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Ms. Leslie Patterson
Remedial Project Manager
USEPA, Region 5
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

April 17, 2012
(1177)

RE: Remedial Investigation (RI) Report – Revision 3
Feasibility Study (FS) Report – Revision 3 and
Response to March 2, 2012 Additional USEPA Comments on Revision 2 of the RI and FS Reports, submitted in December 2011 and Figures submitted on February 29, 2012
Stevens Point Former Manufactured Gas Plant (MGP) Site, Stevens Point, Wisconsin
WIN000509983

Dear Ms. Patterson:

On behalf of Integrys Business Support, LLC (IBS), which manages the former Stevens Point Manufactured Gas Plant (MGP) site on behalf of Wisconsin Public Service Corporation (WPSC), Natural Resource Technology, Inc. (NRT) is submitting the Remedial Investigation (RI) Report – Revision 3 and Feasibility Study (FS) Report – Revision 3 for the above referenced site.

This letter provides responses to the March 2, 2012 Additional United States Environmental Protection Agency (USEPA) comments on the December 14, 2011 RI Report – Revision 2 and December 23, 2011 FS Report - Revision 2. Responses to each comment are summarized herein and they have been incorporated into the RI Report – Revision 3 and FS Report – Revision 3, which are enclosed.

For ease of review, the USEPA comments are bulleted and italicized; the IBS response is noted below the comment.

- *The proposed revisions to Figures 37 and 38 of the RI, as represented in draft figures dated February 17, 2012 and attached to your February 29, 2012 email, are acceptable. For the purposes of evaluating potential vapor intrusion, the naphthalene plume shall be set at 11.3 µg/L, which is consistent with a conservative upper bound of 10 degrees Celsius for groundwater temperature in the Stevens Point area. The proposed revisions to Figures 39 and 40 of the RI, to change the data labeled in black to grey, are also acceptable. The sections of text that relate to these figures will be modified to reflect these changes.*

Response: Figures 37 and 38 have been finalized consistent with the draft figures presented in February 2012. As provided in the March 2, 2012 USEPA comments, the naphthalene groundwater plume, protective of vapor intrusion has been adjusted to 11 µg/L based on a temperature of 10 degrees Celsius. As discussed with USEPA via email April 12, 2012 we agreed to use the temperature conversion fact sheet on USEPA's website: http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettiner.htm using the average annual groundwater temperature of 11 degrees Celsius, which also results in a naphthalene concentration of11 µg/L. Figure 37 have also been revised to show the January 2011 groundwater analytical data and groundwater plumes for comparison with the January 2011 soil vapor sampling results. Figure 38 continues to illustrate March 2011 groundwater and soil vapor sampling results.

Text in Section 4.4 of the RI has been revised to clarify these figures.

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Figures 39 and 40 of the RI, have been modified as requested and Section 5.3.1.2 of the RI has been revised to clarify these figures are based on a target cancer risk of 1x10-4, based on polycyclic aromatic hydrocarbon (PAH) concentrations, mainly benzo(a)pyrene concentrations.

- *In Section 2.4.1 of the FS, remedial action objective (RAO) three should read: "Restore groundwater to PRGs for MGP-related contaminants within a reasonable timeframe." Because the shortest anticipated time to achieve this RAO is 40-100 years under event the most aggressive option, this timeframe is considered reasonable.*

Response: Section 2.4.1 of the FS has been revised as requested.

- *The remedial options presented in the FS for river sediment are incomplete. The range should include an option that covers (with sand, and with sand and armor) the entire 1.3 acres of sediment exceeding the threshold effects concentration (TEC). It should also include an alternative that would dredge contaminated river sediment. Dredging the 1.3-acre TEC area may be contrasted with an option that dredges the 0.4-acre area that exceeds the probable effects concentration and covers the remaining 0.9 acres that exceed the TEC.*

Response: The additional remedial options requested by USEPA have been added to the table below summarizes the complete set of remedial options presented in FS Report – Revision 3 for the Wisconsin River Sediments.

Summary of Remedial Options Stevens Point Former Manufactured Gas Plant Site		
Medium	**Designation**	**Description**
River Sediment	**R1**	No action,
	R2a	Placement of a six-inch sand cover over the river sediment, exceeding the PEC.
	R2b	Placement of a six-inch sand cover over the river sediment, exceeding the TEC.
	R3a	Placement of a six-inch sand cover over the river sediment; placement of a six-inch armor layer over the sand cover, exceeding the PEC.
	R3b	Placement of a six-inch sand cover over the river sediment; placement of a six-inch armor layer over the sand cover, exceeding the TEC.
	R4a	Dredge sediment greater than the PEC, sand cover sediment greater than the TEC.
	R4a	Dredge sediment greater than the TEC.

Section 4.3.2 and Section 4.3.3 have been modified to include the sub-alternatives to address the PEC (sub-alternatives "a") and to address the TEC (sub-alternatives "b"). Section 4.3.4, has been added to discuss dredging in the Wisconsin River. In addition, sub-alternatives and the dredging remedial options are discussed in Section 5, summarized on Table 4, and presented on Figure 7. Additional cost estimating sheets for these new remedial options are included in Appendix D.

Please contact Mr. Naren Prasad of IBS at 312.240.4569 if you should have any questions or require additional information.

Sincerely,

NATURAL RESOURCE TECHNOLOGY, INC.

Eric P. Kovatch, PG, PH
Senior Hydrogeologist

Jennifer M. Kahler, PE
Senior Engineer/Project Manager

Enc: 2 hard copies & 2 CD copies (each) of RI Report – Revision 3 and FS Report – Revision 3

cc: Mr. Bill Evans, WDNR (1 hard copy and 1 CD of RI and FS)
Mr. Tom Hvizdak, WDNR (1 hard copy and 1 CD of RI and FS)
Ms. Catherine Schripsema, CH2M HILL (1 CD copy of RI and FS)
Mr. Mark Thimke, Foley and Lardner (cover letter only)
Mr. Naren Prasad, Integrys Business Support, LLC (1 CD copy of RI and FS)

SMARTER SOLUTIONS

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VALUE

FEASIBILITY STUDY REPORT

Wisconsin Public Service Corporation
Stevens Point Former Manufactured Gas Plant Site
Stevens Point, Wisconsin
WIN000509983

Project No: 1177

Revision 3
April 17, 2012

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FEASIBILITY STUDY REPORT

WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT FORMER MANUFACTURED GAS PLANT SITE
STEVENS POINT, WISCONSIN
WIN000509983

Project No: 1177

Prepared For:

Integrys Business Support, LLC
700 N. Adams Street
Green Bay, WI 54307

Prepared By:

Natural Resource Technology, Inc.
23713 W. Paul Road, Suite D
Pewaukee, WI 53072

Revision 3
April 17, 2012

Brian G. Hennings, PG
Hydrogeologist

Heather M. Simon, PE
Environmental Engineer

Jennifer M. Kahler, PE
Senior Engineer/Project Manager

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ACRONYMS

µg/L	Micrograms Per Liter
µg/kg	Micrograms Per Kilogram
bgs	Below Ground Surface
ARAR	Applicable or Relevant and Appropriate Requirements
B(a)P	Benzo(a)pyrene
BLRA	Baseline Risk Assessment
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CERCLA (“Superfund")	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	Cubic feet per second
COPCs	Contaminants of Potential Concern
CWG	Carbureted Water Gas
CWPC	Consolidated Water Power Company
EDI	Edi Engineering & Science, Inc
ES	NR 140 Enforcement Standard
FS	Feasibility Study
HHRA	Human Health Risk Assessment
ICIP	Institutional Control Implementation Plan
IBS	Integrys Business Support, LLC
MCL	Maximum Contaminant Level
MGP	Manufactured Gas Plant
MNA	Monitored Natural Attenuation
NCP	National Contingency Plan
NRT	Natural Resource Technology, Inc
PAHs	Polynuclear Aromatic Hydrocarbons
PRAP	Preliminary Remediation Action Plan
PRG	Preliminary Remediation Goal
PEC	Probable Effects Concentration
ROD	Record of Decision
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RI/FS	Remedial Investigation and Feasibility Study
Settlement Agreement	Settlement Agreement and Administrative Order on Consent
SHS	Simon Hydro Search, Inc
SOW	Statement of Work
SSWP	Site-specific Work Plan
TBC	To Be Considered

TEC	Threshold Effects Concentration
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources
WPSC	Wisconsin Public Service Corporation

1 INTRODUCTION

This Feasibility Study (FS) addresses the former manufactured gas plant (MGP) site located in Stevens Point, owned by Wisconsin Public Service Corporation (WPSC), a subsidiary of Integrys Energy Group. The Stevens Point site is the first of six former MGP sites to be addressed by WPSC using a common format and approach as set forth in the Statement of Work (SOW) to the Settlement Agreement and Administrative Order on Consent (Settlement Agreement), CERCLA Docket No. V-W-06-C-847 (May 5, 2006).

Under the Settlement Agreement/SOW, the United States Environmental Protection Agency (USEPA) calls for the preparation of “multi-site” documents used to support the FS analysis. USEPA approved the Multi-Site FS Support Document – Revision 1, dated March 26, 2010, on April 20, 2010. As allowed for in the SOW, elements of the Stevens Point FS called for in the Settlement Agreement/SOW were streamlined.

This FS is based on data and conclusions presented in the Remedial Investigation (RI) Report Revision 3 (NRT, April 2012) and was completed in accordance with applicable federal regulations, including Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") as amended by SARA and the National Contingency Plan (NCP). Relevant guidance documents are referenced in Section 6.

1.1 Purpose and Organization of Report

The purpose of the FS is to develop, screen, and evaluate remedial alternatives to reduce unacceptable risks to human-health and ecological receptors as a result of the former MGP. The evaluation of remedial actions includes:

- Overall protection of human health and the environment
- Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility or volume
- Short-term effectiveness
- Implementability

- Cost
- State Acceptance
- Community Acceptance

FS Report is organized into the following sections:

- Section 1 – Introduction and Site Background Information
- Section 2 – Development of Remedial Action Objectives
- Section 3 – Development and Screening of Technologies
- Section 4 – Detailed Analysis of Remedial Options
- Section 5 – Comparative Analysis of Remedial Options
- Section 6 – References

1.2 Background Information

This section summarized background information presented in the Completion Report (NRT 2006), Site Specific Work Plan (SSWP) – Revision 1 (NRT, April 2007), and the RI Report – Revision 3 (NRT, April 2012). Refer to the SSWP for additional detail.

Owner/Operator:	Wisconsin Public Service Corporation, a subsidiary of Integrys Energy Group, managed by Integrys Business Support, LLC (IBS) Contact: Mr. Naren M. Prasad, P.E., MPH, LEED AP Senior Environmental Engineer(312.240.4569) 130 East Randolph Drive, 22nd Floor Chicago, Illinois 60601
Site Location:	T24N, R8E, Section 32 1111 Crosby Avenue Stevens Point, Wisconsin Portage County (Figure 1)
USEPA ID (WDNR BRRTS #)	WIN000509983 (02-50-000079)

As presented in the SSWP, the following definitions are used herein:

- Facility – Refers to the former WPSC MGP structures and related areas.
- Property – Refers to the land currently owned by WPSC (Figure 2).

- Site – Refers to areas where contamination related to the former MGP has been discovered through site investigation activities completed to-date. These areas include the Facility and Property as well as portions of Pfiffner Pioneer Park, the City, and privately owned land south and west of the Property, and near shore sediments within the Wisconsin River.

1.2.1 Site Description and Surrounding Land Use

The former Stevens Point MGP is located on the Property in Stevens Point, Wisconsin (Figure 1) and encompasses approximately 3 acres (Figure 2).

The Site currently consists of an open grass covered field (Property), a portion of the adjacent City Park (Pfiffner Pioneer Park which is a total of approximately 6 acres), a City asphalt parking lot (the parking lot is a total of approximately 1.5 acres), the northwest corner of the shopping mall parking lot, and adjacent streets. An open-air band shell and the Riverfront Art Center are located within the City Park adjacent to the Wisconsin River and the pond (Figure 2).

The former MGP-property is bounded by Crosby Avenue to the west; a City of Stevens Point parking lot to the south and east; and residential properties, West Street, and an apartment building to the north. Pfiffner Pioneer Park, owned by the City, lies west of the Property across Crosby Avenue and is bordered on the west by the Wisconsin River. The western Property boundary is located approximately 300 feet east of the Wisconsin River (Figure 2). The majority of the former MGP structures were located between 300 and 500 feet east of the river, predominantly on the western side of the Property, situated on slightly more than 1.5 acres (Figure 3). Information obtained from the City of Stevens Point Zoning Department indicates land use around the Site includes single and multi-family housing, commercial, and recreational areas (Figure 2). The former Facility and Property are zoned “Commercial.” Areas that border Water Street and Crosby Avenue to the east and south are zoned “Central Business,” while Pfiffner Park is zoned “Conservancy.”

Thirty-three (33) monitoring wells are located in the vicinity of the site, covering approximately 40 acres (Figure 2). Wells are located on the WPSC property as well as on public and private property to the east, west, and south. Including the areas where MGP-affected soils and groundwater are located, the overall site size is less than seven acres. The Site includes areas adjacent to the Wisconsin River and a small decorative pond located off Property, adjacent to the Riverfront Art Center. The pond is located in the vicinity of the former mouth of the slough, but was not a feature of the former MGP and its base is approximately seven to 10 feet above the base of the former slough. The former slough was filled in to grade as part of the City’s storm sewer reconstruction project between 1981 and 1985 (refer to Section 1.2.2 for additional discussion), with the exception of the western end of the slough which was partially filled to create the pond. The bottom of the pond is at approximately elevation 1082 and the bottom of the former slough is approximately elevation 1075 to 1072, as depicted in cross sections included in the RI Report – Revision 3 (NRT, April 2012) on Sheet 1. MGP residuals detected in the vicinity of the pond and adjacent river area could be related to the historical use of the former slough for conveying MGP process wastewater or the quality of the material used to fill the slough. The pond is hydraulically connected to the Wisconsin River by a narrow channel located under the former railroad tracks that was converted into a walking and bike path and parallels the Wisconsin River (Figure 2). There is no ready entry point to the pond, and the area surrounding the pond is maintained as park land with benches.

The Wisconsin River is approximately 900 feet across with a strong current, and water depths exceeding four feet occurring just off-shore in the vicinity of the Facility and the former slough (previously a storm sewer outfall to the Wisconsin River). Lawn is maintained up to the bank of the Wisconsin River, and there is no beach area or ready access the Wisconsin River. The Site includes approximately 0.4 acre in the Wisconsin River, extending a distance of approximately 200 feet along the river bank and 120 feet into the river.

In 2008, Consolidated Water Power (CWP) Company (the dam operator) drew down the water level in the river to perform approximately 1,000 linear feet of repairs on the dam. As shown in Photo 1 in Appendix B-2, during the drawdown, there was no water in the pond. The bottom of the pond contained organic silts and clays, consistent with the sediment borings. The adjacent river at the pond location was also exposed (see Photo 2 in Appendix B-2). The river bottom at the pond/river intersection was dominated by sand, gravel, rip-rap and wood debris. Towards the center of the river and away from the pond, the river bottom was dominated by alluvial sand and wood chips and/or timber (see Photo 3 in Appendix B-2). No sheen or oil-wetted/coated material was observed. No debris, other than wood chips/timbers were observed. Photo 3 in Appendix B-2 also illustrates the river bottom adjacent to the pond drops off quickly and limits receptors from accessing sediment on the river bottom.

Since the drawdown of 2008, CWP has made a point to use divers to perform annual inspections and dam repairs. As a result of the annual inspections/maintenance with divers, future drawdown events are not anticipated.

1.2.2 Site History

The Stevens Point MGP operated from approximately the 1890s to the late 1940s or early 1950s, using the carbureted water/gas (CWG) method to produce gas primarily from oil (SHS, April 1993). The plant ceased production in the late 1940s to early 1950s when piped natural gas became readily available to the Stevens Point area (EDI, 1986). The former MGP process structures were located on the west side of the Facility (Figure 3). The east side of the Facility was used as storage and disposal of MGP process wastes and other materials.

MGP related structures at the Facility present on Sanborn maps from 1898, 1912, 1922, 1934, 1945, and 1960 (provided in the Completion Report (NRT, June 2006)) included the following:

- Materials storage building and garage
- A purifier
- Two tar wells of unknown size
- Eight gas holders (capacities of 4,500 ft^3, 10,000 ft^3, two at 19,500 ft^3, 40,000 ft^3, 200,000 ft^3, and two of unknown volumes)

All historic MGP-related structures have been removed from the site surface. Some former structure foundations were noted during subsurface environmental investigations and the soil remedial action. For instance, during site investigations throughout the 1990s, the only portion of the former purifier structure that remained was the base/foundation. The concrete base was located at a depth of less than two feet bgs and the test pit information from the various investigations in the vicinity of this structure did not find any other purifier related structures. Therefore, it was concluded that there is no source related to the purifier. Similarly during prior remediation work, only concrete debris was found in the vicinity of former tar wells (no intact structures) and all of this debris was removed and disposed off-site during soil remediation. Additional discussion on the fate of the former MGP structures is discussed in Section2.2 and 3.6.1 of the Site-Specific Work Plan- Revision 1 (NRT, April 2007)

A slough was formerly located along the south property boundary (Figure 2). The slough represented the remains of Moses Creek, a former tributary to the Wisconsin River, and this historically served as a storm water outfall to the Wisconsin River for the City of Stevens Point, as well as for the MGP itself. In 1918, a dam was constructed approximately one-half mile downstream of the site. To prevent river water from filling the slough, a retaining wall was built and the present day pond (which is a remnant of the former slough outlet) was created. In 1922, a pump house (Figure 3) was constructed to pump storm water from the slough into the pond, where it could discharge into the Wisconsin River. Thus, the slough remained a vital storm water discharge point for downtown Stevens Point through the 1980s. In the 1980s, a new storm sewer main was constructed in the vicinity of the slough. This storm sewer was routed away from the Wisconsin River to an outfall south of the Main Street Dam, and the slough was filled (although the pond remained). The pond bottom is at an elevation of approximately 1082 feet msl; the bottom of the former slough ranges in elevation from approximately 1072 to 1075 feet msl (refer to the site cross sections on Sheet 1 of the RI Report – Revision 3).

1.2.3 Site Utilities

A storm sewer line is located just south of the Property (Figure 4). The line runs north-south and then angles to the northeast. The storm sewer lines were installed by the City in the 1980s. The City perforated three sections of sewer to facilitate placement of the pipe in the trench at the planned elevation. A video scan of the storm sewers in May 2000 confirmed the perforations. The diameter and lengths of perforated storm sewer are listed below and the locations are shown on Figure 4.

Pipe Diameter (inches)	Approximate Length (feet)	Sewer Segment (Manholes)
18	117	Upstream of MH-4A
24	190	MH-4A to MH-4
27	154	MH-4 to MH-3

The influence of this perforated sewer line on Site conditions is discussed in detail in Section 4.2.3 of the RI Report – Revision 3 (NRT, April 2012). Between July 2007 and January 2008, water levels were monitored continuously in monitoring well MW-06 using a pressure transducer. Groundwater elevations at OW-6 exceeded the elevation of the storm sewer perforations near MH-4 on approximately 11 days between August 20 through August 31, 2007, and were close in elevation before and after this period, confirming that groundwater can enter the sewer when groundwater elevations are above the elevation of the perforations.

Seven storm sewer samples were collected at MH-1, MH-3, MH-4, and MH-5 between May 2000 and November 2003 (Appendix I of the Completion Report, NRT, June 2006). As part of the RI activities, storm sewer samples were collected three times between July 2007 and January 2008. PVOC and PAH concentrations in the storm sewer samples were low compared to the concentrations within the groundwater plume. No PAH MCLs/ESs were exceeded and the benzene MCL/ES was only slightly exceeded. Groundwater elevation data at the closest water table well, OW-6, indicates the water table was above the storm sewer perforation elevation on five of 33 groundwater sampling events since 2000. The site geology is dominated by highly permeable alluvial sand and gravel (refer to Section 2.1. of the RI Report – Revision 3 (NRT, April 2012), and there is no preferential pathway for groundwater to follow the sewer.

Given the low frequency of affected groundwater entering the storm sewer and the storm sewer not a preferential flow path, this pathway is considered insignificant and will not require a remedial action. Addressing the groundwater at the site will ultimately address affected groundwater occasionally entering the storm sewer.

Natural Resource Technology

A natural gas line, installed just prior to soil remediation activities in 1998, crosses the Property (Figure 4). This line crossed through Excavation Area #3 (Figure 2 in Appendix A). Excavated soils from the installation of the gas line were disposed off-site, and the line was left undisturbed during the 1998 soil excavation and remediation activities. An underground water line services two hydrants (one near OW-3R/PZ-3B) at the north end of the Property (Figure 4).

Within the river, a fiber-optic communications line crosses approximately 80 feet upstream of the US Highway 10 (Hwy 10) bridge. A safe-guard area approximately 40 feet wide extends across the river to protect this line. The approximate line location, as well as the safe-guard area, is shown on Figures provided in Appendix B-2.

1.2.4 Topography and Drainage

The Site is generally flat with a mild slope towards the Wisconsin River. Ground surface elevation ranges from approximately 1,090 feet near Water Street (east of the Property) to about 1,087 feet in the vicinity of the pond (south of the Property). Surface water flow is to the river and/or the local storm sewer system. Only precipitation that falls directly onto the park flows to the river. The remaining runoff from the paved surfaces, roads, and grass areas is intercepted by storm sewers located around the Site.

Storm water within the sewers from the northeast, south, and southeast flows to a primary 84-inch line that discharges to the east, and joins with drainage from the north part of City of Stevens Point. Storm water eventually discharges to the river below the dam, in the vicinity of the railroad bridge. No wetlands are present in the vicinity of the Site.

1.2.5 Site Hydrology

The groundwater flow direction in both the water table wells and the piezometers is generally eastward, away from the Wisconsin River.

Easterly flow direction at the Site is a result of the pool behind the Main Street dam, one half (0.5) mile downstream of the Site. As conceptualized in the RI Report, two groundwater flow systems may exist at the Site: a semi-circular flow system caused by seepage of river water around the dam, and the natural flow system where groundwater flows west toward the river. These two flow systems converge so the natural flow system is influenced by the dam flow system. The area of convergence between the two flow systems may move closer to and farther from the river (west and east) in response to changes in pool elevation or to changes in the hydraulic heads driving the natural system.

Groundwater monitoring wells are screened in sand and gravel or highly weathered bedrock with the exception of piezometer PZ-14B. Piezometer PZ-14B is screened in fairly competent granite bedrock and yields very little water. This is a distinctly different zone and results in an approximate 20 foot difference in head at piezometer PZ-14B compared to any other groundwater monitoring well in the network.

1.2.6 Surface Water Flow

As discussed in the RI Report (NRT, April 2012) there is little correlation between rainfall at Stevens Point and flowage discharge and river elevation. There is also little correlation between river elevation and the discharge, and at times these two variables are inversely related.

