

**FIRST FIVE-YEAR REVIEW REPORT FOR  
WPSC STEVENS POINT SUPERFUND SITE  
PORTAGE COUNTY, WISCONSIN**



**Prepared by**

**U.S. Environmental Protection Agency  
Region 5  
CHICAGO, ILLINOIS**

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## Table of Contents

LIST OF ABBREVIATIONS & ACRONYMS.....	3
I. INTRODUCTION.....	4
FIVE-YEAR REVIEW SUMMARY FORM .....	5
II. RESPONSE ACTION SUMMARY .....	6
Basis for Taking Action .....	6
Response Actions.....	7
Status of Implementation.....	9
Institutional Controls.....	11
System Operations/Operation and Maintenance .....	13
III. PROGRESS SINCE THE LAST REVIEW .....	15
IV. FIVE-YEAR REVIEW PROCESS .....	15
Community Notification, Involvement & Site Interviews .....	15
Data Review .....	15
Site Inspection .....	20
V. TECHNICAL ASSESSMENT .....	21
QUESTION A: Is the remedy functioning as intended by the decision documents?.....	21
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?.....	21
QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy? .....	22
VI. ISSUES/RECOMMENDATIONS .....	22
OTHER FINDINGS.....	22
VII. PROTECTIVENESS STATEMENT .....	22
VIII. NEXT REVIEW.....	23

Table 1 – COCs for WPSC Stevens Point Site

Table 2 – Summary of Cleanup Levels

Table 3 – Summary of Implemented ICs

Table 4 – Monitoring Well Locations and Purpose

Table 5 – Exceedances in Groundwater

Table 6 – Trends in Lateral Sentry Wells for Analytes with an Exceedance After Construction of the Remedy

Table 7 – Trends in Vertical Sentry Wells for Analytes with an Exceedance After Construction of the Remedy

Table 8 – Trends in MNA Sentry Wells Outside of the Plume for Analytes with an Exceedance After Construction of the Remedy

Table 9 – Trends in Performance Wells for Analytes with an Exceedance After Construction of the Remedy

Table 10 – Comparison of MNA Parameters from Selected Outside Plume Wells and Inside Plume Wells

Table 11 – Sediment Sample Results

ATTACHMENT 1 – Tables 4, 6-10

## ATTACHMENT 2 – Figures

Figure 1 – Current Site Layout and Vicinity

Figure 2 – Conceptual Flow Model

Figure 3 – Water Table Elevation Contour Map, April 22, 2019

Figure 4 – Water Table Elevation Contour Map, October 7, 2019

Figure 5 – Deep Groundwater Elevation Contour Map, April 22, 2019

Figure 6 – Deep Groundwater Elevation Contour Map, October 7, 2019

Figure 7 – Water Table Benzene Plume Map, April and October 2019

Figure 8 – Water Table Naphthalene Plume Map, April and October 2019

Figure 9 – Deep Groundwater Benzene Plume Map, April and October 2019

Figure 10 – Deep Groundwater Naphthalene Plume Map, April and October 2019

Figure 11 – Water Table Iron Plume Map, April and October 2019

Figure 12 – Deep Groundwater Iron Plume Map, April and October 2019

Figure 13 – Benzene Concentrations and Trends in Selected Wells 2014-2019

Figure 14 – Benzo(a)anthracene Concentrations and Trends in Selected Wells 2014-2019

Figure 15 – Benzo(a)pyrene Concentrations and Trends in Selected Wells 2014-2019

Figure 16 – Benzo(b)fluoranthene Concentrations and Trends in Select Wells 2014-2019

Figure 17 – Benzo(k)fluoranthene Concentrations and Trends in Select Wells 2014-2019

Figure 18 – Chrysene Concentrations and Trends in Select Wells 2014-2019

Figure 19 – Dibenzo(a,h)anthracene Concentrations and Trends in Select Wells 2014-2019

Figure 20 – Indeno(1,2,3-cd)pyrene Concentrations and Trends in Select Wells 2014-2019

Figure 21 – Naphthalene Concentrations and Trends in Select Wells 2014-2019

Figure 22 – Iron Concentrations and Trends in Select Wells 2014-2019

Figure 23 – Groundwater Elevation in Wells with Increasing Organic Concentration Trends

Figure 24 – Pond and River Cap Sampling Locations

APPENDIX A – Reference List

APPENDIX B – Site Wide Ready for Anticipated Use Determination

APPENDIX C – WDNR Continuing Obligations Cover Sheet

APPENDIX D – FYR Public Notice

APPENDIX E – Site Inspection Checklist

APPENDIX F – Site Inspection Photographs

## LIST OF ABBREVIATIONS & ACRONYMS

BRRTS	Bureau for Remediation and Redevelopment Tracking System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
City	City of Stevens Point
CL	Cleanup Level
COC	Contaminant of Concern
ELCR	Excess Lifetime Cancer Risk
EPA	United States Environmental Protection Agency
EPC	Exposure Point Concentration
FYR	Five-Year Review
GAC	Granular Activated Carbon
GES	Groundwater Enforcement Standards
GIS	Geographic Information System
ICs	Institutional Controls
ICIAP	Institutional Controls Implementation and Assurance Plan
MCL	Maximum Contaminant Level
µg/L	Micrograms per Liter
mg/kg	Milligrams per kilogram
MGP	Manufactured Gas Plant
MNA	Monitored Natural Attenuation
NAIMP	Natural Attenuation Implementation and Monitoring Plan
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbons
PEC	Probable Effects Concentration
PRP	Potentially Responsible Party
R <sup>2</sup>	Coefficient of Determination
RAO	Remedial Action Objectives
RBC	Risk-based concentration
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
SCMMP	Soil Cover Monitoring and Maintenance Plan
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compound
WDNR	Wisconsin Department of Natural Resources
WPSC	Wisconsin Public Service Corporation

## **I. INTRODUCTION**

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the first FYR for the WPSO Stevens Point Superfund Alternative Site (Site). The triggering action for this statutory review is the on-site construction start date of the remedial action. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE). The Site consists of one Site-Wide Operable Unit (OU) which will be addressed in this FYR.

The WPSO Stevens Point Superfund Alternative Site FYR was led by Stephanie Ross, Remedial Project Manager (RPM), EPA Region 5. Participants included Sue Pastor, Community Involvement Coordinator, EPA; and Matt Vitale, Project Manager, Wisconsin Department of Natural Resources (WDNR). The potentially responsible party (PRP), Wisconsin Public Service Corporation (WPSO) was notified of the initiation of the FYR. The review began on 10/2/2019.

### **Site Background**

The Stevens Point Manufactured Gas Plant (MGP) was owned and operated by WPSO from approximately the 1890s to the late 1940s or early 1950s, using the carbureted water/gas method to produce gas primarily from oil. The plant ceased production in the late 1940s to early 1950s when piped natural gas became readily available to the City of Stevens Point (City) area. The west side of the Site was the location of the former MGP process structures, while the east side of the Site was generally used as a storage and disposal area for MGP process wastes and other materials.

The Site currently consists of an open field (WPSO property), a portion of the adjacent City park (Pfiffner Pioneer Park), a City asphalt parking lot, the northwest corner of the Mid-State Technical College parking lot, and adjacent streets. There are no buildings or structures on the WPSO property. An open-air band shell and the Riverfront Art Center are located within the City park adjacent to the Wisconsin River and a pond (Figure 1, Attachment 2).

Two groundwater flow systems exist at the Site: 1) Elevated Wisconsin River water that infiltrates and recharges the groundwater system upstream of the dam and 2) The regional flow system flowing westward toward the Wisconsin River where groundwater discharges. These two-flow systems merge into a convergence zone where the head losses from the river water infiltration equal the regional water table gradient flowing west toward the Wisconsin River. Groundwater gradients then slope to the south where groundwater discharges into the river south of the dam. Figure 2 in Attachment 2 (NRT, 2012) depicts the conceptual flow model. The area where the two-flow systems merge may vary to the west and east in response to changes in Wisconsin River pool elevation as well as hydraulic heads in the

regional flow system. However, correspondence with the dam operators indicates the pool elevation is closely maintained around elevation 1087, indicating changes in the location of the convergence zone are primarily controlled by changes in the regional flow system.

Two municipal wells are located near Iverson Park which is located approximately 2.3 miles east of the Site. The remaining five municipal wells are located south of the airport which is located approximately 2.8 miles from the Site. There is no evidence that private or municipal wells influence groundwater flow directions at the Site which deviate from the conceptual site model (Ramboll, 2020).

Land use around the Site includes single and multifamily housing, commercial, and recreational areas. The former MGP facility and WPSC property are zoned "Commercial," areas that border Water Street and Crosby Avenue to the east and south are zoned "Central Business," and Pfiffner Pioneer Park is zoned "Conservancy." In 2008, the City presented a redevelopment plan that includes using the WPSC property to expand the City park and reconfigure roadways. Redevelopment planning is still underway.

The City plans to redevelop the Highway 50 corridor, which includes road construction activities as well as brownfield redevelopment on adjacent parcels. EPA technical assistance teams for land revitalization and Superfund reuse met with City officials, WDNR, and WPSC in December 2019 to discuss the potential for redevelopment in the areas along the corridor and adjacent to and including the Site. Potential future uses discussed included residential, mixed use, expanded parks and commercial uses across both planning areas. The teams identified several barriers to redevelopment, including waste left in place, existing ICs, and additional potential contamination due to brownfield sites. The City will work with WDNR, EPA, WPSC and other landowners to develop redevelopment plans that address these barriers.

**FIVE-YEAR REVIEW SUMMARY FORM**

SITE IDENTIFICATION		
<b>Site Name:</b> WPSC Stevens Point		
<b>EPA ID:</b> WIN000509983		
<b>Region:</b> 5	<b>State:</b> WI	<b>City/County:</b> Stevens Point/Portage County
SITE STATUS		
<b>NPL Status:</b> Non-NPL		
<b>Multiple OUs?</b> No	<b>Has the site achieved construction completion?</b> Yes	
REVIEW STATUS		
<b>Lead agency:</b> EPA		
<b>Author name (Federal or State Project Manager):</b> Stephanie Ross		
<b>Author affiliation:</b> Region 5, Superfund		

<b>Review period:</b> 10/2/2019 – 6/26/2020
<b>Date of site inspection:</b> 12/3/2019 & 6/11/2020
<b>Type of review:</b> Statutory
<b>Review number:</b> 1
<b>Triggering action date:</b> 10/5/2015
<b>Due date (five years after triggering action date):</b> 10/5/2020

## II. RESPONSE ACTION SUMMARY

### Basis for Taking Action

The baseline risk assessment (NRT, 2012) identified the following media of concern:

- Subsurface soils: Potential future residents or outdoor workers were found to be at risk for human health effects due to inhalation, ingestion or dermal contact with soil, and increased cancer risk due to polycyclic aromatic hydrocarbons (PAHs) and benzene.
- Groundwater: Concentrations of volatile and semi-volatile organic compounds would pose a risk to human receptors if the water were to be used for drinking water.
- Sediment: PAH concentrations in the pond sediment were likely to be toxic to benthic invertebrates.

The following chemicals in Table 1 below are identified as contaminants of concern (COCs) for the Site exceeding federal and state standards:

**Table 1: COCs for the WPSC Stevens Point Site**

<b>Soil</b>	<b>Groundwater</b>	<b>Pond and River Sediment</b>
Benzene	Benzene	-
-	-	Xylenes (total)
Benzo[a]anthracene	Benzo[a]anthracene	-
Benzo[a]pyrene	Benzo[a]pyrene	-
Benzo[b]fluoranthene	Benzo[b]fluoranthene	-
Benzo[k]fluoranthene	Benzo[k]fluoranthene	-
Chrysene	Chrysene	-
Dibenz[a,h]anthracene	Dibenz[a,h]anthracene	-
-	Fluoranthene	-
Indeno[1,2,3-cd]pyrene	Indeno[1,2,3-cd]pyrene	-
Naphthalene	Naphthalene	-
-	-	Total PAHs
-	Pyrene	-
Iron	Iron	-

-	-	Lead
-	-	Mercury

**Response Actions**

WPSC has undertaken investigation and remediation activities at the Site since the mid-1980’s. The Completion Report (NRT, 2006) contains detailed information regarding response actions performed up to 2006. These response actions included:

- Surface Soil Removal - WPSC property-wide scrape of the top four inches of surface material which was used as backfill.
- Source Area Excavation and Management - Excavation, treatment and/or off-site disposal of over 16,000 tons of contaminated soil and debris from the Site between February and June 1998. Areas remediated included the former MGP operations area and vicinity where coal tar and/or other MGP residuals were identified by previous investigation work.
- Former Underground Structure Removal - Removal of former underground structures or remnants of structures that had visible evidence of MGP residuals in soil/debris surrounding or within the former structures.
- Excavation Dewatering and Treatment - Temporary groundwater extraction during source area excavation work to maximize excavation depths and control MGP contaminated groundwater. Water was treated on-site and discharged to the local publicly owned treatment works.
- Backfilling, Cover, and Surface Restoration - Restoration activities included:
  - Backfilling with clean and/or thermally treated soil within the excavation areas;
  - Placement of 2-feet of clean imported fill over the backfilled excavation areas, including both WPSC owned property and disturbed portions of Pfiffner Pioneer Park;
  - Reconstruction and paving of excavated sections of Crosby Avenue; and
  - Placement of 4-inches of imported fine grained topsoil cover, seeding and mulching of the entire property owned by WPSC, and placement of sod over imported clean backfilled portions of Pfiffner Pioneer Park.

From post remediation sampling, it was concluded that MGP residuals were observed to have been left in place along the southern boundary of the Excavation Area, where the excavation area abuts the parking lot. These residuals occurred in a relatively thin layer below the water table and could not be practically excavated. However, these observed residuals were not deemed significant compared with the volume of soil excavated and treated as part of the response action.

*Remedial Action Objectives and Cleanup Levels*

The Record of Decision (ROD) was finalized in September 2012. EPA developed the following Remedial Action Objectives (RAOs) to protect the public and the environment from potential current and future health risks from contaminated groundwater, soil and sediment at the Site:

- Prevent human exposure, including dermal contact, incidental ingestion, and inhalation as a result of soil disturbance, to subsurface soil containing levels of MGP-related contaminants that exceed the target excess lifetime cancer risk (ELCR) range of 10<sup>-6</sup> to 10<sup>-4</sup> or a Hazard Index quotient greater than one (1) for outdoor construction workers;



- Prevent human exposure, including dermal contact, ingestion, and inhalation (as a result of vapor intrusion) to groundwater containing levels of MGP-related contaminants that exceed federal Maximum Contaminant Levels (MCLs) or WDNR 140 Groundwater Enforcement Standards (GESs);
- Restore groundwater quality to achieve MCLs or the WDNR 140 GESs;
- Prevent or reduce the exposure to benthic organisms in the Wisconsin River sediment to levels of MGP-related contaminants that are above the Probable Effects Concentrations (PEC); and
- Prevent or reduce the exposure to benthic organisms in Pfiffner Pioneer Park pond levels of MGP-related contaminants that are above the PEC.

Cleanup Levels (CLs) were established to provide further guidance in cleaning up the Site for the protection of human health and the environment (Table 2 below). The CLs equal the Exposure Point Concentrations (EPC) for COCs in soil and groundwater and PEC for COCs in sediment listed in Tables 1, 2, and 3 of the 2012 ROD. EPCs for soil are the Regional Screening Levels (RSLs) for industrial/commercial use. In groundwater, EPA MCLs are used as EPCs for those contaminants with MCLs; if MCLs were not available, GESs were used and tap water RSLs were used if GESs were not available.

**Table 2: Summary of Cleanup Levels**

<b>Contaminant</b>	<b>Soil (milligrams per kilogram [mg/kg])</b>	<b>Groundwater<sup>1</sup> (micrograms per liter [µg/L])</b>	<b>Pond and River Sediment (mg/kg)</b>
Benzene	5.4	5	-
Xylenes (total)	-	-	0.465
Benzo[a]anthracene	2.1	0.029	-
Benzo[a]pyrene	0.21	0.2	-
Benzo[b]fluoranthene	2.1	0.02	-
Benzo[k]fluoranthene	21	0.29	-
Chrysene	210	0.02	-
Dibenz[a,h]anthracene	0.21	0.0029	-
Fluoranthene	-	400	-
Indeno[1,2,3-cd]pyrene	2.1	0.029	-
Naphthalene	18	100	-
Total PAHs	-	-	22.8
Pyrene	-	250	-
Iron	800	300	-
Lead	-	-	128
Mercury	-	-	1.06

### *Remedy Components*

The selected remedy addressed PAH-contaminated soil and sediment in the Wisconsin River and the adjacent Pfiffner Pioneer Park pond, and PAH- and volatile organic compound (VOC)-contaminated groundwater, and includes the following components:

<sup>1</sup>Table 4 in the ROD incorrectly lists CLs for multiple constituents, whereas Table 2 correctly lists these values. EPA clarified and corrected the CLs via two memos to the file (EPA 2014 and 2017). Corrected values are presented here.

- Institutional Controls (ICs) will be placed on those areas of the Site with contaminated subsurface soil to restrict the properties to non-residential use and prevent exposure to the contaminated soil; if the Site is to be developed or future construction or utility workers perform subsurface activities, a soil management plan will be required to ensure proper subsurface soil management; soil ICs will also include restricting unauthorized excavations to limit potential direct contact;
- Groundwater will achieve clean-up standards through monitored natural attenuation (MNA) and ICs will prohibit consumption of site-contaminated groundwater until drinking water standards are met, and groundwater monitoring will be conducted;
- Contaminated sediment that has probable effects on benthic organisms (i.e. exceeds PEC, totaling approx. 2,080 tons) in the Wisconsin River will be dredged; and
- Contaminated sediment in the Pfiffner Pioneer Park pond that has probable effects on benthic organisms will be covered with clean sand with activated carbon.

In the event that MNA is unable to attain the performance standards within a reasonable timeframe, a contingency remedy may be implemented. The 2012 ROD states that the contingency component of the MNA alternative would be implemented if it were determined that the spatial extent of the groundwater contamination was increasing downgradient (that is, if a statistical analysis of the groundwater concentrations show an increasing trend), or if the groundwater contamination became a threat to a water supply well. The contingency remedy may include actions such as pumping and treating groundwater, installation of permeable reactive barriers, subsurface injection of a substrate to promote oxidative or reductive degradation, or other innovative technologies.

Due to the difficulties in achieving the PAH CL in the small area of river sediment, WPSC requested, and EPA in consultation with WDNR approved, a slight modification to the remedy via a memorandum to the Site file (EPA, 2016a) in which WPSC would:

- Fill in the excavated area with clean sand and achieve a 3:1 slope for shoreline stability, and then place a minimum of 15 inches of a granular activated carbon (GAC)-amended clean sand cover on top of the clean sand layer;
- Place 3 inches of 1.5-inch stone on top of the GAC-amended clean sand cover as an armor layer to prevent loss of cover material due to future natural and/or human activity; and
- Monitor the sand cover layer in the river at the same frequency as the sand cover layer placed in the pond.

The goal of the river sediment cleanup action was to reduce the PAH levels in the sediment to below the estimated PEC for ecological receptors. The GAC amended clean sand cover will serve both as a barrier between the residual PAHs in the river sediment and as a potential mixing media to dilute residual PAH levels to below the PEC.

### **Status of Implementation**

In 2013, EPA and WPSC entered into an Administrative Order on Consent for Remedial Design, and in 2014, a Remedial Action Consent Decree was finalized. Remedial action activities were initiated in

October 2015 and substantially complete in December 2015. The Site achieved Construction Completion in 2016 (EPA 2017a), after implementing the following remedial action components at the Site:

### *Soils*

ICs for soil were implemented to restrict soil disturbance in areas with soil concentrations above project CLs. Approximately 5.0 acres of land are subject to ICs to address soil above the CLs. ICs are discussed in more detail in *Institutional Controls Section*.

The remedial action includes maintaining the existing parking lot and soil that was placed over the areas previously remediated to minimize direct contact with soil in the top four feet and material above the CLs. Maintenance activities are discussed in more detail in *System Operations/Operation and Maintenance Section*.

### *Groundwater Monitored Natural Attenuation*

MNA is being used to demonstrate movement of groundwater quality towards the CLs. This groundwater remedial action will also rely on ICs to address groundwater above the CLs (discussed in more detail in *Institutional Controls Section*). Semi-annual groundwater monitoring was initiated following the approval of the Natural Attenuation Implementation Plan (NAIMP) in October 2014 (Ramboll, 2020), and is reported on a regular basis to assess progress toward the CLs and plume stability. Monitoring activities are discussed in more detail in *System Operations/Operation and Maintenance Section*.

### *River Sediment Dredging, Cap, and Residual Sand Layer*

The Wisconsin River sediment remedial action consisted of dredging sediment exceeding the CLs in a localized area of the river between October 21 and November 10, 2015. Once dredging activities achieved the performance objectives, a minimum 6-inch residual sand layer was placed over the dredged surface to manage dredge residuals. River cap installation was completed on November 20, 2015. Long-term monitoring on the residual sand layer would not be performed, as the sediment dredging activities removed sediments driving the elevated risk.

However, due to the difficulty of achieving PAH CLs in the small area of river sediment, the River Remedial Action was modified<sup>2</sup> to include an approximately 110 square yard cap near the pedestrian footbridge where oil-coated sediment could not be excavated. In consultation with EPA and WDNR, a 15-inch thick sand cap amended with GAC was installed in the River. The River cap was overlain with a 3-inch thick armor layer. The carbon-amended cap was based on the approved cap design for the Pond. Long-term monitoring is being performed on the River cap to verify permanency and effectiveness of the remedy. Monitoring activities are discussed in more detail in *System Operations/Operation and Maintenance Section*.

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<sup>2</sup> Minor modifications to the remedy planned for the river and pond are described in the EPA *Memorandum: Non-significant changes in the Selected Remedy for the Wisconsin Public Service (WPSC) Stevens Point Former MGP Superfund Alternative Site, Stevens Point, Wisconsin*, dated July 2016.

*Pond Cap*

The pond sediment remedial action included placing a 15-inch thick sand cap amended with activated carbon over MGP-impacted sediment in the Pond. Sediment dredging from the pond was conducted from October 13 to 19, 2015, removing approximately 680 cubic yards of material. Pond cap installation was completed on November 13, 2015. Long-term monitoring on the Pond Cap is being performed to verify the effectiveness of the remedy. Monitoring activities are discussed in more detail in *System Operations/Operation and Maintenance Section*.

*Site-Wide Ready for Anticipated Use*

EPA determined that all remedial components were in place as designated and that construction of the remedial action at the Site was complete following inspection and approved Construction Completion in August 2016. At that time all cleanup goals in the 2012 ROD had been achieved for any media that may affect current and reasonably anticipated future land uses, so that there were no unacceptable risks. Also, all ICs in the ROD to ensure long-term protection had been put in place. As a result, the Site achieved Site-Wide Ready for Anticipated Use in September 2016 (Appendix B).

**Institutional Controls**

Specific ICs implemented for the Site are described in Table 3 below.

**Table 3: Summary of Implemented ICs**

<b>Media, engineered controls, and areas that do not support UU/UE based on current conditions</b>	<b>ICs Needed</b>	<b>ICs Called for in the Decision Documents</b>	<b>Impacted Parcel(s)</b>	<b>IC Objective</b>	<b>Title of IC Instrument Implemented and Date (or planned)</b>
Soil: WPSC Property and surrounding parcels owned by others with subsurface soil impacts (5.0 acres).	Yes	Yes	See Figure 1 in Attachment 2	Prohibit residential use, unauthorized digging and construction of buildings without evaluation and/or mitigation of vapor intrusion	Wisconsin Geographic Information System (GIS) database; Continuing Obligation letters dated 10/18/2016. City of Stevens Point Revised Municipal Code, Chapter 23, Zoning Code, Adopted 2/19/1979
Groundwater: Area that exceeds groundwater cleanup standards (5.3 acres).	Yes	Yes	See Figure 1 in Attachment 2	Prohibit groundwater use until cleanup standards are achieved	Wisconsin GIS database; Continuing Obligation letters dated 10/18/2016. City of Stevens Point Revised Municipal Code, Chapter 13,

					Water and Sewerage Systems, amended 2/17/2014
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A map showing the area in which the ICs apply is included in Figure 1 (Attachment 2).

