	7,998,984	5,418,056	6,672,781	8,910,152	951,918
PB350NW	1,916,435	1,620,928	2,033,178	1,603,136	1,426,011	1,625,106	1,554,129	870,498	699,104	871,598	754,780	690,450	716,936	622,580
PB319N	198,375	225,753	264,780	208,088	151,967	194,322	184,793	196,603	255,318	250,461	182,919	246,947	438,420	134,406
PB119ER	2,906,659	2,915,390	2,942,828	2,393,444	3,061,421	2,706,014	2,713,810	2,506,189	2,224,013	2,244,063	2,191,227	2,127,150	1,884,174	350,549
PB119NER	4,112,935	2,446,460	2,489,969	2,863,173	2,302,570	2,582,944	2,394,339	773,829	522,066	987,799	1,644,712	1,694,582	1,605,674	1,331,530
PB143NW	855,662	700,460	663,312	693,006	809,421	667,538	571,430	346,741	335,560	163,799	287,732	205,507	131,384	42,776
PL54W	1,112,706	479,017	536,478	473,102	755,111	626,422	723,180	700,403	601,045	433,937	439,668	311,971	273,516	261,616
PL54E	8,525,678	6,241,692	8,933,412	11,350,138	6,766,935	8,161,225	7,529,138	6,339,395	4,242,242	3,391,300	2,779,679	1,421,870	3,585,396	2,738,310
PL54NE	2,324,971	957,156	580,612	459,720	551,198	527,813	512,909	2,907,187	1,048,081	2,430,502	899,930	1,547,974	1,913,607	1,166,110
PL54NE2	4,872,393	3,534,160	2,612,529	3,488,319	3,767,021	3,440,760	3,589,449	6,032,970	4,863,760	4,412,678	3,822,750	3,760,580	3,852,394	3,809,761
PL41N	--	3,281,440	2,857,617	4,135,945	5,456,997	4,344,487	4,906,127	13,210,961	13,188,211	17,102,330	16,686,979	15,611,969	12,338,991	1,933,860
PL41S	--	3,233,012	2,736,056	3,693,618	4,354,380	3,720,322	4,028,035	8,394,502	13,180,297	16,942,574	12,814,921	7,719,710	6,778,939	15,171,550
PL42E	--	560,806	580,650	427,747	323,252	445,790	412,558	378,085	400,015	494,143	361,880	338,031	335,184	370,125
PL42W	--	443,556	569,392	416,237	351,027	422,715	374,877	490,103	331,251	316,829	294,488	263,627	263,969	256,112
PB323SE2	--	--	--	107,808	145,247	144,503	144,029	191,860	162,433	145,895	137,764	129,947	125,120	120,282
PB303SW	--	--	--	700,886	1,020,004	974,230	960,581	541,014	530,017	282,908	370,126	184,315	152,534	161,677
PB303W2	--	--	--	248,077	356,952	343,968	342,470	187,495	170,410	129,035	101,526	107,730	124,240	69,946
MIA-333 (M95)	--	--	--	--	--	--	--	29,079	1,284,743	895,591	731,850	867,648	401,953	2,631
PB307N3	--	--	--	--	--	--	--	--	--	2,181,492	1,731,086	1,282,739	1,218,412	2,142,543
PB307E2	--	--	--	--	--	--	--	--	--	45,055	35,927	192,240	277,991	774,870
PB322NE2	--	--	--	--	--	--	--	--	--	21,889	13,293	11,517	12,301	12,035
PB322NE4	--	--	--	--	--	--	--	--	--	150,545	98,678	88,459	80,104	73,914
EBP TOTAL	**52,188,233**	**48,474,037**	**53,107,241**	**57,074,628**	**54,083,512**	**54,633,366**	**54,383,251**	**65,882,531**	**61,732,897**	**76,907,916**	**66,078,956**	**59,657,501**	**58,847,565**	**42,511,287**

Notes:
All values are in gallons
"--" - System not yet commissioned, or system decommissioned
(1) - Potentially anomalous volume in 2009 at PB54NW, based on volume at PB54NW for 2008 and 2010

Key:
EBP = Eastman Business Park

Table 4 Positive Analytical Results for Groundwater Samples from Pumping Wells
Former Eastman Business Park, Rochester, New York

Analyte	Screening Criteria [1]	Notes	Location ID:	GB326SWR	PB115N	PB119ER	PB119NER	PB135ER	PB136S	PB143NW	PB218N	PB303SW	PB303W2	PB307E2	PB307N3	PB319N	PB322NE2	PB322NE4	PB323SE2	PB326SW5	PB326SW6	PB329E2	PB349N
			Depth:	53 ft	41 ft	45 ft	44 ft	47 ft	34 ft	38 ft		52 ft	52 ft	28 ft	32 ft	27 ft	32 - 52 ft	25 ft	46 ft	22 ft	25 ft	47 ft	37 ft
			Date:	6/25/2015	5/29/2015	08/31/15	06/12/15	05/29/15	06/01/15	06/12/15	06/01/15	05/22/15	05/22/15	05/21/15	05/21/15	05/29/15	06/26/14	06/26/14	05/22/15	10/01/15	10/02/15	05/22/15	07/07/15
Volatile Organic Compounds by Method SW8260C (µg/L)																							
1,1,1-Trichloroethane	5			0.82 U	4.1 U	**10**	**1.2**	3.3 U	0.82 U	0.82 U	0.82 U	**0.91 J**	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	4.1 U	0.82 U	0.82 U	0.82 U
1,1,2-Trichloroethane	1			0.23 U	1.2 U	**1.0**	0.23 U	0.92 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	1.2 U	0.23 U	0.23 U	0.23 U
1,1-Dichloroethane	5			0.38 U	**37**	**11**	**1.7**	1.5 U	0.38 U	0.38 U	0.38 U	**10**	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	**3.9**	1.9 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethene	5			0.29 U	**11**	**4.3**	**0.65 J**	1.2 U	0.29 U	0.29 U	0.29 U	**0.29 J**	0.29 U	0.29 U	**2.6**	0.29 U	0.29 U	0.29 U	0.29 U	1.5 U	0.29 U	0.29 U	0.29 U
1,2-Dichloroethane	0.6			0.21 U	**4300**	**0.27 J**	0.21 U	0.84 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1.1 U	0.21 U	0.21 U	0.21 U
1,2-Dichloropropane	1			0.72 U	**5200**	0.72 U	0.72 U	2.9 U	0.72 U	0.72 U	0.72 U	0.72 U	**2.1**	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	3.6 U	0.72 U	0.72 U	0.72 U
Acetone	50	G		**4.2 J**	**420**	3.0 U	3.0 U	12 U	**6.2 J**	3.0 U	3.0 U	**5.2 J**	**46**	**87**	**29**	3.0 U	3.0 U	3.0 U	**4.4 J**	**58**	3.0 U	3.0 U	3.0 U
Benzene	1			0.41 U	**140**	**18**	**2.7**	1.6 U	**24**	0.41 U	0.41 U	**10**	160 U	0.41 U	**7.5**	0.41 U	0.41 U	0.41 U	0.41 U	**10**	0.41 U	0.41 U	0.41 U
Carbon Disulfide	60	G		0.19 U	0.95 U	0.19 U	0.19 U	0.76 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UT	0.19 UT	0.19 UT	0.19 U	0.19 U	0.19 U	0.19 U	0.95 U	0.19 U	0.19 UT	0.19 U
Chlorobenzene	5			0.75 U	**1500**	**8.2**	**16**	3.0 U	**280**	0.75 U	0.75 U	**8.9**	**2.5**	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	3.8 U	0.75 U	0.75 U	0.75 U
Chloroethane	5			0.32 U	1.6 U	0.32 U	0.32 UT	1.3 U	0.32 U	0.32 UT	0.32 U	0.32 U	0.32 U	0.32 U	**5.1**	0.32 U	0.32 U	0.32 U	0.32 U	1.6 UT	0.32 U	0.32 U	0.32 U
Chloroform	7			0.34 U	1.7 U	0.34 U	0.34 U	1.4 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	**1.8 J**	0.34 U	0.34 U	0.34 U
Chloromethane	5			0.35 U	2.7 J	0.35 U	0.35 U	1.4 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.8 U	0.35 U	0.35 U	0.35 U
Cyclohexane	N/A			--	**8400**	**1.4**	0.18 U	0.72 U	**2300**	0.18 U	0.18 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloroethylenes	5			0.81 U	**28**	0.81 U	0.81 U	3.2 U	0.81 U	**2.1**	0.81 U	0.81 U	0.81 U	**15**	**360**	0.81 U	0.81 U	0.81 U	0.81 U	4.1 U	0.81 U	**1.2 J**	0.81 U
Diethyl Ether (Ethyl Ether)	N/A			--	3.6 U	**1.4**	**3.9**	2.9 U	0.72 U	0.72 U	0.72 U	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5			0.74 U	**250**	**0.79 J**	0.74 U	3.0 U	**31**	0.74 U	0.74 U	**0.95 J**	**840**	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	**260**	0.74 U	0.74 U	0.74 U
Isopropyl Ether	N/A			0.59 U	9.4	**3.0**	**1.7**	2.4 U	**1.1**	0.59 U	0.59 U	**86**	240 U	**120**	**2700**	0.59 U	**30000**	**4500**	**4.4**	3.0 U	0.59 U	**110**	0.59 U
Methyl Ethyl Ketone (2-Butanone)	50	G		1.3 U	6.6 U	1.3 U	1.3 U	5.3 U	1.3 U	1.3 U	1.3 U	1.3 U	**11**	1.3 U	1.3 U	1.3 UT	1.3 U	1.3 U	1.3 U	6.6 U	1.3 U	1.3 U	1.3 U
Methylene Chloride	5			0.44 U	**26000**	0.44 U	0.44 U	1.8 U	**3.1**	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	2.2 U	0.44 U	0.44 U	0.44 U
N-Hexane	N/A			0.40 U	35 J	0.40 U	0.40 U	1.6 U	**1.4 J**	0.40 U	0.40 U	0.40 U	**17**	0.40 U	**24**	0.40 U	0.40 U	0.40 U	0.40 U	**19 J**	0.40 U	0.40 U	0.40 U
Tetrachloroethylene (PCE)	5			0.36 U	1.8 U	0.36 U	0.36 U	1.4 U	0.36 U	**0.42 J**	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	1.8 U	0.36 U	0.36 U	0.36 U
Tetrahydrofuran	N/A			1.3 UT	83	**1.9 JT**	1.3 U	5.0 U	**2. J**	1.3 U	1.3 U	1.3 U	**4.4 J**	1.3 U	1.3 U	1.3 UT	1.3 U	1.3 U	1.3 U	6.3 U	1.3 U	1.3 U	1.3 U
Toluene	5			0.51 U	**7200**	**4.6**	0.51 U	**4.6**	**54**	0.51 U	0.51 U	0.51 U	**320 J**	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	**1900**	0.51 U	0.51 U	0.51 U
Trichloroethylene (TCE)	5			0.46 U	**9.0**	0.46 U	0.46 U	1.8 U	0.46 U	0.46 U	**0.54 J**	0.46 U	0.46 U	0.46 U	**0.61 J**	0.46 U	0.46 U	0.46 U	0.46 U	2.3 U	0.46 U	0.46 U	0.46 U
Vinyl Chloride	2			0.90 U	**10**	**14**	**3.2**	3.6 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	**22**	**120**	0.90 U	0.90 U	0.90 U	0.90 U	4.5 U	0.90 U	**10**	0.90 U
Xylenes, Total	5			**0.71 J**	**1500**	0.66 U	0.66 U	2.6 U	**140**	0.66 U	0.66 U	**65**	**24000**	0.66 U	**24**	0.66 U			0.66 U	**3000**	0.66 U	0.66 U	0.66 U
TOTAL VOCs				**4.9**	**55000**	**80**	**31**	**4.6**	**2800**	**2.5**	**0.54**	**190**	**25000**	**240**	**3300**	**ND**	**30000**	**4500**	**13**	**5200**	**ND**	**120**	**ND**
Semivolatile Organics by Method SW8270D (µg/L)																							
1,4-Dioxane (P-Dioxane)	N/A				--	--	--	--	--	--	--	**59**	**960**	0.33 U	**0.35 J**	**8.0**	0.52 U	0.52 U	**76**	--	--	**2.7**	**1.2 B**

Key at end of table.

Source: Ecology and Environment Engineering, P.C. 2016

Table 4 Positive Analytical Results for Groundwater Samples from Pumping Wells
Former Eastman Business Park, Rochester, New York

Analyte	Screening Criteria [1]	Notes	Location ID:	PB350NE2	PB350NW	PB53N2	PB54NW	PB54SE	PB57W	PL41N	PL41S	PL42E	PL42W	PL50N2	PL50N3	PL50NW3	PL50W	PL54E	PL54NE	PL54NE2	PL54W	PL73N	PWRNW3
			Depth:		26 ft	60 ft	36 ft	47 ft	47 ft	90 ft	89 ft	85 ft	85 ft	71 ft	77 ft	79 ft	76 ft	41 ft	45 ft	46 ft	39 ft		42 ft
			Date:	06/11/15	06/11/15	12/11/15	08/31/15	08/31/15	06/12/15	06/02/15	06/02/15	07/07/15	06/12/15	06/01/15	06/01/15	08/31/15	06/01/15	05/29/15	05/29/15	07/07/15	05/29/15	10/02/15	06/10/15
Volatile Organic Compounds by Method SW8260C (µg/L)																							
1,1,1-Trichloroethane	5			0.82 U	0.82 U	0.82 U	8200 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	3.3 U	4.1 U	4.1 U	**8.0**	8.2 U	0.82 U
1,1,2-Trichloroethane	1			0.23 U	0.23 U	0.23 U	2300 U	0.23 U	0.23 U	**0.56 J**	**0.23 J**	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.92 U	1.2 U	1.2 U	0.92 U	2.3 U	0.23 U
1,1-Dichloroethane	5			0.38 U	0.38 U	0.38 U	3800 U	0.38 U	**4.3**	0.38 U	0.38 U	0.38 U	0.38 U	**18**	0.38 U	**0.47 J**	0.38 U	1.5 U	1.9 U	1.9 U	1.5 U	3.8 U	0.38 U
1,1-Dichloroethene	5			0.29 U	0.29 U	0.29 U	2900 U	0.29 U	**24**	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	1.2 U	1.5 U	1.5 U	1.2 U	2.9 U	0.29 U
1,2-Dichloroethane	0.6			0.21 U	0.21 U	**0.24 J**	2100 U	0.21 U	**110 E**	0.21 U	0.21 U	0.21 U	**0.59 J**	**190**	0.21 U	**0.34 J**	0.21 U	0.84 U	1.1 U	1.1 U	0.84 U	2.1 U	0.21 U
1,2-Dichloropropane	1			0.72 U	0.72 U	**2.0**	7200 U	**3.7**	**480 E**	0.72 U	0.72 U	0.72 U	0.72 U	**46**	0.72 U	0.72 U	0.72 U	2.9 U	3.6 U	3.6 U	2.9 U	7.2 U	0.72 U
Acetone	50	G		3.0 U	3.0 U	3.0 U	30000 U	**7.8 J**	**500**	3.0 U	3.0 U	3.0 U	**10**	**22**	3.0 U	3.0 U	3.0 U	12 U	15 U	15 U	12 U	30 U	3.0 U
Benzene	1			0.41 U	0.41 U	0.41 U	4100 U	0.41 U	**2.6**	0.41 U	0.41 U	0.41 U	0.41 U	**1.2**	0.41 U	0.41 U	0.41 U	1.6 U	2.1 U	2.1 U	1.6 U	4.1 U	0.41 U
Carbon Disulfide	60	G		0.19 UT	0.19 UT	0.19 U	1900 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	**3.3**	0.19 U	0.19 U	0.19 U	0.76 U	0.95 U	0.95 U	0.76 U	1.9 U	0.19 UT
Chlorobenzene	5			0.75 U	0.75 U	0.75 U	7500 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	**1.7**	**0.80 J**	**4.0**	0.75 U	3.0 U	3.8 U	3.8 U	3.0 U	7.5 U	0.75 U
Chloroethane	5			0.32 UT	0.32 UT	0.32 U	3200 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	1.3 U	1.6 U	1.6 U	1.3 U	3.2 UT	0.32 UT
Chloroform	7			0.34 U	**0.52 J**	0.34 U	3400 U	0.34 U	0.34 U	**1.2**	**0.90 J**	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	1.4 U	1.7 U	1.7 U	1.4 U	3.4 U	0.34 U
Chloromethane	5			0.35 U	0.35 U	0.35 U	3500 U	0.35 U	**6.5**	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	1.4 U	1.8 U	1.8 U	1.4 U	3.5 U	0.35 U
Cyclohexane	N/A			--	--	**9.6**	1800 U	0.18 U	**250 E**	0.18 U	0.18 U	0.18 U	0.18 U	**16**	**1.1**	0.18 U	**0.49 J**	0.72 U	0.90 U	0.90 U	0.72 U	--	--
Dichloroethylenes	5			0.81 U	0.81 U	0.81 U	8100 U	**2.1**	**230 E**	0.81 U	0.81 U	0.81 U	0.81 U	**5.5**	0.81 U	**0.83 J**	0.81 U	3.2 U	**14**	**30**	**130**	**24**	0.81 U
Diethyl Ether (Ethyl Ether)	N/A			--	--	--	--	--	--	--	--	--	--	**11**	**5.1**	**8.9**	**2.4**	2.9 U	3.6 U	3.6 U	2.9 U	--	--
Ethylbenzene	5			0.74 U	0.74 U	0.74 U	7400 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	3.0 U	3.7 U	3.7 U	3.0 U	7.4 U	0.74 U
Isopropyl Ether	N/A			0.59 U	0.59 U	--	--	--	--	--	--	--	--	**5.1**	**1.8**	**3.8**	**1.2**	2.4 U	3.0 U	3.0 U	2.4 U	**140**	**1.3**
Methyl Ethyl Ketone (2-Butanone)	50	G		1.3 U	1.3 U	1.3 U	13000 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5.3 U	6.6 U	6.6 U	5.3 U	13 U	1.3 U
Methylene Chloride	5			0.44 U	0.44 U	**22**	**470000**	0.44 U	**410000**	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	1.8 U	2.2 U	2.2 U	1.8 U	4.4 U	0.44 U
N-Hexane	N/A			0.40 U	0.40 U	0.40 U	4000 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	1.6 U	2.0 U	2.0 U	1.6 U	4.0 U	0.40 U
Tetrachloroethylene (PCE)	5			**0.41 J**	0.36 U	0.36 U	3600 U	0.36 U	**8.5**	0.36 U	**0.37 J**	**0.47 J**	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	1.4 U	1.8 U	1.8 U	**33**	3.6 U	0.36 U
Tetrahydrofuran	N/A			1.3 U	1.3 U	--	--	--	--	--	--	--	--	**12**	1.3 U	1.3 UT	1.3 U	5.0 U	6.3 U	6.3 U	5.0 U	13 U	**2.2 J**
Toluene	5			0.51 U	0.51 U	0.51 U	5100 U	0.51 U	**1.1**	0.51 U	0.51 U	0.51 U	0.51 U	**8.4**	0.51 U	0.51 U	0.51 U	2.0 U	2.6 U	2.6 U	2.0 U	5.1 U	0.51 U
Trichloroethylene (TCE)	5			0.46 U	0.46 U	0.46 U	4600 U	0.46 U	**19**	0.46 U	0.46 U	0.46 U	0.46 U	**7.4**	0.46 U	0.46 U	0.46 U	1.8 U	**3.8 J**	2.3 U	**46**	4.6 U	0.46 U
Vinyl Chloride	2			0.90 UT	0.90 UT	0.90 U	9000 U	0.90 U	**18**	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	3.6 U	**8.2**	**13**	**7.0**	**28**	0.90 UT
Xylenes, Total	5			0.66 U	0.66 U	0.66 U	6600 U	0.66 U	**0.89 J**	0.66 U	0.66 U	0.66 U	0.66 U	**5.5**	0.66 U	0.66 U	0.66 U	2.6 U	3.3 U	3.3 U	2.6 U	6.6 U	0.66 U
TOTAL VOCs				**0.41**	**0.52**	**34**	**470000**	**14**	**410000**	**1.8**	**1.5**	**0.47**	**11**	**350**	**8.8**	**18**	**4.1**	**ND**	**26**	**43**	**220**	**190**	**3.5**
Semivolatile Organics by Method SW8270D (µg/L)																							
1,4-Dioxane (P-Dioxane)	N/A			**5.1**	**17**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**20**	**13**

Key:

Qualifiers

-- = no data available

E = estimated value; concentration exceeds the calibration limit of the instrument

J = estimated value

T = quality control issue noted by the laboratory.

U = not detected (method detection limit shown)

Other

µg/L = micrograms per liter

ft = feet

G = guidance value (no standard available)

N/A = no guidance value or standard available

ND = all individual constituents were non-detect

Notes:

1. New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations,* 1998 (with updates), Class GA Groundwater Standards and Guidance Values.

2. Bold values denotes positive hits.

3. Shaded cells exceed groundwater standard.

Key at end of table.

Source: Ecology and Environment Engineering, P.C. 2016

Table 5 Total Annual Contaminant Mass Extracted
Eastman Business Park Remediation Systems, Rochester, New York

Pumping Well / System ID	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
PB53N2	325	323	157	212	188	136	101	32	96	20	26	38	21	13	8	11	3	86	47
PB54NW	248	279	310	125	34	29	306	1,733	<1	<1	652	837	484	597	580	575	496	1060	981 (1)
PB54SE	74	54	42	65	7	<1	3	3	<1	<1	10	1	12	1	33	0.1	0.1	6	409
PB57W	41	36	34	71	--	--	--	--	--	3	7	<1	0.07	0.03	0.5	0.1	0.3	22	83
PL41N	--	--	--	--	--	--	--	--	--	--	--	--	0.09	0.03	0.08	0.12	1.7	530	436
PL41S	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1	0.05	0.07	1.28	155	259
PL42E	--	--	--	--	--	--	--	--	--	--	--	--	0.06	0.05	0.01	0.005	0.02	16	8
PL42W	--	--	--	--	--	--	--	--	--	--	--	--	0.03	0.01	0.01	0.03	13	16	20
PB115N	8,068	4,827	2,503	1,221	1,037	1,132	647	3,535	763	240	536	1,144	349	275	143	124	176	177	64
PB136S	1,105	1,379	505	238	603	107	65	17	62	23	10	15	0.4	0.2	2	0.2	0.3	0.2	1.9
PL50N2	147	2,216	1,354	462	325	219	13	9	198	12	19	79	265	329	211	93	101	34	55
PL50N3	7	18	6	2	1	<1	1	1	<1	<1	<1	2	0.04	0.06	2	0.02	0.02	0.02	0.01
PL50NW3	<1	48	6	2	1	1	2	<1	1	2	<1	84	0.1	0.1	29	0.1	0.1	0.1	3.8
PL50W	<1	2	<1	1	<1	1	2	1	<1	<1	<1	49	0.2	0.2	70	0.2	0.1	0.1	0.02
PB119ER	308	8	8	10	54	6	21	15	93	14	20	150	7	6	3	3	46	36	87
PB119NER	68	21	72	101	299	5	16	5	43	2	1	172	0.4	2	1	0.3	94	109	0.1
PB119SE	1	2	55	15	7	61	--	--	--	--	--	--	--	--	--	--	--	--	--
PB119W	3	2	1	<1	<1	<1	--	--	--	--	--	--	--	--	--	--	--	--	--
PB135ER	546	26	10	1	9	9	5	5	9	6	9	255	2	2	1	1	29	1	1
PB143NW	--	--	--	--	--	--	5	<1	14	<1	<1	428	0.2	0.03	0.03	0.03	0.02	0.03	0.01
PL54W	--	--	--	--	--	--	11	5	28	10	5	681	2	3	3	3	3	9	16
PL54E	--	--	--	--	--	--	2	166	429	4	7	82	3	3	2	0.5	2	0.3	0.3
PL54NE	--	--	--	--	--	--	--	7	4	5	4	271	2	1	3	1	1	13	3
PL54NE2	--	--	--	--	--	--	--	3	2	1	1	751	1	4	0.5	0.9	0.3	143	1
PB218N	--	3	2	6	2	2	2	1	<1	<1	<1	<1	0.6	0.3	0.1	0.1	0.05	0.1	0.5
PB329E2	--				1	2	4	4	<1	<1	<1	<1	0.04	<1	4	<1	<1	<1	<1
PB349N	--				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	6.7	<1	<1
PB350NE2	--	9	5	5	3	8	14	3	2	2	2	2	3	1	0.3	0.3	0.3	0.4	0.4
PB319N	--	--	--	--	--	--	<1	<1	<1	<1	<1	<1	0.1	0.01	0.003	0.003	0.002	0.007	0.004
PB350NW	--	--	--	--	--	--	5	6	3	<1	3	4	3	3	128	1	2	1	0.3
PWRNW3	--	--	--	1	2	2	1	2	2	3	3	2	2	1	1	1	0.8	0.6	0.5
PL73N	--	--	--	--	--	167	196	101	68	32	21	12	28	44	1,129	11	18	27	20
PB323SE2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	2	1	1	1
PB303SW	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28	1	1	0.1	10
PB303W2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	138	187	49	71	63
MIA-333 (M95)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
PB307N3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB307E2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB322NE2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PB322NE4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EBP TOTAL	**10,941**	**9,253**	**5,070**	**2,538**	**2,573**	**1,887**	**1,422**	**5,654**	**1,817**	**379**	**1,336**	**5,059**	**1,186**	**1,286**	**2,523**	**1,017**	**1,047**	**2,515**	**2,572**

Table 5 Total Annual Contaminant Mass Extracted
Eastman Business Park Remediation Systems, Rochester, New York

Pumping Well / System ID	2010	2011	2012	2013	2014	2015
PB53N2	32	0.05	4.1	0.1	0.029	0.025
PB54NW	248	872	1010	1363	54	805
PB54SE	3	0.2	0.8	0.02	0.14	0.0029
PB57W	40	10	13	0.1	5.4	31
PL41N	468	207	137	0.3	0.24	0.028
PL41S	165	245	193	0.1	0.051	0.19
PL42E	6	16	3	0.01	0.0017	0.0015
PL42W	4	4	2	0.04	0.0060	0.023
PB115N	26	58	24	27	38	23
PB136S	6	3	2	2	1.4	2.1
PL50N2	24	44	33	33	62	0.047
PL50N3	0.3	0.1	0.02	0.003	0.0072	0.0072
PL50NW3	0.1	3.8	0.1	0.01	0.0058	0.016
PL50W	2	1	0.03	0.01	0.0084	0.0025
PB119ER	2	36	18	0.3	0.36	0.23
PB119NER	0.06	6	0.4	0.1	0.20	0.34
PB119SE	--	--	--	--	--	--
PB119W	--	--	--	--	--	--
PB135ER	25	13	33	0.2	0.17	0.048
PB143NW	3	7	2	0.004	0.0061	0.00090
PL54W	11	6	2	1	0.81	0.49
PL54E	146	121	23	0.2	0.66	0.0
PL54NE	5	25	8	1	1.0	0.25
PL54NE2	17	52	0.3	0.1	0.030	1.4
PB218N	0.09	0.09	0.14	0.01	0	0.0079
PB329E2	<1	0.03	<1 (3)	1.4	1.8	0.79
PB349N	<1	<1	<1 (3)	<1 (3)	<1 (3)	<1 (3)
PB350NE2	0.7	0.4	10.4	0.8	0.25	0.012
PB319N	0.01	0.9	0.01	0.01	0.028	0
PB350NW	0.3	3	2.9	0.3	0.21	0.0027
PWRNW3	0.6	0.5	0.5	0.4	0.43	0.049
PL73N	15	12	12	20	29	1.5
PB323SE2	0.4	0.9	1	0.1	0.12	0.013
PB303SW	6	3	4	0.8	0.48	0.25
PB303W2	47	22	18	19	22	15
MIA-333 (M95)	9	4	(2)	4	0.87	--
PB307N3	--	59.9	33	14	2.2	59
PB307E2	--	0.04	0.2	1	0.013	1.6
PB322NE2	--	4	2	3	3.1	3.0
PB322NE4	--	23	15	11	3.0	2.8
EBP TOTAL	**1,313**	**1,864**	**1,608**	**1,504**	**228**	**947**

Notes:

All units are in pounds; contaminant mass based on the sum of detected mass concentrations of volatile organics plus 1,4-dioxane in EBP-M.