River discharge and elevation data at the dam for 2006 and 2007 was obtained from the Consolidated Water Power Company (CWPC), which operates the dam located just downstream of the Site. (See Section 2.4 of the RI Report, NRT, April 2012). These daily river discharge data correspond to the investigation period and the prior year. Daily discharge values for 2006/2007 range from 897 cubic feet per second (cfs) to over 19,700 cfs.

CWPC also provided the hourly elevation data for the period from January 1, 2007 through January 31, 2008. These data show that the hourly river elevation fluctuated between 1086.72 and 1087.52 feet; the average daily pool elevations ranged from 1,086.87 to 1,087.33 feet. These data indicate the overall stability of the flowage pool.

1.2.7 Previous Investigations Performed

The Completion Report (NRT, 2006) contains a full bibliography of the reports and summaries issued for the Site. Site investigation and remediation activities were undertaken since the mid-1980s. Investigations completed prior to the soil remediation activities in 1998 focused on determining the presence of former MGP structures, identifying source areas and an initial groundwater assessment. Investigations included soil borings, test pits, surface soil samples, Hydro Punch™ water samples, and groundwater sampling from monitoring wells and piezometers. The 1998 remedial efforts were performed under the WDNR's voluntary cleanup program as, discussed in Section 1.2.8.

Investigations occurring between 1999 and 2002 evaluated other portions of the Site and assessed the overall effect of the remediation. Supplemental site investigation activities focused on the former slough, Wisconsin River sediment, groundwater monitoring, and issues related to groundwater infiltration into the perforated the storm sewer.

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Groundwater monitoring is on-going and reports were prepared on an annual basis through 2007. Since initiating the RI under the SAS program, data is submitted to the USEPA annually through the GEOS Data Coordinator and/or monthly progress reports.

Additional soil, groundwater, sediment and surface and storm water data were collected between June 2007 and January 2008 in accordance with the SSWP – Revision 1, approved by the USEPA on July 11, 2007. These RI activities focused on off Property soil quality, groundwater interaction with the perforated storm sewer, the potential for contaminant source areas in the vicinity of Pfiffner Pioneer Park Pond and the Wisconsin River, the distribution of MGP-residuals in sediment and surface water, and potential for vapor migration. Following submittal of the RI Report – Revision 0 (NRT, June 2008), additional monitoring wells were installed in October 2008 and January 2011 to further refine the down gradient extent of affected groundwater. Figure 2 includes the location of the groundwater monitoring wells. The January 2011 investigation also included installation of soil vapor probes to assess potential for vapor intrusion. The soil vapor probe locations are provided in Appendix B-4.

These results are presented in the RI Report – Revision 3, submitted to USEPA on April 17, 2012, and are included in Appendix B.

1.2.8 Previous Remedial Actions Performed

In 1998, a number of response actions were previously performed at the Site (see Completion Report, NRT, 2006 and Remedial Action Documentation Report, NRT, 1998, and Appendix A). These response actions included:

- Surface Soil Removal. Property-wide scrape of the top four inches of surface material which was used as backfill.
- Source Area Excavation and Management. Over 16,000 tons of contaminated soil and debris were excavated from the Site between February and June 1998. Areas targeted for removal were the former MGP operations area and vicinity where potential sources of coal tar and/or other MGP residuals were identified by previous investigation work. Soil and debris was either thermally treated or disposed off-site.
- Former Underground Structure Removal. Removal of former underground structures or remnants of structures with visible evidence of MGP residuals in soil/debris surrounding or within the former structures.
- Excavation Dewatering and Treatment. Temporary groundwater extraction during the course of the source area excavation work to maximize excavation depths and to control water containing MGP contamination. Water was treated on-site and discharged to the local public wastewater treatment facility.

- Backfilling, Cover and Surface Restoration. Site restoration activities included:
    - Backfilling of clean and thermally treated soil within in the excavation areas
    - Placement of 2 feet of clean imported fill over the backfilled excavation areas, including both the Property and disturbed portions of Pfiffner Pioneer Park
    - Re construction and paving of excavated sections of Crosby Avenue
    - Placement of 4 inches of imported fine grained topsoil cover, seeding and mulching of the Property and placement of sod over imported clean backfilled portions of Pfiffner Pioneer Park

1.2.9 Nature and Extent of Contamination

Constituents of Potential Concern (COPC) were identified in the Multi-Site Risk Assessment Framework (Exponent, 2007) and refined for the Stevens Point Site using previously collected data, as described in the Site Specific Work Plan – Revision 1 (NRT, April 2007). COPC concentrations were evaluated as part of the Baseline Risk Assessment (BLRA) submitted as part of the RI Report – Revision 0 (NRT, 2008). The BLRA relied on screening level assessments as described in the USEPA-approved Multi-Site Risk Assessment Framework (RAF). Screening values were used to conservatively identify media and chemicals of potential concern within these media. This is an appropriate approach given that source removal has been performed and the current and reasonably foreseeable future land use is park/recreational and parking area. Areas of concern were identified based on the screening level risk evaluations performed within the BLRA.

Since submittal of RI Report – Revision 0, the risk-based screening levels used to perform the human health risk assessment component of the BLRA have been updated (Exponent, April 2011) to include Regional Screening Levels (RSLs) in the hierarchy. In September 2011, the screening levels for naphthalene and ethylbenzene were further revised on a programmatic level to incorporate the carcinogenic endpoints. The BLRA included in RI Report – Revision 3 (NRT, April 2012) includes a side-by-side comparison of the former and revised human health risk based screening levels which did not change the media of concern to be considered in the FS.

The range of concentrations for select constituents of concern identified in the BLRA is summarized below. The sample locations and analytical results are included in Appendix B.

1.2.9.1 Soil Analytical Result Summary

Soil samples were collected as part of remedial investigations as discussed in Section 1.2.7. Sampling locations and analytical results are provided in Appendix B-1. Benzene, naphthalene and benzo(a)pyrene (for the polynuclear aromatic hydrocarbons (PAHs)), arsenic, and lead are the parameters most often identified. The general range of concentrations observed for these compounds is summarized below.

Parameter	Maximum Conc. micrograms per kilogram (µg/kg)	Occurrence
Benzo(a)pyrene	200	Surface Soil
Arsenic	4,400	
Benzene	5,600	Subsurface Soil
Benzo(a)pyrene	7,640,000	
Naphthalene	260,000	
Arsenic	2,600	
Lead	1,700,000	

1.2.9.2 Groundwater Analytical Result Summary

Groundwater samples were collected as part of remedial investigations and on-going groundwater monitoring events. Sampling locations and analytical results are provided in Appendix B-3.

Several PAHs exceeded the MCLs. Naphthalene is typically the PAH of concern in Site groundwater, although B(a)P, benzo(b)fluoranthene, and chrysene are also present at low levels. Recent groundwater results from the past four years indicate naphthalene, B(a)P, benzo(b)fluoranthene, and chrysene are above the maximum contaminant level (MCL) and/or WDNR enforcement standard (ES) in certain Site wells (Appendix B-3). Other PAHs exceeding the MCLs in the past include fluoranthene and pyrene.

1.2.9.3 Surface Water Analytical Result Summary

Surface water results (Appendix B-4) from the Wisconsin River show only elevated silver (0.15 micrograms per liter (µg/L)) at one sample location. All remaining metals, as well as volatile organic compounds (VOCs) and PAHs were detected at very low levels or not at all.

Pond samples were low for most parameters. Only three COPCs identified included the following:

- Benz(a)anthracene (maximum concentration of 0.18 µg/L)
- Benzo(a)pyrene (maximum concentration of 0.25 µg/L)
- Lead (maximum concentration of 5.8 µg/L)

NATURAL RESOURCE TECHNOLOGY

1.2.9.4 Sediment Analytical Result Summary

Analytical results and sampling locations for sediments are provided in Appendix B-2. Elevated concentrations of COPCs were detected in sediment samples from the pond and in the river immediately adjacent to the pond. Generally, contaminants were higher in the surface samples in the river with the exception of T3-A1, T3-A2, and T4-A1, which reported the highest concentrations in the near surface samples (18-30 inches below mudline). Concentrations in the pond were the highest in the near surface samples (6-18 inches below mudline). As discussed in Section 1.2.1, the pond is a remnant of the former slough, the base of which is approximately seven to ten feet above the slough bottom.

The range of COPCs detected above the screening levels is summarized below.

Parameter	River Maximum Conc. (µg/kg)	Pond Maximum Conc. (µg/kg)
Xylene	230,000	Below Levels
Total PAHs	23,840,000	53,000
Cadmium	2,600	4,000
Copper	400,000	61,000
Lead	69,000	350,000
Mercury	1,600	1,100
Nickel	29,000	24,000
Zinc	124,000	430,000

1.2.9.5 Soil Vapor Analytical Result Summary

Analytical results and sampling locations for soil vapor are provided in Appendix B-4. The range of benzene detections that exceeded the screening level are summarized below:

Point	Sample Date	Benzene (µg/m3)	Point	Sample Date	Benzene (µg/m3)
SV1S	01/25/11	3.2	SV9S	01/18/11	38
SV5S	01/19/11	33		03/16/11	13
SV6S	03/15/11	3.3	SV10S	01/18/11	9.0
SV7S	01/20/11	9.3		03/16/11	3.4
SV8S	01/17/11	4.7	SV12S	01/25/11	6.8
				03/16/11	9.3

Soil vapor concentrations exceed the residential exposure scenario for benzene at eight locations east of Water Street where there were no MGP operations. Two of these locations also exceed the industrial/commercial screening value for a $1x10^{-6}$ risk. However, there are no exceedances of soil gas screening levels for benzene in deeper soil gas samples collected near the water table, indicating the soil gas exceedances in shallow soil vapor samples are likely associated with a surficial source of benzene and are not related to the former MGP. In addition, soil vapor sample SV-13, collected adjacent to the groundwater monitoring well OW-9, with the highest concentrations, benzene did not exceed the most conservative soil gas screening level.

Naphthalene was not detected above the screening levels at any location or depth.

2 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES

The remedial action objectives were developed to address the potential Site risk to human health and the environment as noted in the BLRA.

2.1 Summary of Baseline Risk Assessment

The BLRA evaluated soil, groundwater, surface water, and sediment data against appropriate screening levels identified in the Multi-Site Risk Assessment Framework (RAF, Exponent, 2007). See RI Report – Revision 3, April 2012, Appendix H. The results of the BLRA are summarized in the following sections:

2.1.1 Human Health Receptors

The BLRA evaluated the current and potential future land uses at the Site. The upland portion of the Site is recreational, consisting of Pfiffner Pioneer Park, band shell area, and museum. Under future land use conditions, Pfiffner Pioneer Park is not expected to change from conservancy zoning (Section 1.2.1).

The human health risk assessment (HHRA) included an initial screening-level assessment that considered two generic land use scenarios (i.e., residential and industrial/commercial use). Based on present and future land use, the following receptors and pathways were considered:

- **Industrial/Commercial Land Use - Worker**: through incidental ingestion, dermal contact, and inhalation of soils (as a result of soil disturbance). Dermal exposure and ingestion of groundwater is not expected due to the depth to groundwater (ranging from 6 to 13 feet below ground surface (bgs) – below depths encountered for landscaping activities) and public water supply.

- **Industrial/Commercial Land Use – Construction Worker:** through incidental ingestion, dermal contact, and inhalation of soils (as a result of soil disturbance) and groundwater via dermal contact and inhalation.

- **Recreational Land Use – Visitor:** through incidental ingestion and dermal contact with surface soil, incidental ingestion and dermal contact with surface water and sediment.

- **Residential Land Use** (the residential land use is a hypothetical future land use scenario for informational purposes)**:** through incidental ingestion of soil (surface and subsurface), dermal contact with soil (surface and subsurface) as a result of soil disturbance, inhalation of vapors and dust as a result of soil disturbance, and inhalation of vapors as a result of vapor intrusion from subsurface soil and groundwater.

2.1.2 Potential Human Health Risks

Results of the BLRA are summarized below:

- **Surface soil** does not pose a human health concern under the current land use and is at the low end of the target risk range for unrestricted use and unlimited access.
- **Subsurface soil** does not present a current human health exposure. Future residential and outdoor worker scenarios may present a risk based on residential and outdoor worker scenarios.
- **Groundwater** concentrations do not pose a current human health risk. A future risk to human receptors may occur if groundwater were to be used for drinking water purposes. Vapor intrusion is not expected to be a future risk if buildings are constructed over the affected groundwater in areas off the former MGP property.
- **Soil vapor** concentrations exceeding the residential exposure scenario for benzene in shallow soil samples at eight locations east of Water Street, two of which also exceed industrial/commercial exposure scenarios at $1x10^{-6}$ risk levels, are unrelated to MGP operations as discussed in Section 1.2.9.5.
- **Sediment** for human health exposure assessments is segregated by depth, considering the sediment in areas where the water depth is less than 3.5 feet. Sediment in areas where water is greater than 3.5 feet are considered too deep to be contacted by wading. The majority of the Wisconsin River is too deep to wade, except limited areas near shore. The entire pond is considered wadeable. No screening risk based concentrations (RBCs) have been established for sediments, so the sediment concentrations are compared to residential soil RBCs as an initial conservative comparison. However, the residential soil screening RBCs for PAH concentrations are based on exposures for 350 days per year over a 30-year duration. If sediment concentrations exceed these conservative RBCs, further evaluation is performed to semi-quantitative evaluate the potential risk associated with the exposure.

  In the case of the pond at Stevens Point, the cancer risk value was estimated at $5x10^{-6}$ (near the low end of the generally acceptable risk range of $1x10^{-4}$ to $1\text{-}10^{-6}$) assuming occasional exposure to the maximum sediment concentration occurred once per year for 30 years, using the same assumptions of the residential soil RBCs. In addition, the number of days that an individual would contact pond sediments before exceeding the upper end of the generally acceptable risk range ($1x10^{-4}$ to $1\text{-}10^{-6}$) was calculated. This calculation indicated an individual could contact the sediment approximately 20 days/year over a 30-year period without exceeding a carcinogenic risk of $1x10^{-4}$.

  Additional discussion on the risk assessment for human health is included in Section 4.2.2.2. of the BLRA, provided in RI Report – Revision 3 (NRT, April 2012).

  - **Wisconsin River Sediment** does not pose a human health concern based on the limited area where wading is possible (water depths less than 3.5 feet).
  - **Pfiffner Pioneer Park Pond Sediments** do not present a human health risk under occasional exposure scenarios ($5x10^{-6}$ if one day per year over a 30 year period or $1x10^{-4}$ if approximately 20 days per year over a 30 year period).

Natural Resource Technology

- **Wisconsin River and Pfiffner Pioneer Park Pond Surface Water** do not present a direct contact risk or an ingestion risk to human health based on the conservative screening of surface water concentrations to drinking water standards.

2.1.3 Ecological Receptors

The habitat assessment, performed on November 1, 2006, as part of the SSWP (see Appendix C of the SSWP), concluded the Site does not provide sufficient habitat for birds and small mammals in either the upland or aquatic portions of the Site. Thus, the ecological receptors are fish and benthic invertebrate.

2.1.4 Potential Ecological Risk

Results of the BLRA are summarized below:

- **Fish** are not at risk due to:
    - Spatial extent of affected sediment compared to the habitat required
    - Mobility of fish
    - The primary contaminant being PAHs, which are readily metabolized by fish
- **Benthic Invertebrates** in a localized area of the Wisconsin River and in Pfiffner Pioneer Park Pond are at risk due to bulk PAH concentrations.

As discussed in the Multi-Site Risk Assessment Framework (Exponent, September 2007), sediment sampling may be a one step or a two step approach. A one step sediment sampling approach was appropriate at Stevens Point (refer to the SSWP – Revision 1 (NRT, April 2007)) because previously collected sediment results compared to the sediment ecological benchmarks indicated the extent of MGP-affected sediment was generally localized to the area where the former slough discharged.

It should be noted because site-specific toxicity testing was not performed as part of the BLRA at Stevens Point, the BLRA relied on the hierarchy of sediment ecological benchmarks for sediment that were presented in USEPA’s December 20, 2007 approval of the Multi-Site Risk Assessment Framework (Exponent, September 2007). A total PAH criterion is used for the sediment ecological benchmarks to account for the combined effects of the PAH mixture. The total PAH sediment benchmarks better represent the toxicity of the mixture of PAHs, which is known to cause narcotic effects on benthic invertebrates. The total PAH sediment benchmarks were developed based on the sum of the PAH concentrations for a specific list of 13 PAHs, (PAH-13, refer to the BLRA in the RI Report – Revision 3 (NRT, April 2012)). The sediment benchmarks are considered conservative and would be protective of PAHs in general, including alkylated PAHs that may not have been reported.

2.2 Applicable or Relevant and Appropriate Requirements (ARAR)

Section 121 of CERCLA requires, subject to specified exceptions, that remedial actions must be protective of human health and the environment. In addition, remedial actions performed under the Superfund program must be undertaken in compliance with both state and federal ARARs. ARARs are defined as:

> *Any cleanup standards, standard of control, environmental protection requirements, criterion, or limitation under any Federal or State environmental law that specifically addresses a hazardous substance, pollutant, contaminant, remedial action, or location*.

Promulgated State Standards that are more stringent than the Federal Standards may be an ARAR. In addition to ARARs, the USEPA may identify other relevant information, criteria, or guidance to be considered (TBC). TBCs may not be legally binding or enforceable but may be useful in developing remedial alternatives. Both ARARs and TBCs may be chemical-specific, location-specific, or action-specific.

Chemical-specific ARARs are generally health or risk based standards that define concentration limits for environmental media or discharges. These requirements may be used to set cleanup levels for constituents of concern in environmental media.

Location-specific ARARs are based on the site's characteristics or location including natural site features such as wetlands, floodplains, and endangered or threatened species and habitats. Location-specific ARARs may also apply to man-made features such as cultural resource areas.

Action-specific ARARs are technology-based or activity-based limits that guide how the remedial action will be implemented or how remedial waste may be handled.

Table 1 summarizes preliminary federal and state ARARs and TBCs. The ARARs and TBCs may be modified until a Record of Decision (ROD) is issued and may be reexamined during the five-year review process.

2.3 Development of Preliminary Remedial Action Goals (PRG)

PRGs are long-term target goals used during analysis and evaluation of remedial alternatives. The PRGs comply with ARARs and result in protection of human health and the environment, as discussed in the BLRA.

2.3.1 PRGs for Soil

The PRG for soil is a target cancer risk of $1x10^{-4}$ for the hypothetical residential land use and outdoor commercial worker land use.

2.3.2 PRGs for Groundwater

The PRG for groundwater is the federal MCLs (USEPA 2008) or the WDNR's NR 140 (WDNR 2008) Groundwater Enforcement Standards (ES), if an MCL does not exist, for MGP-related contaminants.

2.3.3 PRGs for Sediment

The PRG for sediment is to address the effects of oil-wetted/oil-coated sediment or total PAH-13 concentrations that exceed the ecological screening level (based on the probable effects concentration (PEC) of 22.8 mg/kg) in the surface sediment (0 to 6 inches below top of sediment), if present.

2.4 Remedial Action Objectives

Remedial Action Objectives (RAO) for the Site were developed to protect human health and environmental receptors from unacceptable risk due to the MGP-residuals at the Site. These goals serve as the design basis for the remedial options presented in Section 3 and evaluated in Section 4. The RAOs address current and reasonably anticipated future land use and potential beneficial groundwater use.

2.4.1 Protection of Human Health RAOs

- **RAO 1 –** 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 present carcinogenic risks to outdoor construction workers greater than $1x10^{-4}$ to $1x10^{-6}$and non-carcinogenic hazard quotient greater than one.
- **RAO 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 the groundwater PRG.
- **RAO 3 –** Restore groundwater to PRGs for MGP-related contaminants within a reasonable timeframe.

2.4.2 Protection of Ecological/Environment RAOs

- **RAO 4 –** Reduce the exposure of benthic organisms in the Wisconsin River to levels of MGP-related contaminants that are below the probable effects concentrations.
- **RAO 5 –** Reduce the exposure of benthic organisms in the Pfiffner Pioneer Park Pond to levels of MGP-related contaminants that are below the probable effects concentrations.

3 DEVELOPMENT AND SCREENING OF TECHNOLOGIES

3.1 General Response Actions

General response actions describe those actions that will satisfy the remedial action objectives. In developing alternatives, combinations of general response actions may be identified.

General response actions include:

- No action (all media)
- Institutional controls (all media; zoning restriction, dredge restrictions)
- Containment (groundwater containment and sediment capping)
- Removal/collection (groundwater extraction, soil excavation, dredging)
- In-situ treatment or stabilization (groundwater injection treatment or soil stabilization)
- Ex-situ treatment or stabilization (thermal desorption, pump and treat groundwater)
- Disposal/discharge (on-site or off-site)

Table 2 presents the general response actions. Remedial technologies and process options associated with each of the general response actions are identified on Table 2 and further screened as discussed below. The in-situ treatment or stabilization, containment, and on-site disposal for soil were not considered because source removal was performed at the Site.

3.2 Identification and Screening of Technology Types and Process Options

Remedial technologies and related process options that potentially would achieve the RAOs for each media of concern were screened with respect to the following criteria:

- Effectiveness: This criterion evaluated the ability of a technology to achieve the RAOs and to provide long-term protection of human health and the environment. Potential short-term impacts to human health and the environment, and the reliability of the technology are also evaluated.

- Implementability: This criterion addresses the technical and administrative feasibility of implementing the technology as well as the availability of contractors and materials, the potential site constraints (on- and off-site), the difficulties monitoring the effectiveness of the process option, and agency coordination or permits.
- Cost: This criterion utilizes engineering judgment to develop relative estimated costs of each technology for a given RAO. The cost estimates are qualitative (low, moderate and high) at this technology screening stage of the FS.

Table 3 provides a description of the technologies and process options considered and summarize the screening criteria used to retain or eliminate an option from further consideration. Reasoning for eliminating a technology and process option is provided on Table 3.

3.3 Remedial Options

The remedial options further considered in Section 4 for each media are summarized below.

3.3.1 Soil Remedial Options

Soil remedial options include:

- S1 – No Further Action
- S2 – Institutional Controls
- S3 – Limited Excavation and Off-Site Disposal (from the former slough area)

3.3.2 Groundwater Remedial Options

Groundwater remedial options include:

- G1 – No Further Action
- G2 –Institutional Controls
- G3 –Monitored Natural Attenuation
- G4 –Groundwater Extraction, Ex-Situ Treatment and Discharge to Public Wastewater Treatment Plant

3.3.3 River Sediment Remedial Options

River sediment remedial options were based on two sediment screening values, the PEC (22.8 mg/kg total PAH) and the Threshold Effects Concentration (TEC, 1.6 mg/kg total PAH) to develop a range of area and volumes for purposes of the feasibility study:

- R1 –No Further Action
- R2 –Placement of Sand Cover
- R2a – Areas Above the PEC
- R2b – Areas Above the TEC
- R3 –Placement of Sand Cover and Armor Layer
- R3a – Areas Above the PEC
- R2b – Areas Above the TEC
- R4 –Dredge
- R4a – Dredge Areas Above the PEC, Sand Cover Areas Above the TEC
- R4b – Dredge Areas Above the TEC

3.3.4 Pond Sediment Remedial Options

Pond sediment remedial options include:

- P1 –No Further Action
- P2 –Placement of Sand Cap
- P3 –Placement of Sand Cap with Activated Carbon
- P4 –Dredging and Sand Cover

4 DETAILED ANALYSIS OF REMEDIAL OPTIONS

The analysis of options is streamlined by combining both the screening level evaluation and detailed analysis of the remedial options. The Site lends itself to this simplified process due to the extensive removal work previously performed and the limited nature of the remaining exposure pathways.