*Status of Access Restrictions and ICs*

In Wisconsin, ICs are implemented through WDNR’s Geographic Information System Registry of Closed Remediation Sites (Cover Sheet and Approval Letter provided in Appendix C).

Compliance with the continuing obligations is required for the current owner and any subsequent property owners and affected off-source property owners. The continuing obligations for this Site include:

- Groundwater contamination is present at or above ch. NR 140, Wis. Adm. Code enforcement standards. WDNR must be notified and approve any new well construction or reconstruction of existing wells.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Asphalt pavement cover must be maintained over contaminated soil and WDNR must be notified and approve any changes to this barrier.
- Sand and/or rock covers that were placed over the contaminated sediment must be maintained and WDNR must be notified and approve any changes to this barrier.

WDNR sent Continuing Obligation letters to owners affected by ICs in October 2016 explaining the continuing obligations conditions, including prohibited activities; residual groundwater, sediment, and soil contamination located on their property; modification or removal of barrier caps; and general wastewater permits for construction related dewatering activities.

*Current Compliance*

Based on the 12/3/2019 and 6/11/2020 Site inspections, discussion with the City, and the Annual IC review, EPA is not aware of Site or media uses which are inconsistent with the stated objectives to be achieved by the ICs. No Site uses which are inconsistent with the implemented ICs or remedy IC objectives were noted during the Site inspections. ICs for groundwater and land use were also reviewed within the 2019 Groundwater Annual Report (Ramboll, 2020). A State and County database review, zoning review, and review of information obtained from the WDNR Bureau for Remediation and Redevelopment Tracking System (BRRTS) also indicate that the objectives of the ICs are being met.

*Long Term Stewardship*

An Institutional Controls Implementation and Assurance Plan (ICIAP) was developed in conjunction with the Site Operation and Maintenance (O&M) Plan and finalized in September 2016. The ICIAP

discusses the implementation of ICs related to zoning restrictions, deed restrictions, and the use of fences and signs to preserve the integrity of the remedy, including the following:

- Activity and use limitations that will include contact barrier systems (i.e., the upland soil cap and Pond and River caps) and limitations to commercial and industrial uses;
- Demonstration that ICs are applied to physical areas that do not support UU/UE;
- Proprietary controls; and
- Long-term stewardship.

The ICIAP describes the IC-required land-use restrictions and documents procedures for effectively implementing the ICs. The ICIAP is included as Appendix B of the O&M Plan (NRT, 2016).

Groundwater ICs will be maintained until it can be shown that media-specific CLs have been met. Upland ICs will continue to be monitored during regular soil cover inspections.

### **System Operations/Operation and Maintenance**

The O&M Plan (NRT, 2016) describes activities related to groundwater monitoring; inspection and maintenance of the soil cover; inspection, maintenance and replacement, if necessary, of the groundwater monitoring wells; monitoring and maintenance of the restorative sand/carbon caps in the Pond and River; and annual review and certification of ICs.

#### *Soil Cover*

The Soil Cover Monitoring and Maintenance Plan (SCMMP) included in Appendix D of the 2016 O&M Plan identifies monitoring and maintenance of the soil remedial action. The following information is provided in the SCMMP:

- Schedule, materials, equipment, and procedures for ongoing routine monitoring and maintenance of the cover components to document the long-term effectiveness of the existing city parking lot and surface soils as protective covers of the contaminated subsurface soil.
- A contingency plan for the actions that will be taken to provide protectiveness in the event the City decides to remove, repave, or reconfigure the parking lot or if other construction activities take place on-site.

In general, the soil cover consists of fill over WPSC owned property and portions of Pfiffner Pioneer Park, and reconstructed paving along sections of Crosby Avenue. Figure 1 (Attachment 2) defines the extent of the soil cover requiring monitoring and maintenance. The soil cover is inspected annually to verify that it continues to prevent exposure to underlying soils and groundwater. Inspections are conducted to identify areas where soil has rills, eroded, or significantly settled that may result in ponding water and to identify cracked pavement, potholes, or ruts. Soil cover maintenance will be required for overall conditions of poor or critical areas as detailed below:

- Good: 80-100% vegetation and minimal visible signs of erosion, minimal asphalt cracking;
- Fair: 60-80% vegetation, limited rills, or isolated settlement less than 3-inches deep, isolated asphalt cracking <0.5-inch wide;

- Poor: 40-60% vegetation, channelization, and widespread settlement < 3-inches deep, widespread asphalt cracking <0.5-inches, isolated potholes; or
- Critical: <40% vegetation, channelization, and widespread settlement >3-inches deep, widespread asphalt cracking >0.5-inches, and widespread potholes.

Soil Cover Monitoring is performed each spring. During this FYR period, soil cover monitoring occurred in April 2016, 2017, 2018, and 2019.

### Cap maintenance and monitoring

Most recent soil cover inspection observations were made during the April 2019 soil cover inspection and groundwater sampling event (Ramboll, 2019). This soil cover inspection is the fourth documented inspection of the Site. During the April 2019 soil cover inspection, all areas were found to be in good or fair condition, except in the western portion of the parking lot, where asphalt cracking, large potholes, loose gravel, and degradation were observed. This area is in poor condition; however, no ponding or issues with drainage were observed and it continues to provide a barrier to direct contact with the top four feet of soil.

In October 2018 and December 2019, representatives from the City and WPSC discussed the future use of the area and the potential for redevelopment. Since the barrier remains effective no modifications must be made at this time while the City evaluates options for redevelopment.

### *Groundwater*

The NAIMP establishes a program for evaluating progression of the aquifer toward achieving groundwater CLs through natural attenuation. Figure 1 (Attachment 2) defines the extent of the groundwater plume requiring monitoring. Groundwater is sampled semi-annually to verify the progress of natural attenuation. The NAIMP is designed to detect and monitor relevant Site conditions including, but not limited to:

- Horizontal or vertical expansion or contraction of the Site groundwater contaminant plume, especially in areas where homes or other buildings may be at risk for vapor intrusion;
- Changes in the concentration of Site groundwater contaminants over time to verify whether groundwater contamination levels are declining over time; and
- Changes in the chemical properties of the groundwater indicative of conditions favorable to MNA.

Groundwater sampling has been conducted in April and October of each year since the beginning of O&M in October 2014.

### *Pond and River*

Pfiffner Pioneer Park Pond and Wisconsin River sand caps with activated carbon are monitored every five years after placement of the material to support the FYRs. Provisions for ending the long-term monitoring program will include considerations such as a decreasing trend in contaminant concentrations and/or increased Pond cap thickness due to sedimentation. Pond and river monitoring during this FYR period was performed in April 2020.

## *Annual IC Review*

ICs for groundwater and land use are reviewed for the Groundwater Annual Report. State and County database review has not identified any private groundwater wells on the Site or adjoining properties. There are no records of City or private wells on the Site or adjoining properties and the closest private well is located approximately 2,300 feet southeast of the Site.

BRRTS review has not identified any spills/releases of petroleum products and/or hazardous substances at the Site or surrounding area that would impact the effectiveness of the natural attenuation remedy. In addition, as of October 2019, there have been no construction activities or land use changes that would impact the Site.

Land use for the Site and surrounding properties is unchanged, however, some land has been rezoned since remedy completion. The former WPSC MGP facility property is zoned “Central Business” while properties adjoining to the north are zoned “Multi-Family II” and “Central Business Transition.” The properties that border Water Street and Crosby Avenue to the east and south are still zoned “Central Business,” while Pfiffner Park is still zoned “Conservancy.”

### **III. PROGRESS SINCE THE LAST REVIEW**

This is the first FYR for the Site.

### **IV. FIVE-YEAR REVIEW PROCESS**

#### **Community Notification, Involvement & Site Interviews**

A display ad was placed in the *Stevens Point Journal* on 11/5/2019 stating that a FYR was underway and inviting the public to submit comments to EPA (Appendix D). The Site’s web page ([www.epa.gov/superfund/wp-sc-stevenspoint](http://www.epa.gov/superfund/wp-sc-stevenspoint)) was also updated to invite public comments on the FYR. The results of the review and the report will be made available at the Site information repository at the Charles M. White Library, 1001 Main Street, Stevens Point, in another newspaper display ad and at [www.epa.gov/superfund/wp-sc-stevenspoint](http://www.epa.gov/superfund/wp-sc-stevenspoint). No public comments regarding the FYR have been received; no interviews were requested or conducted.

#### **Data Review**

##### *Groundwater monitoring and MNA progress*

The groundwater remedial action relies on ICs to address groundwater above the CLs and MNA to demonstrate movement of groundwater quality towards the CLs. Semi-annual groundwater monitoring of MNA progress was initiated in October 2014. Thirty-three monitoring wells are located in the vicinity of the Site, covering approximately 40 acres (Figure 1 in Appendix H). Wells are located on the WPSC property as well as on public and private property to the east, west, and south. The monitoring program involves assigning each well to one or more of four monitoring categories. These monitoring categories include:



- Sentry Wells - Wells that are not impacted by the Site's groundwater contamination;
- Performance Wells - Wells located in the area of the groundwater contamination;
- Vapor Intrusion Wells - Wells used to evaluate potential vapor intrusion risk; and
- Potentiometric Wells - Wells used to calculate ground water flow direction.

A summary of the well locations and associated purpose as it relates to the above categories is presented in Table 4 (Attachment 1). Water level measurements are collected from the monitoring wells identified in the groundwater flow category included in Table 4.

Overall, there have been no significant changes to the groundwater conditions at the Site or vicinity since monitoring began in 2014. Figures 3 – 6 (Attachment 2) show the potentiometric surface in shallow and deep aquifers for April and October 2019. Groundwater flow characteristics change seasonally and are sensitive to River elevation, which is consistent with previous years' measurements.

### Groundwater Sampling Data Review

Baseline values for remedy performance were established April 2014. Groundwater sampling has been conducted semi-annually since the beginning of O&M in October 2014. Samples are analyzed for Site COCs, manganese, alkalinity, nitrite and nitrate, sulfate, methane and field parameters, and the results are compared to CLs. Since the beginning of O&M in October 2014, the COCs presented in Table 5 below were found to exceed relevant CL criteria at least once.

**Table 5: Exceedances in Groundwater**

Contaminant of Concern	Groundwater CL (µg/L)	Number of exceedances	Number of Monitoring Wells with Exceedances	Maximum Concentration Detected (µg/L)	Location of Maximum Concentration
Benzene	5	33	7	485	OW-09
Benzo[a]anthracene	0.029	30	8	4.3	PZ-07B
Benzo[a]pyrene	0.2	5	5	3.7	PZ-07B
Benzo[b]fluoranthene	0.02	9	7	8.3	PZ-07B
Benzo[k]fluoranthene	0.29	3	3	3.6	PZ-07B
Chrysene	0.02	9	7	7.3	PZ-07B
Dibenz[a,h]anthracene	0.0029	10	9	0.058	OW-14
Indeno[1,2,3-cd]pyrene	0.029	13	8	3	PZ-07B
Naphthalene	100	40	8	3,090	OW-09
Iron	300	175	22	41,900	OW-02

A plume containing organic compounds, as indicated by benzene and naphthalene concentrations (Figures 7-10 in Attachment 2), has been delineated extending from the western edge of the former MGP property eastward toward the former Center Point Mall building, which is approximately 350 feet east of the former MGP property boundary. Plume extents are generally reduced or comparable to baseline conditions illustrated by April 2014 groundwater conditions. With the exception of iron, the plume of COCs is limited at depth in the aquifer and these results are similar to concentrations previously observed at the Site. This pattern also fits the conceptual site model because the Wisconsin River is a regional groundwater discharge area, and upward vertical gradients are expected to inhibit COC migration at depth.

Outside the groundwater IC area, PAH exceedances associated with the former MGP were measured in the following four wells:

- OW02 – Benzo(a)anthracene (CL 0.029 ug/L) was detected at concentrations exceeding the CL in five of 11 sampling events since October 2014. Concentrations ranged from <0.094 ug/L to 0.055ug/L. No other organic constituents were measured above their respective CLs.
- OW11 – Dibenz(a,h)anthracene (CL 0.0029 ug/L) was detected above the CL in October 2019 at 0.029 ug/L. No other organic constituents were measured above their respective CLs.
- OW20 – Dibenz(a,h)anthracene (CL 0.0029 ug/L) and indeno(1,2,3-cd)pyrene (CL 0.029 ug/L) were detected at concentrations exceeding the CL in well OW20, once in April 2019 at 0.014 ug/L and 0.083, respectively. However, sentry wells OW15 and OW18, located between OW20 and the groundwater IC area, did not exceed the CL; indicating these exceedances may not be associated with the former MGP. No other organic constituents were measured above their respective CLs.
- OW23 – Four PAHs were detected at concentrations exceeding the CL in April 2019:
  - Benzo(b)fluoranthene (CL 0.2 ug/L) detected at 0.21 ug/L;
  - Chrysene (CL 0.2 ug/L) detected at 0.21ug/L;
  - Dibenz(a,h)anthracene (CL 0.0029 ug/L) detected at 0.023 ug/l; and
  - Indeno(1,2,3-cd)pyrene (CL 0.029 ug/L) detected at 0.11 ug/L.

This is the first sampling event of OW23 with concentrations greater than CLs since O&M began in October 2014. No other organic constituents were measured above their respective CLs.

Trends for these constituents appear to be decreasing since O&M began; however, due to their locations outside of the IC area, they should continue to be monitored for additional exceedances and potentially increasing trends. If trends begin to increase, or groundwater contamination threatens a water supply well, additional groundwater ICs may be necessary.

Iron water table and deep groundwater plumes (Figures 11 and 12 in Attachment 2) extend from the upgradient western edge of the Pfiffner Pioneer Park eastward beneath the former MGP property, the Water Street and Center Point Drive right-of-way, and beneath the Mid-State Technical College property. Iron CL exceedances have been historically prevalent across the Site and adjoining properties at shallow and deep groundwater wells that are both inside and outside the benzene and naphthalene plumes.

Average iron concentrations in plume wells are higher than in outside plume wells which is a positive indication that microbial activity and biodegradation is occurring. However, the average iron concentrations exceed the CL at both inside plume wells and outside plume wells. The average iron concentrations at wells outside the plume and the IC areas (Table 4 in Attachment 1) are:

- 19,053 µg/L at OW11
- 4,700 µg/L at OW15
- 5,119 µg/L at OW17
- 79 µg/L at OW20
- 109 µg/L at OW23

The CL exceedances at outside plume wells, including at well OW17 which is next to the Wisconsin River (a source of upgradient groundwater), indicates background concentrations of iron in groundwater are significantly higher than the CL. Iron continues to be an indicator of natural attenuation.

### Concentrations Over Time

COC concentrations do not readily fit seasonal analysis statistical tests, so a simple regression plot was created to evaluate the trends in concentration over time for each analyte in any well that had an exceedance since O&M activities began in October 2014 (Figures 13-22 in Attachment 2). For each plot, the coefficient of determination ( $R^2$ ) values are consistently low, reflecting the highly variable nature of contaminant concentrations at the Site.

In general, trends across the Site are stable or decreasing for PAHs and benzene. Iron trends are increasing at most locations tested. For the trendlines, slopes that are less than 0.0001 are considered stable. Tables 6-9 (Attachment 1) show the results of each statistical test for lateral sentry, vertical sentry, MNA sentry and performance wells as defined in Table 4 (Attachment 1). Specifically:

- In lateral sentry wells, all concentration trends for analytes that had at least one exceedance since 10/2014 appear to be decreasing or stable, with the exception of iron. Iron trends are increasing in wells OW03R, OW11, OW15, OW17, OW18, OW20, and OW23.
- In vertical sentry wells, concentration trends for analytes that had at least once exceedance since 10/2014 were varied. In PZ03B, dibenzo(a,h)anthracene was stable, but iron was increasing. In PZ05B, both naphthalene and iron were increasing. In PZ07B, all analytes tested were increasing with the exception of naphthalene, which was decreasing. In well PZ14B, both benzo(b)fluoranthene and chrysene were increasing, and the remainder were stable. In wells PZ09B, PZ11B and PZ15B, iron was the only analyte tested, and it was increasing in each well.
- In MNA sentry wells, concentration trends for analytes that had at least once exceedance since 10/2014 were stable, with the exception of iron, which was increasing in each location.
- In performance wells, concentration trends for analytes that had at least once exceedance since 10/2014 were varied. Wells OW06A and OW07A had increasing trends for a majority of analytes tested, with the exception of benzene and naphthalene, which were decreasing. The only two other increasing trends from the performance wells were benzo(b)fluoroanthene in OW14 and naphthalene in OW05R. All analytes tested in well OW10 showed decreasing trends.

All but two (OW05R and PZ05B) of the increasing trends in organic COCs identified in this analysis might be attributed to increased concentrations measured in April or October 2019. Wells OW06, OW07, OW14, PZ07B, and PZ14B each had significant jumps in measured concentration, sometimes increasing from historically non-detect to above the CL. In wells OW06, OW07, PZ07B, and OW14, this may be influenced by an increase in groundwater elevations since Fall 2018, as shown in Figure 23 (Attachment 2). However, statistical analysis performed in the *2019 Groundwater Annual Report* (Ramboll, 2020a) show poor correlation between concentrations and groundwater elevation over time. Each of these wells is within the organic plume and inside the groundwater IC area, so protectiveness is not changed. Monitoring and statistical analysis of these trends should continue with annual reporting.

### Properties of Groundwater Favorable to MNA

Many of the MNA field and analytical parameters yield confounding results for Site wells, which reflects convergence of the two groundwater flow systems near the Site (Ramboll, 2020a). Review of MNA parameters (Table 10 in Attachment 1) suggest a primarily reducing environment is present with capacity for both aerobic and anaerobic degradation occurring via methanogenesis within the plume. Groundwater samples were analyzed for several MNA indicators including dissolved and total iron, manganese, nitrate/nitrite, sulfate, dissolved oxygen (DO), and Oxidation Reduction Potential (ORP). Statistical analysis of data from 2000-2019 (Ramboll, 2020a) show:

- Nitrate and ORP values are lower within the plume;
- Alkalinity, iron, manganese, and methane values are higher within the plume;
- Slightly higher average DO in the plume wells than the outside plume wells indicates the potential for aerobic degradation of contaminants;
- The ORP values in the plume wells are mildly negative and slightly lower than the ORP values in the outside plume wells, which is an indicator the groundwater within the plume is trending more anaerobic; and
- The presence of aerobic levels of DO and positive indicators of anaerobic biological activity suggests mixing of groundwater from inside and outside of the plume is occurring.

Groundwater collected from wells in the plume exhibit positive indications of biological activity. It is likely a combination of mixing of surface and groundwater in the vicinity of the Site, degradation of contaminants in the subsurface, and influence from the regional groundwater flow system are responsible for overall plume stability.

As noted above, the 2012 ROD stated that the contingency component of the MNA alternative would be implemented if it were determined that the spatial extent of the groundwater contamination was increasing downgradient, or if the groundwater contamination became a threat to a water supply well. Data reviewed during this FYR indicate that the MNA alternative is working as designed and the contingency component of the remedy is not needed at this time.

#### *Summary of Groundwater to Vapor Intrusion Risk*

The potential vapor intrusion risk resulting from elevated concentrations of COCs in groundwater has been investigated and documented in the Remedial Investigation (RI) report (NRT, 2012). The investigations presented in the RI Report concluded that concentrations of benzene and naphthalene in groundwater do not correlate with detections of these compounds in soil gas, and impacted groundwater resulting from MGP operations did not present a vapor intrusion risk. Further, the sandy soil, oxygen content, and depth to groundwater (between 11 and 12 feet at OW10) are conducive to degradation of petroleum VOCs.

As of this review, COC concentrations in wells closest to nearby off-site buildings continue to decrease. Plumes appear to be stable or decreasing in size, and no additional building has occurred on-site or nearby. Because of this, the vapor intrusion pathway remains incomplete.

#### *River Sediment Cap and Pond Cap remedy performance*

Every five years, performance of the river sediment cap and pond cap are monitored, and the reports are submitted in the Five-Year Review Sediment Sampling Report (Ramboll, 2020b). The first of these

reports was completed in June 2020. Core samples were collected at three locations in the pond (PC-1 through PC-3), and one location in the River (RT-1). Poling was performed in the vicinity of the five Pond locations used to verify cap thickness after construction in 2015 (PT-1 through PT-5) in addition to the core sampling locations. Figure 24 (Attachment 2) shows poling and sediment sampling locations for this effort.

### Sediment Poling and Core Sample Observations

Sediment poling found sediment deposition on the cap was limited with one inch or less of sediment deposition observed in the Pond and River. Poling was also completed at four arbitrary points along the boundary of the armor layer in the River to confirm the presence of the armor layer. Based on results of the poling, the armor layer is still present in the River.

Between 13 and 15 inches of sand was recovered in all three cores from the Pond and approximately 14 inches of sand was recovered from the River core. Material below the sand layer was only recovered in one Pond location (PC-1) and was not recovered in the River location. The material beneath the sand layer in PC-1 consisted of very dark brown organic silt. Approximately one inch of the gravel armor layer overlying the River cap was recovered. No visual evidence of impacts or odors were observed in any of the cores collected from the Pond or River.

### Sediment sampling results

Pond and River caps are considered effective if the composite sand cap sample interval (top 6 inches of the sand cap) of the Pond and River cap material remains below the CLs. Based on the results of the sediment sampling presented in Table 11 below, none of the Pond or River samples collected from the composite sand cap sample interval (0 to 6-inch depth) or the deeper composite sample interval (6 to 15-inch depth) had tPAH-13, lead, mercury, or xylenes (total) concentrations exceeding their respective CLs.

**Table 11: Sediment Sample Results**

COC	CL (µg/L)	Pond Maximum Concentration (µg/L)	River Maximum Concentration (µg/L)
tPAH-13	22,800	15,100	374
Lead	128,000	17,600	1,900
Mercury	1,060	<14	<13
Xylenes (total)	465	<13.7	<11.9

In addition, the physical observations made during the sampling indicate that the sand caps in the Pond and River are present and intact.

### Site Inspection

The inspection of the Site was conducted on 12/3/2019 and again on 6/11/2020, due to December snowfall. In attendance in December were Stephanie Ross, RPM, EPA; Matthew Vitale, Project Manager, WDNR; Ryan Kernosky, Community Development Director, City of Stevens Point; Joel Lemke, Public Utilities Director, City of Stevens Point; Dan Kremer, Parks, Recreation & Forestry Director, City of Stevens Point; and Frank Dombrowski, Principal Environmental Consultant, WEC

Energy Group, representing the PRP. The purpose of the inspection was to assess the protectiveness of the remedy.

A Site walk was conducted during the December meeting, however, recent snowfall prevented observation of the condition of the grassed cap and some parking lot areas. Discussion at this time yielded no concerns about the condition or protectiveness of the remedy (Appendix E). Upon return in June 2020, no issues regarding the condition of the grass cap, asphalt cap, or pond and river caps were identified. Some potholes and erosion are present on the City-owned parking lot (see Appendix F for Site photographs). The condition of the parking lot is known by both the City and the PRP and is slated to be repaired at the time of any future redevelopment of the area, though the cap in this area remains protective. Monitor wells are locked and in good condition. Further, no Site uses which are inconsistent with the implemented ICs or remedy IC objectives were noted during the Site inspection for this FYR.

## **V. TECHNICAL ASSESSMENT**

**QUESTION A:** Is the remedy functioning as intended by the decision documents?

Yes.

All implemented components of the remedy required by the decision documents are functioning as intended. Based on groundwater monitoring data since O&M began in 2014, concentrations of a majority of Site COCs remain stable or are slowly declining, and groundwater plumes continue to shrink. Pond and River contaminated sediment continues to be contained, and the vapor intrusion pathway remains incomplete. MNA appears to be successful, however, increasing trends were identified for PAHs in a few select wells within and outside of the groundwater IC area and should continue to be monitored. Because trends in wells outside of the groundwater IC area are decreasing and are not a threat to water supply wells, no additional action is necessary at this time.

Portions of the cap in the western portion of the parking lot were degraded, with asphalt cracking, large potholes, and loose gravel observed. Because no ponding or issues with drainage were observed and it continues to provide a barrier to direct contact with the top four feet of soil, repair of the cap in this area is expected to coincide with City redevelopment plans.

ICs in the form of continuing obligations were put into place in 2016. Further, a final ICIAP was approved on September 27, 2016, and contains procedures to ensure long-term IC monitoring, including regular inspections of controls at the Site, reviews of the ICs in place, annual ICs reports with results of the inspection, and review and certification to EPA that ICs remain in place and are effective. Additionally, no Site uses which are inconsistent with the implemented ICs or remedy IC objectives were noted during the Site inspection for this FYR.