Data prior to 2015 obtained from Eastman Kodak Company.

"--" System not yet commissioned or system decommissioned

(1) Potential anomalous mass; the mass is calculated using the 2009 volume at PB54NW that is potentially anomalous based on 2008 and 2010 volumes at PB54NW.

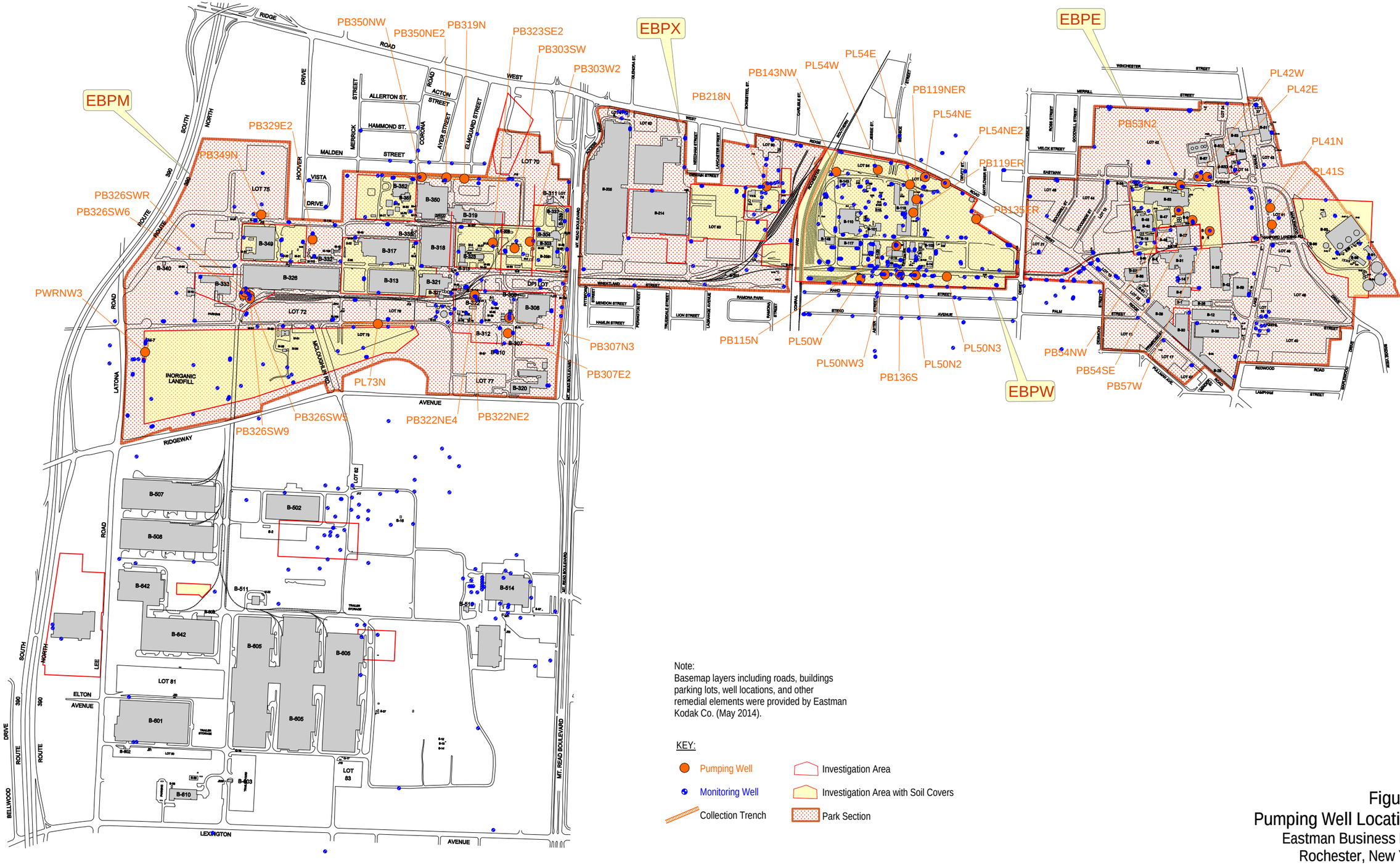
(2) A sample was not collected from the M95 system in 2013 (system was down during sampling event).

(3) This sample was not detected at these locations; total extracted mass assumed <1 based on typical annual mass removal.

Key:

EBP = Eastman Business Park

Figures



Note:
Basemap layers including roads, buildings parking lots, well locations, and other remedial elements were provided by Eastman Kodak Co. (May 2014).

KEY:

- Pumping Well
- Monitoring Well
- Collection Trench
- Investigation Area
- Investigation Area with Soil Covers
- Park Section

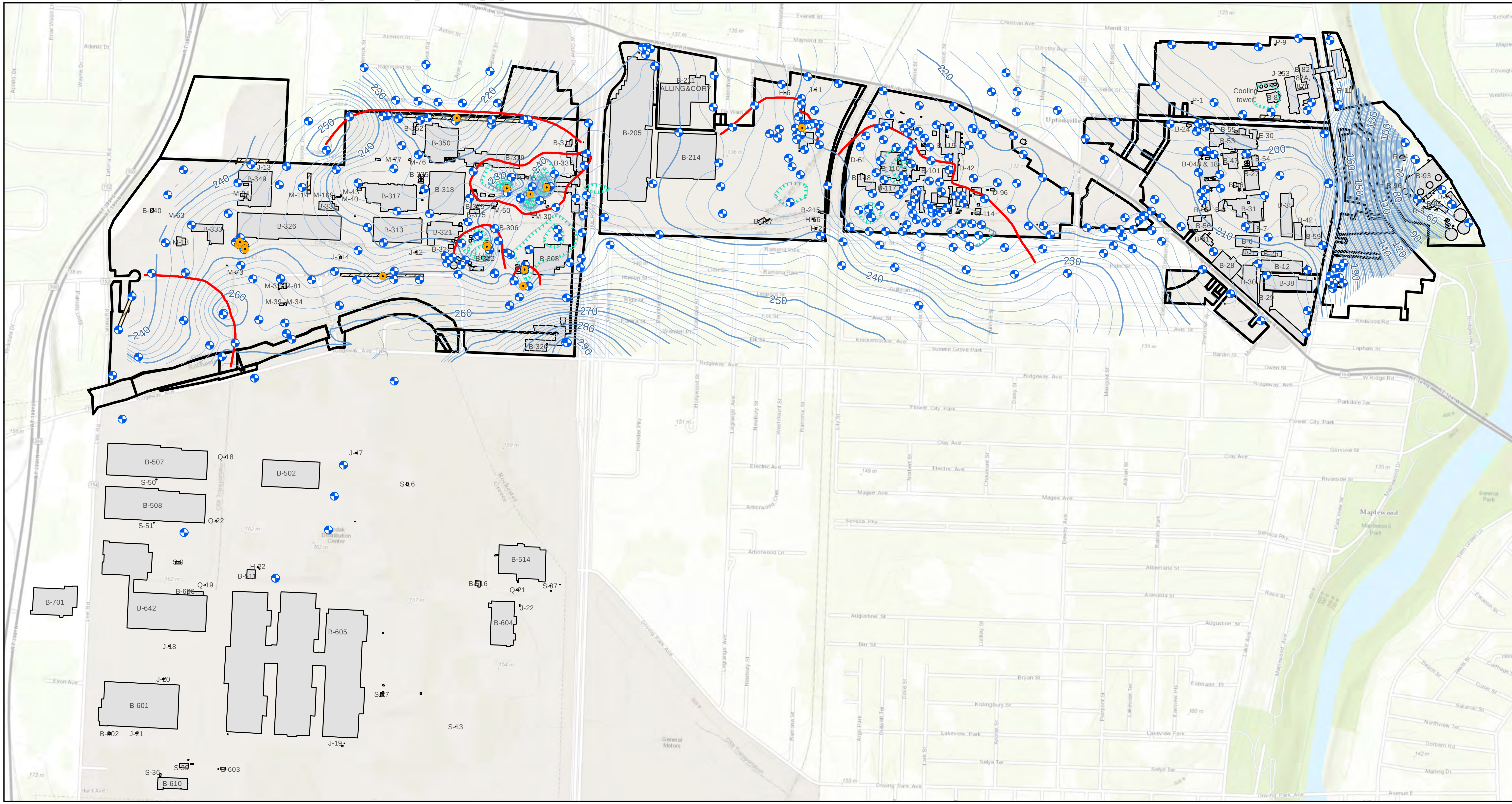
Figure 1
Pumping Well Locations
Eastman Business Park
Rochester, New York

0 175 350 525 700 Feet

N

ecology and environment engineering, p.c.
Global Environmental Specialists

Path: L:\Buffalo\Eastman_Kodak\Maps\MXD\Groundwater\Updated_032116\Overburden_Groundwater_Pot_Surface.mxd



KEY:

- Pumping Well
- Monitoring Well
- Kodak Park Parcels
- Corrective Measure Zone of Capture
- Existing Building
- Approximate Location of Corrective Measure Trench

Overburden Groundwater Elevation (Feet, Kodak Park Datum)

- 10 foot Contour Interval
- 2 foot Contour Interval
- Depression

NOTES:

1. Well locations, well elevation data, trench locations, and basemap features were provided by Eastman Kodak Company. Contours were created by EEEPC using depth to water measurements obtained in 2015.

2. All elevations are based on the Kodak Park Datum, which can be referenced to United States Coast Guard and National Geodetic Survey Datum (1911) by adding 201.75 feet to the elevation shown.

Figure 2

2015 Overburden Groundwater Potentiometric Surface

Eastman Business Park

Rochester, New York

0 0.2 0.4 Miles

N

Path: L:\Buffalo\Eastman_Kodak\Maps\MXD\Groundwater\Updated_032116\Top_of_Rock_Groundwater_Pot_Surface.mxd

KEY:

- Pumping Well
- Monitoring Well
- Kodak Park Parcels
- Corrective Measure Zone of Capture
- Existing Building
- Approximate Location of Corrective Measure Trench

Top of Rock Groundwater Elevation
(Feet, Kodak Park Datum)

- 10 foot Contour Interval
- 2 foot Contour Interval
- Depression

NOTES:
1. Well locations, well elevation data, trench locations, and basemap features were provided by Eastman Kodak Company. Contours were created by EEEPC using depth to water measurements obtained in 2015.

2. All elevations are based on the Kodak Park Datum, which can be referenced to United States Coast Guard and National Geodetic Survey Datum (1911) by adding 201.75 feet to the elevation shown.

Figure 3
2015 Top-of-Rock Groundwater Potentiometric Surface
Eastman Business Park
Rochester, New York

0 0.2 0.4 Miles

N

Path: L:\Buffalo\Eastman_Kodak\Maps\MXD\Groundwater\Updated_032116\Grimsby_Queenston_Groundwater_Pot_Surface.mxd

KEY:

- Pumping Well
- Monitoring Well
- Kodak Park Parcels
- Corrective Measure Zone of Capture
- Existing Building
- Approximate Location of Corrective Measure Trench

Grimsby Queenston Groundwater Elevation
(Feet, Kodak Park Datum)

- 10 foot Contour Interval
- 2 foot Contour Interval
- Depression

NOTES:
1. Well locations, well elevation data, trench locations, and basemap features were provided by Eastman Kodak Company. Contours were created by EEEPC using depth to water measurements obtained in 2015.

2. All elevations are based on the Kodak Park Datum, which can be referenced to United States Coast Guard and National Geodetic Survey Datum (1911) by adding 201.75 feet to the elevation shown.

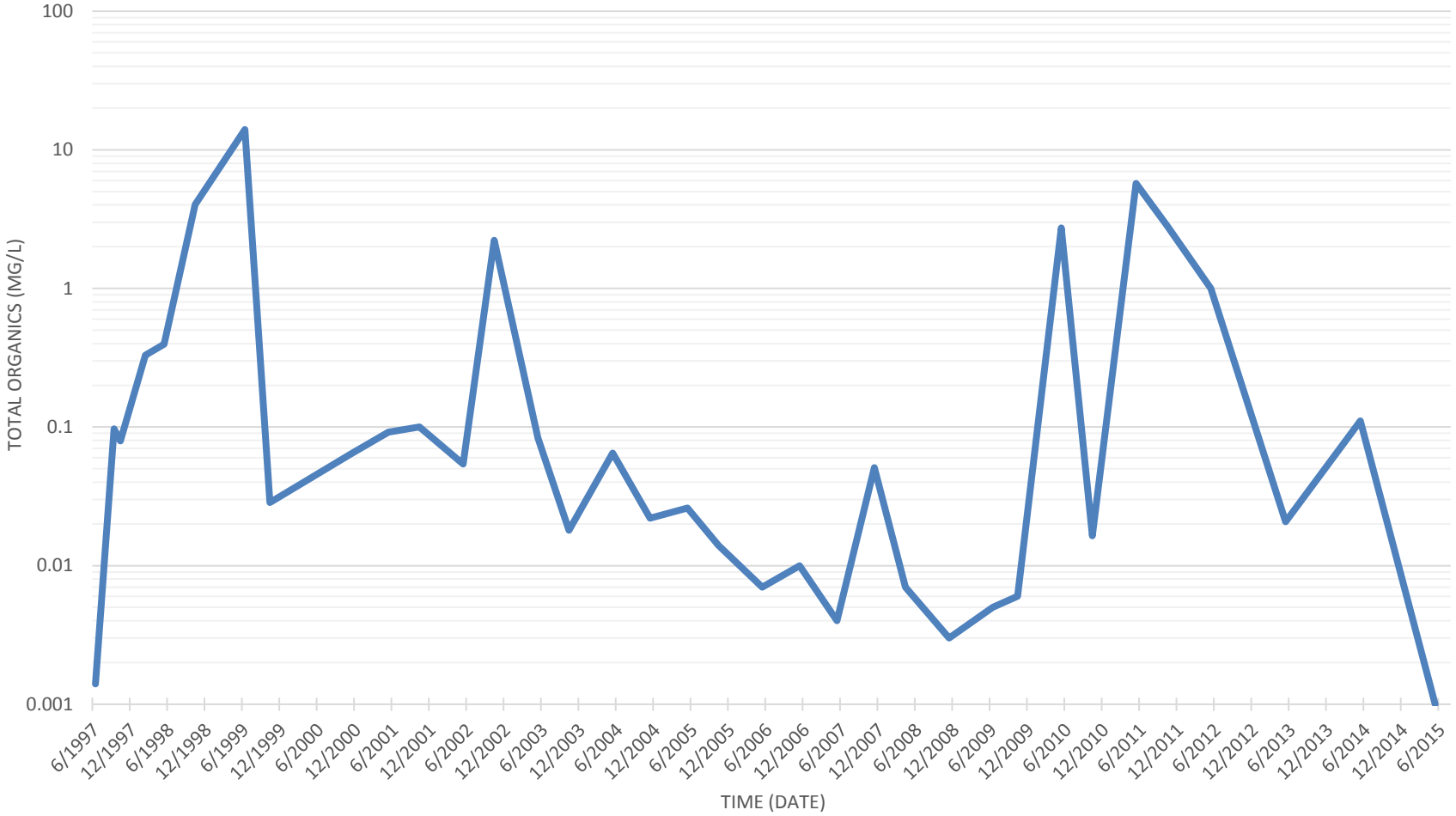
Figure 4
2015 Grimsby-Queenston Groundwater Potentiometric Surface
Eastman Business Park
Rochester, New York

0 0.2 0.4 Miles

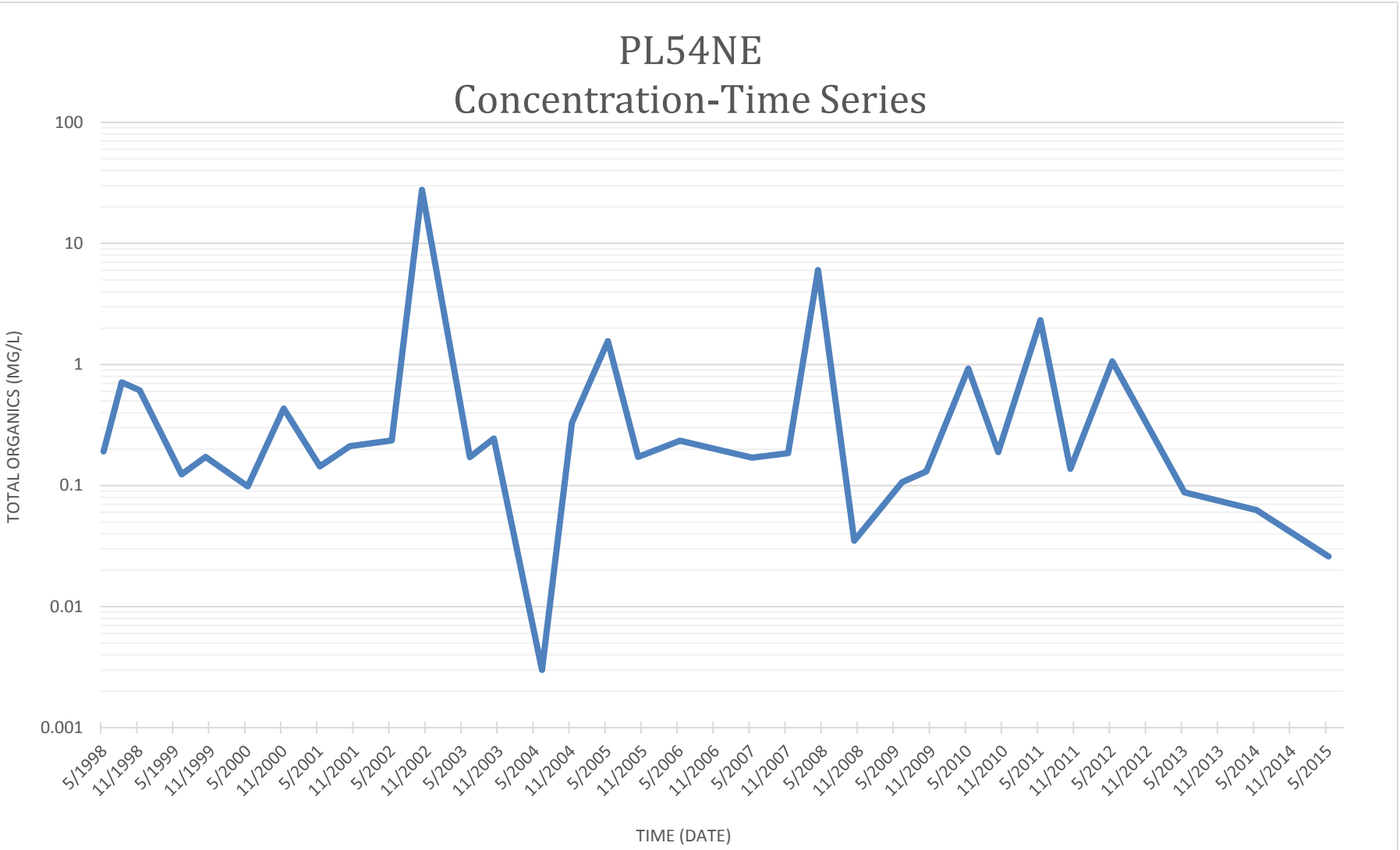
N

A Concentration-Time Series Plots

PL54E
Concentration-Time Series

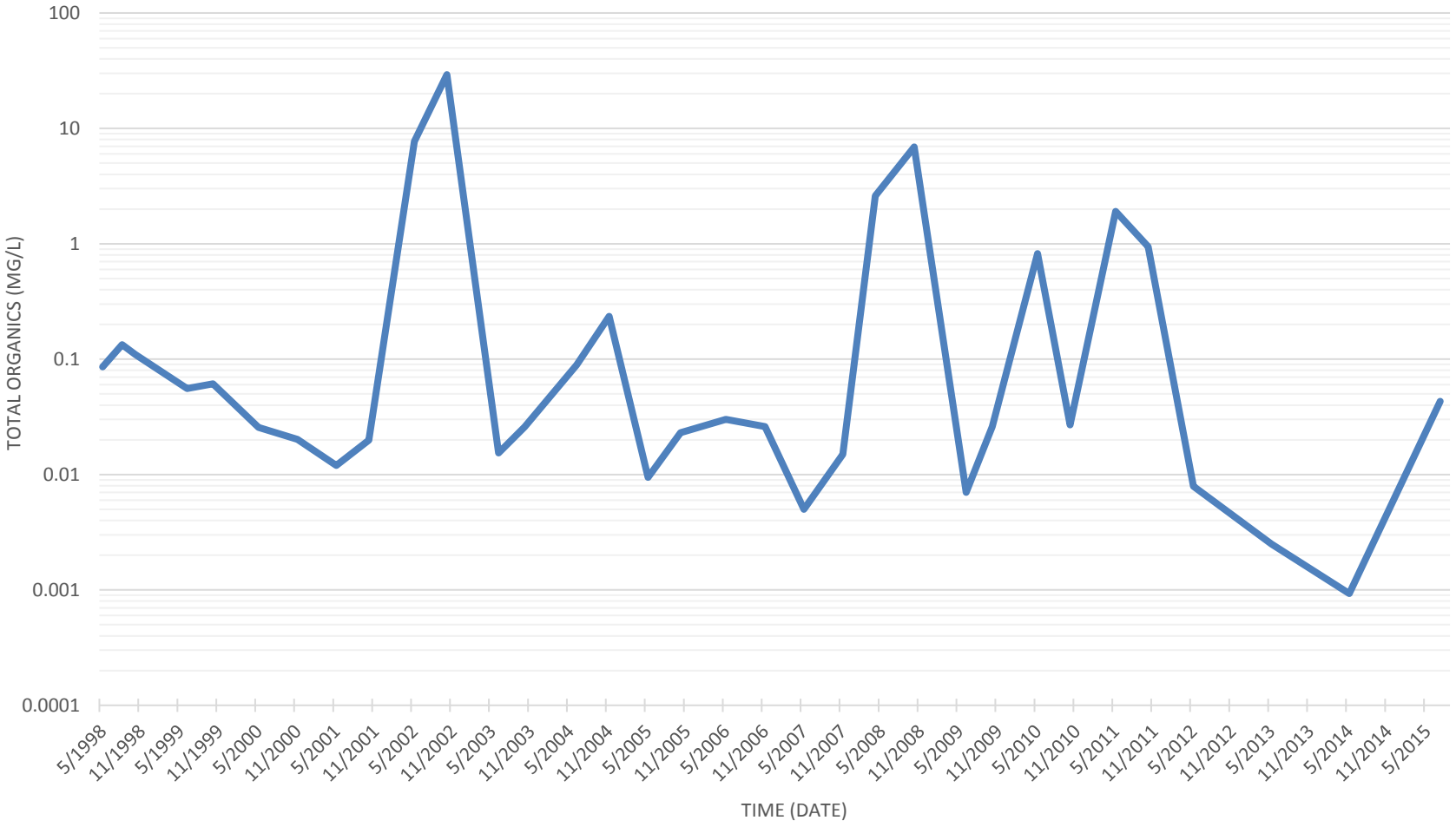


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.