In accordance with CERCLA Section 121, the NCP, and USEPA RI/FS guidance, remedial alternatives are assessed against seven evaluation criteria. Because this FS is evaluating media specific remedial options individually, each remedial option is assessed against the seven evaluation criteria (Table 4). These include:

Threshold Criteria

- **Overall Protection of Human Health and the Environment –** This criterion assesses how well an alternative/option, as a whole, achieves and maintains protection of human health and the environment.

- **Compliance with ARARs –** This criterion assesses how the alternative/option complies with location-, chemical-, and action-specific ARARs, and whether a waiver is required or justified. The assessment also addresses other information from advisories, criteria, and guidance that the lead and support agencies have agreed is “to be considered.”

Balancing Criteria

- **Long-Term Effectiveness and Permanence –** This criterion evaluates the long-term effectiveness of the alternative in maintaining protection of human health and the environment after response objectives have been met. This criterion includes consideration of the magnitude of residual risks and the adequacy and reliability of controls.

- **Reduction of Toxicity, Mobility and Volume through Treatment –** This criterion evaluates the effectiveness of treatment processes used to reduce toxicity, mobility, and volume of contaminated media of concern. It also considers the degree to which treatment is irreversible, and the type and quantity of residuals remaining after treatment.

- **Short-Term Effectiveness –** This criterion examines the effectiveness of the alternatives in protecting human health and the environment during the construction and implementation of a remedy until response objectives have been met. It considers the protection of the community, workers, and the environment during implementation of remedial actions.

- **Implementability –** This criterion assesses the technical and administrative feasibility of an alternative/option and availability of required goods and services. Technical feasibility considers the ability to construct and operate a technology and its reliability, the ease of undertaking additional remedial actions, and the ability to monitor the effectiveness of a remedy. Administrative feasibility considers the ability to obtain approvals from other parties or agencies and the extent of required coordination with other parties or agencies.

- **Cost –** This criterion evaluates the direct and indirect capital, and annual operation and maintenance costs of each alternative/option. Present worth costs, using a 5% discount rate (consistent with USEPA guidance), are presented to help compare annual O&M and 5 year review costs on the basis of a single amount of money that, if invested in the base year and disbursed as needed, would be sufficient to cover all costs associated with remedial action over its planned life, assumed to be 30 years for the purpose of the detailed analysis. Cost estimates are intended to be within an accuracy range of plus 50 percent to minus 30 percent, unless otherwise noted.

Present worth costs for each remedial option are in Appendix D and include:

- Consulting costs including engineering design, plans and specifications, permitting, oversight, and documentation as a percentage of the construction capital costs.
- Estimates of the volume of contaminated media to be addressed.
- Annual operation and maintenance costs, if applicable.
- A 25% contingency on construction capital costs to account for unforeseen project complexities such as adverse weather, unexpected subsurface conditions increased standby times, etc.

Modifying Criteria

- The modifying criteria, state acceptance and community acceptance, will be addressed by USEPA based on WDNR and public comments following USEPA's selection of a proposed remedial action plan (PRAP).
- **State Acceptance –** This criterion considers the state's technical and administrative issues and State concerns regarding each alternative/option, including comments on ARARs or proposed use of waivers. This criterion is evaluated following comment on the RI/FS report and the PRAP and will be addressed once a final decision is made and the ROD is being prepared.
- **Community Acceptance –** This criterion considers the issues and concerns community may have regarding each alternative/option. This criterion is evaluated following comment on the RI/FS report and the PRAP and will be addressed once a final decision is made and the ROD is being prepared.

4.1 Soil Remedial Options

Soil remedial options are intended to address RAO-1. Soil remedial options are presented on Figure 5.

4.1.1 S1 – No Further Action

Consistent with NCP requirements, a No-Further Action option will be considered. This option does not include any remediation or monitoring to minimize potential exposures related to soil at the Site. The No-

Further Action option will be used as a baseline for comparisons of other remedial options. In accordance with CERCLA, Site reviews will be performed every five (5) years in soil remedial option S1.

4.1.1.1 Overall Protection of Human Health and the Environment

Risks to human health and the environment and will remain due to the presence of MGP-residuals under soil remedial option S1. As a result, soil remedial option S1 will not achieve RAO-1.

4.1.1.2 Compliance with ARARs

The no action option does not comply with or attain chemical-specific ARARs identified in Section 2.2. Location and action-specific ARARs are not relevant because there is no action associated with this option.

4.1.1.3 Long-Term Effectiveness and Permanence

Potential risk to human health and the environment will remain. Soil remedial option S1 does not provide long-term effectiveness or permanent control of potential risk.

4.1.1.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media. There is no reduction of toxicity, mobility or volume through treatment under soil remedial option S1.

4.1.1.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing soil remedial option S1 will not increase and there will be no short term disturbance to the community or environment from remedial option S1.

4.1.1.6 Implementability

No implementability issues exist as no action is conducted.

4.1.1.7 Cost

The only costs associated with soil remedial option S1 relate to the five-year review requirements. The five-year reviews are estimated to be $15,000 per year over 30 years (6 five-year review events) for a total present worth cost of approximately $42,000.

4.1.2 S2 – Institutional Controls

Institutional controls for soil will be used to restrict soil disturbance in areas with soil concentrations above the residential land use and thereby address RAO-1.

Approximately 5.4 acres will be subject to institutional controls to address soil above the PRGs (Figure 5). Of this, approximately 2.4 acres are owned by the City of Stevens Point and are currently under local government control through zoning ordinances as conservancy, commercial, and central business.

WDNR's GIS Registry will be the primary mechanism for restricting soil disturbance. Requirements, limitations or conditions relating to a remedial action and that are listed in the Wisconsin GIS database maintained under Section 2929.12(3) are required to be met by all property owners under Wisconsin law. See Section 292.12(5). More specifically, Section 292.12(5) makes these requirements, limitations or conditions a specific obligation that must be complied with by the owner of the property. In effect, the statute makes the GI S database conditions "run with the land". A violation of Section 292.12 is enforceable under Sections 292.93 and 292.99.

This remedial option 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 of soil that is above the direct contact screening levels. To ensure the effectiveness of this direct contact barrier, a maintenance plan will be developed which includes annual inspections and repairs, as required. For cost estimating purposes, it is assumed inspections and repairs of the direct contact barrier areas will be required for 30 years. It is assumed repairs will be minor (i.e., re-surfacing asphalt every five years).

If the Site is to be developed or future construction or utility workers perform subsurface activities (i.e., utility construction or repairs), a soil management plan will be required to ensure the subsurface soil is properly managed (i.e., not brought to the surface where direct contact may occur). Soil institutional controls will also include restricting unauthorized excavations to limit potential direct contact (authorized excavations will required a health and safety plan and oversight). Institutional controls may also be used to require future buildings to include vapor intrusion mitigation barriers or prevent buildings from being built on the former MGP property, currently owned by WPSC.

An Institutional Control Implementation Plan (ICIP) will be developed to detail land-use restrictions and will document procedures for effectively implementing the institutional control. For cost estimating purposes, it is assumed that institutional controls will be assessed in the Five-Year Reviews for 30 years.

4.1.2.1 Overall Protection of Human Health and the Environment

Soil remedial option S2 is protective of human health in the short-term and long-term under either the current Site conditions or anticipated future Site conditions (continued Site use as City Park/parking lots). Use of soil institutional controls will be protective of human health and the environment.

4.1.2.2 Compliance with ARARs

Soil remedial option S2 complies with and attains chemical-specific ARARs identified in Table 1. Soil remedial option S2 does not trigger location-specific or action-specific ARARs.

4.1.2.3 Long-Term Effectiveness and Permanence

Soil remedial option S2 provides long-term effectiveness and permanent control of potential risk. The majority of the property is City-owned or WPSC-owned which allow for governmental and propriety controls to run with the land.

4.1.2.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media. There is no reduction of toxicity, mobility or volume through treatment under soil option S2.

4.1.2.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing soil option S2 will not increase and there will be no short term disturbance to the community or environment from remedial option S2.

Remedial option S2 relies primarily on the WDNR GIS Registry and existing zoning ordinances. Listing the property on the WDNR GIS Registry is estimated to take up to two months to be registered.

4.1.2.6 Implementability

No implementability issues exist because the GIS Registry is in place. WPSC also has the capability to monitor and repair the existing soil barriers (asphalt and soil cover over the previously remediated areas) or to assist with implementing a soil management plan, in the event the property is to be developed in the future.

4.1.2.7 Cost

Capital costs are $29,000 to implement the institutional controls for soil (including the maintenance plan, and GIS Registry). The annual costs for monitoring and maintenance of the soil barriers are estimated at $9,600. For cost estimating purposes, these are anticipated for 30 years. Overall, the present worth cost of soil remedial option S2 is $128,000. Appendix D provides the unit costs and Table 4 provides a summary of the overall costs to implement soil remedial option S2.

4.1.3 S3 – Limited Excavation and Off-Site Disposal

Soil remedial option S3 includes soil excavation and off-site disposal in an approved off-site commercial landfill. Elements of soil remedial option S3 include:

- An area of approximately 0.4 acres would be excavated in the vicinity of the former slough near Pfiffner Pioneer Park Pond to a depth of approximately 16 feet.
- Temporary shoring to facilitate the excavation and temporary removal and stockpiling of overburden soil is assumed suitable for re-use. Deeper soil containing MGP residuals would be removed and loaded for off-site disposal at an approved landfill.
- Water that has contacted MGP residuals would be treated on-site and discharged to the publically owned wastewater treatment plant.
- The excavation would be restored to grade with a combination of stockpiled material deemed suitable for re-use and imported fill.
- Surface restoration of either grass or asphalt pavement (the excavation would need to extend into Crosby Avenue and the City Park).

Soil remedy option S3 is not an independent remedy option and will also require implementation of soil remedy option S2 to address soil outside of the excavation limits and fully address RAO-1.

4.1.3.1 Overall Protection of Human Health and the Environment

Soil remedial option S3 is protective of human health in the long-term under either the current Site conditions or anticipated future Site conditions (continued Site use as City Park/parking lots). Removal of soil and use of soil institutional controls will be protective of human health and the environment.

In the short-term, there is some additional risk to human health and the environment as a result of removing the overburden soil to access the deeper soil containing MGP residuals and transportation to the landfill. Soil particles may become air borne and contaminants may volatilize. These risks can be minimized through best management practices (i.e., misting to minimize dust and odors) and covering trucks when transporting soil to the landfill.

4.1.3.2 Compliance with ARARs

Soil remedial option S3 complies with and attains chemical-specific, location specific, and action-specific ARARs identified in Table 1.

4.1.3.3 Long-Term Effectiveness and Permanence

Institutional controls satisfy RAO-1 and provide long-term effectiveness (as discussed in Section 4.1.2.3). Removal of soil in the vicinity of Pfiffner Pioneer Park pond will minimize the residual MGP-materials remaining on-site.

4.1.3.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected soil.

Soil remedy option S3 will further reduce the volume of affected soil at the site, although the removed material is disposed in a landfill and not treated.

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in soil. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005, WDNR, March 2003).

4.1.3.5 Short-Term Effectiveness

Soil excavation creates the potential for direct contact exposure during excavation/dredging, fugitive volatile organic emissions and nuisance odors. Transporting affected soil and sediment to the landfill creates a short-term effect on the communities due to increased truck traffic, noise and the potential for increased accidents.

For cost estimating and comparison purposes, it is assumed the soil excavation will be approximately three months. Implementing soil remedy option S3 may increase human health risk during the construction.

4.1.3.6 Implementability

Soil remedy option S3 is technically and administratively implementable. Agreements with third parties may be needed. Disposal facilities, materials and contractors required to implement soil remedy option S3 are available.

Removal of the material in the vicinity of Pfiffner Pioneer Park Pond will require closing and re-construction of Crosby Avenue. Closing Crosby Avenue for up to three months will require the agreement of the City. In addition, removal of the soil to 16 feet below ground surface requires sheet pile shoring system and pumping a significant volume of water from the excavation and during backfill activities as a result of the sandy subsurface conditions. Backfilling and compacting the excavation to depths of 16 feet bgs may require aggregate materials to be used until compaction of existing material is practical.

4.1.3.7 Cost

The present worth cost of soil remedy option S3 is approximately $2,930,000. Capital costs of soil remedy option S3 are approximately $2,930,000. There are no annual costs associated with soil remedy option S3. Appendix D provides unit cost of each remedial action component and Table 4 provides a summary of the overall costs to implement soil remedy option S3.

4.2 Groundwater Remedial Options

Groundwater remedial options are intended to address RAO-2 and RAO-3. Groundwater remedial options are presented on Figure 6.

4.2.1 G1 – No Further Action

Consistent with NCP requirements, a No-Further Action option will be considered. This option does not include any remediation or monitoring to minimize potential exposures related to groundwater at the Site. The No-Further Action option will be used as a baseline for comparisons of other remedial options. In accordance with CERCLA, Site reviews will be performed every five (5) years in groundwater remedial option G1.

4.2.1.1 Overall Protection of Human Health and the Environment

Potential risks to human health and the environment and will remain due to the presence of groundwater containing MGP-residuals that exceed the drinking water standards under groundwater remedial option G1. As a result, groundwater remedial option G1 will not achieve RAO-2 or RAO-3. However, there is no current pathway for exposure to the groundwater because groundwater is 6 to 13 feet below ground surface and there is a publically available water supply.

4.2.1.2 Compliance with ARARs

The no action option does not comply with or attain chemical-specific ARARs identified in Section 2.2. Location and action-specific ARARs are not relevant because there is no action associated with this option.

4.2.1.3 Long-Term Effectiveness and Permanence

Potential risk to human health and the environment will remain. Groundwater remedial option G1 does not provide long-term effectiveness or permanent control of potential risk.

4.2.1.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media. There is no reduction of toxicity, mobility or volume through treatment under groundwater remedial option G1.

4.2.1.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing groundwater remedial option G1 will not increase and there will be no short term disturbance to the community or environment from groundwater remedial option G1.

4.2.1.6 Implementability

No implementability issues exist as no action is conducted.

4.2.1.7 Cost

The only costs associated with groundwater remedial option G1 relate to the five-year review requirements. The five-year reviews are estimated to be $15,000 per year over 30 years (6 five-year review events) for a total present worth cost of approximately $42,000.

4.2.2 G2 – Institutional Controls

Institutional controls for groundwater will be used to restrict the use of groundwater as a drinking water source until the drinking water standards are met and thereby address RAO-2. Institutional controls for groundwater will be implemented in the areas shown on Figure 28 and 29 in Appendix C-1 where the groundwater plume is generally located (approximately 7 acres). Of this, approximately 4 acres are owned by the City of Stevens Point and are currently under local government control through zoning ordinances as conservancy, commercial, and central business.

Similar to the soil institutional controls, WDNR’s GIS Registry will be the primary mechanism for restricting the use of groundwater. In addition, the City of Stevens Point has statutory authority from the Wisconsin Legislature in 1983, Wisconsin Act 410 (effective May 11, 1984), to enact the Wellhead Protection Ordinance which institutes land use regulations and restrictions protective of groundwater.

An ICIP will be developed to detail groundwater use restrictions and document procedures for effectively implementing the institutional control. For cost estimating purposes, it is assumed that institutional controls will be assessed in the Five-Year Reviews for 30 years.

4.2.2.1 Overall Protection of Human Health and the Environment

Under current Site conditions, the groundwater is not used for either drinking or industrial use. Under the current Site conditions or anticipated future Site conditions (no groundwater receptors and continued Site use as City Park/parking lots), groundwater remedial option G2 will be protective of human health and the environment, but will not result in restoration of the aquifer.

4.2.2.2 Compliance with ARARs

Groundwater remedial option G2 complies with and attains chemical-specific ARARs identified in Table 1. Groundwater remedial option G2 does not trigger location-specific or action-specific ARARs.

4.2.2.3 Long-Term Effectiveness and Permanence

Groundwater remedial option G2 provides long-term effectiveness and permanent control of potential risk. The majority of the property is City-owned or WPSC-owned which allow for governmental and propriety controls to run with the land and the City of Stevens Point has groundwater ordinances in place.

4.2.2.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media. There is no reduction of toxicity, mobility or volume through treatment under groundwater option G2. However, MGP-residuals degrade under natural processes in groundwater (WDNR, March 2003).

4.2.2.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing groundwater option G2 will not increase and there will be no short term disturbance to the community or environment from groundwater remedial option G2.

Groundwater remedial option G2 relies primarily on the existing zoning, GIS Registry, and the City's existing ordinances. Listing the property on the WDNR GIS Registry is estimated to take up to two months to be registered.

4.2.2.6 Implementability

No implementability issues exist because the GIS Registry and City Ordinances are in place.

4.2.2.7 Cost

Capital costs are $35,000 to implement the institutional controls for groundwater (including the GIS Registry). Overall, the present worth cost of groundwater remedial option G2 is $35,000. Appendix D provides the unit costs and Table 4 provides a summary of the overall costs to implement groundwater remedial option G2.

4.2.3 G3 – Monitored Natural Attenuation

Monitored natural attenuation will be used to demonstrate movement towards the drinking water standards, thereby meeting RAO-3. However, this groundwater remedial option also requires use of institutional controls (as described in Section 4.2.2) to meet RAO-2 in the short term.

USEPA OSWER Directive 9200.4-179, Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action and Under Ground Storage Tank Sites, 1999, states the most important consideration regarding the suitability of MNA includes the stability of the groundwater containment plume and the potential for unacceptable human health risks. As previously discussed, groundwater does not pose a human health risk because the pathway does not currently exist.

Groundwater quality and trends supporting MNA are discussed in Appendix C-1. A summary of groundwater quality and trends evaluation indicates the following:

- The groundwater plume is well defined by the well network.
- The regression plots and Mann-Kendall tests indicate generally stable or decreasing trends, especially for wells outside of the plume in both the shallow and deep flow systems.
- The contaminant transport assessment indicates natural attenuation mechanisms (such as biodegradation, dispersion, and dilution) have restricted plume expansion over time.
- The MNA geochemical indicator parameters are confounding, likely due to the presence of two groundwater flow systems that converge in the vicinity of the site.

Thus, the groundwater sampling results are evidence that natural attenuation mechanisms are present and the plume is stable rather than expanding at the site regardless of contaminant concentration variability in individual wells. Plume stability at the leading edge is based on two sampling rounds at wells

OW-18 through OW-21, observed conditions in wells that have been monitored for longer periods of time, and the increasing trends observed at a limited number of locations central to the historic MGP site have not been observed at down gradient locations (i.e. wells OW-12, OW-14, OW-15, TW-1, and TW-2). Cumulatively, all of these observations suggest the plume is stable.

To further support selection of MNA, analytical groundwater modeling was performed. The objective of the groundwater modeling was to evaluate plume stability and to estimate the time over which MNA would reduce concentrations of benzene and naphthalene to levels below the PRGs or demonstrate movement towards the PRGs. Modeling was performed using the MYGRT Version 3.1 analytical transport model. Detailed descriptions of the software, model construction, calibration, and results are presented in Appendix C-2. The model results are included on CD in Appendix C-2.

Two rounds of modeling were performed. The initial model compared relative MNA timeframes for benzene and naphthalene, demonstrating that the naphthalene time frame will be longer. The final modeling further evaluated the model sensitivity of naphthalene, and was used to predict when future concentrations of naphthalene would degrade to concentrations lower than the MCL. The final model was also used to evaluate changes in the MNA time frame if a groundwater extraction system is implemented to prevent future migration from the source area. Models were developed using site-specific input values whenever possible, and calibrated to match observed concentrations in groundwater prior to and following the source removal remediation. Both the initial and final modeling were developed using site-specific input values whenever possible, and calibrated to match observed concentrations in groundwater prior to and following the source removal remediation. Model sensitivity was evaluated over a range of groundwater velocity and fraction of organic carbon values.

The model-predicted time to achieve the MCL ranged from 38 to 114 years beginning in 2011 for the scenario without groundwater extraction, and 36 to 96 years for the scenario with groundwater extraction. Significant concentration decreases are predicted for three of the four final model scenarios that were used in the final evaluation. Discussion of the model inputs, results, and uncertainty, is included in Appendix C-2.

Groundwater monitoring wells recommended to be included in the MNA monitoring well network include the following:

<u>Monitoring Wells:</u> OW-1, OW-2, OW-3R, OW-4, OW-5R, OW-6, OW-7A, OW-9, OW-10, OW-11, OW-12, OW-14, OW-15, OW-16, OW-17, OW-18, OW-19, OW-20, OW-21, TW-1 and TW-2.

Piezometers: PZ-3B, P-5B, PZ-7B, PZ-9B, PZ-10B, PZ-11B, PZ-12B, PZ-13B, PZ-14B, PZ-15B, and PZ-16B.

For cost estimating purposes, it is assumed that achievement of RAO-2 and RAO-3 will be sufficiently demonstrated within 30 years of annual groundwater monitoring.

4.2.3.1 Overall Protection of Human Health and the Environment

Groundwater remedial option G3 is protective of human health in the short-term and long-term due to groundwater monitoring. Groundwater remedial option G3 is protective of the environment when combined with groundwater remedial option G2.

4.2.3.2 Compliance with ARARs

Groundwater remedial option G3 complies with and attains chemical-specific ARARs identified in Table 1. Groundwater remedial option G3 does not trigger location-specific or action-specific ARARs.

4.2.3.3 Long-Term Effectiveness and Permanence

As discussed in Appendix C-1, the groundwater plume has been demonstrated to be stable. Groundwater remedial option G3 continues to monitor trends in groundwater quality and provides long-term effectiveness at identifying increases in groundwater concentrations.

Combined with groundwater remedial option G2, groundwater remedial option G3 provides long-term effectiveness and permanent control of potential risk. The majority of the property is City-owned or WPSC-owned which allow for governmental and propriety controls to run with the land and the City of Stevens Point has groundwater ordinances in place.

Natural processes are likely to reduce or isolate MGP-residuals and the overall magnitude of the potential risk.

4.2.3.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media. MGP-residuals also degrade under natural processes in groundwater (WDNR, March 2003).

4.2.3.5 Short-Term Effectiveness

For cost estimating purposes, demonstrating movement towards achievement of RAO-2 and RAO-3 will be satisfied within 30 years of annual groundwater monitoring. Although, as discussed in Appendix C-2, achieving the PRGs for benzene and naphthalene is estimated to be longer than 40 years, potentially a hundred years, but demonstrating improved groundwater quality. Implementing groundwater remedial option G3 will not increase human health or environmental risk.

Groundwater remedial option G3 will satisfy RAO-2 as soon as the ICIP is prepared and the site is entered on the GIS Registry (approximately two months, as discussed in Section 4.2.2.5).