Additional groundwater ICs may be necessary if COC concentrations in wells outside of the IC area continue to have exceedances or begin to have increasing trends.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?

Yes.

The exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of remedy selection are still valid. There have been no changes in land use at or near the Site; however, the City has indicated that they would like to redevelop the corridor adjacent to the Site, which could potentially change zoning and land use at the Site. Human health exposure routes or receptors have not changed since remedy selection. There are no newly identified contaminants or unanticipated toxic byproducts based on current information. Toxicity information and current risk assessment methodologies have not changed significantly so as to affect the protectiveness determination. The remedy is progressing as expected towards meeting RAOs.

**QUESTION C:** Has any other information come to light that could call into question the protectiveness of the remedy?

No. There have been no impacts from climate change or natural disasters at the Site. Water levels in the Wisconsin River and groundwater flow continue to be consistent with historical data.

## VI. ISSUES/RECOMMENDATIONS

### Issues and Recommendations Identified in the Five-Year Review:

OU(s): Sitewide	<b>Issue Category:</b> Institutional Controls			
	<b>Issue:</b> PAH exceedances were detected in wells OW02, OW11, OW20 and OW23, located outside of the groundwater IC area.			
	<b>Recommendation:</b> Based on monitoring results, determine if additional groundwater ICs are needed and, if so, implement them.			
<b>Affect Current Protectiveness</b>	<b>Affect Future Protectiveness</b>	<b>Party Responsible</b>	<b>Oversight Party</b>	<b>Milestone Date</b>
No	Yes	PRP	EPA	10/5/2024

## OTHER FINDINGS

In addition, the following recommendation was identified during the FYR but does not affect current protectiveness:

- *At the time of Site inspection, the asphalt cap in the western parking lot appeared to be degraded. Continued monitoring to confirm protectiveness is still effective should be performed until such time as a repair can be made during City redevelopment construction.*

## VII. PROTECTIVENESS STATEMENT

### OU1 and Sitewide Protectiveness Statement

*Protectiveness Determination:*

Short-term Protective

*Protectiveness Statement:*

The Sitewide remedy currently protects human health and the environment because the remedy has been fully implemented and there are no complete exposure pathways to the contaminants remaining at the Site. Additionally, ICs that protect against groundwater use and soil exposures have been completed and filed with WDNR and the City of Stevens Point. An O&M Plan with an ICIAP has been approved for the Site to ensure the ICs for the Site remain protective. However, in order for the remedy to be protective in the long term, the following action needs to be taken to ensure protectiveness: continued monitoring of concentrations of COCs outside of the IC area to confirm decreasing trends should be performed.

**VIII. NEXT REVIEW**

The next FYR report for the WPSC Stevens Point Superfund Site is required five years from the completion date of this review.



ATTACHMENT 1

Tables 4, 6-10

**Table 4. Monitoring Well Locations and Purpose (Revised June 2017)**

Wisconsin Public Service Corporation - Former Stevens Point Manufactured Gas Plant Site  
 1111 Crosby Avenue, Stevens Point, Wisconsin  
 USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Current Name	Proposed Name	Monitoring Zone	Sentry			Performance		Vapor Intrusion	Potentiometric
			Lateral Plume Definition	Vertical Plume Definition	Outside Plume MNA Monitoring	Plume Concentration Trends	Inside Plume MNA Monitoring	GW to Vapor	Groundwater Flow
OW-01	OW01	WT	X					X	X
OW-02	OW02	WT				X	X	X	X
OW-03R	OW03R	WT	X					X	X
OW-04	OW04	WT							X
OW-05R	OW05R	WT				X	X	X	X
OW-06	OW06	WT				X	X	X	X
OW-07A	OW07A	WT				X	X	X	X
OW-08	OW08	WT							X
OW-09	OW09	WT				X	X	X	X
OW-10	OW10	WT				X	X	X	X
OW-11	OW11	WT	X		X			X	X
OW-12	OW12	WT				X	X	X	X
OW-14	OW14	WT				X	X	X	X
OW-15	OW15	WT	X		X			X	X
OW-16	OW16	WT							X
OW-17	OW17	WT	X		X			X	X
OW-18	OW18	WT	X					X	X
OW-19	OW19	WT							X
OW-20	OW20	WT	X		X			X	X
TW-01	OW22	WT							X
TW-02	OW23	WT	X		X			X	X
PZ-03B	PZ03B	D		X				X	X
PZ-05B	PZ05B	D		X				X	X
PZ-07B	PZ07B	D		X				X	X
PZ-09B	PZ09B	D		X				X	X
PZ-10B	PZ10B	D		X				X	X
PZ-11B	PZ11B	D		X				X	X
PZ-12B	PZ12B	D							X
PZ-13	PZ13B	D							X
PZ-14B	PZ14B	D		X				X	X
PZ-15B	PZ15B	D		X				X	X
PZ-16B	PZ16B	D							X

(U: AGC 5/26/17, C: BGH 5/26/17, U: AGC 6/13/17, C: BGH 6/14/17)

OW : Water table monitoring well

P/PZ : Piezometer

WT: Water table

D: Deep groundwater

MNA: Monitored Natural Attenuation

The potential vapor intrusion risk will be assessed as described in Section 5.5 of the NAIMP



Table 7: Trends in vertical sentry wells for analytes with an exceedance after construction of the remedy

Well	PZ03B	PZ05B	PZ07B	PZ09B	PZ11B	PZ14B	PZ15B
Benzo(a)anthracene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0009x - 38.032 R <sup>2</sup> = 0.2272 increasing	-- -- --	-- -- --	y = 4E-05x - 1.685 R <sup>2</sup> = 0.3159 stable
Benzo(a)pyrene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0008x - 32.74 R <sup>2</sup> = 0.2272 increasing	-- -- --	-- -- --	y = 6E-05x - 2.5053 R <sup>2</sup> = 0.3791 stable
Benzo(b)fluoranthene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0017x - 73.444 R <sup>2</sup> = 0.2272 increasing	-- -- --	-- -- --	y = 0.0001x - 5.0814 R <sup>2</sup> = 0.4507 increasing
Benzo(k)fluoranthene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0001x - 5.751 R <sup>2</sup> = 0.2272 increasing	-- -- --	-- -- --	-- -- --
Chrysene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0015x - 64.581 R <sup>2</sup> = 0.2271 increasing	-- -- --	-- -- --	y = 0.0001x - 5.0603 R <sup>2</sup> = 0.4997 increasing
Dibenzo(a,h)anthracene	Trendline equation R <sup>2</sup> Trend	y = 2E-06x - 0.0727 R <sup>2</sup> = 0.0417 stable	-- -- --	-- -- --	-- -- --	-- -- --	y = 1E-05x - 0.4892 R <sup>2</sup> = 0.3346 stable
Indeno(1,2,3-cd)pyrene	Trendline equation R <sup>2</sup> Trend	-- -- --	-- -- --	y = 0.0006x - 26.546 R <sup>2</sup> = 0.2272 increasing	-- -- --	-- -- --	y = 5E-05x - 2.1108 R <sup>2</sup> = 0.3705 stable
Naphthalene	Trendline equation R <sup>2</sup> Trend	-- -- --	y = 0.2656x - 11101 R <sup>2</sup> = 0.2631 increasing	y = -0.5404x + 23764 R <sup>2</sup> = 0.0757 decreasing	-- -- --	-- -- --	-- -- --
Iron	Trendline equation R <sup>2</sup> Trend	y = 2.8613x - 118538 R <sup>2</sup> = 0.2253 increasing	y = 2.8991x - 119566 R <sup>2</sup> = 0.3213 increasing	y = 1.025x - 41456 R <sup>2</sup> = 0.3103 increasing	y = 0.9204x - 38154 R <sup>2</sup> = 0.2087 increasing	y = 0.3544x - 14782 R <sup>2</sup> = 0.4439 increasing	-- -- --



Table 9: Trends in performance wells for analytes with an exceedance after construction of the remedy

Well	OW02	OW05R	OW06	OW7A	OW09	OW10	OW12	OW14	
Benzene	Trendline equation	--	$y = -0.0207x + 923.96$	--	$y = -0.0002x + 19.357$	$y = -0.0256x + 1288.4$	$y = -0.0048x + 208.63$	$y = -0.0061x + 265.94$	$y = -0.0035x + 163.84$
	R <sup>2</sup>	--	R <sup>2</sup> = 0.0393	--	R <sup>2</sup> = 0.001	R <sup>2</sup> = 0.0179	R <sup>2</sup> = 0.2327	R <sup>2</sup> = 0.32	R <sup>2</sup> = 0.0173
	Trend	--	decreasing	--	decreasing	decreasing	decreasing	decreasing	decreasing
Benzo(a)anthracene	Trendline equation	$y = -3E-05x + 1.4634$	$y = -3E-05x + 1.4635$	$y = 0.0007x - 30.027$	$y = 0.0002x - 8.0651$	--	--	--	$y = 6E-05x - 2.304$
	R <sup>2</sup>	R <sup>2</sup> = 0.445	R <sup>2</sup> = 0.0401	R <sup>2</sup> = 0.2287	R <sup>2</sup> = 0.2352	--	--	--	R <sup>2</sup> = 0.0916
	Trend	stable	stable	increasing	increasing	--	--	--	stable
Benzo(a)pyrene	Trendline equation	--	--	$y = 0.0006x - 26.499$	$y = 0.0001x - 6.0165$	--	--	--	$y = 6E-05x - 2.6047$
	R <sup>2</sup>	--	--	R <sup>2</sup> = 0.2265	R <sup>2</sup> = 0.2272	--	--	--	R <sup>2</sup> = 0.1424
	Trend	--	--	increasing	increasing	--	--	--	stable
Benzo(b)fluoranthene	Trendline equation	--	$y = -5E-05x + 2.2584$	$y = 0.0013x - 56.654$	$y = 0.0003x - 12.432$	--	--	--	$y = 0.0001x - 4.7511$
	R <sup>2</sup>	--	R <sup>2</sup> = 0.2745	R <sup>2</sup> = 0.228	R <sup>2</sup> = 0.2291	--	--	--	R <sup>2</sup> = 0.1435
	Trend	--	decreasing	increasing	increasing	--	--	--	increasing
Benzo(k)fluoranthene	Trendline equation	--	--	$y = 0.0007x - 31.638$	$y = 0.0001x - 5.751$	--	--	--	--
	R <sup>2</sup>	--	--	R <sup>2</sup> = 0.2682	R <sup>2</sup> = 0.2272	--	--	--	--
	Trend	--	--	increasing	increasing	--	--	--	--
Chrysene	Trendline equation	--	$y = -6E-05x + 2.5797$	$y = 0.0011x - 47.242$	$y = 0.0003x - 11.603$	--	--	--	$y = 9E-05x - 3.8138$
	R <sup>2</sup>	--	R <sup>2</sup> = 0.1848	R <sup>2</sup> = 0.2322	R <sup>2</sup> = 0.2785	--	--	--	R <sup>2</sup> = 0.1065
	Trend	--	stable	increasing	increasing	--	--	--	stable
Dibenzo(a,h)anthracene	Trendline equation	--	--	--	--	--	$y = -3E-07x + 0.0154$	$y = 1E-05x - 0.467$	
	R <sup>2</sup>	--	--	--	--	--	R <sup>2</sup> = 0.0158	R <sup>2</sup> = 0.1821	
	Trend	--	--	--	--	--	stable	stable	
Indeno(1,2,3-cd)pyrene	Trendline equation	--	--	$y = 0.0005x - 20.328$	$y = 0.0001x - 4.6008$	--	$y = -1E-05x + 0.6281$	$y = 6E-05x - 2.2834$	
	R <sup>2</sup>	--	--	R <sup>2</sup> = 0.2267	R <sup>2</sup> = 0.2272	--	R <sup>2</sup> = 0.0901	R <sup>2</sup> = 0.173	
	Trend	--	--	increasing	increasing	--	stable	stable	
Naphthalene	Trendline equation	--	$y = 0.012x - 483.41$	$y = -2.001x + 87043$	$y = -0.0121x + 711.81$	$y = -0.3751x + 18100$	$y = -0.0523x + 2328.9$	--	$y = -0.0543x + 2428.6$
	R <sup>2</sup>	--	R <sup>2</sup> = 0.0098	R <sup>2</sup> = 0.1386	R <sup>2</sup> = 0.0037	R <sup>2</sup> = 0.1304	R <sup>2</sup> = 0.062	--	R <sup>2</sup> = 0.0581
	Trend	--	increasing	decreasing	decreasing	decreasing	decreasing	--	decreasing
Iron	Trendline equation	$y = 11.957x - 495354$	$y = 5.7002x - 228964$	$y = 4.267x - 174493$	$y = 5.3321x - 217851$	$y = 11.592x - 477913$	$y = -1.4503x + 65603$	$y = 8.1005x - 335927$	$y = -0.5222x + 30909$
	R <sup>2</sup>	R <sup>2</sup> = 0.4822	R <sup>2</sup> = 0.1166	R <sup>2</sup> = 0.4049	R <sup>2</sup> = 0.4427	R <sup>2</sup> = 0.7035	R <sup>2</sup> = 0.0372	R <sup>2</sup> = 0.788	R <sup>2</sup> = 0.0022
	Trend	increasing	increasing	increasing	increasing	increasing	decreasing	increasing	decreasing

**Table 10. Comparison of MNA Parameters from Selected Outside Plume Wells and Inside Plume Wells**

Wisconsin Public Service Corporation - Former Stevens Point Manufactured Gas Plant Site  
 1111 Crosby Avenue, Stevens Point, Wisconsin  
 USEPA ID #WIN000509983 / BRRS #02-50-000079 / FID # 750081200

	Iron, Dissolved (ug/L)	Iron, Total (ug/L)	Manganese, Dissolved (ug/L)	Alkalinity, Total (mg/L)	Methane (mg/L)	Nitrogen, NO2 + NO3, Total (mg/L)	Sulfate, Total (mg/L)	Dissolved Oxygen (mg/L)	Groundwater, depth to (ft)	Oxidation Reduction Potential (millivolts)	pH, Field (Standard Units) (pH units)	Specific Conductance, Field (mmhos/cm)	Temperature, Water (Degrees Celsius) (deg c)	Turbidity, Quantitative (NTU)
Outside Plume Wells (OW11, OW15, OW17, OW20, OW23)														
Min	8.6	27.4	10.5	61.3	0.0	0.04	0.26	0.0	2.7	-281	6.0	0.2	4.0	0.0
Max	34,000	35,900	2,190	939	11.7	4.9	30.5	6.6	16.7	243	8.7	2,501	18.1	213
Average	7,287	6,158	565	165	2.0	0.45	9.6	1.06	11.2	-2.9	7.0	80.4	11.9	23.8
Inside Plume Wells (OW02, OW05R, OW06, OW07A, OW09, OW10, OW12, OW14)														
Min	<b><u>18</u></b>	<b><u>35</u></b>	<b><u>67</u></b>	20	<b><u>0.01</u></b>	<b><u>0.02</u></b>	0.26	<b><u>0.0</u></b>	6.4	<b><u>-372</u></b>	5.9	0.00	2.6	0.0
Max	<b><u>154,000</u></b>	<b><u>41,900</u></b>	<b><u>2,420</u></b>	<b><u>2,330</u></b>	<b><u>14.7</u></b>	20.4	2,220	7.7	13.0	385	8.8	2,098.3	20.5	181.7
Average	<b><u>14,247</u></b>	<b><u>13,313</u></b>	<b><u>1,029</u></b>	<b><u>246</u></b>	<b><u>3.56</u></b>	<b><u>0.40</u></b>	74.0	1.03	10.1	<b><u>-17.4</u></b>	6.8	44.10	11.5	21.5

[O: AGC 12/19/16, C: ANS 12/22/16][U: KLT 6/1/17, C: AGC 6/1/17][U: KLT 6/13/17, C: AGC 6/14/17][U: AGC 12/15/17, C: ABB 12/22/17, U: AGC 11/30/18, C: ABB 12/27/18, U: AGC 12/4/19, C: MJM 12/9/19]

**Notes:**

Observations from the Plume Wells were compared to Outside Plume Wells  
 Values that are **bold and underlined** are positive indicators for microbial activity and biodegradation within the plume.

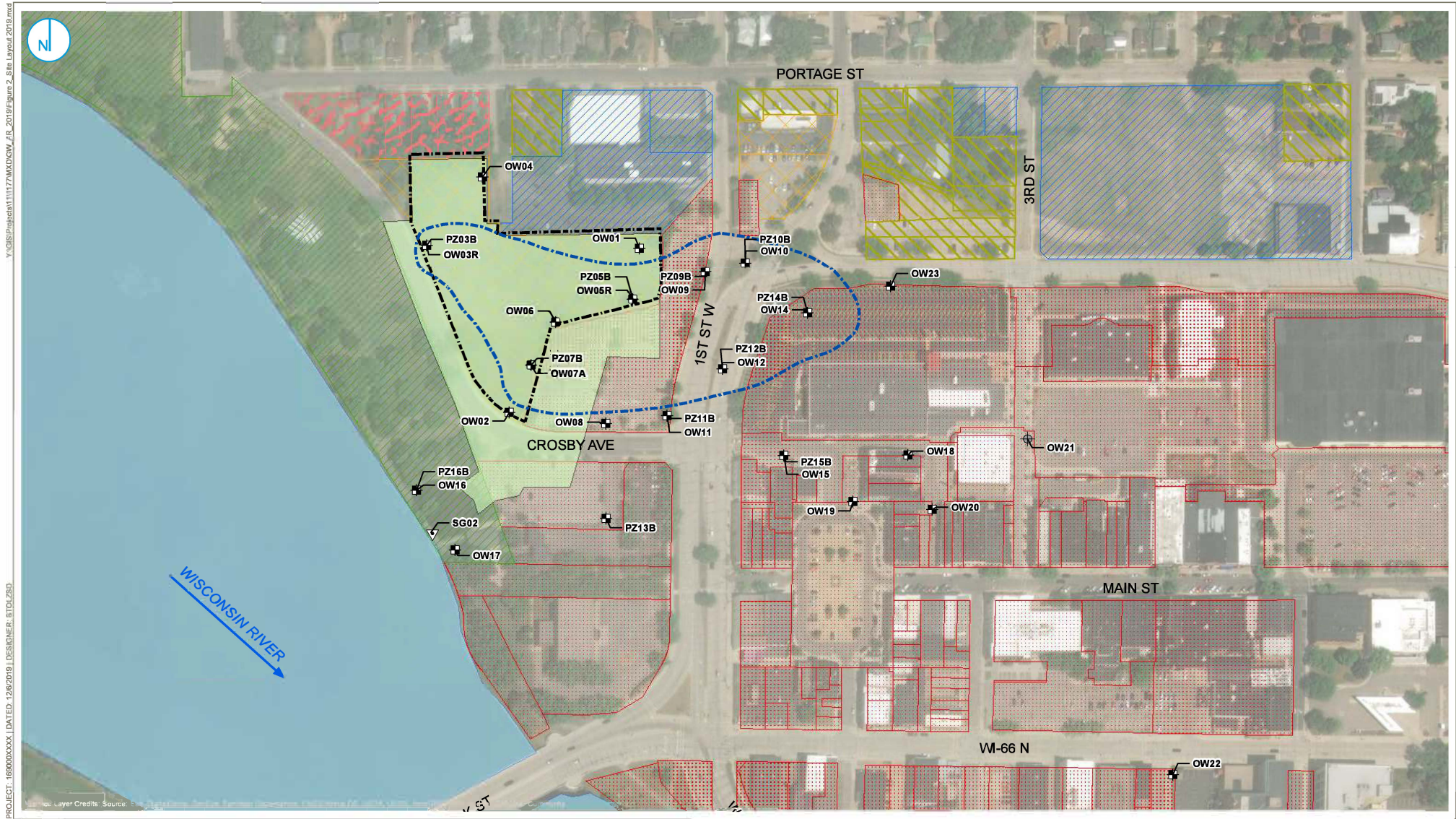
Typically, if reducing conditions are present beneath a site, the following is observed as positive indicators of microbial activity and biodegradation:

1. DO will typically be less than 0.5 mg or lower than DO readings in unaffected groundwater.
2. Nitrate and sulfate concentrations will be lower than areas of unaffected groundwater.
3. Iron and manganese are reduced and concentrations in groundwater will increase, as the reduced forms of these compounds have greater solubility than do the oxidized forms.
4. Methane concentrations will increase as methanogenesis occurs.
5. Alkalinity will increase with increased CO<sub>2</sub> released during biodegradation.
6. ORP of groundwater generally ranges from about 800 millivolts to -400 millivolts; the lower the redox potential, the greater the potential for a reducing and anaerobic environment.