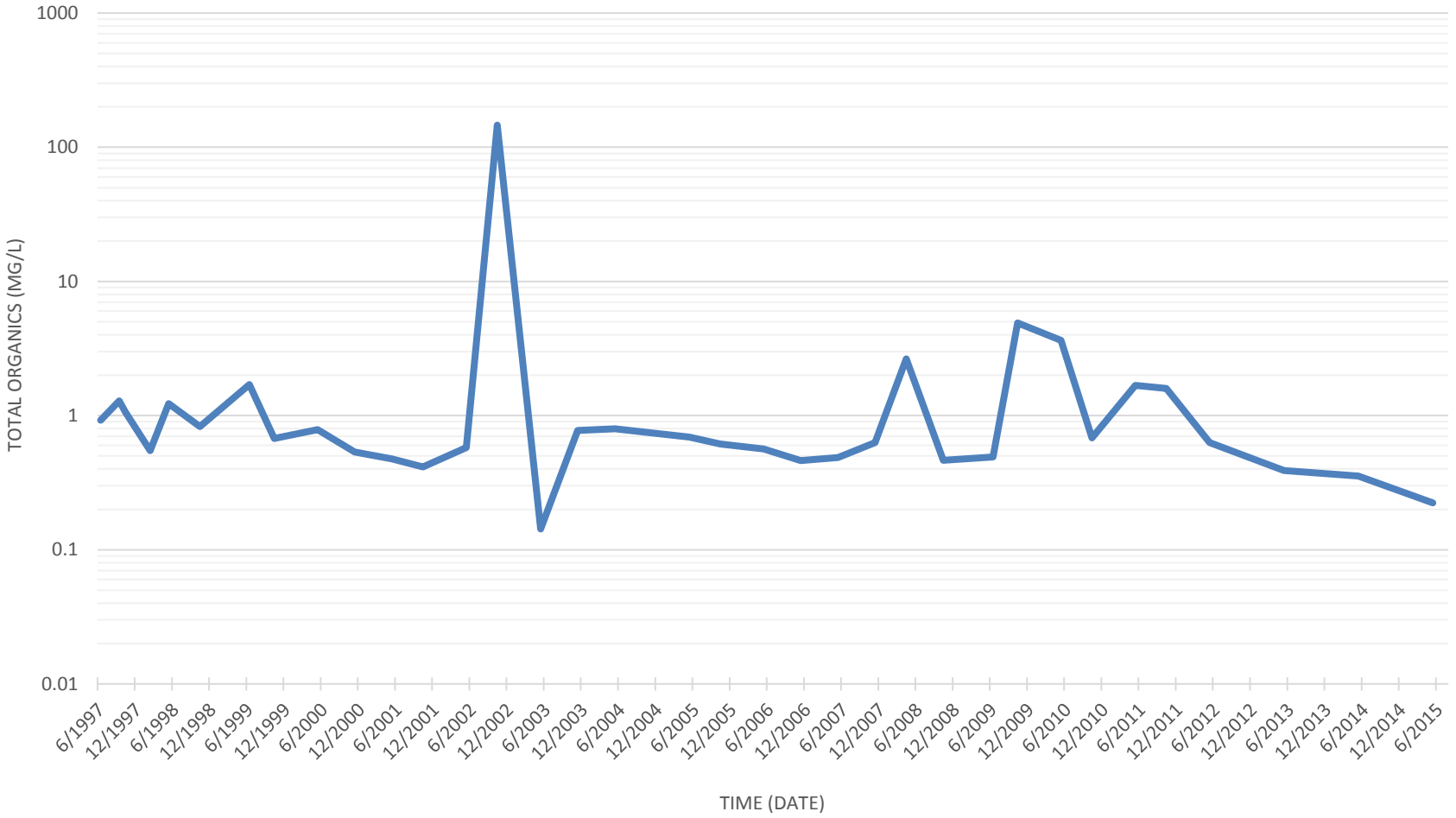
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL54NE2
Concentration-Time Series



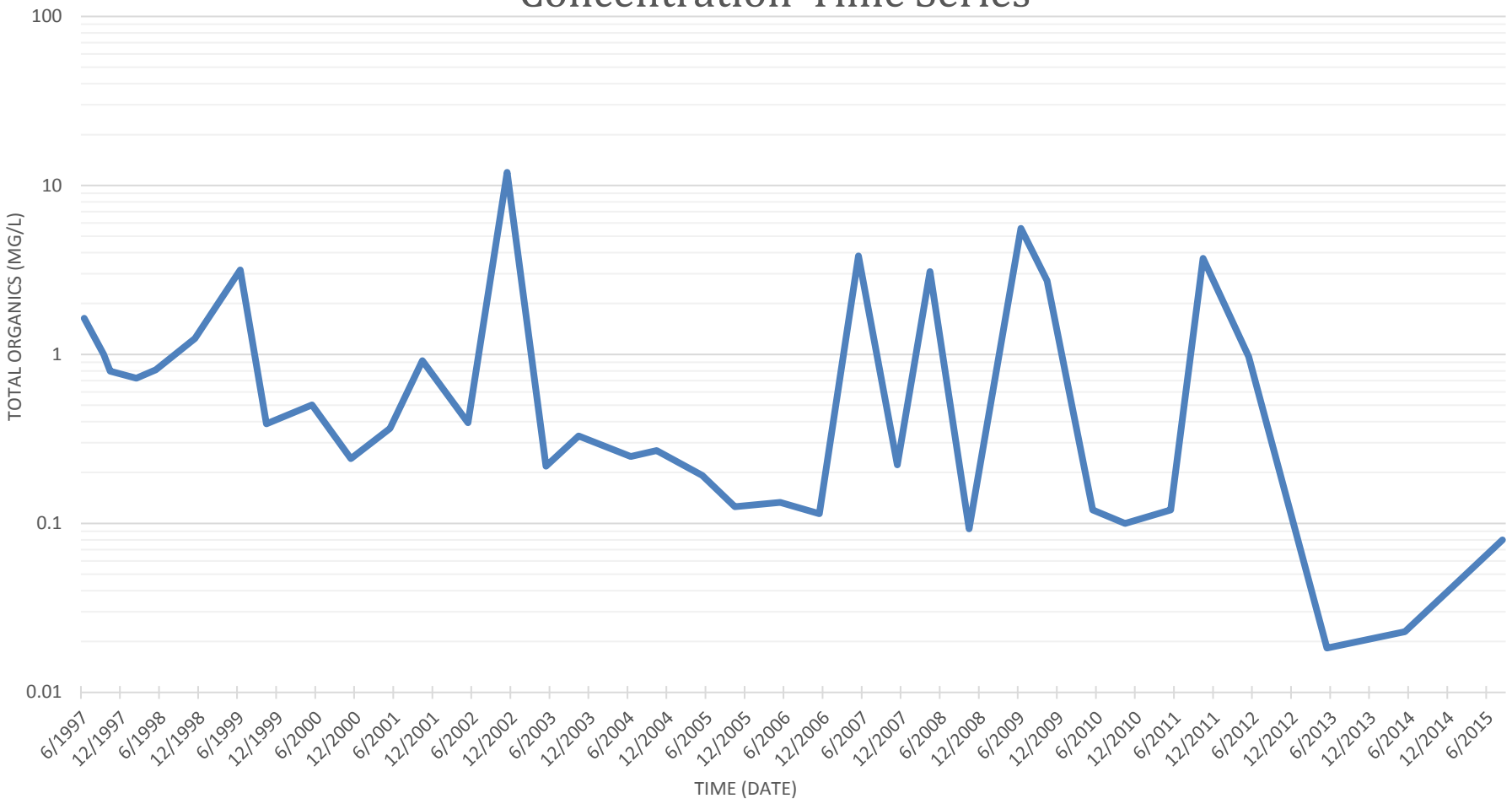
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL54W
Concentration-Time Series



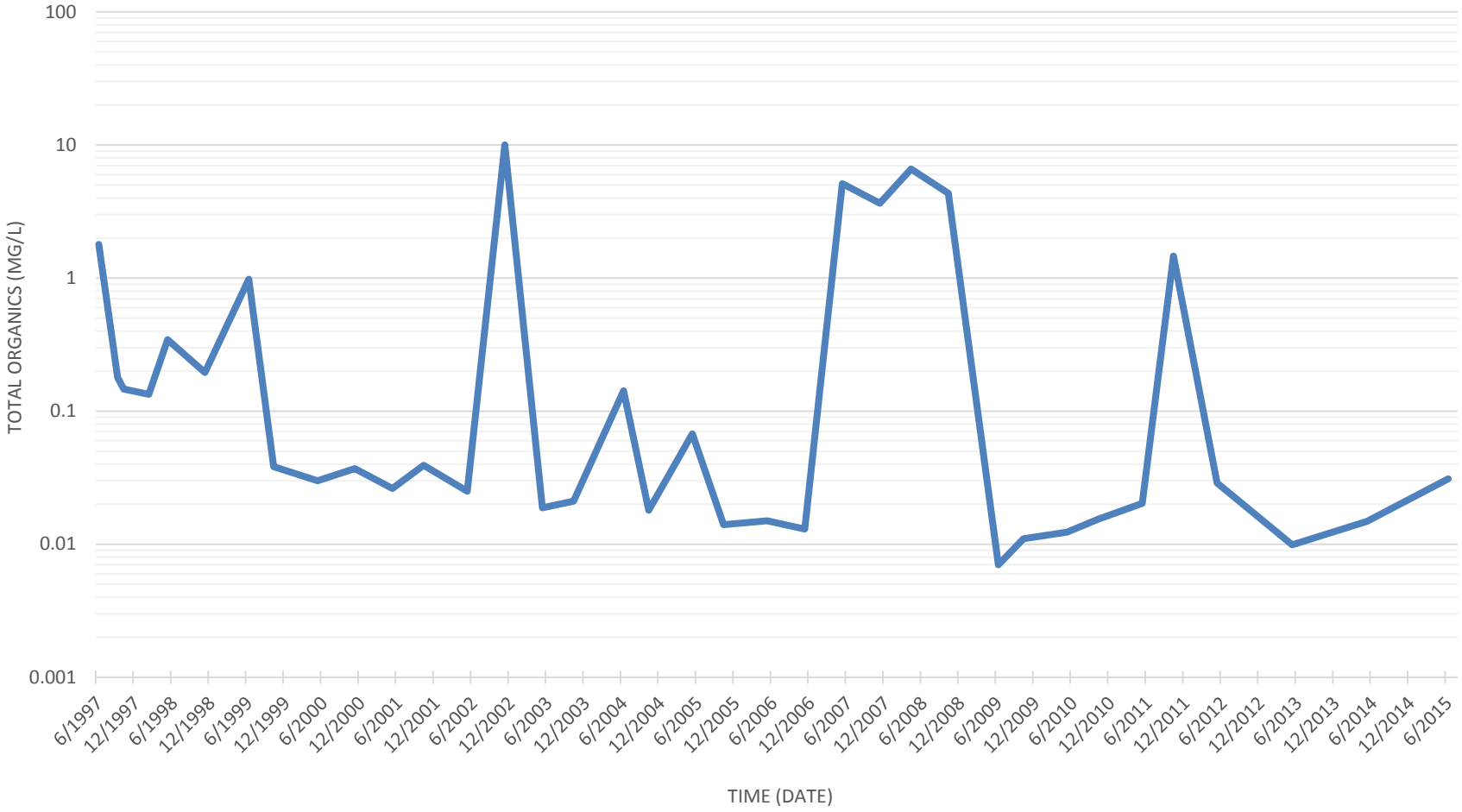
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for this well in accordance with the KPGSAP protocol.

PB119ER
Concentration-Time Series



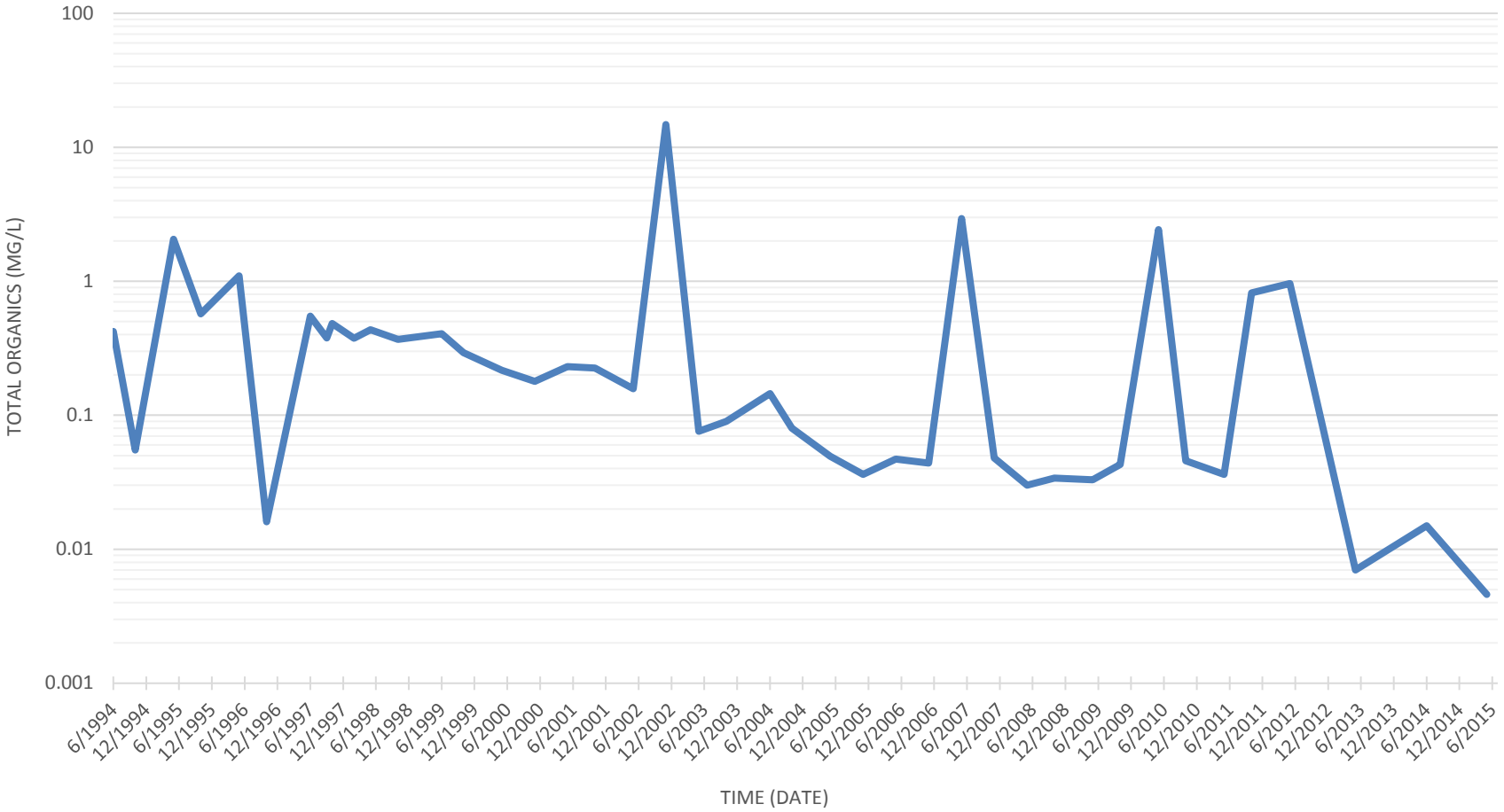
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB119NER
Concentration-Time Series



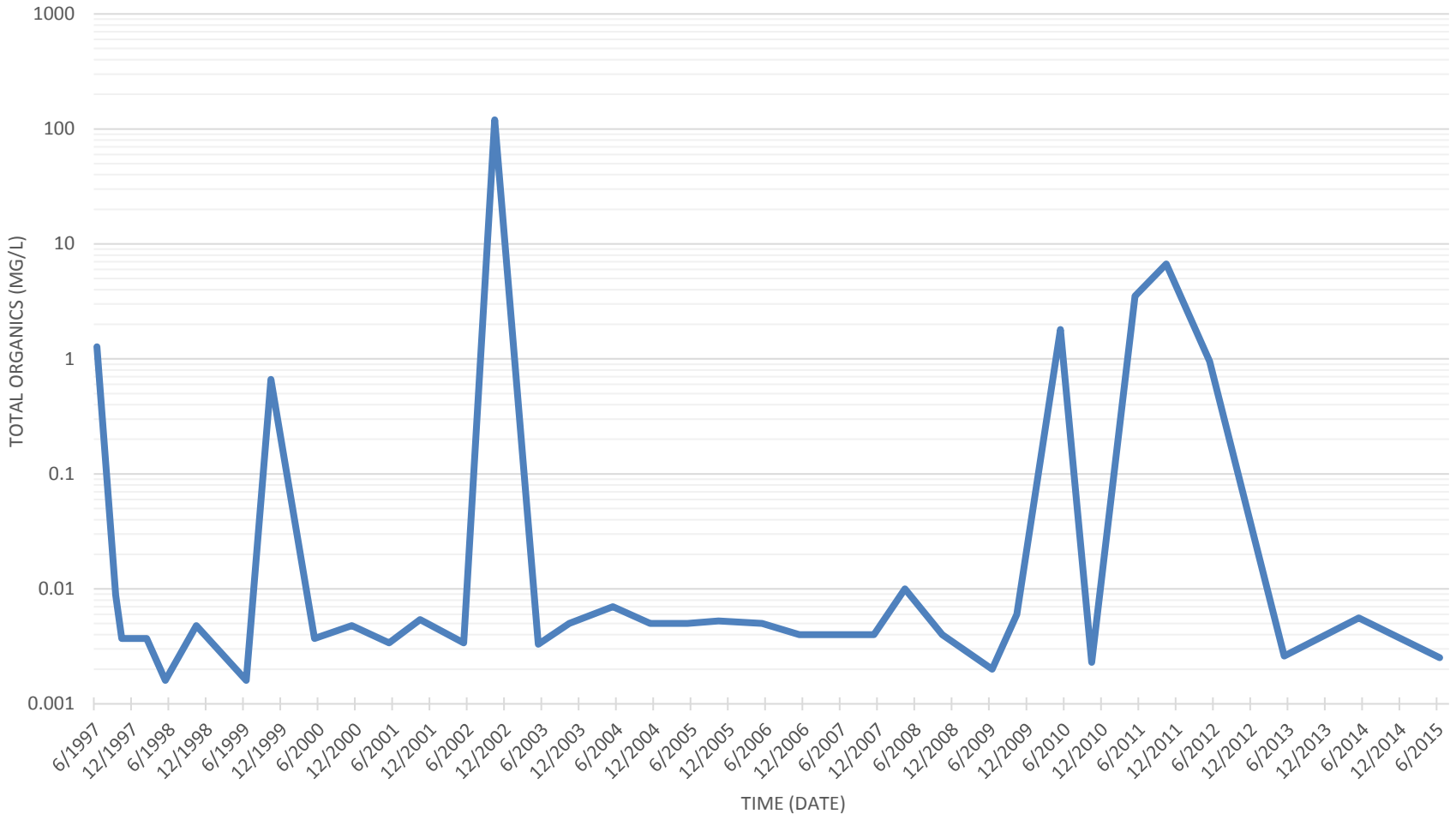
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB135ER
Concentration-Time Series



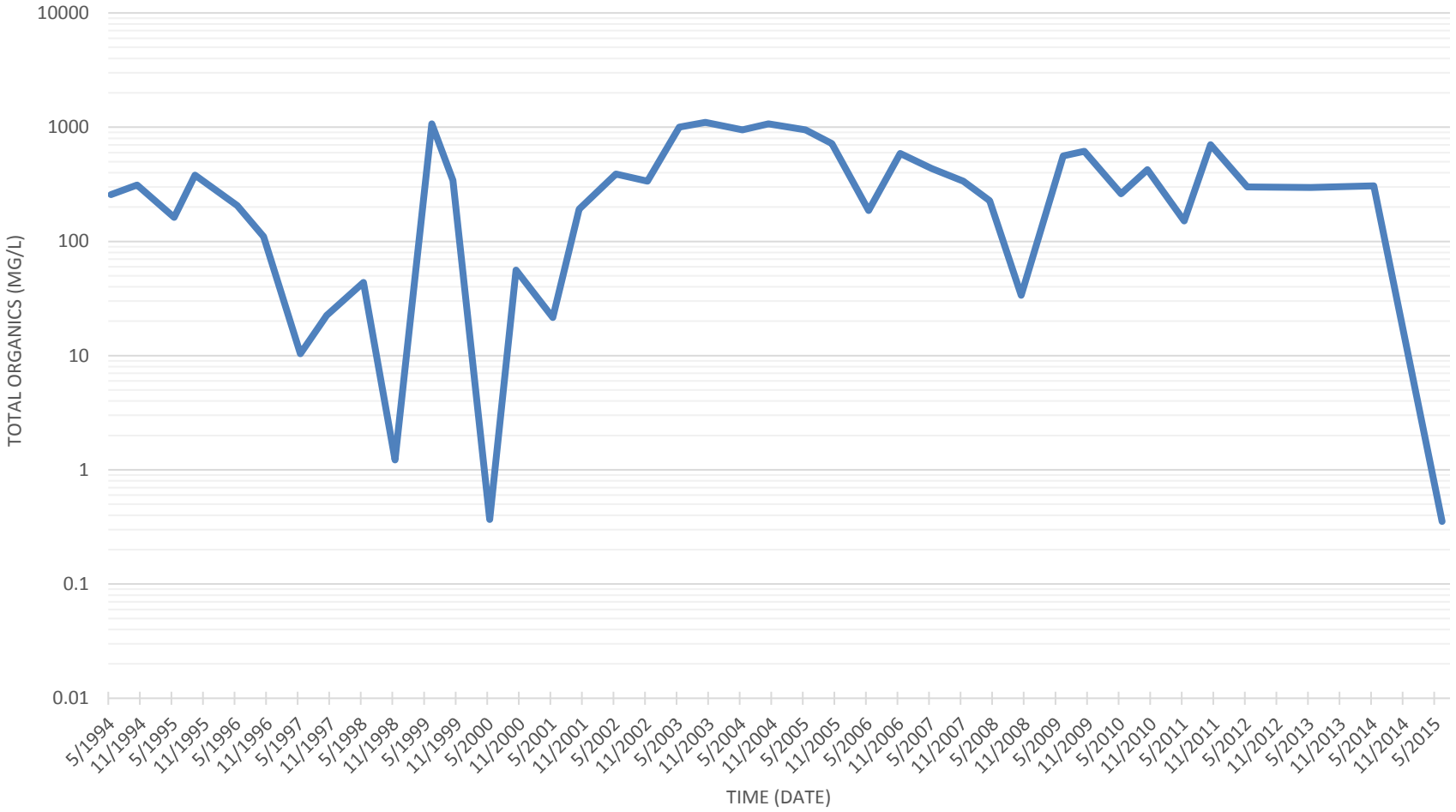
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for this in well in accordance with the KPGSAP protocol.

PB143NW
Concentration-Time Series



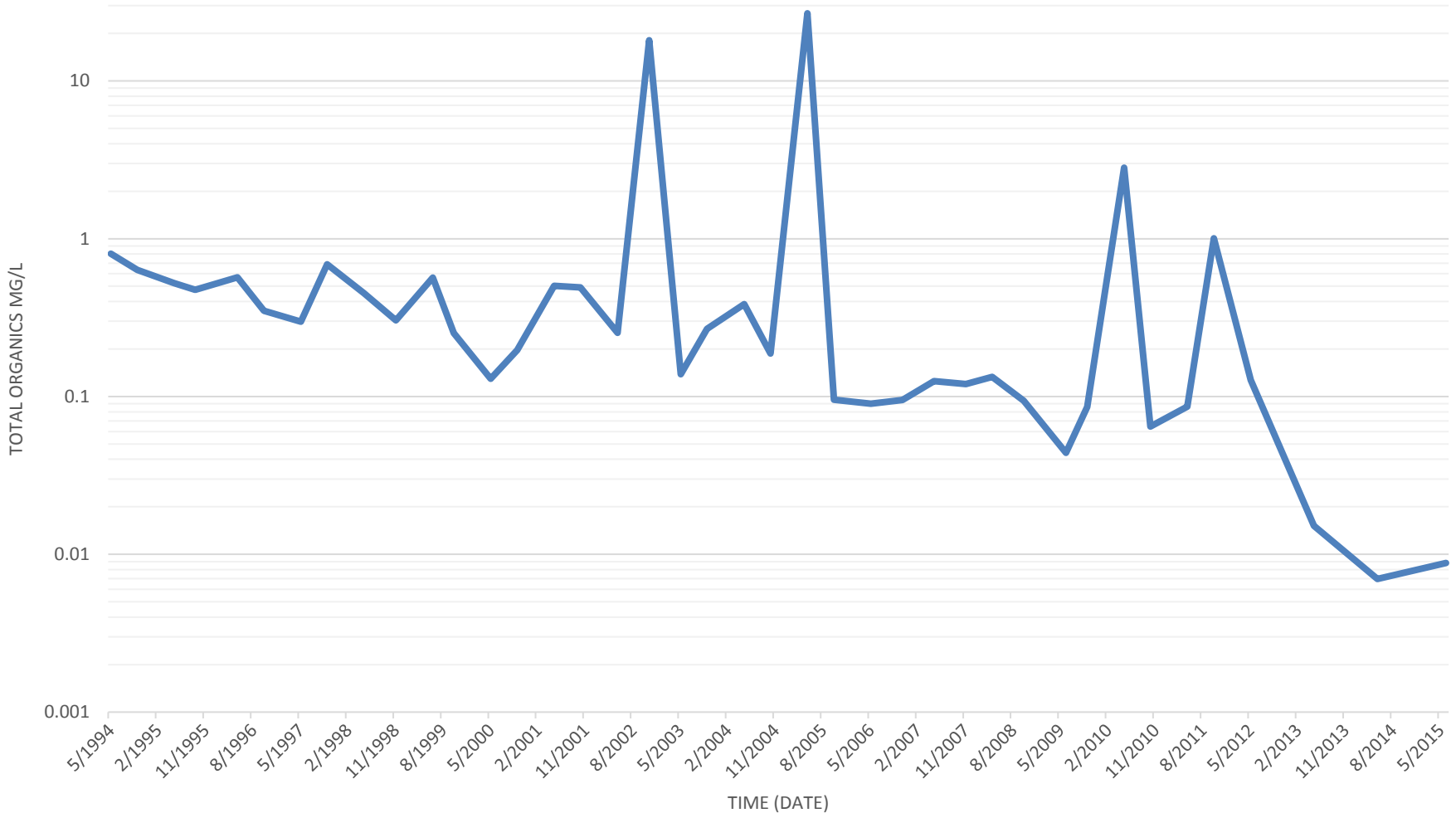
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL50N2
Concentration-Time Series



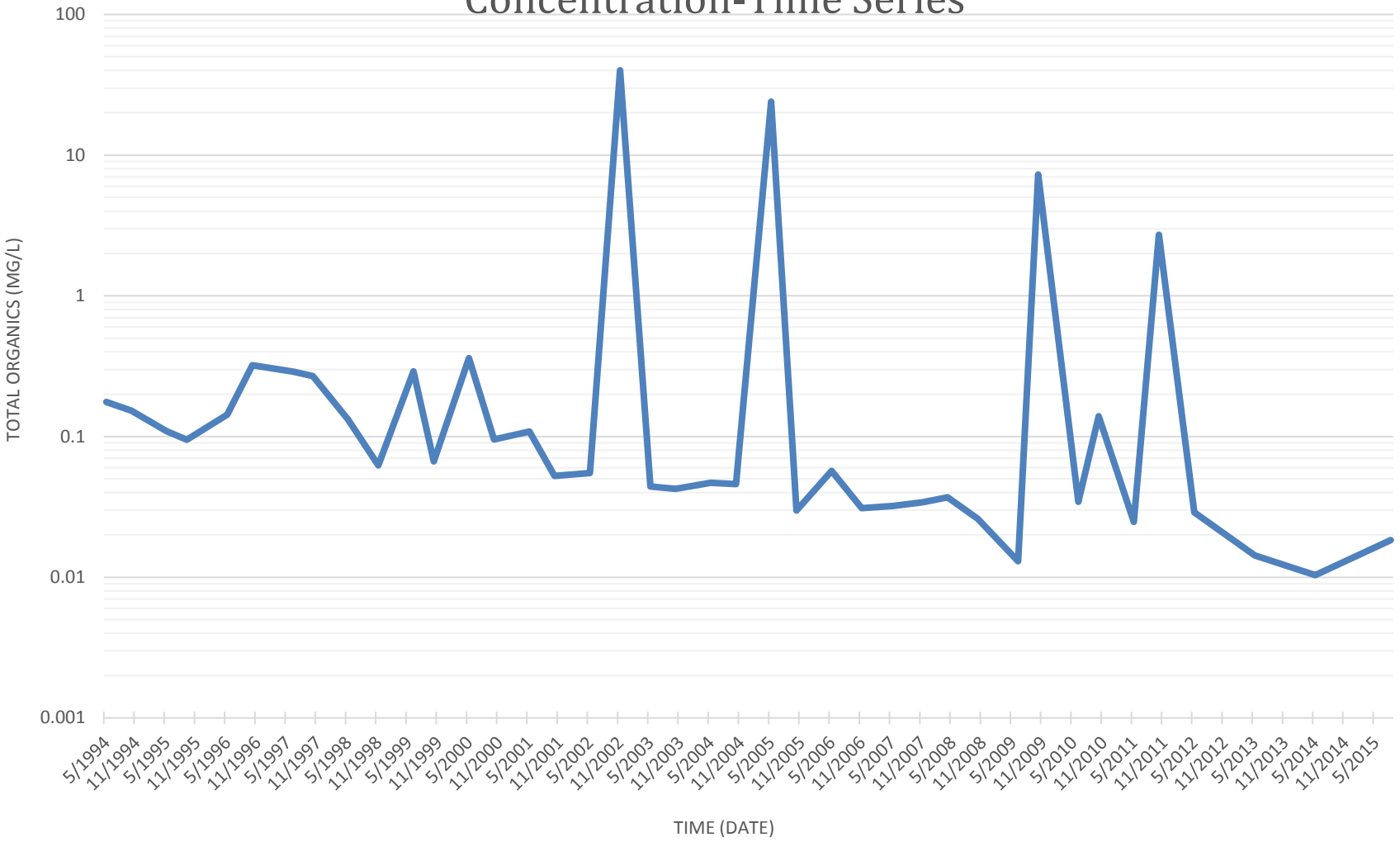
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL50N3
Concentration-Time Series