4.2.3.6 Implementability

Groundwater remedial option G3 is technically and administratively implementable. The effectiveness of this alternative can be evaluated through groundwater monitoring.

4.2.3.7 Cost

Capital costs for developing the MNA groundwater monitoring plan are $38,000. The annual costs for groundwater monitoring are $57,000 and are anticipated for 30 years. Overall, the present worth cost of groundwater remedial option G3 is $914,000. Appendix D provides unit cost and Table 4 provides a summary of the overall costs to implement groundwater remedial option G3.

4.2.4 G4 – Groundwater Extraction, Ex-Situ Treatment and Discharge to Public Wastewater Treatment Plant

Groundwater remedial option G4 includes groundwater extraction, ex-situ treatment, and discharge to the public wastewater treatment plan. Elements of groundwater remedial option G4 include:

- Two extraction wells approximately 400 feet apart, each with a pumping rate of 25 gpm. (total of 50 gpm)[1]

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[1] Well spacing and flow rate were determined based on the Theis pumping test method for an ideal aquifer using a steady pumping rate, aquifer hydraulic conductivity of `9.2 ft/day calculated transmissivity of757ft^2/day and storativity of 0.22. This analysis estimated a 3 foot drawdown at 200 feet from the extraction wells but does not account for surface water affects on the system (due to the river or recharge).

- A pump test and related analysis would be required as part of design efforts to more reliably determine pumping rate, number of wells, and location of wells to achieve an optimized well layout scheme for the desired drawdown and radius of influence.
- Each extraction well is 30 feet deep, extending to bedrock.
- Horizontal directional boring of groundwater extraction conveyance piping would be necessary across Water Street.
- Extracted groundwater to be treated using a filter system (e.g. bag filter) and activated carbon or air stripper to meet discharge pre-treatment requirements.
- Discharge the treated groundwater to the publically owned wastewater treatment plant via the City's sanitary sewer system.
- Annual operation and maintenance costs include measurement of water levels quarterly to confirm containment, annual groundwater monitoring of the existing well network for benzene and PAHs, and collection of treatment system influent and effluent quarterly for BTEX, PAHs and total suspended solids.

Groundwater remedy option G4 is not an independent remedy option and will also require implementation of groundwater remedy option G2 to fully address RAO-2 in the short term.

4.2.4.1 Overall Protection of Human Health and the Environment

Groundwater remedial option G4 is protective of both human health and the environment, particularly when combined with groundwater remedy option G2.

In the short-term, there is some additional risk to human health and the environment as a result of extracting the affected groundwater for treatment. Contaminants in the groundwater may volatilize in the extraction process.

4.2.4.2 Compliance with ARARs

Groundwater remedial option G4 complies with and attains chemical-specific ARARs identified in Table 1. Groundwater remedial option G4 will meet the requirements of the action-specific ARARs.

4.2.4.3 Long-Term Effectiveness and Permanence

Transport modeling suggested that a groundwater extraction system installed to cutoff future migration near the source may reduce the time frame for meeting the PRG from 38 to114 years to 36 to 96 years, which falls within the uncertainty of the model. These results suggest that groundwater extraction will have little measurable benefit on the remediation time frame.

4.2.4.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected soil and groundwater.

The groundwater extraction system will reduce contaminant mass in the groundwater from the most transmissive zone; however, will generate a contaminated waste that will require disposal (i.e., bag filters and activated carbon) or air emissions (i.e., air stripper vent or reactivation process of carbon).

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in groundwater. Natural attenuation processes of such constituents have been well documented (WDNR, March 2003).

4.2.4.5 Short-Term Effectiveness

Groundwater remedial option G4 will require installation of the groundwater extraction system which is estimated to take 3 months. During this time, construction workers may be exposed to subsurface soil and groundwater containing MGP-residuals. However, these exposures can be controlled through best management practices (e.g., dust control) and adhering to standard health and safety procedures (e.g., personal protective equipment).

Following construction, groundwater containing MGP-residuals will be pumped to a collection system and treated on-site. Workers responsible for operation and maintenance of the treatment system may also be exposed to groundwater containing MGP-residuals for the duration of the treatment system operation. These exposures can be minimized through the use of enclosed tanks and piping systems in addition to standard health and safety procedures.

As noted previously and in Appendix C-2, groundwater extraction is not predicted to have a significant reduction on remediation time frame. As discussed in Appendix C-2, achieving the PRGs for benzene and naphthalene is estimated still estimated to be in the range of 40 years up to a hundred years.

For cost estimating and comparison purposes, it is assumed the groundwater extraction system will operate for 30 years and groundwater institutional controls will still be required.

4.2.4.6 Implementability

Groundwater remedial option G4 is technically and administratively implementable. Agreements with third parties may be needed. Disposal facilities, materials and contractors required to implement Groundwater remedial option G4 are available.

Trenching or horizontal directional boring of conveyance piping for the groundwater extraction system across Water Street would be difficult to implement due to the potential for conflicts with underground utilities and crossing utility easements.

4.2.4.7 Cost

Capital costs of groundwater remedial option G4 is approximately $566,000. The annual costs for operation and maintenance of groundwater extraction and treatment system and groundwater monitoring are approximately $215,000 per year for 30 years. The present worth cost of groundwater remedial option G4 is approximately $3,870,000. Appendix D provides unit cost of each remedial action option and Table 4 provides a summary of the overall costs to implement.

4.3 River Sediment Remedial Options

River sediment remedial options are intended to address RAO-4. The river sediment remedial options are shown on Figure 7.

4.3.1 R1 – No Further Action

Consistent with NCP requirements, a No-Further Action option will be considered. This option does not include any remediation or monitoring to minimize potential exposures related to river sediment in the Wisconsin River, adjacent to the former MGP property. The No-Further Action option will be used as a baseline for comparisons of other remedial options. In accordance with CERCLA, Site reviews will be performed every five (5) years in river sediment remedial option R1.

As discussed in BLRA included in the RI Report – Revision 3 (NRT, April 2012), a small area of the Wisconsin River (approximately 0.4 acres) contains sediment with total PAH-13 concentrations above the PEC. The area of the river with sediment concentrations between the PEC and the TEC of 1.6 mg/kg is approximately 0.9 acres, beyond which represents ambient concentrations. The distribution of PAHs around the pond decrease moving off shore corresponds to the outlet of the former slough as a historic input that no longer occurs and conditions are stable. The majority of the Wisconsin River sediments have not been affected by former MGP operations. The Wisconsin River is approximately 900 feet wide, allowing the benthic community and fish to access a wide area outside of the relatively small area affected with MGP residuals. In addition, the affected sediment in the Wisconsin River is generally sand and does not provide a stable substrate for benthic invertebrate colonization.

The most significant MGP-residuals are detected at T3-A1, in 2000 and in 20007 investigations. Nearby borings do not exhibit MGP-residuals and it is reasonable that the observed MGP residuals at T3-A1 are historic inputs that have not degraded because the residuals occur in sands and gravel that are more protected/un-weathered than soft sediment.

Based on the nature of the sediment surface (gravel, debris, etc.) as noted in the Wisconsin River sediment borings and the divers survey (refer to Appendix H of the Completion Report (NRT, 2006), lack of sheen observations, and the area and magnitude of affected sediment when comparing 2000 and 2007 data, the sediment conditions are stable. Stability is further supported by the rip-rap observed on the river bottom during the drawdown in 2008 (see photos in Appendix B-2) which is substantial in the area at the mouth of the former slough where the elevated PAH concentrations are detected in sediment. Therefore, it is reasonable to expect the sediment is stable in this area.

While there are specific areas that exceed generic screening levels and may pose a risk to the benthic invertebrates in the immediate vicinity of the sediment exceeding the screening levels, on a community basis, which the risk assessment is to consider the ***community***, not the individual, there is a lower risk. Based on the relative size of affected sediment (0.4 acres in the Wisconsin River) compared to the larger water body system and the short-term disruption to the aquatic eco-system potentially outweighing the ***net benefit*** of isolating affected sediment, it is appropriate to consider a no action remedy for the Wisconsin River.

4.3.1.1 Overall Protection of Human Health and the Environment

There are no current risks to human health as a result of sediment concentrations detected in the Wisconsin River because the pathway does not exist (water depths prohibit direct access to the river sediment). Risk to the benthic invertebrates will remain in the 0.4 acres of the Wisconsin River, however, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis. As a result, river sediment remedial option R1 is considered to meet RAO-4.

4.3.1.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. Location and action-specific ARARs are not relevant because there is no action associated with this option.

4.3.1.3 Long-Term Effectiveness and Permanence

Potential risk to human health does not currently exist as a result of Wisconsin River sediment. Potential risk to the benthic invertebrates will remain in the 0.4 acres of the Wisconsin River, however, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis. In addition, the current sediment surface is considered stable in the long term.

4.3.1.4 Reduction of Toxicity, Mobility, and Volume through Treatment

There is no reduction of toxicity, mobility or volume through treatment under river sediment remedial option R1.

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.3.1.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing river sediment remedial option R1 will not increase and there will be no short term disturbance to the community or environment from remedial option R1.

4.3.1.6 Implementability

No implementability issues exist as no action is conducted.

4.3.1.7 Cost

The only costs associated with river sediment remedial option R1 relate to the five-year review requirements. The five-year reviews are estimated to be $15,000 per year over 30 years (6 five-year review events) for a total present worth cost of approximately $42,000.

4.3.2 R2 – Placement of Six Inch Sand Layer over River Sediment

River sediment remedial option R2 consists of covering a localized area of the Wisconsin River affected sediment with a minimum of 6-inches of sand. Monitoring of the sand layer will not be performed.

River sediment remedial option R2a includes placing a six inch sand layer over river sediment exceeding the PEC in the top 0-6 inches of sediment (considered the biologically active zone) or approximately 0.4 acres of the Wisconsin River.

River sediment remedial option R2b includes placing a six inch sand layer over river sediment exceeding the TEC in the top 0-6 inches of sediment (considered the biologically active zone) or approximately 1.3 acres of the Wisconsin River.

4.3.2.1 Overall Protection of Human Health and the Environment

There are no current risks to human health as a result of sediment concentrations detected in the Wisconsin River because the pathway does not exist (water depths prohibit direct access to the river sediment and swift currents).

Risk to the benthic invertebrates will remain in the 0.4 acres and 1.3 acres of the Wisconsin River, for sediment remedial options R2a and R2b, respectively. However, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis. The sand layer cover will create a new sediment surface and minimize benthic invertebrate exposure to the existing sediment surface. As a result, river sediment remedial options R2a and R2b will meet RAO-4.

4.3.2.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. River sediment remedial options R2a and R2b will meet the requirements of the location-specific and action-specific ARARs.

4.3.2.3 Long-Term Effectiveness and Permanence

River sediment remedial options R2a and R2b satisfy RAO-4 because the existing sediment is stable and placement of the sand layer will further minimize benthic invertebrate exposure to the sediment.

4.3.2.4 Reduction of Toxicity, Mobility, and Volume through Treatment

River sediment remedial options R2a and R2b include placement of 6 inches of sand in the Wisconsin River which will result in a new biologically active zone (conservatively considered as the top 0-6 inches) and an incomplete exposure pathway for benthic invertebrate exposure to affected sediment. Placement of the sand will reduce the availability of the contaminants and therefore, may reduce the toxicity. The physical process of placing sand will physically reduce risk of the remaining sediment by containing contaminants in place (USEPA, December 2005).

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.3.2.5 Short-Term Effectiveness

Placement of the sand layer to address RAO-4 will adversely affect the benthic community and may adversely affect water column quality in the short term during placement of the sand layer in the Wisconsin River.

Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land.

It is assumed the short term effects while placement of sand for R2a will range from 1 to 2 weeks and for R2b will range from 3 to 4 weeks.

4.3.2.6 Implementability

River sediment remedial options R2a and R2b are technically and administratively implementable. Placement of the sand layer in the localized area of the Wisconsin River would be difficult due to the small area and swift current. Materials and contractors required to implement river sediment remedial options R2a and R2b are available.

4.3.2.7 Cost

The present worth cost of river sediment remedial option R2a is approximately $438,000. Capital costs of are approximately $438,000.

The present worth cost of river sediment remedial option R2b is approximately $696,000. Capital costs of are approximately $696,000. There are no annual costs.

There are no annual costs. Appendix D provides the unit cost of river sediment remedial options R2a and R2b and Table 4 provides a summary of the overall costs to implement.

4.3.3 R3 – Placement of Six Inch Sand Cover and Six Inch Armor Layer over River Sediment

River sediment remedial option R3 consists of covering a localized area of the Wisconsin River affected sediment with a minimum of 6-inches of sand and placement of 6-inches of armor. The armor size will be evaluated in remedial design but for cost estimating purposes, it is assumed to be of 3-inch clear stone.

River sediment remedial option R3a includes placing a six inch sand layer and six inch armor layer over river sediment exceeding the PEC in the top 0-6 inches of sediment (considered the biologically active zone) or approximately 0.4 acres of the Wisconsin River.

River sediment remedial option R3b includes placing a six inch sand layer and six inch armor layer over river sediment exceeding the TEC in the top 0-6 inches of sediment (considered the biologically active zone) or approximately 1.3 acres of the Wisconsin River.

4.3.3.1 Overall Protection of Human Health and the Environment

There are no current risks to human health as a result of sediment concentrations detected in the Wisconsin River because the pathway does not exist (water depths prohibit direct access to the river sediment and swift currents).

Risk to the benthic invertebrates will remain in the 0.4 acres and 1.3 acres of the Wisconsin River, for sediment remedial options R2a and R2b, respectively. However, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis. The sand and gravel layer covers will create a new sediment surface and minimize benthic invertebrate exposure to the existing sediment surface. As a result, river sediment remedial options R3a and R3b will meet RAO-4.

4.3.3.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. River sediment remedial options R3a and R3b will meet the requirements of the location-specific and action-specific ARARs.

4.3.3.3 Long-Term Effectiveness and Permanence

River sediment remedial option R3a and R3b satisfy RAO-4 because the existing sediment is stable. Placement of the sand layer will further minimize benthic invertebrate exposure to the sediment. Placement of the armor layer will further ensure the stability of the existing sediment surface.

4.3.3.4 Reduction of Toxicity, Mobility, and Volume through Treatment

River sediment remedial options R3a and R3b include placement of 6 inches of sand and 6 inches of armor in the Wisconsin River which will result in a new biologically active zone (conservatively considered as the top 0-6 inches). Thereby, the exposure pathway for benthic invertebrates and the remaining affected sediment will be incomplete. Placement of the sand and gravel will reduce the availability of the contaminants and therefore, may reduce the toxicity. The physical process of placing sand will physically reduce risk of the remaining sediment by containing contaminants in place (USEPA, December 2005).

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.3.3.5 Short-Term Effectiveness

Placement of the sand and armor layers to address RAO-4 will adversely affect the benthic community and may adversely affect water column quality in the short term during placement of the layers in the Wisconsin River.

Construction worker exposure to affected sediment is expected to be minimal because the sand and armor will be mechanically placed from land.

It is assumed the short term effects while placement of sand and gravel for R3a will range from 1 to 2 weeks and for R3b will range from 3 to 4 weeks.

4.3.3.6 Implementability

River sediment remedial options R3a and R3b are technically and administratively implementable. Placement of the sand layer in the localized area of the Wisconsin River would be difficult due to the small area and swift current. Materials and contractors required to implement river sediment remedial options R3a and R3b are available.

4.3.3.7 Cost

The present worth cost of river sediment remedial option R3a is approximately $477,000. Capital costs of are approximately $477,000.

The present worth cost of river sediment remedial option R3b is approximately $821,000. Capital costs of are approximately $821,000. There are no annual costs.

There are no annual costs. Appendix D provides the unit cost of river sediment remedial options R3a and R3b and Table 4 provides a summary of the overall costs to implement.

4.3.4 R4 – Dredge and Sand Cover

River sediment remedial option R4 consists of dredging in a localized area of the Wisconsin River Dredging by mechanical methods, in the wet is assumed, using silt curtains and oil booms to manage suspended sediment and the presence of free product or liquids such as NAPL. Dredging will be followed by a minimum 6-inch sand layer to manage dredging residuals. Dredged sediment would be stabilized on site with amendments, if required, and loaded for off-site disposal at an approved landfill. Contact water generated during dredging/dewatering activities will be treated on site and then discharged to the Wisconsin River.

Dredging in the dry would not be warranted due to minimal free oil/oil wetted sediment. Further it is not practical due to the water depths and currents in the river. In addition a containment system is not implementable due to the difficulty of achieving embedment in the river because the bottom of the Wisconsin River is generally sandy and gravelly to rocky (RI Report, NRT, April 2012)

River sediment remedial option R4a includes dredging sediment that exceeds the PEC, ranging from 1 to 5 feet below mudline as shown on Figure 7. Following dredging, a minimum 6-inch sand layer will be placed on the dredged surface and will extend to the area exceeding the TEC in the top 0-6 inches of sediment. No monitoring or maintenance will be required in the Wisconsin River.

River sediment remedial option R4b includes dredging sediment as described for sediment remedial option R4a and also includes dredging the area exceeding the TEC. Areas exceeding the TEC are estimated to be dredged approximately one foot. Following dredging, a minimum 6-inch sand layer will be placed on the dredged surface. No monitoring or maintenance will be required in the Wisconsin River.

4.3.4.1 Overall Protection of Human Health and the Environment

There are no current risks to human health as a result of sediment concentrations detected in the Wisconsin River because the pathway does not exist (water depths and swift currents prohibit direct access to the river sediment).

River sediment remedial option R4a will be protective of the environment due to removal of the sediment exceeding the PEC and placement of sand in areas exceeding the TEC.

River sediment remedial option R4b will be protective of the environment due to removal of the sediment exceeding the TEC.

However, adverse short term effects of both sediment remedial options R4a and R4b to the existing benthic invertebrates in this area may outweigh the overall net benefit.

In the short term, there is some additional risk to human health and the environment as a result of dredging sediment containing MGP residuals, stabilizing, and transporting to the landfill. Particulates may become air borne and contaminants may volatilize. These risks can be minimized through best management practices (i.e., misting to minimize dust and odors) and covering trucks when transporting sediment to the landfill.

4.3.4.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. River sediment remedial options R4a and R4b will meet the requirements of the location-specific and action-specific ARARs.

4.3.4.3 Long-Term Effectiveness and Permanence

River sediment remedial option R4a and R4b satisfy RAO-4 through removal and sad covers. Annual monitoring is not required because MGP-residuals will be removed.

4.3.4.4 Reduction of Toxicity, Mobility, and Volume through Treatment

River sediment remedial options R4a and R4b include reduction of the volume of affected sediment, although the removed material is disposed in a landfill and not treated.

River sediment remedial option R4a also includes placement of a 6-inch sand cover which will result in a new biologically active zone (conservatively considered as the top 0-6 inches) and an incomplete exposure pathway for benthic invertebrates exposure to sediment with concentrations greater than the TEC. Placement of the sand will reduce the availability of the contaminants and therefore, may reduce the toxicity.

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.3.4.5 Short-Term Effectiveness

Sediment dredging creates the potential for direct contact exposure during excavation/dredging, fugitive volatile organic emissions and nuisance odors. Transporting affected sediment to the landfill creates a short-term effect on the communities due to increased truck traffic, noise and the potential for increased accidents.

Removal of sediment and placement of a sand layers to address RAO-4 will remove the existing benthic community in the short term. River sediment remedial option R4a and R4b may adversely affect water column quality in the short term during dredging of the river and placement of the sand cover.

For cost estimating and comparison purposes, it is assumed the short term effects of river sediment remedial options R4a and R4b will be approximately 5-6 weeks and 7-8 weeks, respectively, including dredging and sand cover placement. Implementing river sediment remedial options R4a and R4b may increase human health risk during the construction.

4.3.4.6 Implementability

River sediment remedial options R4a and R4b are technically and administratively implementable. Disposal facilities, materials and contractors required to implement river sediment remedial option R4a and R4b are available. R4a and R4b require adequate area to dewater sediment at the site, in preparation for transportation to the landfill. This is assumed to include a portable water treatment system, a stabilization pad, stabilization materials (e.g., cement kiln dust) and mixing equipment.

Dredging of the Wisconsin River is assumed to be difficult due to the sandy and gravelly to rocky bottom. Placement of the sand layer can be implemented but would be difficult due to the small area and swift current.

4.3.4.7 Cost

The present worth cost of river sediment remedial option R4a is approximately $1,461,000. Capital costs of are approximately $1,461,000.

The present worth cost of river sediment remedial option R4b is approximately $2,294,000. Capital costs of are approximately $2,294,000. There are no annual costs.

There are no annual costs. Appendix D provides the unit cost and additional assumptions of river sediment remedial options R4a and R4b and Table 4 provides a summary of the overall costs to implement.

4.4 Pond Sediment Remedial Options

Pond sediment remedial options are intended to address RAO-5.

4.4.1 P1 – No Further Action

Consistent with NCP requirements, a No-Further Action option will be considered. This option does not include any remediation or monitoring to minimize potential exposures related to pond sediment in the Pfiffner Pioneer Park. The No-Further Action option will be used as a baseline for comparisons of other remedial options. In accordance with CERCLA, Site reviews will be performed every five (5) years in pond sediment remedial option P1.

As discussed in BLRA included in the RI Report – Revision 3, (NRT, April 2012), the Pfiffner Pioneer Park Pond (approximately 0.2 acres) contains sediment with total PAH-13 concentrations of sediment above the PEC that may cause toxicity to sensitive benthic invertebrates. However, benthic invertebrates were observed in the pond during the site reconnaissance. Based on the small size of the pond and the way it is maintained, it provides very minimal aquatic habitat and would not have any real effect on the health of the benthic invertebrate or fish populations of the adjacent Wisconsin River.

Similar to the Wisconsin River, there are specific areas that exceed generic screening levels and may pose a risk to the benthic invertebrates in the immediate vicinity of the sediment exceeding the screening levels. On a community basis, which the risk assessment is to consider the ***community***, not the individual, there is a lower risk. Based on the relative size of affected sediment (0.2 acres in the Pfiffner Pioneer Park) compared to the larger water body system and the short-term disruption to the aquatic eco-system potentially outweighing the ***net benefit*** of isolating or removing affected sediment, it is appropriate to consider a no action remedy for Pfiffner Pioneer Park Pond.

4.4.1.1 Overall Protection of Human Health and the Environment

Although the BLRA indicated human health was not at risk for sediment exposure in Pfiffner Pioneer Park Pond, there is some potential for human health receptors to encounter affected sediment.

Risk to the benthic invertebrates will remain in Pfiffner Pioneer Park Pond (0.2 acres) that exceeds the PEC, however, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis. As a result, pond sediment remedial option P1 is considered to meet RAO-5.

4.4.1.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. Location and action-specific ARARs are not relevant because there is no action associated with this option.

4.4.1.3 Long-Term Effectiveness and Permanence

Potential risk to human health does not currently exist, however there is some potential for human health receptors to encounter affected sediment. Potential risk to the benthic invertebrates will remain in Pfiffner Pioneer Park Pond (0.2 acres), however, as discussed above, the risk to the overall aquatic community is considered to be lower than on an individual basis.