## ATTACHMENT 2

### Figures





- MONITORING WELL LOCATION
- STAFF GAUGE LOCATION
- ABANDONED MONITORING WELL LOCATION
- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- SOIL INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER

- Zoning**
- Central Business
  - Central Business Transition
  - Commercial
  - Conservancy
  - Light Industrial
  - Multi-Family II



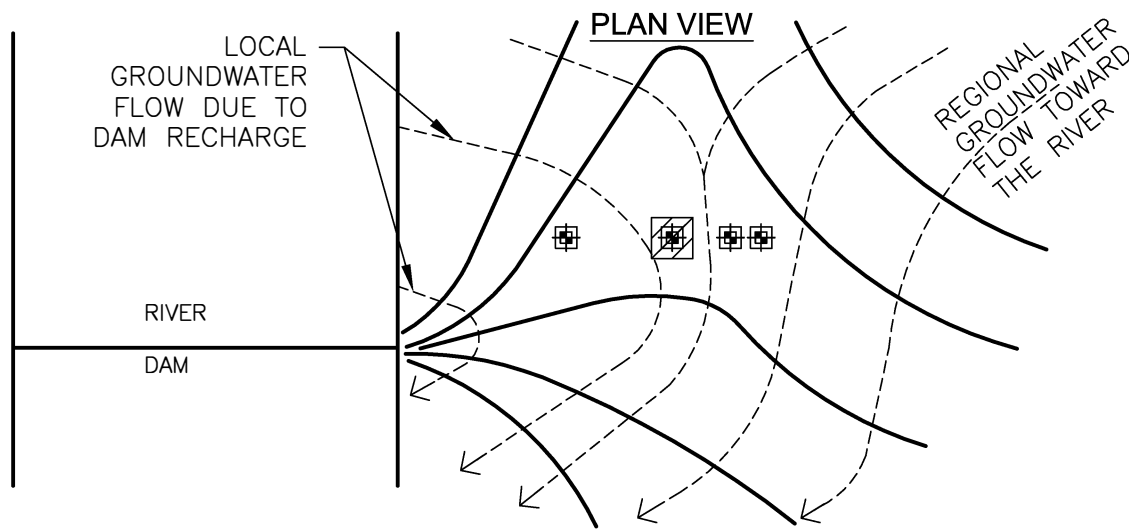
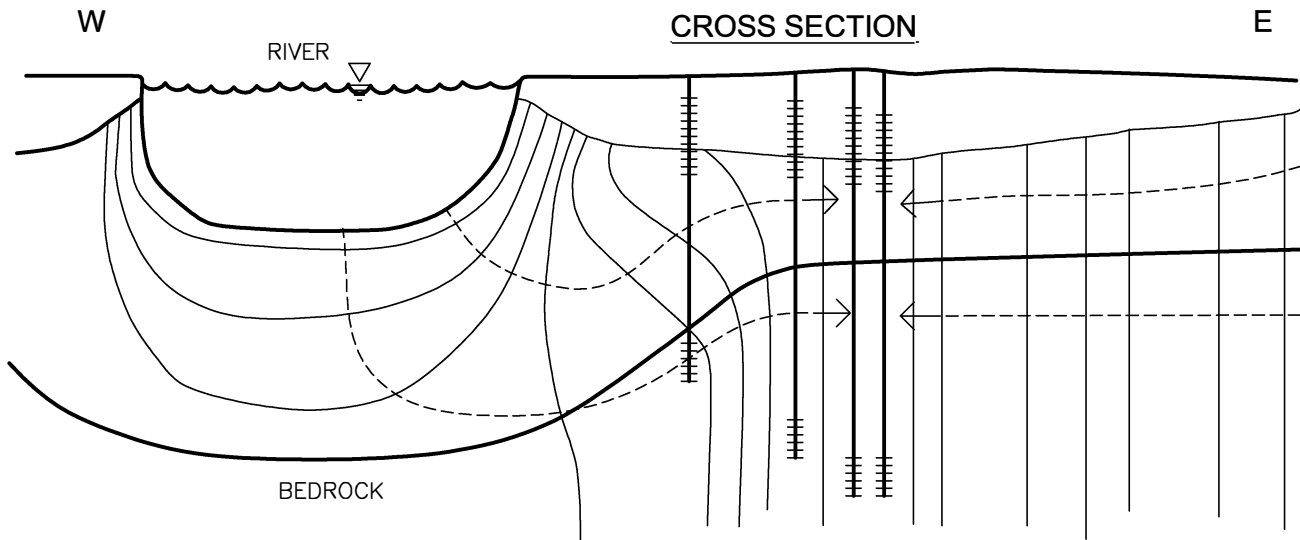
**CURRENT SITE LAYOUT AND VICINITY**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

**FIGURE 01**

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





LEGEND	
	MGP FACILITY
	NESTED WELL
	GW CONTOURS
	EQUIPOTENTIAL LINE
	FLOW DIRECTION
	WATER LEVEL
	WELL SCREEN

## CONCEPTUAL FLOW MODEL

REMEDIAL INVESTIGATION REPORT  
 STEVENS POINT MGP SITE  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

DRAWN BY: KNW 05/10/11 APP'D BY: EPK DATE: 05/24/11

PROJECT NO.  
1177/14.12C

DRAWING NO.  
1177-1412C-A18

FIGURE NO.  
2





- MONITORING WELL LOCATION AND WATER TABLE ELEVATION IN FEET (MSL)
- MONITORING WELL LOCATION NOT USED FOR WATER TABLE CONTOURS
- STAFF GAUGE LOCATION
- WATER TABLE ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, MSL)
- INFERRED WATER TABLE ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARY
- RIVER



NOTES:  
 1. OW17 NOT USED TO DEVELOP WATER TABLE CONTOURS AS WELL IS SCREENED IN SHALLOW BEDROCK.  
 2. GROUNDWATER ELEVATIONS IN PARENTHESES NOT USED FOR CONTOURING

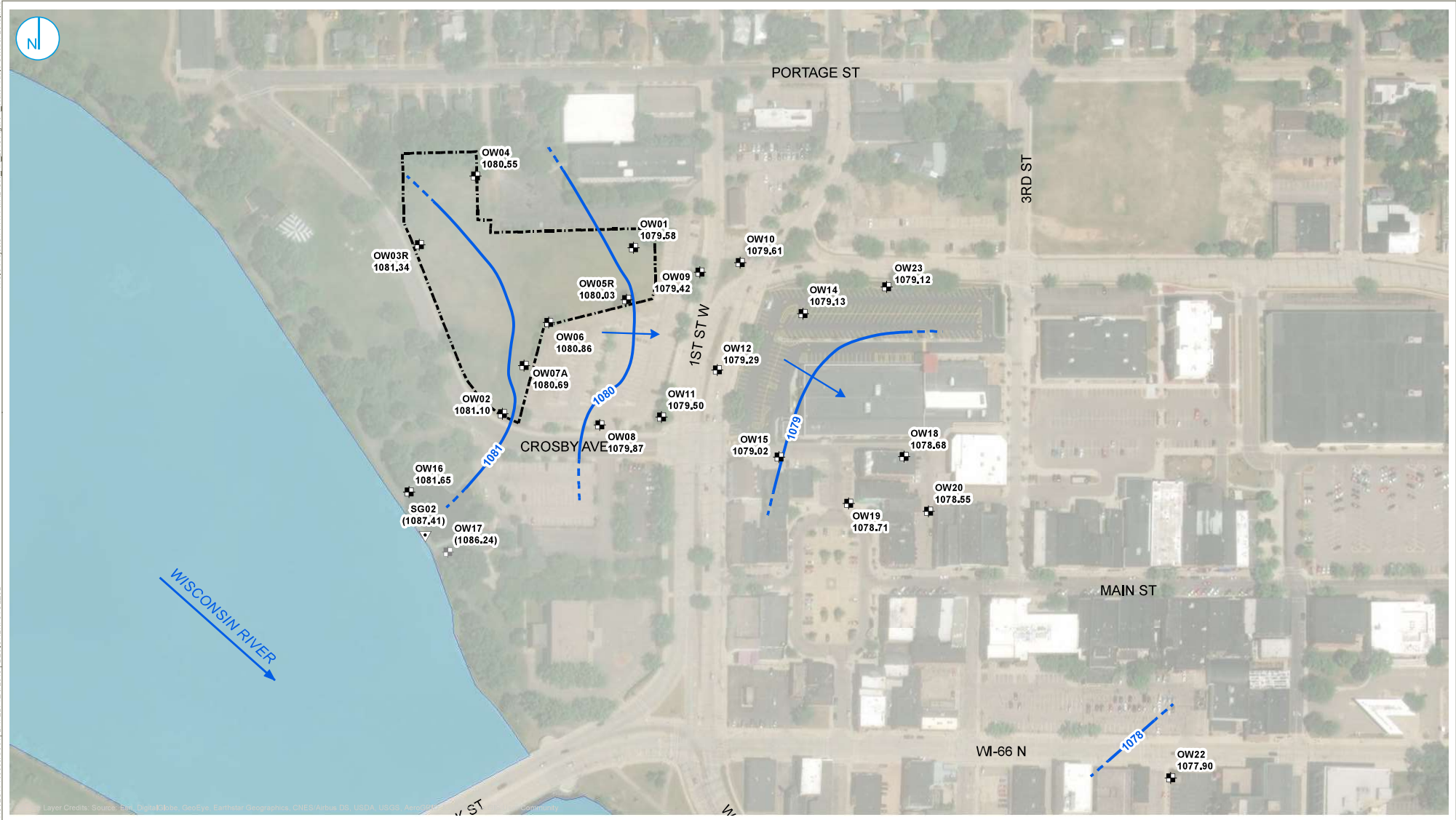
**WATER TABLE ELEVATION CONTOUR MAP**  
**APRIL 22, 2019**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

**FIGURE 03**

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





- MONITORING WELL LOCATION AND WATER TABLE ELEVATION IN FEET (MSL)
- MONITORING WELL LOCATION NOT USED FOR WATER TABLE CONTOURS
- STAFF GAUGE LOCATION
- WATER TABLE ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, MSL)
- INFERRED WATER TABLE ELEVATION CONTOUR
- PROPERTY BOUNDARY
- GROUNDWATER FLOW DIRECTION
- RIVER

NOTES:  
 1. OW17 NOT USED TO DEVELOP WATER TABLE CONTOURS AS WELL IS SCREENED IN SHALLOW BEDROCK.  
 2. GROUNDWATER ELEVATIONS IN PARENTHESES NOT USED FOR CONTOURING

**WATER TABLE ELEVATION CONTOUR MAP  
 OCTOBER 7, 2019**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

**FIGURE 04**

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





- PIEZOMETER LOCATION AND DEEP GROUNDWATER ELEVATION IN FEET (MSL)
- PIEZOMETER LOCATION NOT USED FOR DEEP GROUNDWATER CONTOURS
- STAFF GAUGE LOCATION

- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, MSL)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARY
- RIVER



**DEEP GROUNDWATER ELEVATION CONTOUR MAP  
APRIL 22, 2019**

NOTES:  
 1. PZ14B NOT USED TO DEVELOP DEEP GROUNDWATER CONTOURS AS WELL IS SCREENED IN SHALLOW BEDROCK.  
 2. GROUNDWATER ELEVATIONS IN PARENTHESES NOT USED FOR CONTOURING

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

**FIGURE 05**





- PIEZOMETER LOCATION AND DEEP GROUNDWATER ELEVATION IN FEET (MSL)
- PIEZOMETER LOCATION NOT USED FOR DEEP GROUNDWATER CONTOURS
- STAFF GAUGE LOCATION
- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, MSL)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARY
- RIVER



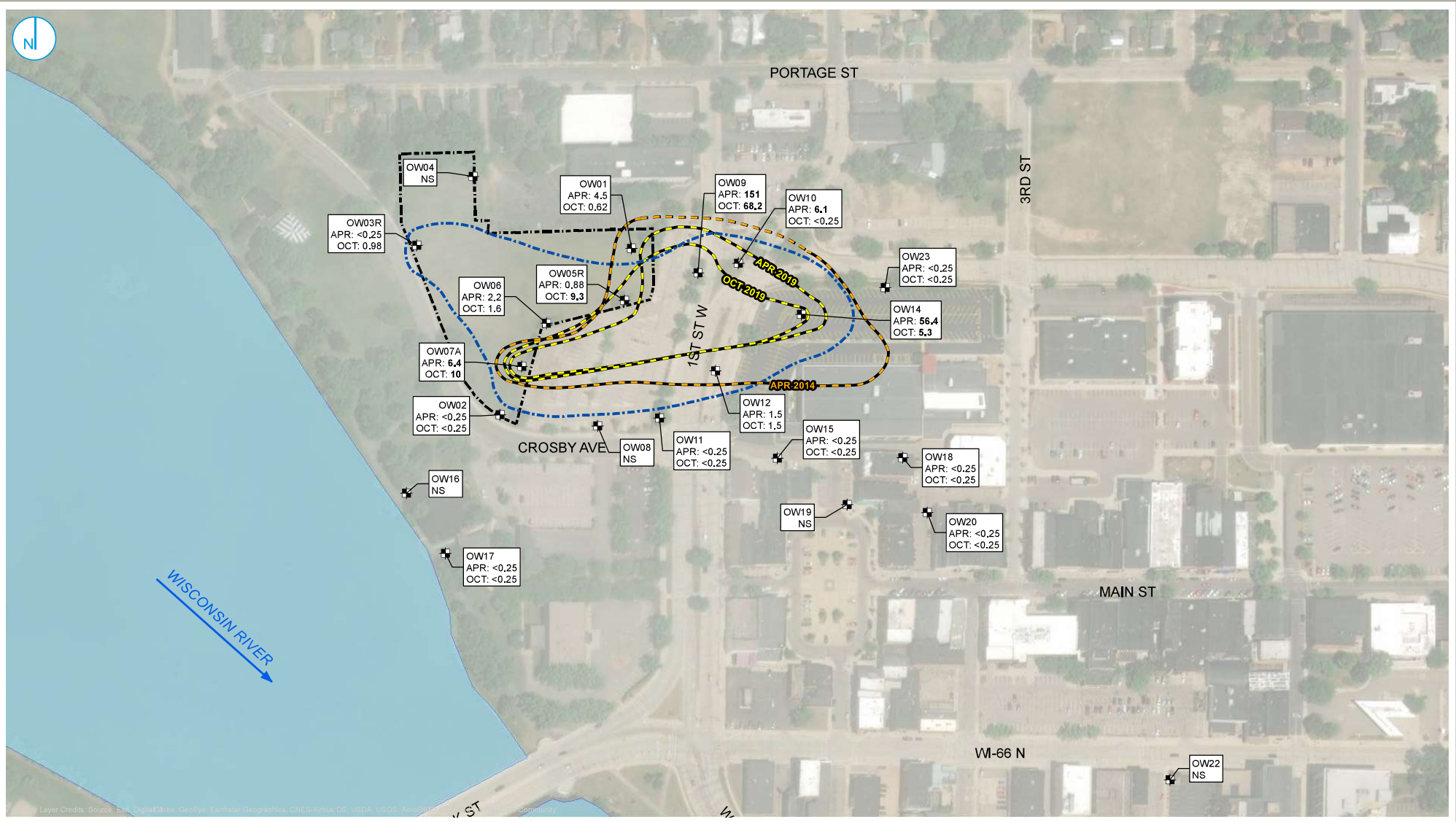
NOTES:  
 1. PZ14B NOT USED TO DEVELOP DEEP GROUNDWATER CONTOURS AS WELL IS SCREENED IN SHALLOW BEDROCK.  
 2. GROUNDWATER ELEVATIONS IN PARENTHESES NOT USED FOR CONTOURING

**DEEP GROUNDWATER ELEVATION CONTOUR MAP  
 OCTOBER 7, 2019**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

**FIGURE 06**





MONITORING WELL LOCATION  
 BENZENE IN GROUNDWATER - APRIL AND OCTOBER 2019 (5 µg/L)  
 BENZENE IN GROUNDWATER - APRIL 2014 (DASHED WHERE INFERRED) (5 µg/L)  
 GROUNDWATER INSTITUTIONAL CONTROLS AREA  
 PROPERTY BOUNDARY  
 RIVER  
 2.2 BENZENE CONCENTRATION (µg/L) < CONCENTRATION IS LESS THAN REPORTED LIMIT  
 NS: NOT SAMPLED



**NOTES:**  
 1. THE APRIL 2014 CONTOUR IS THE BASELINE EXTENT PRESENTED IN THE NATURAL ATTENUATION IMPLEMENTATION PLAN (NAIMP) WHICH WAS SUBMITTED AS PART OF THE FINAL REMEDIAL DESIGN, REVISION 0 (MODIFIED) AND WAS APPROVED BY USEPA ON OCTOBER 22, 2014.  
 2. THE APRIL AND OCTOBER 2019 CONTOURS REPRESENT THEIR RESPECTIVE SAMPLING EVENTS.  
 3. CONCENTRATIONS THAT EXCEEDED THE GROUNDWATER CLEANUP LEVEL ARE BOLD AND BLACK.

**WATER TABLE BENZENE PLUME MAP  
APRIL AND OCTOBER 2019**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

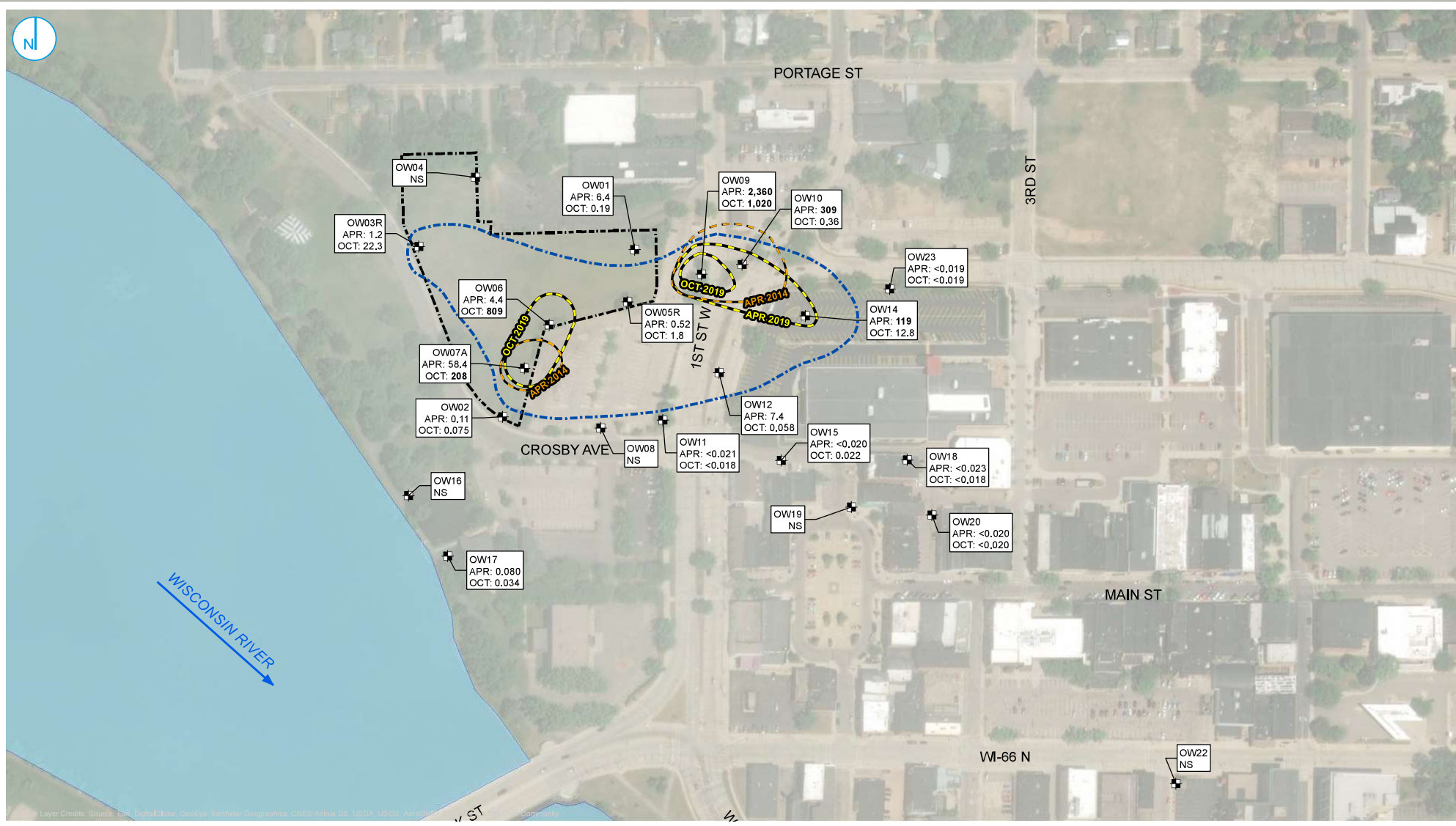
**FIGURE 07**

RAMBOLL US CORPORATION  
A RAMBOLL COMPANY



Y:\GIS\Projects\111717\MD\GW\_AR\_2019\Figure 8\_WT Naphthalene\_2019.mxd

PROJECT: 16000XXXXX | DATED: 12/6/2019 | DESIGNER: STOLZSD



- MONITORING WELL LOCATION
- NAPHTHALENE IN GROUNDWATER - APRIL AND OCTOBER 2019 (100 µg/L)
- NAPHTHALENE IN GROUNDWATER - APRIL 2014 (DASHED WHERE INFERRED) (100 µg/L)

- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER
- 4.4 NAPHTHALENE CONCENTRATION (µg/L) < CONCENTRATION IS LESS THAN REPORTED LIMIT
- NS: NOT SAMPLED

NOTES:  
 1. THE APRIL 2014 CONTOUR IS THE BASELINE EXTENT PRESENTED IN THE NATURAL ATTENUATION IMPLEMENTATION PLAN (NAIMP) WHICH WAS SUBMITTED AS PART OF THE FINAL REMEDIAL DESIGN, REVISION 0 (MODIFIED) AND WAS APPROVED BY USEPA ON OCTOBER 22, 2014.  
 2. THE APRIL AND OCTOBER 2019 CONTOURS REPRESENT THEIR RESPECTIVE SAMPLING EVENTS.  
 3. CONCENTRATIONS THAT EXCEED THE GROUNDWATER CLEANUP LEVEL ARE BOLD AND BLACK.

**WATER TABLE NAPHTHALENE PLUME MAP  
 APRIL AND OCTOBER 2019**

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

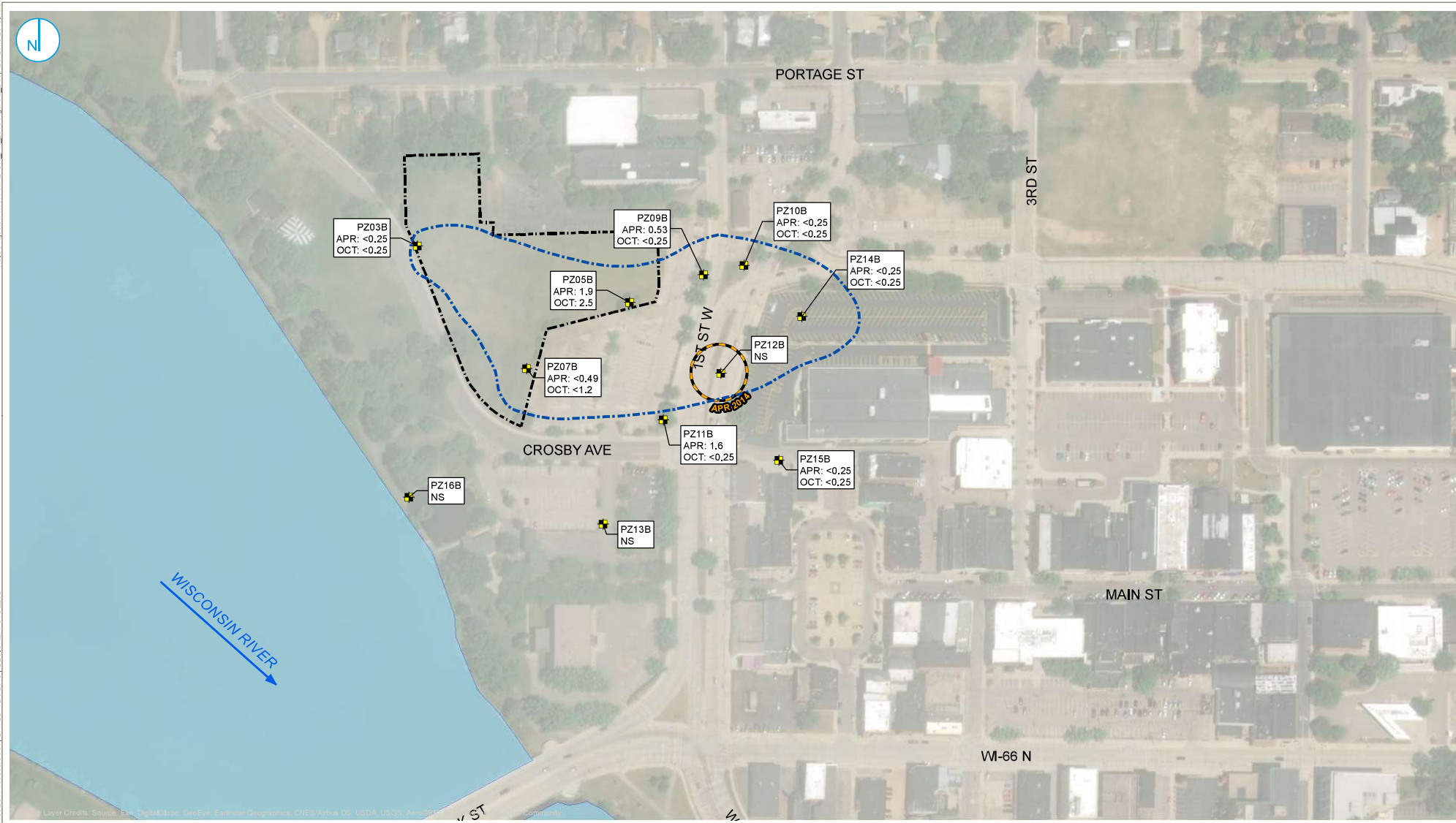


FIGURE 08

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY







- PIEZOMETER LOCATION
- DEEP BENZENE GROUNDWATER PLUME - APRIL 2014
- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER



1.9 BENZENE CONCENTRATION (µg/L)  
 < CONCENTRATION IS LESS THAN  
 REPORTED LIMIT  
 NS: NOT SAMPLED

NOTES:  
 1. THE APRIL 2014 CONTOUR IS THE BASELINE EXTENT PRESENTED IN THE NATURAL ATTENUATION IMPLEMENTATION PLAN (NAIMP) WHICH WAS SUBMITTED AS PART OF THE FINAL REMEDIAL DESIGN, REVISION 0 (MODIFIED) AND WAS APPROVED BY USEPA ON OCTOBER 22, 2014.  
 2. THE APRIL AND OCTOBER 2019 BENZENE CONCENTRATIONS DID NOT EXCEED THE GROUNDWATER CLEAN-UP LEVEL.