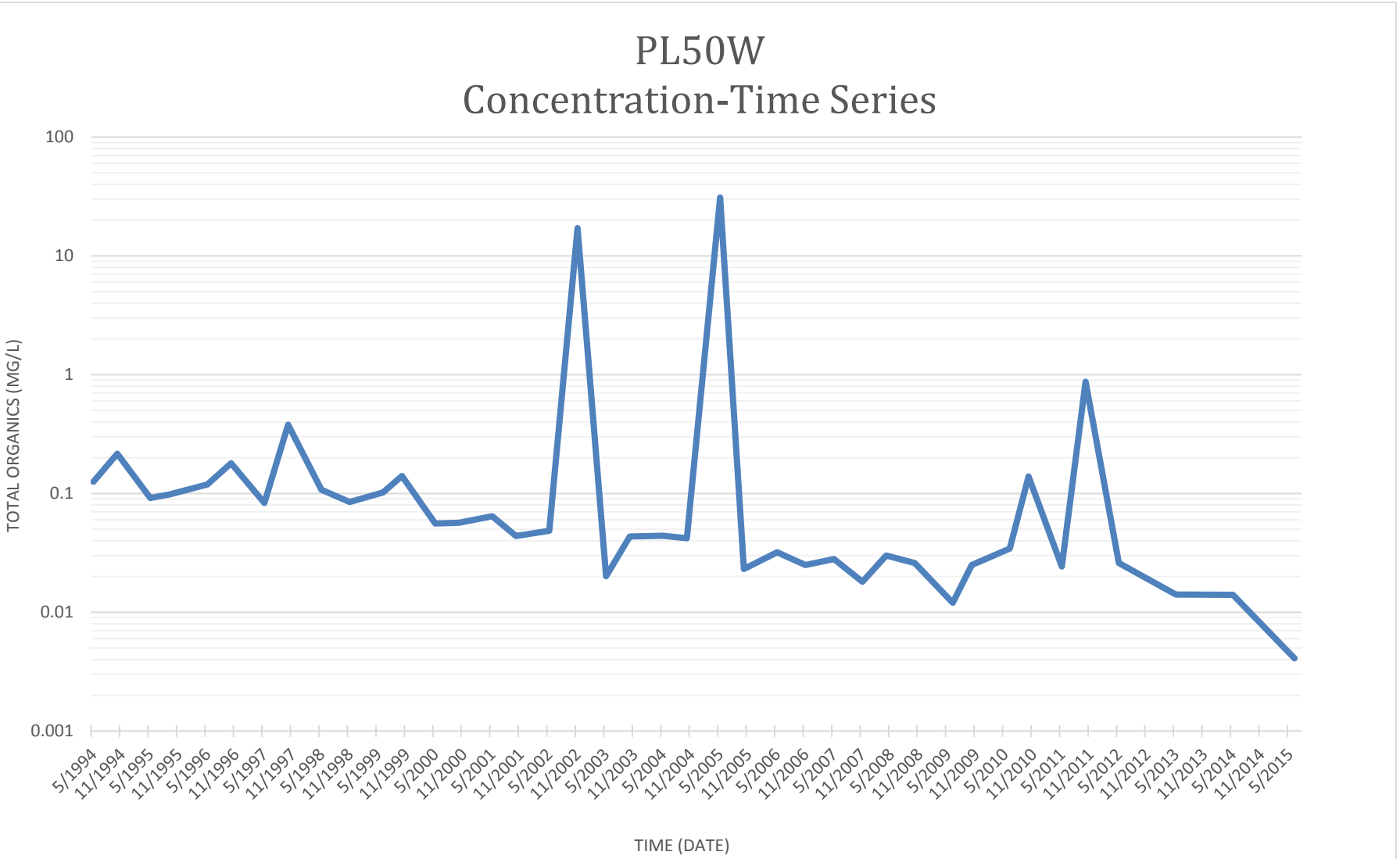


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL50NW3
Concentration-Time Series

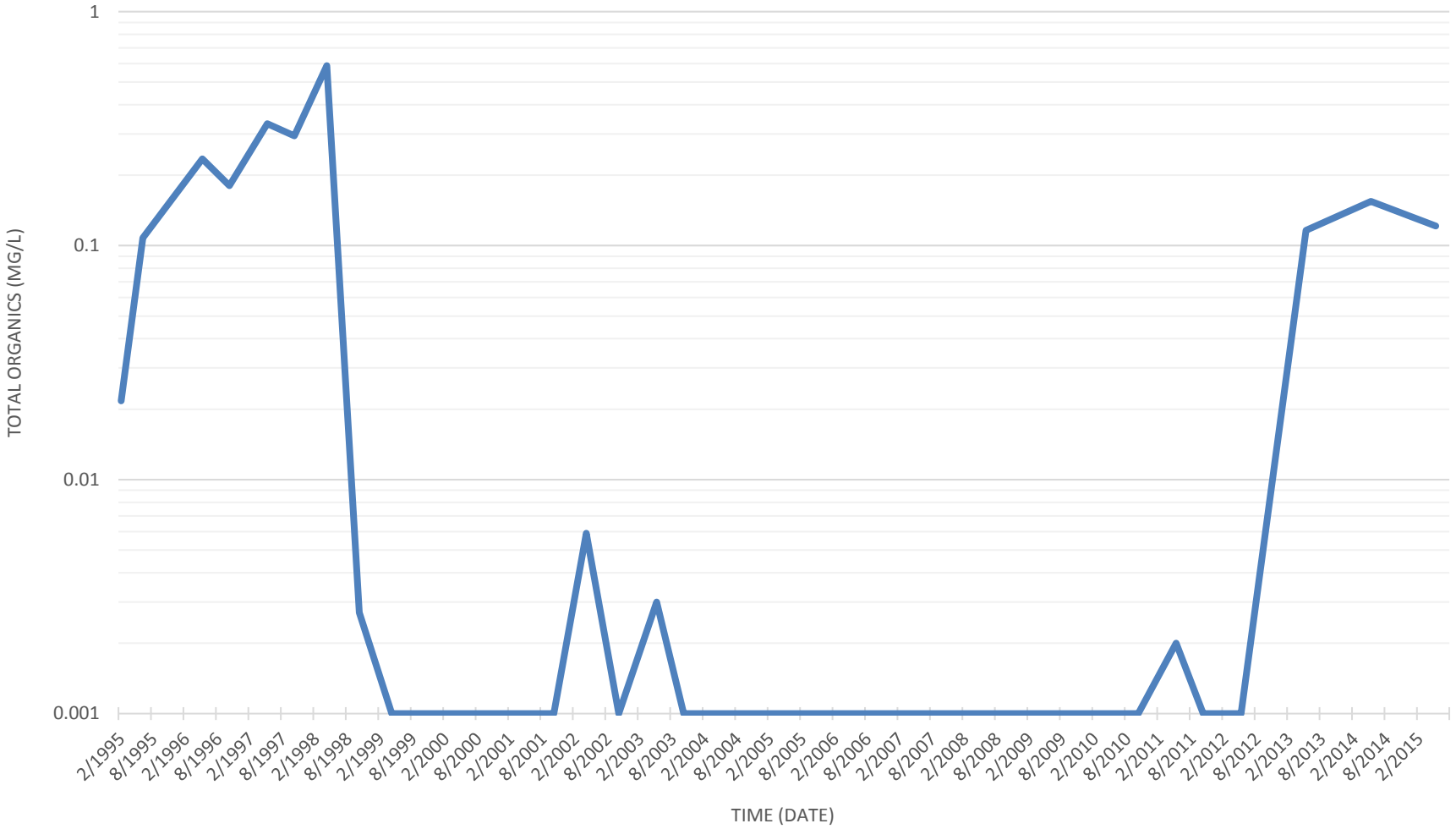


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.



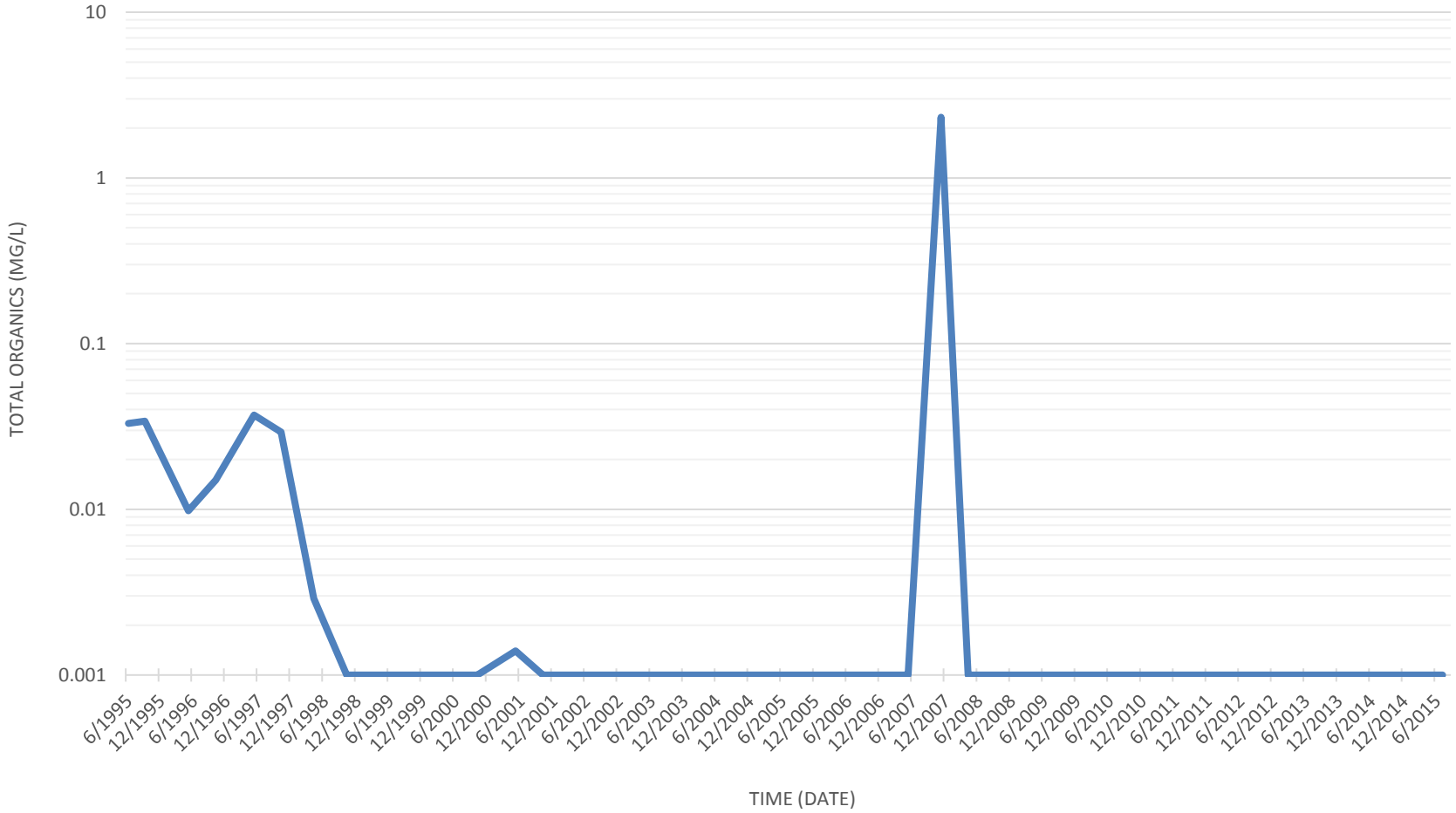
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB329E2
Concentration-Time Series



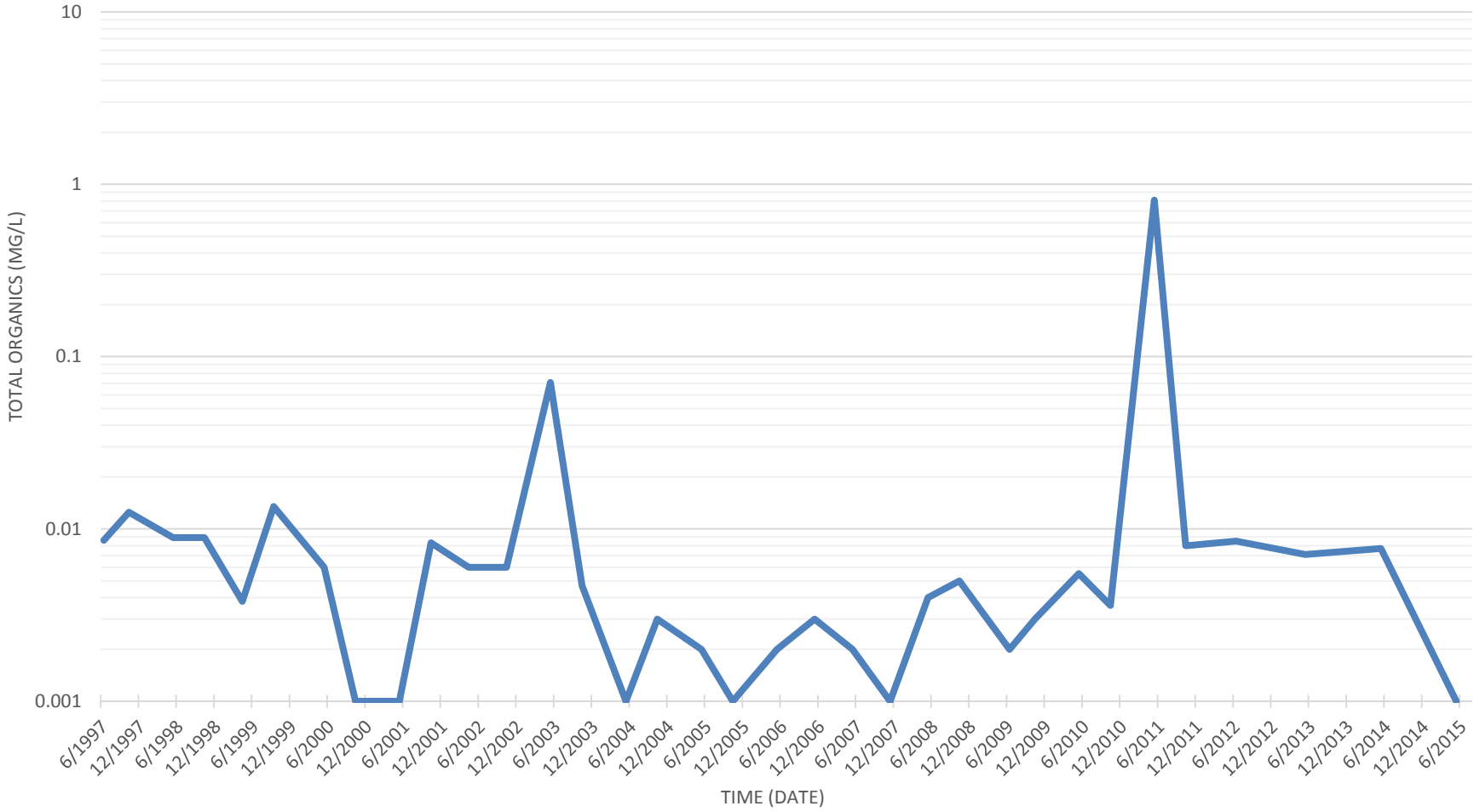
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB349N
Concentration-Time Series



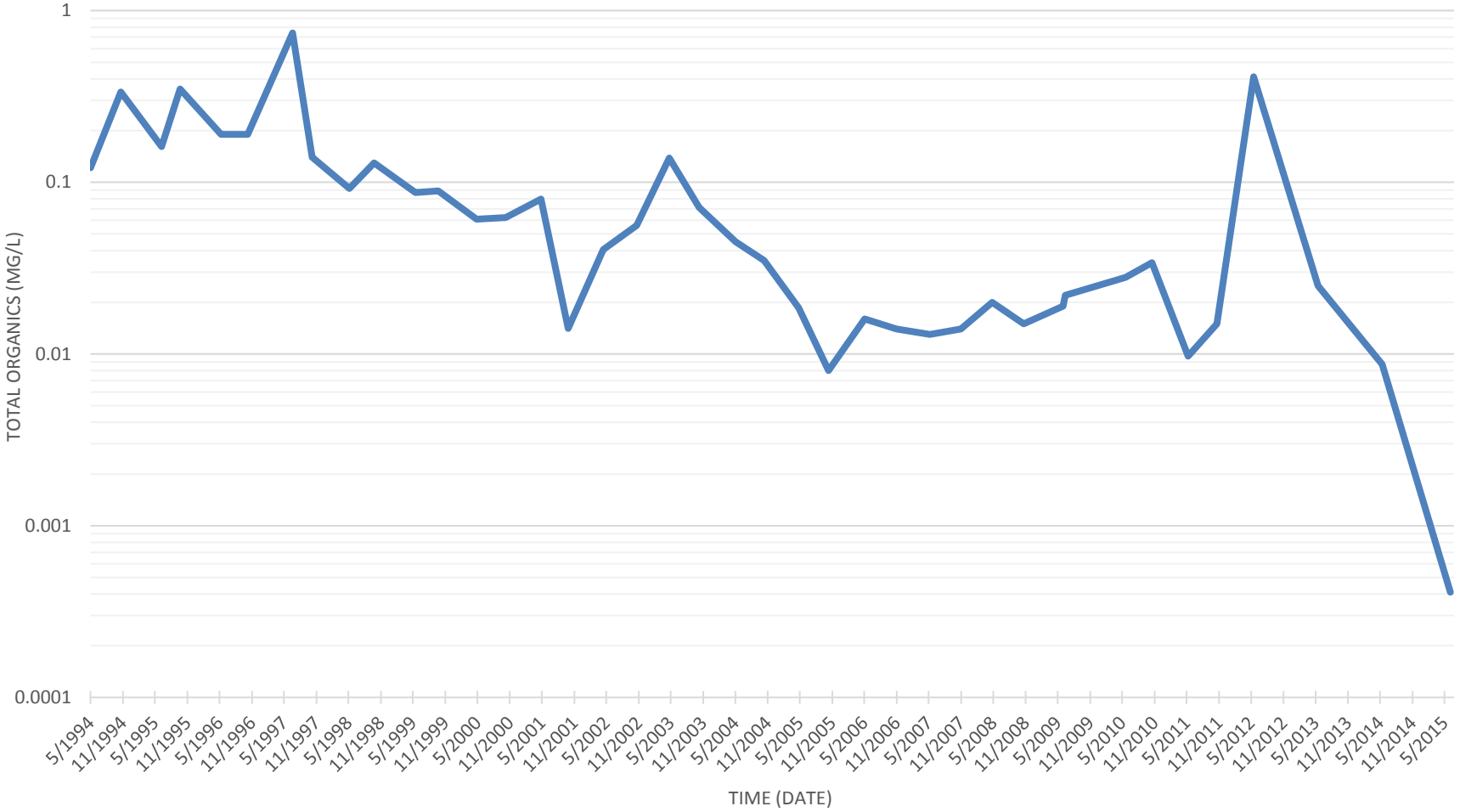
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB319N
Concentration-Time Series



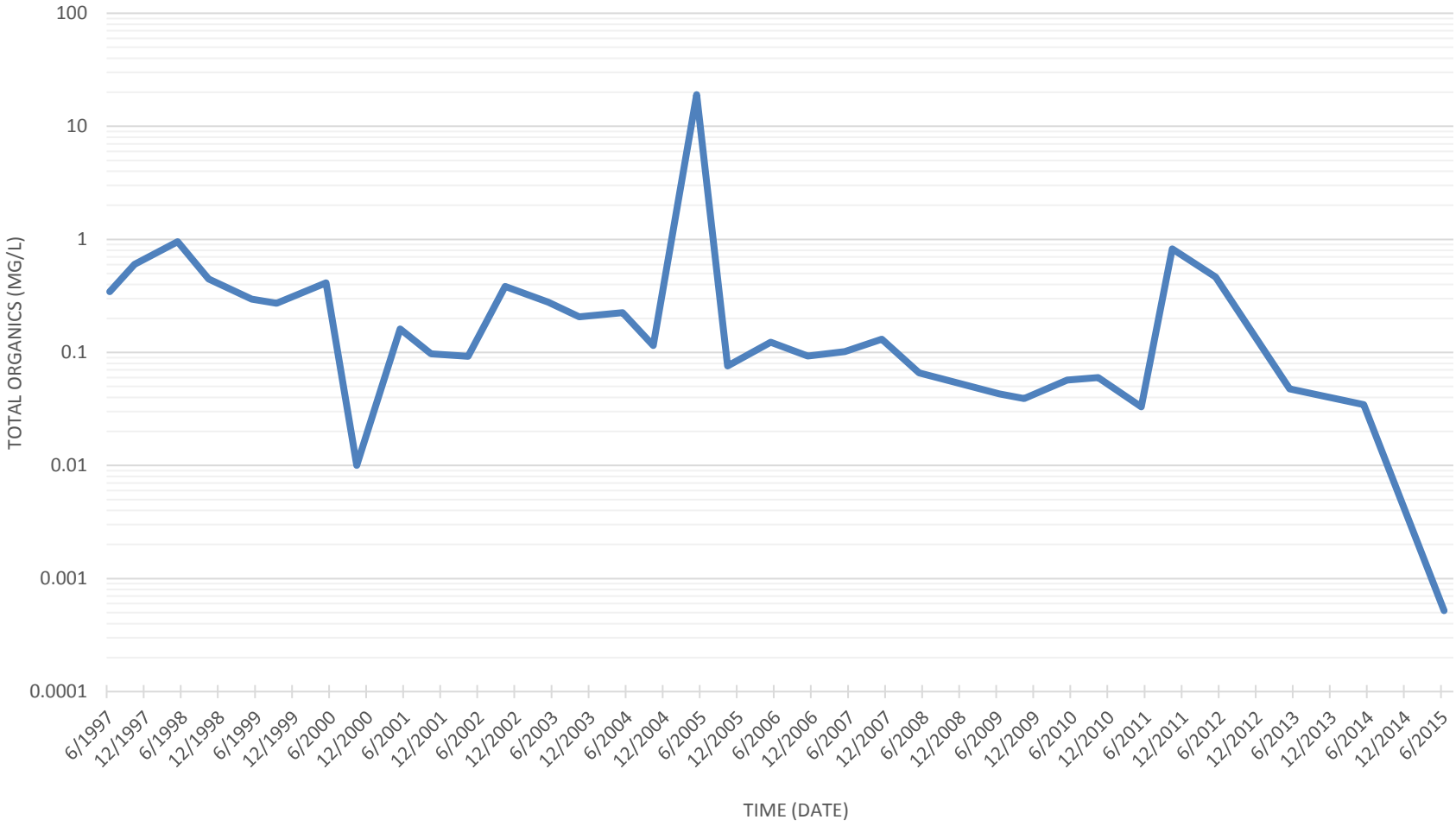
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB350NE2
Concentration-Time Series