4.4.1.4 Reduction of Toxicity, Mobility, and Volume through Treatment

There is no reduction of toxicity, mobility or volume through treatment under pond sediment remedial option P1.

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.4.1.5 Short-Term Effectiveness

The short term risk to human health and the environment from implementing pond sediment remedial option P1 will not increase and there will be no short term disturbance to the community or environment from remedial option P1.

4.4.1.6 Implementability

No implementability issues exist as no action is conducted.

4.4.1.7 Cost

The only costs associated with pond sediment remedial option P1 relate to the five-year review requirements. The five-year reviews are estimated to be $15,000 per year over 30 years (6 five-year review events) for a total present worth cost of approximately $42,000.

4.4.2 P2 – Placement of Six Inch Sand Cap over Pond Sediment

Pond sediment remedial option P2 consists of placing a 6-inch sand cap in Pfiffner Pioneer Park Pond. The presence of the sand cap in Pfiffner Pioneer Park Pond will be assessed to support the Five-Year Review process for 30 years.

4.4.2.1 Overall Protection of Human Health and the Environment

Although the BLRA indicated human health was not at risk for sediment exposure in Pfiffner Pioneer Park Pond, there is some potential for human health receptors to encounter affected sediment.

Pond remedial option P2 will be protective of the environment due to placement of sand in Pfiffner Pioneer Park Pond. However, adverse short term effects to the existing benthic invertebrates in the pond may outweigh the overall net benefit.

4.4.2.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. Pond sediment remedial action P2 will meet the requirements of the location-specific and action-specific ARARs.

4.4.2.3 Long-Term Effectiveness and Permanence

Pond sediment remedial action P2 satisfies RAO-5 because the existing sediment is stable and placement of the sand cap will further minimize benthic invertebrate exposure to the sediment. The presence of the sand cap will be assessed to support the Five-Year Review process for 30 years.

4.4.2.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Pond sediment remedial option P2 includes placement of a 6 inch sand cap in Pfiffner Pioneer Park Pond which will result in a new biologically active zone (conservatively considered as the top 0-6 inches) and an incomplete exposure pathway for benthic invertebrate exposure to affected sediment. Placement of the sand will reduce the availability of the contaminants and therefore, may reduce the toxicity. The physical process of placing sand will physically reduce risk of the remaining sediment by containing contaminants in place (USEPA, December 2005).

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.4.2.5 Short-Term Effectiveness

Placement of the sand will affect the benthic community in the pond (RAO-5) in the short term, but the exposure pathway will be incomplete immediately after the sand is placed (estimated as 3 days). Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land.

Placement of the sand cap to address RAO-5 will adversely affect the benthic community and may adversely affect water column quality over the short term (while sand is placed) due to the hydraulic connection.

Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land.

4.4.2.6 Implementability

Pond sediment remedial option P2 is technically and administratively implementable. Materials and contractors required to implement pond sediment remedial option P2 are available.

4.4.2.7 Cost

The present worth cost of pond sediment remedial option P2 is approximately $216,000. Capital costs of are approximately $182,000. Cap monitoring costs are approximately $7,000 and 8 events are assumed over 30 years (initially annual events for three years followed by one event every 5 years thereafter). Appendix D provides the unit cost of pond sediment remedial option P2 and Table 4 provides a summary of the overall costs to implement pond remedial option P2.

4.4.3 P3 – Placement of Six Inch Sand Cap with Activated Carbon over Pond Sediment

Pond sediment remedial option P3 consists of placing a 6-inch sand cap with activated carbon in the sand cap for Pfiffner Pioneer Park Pond. The application rate of activated carbon would be assessed as part of the design but for cost estimating purposes, it is assumed 6 pounds of activated carbon will be placed per square yard of sand layer.

The presence of the sand cap in Pfiffner Pioneer Park Pond will be assessed to support the Five-Year Review process for 30 years.

4.4.3.1 Overall Protection of Human Health and the Environment

Although the BLRA indicated human health was not at risk for sediment exposure in Pfiffner Pioneer Park Pond, there is some potential for human health receptors to encounter affected sediment.

Pond remedial option P3 will be protective of the environment due to placement of sand in Pfiffner Pioneer Park Pond. However, adverse short term effects to the existing benthic invertebrates in the pond may outweigh the overall net benefit.

4.4.3.2 Compliance with ARARs

There are no federal or state chemical-specific ARARs applicable to sediment identified in Section 2.2. Pond sediment remedial action P3 will meet the requirements of the location-specific and action-specific ARARs.

4.4.3.3 Long-Term Effectiveness and Permanence

Pond sediment remedial action P3 satisfies RAO-5 because the existing sediment is stable and placement of the sand cap will further minimize benthic invertebrate exposure to the sediment. The long term effectiveness of the sand cap may be increased as a result of the activated carbon increasing PAH sequestration compared to sand alone. The presence of the sand cap will be assessed to support the Five-Year Review process for 30 years.

4.4.3.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Pond sediment remedial option P3 includes placement of a 6 inch sand cap in Pfiffner Pioneer Park Pond which will result in a new biologically active zone (conservatively considered as the top 0-6 inches) and an incomplete exposure pathway for benthic invertebrate exposure to affected sediment. Placement of the sand will reduce the availability of the contaminants and therefore, may reduce the toxicity. The activated carbon included in the sand cap will sequester PAHs, further reducing toxicity, beyond the sand layer alone. The physical process of placing sand will physically reduce risk of the remaining sediment by containing contaminants in place (USEPA, December 2005).

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005).

4.4.3.5 Short-Term Effectiveness

Placement of the sand will affect the benthic community in the pond (RAO-5) in the short term, but the exposure pathway will be incomplete immediately after the sand is placed (estimated as 3 days). Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land.

Placement of the sand cap to address RAO-5 will adversely affect the benthic community and may adversely affect water column quality over the short term (while sand is placed) due to the hydraulic connection.

Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land.

4.4.3.6 Implementability

Pond sediment remedial option P3 is technically and administratively implementable. Placement and monitoring of the sand cap are readily implemented, although placing granular activated carbon may be difficult to incorporate evenly through the material due to the low density of the material. Materials and contractors required to implement pond sediment remedial option P3 are available.

4.4.3.7 Cost

The present worth cost of pond sediment remedial option P3 is approximately $232,000. Capital costs of are approximately $198,000. Cap monitoring costs are approximately $7,000 and 8 events are assumed over 30 years (initially annual events for three years followed by one event every 5 years thereafter). Appendix D provides the unit cost of pond sediment remedial option P3 and Table 4 provides a summary of the overall costs to implement pond remedial option P3.

4.4.4 P4 – Dredging Pond Sediment

Pond sediment remedial option P4 consists of removing up to 3.5 feet of sediment in Pfiffner Pioneer Park Pond. Removal is assumed to be in the wet, followed by 6-inch sand layer. Dredged sediment would be stabilized on site with amendments, if required, and loaded for off-site disposal at an approved landfill.

Dredging the pond in the dry is not considered necessary because there is no flow in the pond, the materials to be removed are solids, no visual evidence of MGP-residuals was observed that would require additional management of free product or liquids such as NAPL, there is no need to observe the excavation bottom, and the sediment is easily accessible on land with a backhoe. If dredging in the dry is to be required, sheet piles will be installed between the western edge of the pond and pond water will be pumped directly to the Wisconsin River. Contact water generated during excavation/dewatering activities will be treated on site and then discharged to the Wisconsin River.

No monitoring or maintenance will be required in Pfiffner Pioneer Park Pond.

4.4.4.1 Overall Protection of Human Health and the Environment

Although the BLRA indicated human health was not at risk for sediment exposure in Pfiffner Pioneer Park Pond, there is some potential for human health receptors to encounter affected sediment.

Pond remedial option P4 will be protective of the environment due to removal of soft sediment and placement of sand in Pfiffner Pioneer Park Pond.

However, adverse short term effects to the existing benthic invertebrates in the pond may outweigh the overall net benefit.

In the short-term, there is some additional risk to human health and the environment as a result of dredging sediment containing MGP residuals, stabilizing, and transporting to the landfill. Particulates may become air borne and contaminants may volatilize. These risks can be minimized through best management practices (i.e., misting to minimize dust and odors) and covering trucks when transporting sediment to the landfill

Pond sediment remedial option P4 is protective of both human health and the environment.

4.4.4.2 Compliance with ARARs

Pond sediment remedial option P4 complies with and attains chemical-specific ARARs identified in Table 1. Pond sediment remedial option P4 will meet the requirements of the location and action-specific ARARs.

4.4.4.3 Long-Term Effectiveness and Permanence

RAO-5 is satisfied through removal and sand covers. Annual monitoring is not required because MGP-residuals will be removed.

4.4.4.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Pond sediment remedial option P4 includes reduction of the volume of affected sediment, although the removed material is disposed in a landfill and not treated.

Placement of 6 inches of sand in Pfiffner Pioneer Park pond following removal will result in a new biologically active zone (conservatively considered as the top 0-6 inches) and minimize the exposure pathway for benthic invertebrates and the residual affected sediment. Removal of the sediment and placement of the sand will reduce the availability of the contaminants and therefore, may reduce the toxicity. The physical process of placing sand will physically reduce risk of the remaining sediment by containing contaminants in place. (USEPA, December 2005).

The dredging of soft sediment from the pond up to 3.5 feet accomplishes no further reduction of toxicity, mobility or volume through treatment. Visual observations of MGP residuals were not observed in the pond and the elevated PAH concentrations are likely associated with the quality of the fill material used to fill in the slough.

MGP-residuals such as benzene and PAHs (e.g., naphthalene) will also degrade under natural processes in soil, groundwater and sediment. Natural attenuation processes of such constituents have been well documented (USEPA, December 2005, WDNR, March 2003).

4.4.4.5 Short-Term Effectiveness

Sediment dredging creates the potential for direct contact exposure during excavation/dredging, fugitive volatile organic emissions and nuisance odors. Transporting affected sediment to the landfill creates a short-term effect on the communities due to increased truck traffic, noise and the potential for increased accidents.

For cost estimating and comparison purposes, it is assumed the sediment excavation will be approximately one month. Implementing pond sediment remedial option P4 may increase human health risk during the construction.

Removal of sediment in the pond and placement of a sand layer to address RAO-5 will remove the existing benthic community in the short term. The potential exists for construction worker exposure to affected sediment during dredging, loading and disposal. Construction worker exposure to affected sediment is expected to be minimal because the sand will be mechanically placed from land. It is assumed the short term effects while placement of sand will range from 1 to 2 weeks.

Pond sediment remedial option P4 may adversely affect water column quality in the short term during dredging of the pond and placement of the sand cover in the pond.

4.4.4.6 Implementability

Pond sediment remedial option P4 is technically and administratively implementable. Disposal facilities, materials and contractors required to implement pond sediment remedial option P4 are available. P4 requires adequate area to dewater sediment at the site, in preparation for transportation to the landfill. This is assumed to include a portable water treatment system, a stabilization pad, stabilization materials (e.g., cement kiln dust) and mixing equipment.

Dredging of Pfiffner Pioneer Park Pond and placement of the sand layer can be implemented.

4.4.4.7 Cost

The present worth cost of pond sediment remedial option P4 is approximately $661,000. Capital costs are approximately $661,000. If the pond is dredged in the dry, capital costs increase approximately $100,000. There are no annual costs. Appendix D provides unit cost of each remedial action component and Table 4 provides a summary of the overall costs to implement pond sediment remedial option P4.

5 COMPARATIVE ANALYSIS OF REMEDIAL OPTIONS

The following analysis compares remedial options relative to each other using the seven evaluation criteria to support selection of a preferred remedial option for each media. The analysis is summarized on Table 4. The analysis is designed to provide decision makers with information to aid in the selection of remedial options that best meet the statutory requirements for remedial actions.

As discussed in the RI Report – Revision 3 (NRT, April 2012) and summarized herein, previous remedial actions significantly reduced the toxicity, mobility, and volume of affected media. The sediments (including surficial sediment) in the Wisconsin River have high concentrations of PAHs in a relatively small area. The PAH concentrations are stable, likely due to the protective environment of sand and cobbles. Neither the area nor concentrations of PAHs have significantly changed from the 2000 sediment survey. Further there have been no reported observations of sheens in the area. These conditions need to be recognized as part of the comparative analysis.

5.1 Overall Protection of Human Health and the Environment

5.1.1 Soil

Soil remedial option S1 is not protective of human health and the environment in comparison to soil remedial option S2 or S3. Therefore soil remedial option S1 will no longer be considered in this analysis.

Both soil remedial option S2 and S3, if implemented, will achieve and maintain protection of human health and the environment. Soil remedial option S3, is more extensive in remediation work, but would result in fugitive volatile organic emissions to the community through the excavation and disposal of affected soil. Environmental protection may be slightly greater with soil remedial option S3, due to less potential for future groundwater effects but not appreciably considering the relatively small volume of MGP residuals to be removed.

5.1.2 Groundwater

Groundwater remedial option G1 is not protective of human health and the environment in comparison to groundwater remedial option G2, G3, or G4. Therefore groundwater remedial option G1 will no longer be considered in this analysis.

Groundwater remedial option G2 is protective of human health, given the current groundwater use, and could be paired with either groundwater remedial options G3 or G4. Groundwater remedial options G3 and G4 provide similar levels of performance and protection to human health and the environment. Both groundwater remedial option G3 and G4, if implemented, will achieve and maintain protection of human health and the environment.

Groundwater remedial option G4, is more labor intensive (i.e., monthly operations and maintenance on the system) and has a greater potential for contact with MGP-affected groundwater than G3.

5.1.3 River Sediment

River sediment remedial option R1 is protective of human health and the environment (on a community basis) under current conditions. River sediment remedial options R2 and R3 may provide equal level of protection as both create a new sediment surface. River sediment remedial option R3 may offer greater protection than R2 in the event there is unexpectedly higher levels of disturbance in the area. River sediment remedial option R4 may offer the greatest protection through removal of sediment, however the current conditions are protective of human health and the environment.

Under each of the river sediment remedial options, options addressing sediment above the TEC (denoted with “b”) may provide slightly greater overall protection than options addressing sediment above the PEC (denoted with “a”).

5.1.4 Pond Sediment

Pond sediment remedial option P1 is protective of human health. P1 does not fully protect the benthic invertebrates that exist in the pond. Pond sediment remedial option P2, P3, and P4 will all provide similar levels of performance at removing the sediment pathway but will also damage the current benthic invertebrate population. Pond sediment remedial option P4 has the greatest potential to expose human health and the environment to MGP-residuals through dredging, although the exposures are relatively short term (i.e., approximately one month). The environmental protection may be higher due to the removal of soft sediment in the pond but will still require a sand layer to manage post-dredge residuals.

5.2 Compliance with ARARs

5.2.1 Soil

Soil remedial options S2 and S3 comply with and attain the ARARs in Table 1.

5.2.2 Groundwater

Groundwater remedial options G2, G3, and G4 comply with and attain the ARARs in Table 1.

5.2.3 River Sediment

River sediment remedial options R1, R2, R3, and R4 (and the subsets) comply with and attain the ARARs in Table 1.

5.2.4 Pond Sediment

Pond sediment remedial options P1, P2, P3, and P4 comply with and attain the ARARs in Table 1.

5.3 Long-Term Effectiveness and Permanence

5.3.1 Soil

Soil remedial option S2, if properly implemented and maintained, is effective in the long term and relies on maintenance and monitoring for permanence of the remedy. S2 also includes public notice through the GIS Registry.

Soil remedial option S3, through excavation and off-site disposal, offer greater permanence through removal of contaminant mass in the excavation area. Soil remedial option S3 would also require pairing with S2 to be effective in the long term on a site-wide basis.

5.3.2 Groundwater

Groundwater remedial option G2, if properly implemented and maintained, is effective in the long term and relies on existing governmental control through GIS Registry and zoning.

Groundwater remedial option G3 and G4 are similar with respect to long-term effectiveness. As discussed in Section 4.2.3, transport modeling suggested that a groundwater extraction system installed to cutoff future migration near the source could reduce the time frame for meeting the PRG from 38-114 years to 36-96 years, which falls within the uncertainty of the model. These results suggest that groundwater extraction will have little measurable benefit on the remediation time frame.

5.3.3 River Sediment

Section 4.3.1.2 of the RI Report (NRT, April 2012) discusses the characteristics of the Wisconsin River as neither erosional nor depositional. As such, the current surface is not expected to change and river sediment remedial option R1 is expected to continue to provide long-term permanence.

River sediment remedial option R2 provides a layer of sand that may increase long term performance if there were an unexpected residuals coming to the surface, however this has not been observed. The armor layer over river sediment remedial option R3 would further enhance long term performance and permanence of the sand cover by addressing potential scour concerns. River sediment remedial option R4 improves long-term effectiveness, at a higher cost.

Under each of the river sediment remedial options, options addressing sediment above the TEC (denoted with “b”) may provide slightly greater long term effectiveness and permanence than options addressing sediment above the PEC (denoted with “a”).

5.3.4 Pond Sediment

Pond sediment remedial option P1 does not offer long-term effectiveness, although new sediment may enter the pond and naturally isolate the existing surface, it cannot be relied on.

Pond sediment remedial option P2 provides long term effectiveness through the sand cap placement. Pond sediment remedial option P3 offers greater long-term effectiveness compared to P2 due to the addition of granular activated carbon. Both P2 and P3 rely on maintenance monitoring for ensuring effectiveness. Pond sediment remedial option P4 improves long-term effectiveness, at a higher cost.

5.4 Reduction of Toxicity, Mobility, and Volume through Treatment

Previous remedial actions on soils and groundwater (Section 1.2.8) significantly reduced the toxicity, mobility, and volume of affected media.

5.4.1 Soil

Soil remedial option S2 does not reduce volume of contaminants at the site however S2 does include maintenance monitoring of the existing asphalt and soil covers to reduce the mobility of residuals in soil.

Soil remedial option S3 reduces volume of contaminants at the site although does not destroy or immobilize contaminant mass through treatment.

5.4.2 Groundwater

Groundwater remedial option G2 does not reduce volume of contaminants. Groundwater remedial option G3 does benefit from natural processes that will reduce the toxicity or mobility of affected groundwater. The groundwater extraction system and ex-situ treatment system included in groundwater remedial option G4 reduces mobility compared to MNA options, but offers no better treatment and may impede natural processes. As a result of the characteristics of the aquifer (sandy), a large volume of water will need to be extracted to remove an appreciable amount of contaminants for an extended period (assumed to be 30 years for cost purposes). Attainment of PRGs for G4 is predicted to be in the same order of magnitude as MNA, at 36 to 96 years, which is within the uncertainty expected for MNA to attain the PRGs.

5.4.3 River Sediment

River sediment remedial option R1 does not reduce volume, toxicity or mobility of contaminants in the river. River sediment remedial option R2 reduces toxicity and mobility of affected sediment through placement of the sand. River sediment remedial option R3 does not provide any more reduction of toxicity, mobility or volume than R2 as both isolate the existing surface and create a new sediment surface. River sediment remedial option R4 removes the exposure pathway through dredging sediment. However, the sediment will be transported to an off-site landfill for disposal and will not be treated.

Under each of the river sediment remedial options, options addressing sediment above the TEC (denoted with “b”) may provide slightly greater reduction than options addressing sediment above the PEC (denoted with “a”).

5.4.4 Pond Sediment

Pond sediment remedial option P1 does not reduce volume, toxicity or mobility of contaminants in the pond.

Pond sediment remedial option P2 reduces toxicity and mobility of affected surface sediment through placement of the sand. Pond sediment remedial option P3 further reduces toxicity and mobility by including granular activated carbon to sequester PAHs that may come to the sediment surface. Pond sediment remedial option P4 removes the exposure pathway through dredging sediment. However, the sediment will be transported to an off-site landfill for disposal and will not be treated.

5.5 Short-Term Effectiveness

5.5.1 Soil

Soil remedial option S2 will minimize risk to human health receptors. For comparison purposes, it is assumed the GIS Registry and maintenance plan for the existing asphalt and soil cover will be completed within two months. Soil remedial option S2 is the most effective for minimizing material management requirement, and short term exposure to workers.

Soil remedial option S3 will be the most disruptive to the community because Crosby Avenue will be closed, for up to three months to install the sheet piling and dewatering system to excavate soil below the water table. Closing Crosby Avenue may be disruptive to the local community due to traffic congestion, road blockage, noise and dust.

5.5.2 Groundwater

Groundwater remedial option G2 will minimize risk to human health receptors. For comparison purposes, it is assumed the GIS Registry will be completed within two months. Based on the plume stability demonstrated from the existing period of record for groundwater monitoring (discussed in Section 4.2.3), it is reasonable to not expect the groundwater plume to migrate significantly.

Groundwater remedial option G3 will minimize risk to human health receptors. For comparison purposes, it is assumed the monitored natural attenuation plan will be completed within one month. Also as discussed in Section 4.2.3, the estimated timeframe for the groundwater to meet the PRGs is estimated to be longer than 40, potentially 100 years, which is similar in timeframe with the most aggressive groundwater remedial option. Therefore, groundwater remedial option G3 is considered a reasonable timeframe. It is also expected that within 30 years sufficient data would be available to demonstrate movement towards the PRGs. Groundwater remedial option G3 is the most effective for minimizing material management requirement, and short term exposure to workers.

Groundwater remedial option G4 will also minimize risk to human health receptors at a similar level as G3 but at a higher cost. Groundwater remedial option G4 is estimated to take up to three months to install the collection and treatment system during which time workers may be exposed to subsurface soil and groundwater containing MGP-residuals. The estimated timeframe for the groundwater to meet the PRGs with groundwater extraction is expected in the range of 40 up to 100 years. During this time, a worker will be maintaining the extraction system and may be exposed to groundwater containing MGP-residuals and expended treatment media used in the treatment system. Similar to groundwater remedial option G3, it is expected that within 30 years sufficient data would be available to demonstrate movement towards the PRGs

5.5.3 River Sediment

River sediment remedial option R1 is the only remedial option which does not disrupt the existing benthic community and water quality in the short-term. In addition, human health receptors are not adversely affected in the short-term with river sediment remedial option R1.

River sediment remedial option R2 and R3 both adversely affect the benthic community due to cover placement and disturbance to the water column. Neither adversely affects human health receptors in the short term because neither bring affected sediment to the surface. However, both may minimize the use of the near-shore park area for one to four weeks. River sediment remedial option R3 would disrupt the park’s use slightly longer than R3 due to the added placement of the armor. River sediment remedial option R4 would disrupt the park’s use up to eight weeks.

Under each of the river sediment remedial options, options addressing sediment above the TEC (denoted with “b”) may provide slightly greater short term effectiveness than options addressing sediment above the PEC (denoted with “a”).

5.5.4 Pond Sediment

Pond sediment remedial option P1 is the only remedial option which does not disrupt the existing benthic community and water quality in the short-term. In addition, human health receptors are not adversely affected in the short-term with pond sediment remedial option P1.

Pond sediment remedial option P2 and P3 adversely affect the benthic community equally due to cover placement and disturbance to the water column. Neither adversely affects human health receptors in the short term because neither brings affected sediment to the surface. However, both may minimize the use of the park in the vicinity of the pond for approximately three days.