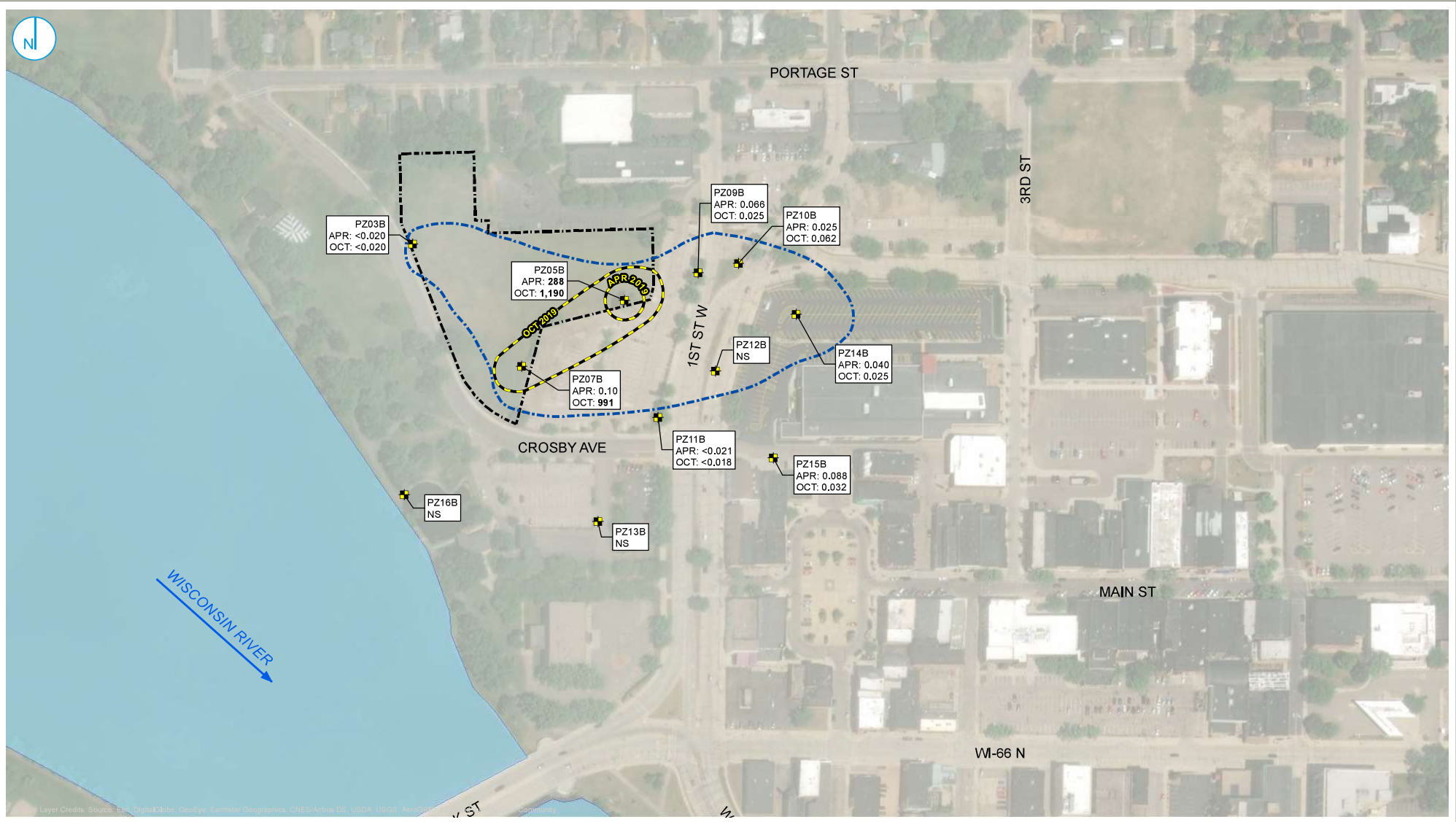
## DEEP GROUNDWATER BENZENE PLUME MAP APRIL AND OCTOBER 2019

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

FIGURE 09

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





- PIEZOMETER LOCATION
- DEEP NAPHTHALENE GROUNDWATER PLUME - APRIL AND OCTOBER 2019 (100 µg/L)
- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER

0 90 180 Feet

NOTES:  
 1. THE APRIL AND OCTOBER 2019 CONTOURS REPRESENT THEIR RESPECTIVE SAMPLING EVENTS.  
 2. CONCENTRATIONS THAT EXCEEDED THE GROUNDWATER CLEANUP LEVEL ARE BOLD AND BLACK.

991 NAPHTHALENE CONCENTRATION (µg/L)  
 < CONCENTRATION IS LESS THAN REPORTED LIMIT  
 NS: NOT SAMPLED

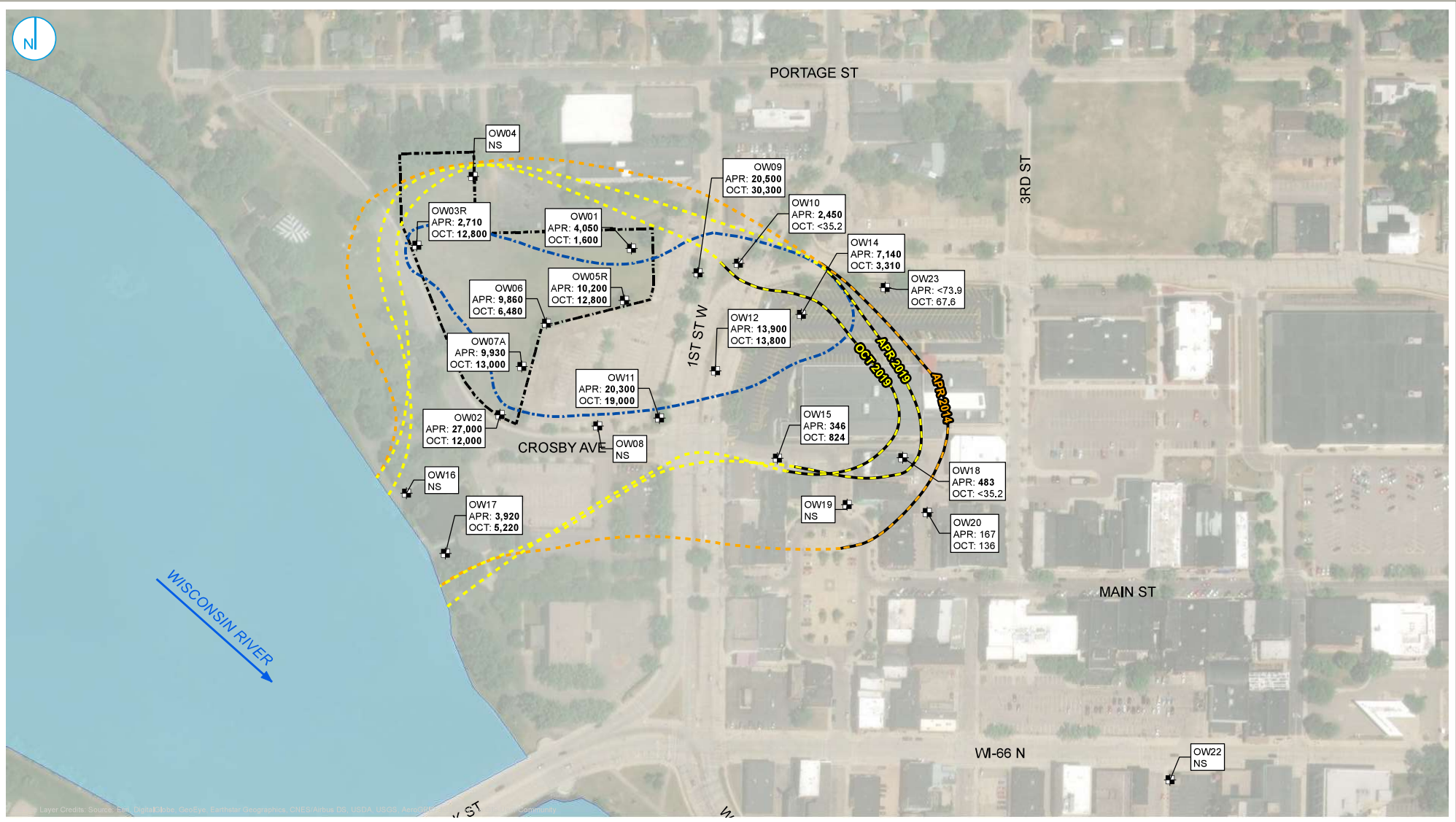
### DEEP GROUNDWATER NAPHTHALENE PLUME MAP APRIL AND OCTOBER 2019

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

FIGURE 10

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





- MONITORING WELL LOCATION
- IRON IN GROUNDWATER - APRIL 2014 (DASHED WHERE INFERRED) (300 µg/L)
- IRON IN GROUNDWATER - APRIL AND OCTOBER 2019 (DASHED WHERE INFERRED) (300 µg/L)
- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER



NOTES:  
 1. THE APRIL AND OCTOBER 2019 CONTOURS REPRESENT THEIR RESPECTIVE SAMPLING EVENTS.  
 2. CONCENTRATIONS THAT EXCEED THE GROUNDWATER CLEANUP LEVEL ARE BOLD AND BLACK.

67.6 DISSOLVED IRON CONCENTRATION (µg/L)  
 < CONCENTRATION IS LESS THAN REPORTED LIMIT  
 NS: NOT SAMPLED

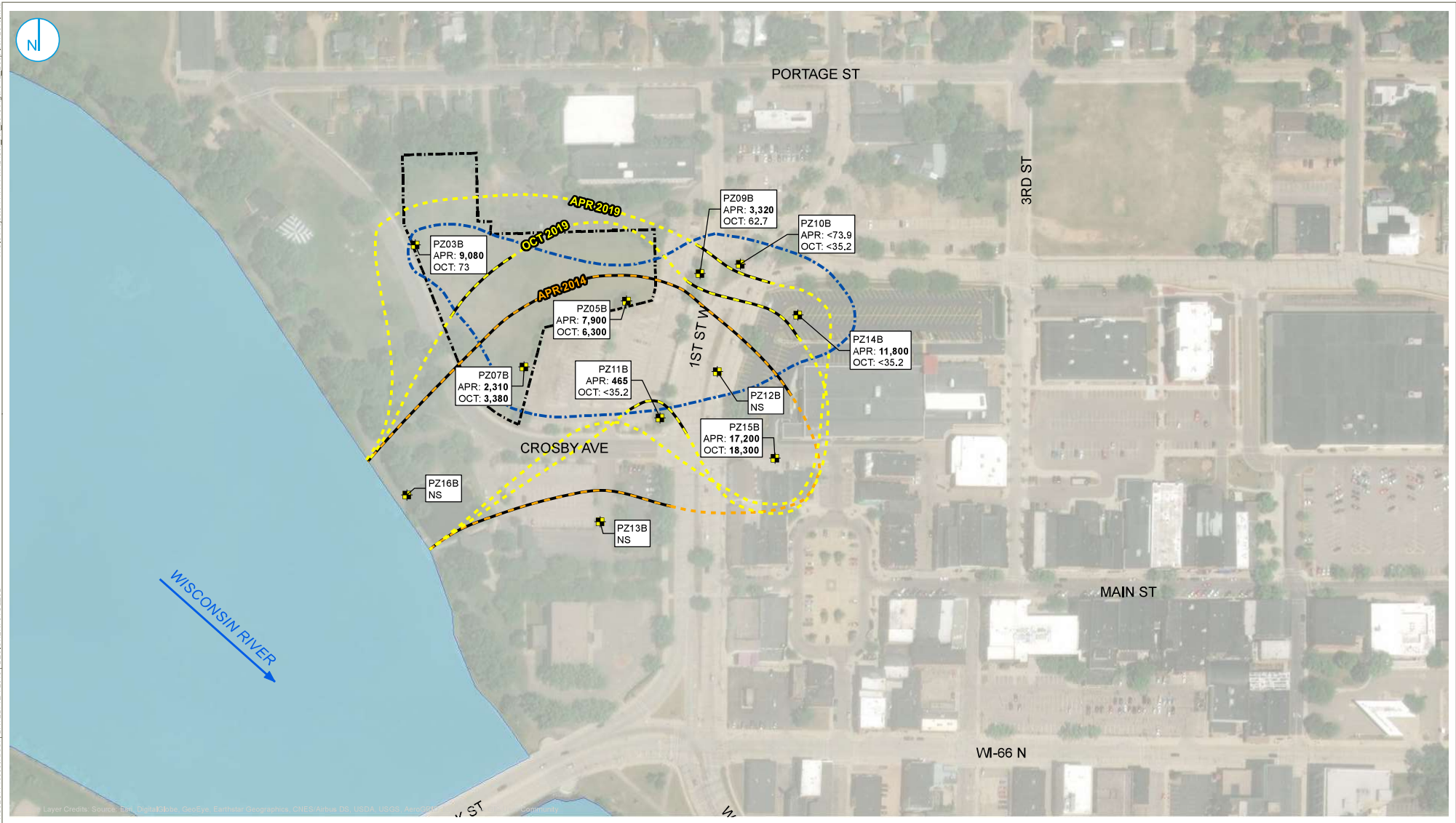
### WATER TABLE IRON PLUME MAP APRIL AND OCTOBER 2019

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

FIGURE 11

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY





- PIEZOMETER LOCATION
- DEEP IRON GROUNDWATER PLUME - APRIL 2014 (DASHED WHERE INFERRED) (300 µg/L)
- DEEP IRON GROUNDWATER PLUME - APRIL AND OCTOBER 2019 (DASHED WHERE INFERRED) (300 µg/L)
- GROUNDWATER INSTITUTIONAL CONTROLS AREA
- PROPERTY BOUNDARY
- RIVER

NOTES:  
 1. THE APRIL AND OCTOBER 2019 CONTOURS REPRESENT THEIR RESPECTIVE SAMPLING EVENTS.  
 2. CONCENTRATIONS THAT EXCEED THE GROUNDWATER CLEANUP LEVEL ARE BOLD AND BLACK.

465 DISSOLVED IRON CONCENTRATION (µg/L)  
 < CONCENTRATION IS LESS THAN REPORTED LIMIT  
 NS: NOT SAMPLED



### DEEP GROUNDWATER IRON PLUME MAP APRIL AND OCTOBER 2019

2019 GROUNDWATER ANNUAL REPORT  
 FORMER MANUFACTURED GAS PLANT  
 WISCONSIN PUBLIC SERVICE CORPORATION  
 STEVENS POINT, WISCONSIN

FIGURE 12

RAMBOLL US CORPORATION  
 A RAMBOLL COMPANY



Figure 13 - Benzene Concentrations and Trends in Selected Wells 2014-2019

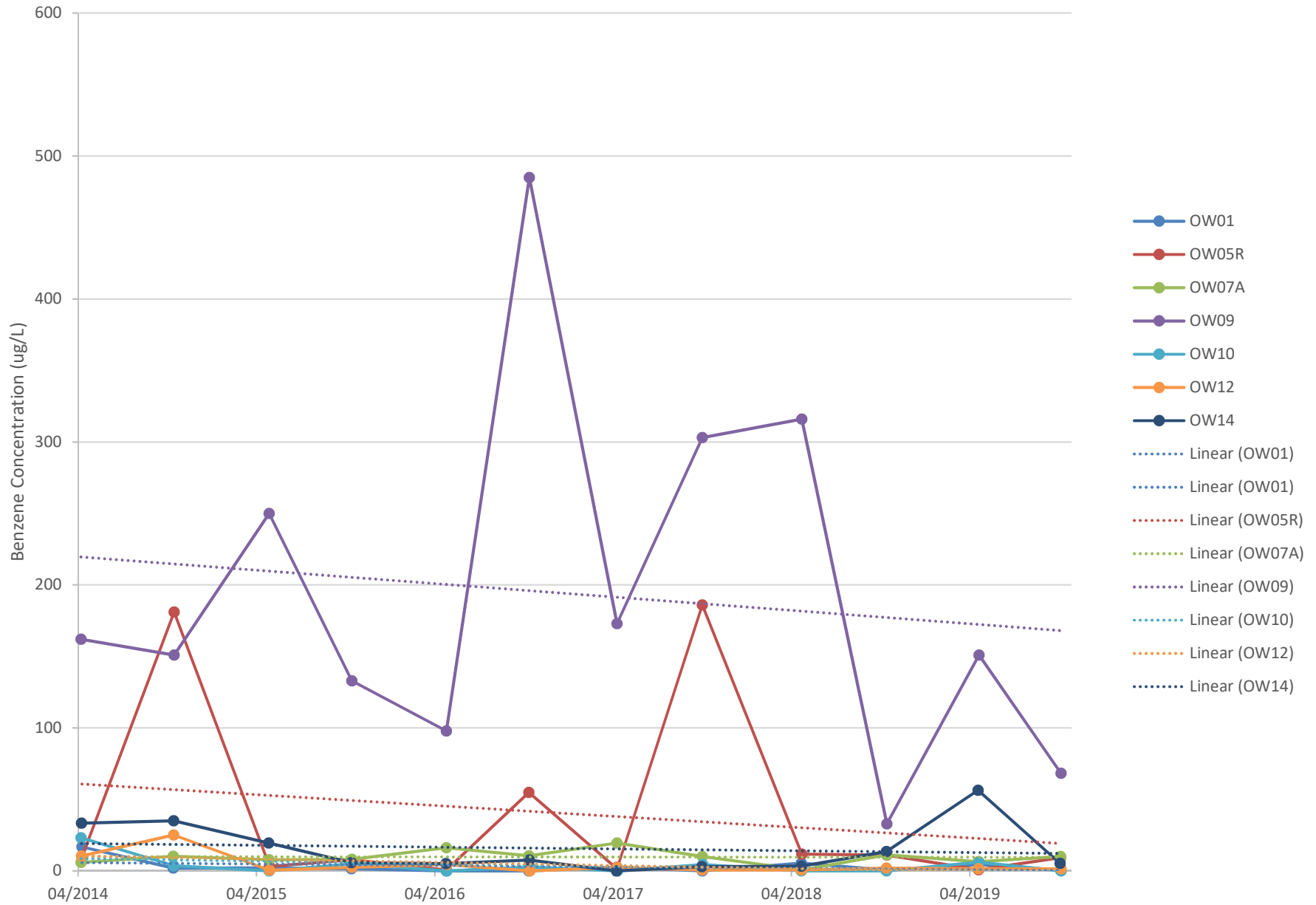




Figure 15 - Benzo(a)pyrene Concentrations and Trends in Selected Wells 2014-2019

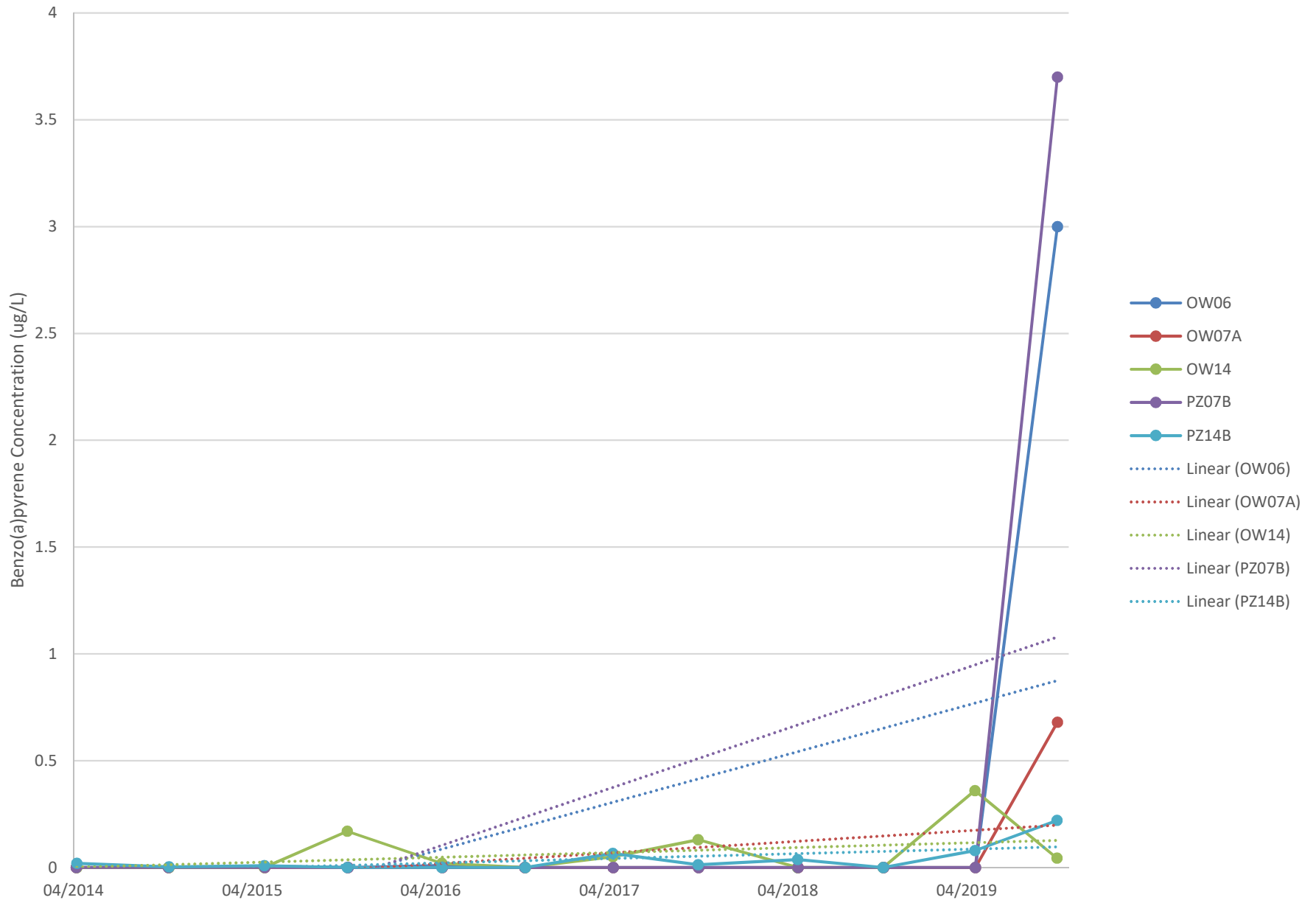


Figure 16 - Benzo(b)fluoranthene Concentrations and Trends in Select Wells 2014-2019

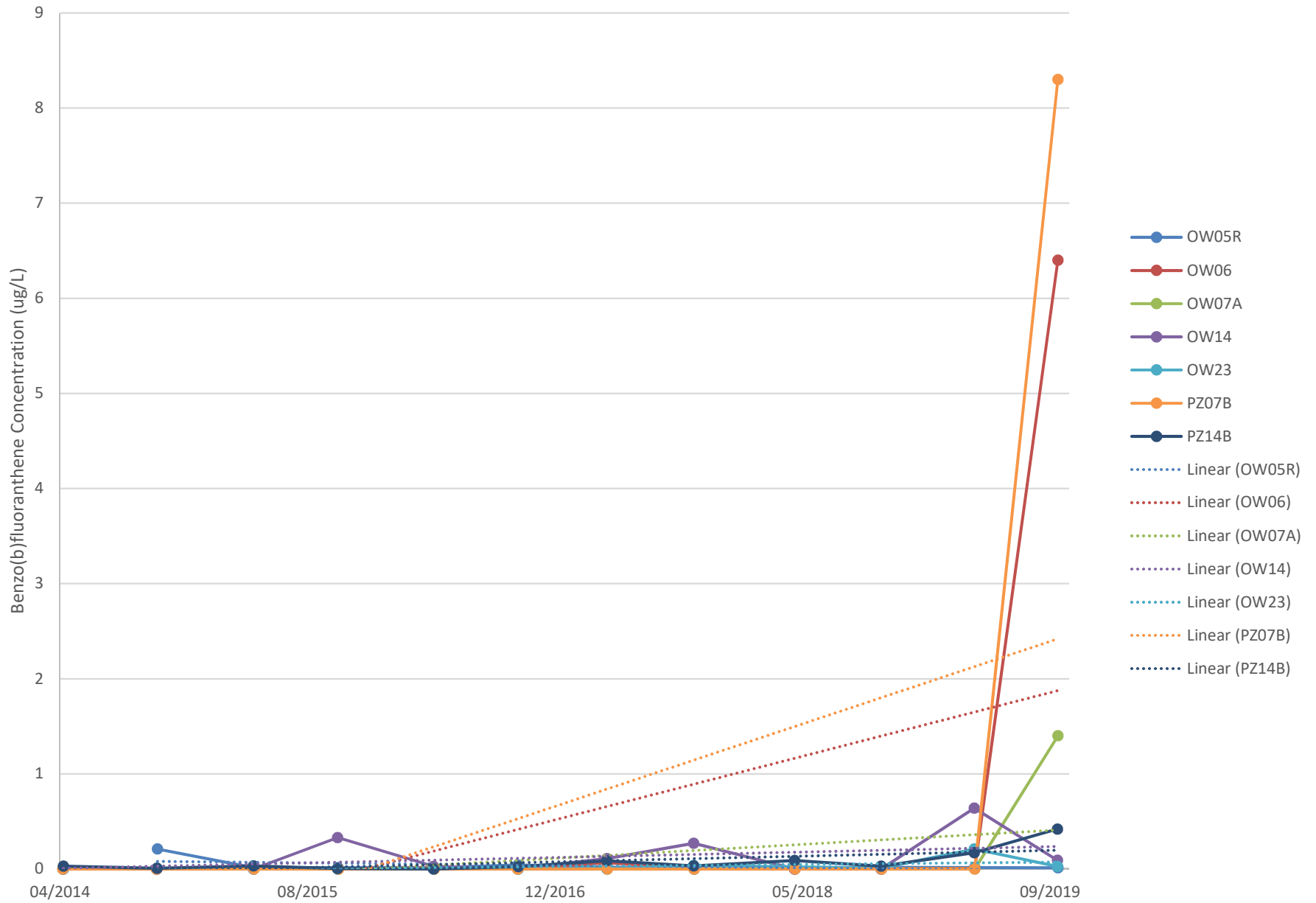




Figure 17 - Benzo(k)fluoranthene Concentrations and Trends in Select Wells 2014-2019