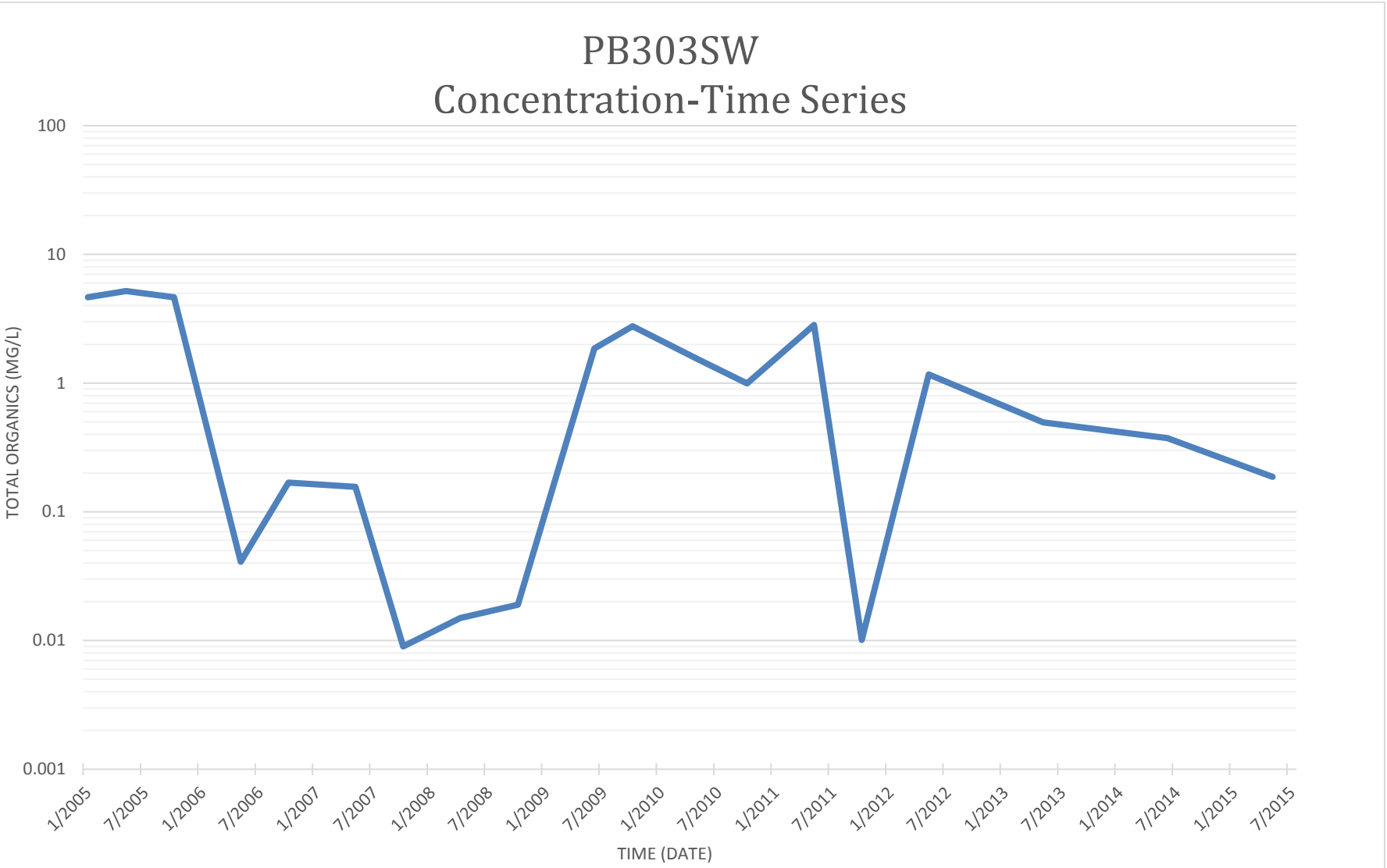


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

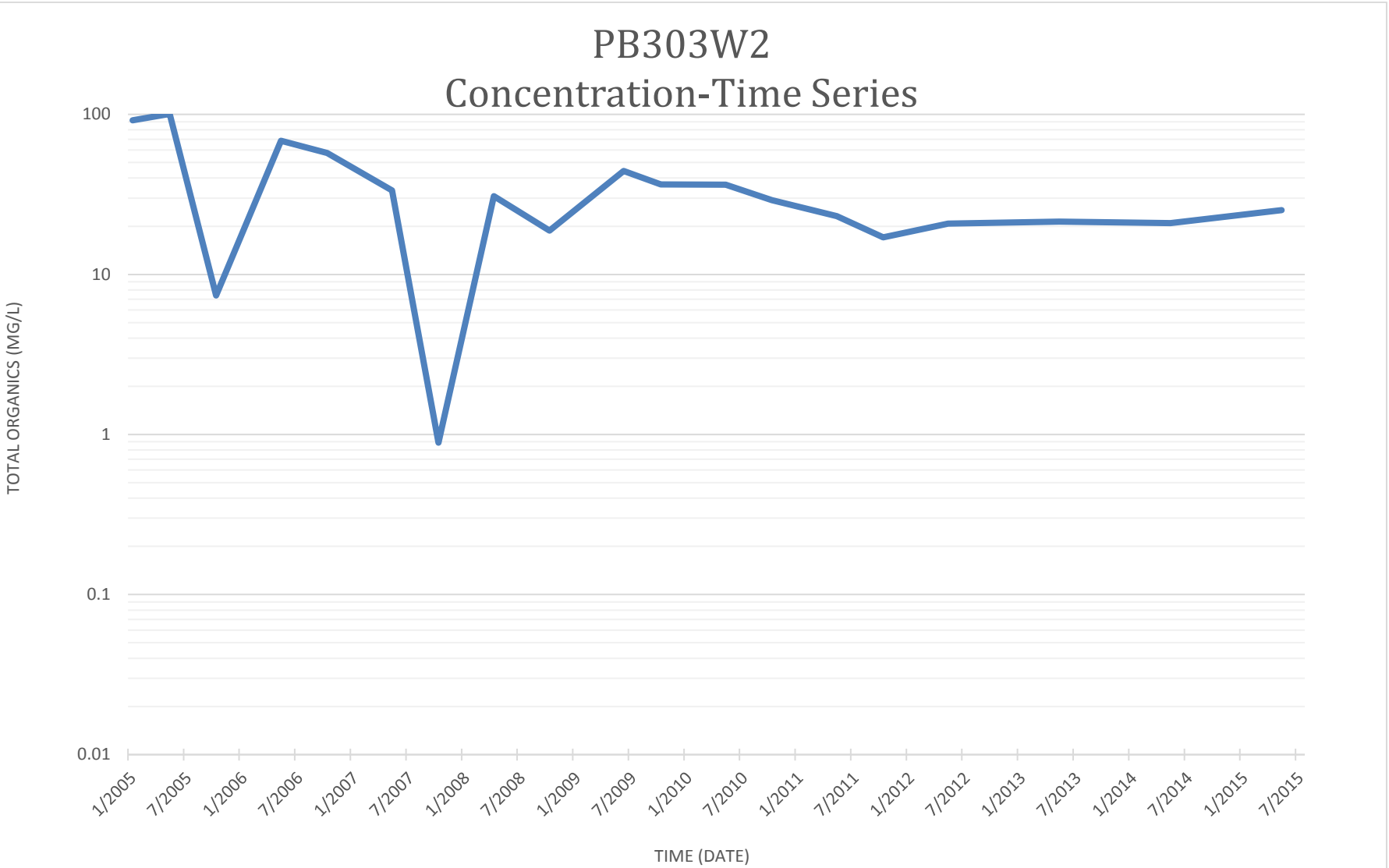
PB350NW
Concentration-Time Series



Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

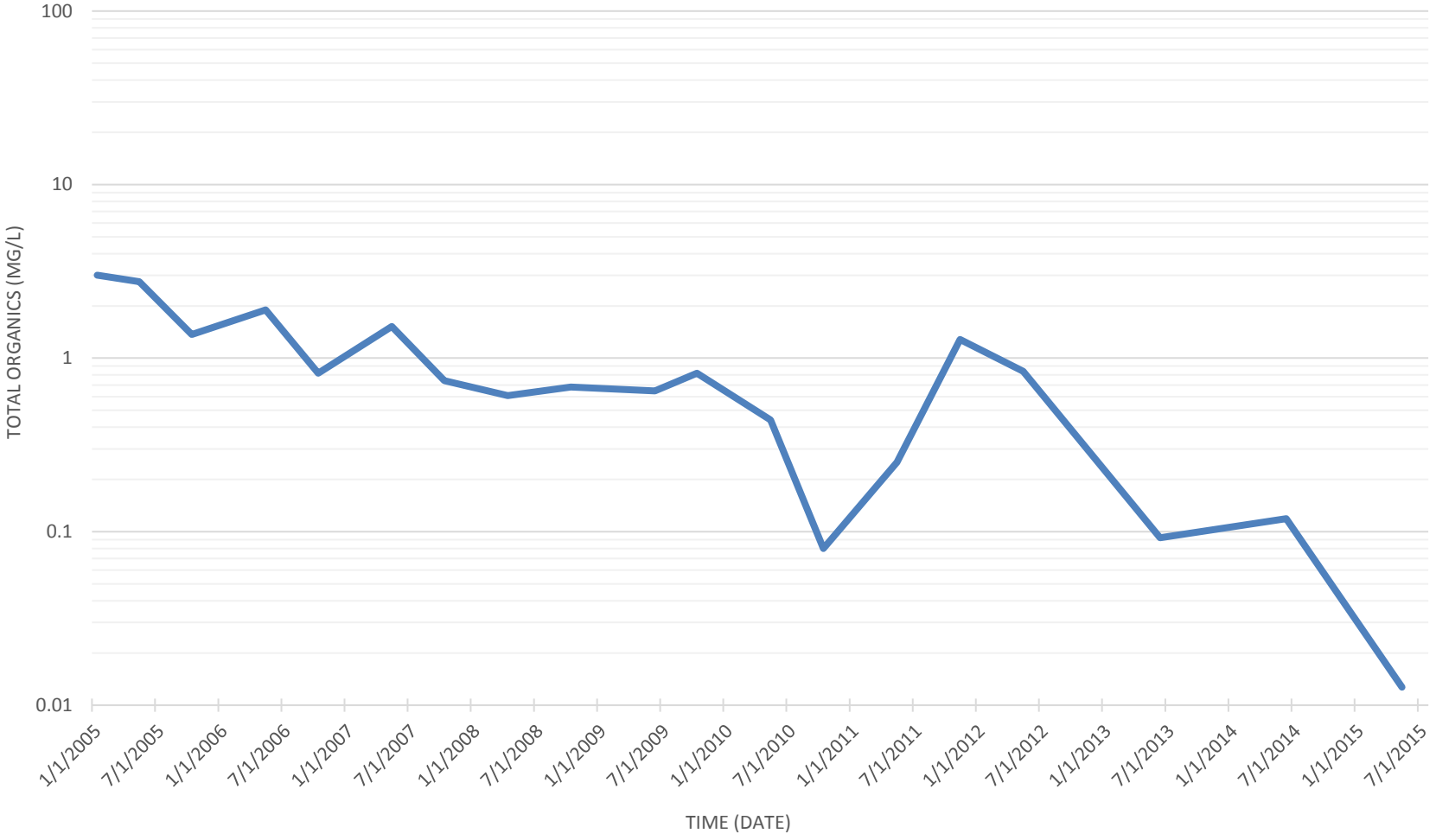


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.



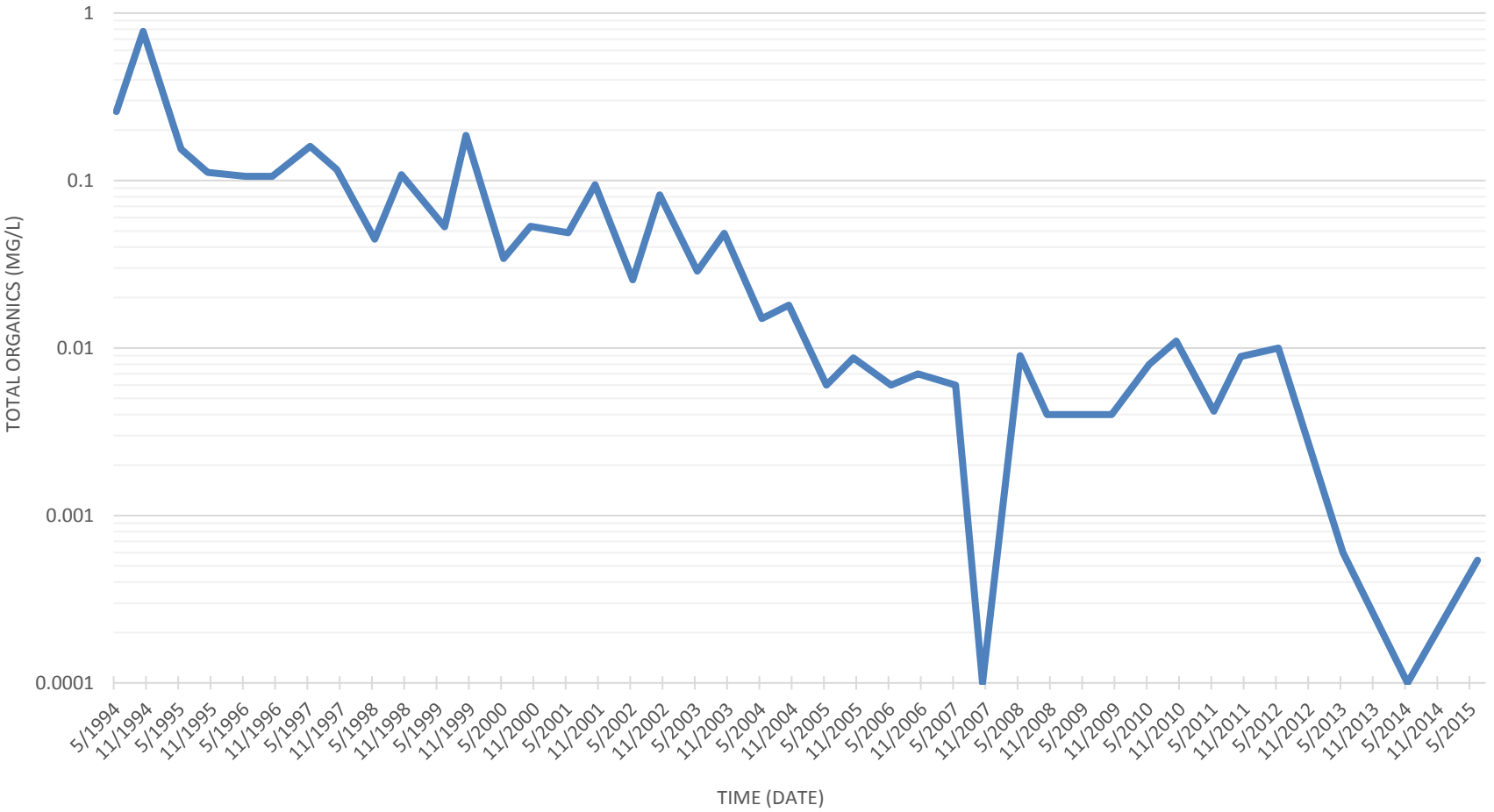
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB323SE2
Concentration-Time Series



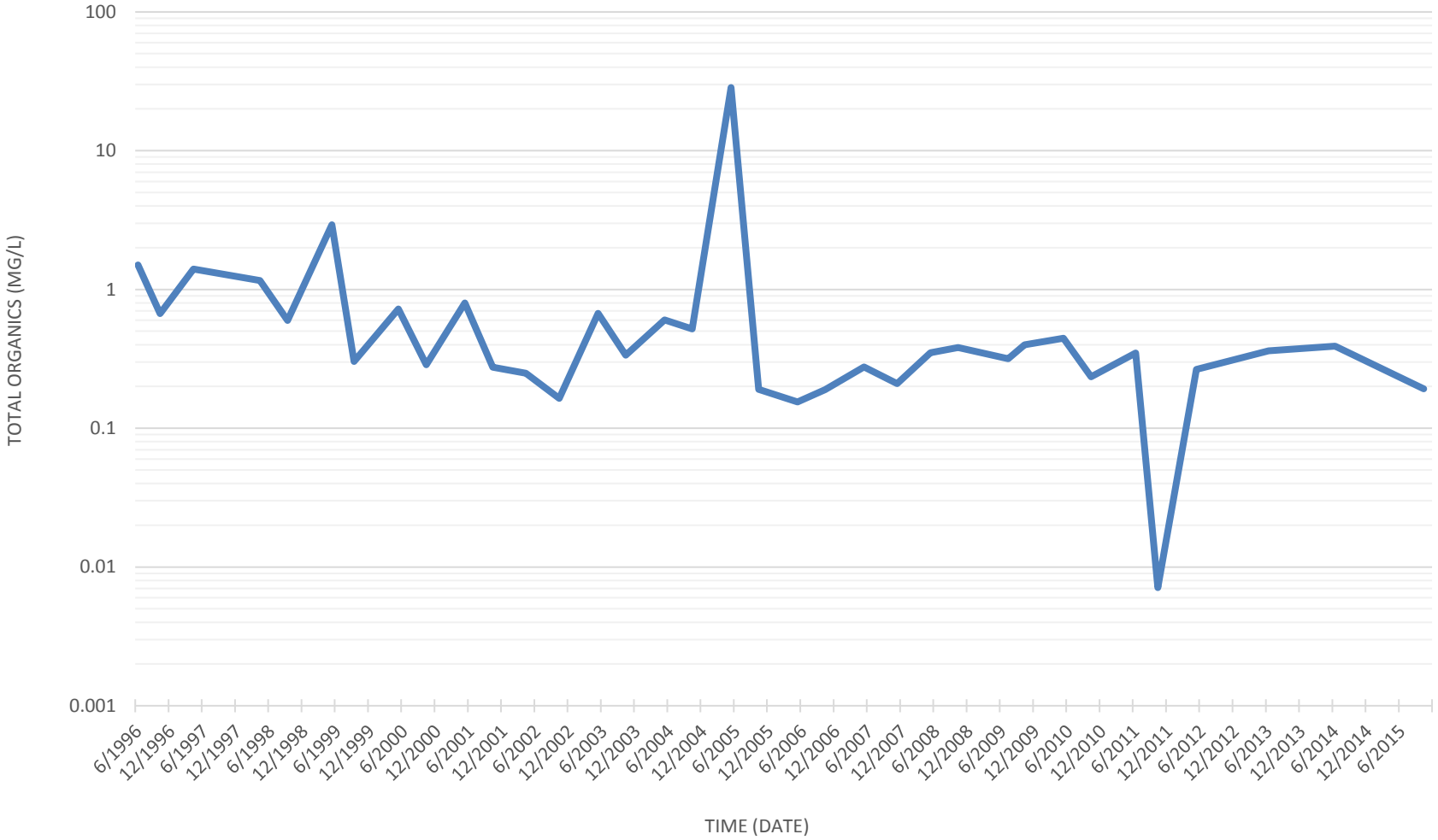
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB218N
Concentration-Time Series

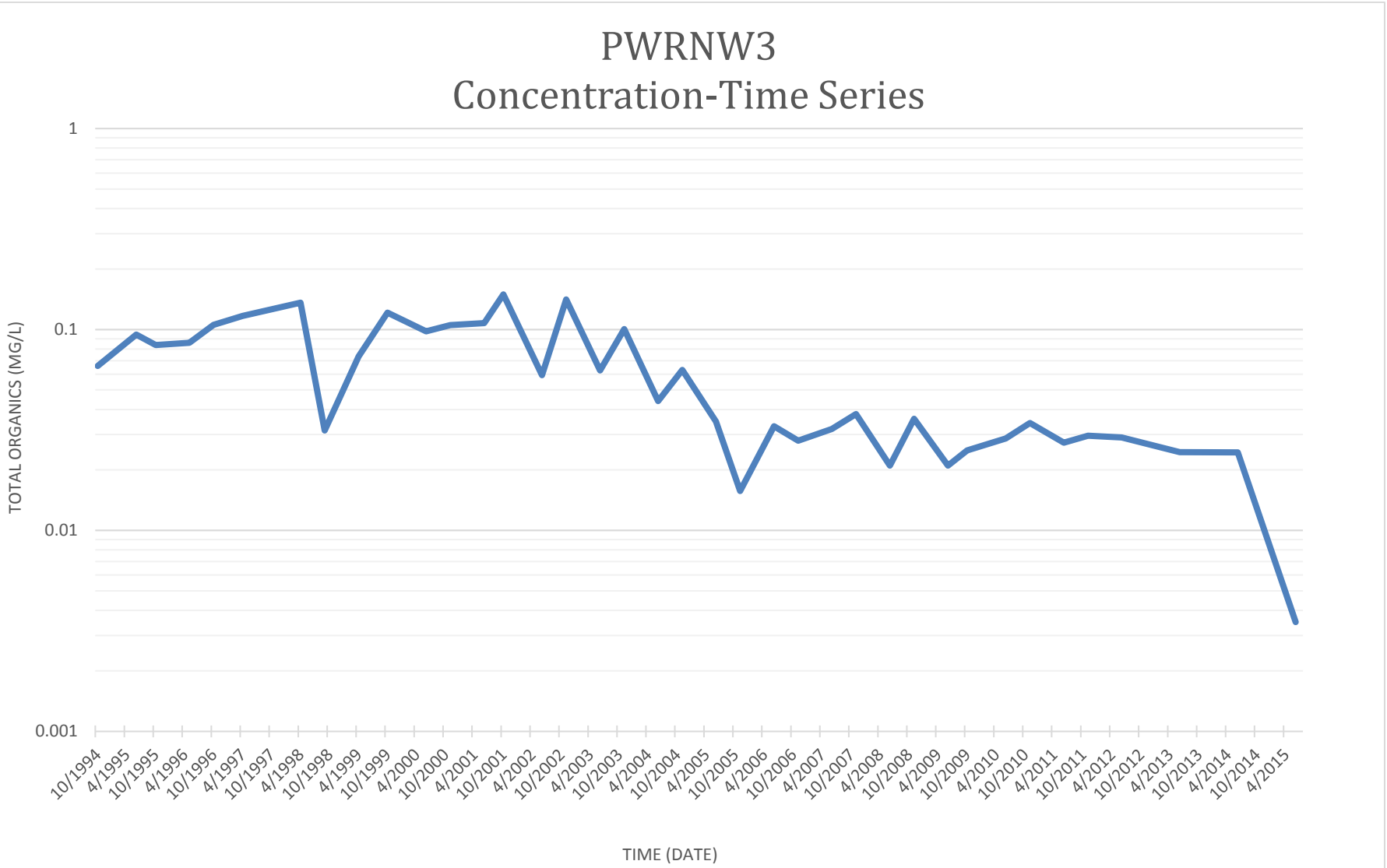


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL73N
Concentration-Time Series

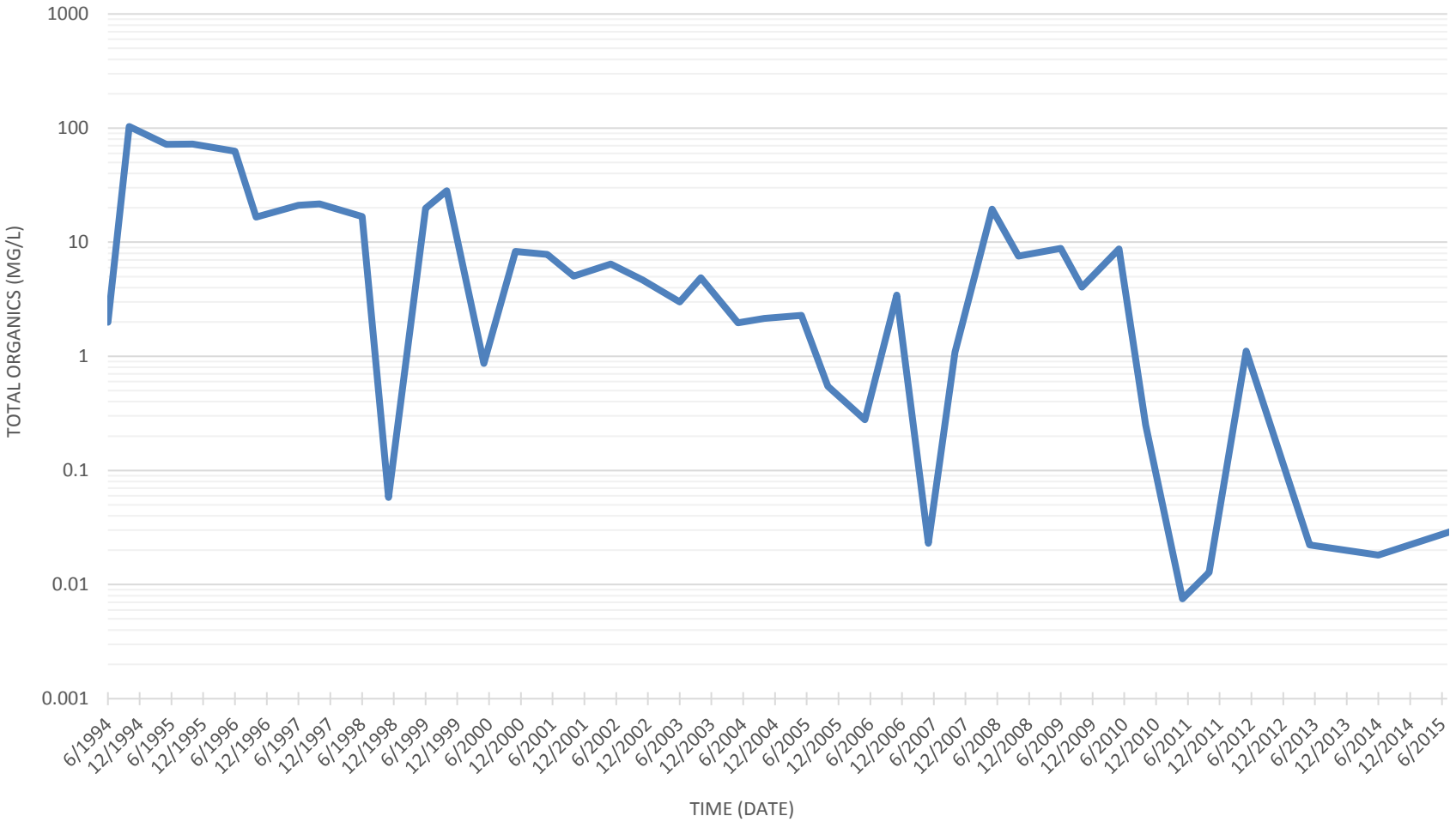


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.



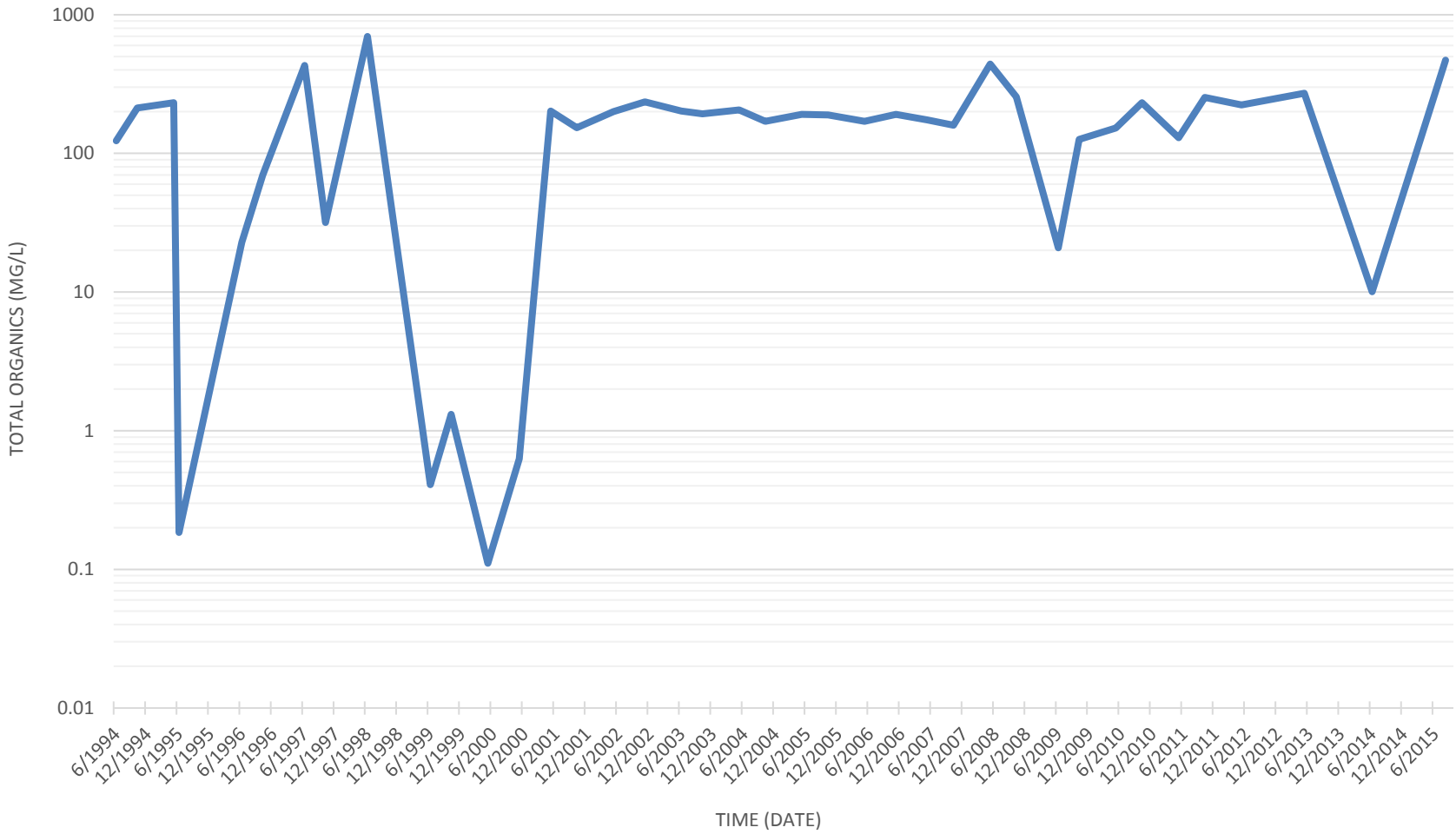
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB53N2
Concentration-Time Series



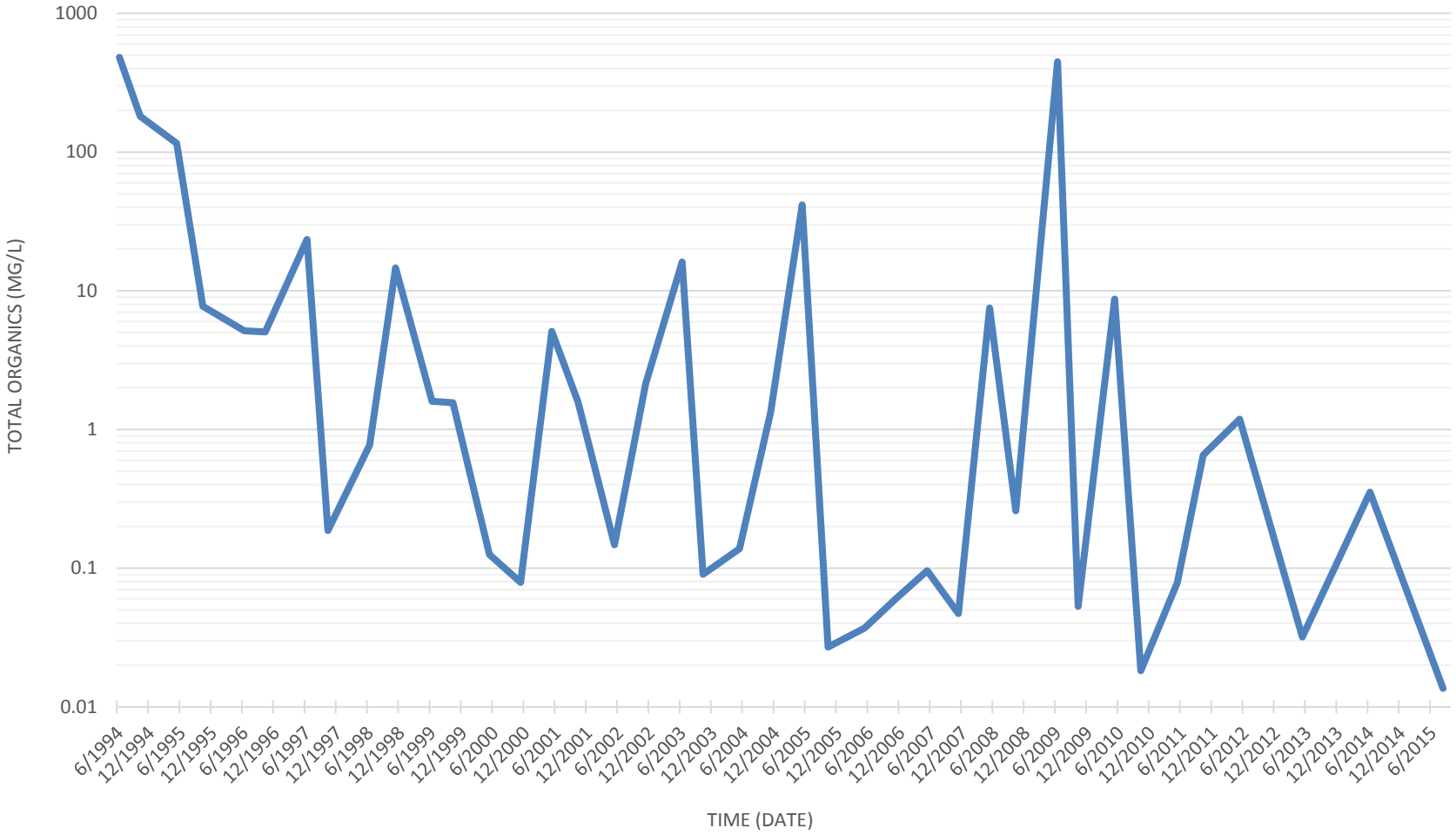
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB54NW
Concentration-Time Series