Pond sediment remedial option P4 has the greatest potential to expose human health receptors as a result of removal which will take approximately one month. During this time excavated sediment would be brought to the surface and mixed with additives to facilitate transportation to the landfill. Pond sediment remedial option P4 completely removes the existing benthic community and R3 would disrupt the park’s use longer due to the added placement of the armor.

5.6 Implementability

5.6.1 Soil

Each of the soil remedial options is implementable. S2 is the most readily implemented without disruption to the community. Soil remedial option S3 is the most difficult to implement compared to S2 due to the relatively deep excavation compared to the area of the excavation in the vicinity of Pfiffner Pioneer Park Pond and the uncertainty regarding the volume of water which may require management to maintain dewatered conditions. S3 requires closure of Crosby Avenue which will reduce access to the park and the Art Museum for approximately 3 months, and require an agreement with the City of Stevens Point; therefore requires consideration of administrative implementability. To implement soil removal, a temporary sheet pile shoring system and management of groundwater (dewatering) will increase the construction duration and difficulty (and cost) of excavation.

5.6.2 Groundwater

Groundwater remedial option G2 and G3 are readily implemented.

Groundwater remedial option G4 is the most difficult to implement and maintain for little net benefit over groundwater remedial option G3. Groundwater remedial option G4 requires a pump test to evaluate the pumping rate, number of wells, and location of wells to achieve an adequate radius of influence and drawdown. Existing subsurface utilities may also interfere with installation of the conveyance system. The groundwater extraction system is labor intensive (requires routine monitoring and maintenance) and provides little appreciable mass removal. The additional labor effort must be considered in evaluating the net benefit of implementing a groundwater extraction system, given that the plume is stable well defined.

5.6.3 River Sediment

Placing sand cover/armor in the Wisconsin River as part of river sediment remedial options R2, R3, and R4 is more difficult to implement than sediment remedial option R1 considering the small area and swift current. However, equipment and supplies are readily available to place the materials in the Wisconsin River. River sediment remedial option R4 is the most difficult to implement compared to the other river sediment remedial options because of the difficulty in dredging the river bottom materials (sandy and gravelly to rocky).

Under each of the river sediment remedial options, options addressing sediment above the TEC (denoted with “b”) may be slightly more difficult to implement as a result of addressing a larger area than options addressing sediment above the PEC (denoted with “a”).

5.6.4 Pond Sediment

Pond sediment remedial options P2 and P3 are readily implemented although it may be slightly more difficult to place the activated carbon evenly with the sand in pond sediment remedial option P3.

Pond sediment remedial option P4 is the most difficult to implement. P4 requires adequate area to dewater sediment at the site, in preparation for transportation to the landfill. This is assumed to include a portable water treatment system, a stabilization pad, stabilization materials (e.g., cement kiln dust) and mixing equipment.

5.7 Cost

Table 4 summarizes the costs for each remedial option. The present worth costs for the remedial options are summarized below:

5.7.1 Soil

Remedial Option S1: $42,000

Remedial Option S2: $128,000

Remedial Option S3: $2,930,000

Remedial option S3 has the greatest potential for increases due to the potential for greater volumes of water, community disturbance and overall construction implementability issues that may arise.

5.7.2 Groundwater

Remedial Option G1: $42,000

Remedial Option G2: $35,000

Remedial Option G3: $914,000

Remedial Option G4: $3,870,000

Remedial option G4 has the greatest potential for increases due to the potential for greater volumes of water, community disturbance, overall construction implementability issues that may arise, and long term maintenance costs.

5.7.3 River Sediment

Remedial Option R1: $42,000

Remedial Option R2:

- R2a: $438,000
- R2b: $696,000

Remedial Option R3:

- R3a: $477,000
- R3b: $821,000

Remedial Option R4:

- R4a: $1,461,000
- R4b: $2,294,000

Remedial options R2 and R3 have a potential for increases due to the potential for a greater volume of sand required to achieve the targeted thickness if the river velocity cannot be overcome during construction. Remedial option R4 has the greatest potential for increase due to the potential for a greater excavation area or depth or more complex dredging conditions.

5.7.4 Pond Sediment

Remedial Option P1: $42,000

Remedial Option P2: $216,000

Remedial Option P3: $232,000

Remedial Option P4: $661,000

Remedial option P4 has the greatest potential for increases due to the potential for greater wastewater volumes and community disturbance.

Alternatives 4a/b have the greatest potential for increases due to the potential for greater volumes of water, community disturbance, overall construction implementability issues that may arise, and long term maintenance costs.

5.8 Summary

Based on the above comparison, the recommended remedial options for each media, based on overall protection of human health and the environment, effectiveness and implementability at a cost effectively for the net benefit:

Soil: S2 – Institutional Controls and Maintenance of Existing Asphalt and Soil Covers

Groundwater: G3 – Monitored Natural Attenuation

River Sediment: R1 – No Action

Pond Sediment: P3 – Capping – Sand layer with Activated Carbon

6 REFERENCES

1986 EDI Engineering & Science, Inc. Site Investigation, Former Coal Gas Manufacturing Plant, Crosby Avenue, Stevens Point, Wisconsin.

1988 October, United States Environmental Protection Agency, Office of Emergency and Remedial Response, Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004, OSWER Directive 9355.3-01

1993 April 6. Simon Hydro Search, Inc. Phase II Work Plan for Environmental Investigation of Manufactured Gas Plant Site, Stevens Point, Wisconsin.

1993 December 8. Simon Hydro Search, Inc. Phase II Investigation Report, Environmental Investigation of Former Manufactured Gas Plant Facility, Stevens Point, Wisconsin.

1998 September 16. Natural Resource Technology, Inc. Remedial Action Documentation Report Former Manufactured Gas Plant Site, Stevens Point, WI, Project No. 1177.

1999 July. United States Environmental Protection Agency, Office of Solid Waste and Emergency Response, A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, OSWER Directive 9200.1-23P, EPA 540-R-98-031.

2003 March. Wisconsin Department of Natural Resources, Bureau for Redevelopment and Remediation, Guidance on Natural Attenuation for Petroleum Releases, PUB-RR-614.

2005 December, United States Environmental Protection Agency, Office of Solid Waste and Emergency Response, Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, OSWER Directive 9355.0-85.

2006 May, 5, United States Environmental Protection Agency and Wisconsin Public Service Corporation, *Settlement Agreement and Administrative Order on Consent for the conduct of Remedial Investigations and Feasibility Studies at six WPSC MGP Sites in Green Bay, Manitowoc, Marinette, Oshkosh, Stevens Point and Two Rivers, Wisconsin*. U.S. EPA Region 5, CERCLA Docket No. V-W-06-C-847.

2006 June 5. Natural Resource Technology, Inc. Completion Report, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2007 April 26. Natural Resource Technology, Inc. Remedial Investigation/Feasibility Study Site Specific Work Plan, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2007 September, Exponent, Multi-Site Risk Assessment Framework Revision 0, Former Manufactured Gas Plant Sites.

2008 June 5. Natural Resource Technology, Inc. Remedial Investigation Report – Revision 0, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

NATURAL RESOURCE TECHNOLOGY

2009 January 6. Natural Resource Technology, Inc. Feasibility Study Report, Revision 0, dated January 6, 2009, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2009 January 8. United States Environmental Protection Agency, Comments on the Remedial Investigation Report – Revision 0, dated June 5, 2008, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2009 February 24. Natural Resource Technology, Inc. Response to United States Environmental Protection Agency, Comments on the Remedial Investigation Report – Revision 0, dated June 5, 2008, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2010 March 5. Natural Resource Technology, Inc. Supplemental RI Field Work Technical Memorandum - Potential Vapor Intrusion, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2010 March 26, Multi-Site Feasibility Study Support Document Revision 1, Former Manufactured Gas Plant Sites.

2010 April 20, United States Environmental Protection Agency Approval of Multi-Site Feasibility Study Support Document Revision 1, Former Manufactured Gas Plant Sites, dated March 26, 2010.

2010 April 27. United States Environmental Protection Agency, Additional Comments on the Response to USEPA Comments submitted February 24, 2009 on the Remedial Investigation Report – Revision 0, dated June 5, 2008, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2010 July 2 and October 5. Natural Resource Technology, Inc, Respond to Additional Comments on the Response to USEPA Comments submitted April 27, 2010 on the Remedial Investigation Report – Revision 0, dated June 5, 2008 and Work Plan for Supplemental Groundwater Investigation, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2010 July 7. United States Environmental Protection Agency, Comments on the Feasibility Study Report, Revision 0, dated January 6, 2009, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2010 November 8. United States Environmental Protection Agency, Comments on the Feasibility Study Report, Revision 0, dated January 6, 2009, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2010 November 12. United States Environmental Protection Agency, Approval of Supplemental RI Field Work Technical Memorandum - Potential Vapor Intrusion, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983

2010 December 6. United States Environmental Protection Agency, Approval of Supplemental Groundwater Investigation Work Plant submitted October 5, 2010, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983

2010 December 22. Natural Resource Technology, Inc. Response to United States Environmental Protection Agency's July 7 and November 8, 2010 Comments on the Feasibility Study Report, Revision 0, dated January 6, 2009, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983.

2011 May 27. Natural Resource Technology, Inc. Remedial Investigation Report – Revision 1, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2011 May 31. Natural Resource Technology, Inc. Feasibility Study Report – Revision 1, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2011 September 9. United States Environmental Protection Agency, Comments on Revision 1 of the Remedial Investigation and Feasibility Study Reports, submitted in May 2011, WPSC Former Manufactured Gas Plant Superfund Site, Stevens Point, Wisconsin, CERCLA Docket No. V-W-06-C-8472011

2011 December 14. Natural Resource Technology, Inc. Remedial Investigation Report – Revision 2, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

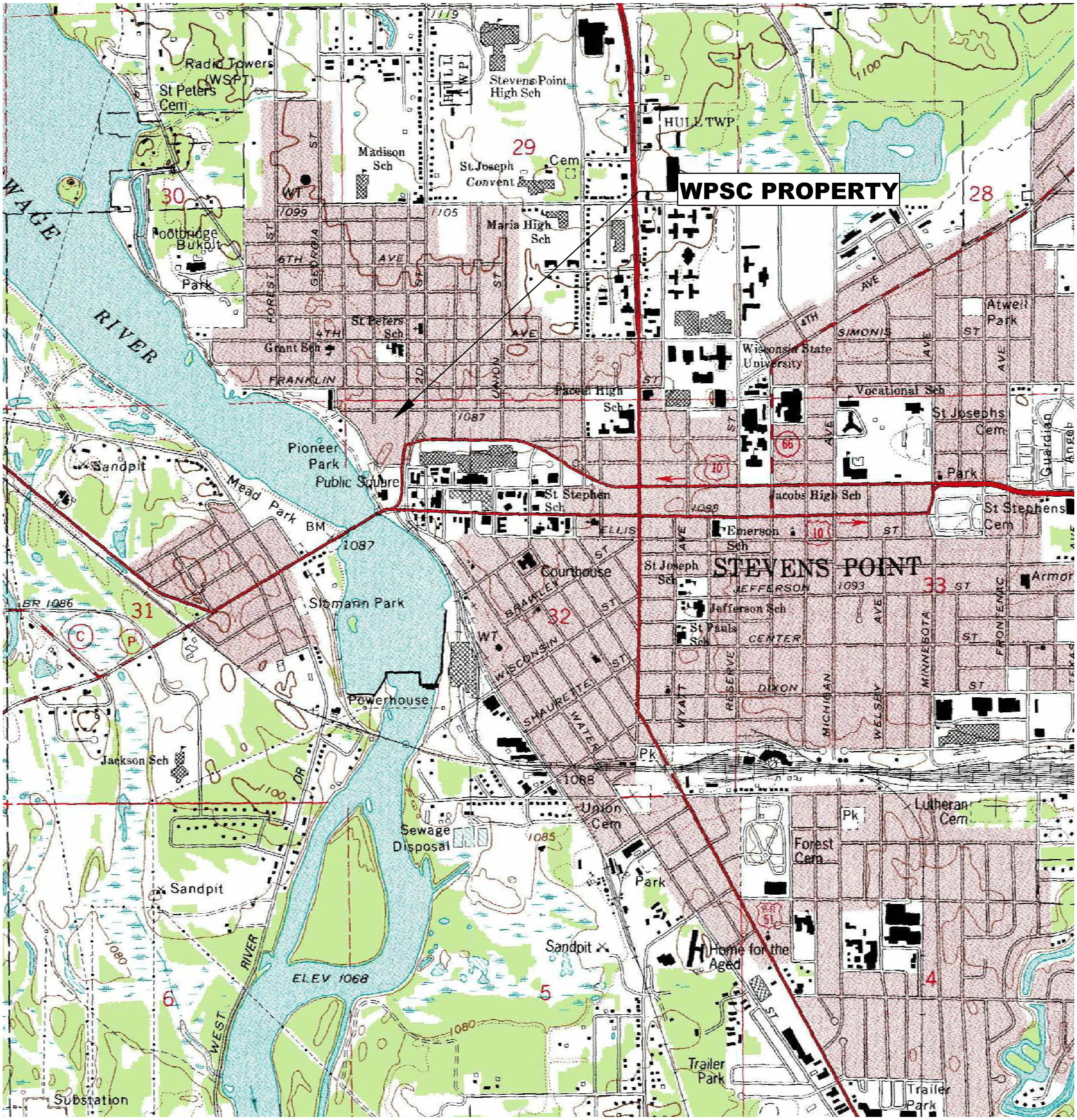
2011 December 23. Natural Resource Technology, Inc. Feasibility Study Report – Revision 2, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

2012 February 2. United States Environmental Protection Agency, Comments on Revision 2 of the Remedial Investigation and Feasibility Study Reports, submitted in December 2011, WPSC Former Manufactured Gas Plant Superfund Site, Stevens Point, Wisconsin, CERCLA Docket No. V-W-06-C-8472011

2012 March 2. United States Environmental Protection Agency, Additional Comments on Revision 2 of the Remedial Investigation and Feasibility Study Reports, submitted in December 2011, WPSC Former Manufactured Gas Plant Superfund Site, Stevens Point, Wisconsin, CERCLA Docket No. V-W-06-C-8472011

2012 April 17. Natural Resource Technology, Inc. Remedial Investigation Report – Revision 3, Former Manufactured Gas Plant, Stevens Point, USEPA# WIN000509983, NRT Project No. 1177.

FIGURES



SOURCE: DIGITAL DOWNLOAD FROM http://STORE.USGS.GOV.
USGS 7.5 MINUTE QUADRANGLE, STEVENS POINT, WIS.
DATED 1970. REVISED 1991.

QUADRANGLE LOCATION

N

0 2000 4000

SCALE IN FEET

CONTOUR INTERVAL 10 FEET

NATURAL RESOURCE TECHNOLOGY

LOCATION MAP

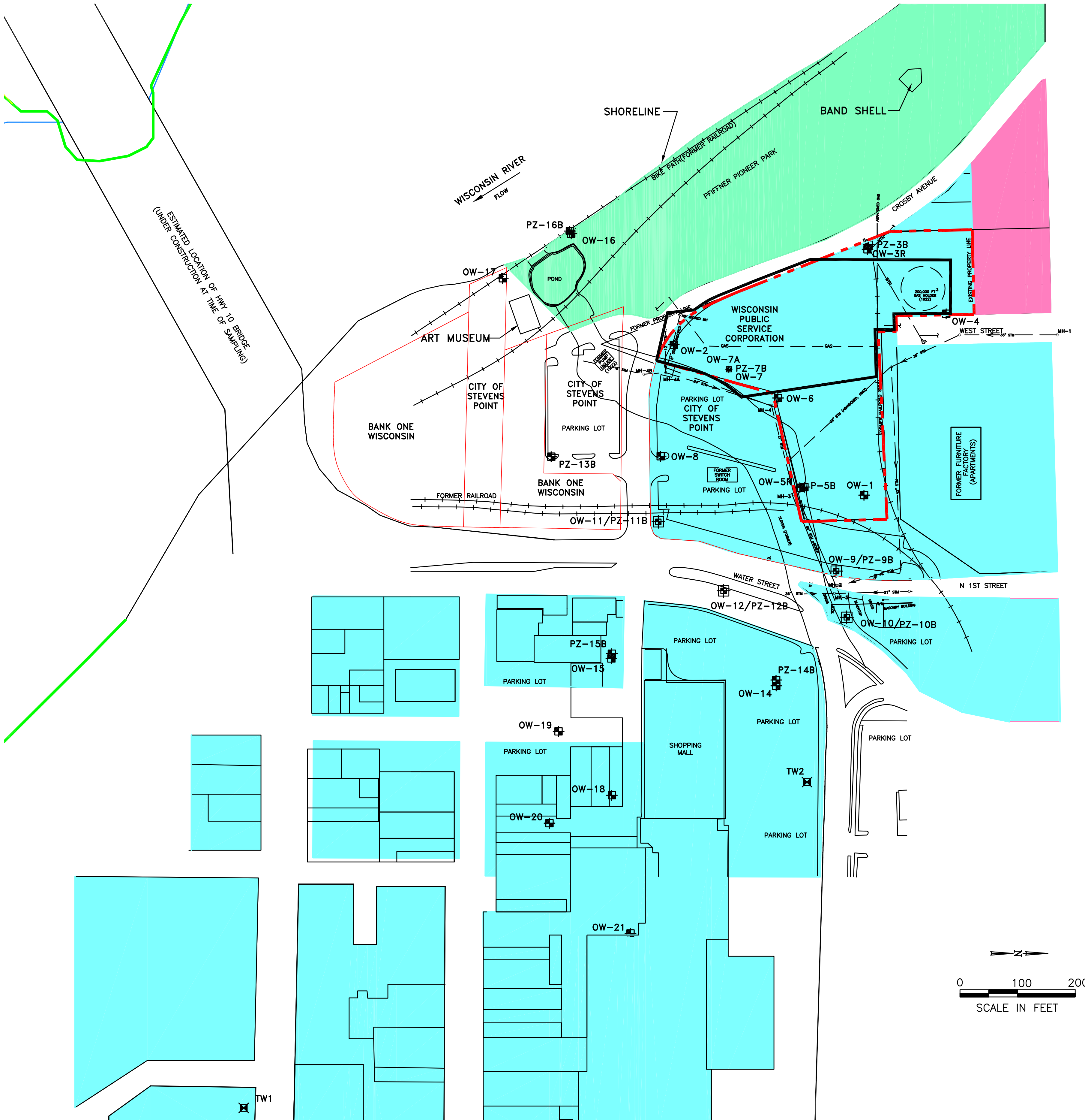
WPSC
FORMER STEVENS POINT MGP SITE
STEVENS POINT, WISCONSIN

DRAWN BY: RLH 05/28/08 APP'D BY: JMK DATE: 05/28/08

PROJECT NO. 1177

DRAWING NO. 1177-A01

FIGURE NO. 1



LEGEND

OW-1	WATER TABLE OBSERVATION WELL
P-5B	PIEZOMETER
OW-9 /PZ-9B	WATER TABLE/PIEZOMETER WELL NEST
TW1	TEMPORARY WELL
	COMMERCIAL/CENTRAL BUSINESS/LIGHT INDUSTRIAL
	CONSERVANCY
	RESIDENTIAL
	APPROXIMATE PARCEL BOUNDARIES AND PARCEL OWNER
	APPROXIMATE CURRENT WPSC PROPERTY BOUNDARY
	APPROXIMATE FORMER FACILITY EXTENT
MH-1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
WTR	WATER LINE
GAS	GAS LINE
STM	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

NOTES:

1) SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

2) APPROXIMATE PARCEL BOUNDARIES WERE DEVELOPED FROM A MAP PROVIDED BY PORTAGE COUNTY PLANNING AND ZONING DEPARTMENT.

SOURCE NOTES:

THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.

A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.

A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321

TW-1 AND TW-2 SURVEYED BY WPSC ON DECEMBER 1, 2008.

OW-18 THROUGH OW-21 SURVEYED BY WPSC ON MARCH 1, 2011.

DRAWN BY: KNW DATE: 05/05/11
CHECKED BY: HMS DATE: 05/27/11
APPROVED BY: HMS DATE: 05/27/11
DRAWING NO: 1177-152-B01C
REFERENCE: NONE

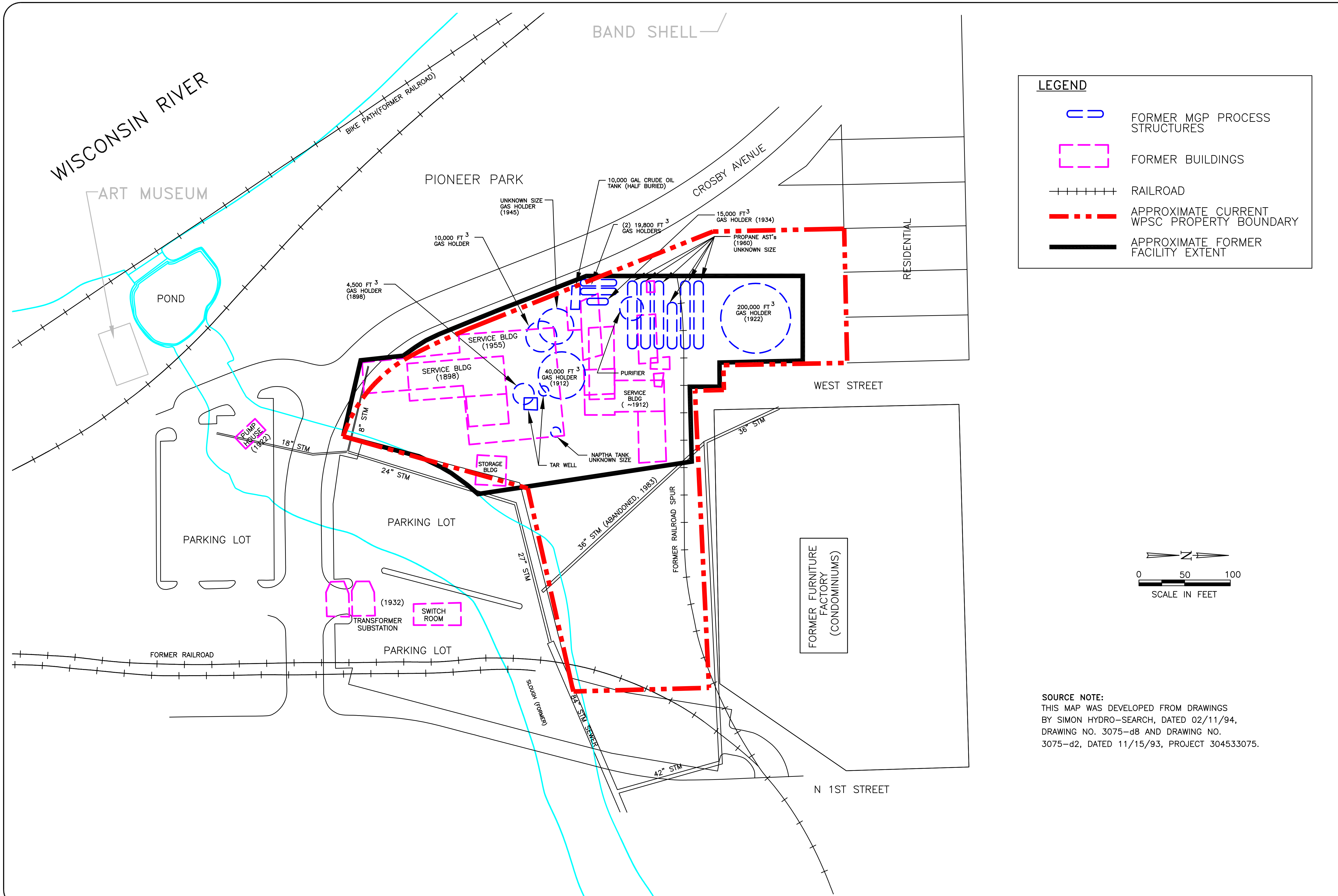
CURRENT SITE LAYOUT AND VICINITY

FEASIBILITY STUDY REPORT (REVISION 1)
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURE GAS PLANT, STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/15.2

FIGURE NO. 2



SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075.