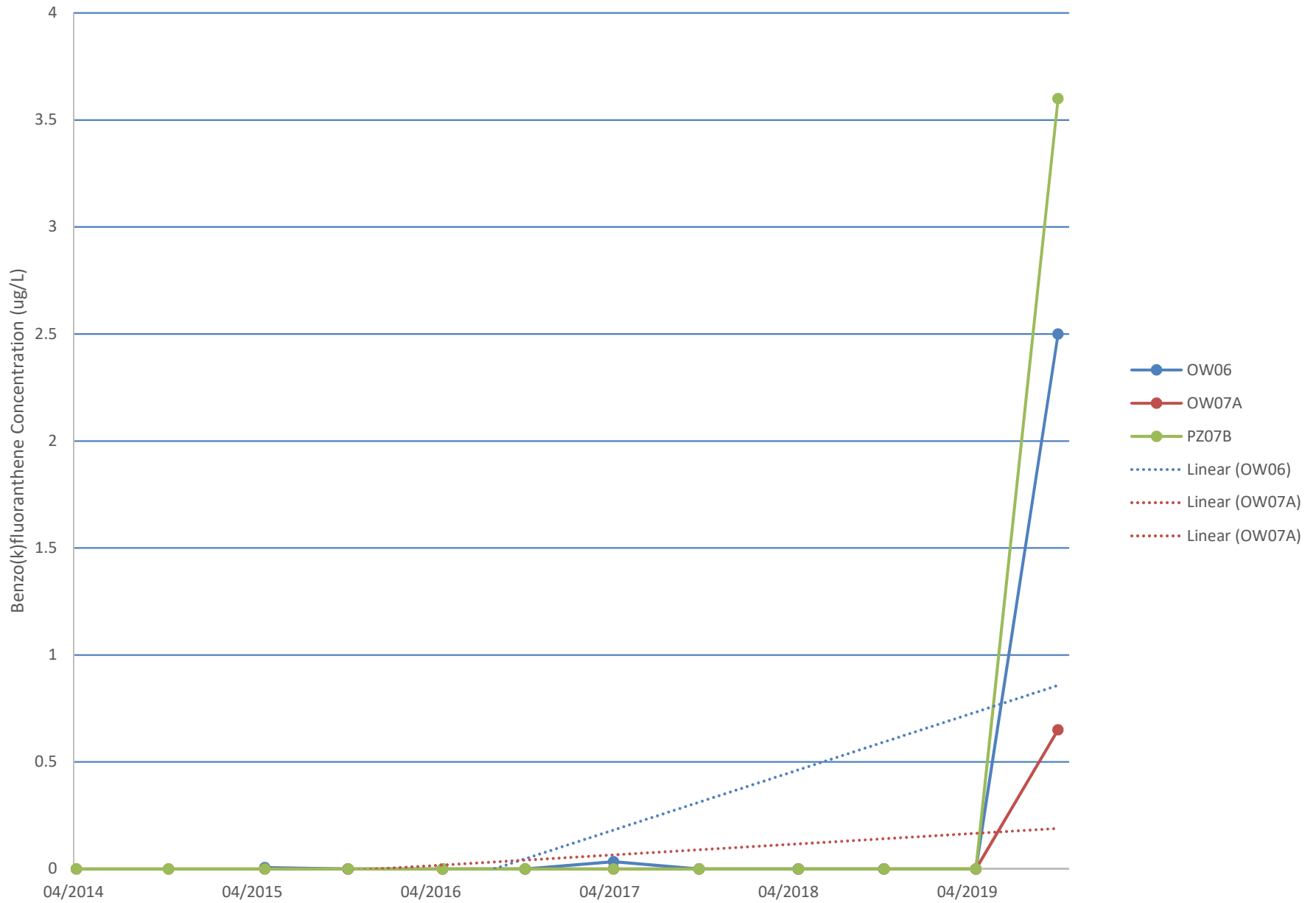


Figure 18 - Chrysene Concentrations and Trends in Select Wells 2014-2019

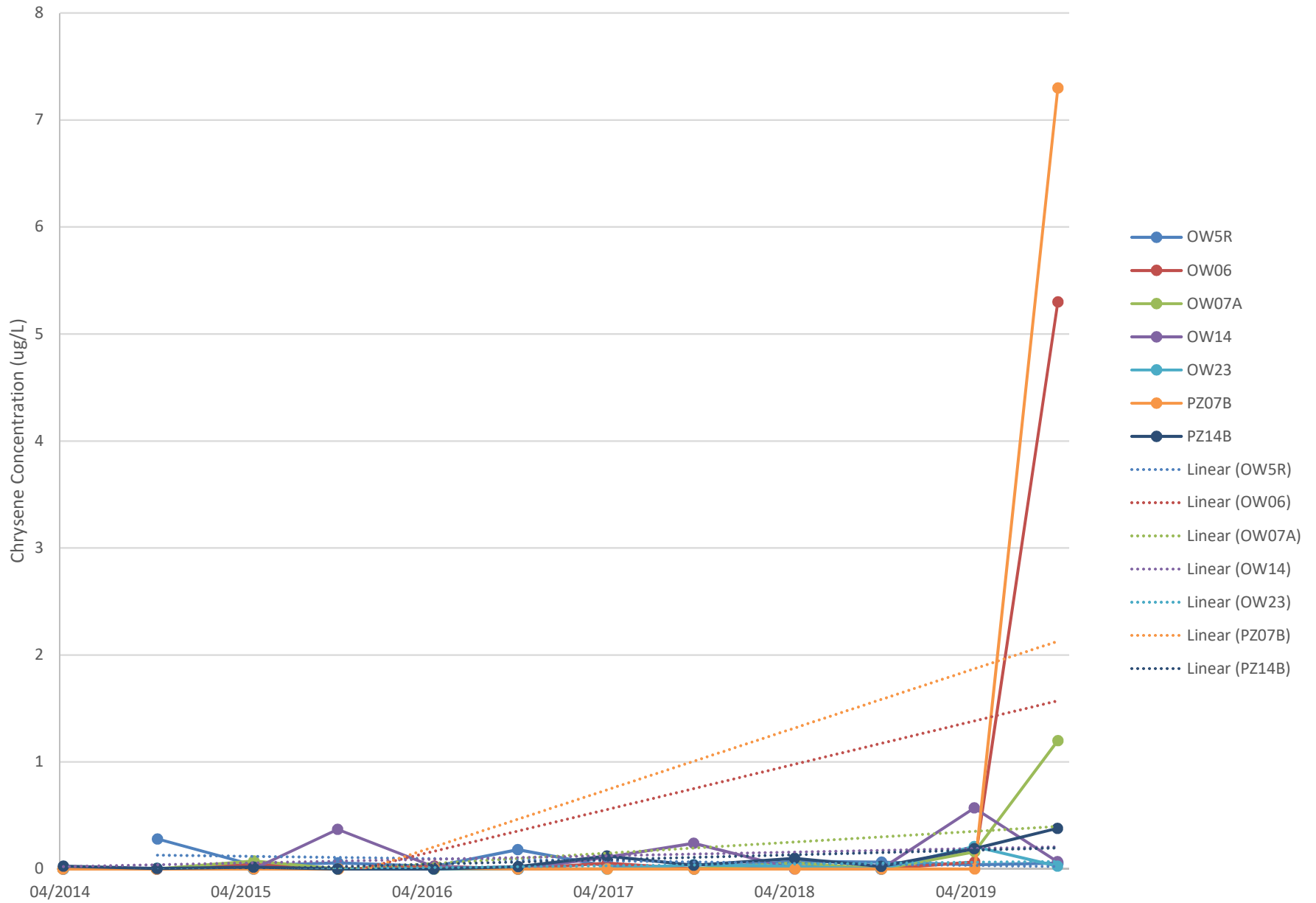


Figure 19 - Dibenzo(a,h)anthracene Concentrations and Trends in Select Wells 2014-2019

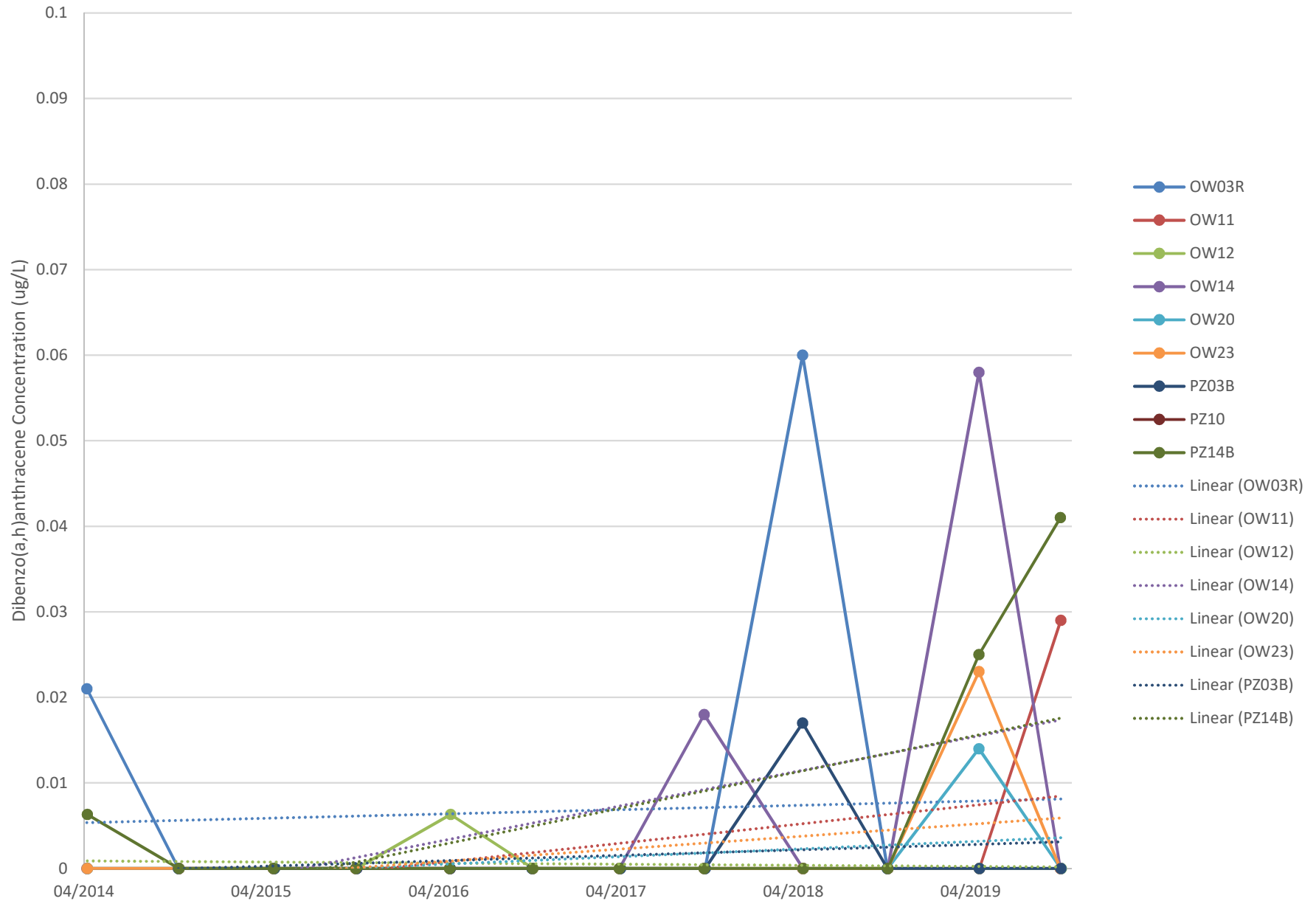


Figure 20 - Indeno(1,2,3-cd)pyrene Concentrations and Trends in Select Wells 2014-2019