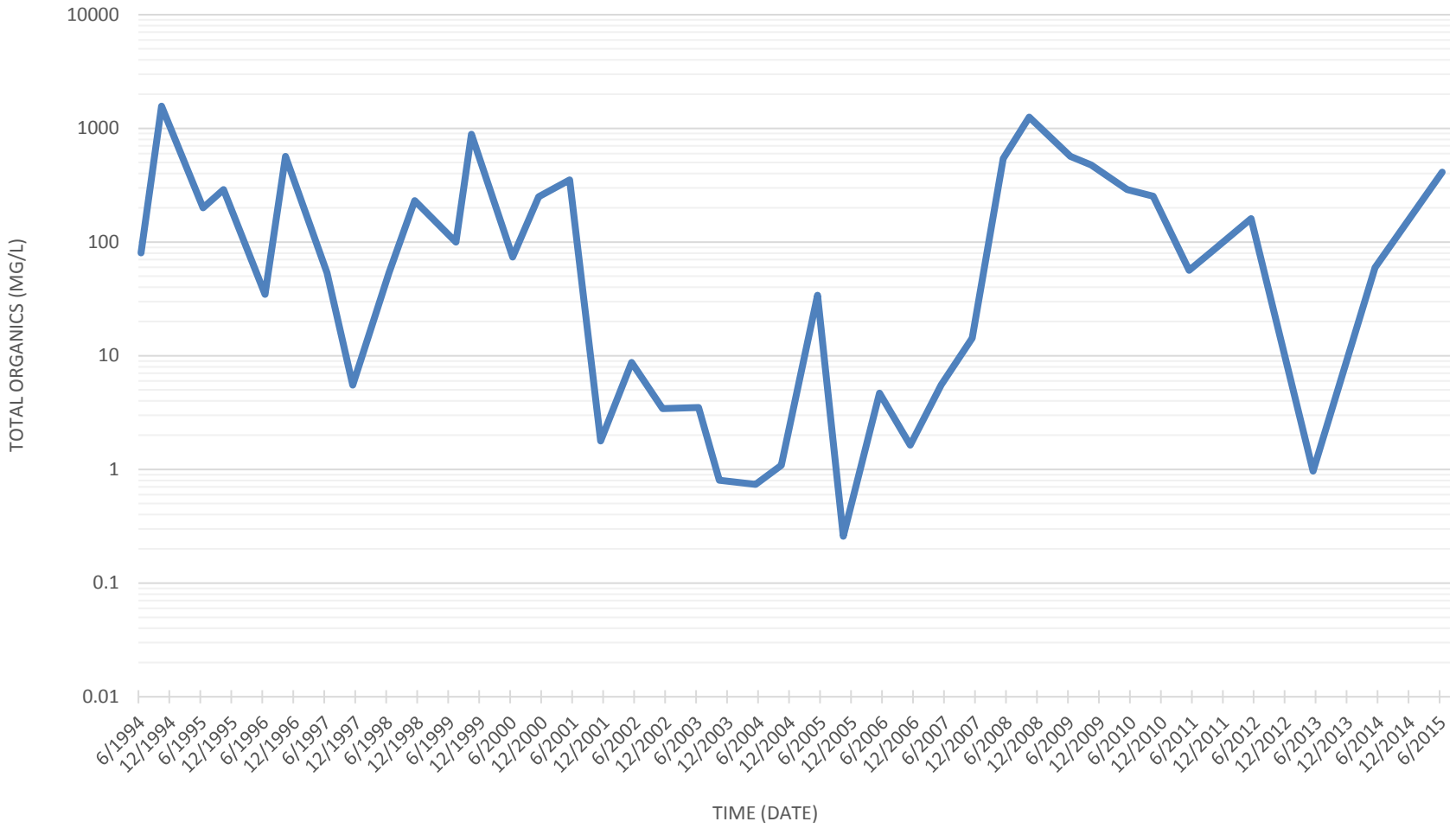
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB54SE
Concentration-Time Series



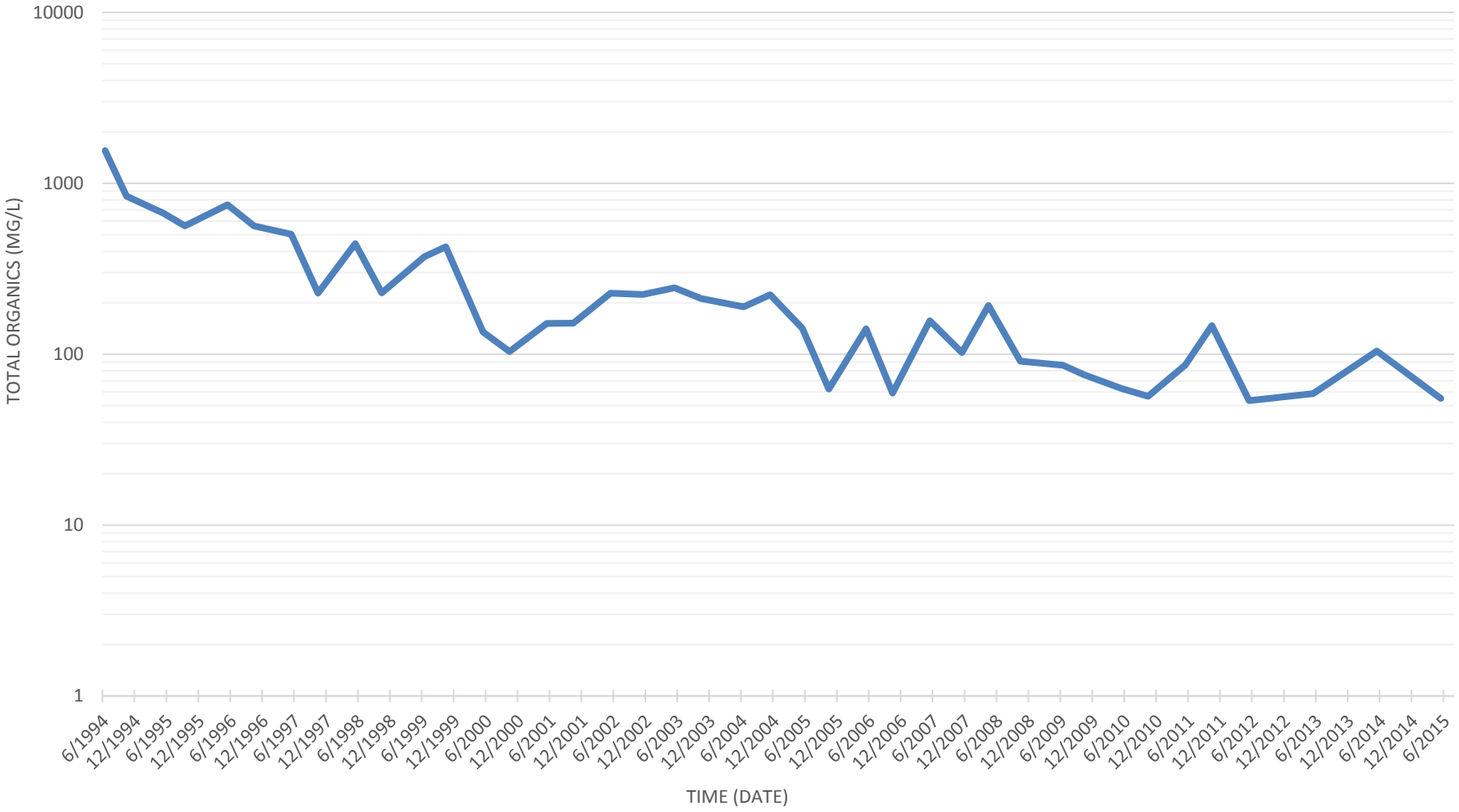
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB57W
Concentration-Time Series



Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB115N
Concentration-Time Series

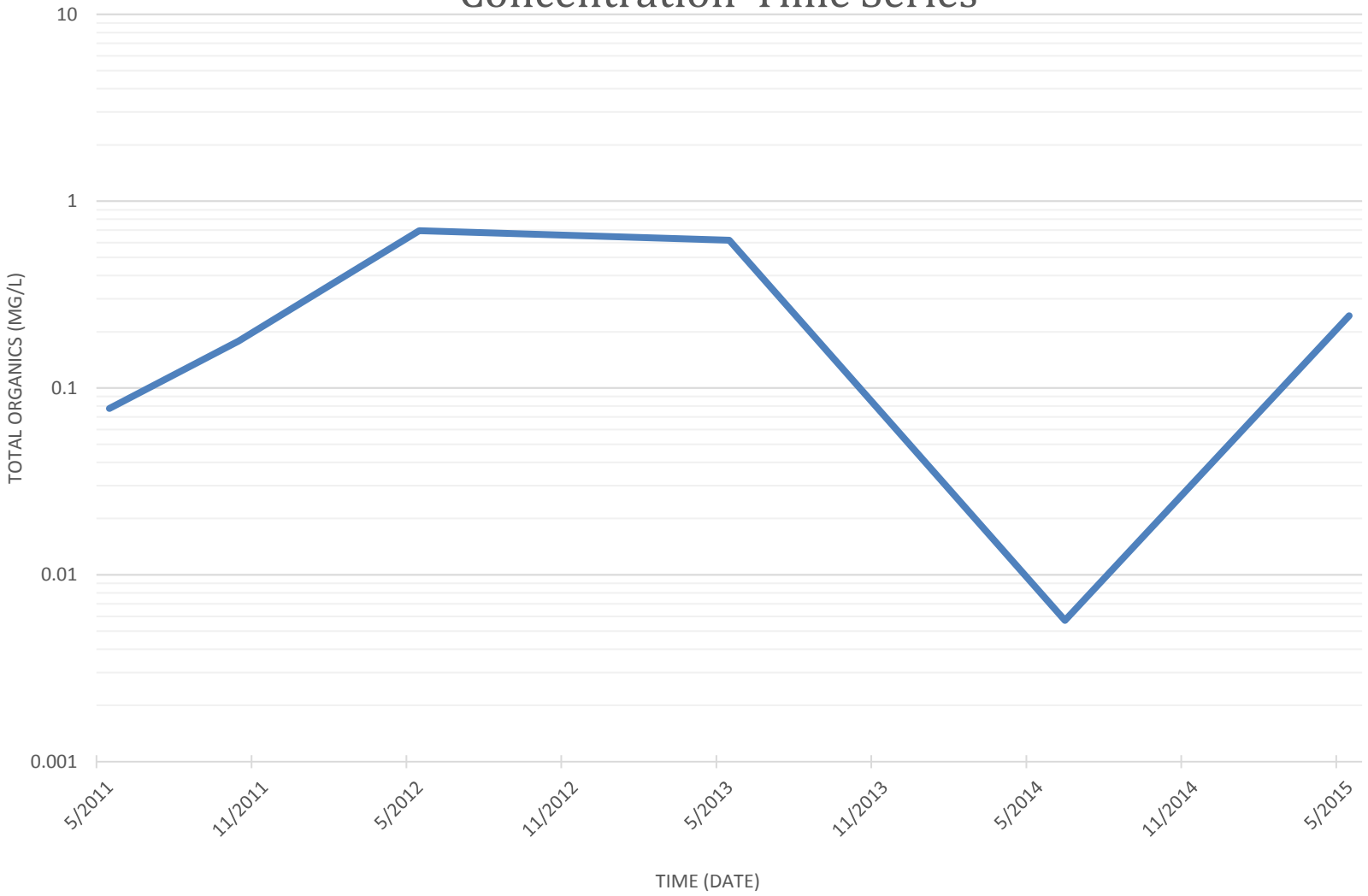


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB136S
Concentration-Time Series

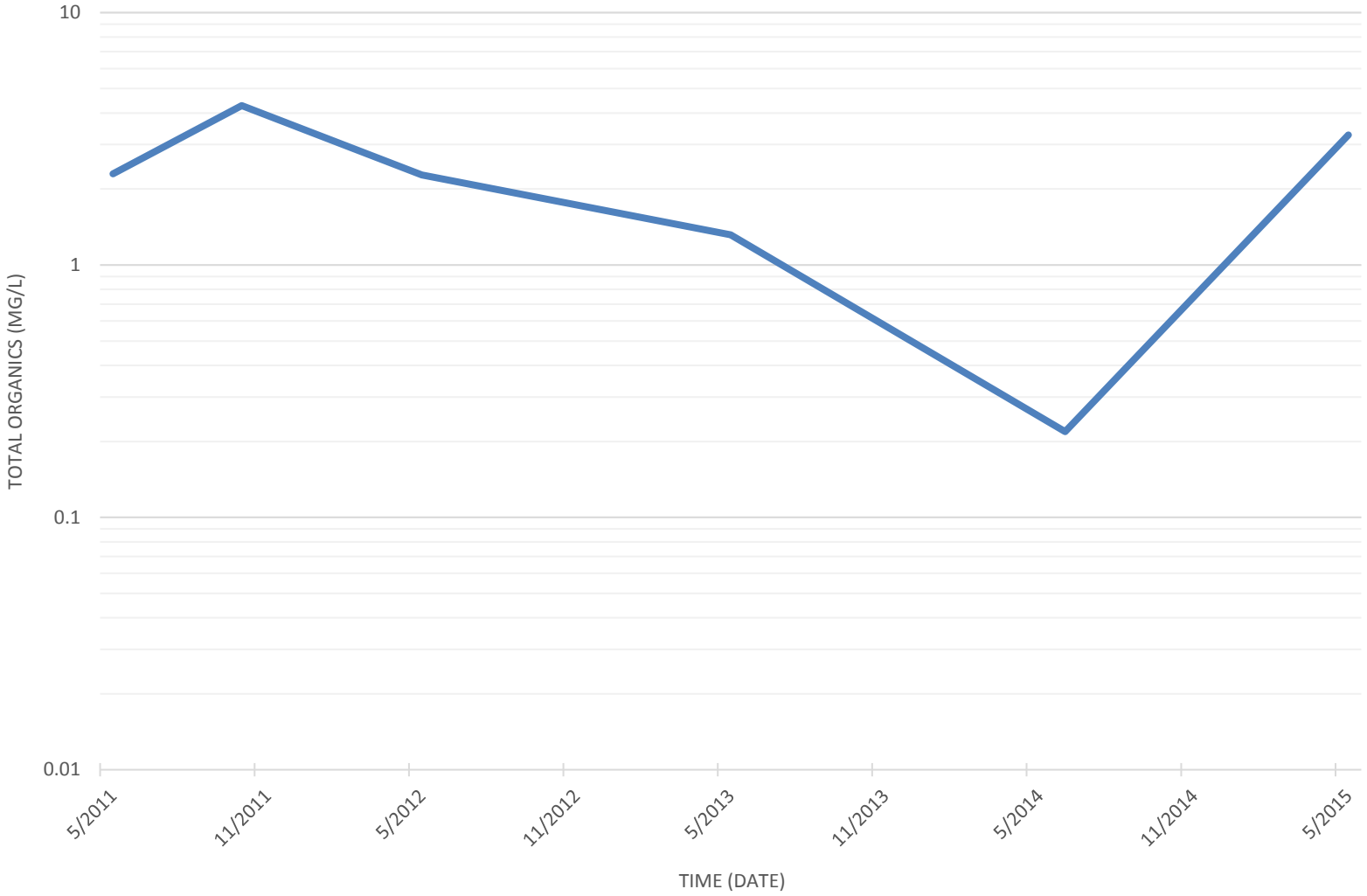
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB307E2
Concentration-Time Series



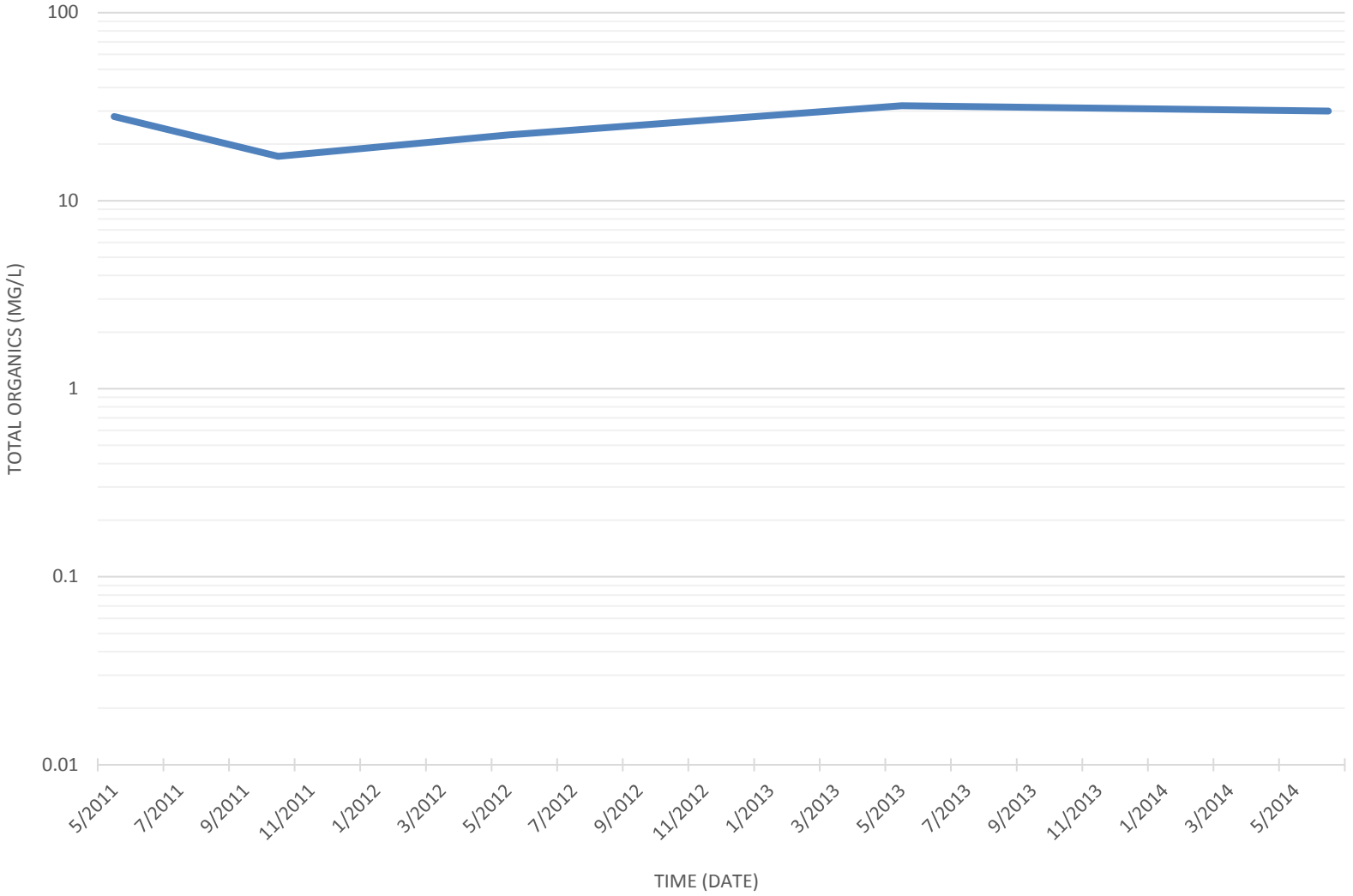
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB307N3
Concentration-Time Series



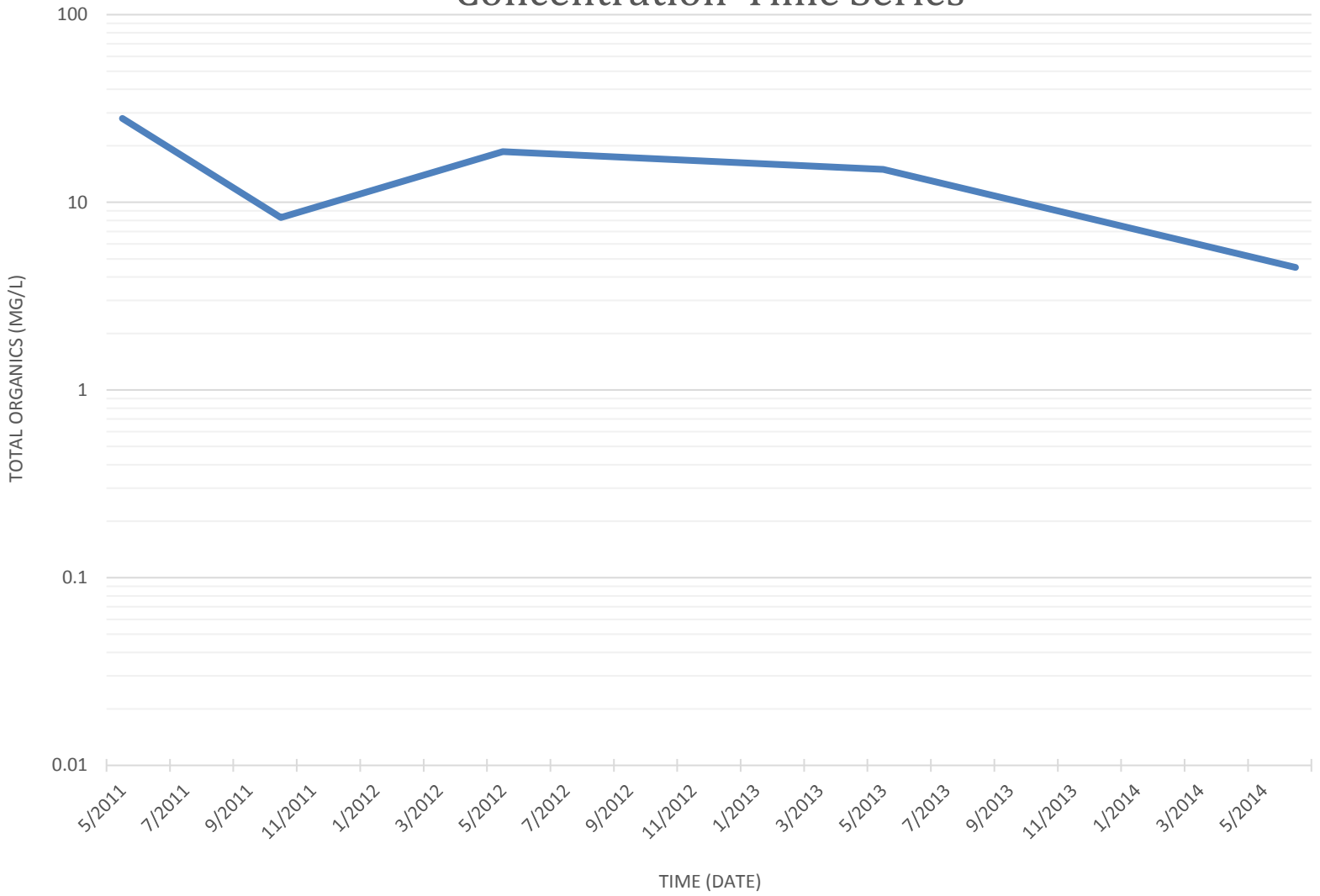
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB322NE2
Concentration-Time Series



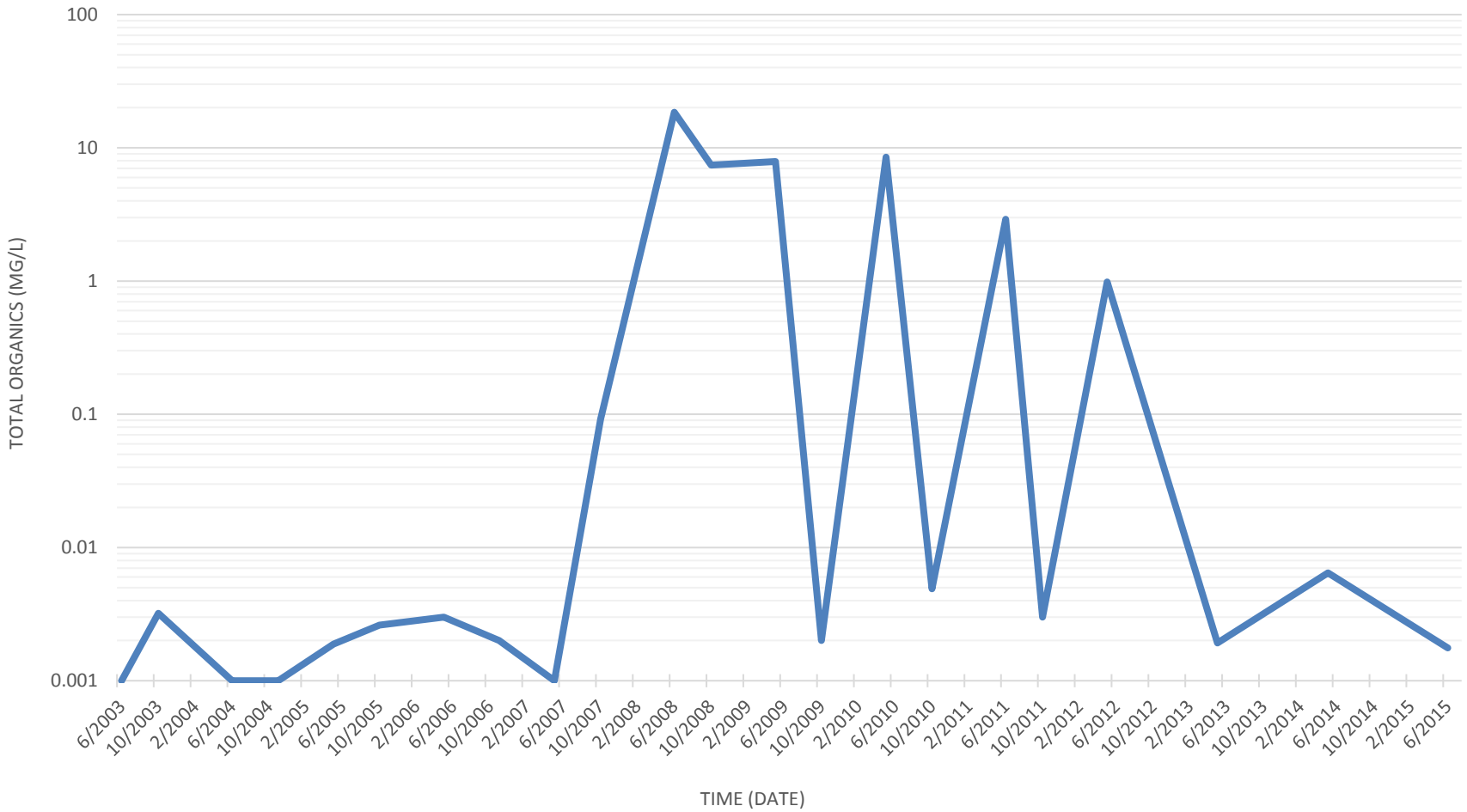
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PB322NE4
Concentration-Time Series