DRAWN BY: HMS	DATE: 12/22/08
CHECKED BY: HMS	DATE: 12/22/08
APPROVED BY: JMK	DATE: 01/02/09

DRAWING NO: 1177-15-B13C
REFERENCE: NONE

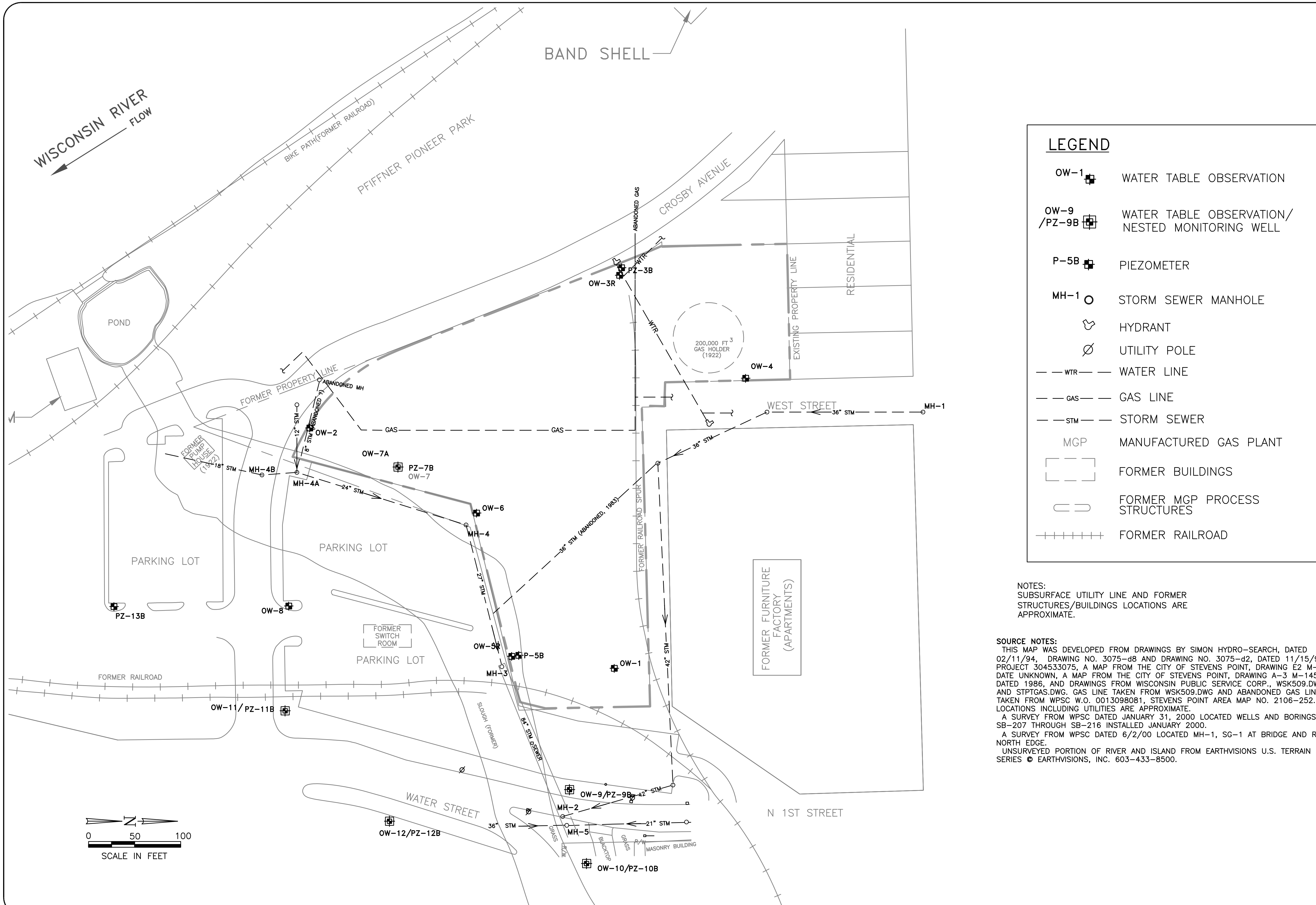
FORMER MGP STRUCTURE LOCATIONS

FEASIBILITY STUDY REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURE GAS PLANT, STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/15

FIGURE NO.
3



NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTES:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

DRAWN BY: HMS	DATE: 12/22/08
CHECKED BY: HMS	DATE: 12/22/08
APPROVED BY: JMK	DATE: 01/02/09
DRAWING NO: 1177-15-B14	
REFERENCE: NONE	

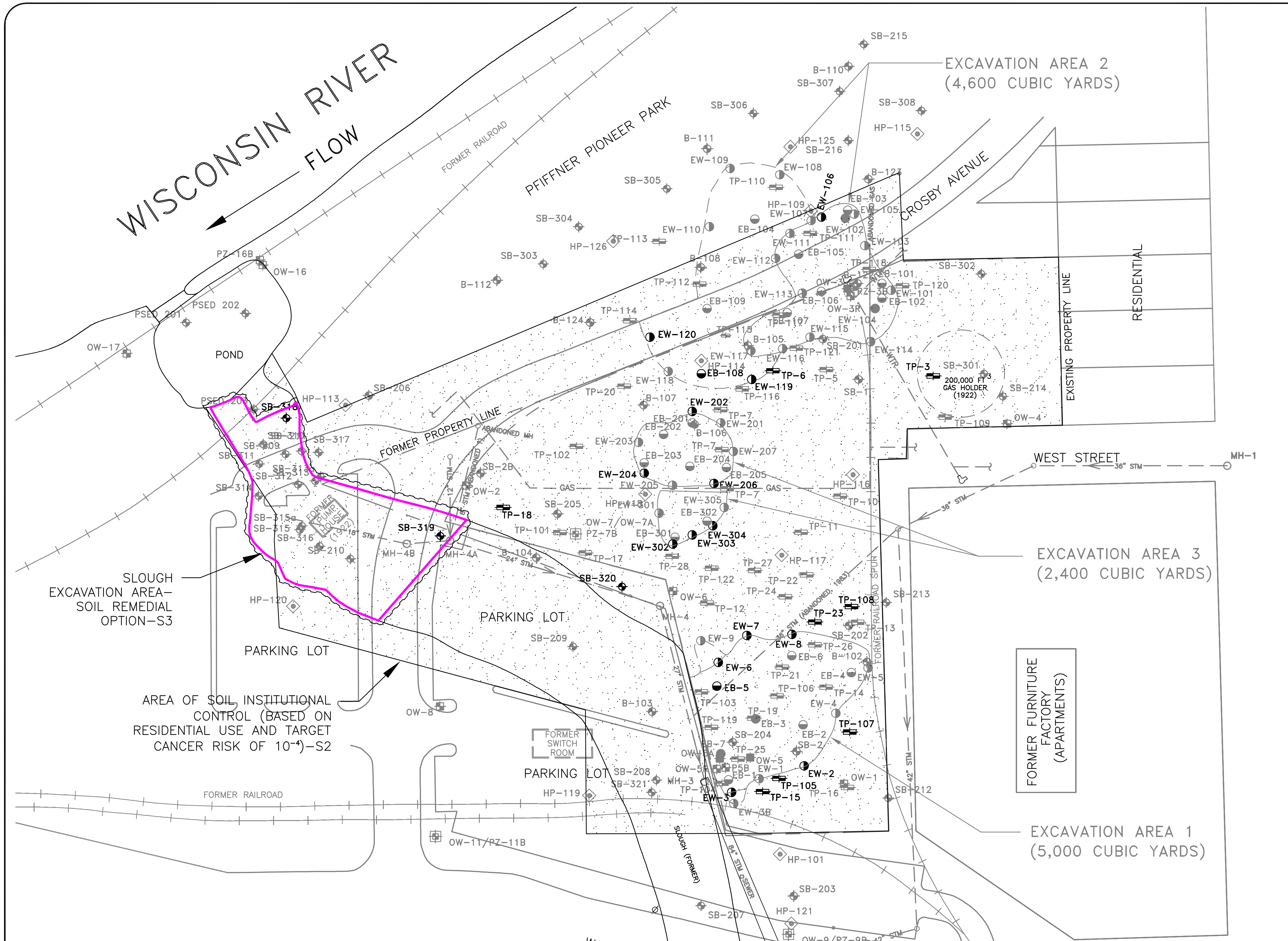
UNDERGROUND UTILITIES

FEASIBILITY STUDY REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURED GAS PLANT, STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/15

FIGURE NO.
4



SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO–SEARCH, DATED 02/11/94, DRAWING NO. 3075–d8 AND DRAWING NO. 3075–d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M–1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A–3 M–1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106–252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB–207 THROUGH SB–216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH–1, SG–1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 6/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603–433–8500.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

N
0 50 100
SCALE IN FEET

LEGEND

SB–207	SOIL BORING (NRT)
OW–1	INVESTIGATION WELL
P5B	BEDROCK WELL
OW–9/ PZ–9B	NESTED MONITORING WELL/ BEDROCK WELL
	DEEP EXCAVATION (AVERAGE DEPTH IS 9–10 FEET)
	SHALLOW EXCAVATION (AVERAGE DEPTH IS 2 FEET)
HP–120	HYDRO–PUNCH
EB–1	EXCAVATION BASE SAMPLE
EB–3	SOIL SAMPLE WHICH WAS EXCAVATED
EW–1	EXCAVATION WALL SAMPLE
OW–3	ABANDONED INVESTIGATION WELL
SB–206	SOIL BORING (HISTORICAL NRT)
B–124 SB–1	BOREHOLE
TP–3	TEST PIT
MH–1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
	LIMIT OF EXCAVATION
	SHEET PILE WALL
— — WTR — —	WATER LINE
— — GAS — —	GAS LINE
— — STM — —	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD
	INSTITUTIONAL CONTROL FOR SOIL

NOTE: BOLD SAMPLE LOCATIONS INDICATE SOIL CONCENTRATIONS EXCEED THE TARGET CANCER RISK OF 10^{-4} FOR RESIDENTIAL USE.

SOIL REMEDIAL OPTIONS:
S1 – NO ACTION
S2 – INSTITUTIONAL CONTROLS
S3 – LIMITED EXCAVATION AND OFF–SITE DISPOSAL (FROM FORMER SLOUGH AREA)

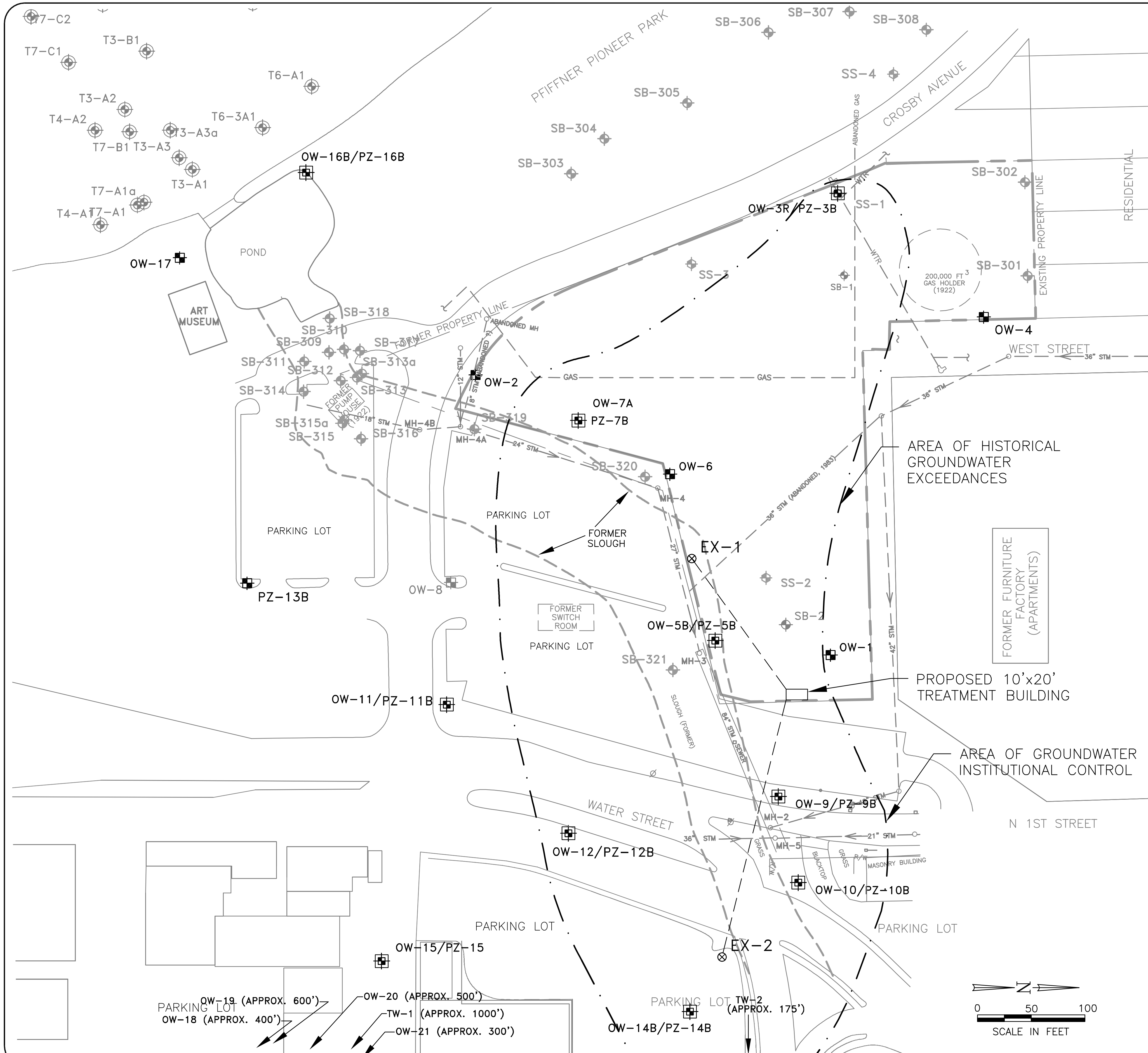
DRAWN BY: RLH DATE: 12/21/11
CHECKED BY: JMK DATE: 12/21/11
APPROVED BY: JMK DATE: 12/22/11
DRAWING NO: 1177–153–B05
REFERENCE: .

REMEDIAL OPTIONS–SOIL
FEASIBILITY STUDY REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURED GAS PLANT
STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/15.3

FIGURE NO.
5



LEGEND

- PZ-14B / OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- TW2 — TEMPORARY WELL
- OW-1 — WATER TABLE OBSERVATION WELL
- OW-8 — OW-8 WATER TABLE OBSERVATION WELL NOT SCHEDULED FOR SAMPLING
- OW-9 /PZ-9B — WATER TABLE OBSERVATION WELL
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- T4-B1 — SEDIMENT SAMPLE
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- STRUCTURES FORMER MGP PROCESS

GROUNDWATER REMEDIAL OPTION G4

- EX-1 — PROPOSED GROUNDWATER EXTRACTION WELL
- PROPOSED GROUNDWATER CONVEYANCE PIPING

GROUNDWATER REMEDIAL OPTIONS:

G1 – NO ACTION

G2 – MONITORED NATURAL ATTENUATION

G3 – GROUNDWATER EXTRACTION, EX-SITU TREATMENT AND DISCHARGE TO PUBLIC WASTEWATER TREATMENT PLANT

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG, AND A DIGITAL FILE DOWNLOADED FROM www.gisinfo.co.portage.wi.us, ON 12/17/08. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: RLH	DATE: 12/21/11
CHECKED BY: JMK	DATE: 12/21/11
APPROVED BY: JMK	DATE: 12/22/11
DRAWING NO: 1177-153-B06	REFERENCE: NONE

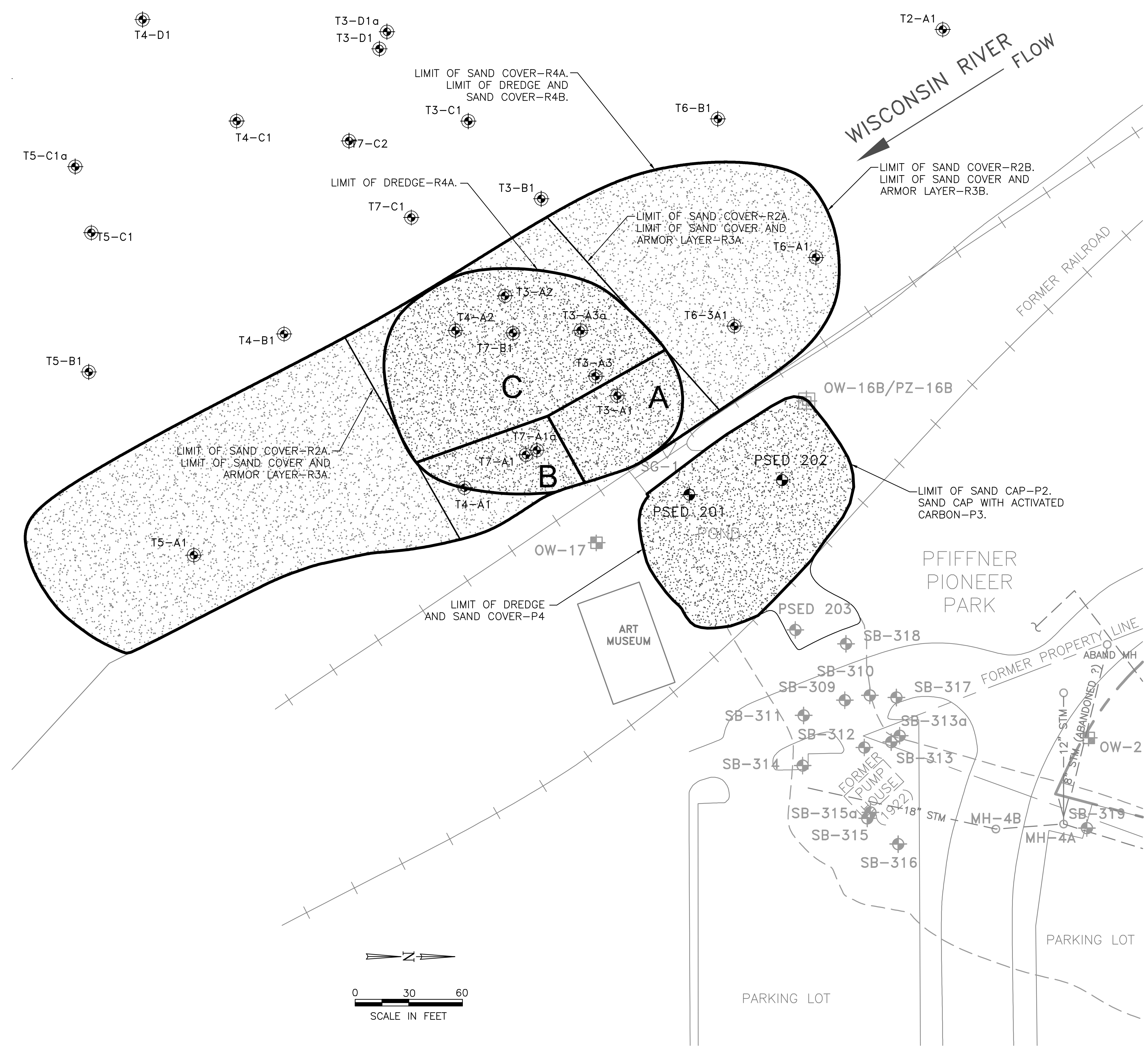
REMEDIAL OPTIONS–GROUNDWATER

FEASIBILITY STUDY REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURED GAS PLANT
STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/15.3

FIGURE NO.
6



OW-17	WELL LOCATION (2007)
SB-308	SOIL BORING (2007)
OW-2	WATER TABLE OBSERVATION WELL
OW-16B /PZ-16B	WATER TABLE OBSERVATION WELL NEST
T4-B1	SEDIMENT SAMPLE
MH-1	STORM SEWER MANHOLE
	LIMIT OF SAND COVER
	LIMIT OF DREDGING AND SAND COVER
STM	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD
	SEDIMENT CONCENTRATIONS ABOVE THE PROBABLE EFFECTS CONCENTRATION (PEC)
	SEDIMENT CONCENTRATION BELOW THE PEC AND ABOVE THE THRESHOLD EFFECTS CONCENTRATION (TEC)

RIVER REMEDIAL OPTIONS:

R1 – NO ACTION

R2A – PLACEMENT OF SAND COVER (>PEC)
R3A – PLACEMENT OF SAND COVER AND ARMOR LAYER (>PEC)
R4A – DREDGE (>PEC) AND SAND COVER (>TEC)

R2B – PLACEMENT OF SAND COVER (>TEC)
R3B – PLACEMENT OF SAND COVER AND ARMOR LAYER (>TEC)
R4B – DREDGE AND SAND COVER (>TEC)

POND REMEDIAL OPTIONS:

P1 – NO ACTION
P2 – PLACEMENT OF SAND CAP
P3 – PLACEMENT OF SAND CAP AND ACTIVATED CARBON
P4 – DREDGE AND SAND COVER

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG, AND A DIGITAL FILE DOWNLOADED FROM www.gisinfo.co.portage.wi.us, ON 12/17/08. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
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NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

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CHECKED BY: HMS DATE: 04/11/12
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DRAWING NO: 1177-154-B07
REFERENCE: NONE

REMEDIAL OPTIONS – SEDIMENT

FEASIBILITY STUDY REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURED GAS PLANT
STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/15.4

FIGURE NO.
7

Apr 17, 2012 8:41am PLOTTED BY: ndraskovich SAVED BY: ndraskovich
Y:\ACAData\Projects\11\1177\STPT\15-4\1177-154-B07.dwg LAYOUT 1
IMAGES:
XREFS:

TABLES

Table 1 - Preliminary ARARs and TBCs
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Chemical-Specific ARARs/TBC

STANDARD, REQUIREMENT, CRITERIA, LIMITATION	CITATION	MEDIA	POTENTIAL ARAR / TBC	REQUIREMENT/COMMENTS
WISCONSIN				
Groundwater Quality Standards	Wis. Admin. Code (WAC) ch. NR 140	Groundwater	ARAR	Establishes groundwater quality standards; NR 140 enforcement standards equivalent to federal Safe Drinking Water Act maximum contaminant levels (MCL)
Soil cleanup standards	WAC chs. 720 and 722	Soil	ARAR	Includes generic, site specific, and performance-based soil cleanup standards; protects against groundwater contamination and direct contact exposure
Hazardous Waste	WAC chs. NR 660-679	Hazardous Waste	ARAR	Applies generally to the treatment, storage and disposal of identified hazardous wastes
Air Quality Standards	Wis Stat. ch. 285; WAC chs. NR 404, 415, 419, 431, 440, 445.	Air	ARAR	Establishes air pollution control standards for removal, treatment and disposal of contaminated sediments and surface water; includes control of dust or emissions from treatment systems, grading or other earth work
Control of Organic Compound Emissions	WAC § NR 419.07	Air	ARAR	Applies to all facilities and procedures used to remediate or dispose of soil or water contaminated with organic compounds which are direct air contaminant sources to their owners and operators.
Sediment Quality	WAC chs. NR 105 – 106; WDNR Guidance Document: "Assessing Sediment Quality in Water Bodies Associated with Manufactured Gas Plant Sites" (WDNR PUBL-WR-447-96, March 1996)	Sediment	To Be Considered (TBC)	DNR guidance document provides framework for investigating potential sediment contamination at MGP sites
Surface Water Quality Standards	Wis. Stats. ch. 281; WAC chs. NR 102-105, 207	Sediment	TBC	WQS applies to surface water; with respect to sediment, a TBC (WQS applicable to point source discharges are addressed as Action-specific ARARs)
FEDERAL				
Resource Conservation and Recovery Act (RCRA)	40 C.F.R. § 260 et seq. – waste characterization and handling requirement Land disposal restrictions (40 C.F.R. § 268)	Hazardous Wastes	ARAR	Establishes standard for hazardous waste characterization, storage, treatment and disposal; removed materials may be subject to RCRA requirements if a hazardous waste
Clean Air Act (CAA)	Air Quality Standards (40 C.F.R. § 50)	Air	ARAR	Establishes federal standards for various pollutants from mobile construction/ remediation sources
Clean Water Act (CWA) (Section 304)	Water quality standards (40 C.F.R.. § 131) Discharge of dredge/fill material (33 C.F.R. § 323) Federal Total Maximum Daily Loads (TMDLs) for impaired waters (40 C.F.R. § 130.7)	Surface Water	TBC	Federal WQS are ARARs for point source discharges where state has not adopted standards. Federal WQS are TBC for Wisconsin as Wisconsin has adopted WQS applicable to point source discharges from remedial action.