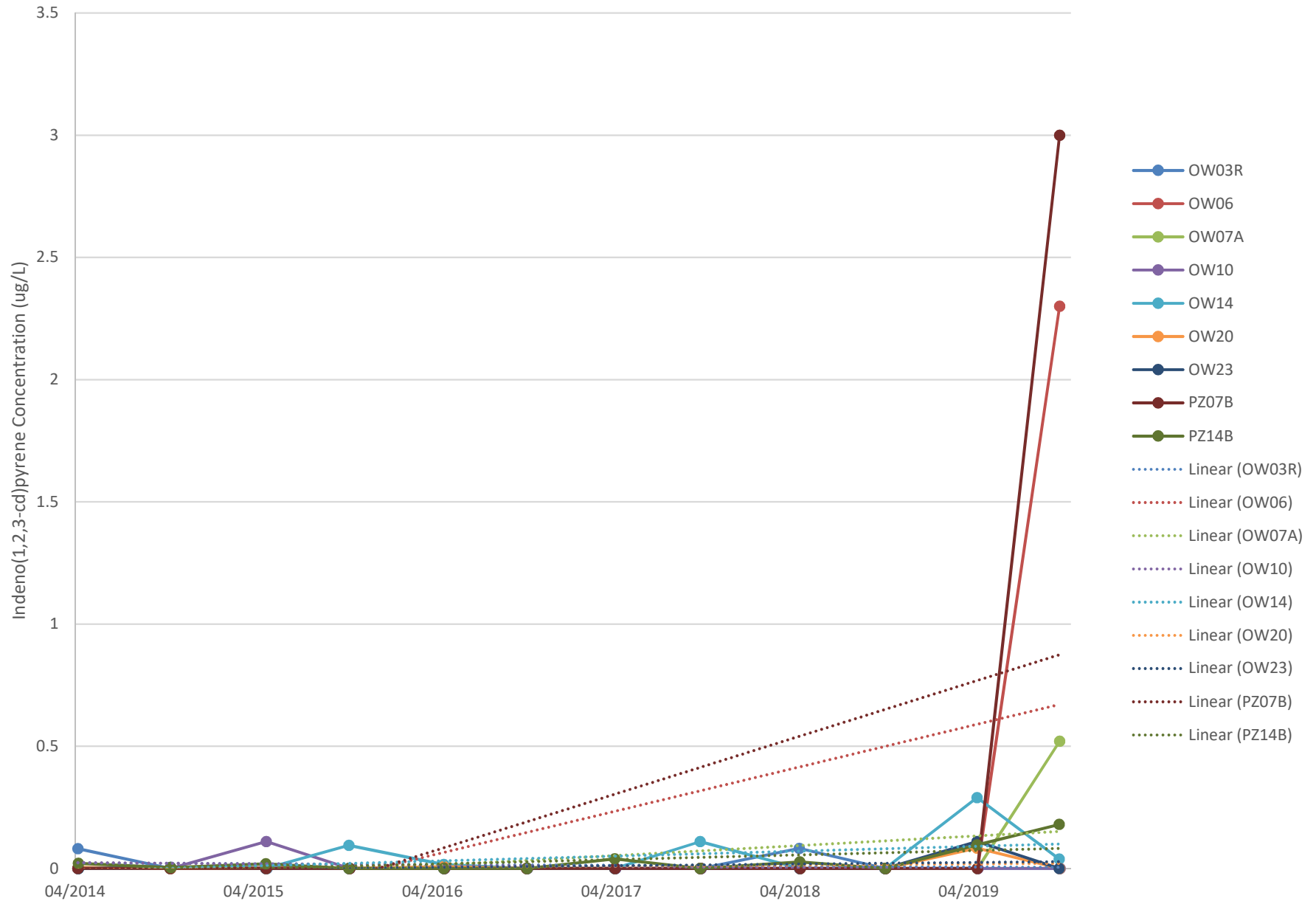


Figure 21 - Naphthalene Concentrations and Trends in Select Wells 2014-2019

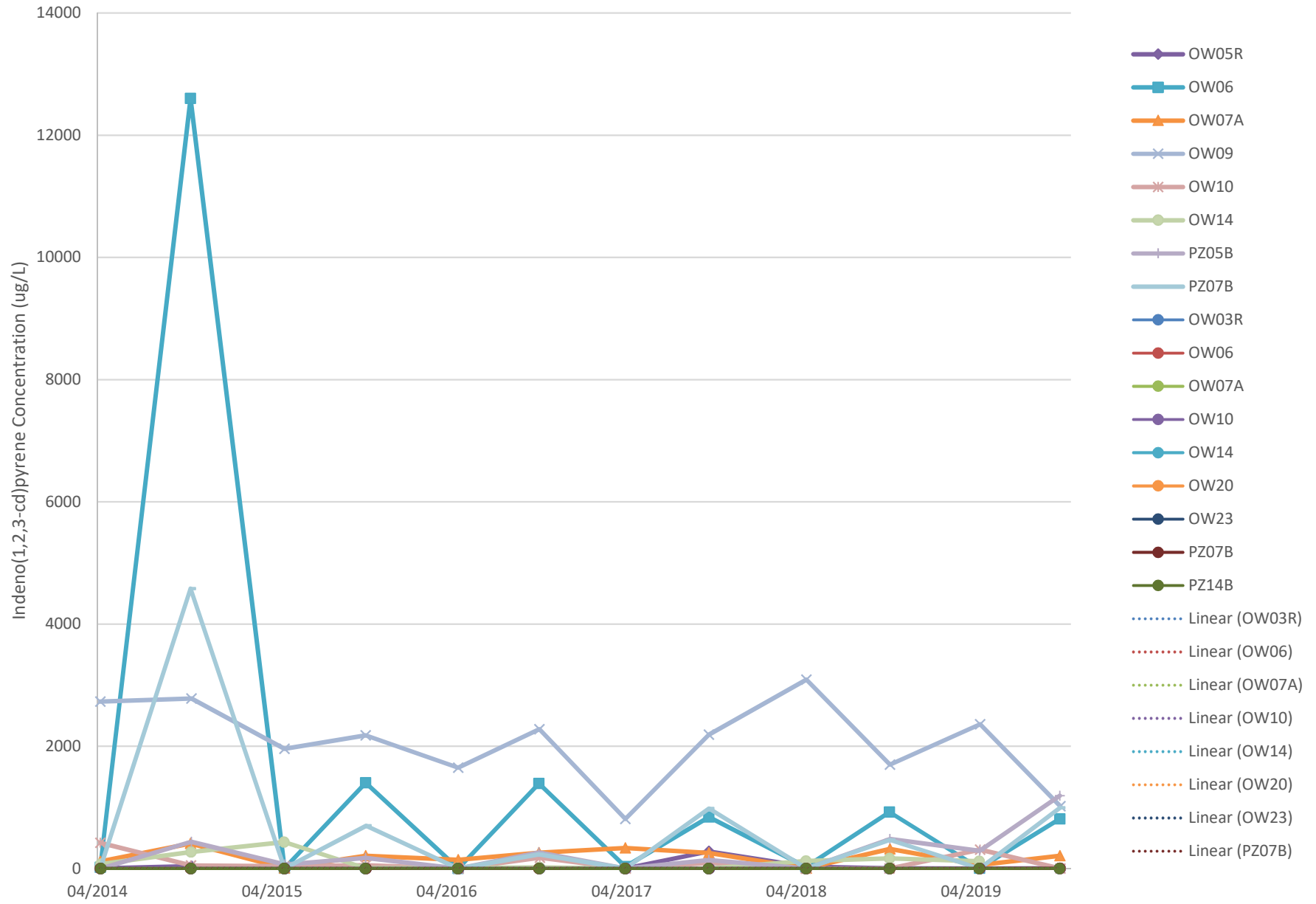


Figure 22 - Iron Concentrations and Trends in Select Wells 2014-2019

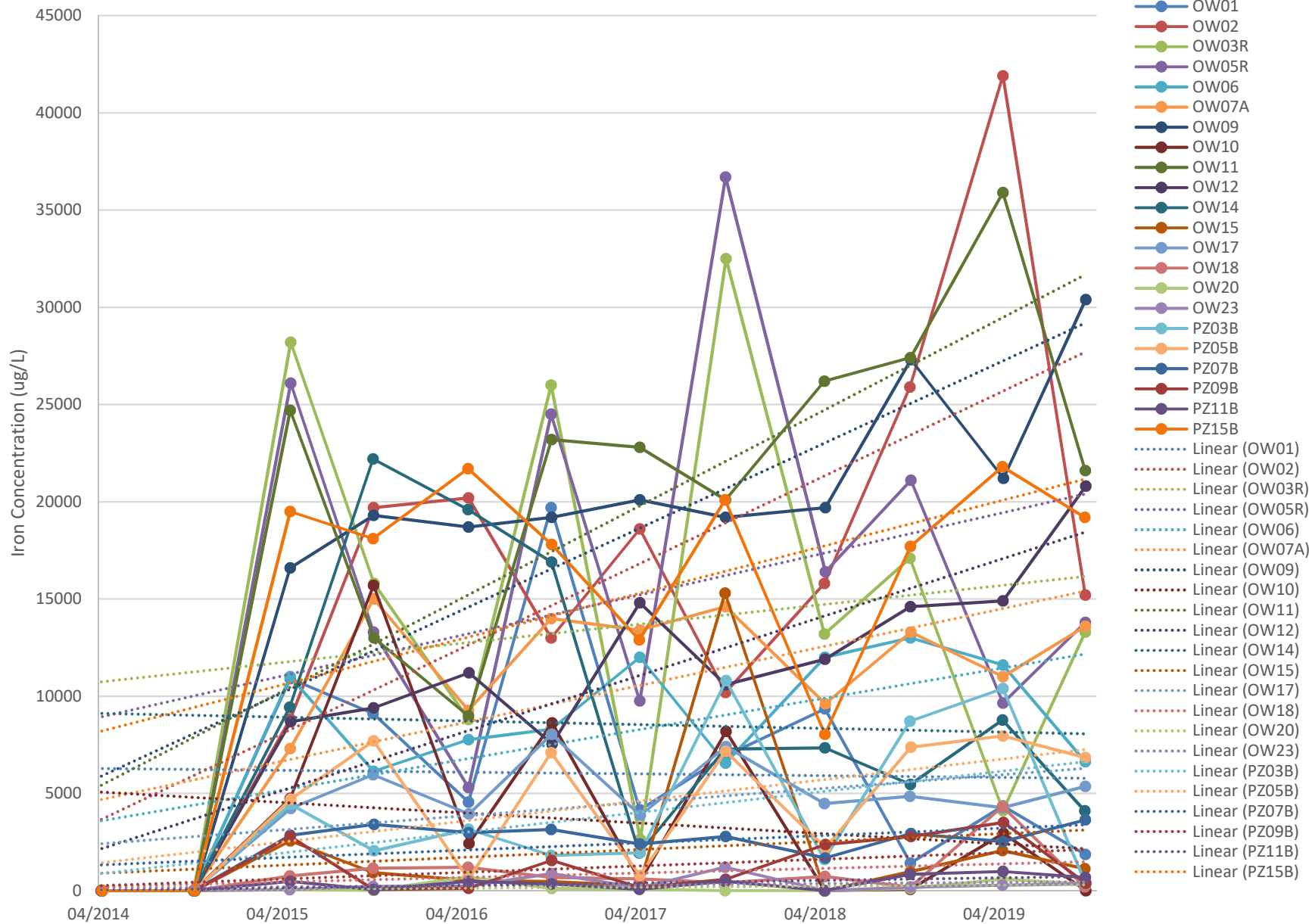
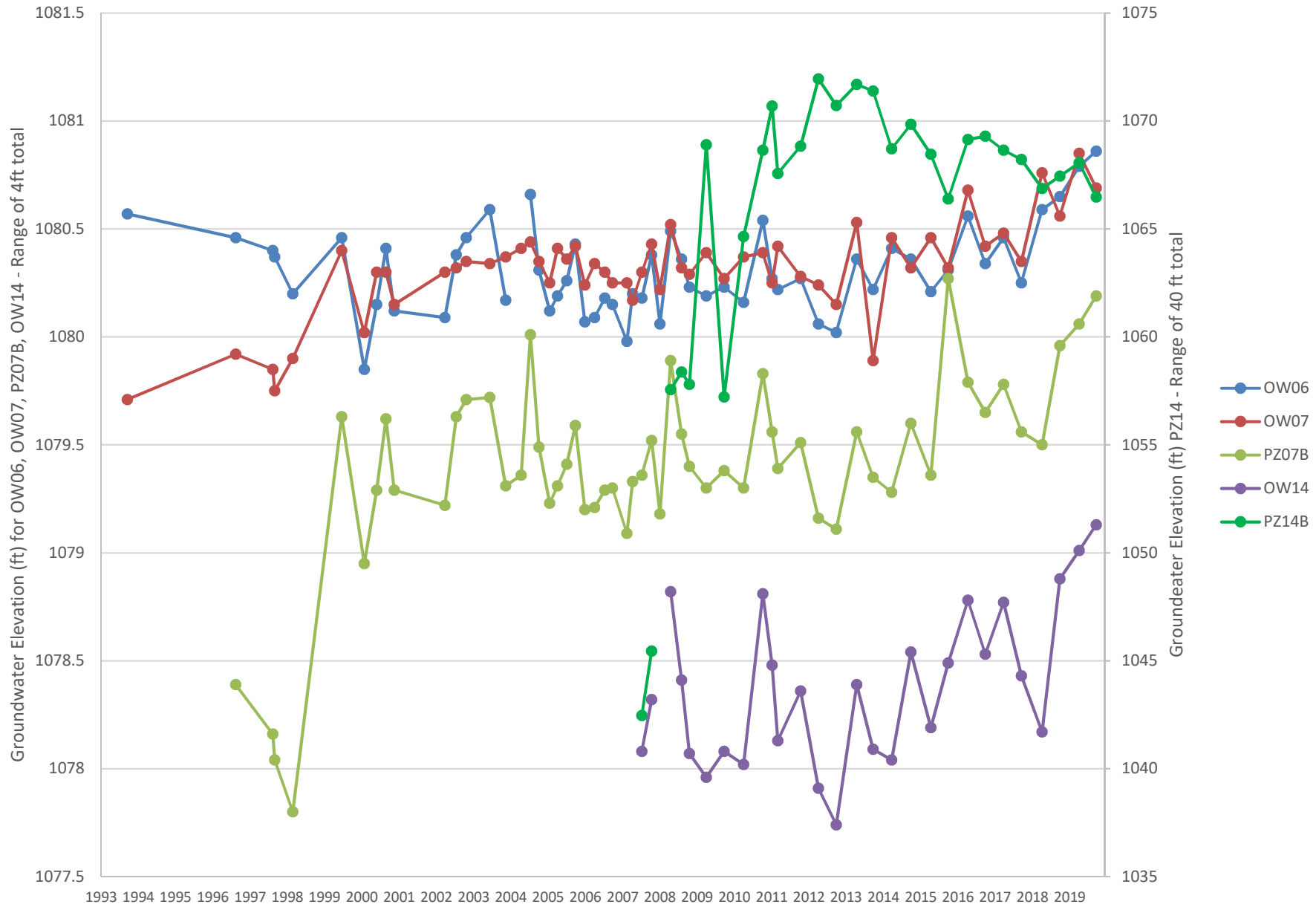
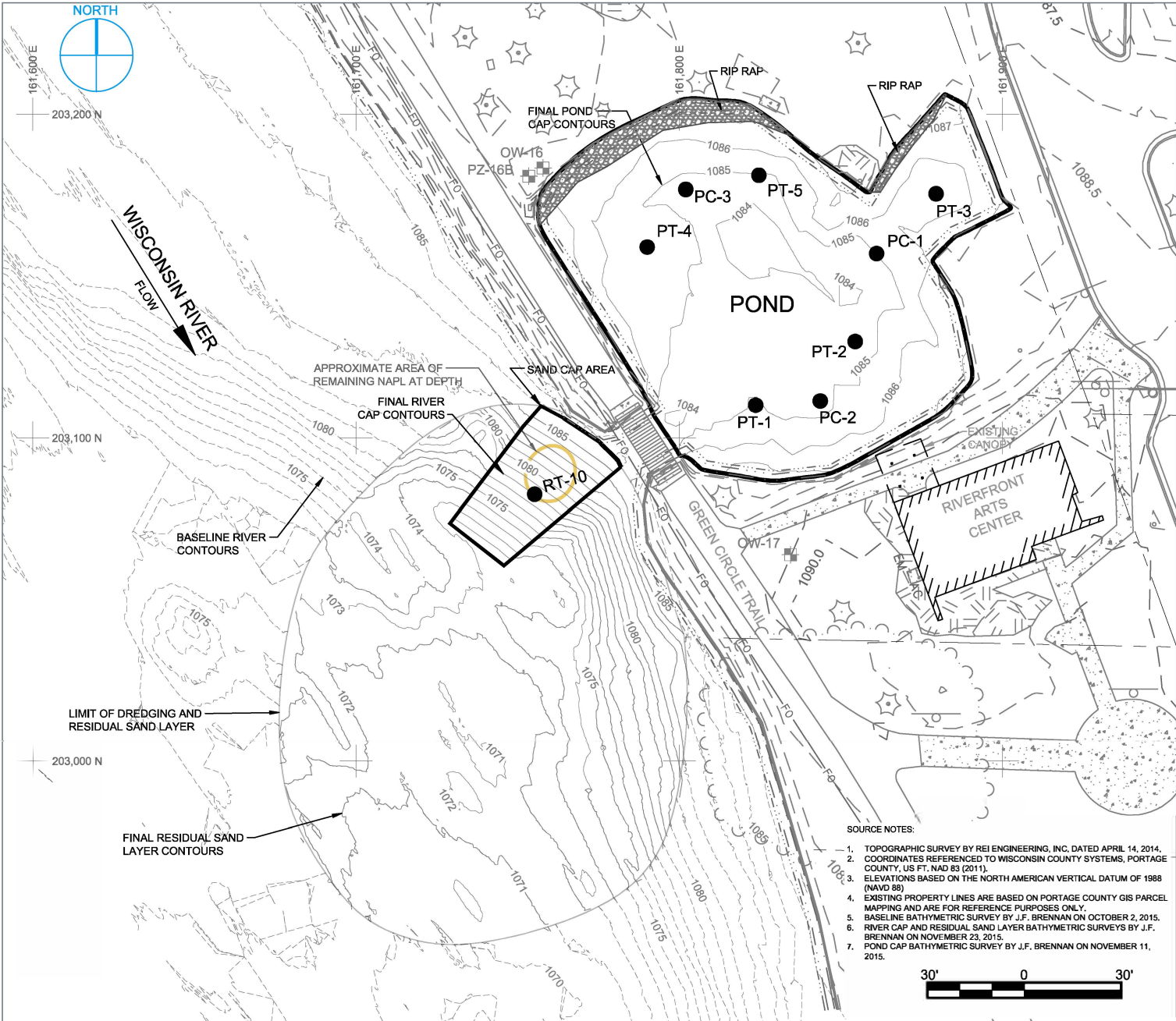


Figure23 - Groundwater Elevation in Wells With Increasing Organic Concentration Trends





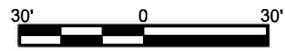
- OW-1 WATER TABLE OBSERVATION WELL
- PZ-5B PIEZOMETER
- PT-1 POND CAP THICKNESS CHECK LOCATIONS
- PC-3 POND CAP SAMPLE AND THICKNESS CHECK LOCATIONS
- RT-10 RIVER CAP SAMPLE AND THICKNESS CHECK LOCATION
- LIMIT OF CAPPING
- APPROXIMATE PROPERTY BOUNDARY
- 1081 FINAL POND AND RIVER CAP CONTOUR, FT.
- 1070 OCTOBER 2, 2015 BATHYMETRIC CONTOUR, FT. (BASELINE)
- 1087.5 APRIL 2014 GROUND SURFACE MAJOR CONTOUR 2.5 FT INTERVAL
- 1088.0 APRIL 2014 GROUND SURFACE MINOR CONTOUR 0.5 FT INTERVAL
- APPROXIMATE SHORELINE
- BUILDING
- CONCRETE PAVEMENT
- LANDSCAPE
- CURB & GUTTER
- TREE

**POND AND RIVER CAP SAMPLE LOCATIONS**

**FIVE-YEAR REVIEW SEDIMENT SAMPLING REPORT**  
 STEVENS POINT FORMER MGP SITE  
 STEVENS POINT, WISCONSIN

**FIGURE 24**

- SOURCE NOTES:
1. TOPOGRAPHIC SURVEY BY REI ENGINEERING, INC. DATED APRIL 14, 2014.
  2. COORDINATES REFERENCED TO WISCONSIN COUNTY SYSTEMS, PORTAGE COUNTY, US FT. NAD 83 (2011).
  3. ELEVATIONS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
  4. EXISTING PROPERTY LINES ARE BASED ON PORTAGE COUNTY GIS PARCEL MAPPING AND ARE FOR REFERENCE PURPOSES ONLY.
  5. BASELINE BATHYMETRIC SURVEY BY J.F. BRENNAN ON OCTOBER 2, 2015.
  6. RIVER CAP AND RESIDUAL SAND LAYER BATHYMETRIC SURVEYS BY J.F. BRENNAN ON NOVEMBER 23, 2015.
  7. POND CAP BATHYMETRIC SURVEY BY J.F. BRENNAN ON NOVEMBER 11, 2015.





## APPENDIX A

### Reference List

## **APPENDIX A REFERENCE LIST**

- Natural Resources Technology. 2006. *Completion Report: Former Manufactured Gas Plant, Wisconsin Public Service Corporation, Stevens Point, Wisconsin*. June.
- Natural Resources Technology. 2012. *Remedial Investigation Report – Revision 3, Wisconsin Public Service Corporation, Stevens Point Former Manufactured Gas Plant Site, Stevens Point, Wisconsin*. WIN000509983. April.
- Natural Resource Technology, 2016. *Operations and Maintenance Plan Revision 1, Wisconsin Public Service Corporation, Former Stevens Point Manufactured Gas Plant Site, Stevens Point, Wisconsin*. September.
- Ramboll. 2019. *April 2019 Groundwater Sampling and Soil Cover Inspection Report, Wisconsin Public Service Corporation’s Former Stevens Point Manufactured Gas Plant Site, Stevens Point, Wisconsin*. July.
- Ramboll. 2020a. *2019 Groundwater Annual Report, Former Stevens Point Manufactured Gas Plant Site*. January.
- Ramboll. 2020b. *Five-Year Review Sediment Sampling Report, Former Wisconsin Public Service Corporation, Stevens Point Manufactured Gas Plant Site*. May.
- U.S. Environmental Protection Agency (EPA). 2012. *Record of Decision, Decision, WPSC Stevens Point MGP Superfund Alternative Site, Portage County, Wisconsin*. September.
- U.S. Environmental Protection Agency (EPA). 2013. *WPSC Stevens Point MGP Superfund Alternative Site, Stevens Point, Wisconsin, Administrative Settlement Agreement and Order on Consent for Remedial Design*. May.
- U.S. Environmental Protection Agency (EPA). 2014a. *Memorandum: Correction of the Groundwater Cleanup Level for Iron in the WPSC Stevens Point Manufactured Gas Plant (MGP) Superfund Alternative Site Record of Decision*. March.
- United States Environmental Protection Agency (EPA) and Wisconsin Public Service Corporation. 2014b. *Remedial Action Consent Decree for, WPSC Stevens Point MGP, Superfund Alternative Site, Stevens Point, Wisconsin*. U.S. EPA Region 5, Civil Action No. 14-cv-546. October.
- U.S. Environmental Protection Agency (EPA). 2016a. *Memorandum: Non-significant changes in the Selected Remedy for the Wisconsin Public Service (WPSC) Stevens Point Former MGP Superfund Alternative Site, Stevens Point, Wisconsin*. July.

U.S. Environmental Protection Agency (EPA). 2016b. *Recommendations to Sign the Site-Wide Ready for Anticipated Use Determination for the WPSC Stevens Point Superfund Site, Stevens Point, Wisconsin*. September.

U.S. Environmental Protection Agency (EPA). 2017a. *Certification of Completion of Remedial Action, WPSC Stevens Point Former MGP Superfund Alternative Site*. January.

U.S. Environmental Protection Agency (EPA). 2017b. *Clarification of the Groundwater Cleanup Levels for Benzo[b]fluoranthene, Chrysene, Fluoranthene, Naphthalene, and Pyrene in the WPSC Stevens Point Manufactured Gas Plant (MGP) Superfund Alternative Site Record of Decision*, November.

Wisconsin Department of Natural Resources (WDNR) 2016. *Approval of the Remedial Design with Continuing Obligations, Wisconsin Public Service Corporation Crosby Avenue MGP Site, Stevens Point, Wisconsin*. September.

## APPENDIX B

### Site Wide Ready for Anticipated Use Determination



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



508890

REPLY TO THE ATTENTION OF:

**Date:** September 29, 2016

**From:** Leslie Patterson, RPM  
Peter Felitti, ORC Attorney

**To:** Timothy Fischer, Acting Chief  
Remedial Response Branch #2

**Subject:** Recommendation to Sign the Site-Wide Ready for Anticipated Use  
Determination for the WPSC Stevens Point Superfund Site, Stevens Point,  
Wisconsin

The WPSC Stevens Point Superfund Site, Stevens Point, Wisconsin, achieved Construction Completion on August 23, 2016, based on the remedy selected in the Record of Decision (ROD) of September 25, 2012. All cleanup goals for the site have been achieved for media that may affect current and reasonably anticipated future land uses, including subsurface soil, groundwater and sediment. The ROD specified the following Remedial Action Objectives (RAOs) to protect the public and the environment from potential current and future health risks:

- 1) Prevent human exposure, including dermal contact, incidental ingestion, and inhalation as a result of soil disturbance, to subsurface soil containing levels of manufactured gas plant (MGP)-related contaminants that exceed the target excess lifetime cancer risk range of  $10^{-6}$  to  $10^{-4}$  or a hazard index greater than one (1) for outdoor construction workers;
- 2) Prevent human exposure, including dermal contact, ingestion, and inhalation (as a result of vapor intrusion) to groundwater containing levels of MGP-related contaminants that exceed federal maximum contaminant levels (MCLs) or state Groundwater Enforcement Standards (GESs);
- 3) Restore groundwater quality to achieve MCLs or GESs;
- 4) Prevent or reduce the exposure of benthic organisms in the Wisconsin River sediment to levels of manufactured gas plant (MGP)-related contaminants that are above the probable effects concentration (PEC); and
- 5) Prevent or reduce the exposure of benthic organisms in Pfiffner Pioneer Park pond to levels of MGP-related contaminants that are above the PEC.

Cleanup goals for soil, groundwater and sediment allow for and were based on:

- Potential future residential use of the upland area;
- Potential future commercial/industrial use of the upland area;
- Recreational users of the city park, pond and Wisconsin River;
- Outdoor workers in the city park, pond and Wisconsin River;
- MCLs to be achieved by monitored natural attenuation; and
- The probable effects concentration for risk to ecological receptors.

Institutional Controls (ICs) have been reviewed and evaluated using the checklist in footnote 1, and all required ICs are in place and effective. Although the ROD stated that the site consists of three acres, 5 acres are subject to soil ICs and 5.3 acres are subject to groundwater ICs. Those two areas overlap, creating a total of 7.7 acres subject to ICs.

There are no private groundwater wells within the area of the groundwater IC, and buildings are required to connect to the municipal water supply.

**Institutional Controls Summary Table**

<b>Media, Engineered Controls, &amp; Areas That do not Support Unlimited Use/Unrestricted exposure (UU/UE) Based on Current Conditions</b>	<b>IC Objectives in Decision Documents</b>	<b>Title of IC Instrument Implemented and Date</b>
<i>WPSC Property and portions of parcels owned by the City of Stevens Point- Area with subsurface soil is identified in Figure A.</i>	Prohibit residential use, unauthorized digging and construction of buildings without evaluation and/or mitigation of vapor intrusion	Wisconsin GIS database. City of Stevens Point <i>Revised Municipal Code, Chapter 23, Zoning Code</i> , adopted 2/19/1979
<i>Groundwater – current area that exceeds groundwater cleanup standards identified in Figure B.</i>	Prohibit groundwater use until cleanup standards are achieved	Wisconsin GIS database. City of Stevens Point <i>Revised Municipal Code, Chapter 13, Water and Sewerage Systems</i> , amended 2/17/2014

EPA determined that all remedial components are in place as designed and that construction of the remedial action at the Stevens Point MGP site was complete following the pre-final inspection by the Remedial Project Manager on June 23, 2016. EPA approved the Construction Completion on August 23, 2016.

We’ve also reviewed the current Human Exposure Environmental Indicator and have determined that the Site is Current Human Exposure is Controlled and Protective Remedy in Place and is consistent with this Site-wide Ready for Anticipated Use determination.

Based on the above information and all documents reviewed for this site, we find that the Site meets the following requirements:

- All cleanup goals in the ROD or other decision document have been achieved for any media that may affect current and reasonably anticipated future land uses, so that there are no unacceptable risks.
- All institutional or other controls required in the ROD or identified as part of the response action to help ensure long-term protection have been put in place.

Based on the information presented below, we are recommending that you sign the attached Site-wide Ready for Anticipated Use Determination Checklist.

The first Five-Year Review will be completed by October 5, 2020. Data collected up to that time will be reviewed for any changes or new information that would affect or change the Site's protectiveness. Region 5 may, in the future, modify the Site-wide Ready for Anticipated Use Determination based on changed site conditions.

Cleanup Goals	Soils – exposure point concentrations based on industrial/commercial regional screening levels; Groundwater – natural attenuation to achieve MCLs and Wisconsin Groundwater Enforcement Standards
Construction Complete Date	August 23, 2016
Five Year Review Date	Planned October 5, 2020
Human Exposure Environmental Indicator	Current Human Exposure is Controlled and Protective Remedy in Place
NPL Deletion Date	N/A
Existing Land Use for Entire Site /Status of Use Last Inspection Date:	Soil (non-landfill area) – vacant property, parking lot, city park; Groundwater – no consumptive use in current plume area. June 23, 2016
Anticipated Future Land Use	Land – commercial, roadway and recreational (city park) use only; Groundwater – no consumptive use anticipated
Media, Remedy Components, & Areas that do not support UU/UE Based on Current Conditions	Subsurface soil - exceeds industrial cleanup standards Groundwater – exceeds MCLs
Acres Associated with Institutional Control	5.0 (soil) 5.3 (groundwater)
Total Site Acres	7.7
Title of Institutional Control Instrument	Wisconsin GIS Registry
IC Implementation Date	September 29, 2016

Documents Reviewed for SWRAU Determination	<i>Final Remedial Design, Revision 0 (Modified), 10/20/2014; Construction Completion Report, Sediment Remedial Action, Revision 1, 9/2/2016; Groundwater Sampling and Soil cover Inspection Report, 7/25/2016; May 2016 Monthly Progress Report, 6/15/2016; October 2015 Monthly Progress Report, 11/11/2015; May 2015 Monthly Progress Report, 6/12/2015.</i>
ICTS Booklet	See attachment.

Footnote 1:

In order for ICs to be considered “in place and effective”, the following must be met (check all that apply):

- the ICs cover all physical areas that do not support unlimited use/unrestricted exposure (UU/UE) and the ICs’ physical description of the non-UU/UE areas are accurate based on current conditions for the entire site (e.g., groundwater ordinance covers the entire plume area; legal description of cap in restrictive covenant has been mapped or undergone other verification);
- all needed land use restrictions/objectives are stated in/covered by the IC;
- title work shows recording and that no other existing property rights will interfere with the site remedy or cause undue exposure (for restrictive covenants and other proprietary controls only),
- there is current compliance with the land use restriction determined by a recent inspection; and
- future compliance with the restrictions is expected because: a) there is a legal basis for enforcing the use restriction against current and future owners; and/or b) ORC and Superfund Branch Chiefs concur that the totality of the circumstances support the expectation of future compliance with restrictions. (Examples: UECA covenant, state solid waste deed notice in conjunction with state solid waste regulation prohibiting interference with landfill component, best available IC has been implemented such as fish consumption advisory).



# Figures

## Figure A - Area in which Subsurface Soil Does Not Support UU/UE

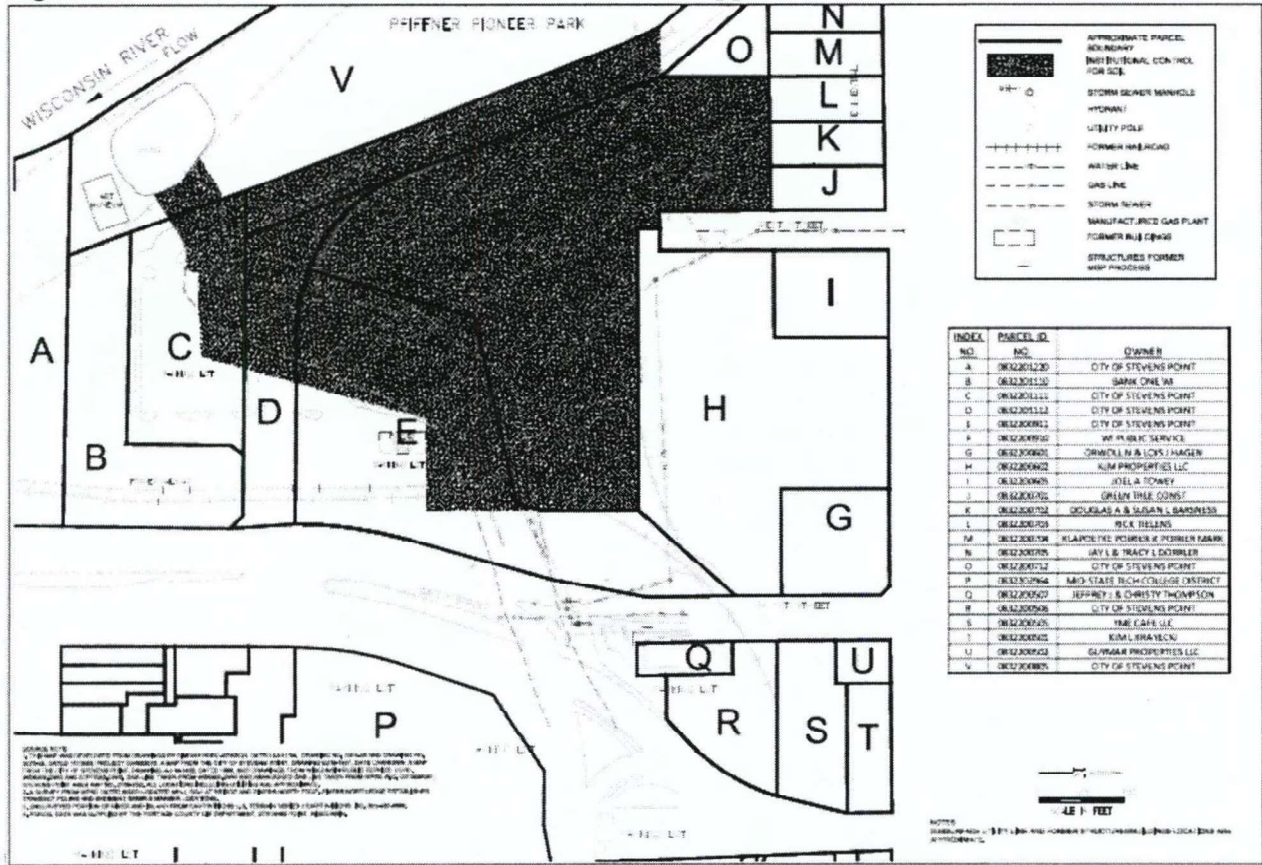
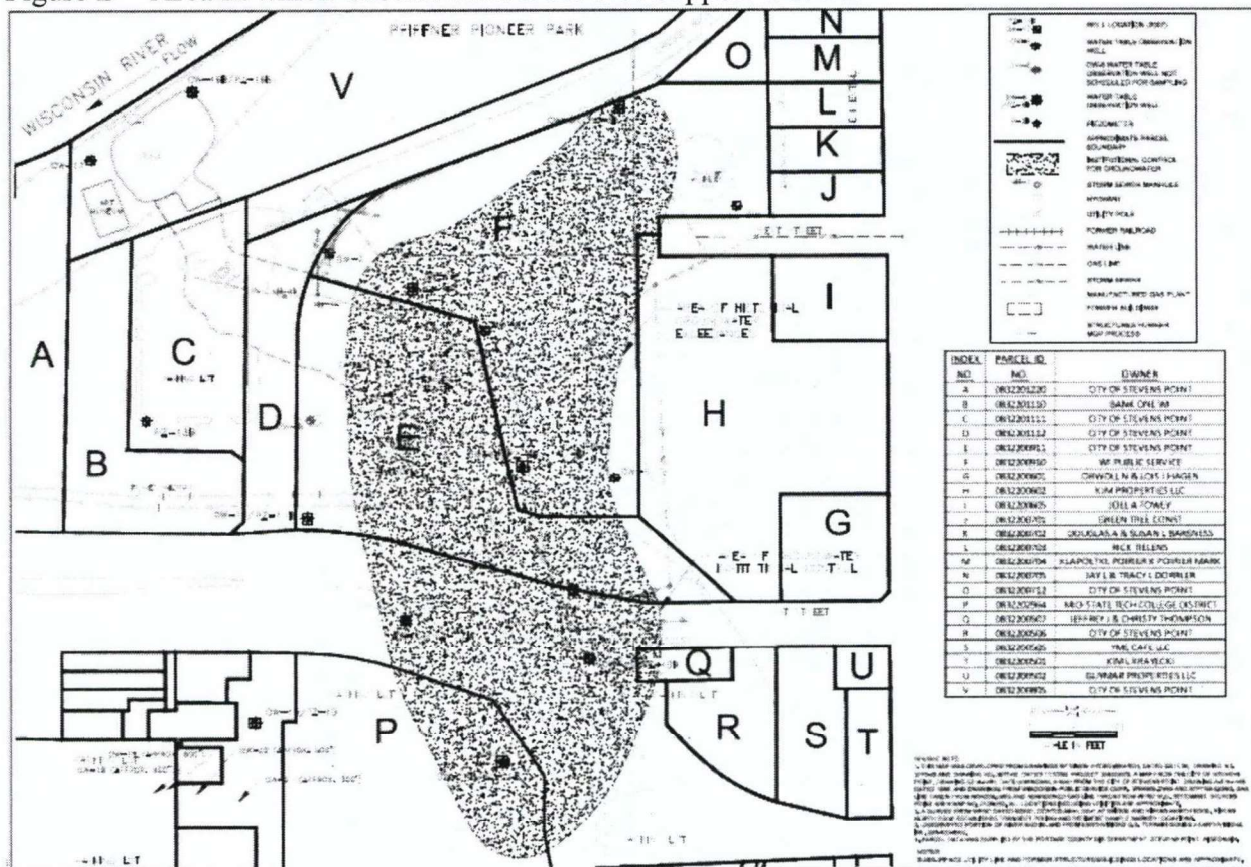