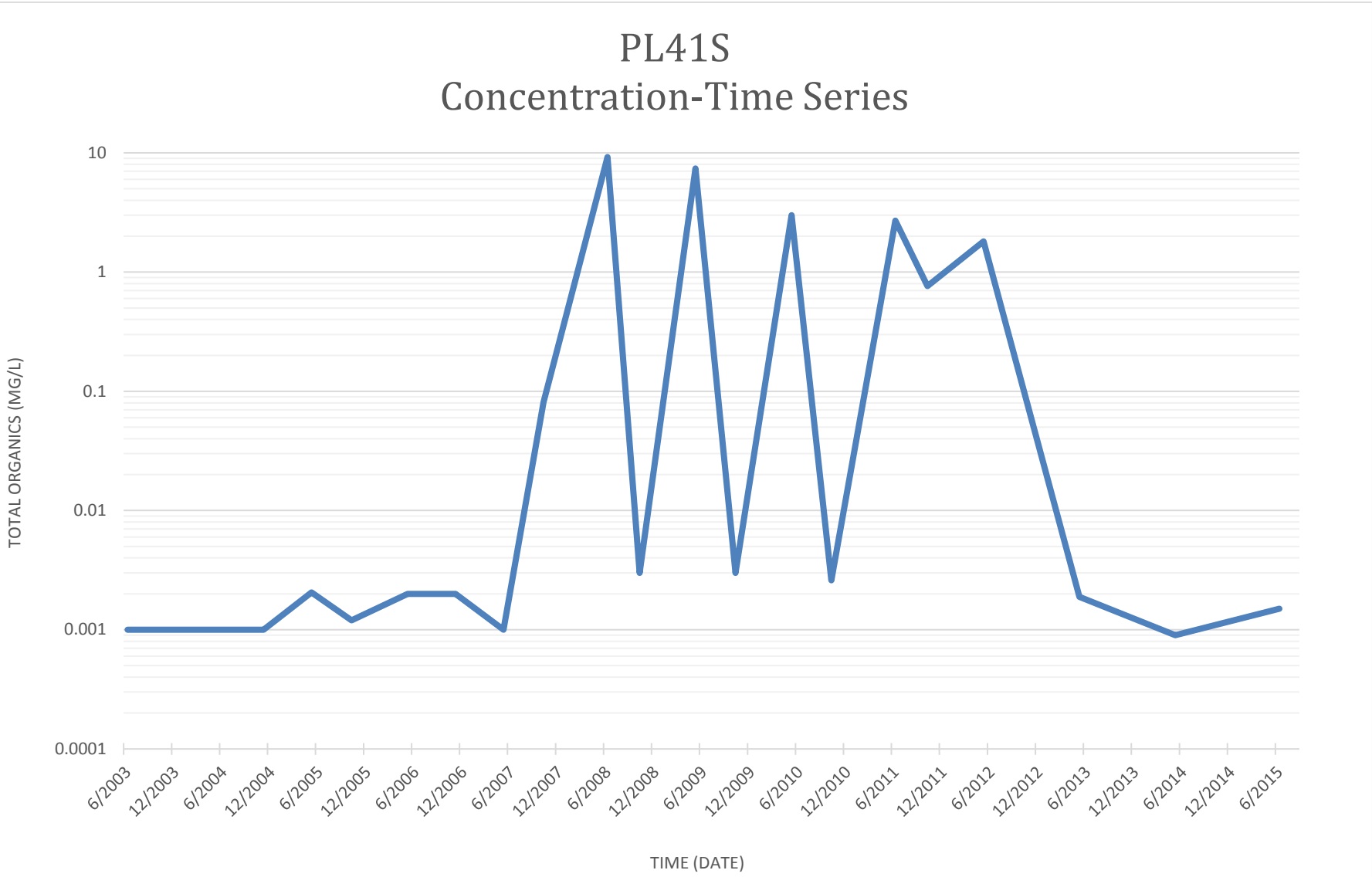


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL41N
Concentration-Time Series

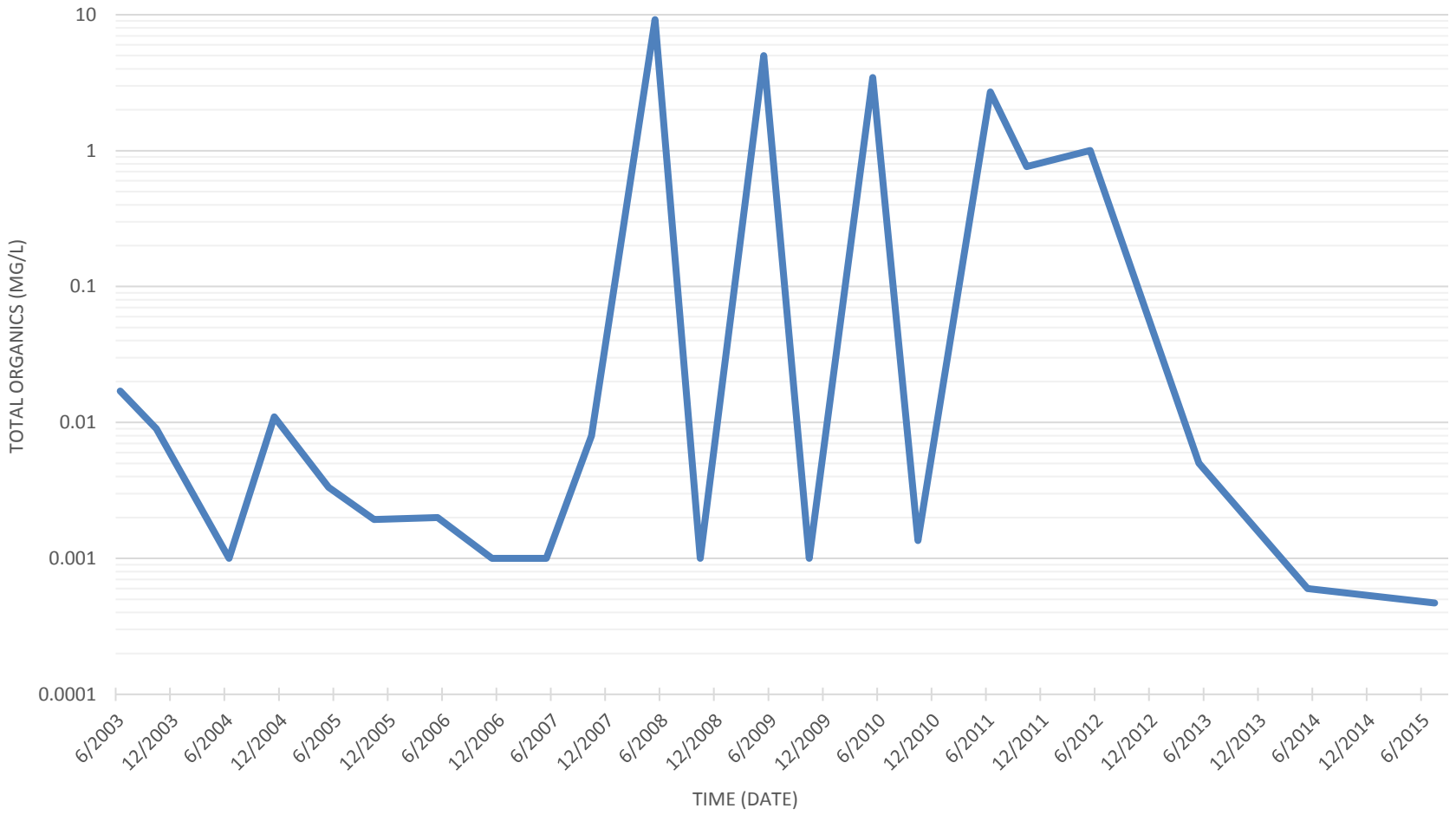


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.



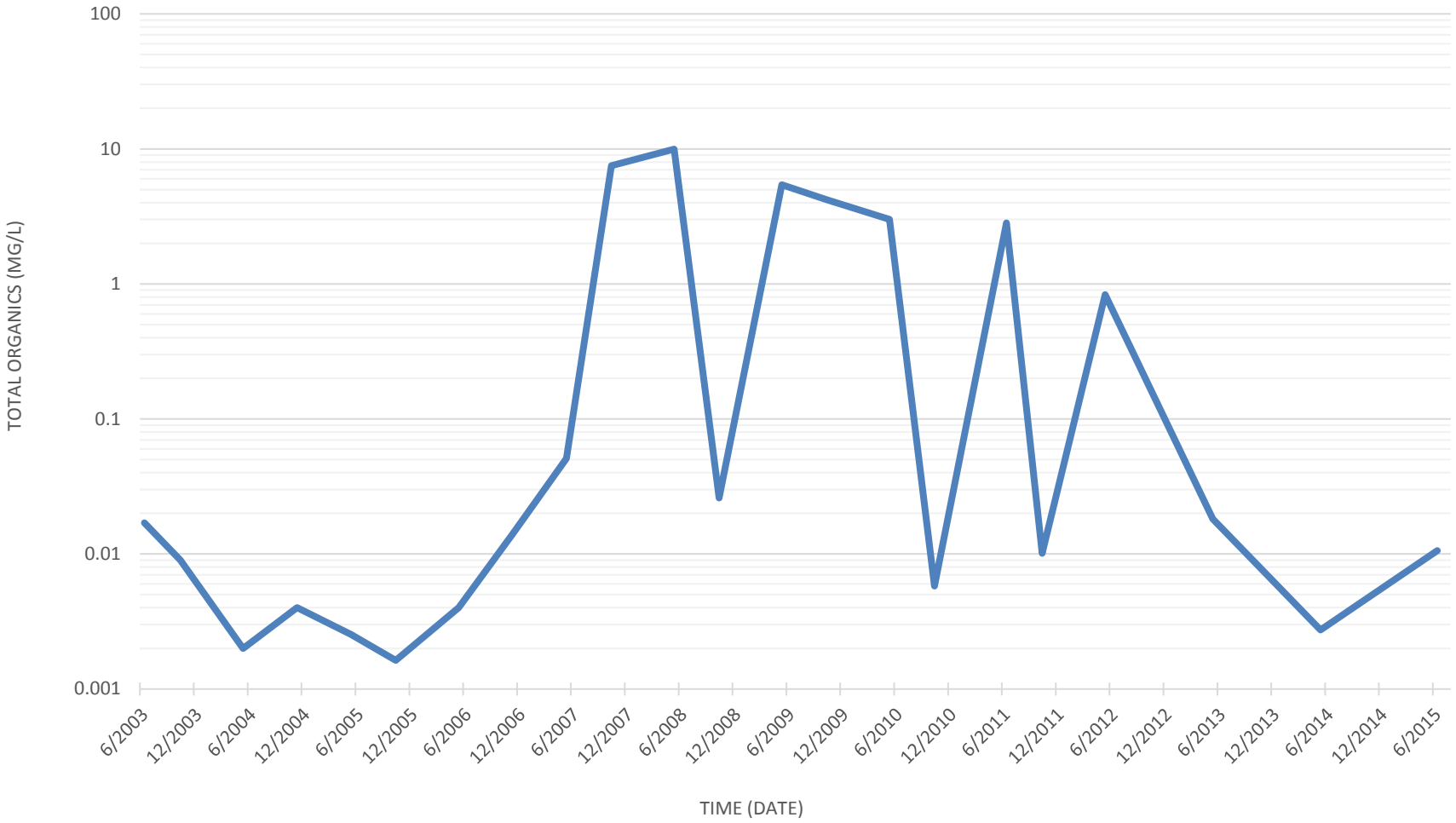
Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL42E
Concentration-Time Series



Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

PL42W
Concentration-Time Series

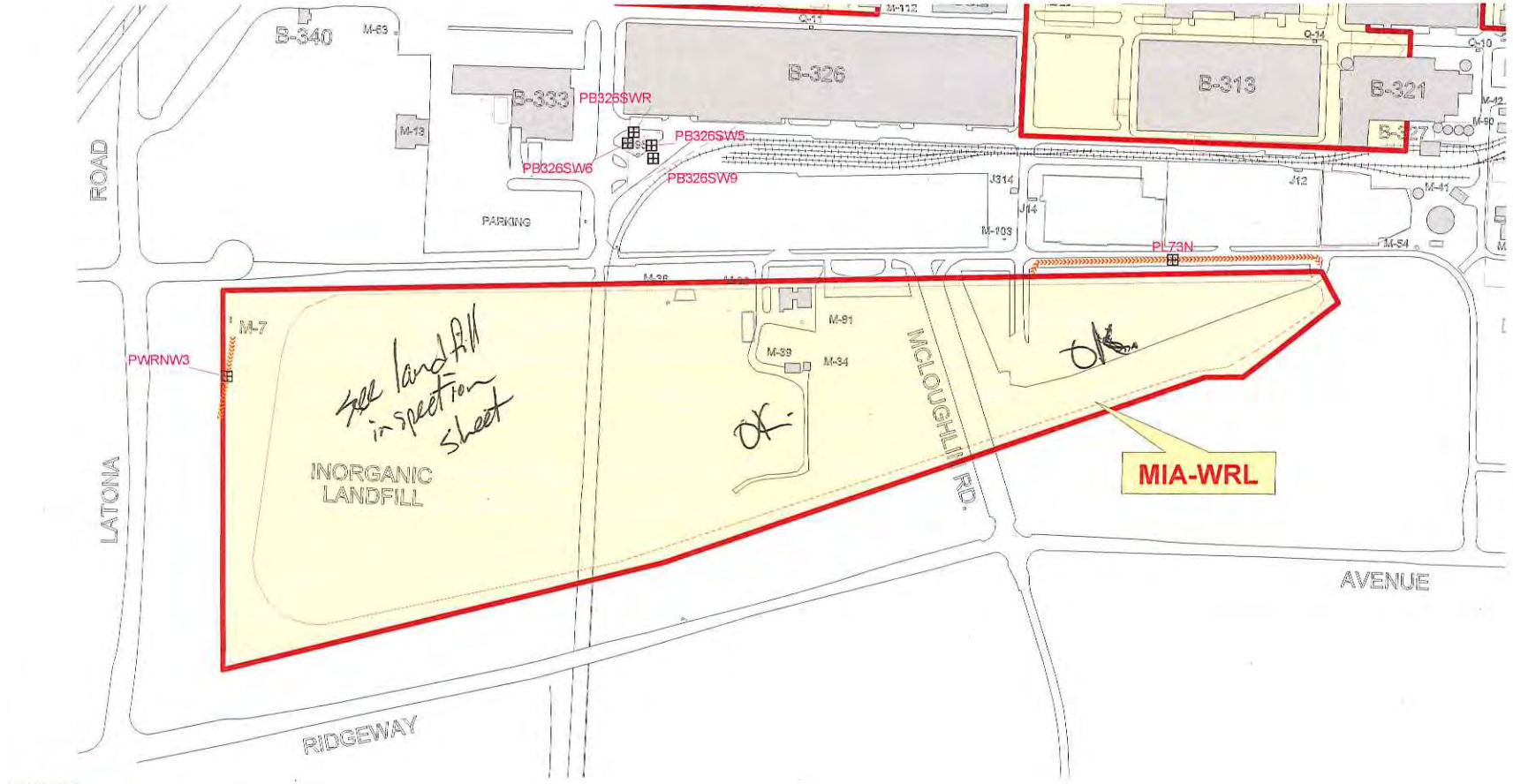


Note: The total organic concentrations presented on this concentration time series plot represent the totalized values for constituents tested for in this well in accordance with the KPGSAP protocol.

B Protective Cover Observation Maps

08/18/15
Christopher Wood
ACM Z.

OK.



LEGEND

- Soil Cover Investigation Area
- Pumping Well
- Collection Trench

0 ft 75 ft 150 ft 225 ft 300 ft

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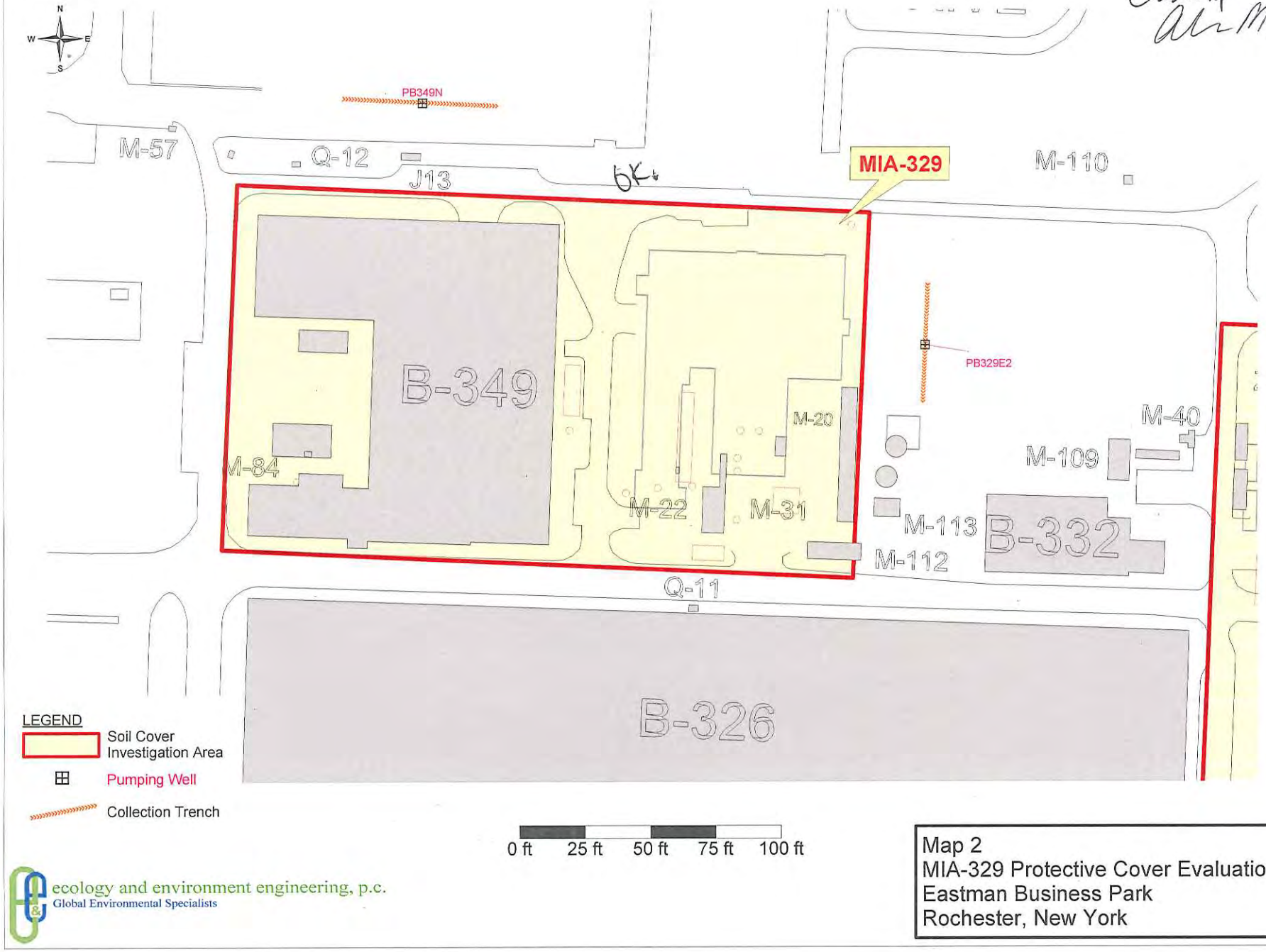
Global Environmental Specialists

Map 1
MIA-WRL Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15



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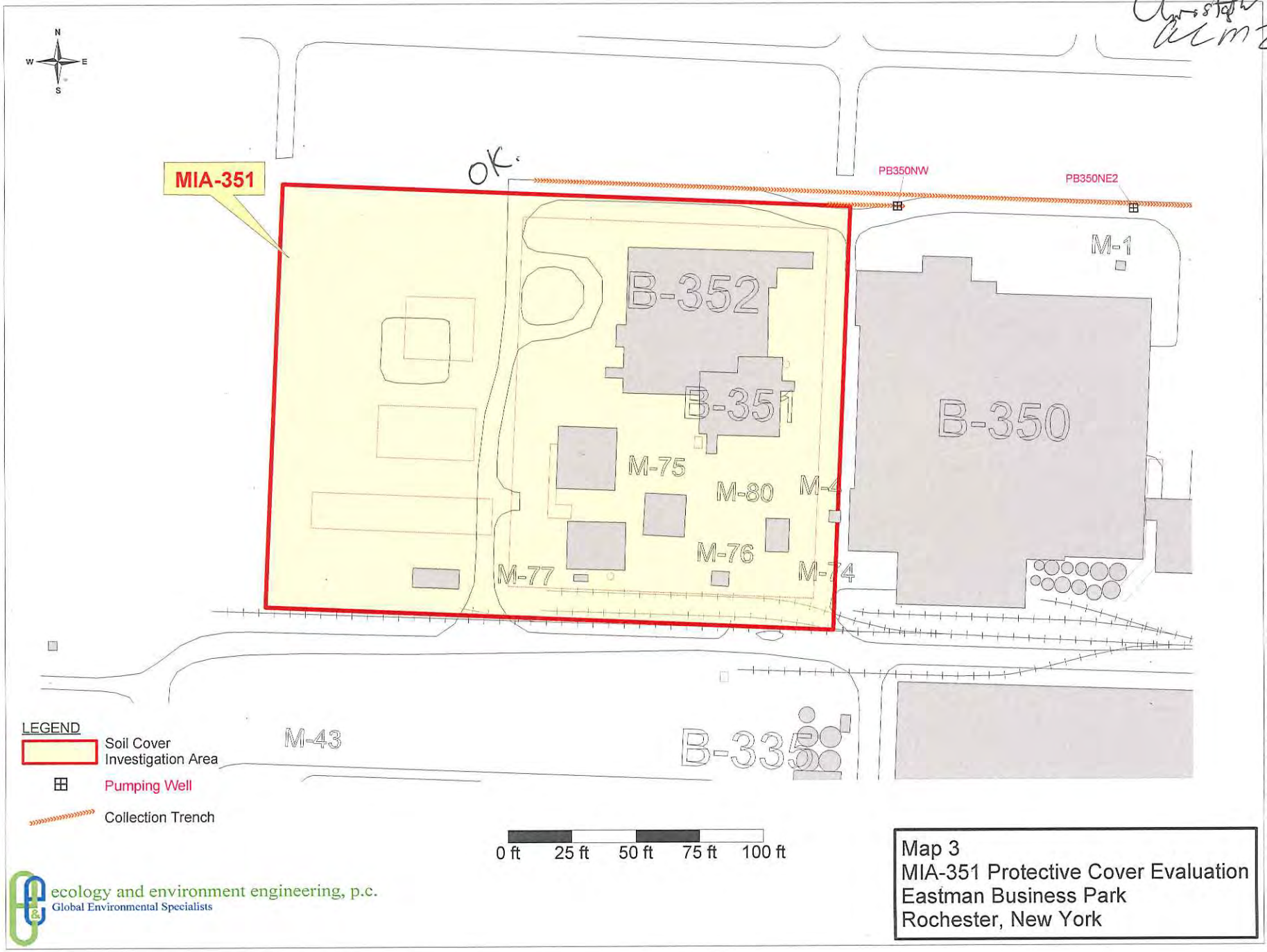
Global Environmental Specialists

Map 2
MIA-329 Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15
OK.



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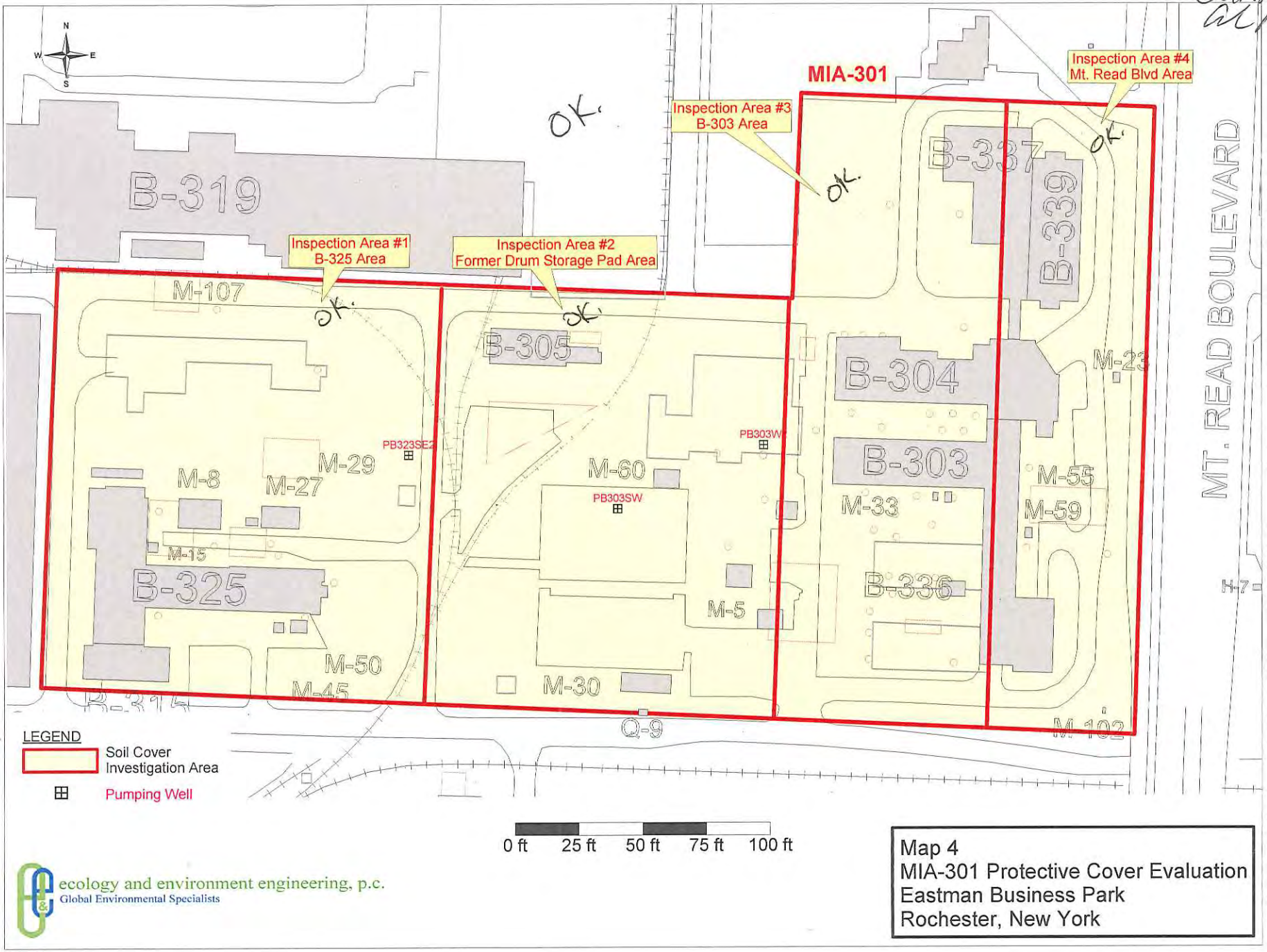
Map 3
MIA-351 Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15
Christopher W...