Figure B – Area in which Groundwater Does Not Support UU/UE



**Superfund Checklist for Reporting the  
Sitewide Ready for Anticipated Use GPRA Measure**

*Note: Upon issuance of the Guidance for Documenting and Reporting Performance in Achieving Land Revitalization (March 1, 2007), the Sitewide Ready-for-Reuse measure was renamed "Sitewide Ready for Anticipated Use" (SWRAU).*

	United States <b>ENVIRONMENTAL PROTECTION AGENCY</b> Washington, DC 20460		
	<b>SUPERFUND CHECKLIST FOR REPORTING THE SITEWIDE READY FOR ANTICIPATED USE GPRA MEASURE</b> Office of Superfund Remediation & Technology Innovation and Federal Facilities Restoration & Reuse Office		
<b>PART A – GENERAL SITE INFORMATION</b>			
1. Site Name Wpsc Stevens Point	2. EPA ID WIN000509983		
3. Site ID 0509983	4. RPM Leslie Patterson		
5. Street Address CROSBY AVENUE JUST NORTH OF HWY 10			
6. City Stevens Point	7. State Wisconsin	8. Zip Code 54492	
9. Number of Sitewide Ready for Anticipated Use Acres: 7.7		<input checked="" type="checkbox"/> 10. This is a Superfund Alternative site.	
11. Sitewide Ready for Anticipated Use Determination Requirements (all must be met for the entire construction complete site) <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> All cleanup goals in the Record(s) of Decision or other remedy decision document(s) have been achieved for any media that may affect current and reasonably anticipated future land uses, so that there are no unacceptable risks.</li> <li><input checked="" type="checkbox"/> All institutional or other controls required in the Record(s) of Decision or other remedy decision document(s) have been put in place.</li> </ul>			
<b>PART B – SIGNATURE (Branch Chief or above should sign)</b>			
NOTE: The outcome of this Checklist does not have any legally binding effect and does not expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits of any party. EPA assumes no responsibility for reuse activities and/or any potential harm that might result from reuse activities. EPA retains any and all rights and authorities it has, including but not limited to legal, equitable, or administrative rights. EPA specifically retains any and all rights and authorities it has to conduct, direct, oversee, and/or require environmental response actions in connection with the site, including but not limited to instances when new or additional information has been discovered regarding the contamination or conditions at the site that indicates that the response and/or the conditions at the site are no longer protective of human health or the environment.			
12. Name Timothy Fischer		13. Title/Organization Acting Chief, Remedial Response Branch #2	
14. Signature 		15. Date 9/30/16	

APPENDIX C

WDNR Continuing Obligations Cover Sheet

# Ongoing Cleanups with Continuing Obligations Cover Sheet

April, 2010  
(RR 5391)

## Purpose

This cover sheet summarizes continuing obligations regarding environmental conditions on this property. Continuing obligations are legal mechanisms that:

- 1) Require or restrict certain actions to protect human health or the environment.
- 2) Minimize human and natural resource exposure to contamination, and/or
- 3) Give notice of the **existence** of residual contamination

Learn more about continuing obligations at <http://dnr.wi.gov/topic/brownfields/residual.html>

## DNR Property Information:

DNR Approval Date:

**BRRTS #:**

**02-50-000079**

**FID #:**

**750081200**

**ACTIVITY NAME:**

Former Stevens Point Manufactured Gas Plant (MGP)

**PROPERTY ADDRESS:**

Crosby Ave

**MUNICIPALITY:**

Stevens Point, WI

**PARCEL ID #:**

832200910

### \*WTM COORDINATES:

**X:**

**207568**

**Y:**

**252534**

*\*Coordinates are in WTM83, NAD83 (1991)*

### WTM COORDINATES REPRESENT:

Approximate Center Of Continuing Obligations

Approximate Source Parcel Center

Please use the CLEAN system at <http://dnr.wi.gov/topic/brownfields/clean.htm> for additional DNR site information.

## EPA Superfund Information (if applicable):

**EPA ID:**

**WIN000509983**

To view more information click on the EPA ID.

**SITE NAME:**

Former Stevens Point Manufactured Gas Plant (MGP)

## Requirements for all properties with Continuing Obligations

1. Properly manage contaminated soil if it is excavated. Sample and arrange appropriate treatment or disposal.
2. DNR approval is required if a water supply well will be constructed or reconstructed.

### Site-Specific Requirement(s) - (BRRTS Action Code)

A "cap" over the contaminated area must be: (222)

Constructed & Maintained

Maintained

A vapor mitigation system must be: (226)

Constructed & Maintained

Maintained

The need for vapor control technology must be evaluated if a building will be constructed. (228)

The approved soil cleanup level is suitable for industrial use of the property. (220)

DNR has approved construction on an abandoned landfill and certain maintenance requirements apply. (402) or (404)

A structural impediment (e.g. building) is present which inhibited investigation/cleanup. Further environment work may be required if the impediment is removed. (224)

DNR has directed a local government unit (LGU) to take an action and a LGU liability exemption applies. This exemption does not transfer to future private owners. (230)

Another type of continuing obligation has been established in DNR's remedial action plan approval. (228)

*Explain:*



BRRTS #: 02-50-000079

ACTIVITY NAME: Former Stevens Point Manufactured Gas Plant (MGP)

**MAPS (continued)**

- Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

**Figure #: 4**                      **Title: Geologic Cross-Section A-A'**

**Figure #:**                      **Title:**

- Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.

**Note:** This is intended to show the total area of contaminated groundwater.

**Figure #: 5**                      **Title: Groundwater Isoconcentration Map**

- Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

**Figure #: 6**                      **Title: Water Table Contours March 2011**

**Figure #: 7**                      **Title: Piezometric Surface March 2011**

**TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))**

Tables must be no larger than 11 x 17 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

- Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.  
**Note:** This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

**Table #: 1**                      **Title: Residual Soil Contamination**

- Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

**Table #: 2**                      **Title: Groundwater Analytical Data**

- Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

**Table #: 3**                      **Title: Groundwater Elevation Summary**

**IMPROPERLY ABANDONED MONITORING WELLS**

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.

**Note:** If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.

- Not Applicable**

- Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.

**Note:** If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.

**Figure #:**                      **Title:**

- Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

- Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

- Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 02-50-000079

ACTIVITY NAME: Former Stevens Point Manufactured Gas Plant (MGP)

## NOTIFICATIONS

### Source Property

**Not Applicable**

**Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.

**Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

### Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

**Not Applicable**

**Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.

**Note:** Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.

**Number of "Off-Source" Letters: 2**

**Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.

**Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies)**. This does not apply to right-of-ways.

**Note:** If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.

**Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

**Figure #:**                      **Title:**

**Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

**Number of "Governmental Unit/Right-Of-Way Owner" Letters: 1**



APPENDIX D

FYR Public Notice



# Stevens Point Journal

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A GANNETT COMPANY

STATE OF WISCONSIN  
BROWN COUNTY

USPC INTEGRATION USER  
202 E MAPLE ST  
MASON, MI 48854 1748

Being duly sworn, doth depose and say that I am an authorized representative of the Stevens Point Journal, public newspaper published in the city of Stevens Point, in Portage and/or Wood counties; that a notice of which the annexed is a copy, taken from said paper, has been published in such newspaper.

Account Number: 0000003076

Ad Number: 5002250275

Published Date: 11/5/19

(Signed):

Legal Clerk

Date:

11/11/19

Signed and sworn to before me

*Nancy Heyrman*

Notary Public,  
Brown County, Wisconsin

My commission expires 5-15-23

NANCY HEYRMAN  
Notary Public  
State of Wisconsin



**EPA Begins Review  
Of WPSC Stevens Point MGP Superfund Site  
Stevens Point, Wisconsin**

U.S. Environmental Protection Agency is conducting a five-year review of the WPSC Stevens Point MGP Superfund site. It's located on Crosby Avenue just north of Highway 10 along former Moses Creek in Stevens Point, Wisconsin. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This is the first five-year review of this site.

EPA's cleanup included excavating and covering river and pond sediment contaminated with polycyclic aromatic hydrocarbons, or PAHs; banning the use of groundwater; limiting future use of the site; and monitoring the groundwater's natural recovery.

More information is available at the Charles M. White Library, 1001 Main St., Stevens Point, and at [www.epa.gov/superfund/wpse-stevenspoint](http://www.epa.gov/superfund/wpse-stevenspoint). The review should be completed by September 2020.

The five-year-review report is an opportunity for you to tell EPA about site conditions and any concerns you have. Contact:

**Susan Pastor**  
Community Involvement  
Coordinator  
312-353-1325  
[pastor.susan@epa.gov](mailto:pastor.susan@epa.gov)

**Stephanie Ross**  
Remedial Project Manager  
312-886-0913  
[ross.stephanie@epa.gov](mailto:ross.stephanie@epa.gov)

You may also call EPA toll-free at 800-621-5431, 8:30 a.m. to 4:30 p.m., weekdays.



## **EPA Begins Review Of WPSC Stevens Point MGP Superfund Site Stevens Point, Wisconsin**

U.S. Environmental Protection Agency is conducting a five-year review of the WPSC Stevens Point MGP Superfund site. It's located on Crosby Avenue just north of Highway 10 along former Moses Creek in Stevens Point, Wisconsin. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This is the first five-year review of this site.

EPA's cleanup included excavating and covering river and pond sediment contaminated with polycyclic aromatic hydrocarbons, or PAHs; banning the use of groundwater; limiting future use of the site; and monitoring the groundwater's natural recovery.

More information is available at the Charles M. White Library, 1001 Main St., Stevens Point, and at [www.epa.gov/superfund/wpsc-stevenspoint](http://www.epa.gov/superfund/wpsc-stevenspoint). The review should be completed by September 2020.

The five-year-review report is an opportunity for you to tell EPA about site conditions and any concerns you have. Contact:

**Susan Pastor**  
Community Involvement  
Coordinator  
312-353-1325  
[pastor.susan@epa.gov](mailto:pastor.susan@epa.gov)

**Stephanie Ross**  
Remedial Project Manager  
312-886-0913  
[ross.stephanie@epa.gov](mailto:ross.stephanie@epa.gov)

You may also call EPA toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m., weekdays.

APPENDIX E

Site Inspection Checklist

## Appendix E – Site Inspection Checklist

I. SITE INFORMATION	
<b>Site name:</b> <b>WPSC Stevens Point Superfund Alternative Site</b>	<b>Date of inspection:</b> <b>12/2/2019 &amp; 6/11/2020</b>
<b>Location and Region:</b> <b>Stevens Point, WI</b>	<b>EPA ID:</b> <b>WIN000509983</b>
<b>Agency, office, or company leading the FYR:</b> US EPA	<b>Weather/temperature:</b> Partly cloudy, 70 degrees, recent rainfall on 6/11/20
<b>Remedy Includes:</b>	
<input checked="" type="checkbox"/> Landfill cover/containment	<input checked="" type="checkbox"/> Monitored natural attenuation
<input type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment
<input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Vertical barrier walls
<input type="checkbox"/> Groundwater pump and treatment	<input type="checkbox"/> Other:
<input type="checkbox"/> Surface water collection and treatment	
II. INTERVIEWS (Check all that apply)	
1. <b>O&amp;M Site Manager</b>	N/A
2. <b>O&amp;M Staff</b>	N/A
<b>3. Local regulatory authorities and response agencies</b> Participated in site inspection 12/3/2019.	
Agency: Wisconsin Department of Natural Resources	
Contact: Matthew Vitale, Project Manager, 12/3/2019, P: 715-839-3760	
Problems, suggestions:	<input type="checkbox"/> Report attached
None	
Agency: City of Stevens Point, WI	
Contact: Ryan Kernosky, Community Development Director, 12/3/2019, P: 715-346-1567	
Problems, suggestions:	<input type="checkbox"/> Report attached
None	
Agency: City of Stevens Point, WI	

## Appendix E – Site Inspection Checklist

Contact: Joel Lemke, Public Utilities Director, 12/3/2019, P: 715-345-5266

Problems, suggestions:  Report attached

None

Agency: City of Stevens Point, WI

Contact: Dan Kremer, Parks, Recreation & Forestry Director, 12/3/2019, P: 715-346-1531

Problems, suggestions:

None

4. **Other Interviews (optional):**  Report attached

Frank Dombrowski, Principal Environmental Consultant, WEC Energy Group  
12/3/19, 414-221-2156

Kyle Kearns, Zoning Administrator, City of Stevens Point, WI  
12/3/19, (no longer with City)

### III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

**1. O&M Documents**

- |  |  |                                     |   |
|--|--|-------------------------------------|---|
| <input type="checkbox"/> O&M manual        | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
| <input type="checkbox"/> As-built drawings | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
| <input type="checkbox"/> Maintenance logs  | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |

**2. Site-Specific Health and Safety Plan**

- |   |
|---|
| <input type="checkbox"/> Readily available  |
| <input type="checkbox"/> Contingency Plan/Emergency Response Plan <span style="float: right;"><input type="checkbox"/> Readily available</span> |

**Note:** Available with field staff.

**3. O&M and OSHA Training Records**

- |  |                                     |   |
|--|-------------------------------------|---|
| <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
|--|-------------------------------------|---|

**4. Permits and Service Agreements**

- |   |  |                                     |   |
|---|--|-------------------------------------|---|
| <input type="checkbox"/> Air discharge permit | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
| <input type="checkbox"/> Effluent discharge   | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
| <input type="checkbox"/> Waste disposal, POTW | <input type="checkbox"/> Readily available | <input type="checkbox"/> Up to date | <input checked="" type="checkbox"/> N/A |
| <input type="checkbox"/> Other permits:       |  |                                     |   |

**5. Gas Generation Records**

**Appendix E – Site Inspection Checklist**

	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<b>6. Settlement Monument Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<b>7. Groundwater Monitoring Records</b>	<input type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: Reviewed electronically, not onsite			
<b>8. Leachate Extraction Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<b>9. Discharge Compliance Records</b>	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date
<b>10. Daily Access/Security Logs</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A

**IV. O&M COSTS**

<b>1. O&amp;M Organization</b>	<input type="checkbox"/> State in-house	<input type="checkbox"/> Contractor for State	
	<input type="checkbox"/> PRP in-house	<input checked="" type="checkbox"/> Contractor for PRP	
	<input type="checkbox"/> Federal Facility in-house	<input type="checkbox"/> Contractor for Federal Facility	
<b>2. O&amp;M Cost Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> Funding mechanism/agreement in place
Original O&M cost estimate		<input type="checkbox"/> Breakdown attached	
<b>3. Unanticipated or Unusually High O&amp;M Costs During Review Period</b>	Describe costs and reasons: N/A		

**V. ACCESS AND INSTITUTIONAL CONTROLS**

	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
<b>1. Fencing Damaged</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Gates secured
<b>2. Other Access Restrictions</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Gates secured
Remarks: N/A		



## Appendix E – Site Inspection Checklist

<b>3. Institutional Controls (ICs)</b>			
<b>A. Implementation and Enforcement</b>			
Site conditions imply ICs not properly implemented	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Site conditions imply ICs not being fully enforced	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Type of monitoring ( <i>e.g.</i> , self-reporting, drive by)	Self-Reporting		
Frequency	Annually		
Responsible party/agency	WPSC		
Contact: Frank Dombrowski, Principal Environmental Consultant, WEC Energy Services, 12/3/2019, P: 414-221-2156			
Reporting is up-to-date	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Reports are verified by the lead agency	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Specific requirements in deed or decision documents have been met	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Violations have been reported	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Other problems or suggestions: None			
<b>B. Adequacy</b>	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate	<input type="checkbox"/> N/A
<b>4. General</b>			
<b>A. Vandalism/Trespassing</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident	
<b>B. Land use changes on site</b>	<input checked="" type="checkbox"/> N/A		
<b>C. Land use changes off site</b>	<input checked="" type="checkbox"/> N/A		
<b>VI. GENERAL SITE CONDITIONS</b>			
<b>1. Roads</b>	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A	
<b>A. Roads damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A
<b>B. Other Site Conditions</b>			
<b>VII. LANDFILL COVERS</b>			
<b>1. Landfill Surface</b>	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A	
<b>A. Settlement (Low Spots)</b>	<input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Settlement Not Evident	
<b>B. Cracks</b>	<input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Cracking Not Evident	
<b>C. Erosion</b>	<input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Erosion Not Evident	
<b>D. Holes</b>	<input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Holes Not Evident	
<b>E. Vegetative Cover</b>	<input checked="" type="checkbox"/> Grass	<input checked="" type="checkbox"/> Cover Properly Established	

## Appendix E – Site Inspection Checklist

<input type="checkbox"/> Tress/Shrubs (indicate size and locations on a diagram)	<input checked="" type="checkbox"/> No Signs of Stress
<b>F. Alternative Cover (armored rock, concrete, etc.)</b>	<input checked="" type="checkbox"/> N/A
<b>G. Bulges</b> <input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Bulges Not Evident
Areal Extent:	Height:
<b>H. Wet Areas/Water Damage</b>	<input checked="" type="checkbox"/> Wet Areas/Water Damage Not Evident
<b>I. Slope Instability</b> <input type="checkbox"/> Location Shown on Site Map	<input checked="" type="checkbox"/> Slope Instability Not Evident
<b>2. Benches</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
<b>3. Letdown Channels</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
<b>4. Cover Penetrations</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
<b>A. Gas Vents</b>	<input type="checkbox"/> Active <input type="checkbox"/> Passive
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled
<input type="checkbox"/> Good condition	<input type="checkbox"/> Evidence of leakage at penetration
<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
<b>B. Gas Monitoring Probes</b>	
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled
<input type="checkbox"/> Good condition	<input type="checkbox"/> Evidence of leakage at penetration
<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
<b>C. Monitoring Wells</b>	
<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled
<input checked="" type="checkbox"/> Good condition	<input type="checkbox"/> Evidence of leakage at penetration
<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
<b>D. Leachate Extraction Wells</b>	
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled
<input type="checkbox"/> Good condition	<input type="checkbox"/> Evidence of leakage at penetration
<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
<b>E. Settlement Monuments</b>	<input type="checkbox"/> Located <input type="checkbox"/> Routinely Surveyed <input checked="" type="checkbox"/> N/A
<b>5. Gas Collection and Treatment</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
<b>6. Cover Drainage Layer</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A
<b>7. Detention/Sediment Ponds</b>	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A

## Appendix E – Site Inspection Checklist

<b>8. Retaining Walls</b>	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>9. Perimeter Ditches/Off-Site Discharge</b>	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>VIII. VERTICAL BARRIER WALLS</b>		
<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b>		
<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A	
<b>1. Groundwater Extraction Wells, Pumps, and Pipelines</b>	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>2. Surface Water Collection Structures, Pumps, and Pipelines</b>	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>3. Treatment System</b>	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
<b>4. Monitoring Data</b>		
<b>A. Monitoring Data:</b>		
<input checked="" type="checkbox"/> Is Routinely Submitted on Time	<input checked="" type="checkbox"/> Is of Acceptable Quality	
<b>B. Monitoring Data Suggests:</b>		
<input checked="" type="checkbox"/> Groundwater plume is effectively contained	<input checked="" type="checkbox"/> Contaminant concentrations are declining	
<b>5. Monitored Natural Attenuation</b>		
<b>A. Monitoring Wells (natural attenuation remedy)</b>		<input type="checkbox"/> N/A
<input checked="" type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning	<input checked="" type="checkbox"/> Routinely sampled
<input checked="" type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> Good condition
<b>X. OTHER REMEDIES</b>		
River and pond sediment caps appear to be in place and functioning.		
<b>XI. OVERALL OBSERVATIONS</b>		
<b>1. Implementation of the Remedy</b>		
Remedy components include cap with grassy cover or paved parking lot, monitored natural attenuation and ICs for soil and groundwater. Remedy construction complete in 2015, grass cap in good condition. Parking lot shows weathering and some cracks, but remains protective.		
<b>2. Adequacy of O&amp;M</b>		
O&M plan is adequate. Soil cover is inspected annually, groundwater is sampled semi-annually, and pond and river caps are monitored every five years. All components of the remedy continue to remain protective.		
<b>3. Early Indicators of Potential Remedy Problems</b>		

## Appendix E – Site Inspection Checklist

No unexpected changes in cost or scope of O&M. City plans to redevelop area in the future, will work with owner to ensure remedy remains protective. Parking lot will need to be resurfaced eventually, but it remains protective while City is working on redevelopment concept.

### **4. Early Indicators of Potential Remedy Problems**

No opportunities for optimization in monitoring tasks or operation of the remedy identified.

APPENDIX F

Site Inspection Photographs



12/3/2019: Pond on the southwest side of the Site. View to west and southwest.



12/3/2019: Crosby Avenue from parking lot to the south.



12/2/2019: Monitor wells OW02 (from south) & OW08 (from northeast). Wells are protected from snow removal.



12/3/2019: View of City-owned parking lot from 1<sup>st</sup> Street.



6/11/2020: View of City-owned parking lot from 1<sup>st</sup> Street side to the southwest and north.



6/11/2020: View of City-owned parking lot from the north end of the westernmost row, to the south and northwest. Some asphalt erosion and cracking present.





6/11/2020: View of OW08 (from south) and OW07A & PZ07B (from east). Monitor wells and bollards are in good condition and secure.



6/11/2020: Grassy cap, view to east and to south. Grass is in good condition over most of the cap, some patchy areas. No cracking, sinking or mounding observed.



6/11/2020: View of pond from east. Water elevation is controlled by River. Sand cap and rock armor cover appear to be in good condition. No erosion of sides of pond observed. Grasses, algae, ducks and fish observed.