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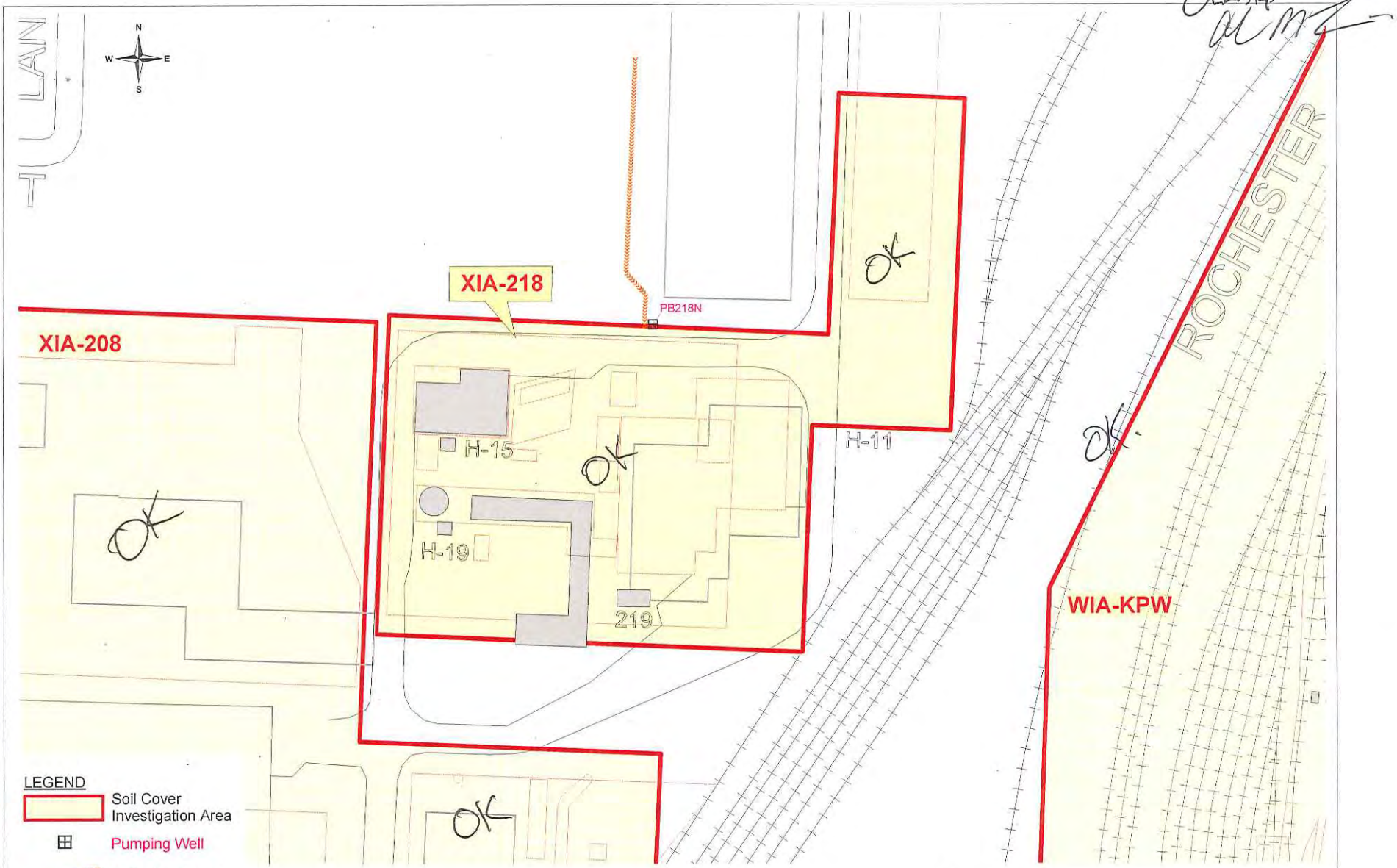
Map 4
MIA-301 Protective Cover Evaluation
Eastman Business Park
Rochester, New York



08/18/15
Christopher Ward

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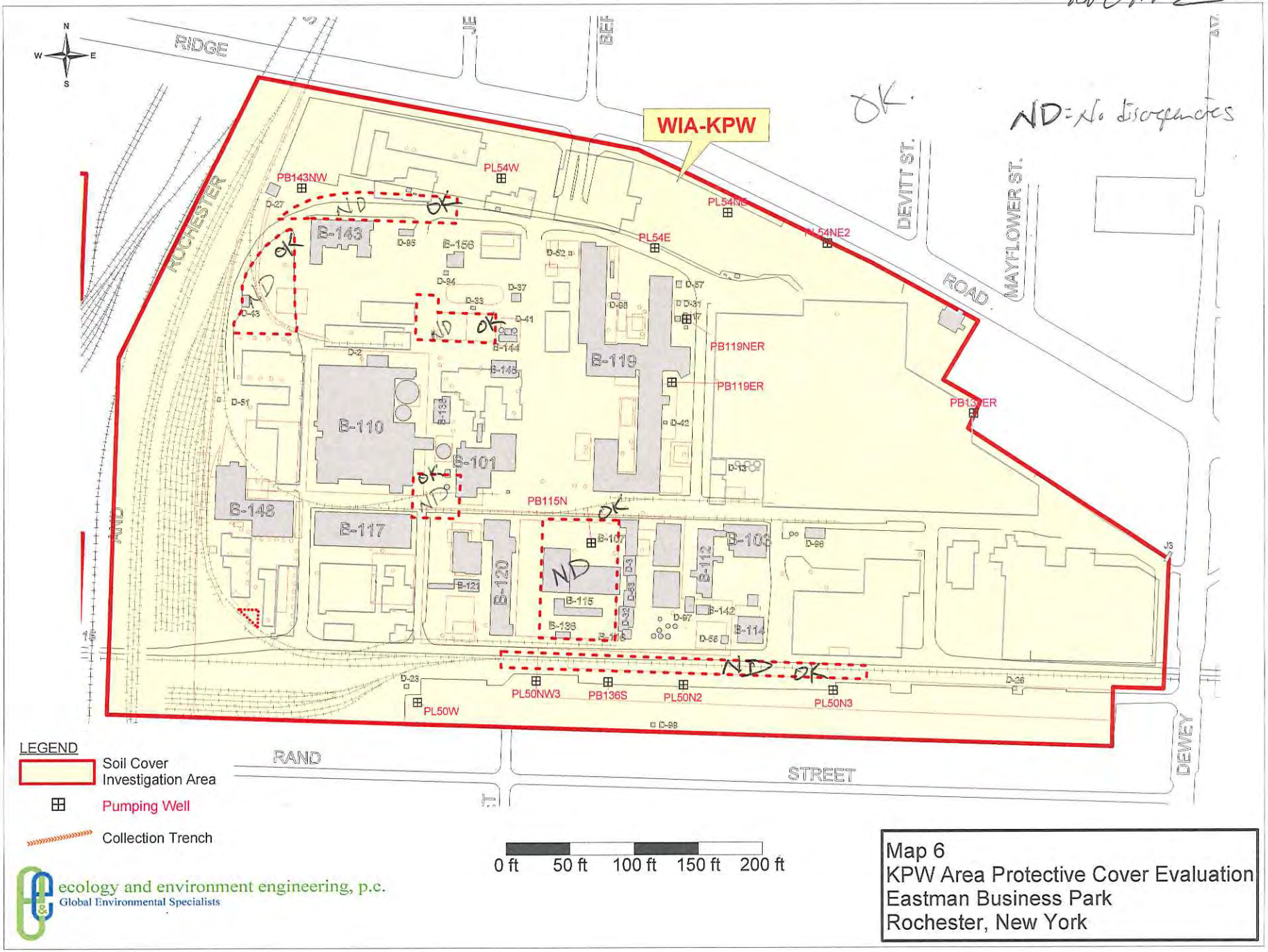
Map 5
XIA-218 Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15
Christopher Ward



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Global Environmental Specialists

Map 6
KPW Area Protective Cover Evaluation
Eastman Business Park
Rochester, New York

--- Construction Fence

08/18/15
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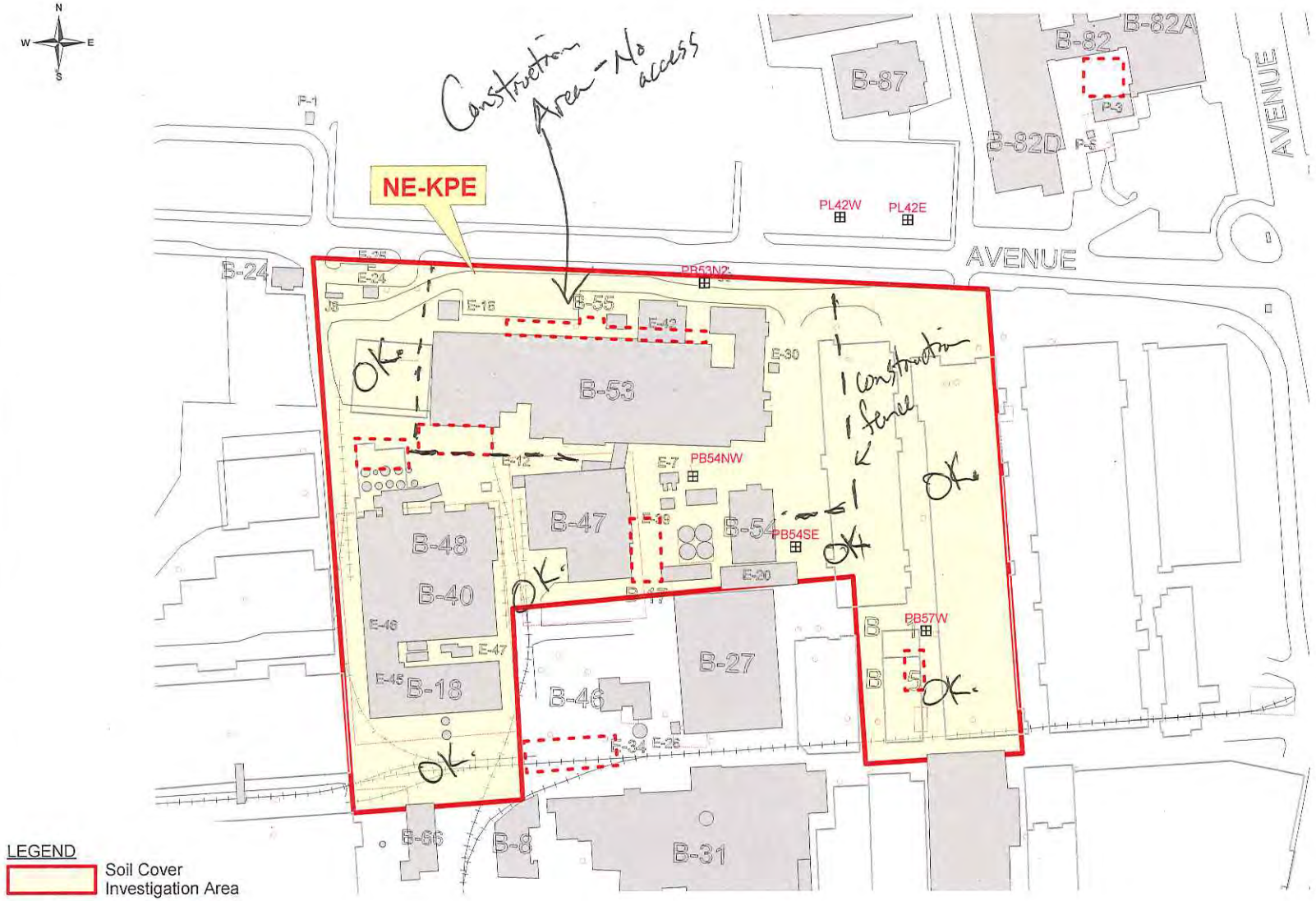
MMZ



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Map 7
NE-KPE Protective Cover Evaluation
Eastman Business Park
Rochester, New York

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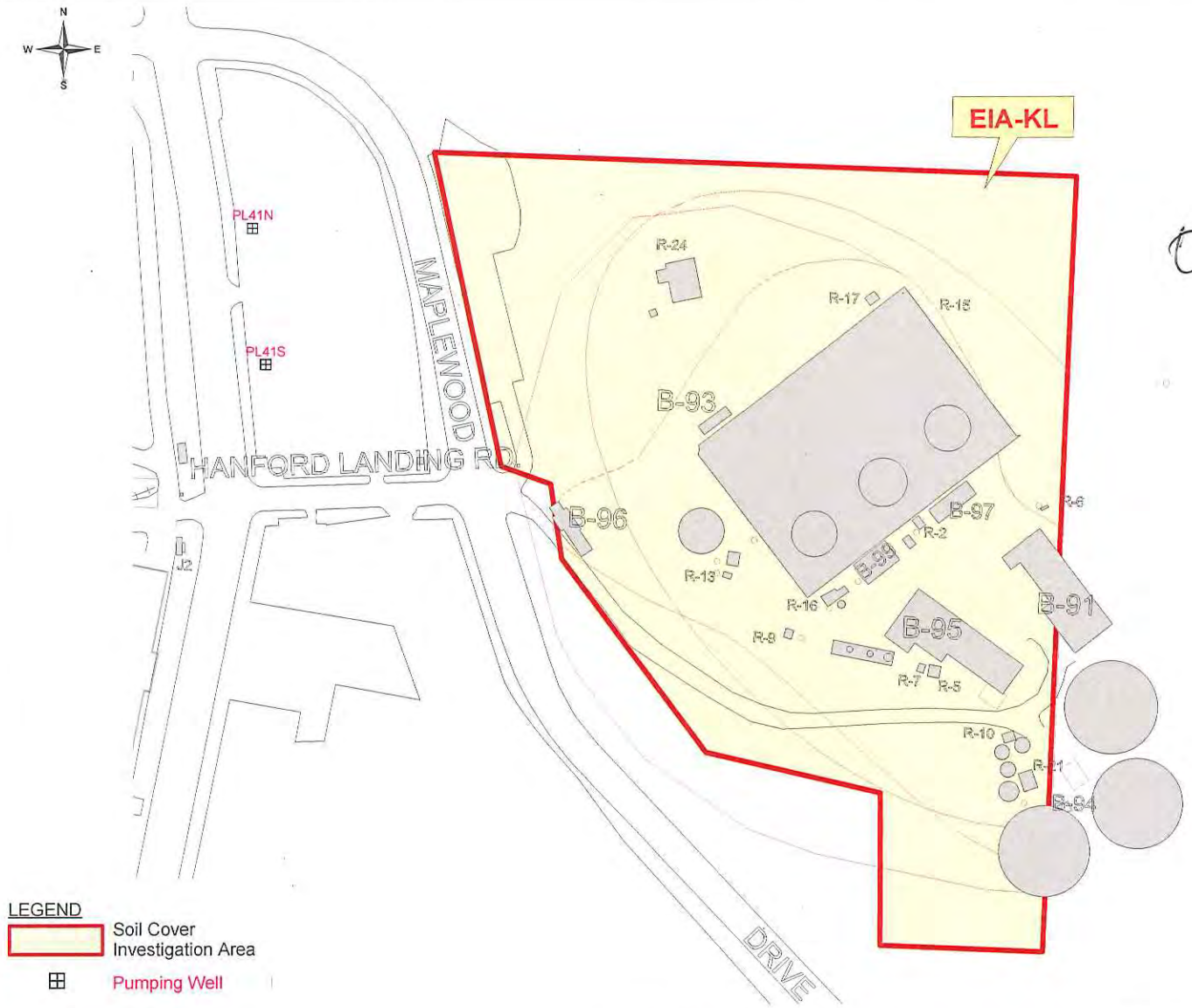
OK.



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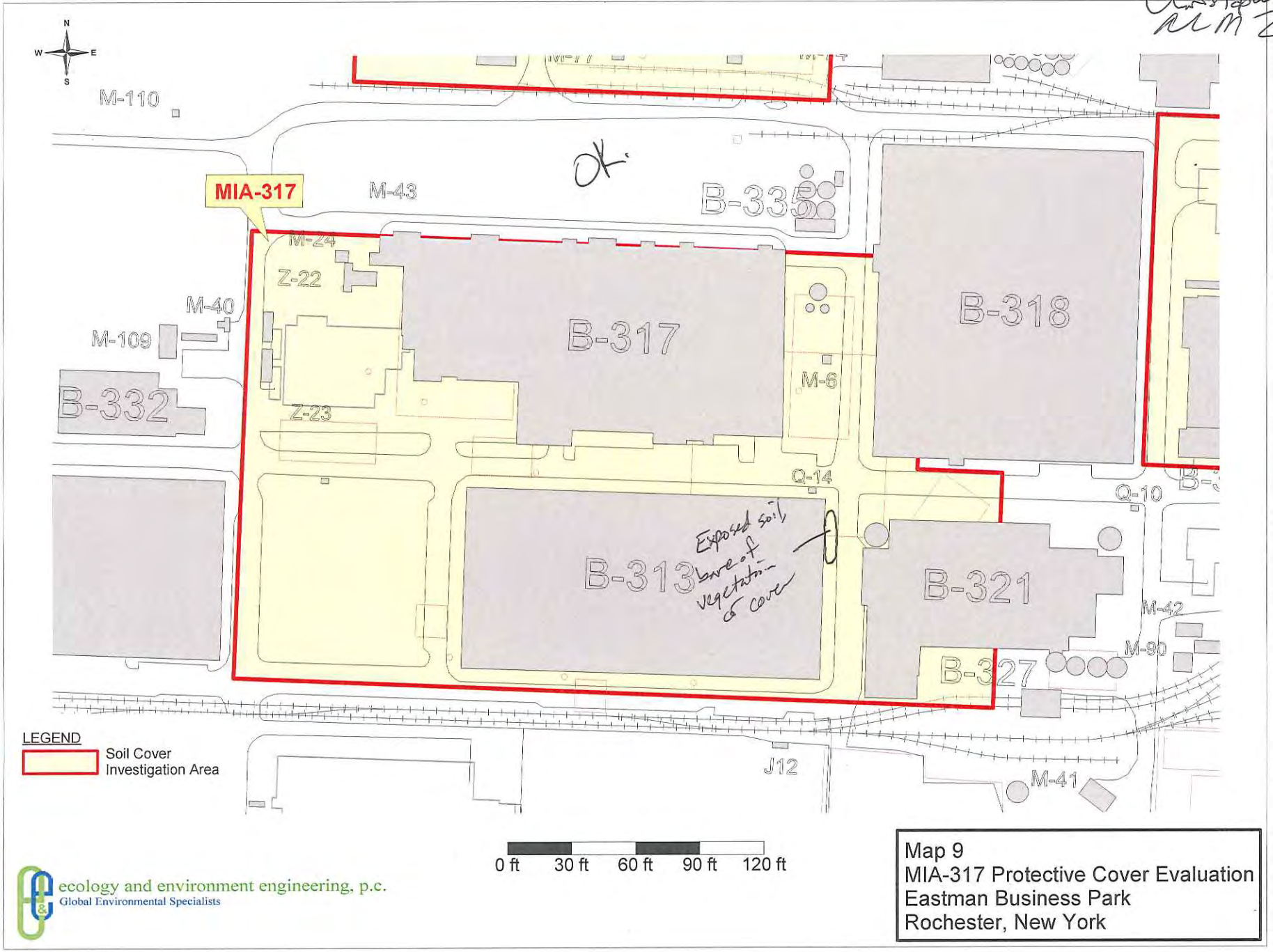
Map 8
EIA-KL Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15



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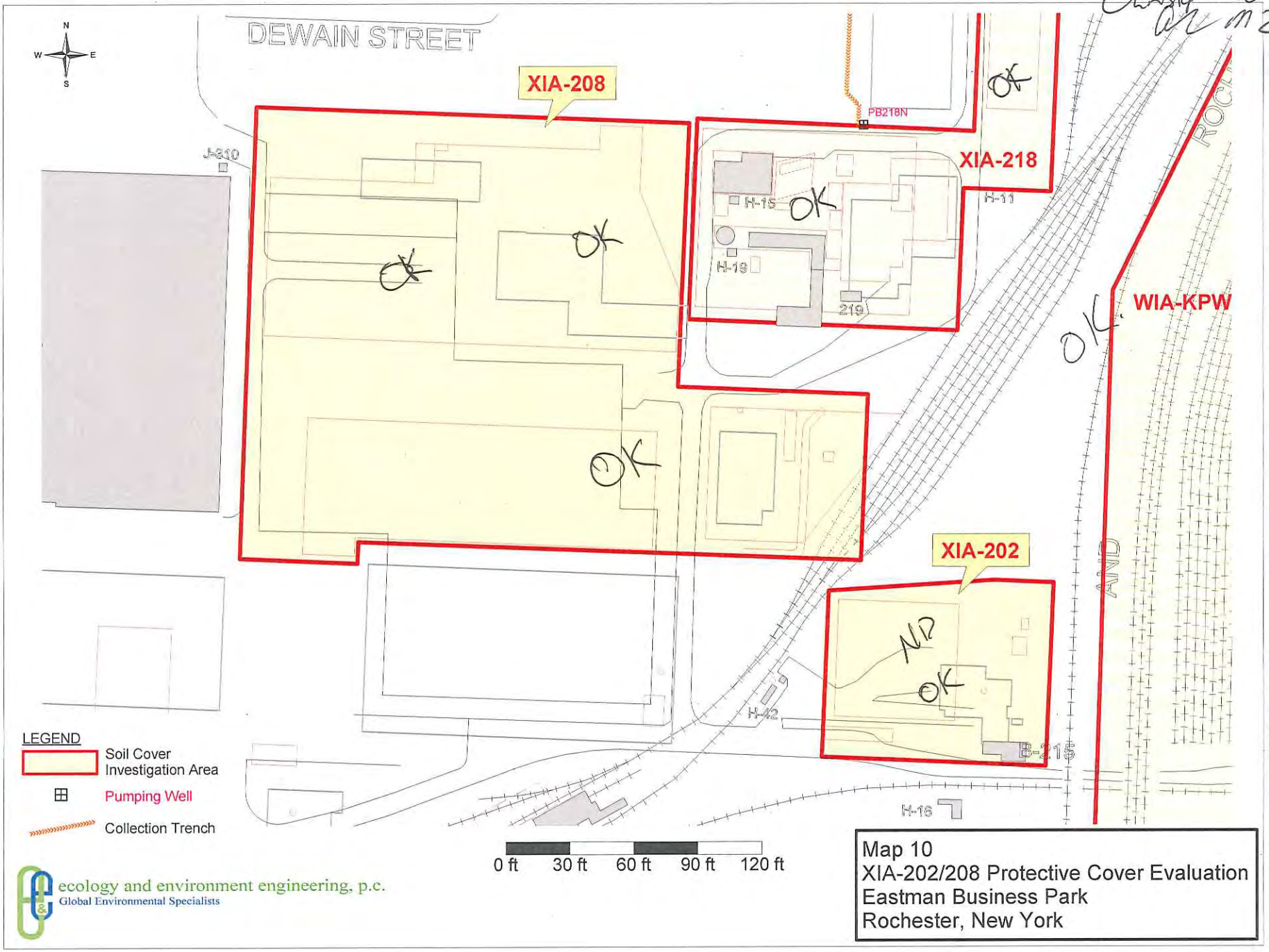
Map 9
MIA-317 Protective Cover Evaluation
Eastman Business Park
Rochester, New York


08/18/15
DEWAIN STREET
XIA-208
XIA-218
XIA-202
WIA-KPW
PB218N
J-310
H-15
H-19
H-11
219
H-42
B-21
H-16
OK
NP
LEGEND
Soil Cover Investigation Area
Pumping Well
Collection Trench
0 ft
30 ft
60 ft
90 ft
120 ft
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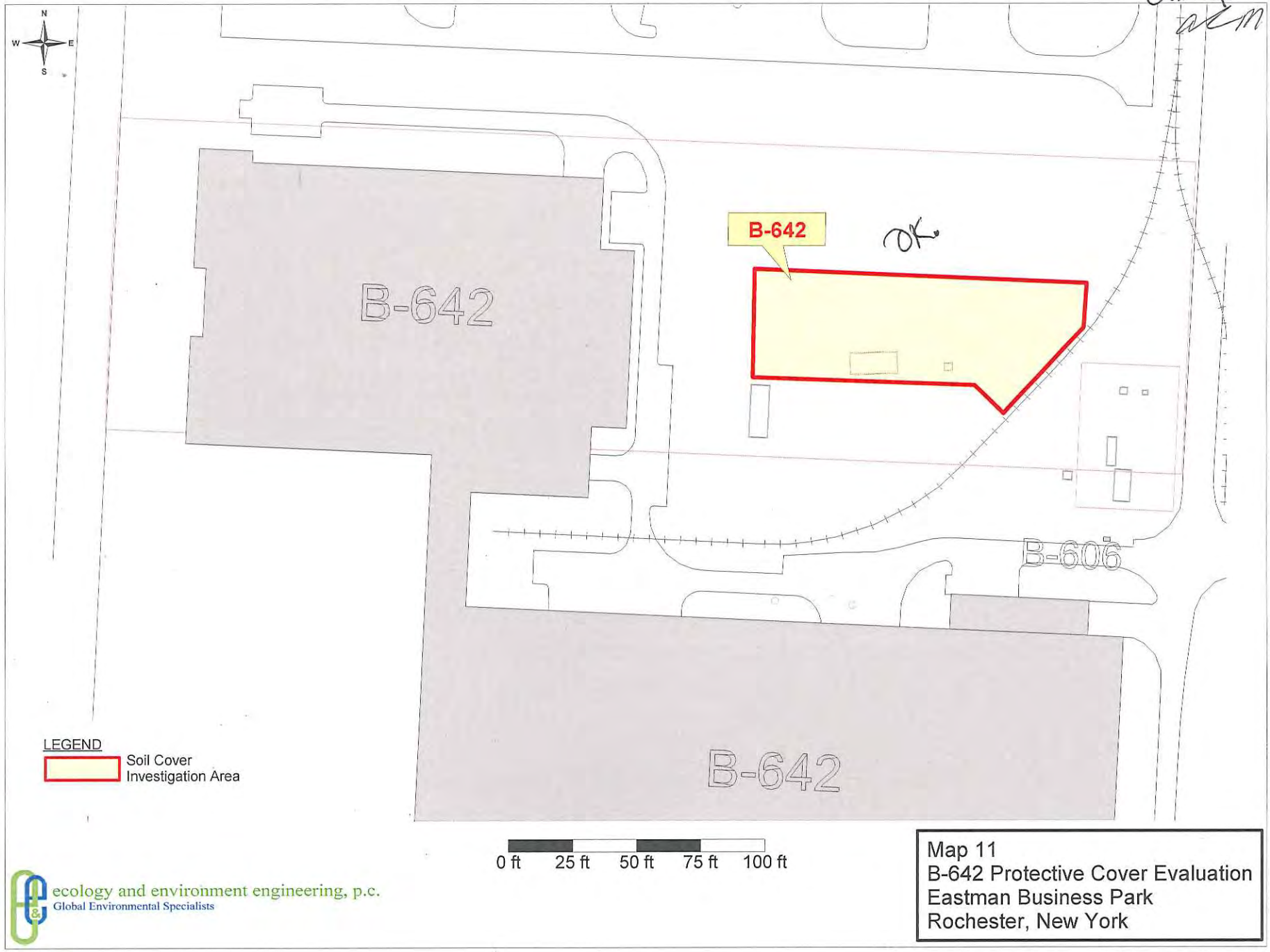
Global Environmental Specialists
Map 10
XIA-202/208 Protective Cover Evaluation
Eastman Business Park
Rochester, New York

08/18/15
Christopher Ward
ECM2



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Global Environmental Specialists

Map 11
B-642 Protective Cover Evaluation
Eastman Business Park
Rochester, New York