Table 1 - Preliminary ARARs and TBCs
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
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USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Location-Specific ARARs/TBC

STANDARD, REQUIREMENT, CRITERIA, LIMITATION	CITATION	MEDIA	POTENTIAL ARAR / TBC	REQUIREMENT/COMMENTS
		WISCONSIN		
Water Quality Standards for Wetlands	Water Quality Standards for Wetlands (WAC ch. NR 103)	Wetlands	**ARAR**	Establishes water quality standards for wetlands; applicable to all determinations that affect wetlands
		FEDERAL		
National Environmental Policy Act (NEPA)	Floodplain Management Executive Order 11988 (40 C.F.R. Part 6, App. A)	Floodplains	ARAR	Regulates construction in floodplains and evaluates adverse effects associated with direct/indirect development of floodplains
CWA and NEPA	Wetlands: Permits for Dredge and Fill (CWA Section 404; 33 C.F.R. Part 330); Protection of Wetlands Executive Order 11990 (40 C.F.R. Part 6, App. A)	Wetlands	ARAR	Regulates construction/remediation in wetlands; requires that no activity that adversely affects a wetlands shall be permitted if a practicable alternative that has less effect is available
Fish and Wildlife Coordination Act	16 U.S.C. §§661-667e	Surface water body modification; endangered species; migratory species	ARAR	Requires coordination/consultation with Federal and State agencies to provide protection of fish and wildlife from actions that affect species and habitat; requires consultation with U.S. Fish and Wildlife Service prior to water body modification
Endangered Species Act (ESA)	Species/habitat protection (50 C.F.R. Parts 17 and 402)	Endangered/ threatened species and habitat	ARAR	Only relevant if threatened and/or endangered species are present in vicinity of site
Wild and Scenic Rivers Act	Waterway protection (36 C.F.R. § Part 297)	Rivers	ARAR	Establishes requirements to protect wild, scenic, or recreational rivers

Table 1 - Preliminary ARARs and TBCs
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
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Action-Specific ARARs

STANDARD, REQUIREMENT, CRITERIA, LIMITATION	CITATION	MEDIA	POTENTIAL ARAR / TBC	REQUIREMENT/COMMENTS
WISCONSIN				
Water Quality Standards (WQS)	Wis. Stats. ch. 281; WAC chs. NR 102-105	Surface Waters	ARAR	Surface WQS are applicable only to point source discharges that may be part of a remedial action.
Water Quality Analytical Test Methods	WAC ch. NR 219	Surface Waters	ARAR	Establishes analytical test methods applicable to effluent limitations for discharges from point sources.
Miscellaneous Structures in Navigable Waters	Wis. Stats. ch. 30; WAC ch. NR 329	Surface waters; sediment	ARAR	Minimize adverse effects of structures in waterways; requires permits for structures placed on, and/or dredging of, the beds of navigable waters.
Wisconsin Pollutant Discharge Elimination System (WPDES)	Wis. Stat. ch. 283; WAC chs. NR 102, 104, 105, 106, 200, 207, 219, 220	Surface Waters	ARAR	Requires compliance with permit limitations for discharge to navigable waters (including water quality effluent limits, water quality standards, state performance standards and toxic and pretreatment effluent standards) for actions involving discharges of effluent associated with dredging operations.
Dredging Requirements	Wis. Stat. § 30.20; WAC chs. 345-47	Surface waters; sediment	ARAR (if dredging)	For specific types of dredging projects, establishes sediment sampling and analysis requirements, evaluation criteria for dredging sites and disposal sites, and monitoring requirements for dredging projects regulated by the State for the removal, transport and disposal of sediments
Solid Waste Management	Wis. Stats. ch. 289; WAC chs. NR 500-590	Solid waste	ARAR	Establishes storage, transportation and disposal requirements for managing solid waste
Hazardous Waste Management	Wis. Stat. ch. 291; WAC chs. NR 661, 662, 664	Hazardous Waste	ARAR	Applicable to wastes generated on-site during remedial action; identification and listing of hazardous waste; specifies requirements that apply to small quantity generators of hazardous waste; specifies general requirements that apply to the storage, treatment and disposal of hazardous waste
Hazardous Substance Discharge	WAC ch. NR 706	Hazardous Substances	ARAR	Notification procedures and responsibilities for discharger of hazardous substances that may occur during remedial work, including containment, cleanup, disposal and restoration
Groundwater Protection Standards	Groundwater Monitoring Well Requirements (WAC ch. NR 141)	Groundwater	ARAR	Provides standards for design, construction, installation, abandonment and documentation of groundwater monitoring wells
Endangered and Threatened Species protection	Wis. Stats. ch. 29.604; WAC ch. 27	Endangered/threatened species	ARAR	Applies only if threatened or endangered species exist at or in certain areas around site; establishes requirements for minimizing affects on such species
Soil Cleanup Requirements	WAC ch. NR 720	Soil	ARAR	(See above) Specifies soil criteria to be used in conjunction with remedial actions

Table 1 - Preliminary ARARs and TBCs
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
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Action-Specific ARARs

STANDARD, REQUIREMENT, CRITERIA, LIMITATION	CITATION	MEDIA	POTENTIAL ARAR / TBC	REQUIREMENT/COMMENTS
FEDERAL				
CWA	National Pollutant Discharge Elimination System (NPDES) (40 C.F.R. §§ 122 and 125)	Surface waters	ARAR	Relevant for any wastewater discharge of treated groundwater to surface water body during course of remediation; establishes criteria and standards for imposing treatment requirements in permits.
CWA (Section 304)	Ambient Water Quality Criteria (40 C.F.R. Part 130)	Surface waters	ARAR	Ambient Water Quality Criteria for the protection of aquatic life and human health developed for discharging treated water to a navigable waterway
CWA	NPDES (40 C.F.R. Part 403)	Publicly Owned Treatment Works (POTW)	ARAR	Relevant to discharge of treated groundwater to POTW; establishes standards and requirements for discharge to a POTW
RCRA	Hazardous Waste Management System – General (40 C.F.R. Part 260) and Identification and Listing of Hazardous Waste (40 C.F.R. Part 261)	Offsite land disposal hazardous waste	ARAR	Identifies solid wastes subject to regulation as hazardous wastes and provides general standards for handling and disposal of hazardous wastes
RCRA	Standards for Hazardous Waste Generators (40 C.F.R. Part 262) and Hazardous Waste Transporters (40 C.F.R. Part 263)	Offsite land disposal hazardous waste	ARAR	General requirements for packaging, labeling, marking, and manifesting RCRA hazardous wastes for temporary storage and transportation offsite
RCRA	Land Disposal Restriction (40 C.F.R. Part 268)	Offsite land disposal hazardous waste	ARAR	Identifies hazardous wastes that are restricted from land disposal
RCRA	Municipal Solid Waste Landfills (40 C.F.R. Part 258)	Offsite land disposal non-hazardous waste	ARAR	Applicable to remedial actions that involve generation of non-hazardous waste; minimum national criteria for management of non-hazardous waste
U.S. Department of Transportation	Hazardous Waste Transport (49 C.F.R. Parts 107, 171 and 172)	Offsite land disposal hazardous waste	ARAR	Applies to transportation, packaging and labeling of hazardous materials on public roadways
Rivers and Harbors Act, Section 10	33 C.F.R. Parts 320-323	Navigable waterway	ARAR	Applicable to site capping activities on sediment or navigable waterway; prohibits unauthorized obstruction or alteration of any navigable waterway or activities that could impede navigation and commerce

Table 2 - General Response Actions
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

General Response Action	Remedial Technology	Process Option: Soil	Process Option: Groundwater	Process Option: Sediment
No Action	None	• None	• None	• None
Institutional Controls	Access and Use Restrictions	• Zoning Restrictions • Deed Covenants • Fencing/Signs	• Zoning Restrictions • Deed Covenants • Groundwater Use Restrictions	• Dredging Restrictions • Direct Contact and Anchoring Restrictions • Signs
	Environmental Monitoring	• None	• Groundwater Monitoring	• Sediment Monitoring
Containment	Barriers	• Soil Cover • Engineered Cover	• Hydraulic Containment • Vertical Barrier	• Capping
In-Situ Treatment	Physical	• Multi-phase Extraction • Solidification/Stabilization	• Air Sparging • Permeable Reactive Barrier • Multi-phase Extraction	• None
	Chemical	• Chemical Oxidation	• Chemical Oxidation	• None
	Thermal	• In-situ Heated Soil Vapor Extr	• None	• None
	Biological	• Bioventing • Phytoremediation • Enhanced In-situ Biodegradation	• Monitored Natural Attenuation • Phytoremediation • Enhanced In-situ Biodegradation	• Monitored Natural Recovery
Collection/Exctraction/Removal	Removal	• Excavation	• Interceptor Trenches • Extraction Wells	• Dredging
Ex-situ Treatment	Physical/Chemical	• None	• Activated Carbon • Air Stripping • Chemical/UV Oxidation • Separation	• None
	Thermal	• Thermal Desorption	• None	• None
	Biological	• Biopiles • Landfarming	• Bioreactors	• Landfarming
Discharge/Disposal	On-site	• Return to Excavation • Consolidation	• Reinjection • Discharge to Surface Water	• Water from dewatered sediment treated in on-site water treatment system and discharged to surface water
	Off-site	• Landfilling	• Publicly Owned Treatment Works	• Landfilling

= Process option elimiated

Table 3 - Description of Potential Process Options
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

General Response Action and Remedial Technology	Description of Process Option	Effectiveness	Implementability	Relative Cost	Status for Remedial Alternative Assembly
Soil					
No Action - None	◆ No action taken to reduce or monitor site risks.	◆ No added risk during short term ◆ Not proven or reliable	◆ Easy implementation	Low	Retained
Institutional Controls - Access and Use Restrictions	◆ Zoning Restrictions: Through community zoning ordinances, restrict land use within a given area.	◆ Could be conducted to address properties within entire impacted area ◆ Minimal potential short term exposure risk ◆ Administratively effective and reliable	◆ Require approval by third-party property owners, if any ◆ Administratively implementable assuming property owner approval	Low	Retained
	◆ Deed Covenants: With legal instruments of property transfer (e.g., deeds, easements, mortgages, leases), limiting activities that would increase risk, and mange further development.	◆ Could be written and filed to address real estate within entire impacted area ◆ Minimal potential short term exposure risk ◆ Administratively effective and reliable	◆ Require approval by third-party property owners, if any ◆ Administratively implementable assuming property owner approval	Low	Retained
	◆ Fencing/Signs: Controls that are installed to prevent access and/or warn of the presence of site-related contaminants.	◆ Could be configured to address entire impacted area ◆ Minimal potential short term exposure risk ◆ Effective and reliable in reducing direct exposure risk; ineffective for addressing COC in vadose zone soils from leaching to groundwater	◆ Requires approval by third-party property owners, if any ◆ Easy implementation ◆ Administratively implementable assuming property owner approval	Low	Retained
Collection/Extraction/ Removal	◆ Excavation: Contaminated soils are excavated followed by on-site or off-site treatment and/or disposal.	◆ Effective at reducing direct exposure risk and leaching of COCs from soil to groundwater ◆ Combine with another process option to be effective ◆ Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures) ◆ Require engineering, erosion and access controls during construction for managing fugitive emissions, sediment, and public access	◆ Shoring may be required based on geotechnical evaluation and/or excavation areas adjacent to infrastructures ◆ Require dewatering of excavations and treatment of generated wastewater ◆ Limited by underground utilities, structures and depth of contamination	Moderate	Retained
Ex-situ Treatment	◆ Thermal Desorption: Excavated soil is processed through a thermal-desorption unit that uses indirect or direct heat exchange to vaporize organic contaminants and water. Thermal desorption generally heats the soil up to 1200°F, and off-gases are captured and thermally destroyed in an oxidizer at temperatures up to 2000°F.	◆ Combined with excavation; limited by the volume of contaminated soil excavated ◆ Effective at reducing VOCs and PAHs concentrations; proven at other MGP sites ◆ BTU, moisture content and sulfur could limit the effectiveness of treatment ◆ Thermal treated soil could be beneficially reused as backfill ◆ Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures) ◆ Require engineering, erosion and access controls during construction for managing fugitive emissions, sediment, and public access	◆ Air permitting and monitoring are required ◆ Soil requires processing prior to treatment ◆ Limited qualified contractors and equipment ◆ Limited to availability of space	Moderate to High	Eliminated (high moisture content limit effectiveness)
	◆ Biopiles: Excavated soils are mixed with soil amendments and placed in aboveground enclosures. It is an aerated static pile composting process in which compost is formed into piles and aerated with blowers or vacuum pumps.	◆ Effective at treating nonhalogenated VOCs and fuel hydrocarbons, but effectiveness vary in treating halogenated VOCs and SVOCs ◆ High potential to require an air treatment system ◆ Require air distribution system buried under the soil ◆ Require engineering, erosion and access controls for managing fugitive emissions, sediment, and public access	◆ Limited to availability of space ◆ Topography, erosion, climate, and soil type and permeability at the site dependant on implementability ◆ Require permitting ◆ Treatability and pilot testing is required	Moderate to High	Eliminated (difficult to implement)
	◆ Landfarming: Contaminated soil, sediment, or sludge is excavated, applied into lined beds, and periodically turned over or tilled to aerate the waste to promote volatilization of VOCs from media and to enhance biodegradation.	◆ Effective at treating highly volatile hydrocarbons ◆ Marginally effective at treating PAHs ◆ Potential for causing air pollution; therefore may require air treatment ◆ Require engineering, erosion and access controls for managing fugitive emissions, sediment, and public access ◆ Require a runoff collection facility, and possibly require treatment	◆ Limited to availability of space ◆ Topography, erosion, climate, and soil type and permeability at the site dependant on implementability ◆ Require permitting ◆ Pilot testing would be required	Low to Moderate	Eliminated (difficult to implement; marginally effective with PAHs)
Discharge/Disposal - Off-site	◆ Landfilling: Treated or untreated soils are disposed of at an off-site state licensed landfill.	◆ Combined with excavation; thereby limited to the volume of contaminated soil excavated ◆ Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures) ◆ Effective at reducing direct exposure risk and leaching of COCs from soil to groundwater	◆ Transportation of the soil through populate areas may affect community acceptance due to noise, potential accidents, and use of carbon-based fuels. ◆ Limited by disposal facility availability and approval	Moderate	Retained

Table 3 - Description of Potential Process Options
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

General Response Action and Remedial Technology	Description of Process Option	Effectiveness	Implementability	Relative Cost	Status for Remedial Alternative Assembly
Groundwater					
No Action - None	• No action taken to reduce or monitor site risks.	• No added risk during short term • Not proven or reliable	• Easy implementation	Low	Retained
Institutional Controls - Access and Use Restrictions	• Groundwater Use Restrictions: Through community ordinance, require a permit for installation of groundwater wells and prohibit installation of new wells within the institutional control zone.	• Could be conducted to address properties within entire impacted area • Minimal potential short term exposure risk • Administratively effective and reliable; relies on local government action to establish, enforce and restrict	• Require approval by third-party property owners, if any • Administratively implementable assuming property owner approval	Low	Retained
	• Deed Covenants: With legal instruments of property transfer (e.g., deeds, easements, mortgages, leases), prohibit installation and use of groundwater wells for potable and/or non-potable purposes, and mange further development.	• Could be written and filed to address real estate within entire impacted area • Minimal potential short term exposure risk • Administratively effective and reliable	• Require approval by third-party property owners, if any • Administratively implementable assuming property owner approval	Low	Retained
Institutional Controls - Environmental Monitoring	• Groundwater Monitoring: Perform water quality analysis to monitor contaminant concentrations over time and to assess future environmental effects and compliance with remedial action objectives.	• Minimal potential short term exposure • Could be combined with other process option to be more effective	• Easy implementation	Low	Retained
Containment - Barriers	• Hydraulic Containment: Isolate contamination by restricting or capturing groundwater flow from the contamination zone through the use of extraction wells or trenches.	• Groundwater treatment system required; operation and maintenance required • Less effective in-situ remedial solution without combined with another process option • DNAPL is difficult to extract from the subsurface • Heterogeneous conditions and low permeabilities in the subsurface can limit effectiveness	• Implementability would be difficult with presence of extensive amounts of debris and subsurface structures • Treatment process may not be available for treating some constituents (i.e. inorganics)	Low to Moderate	Retained
	• Vertical Barrier: Containment of contaminated groundwater using vertical barrier walls (i.e. frozen soil barriers, slurry wall barriers, sheet piling, jet grouting etc.). Purpose of containment would be to limit exposure to sensitive receptors) (i.e. surface water and groundwater exposure pathways). The bottom of wall typically keyed into a low permeability layer.	• Could effectively contain impacted groundwater > 30 years • Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures) • Significant quantities of DNAPL could limit effectiveness of jet grouting barriers • Absence of an aquitard at depth limits long term effectiveness	• Geotechnical evaluation of containment area would be necessary for design and construction • Additional potential implementability constraints depending on type of barrier used • Site-specific space restrictions could inhibit implementability • Implementability would be difficult with presence of extensive amounts of debris and subsurface structures • Treatability and/or pilot testing would be required depending on selected vertical barrier wall technology	Moderate to High	Eliminated (bedrock inadequate as an aquitard; weathered, ungulate, and not competent)
In-situ Treatment	• Air Sparging: Removes VOCs and high-vapor pressure SVOCs from groundwater and saturated soil by forcing air into the saturated zone and inducing air flow through the soil matrix. Typically combined with soil vapor extraction to collect contaminated vapor prior to reaching the ground surface.	• Effective at treating VOCs, but less effective for SVOCs • Less effective where DNAPL present • Could be combined with another process option (i.e. soil vapor extraction) to be more effective • Heterogeneous conditions and low permeabilities in the subsurface could limit effectiveness • Controlling spread of contamination could limit technology effectiveness.	• Pilot testing is required • Permit is required • Implementability would be difficult with presence of extensive amounts of debris and subsurface structures, or low permeability soil	Low to Moderate	Eliminated (less effective on SVOCs)
	• Permeable Reactive Barrier : This technology would remediate groundwater affected by MGP residuals by actively or passively treating GW as it passes through a permeable treatment wall. Walls can be designed with reactive media appropriate for treatment of site-specific constituents present in the groundwater - can be designed as a continuous treatment wall or with a "funnel and gate" design.	• Deep contamination and fluctuating hydraulic gradients could limit effectiveness • Potentially ineffective on treating/removing DNAPL • Absence of an aquitard at depth limits long term effectiveness	• Treatability and pilot testing would be required • Permit may be required	Moderate to High	Eliminated (bedrock inadequate as an aquitard; weathered, ungulate, and not competent)
	• Multi-phase Extraction (MPE): MPE is an enhancement of the traditional SVE system. Both groundwater and soil vapor are simultaneously extracted. Extracted liquids and vapor are collected and treated for disposal, or re-injected to the subsurface. It removes contaminants from above and below the water table. The system lowers the water table around the well, exposing more of the formation	• Heterogeneous conditions and low permeabilities in the subsurface could limit effectiveness • Presence of significant amount of debris could significantly limit effectiveness • Not effective on soils with high organic content or extremely dry • Not effective on contaminants of Henry's Law Constant below 0.01 at 20 deg C (dimensionless) • Could be combined with another process option to be more effective	• Require treatment of air and water • Pilot testing is required	Moderate to High	Eliminated (majority of the COCs Henry's Law Constant below 0.01 (dimensionless))
	• Monitored Natural Attenuation: Verify that loss of contaminants is naturally occurring and that contaminant degradation and natural processes will reduce contaminant concentrations to acceptable levels. Demonstrate through a groundwater sampling network, contaminant trend analysis, mass balance calculations and modeling.	• Potential effectiveness is 0%-99% treatment for various contaminants • Potential for contaminants to migrate before they are degraded • Potentially longer time frame required to achieve remediation objectives compared to active remediation depending on site • Free product, if exist, may be required to be removed	• Easy implementation	Low	Retained
	• Phytoremediation: Phytoremediation is a process that uses naturally-occurring or genetically engineered vegetation to remove, transfer, stabilize, and destroy contaminants in soil and sediment. Contaminants may be either organic or inorganic. Poplar tree is a typical plant species used since it adapt well to wet environments and its root structure can promote water withdrawal or hydraulic control in shallow groundwater. Phytoremediation techniques also include engineered wetlands.	• Treatment zone is determined by plants used; usually limited to shallow soils • High concentrations of hazardous materials can be toxic to plants • Dependant on climatic or seasonal conditions, which may interfere or inhibit plant growth, slow remediation efforts, or increase the length of the treatment period • Effective for removal of metals and PAHs • Potentially long time frame required to achieve remedial objectives	• Potential for community not to accept option • Treatability and pilot testing would be required • Limited by the availability of space	Low to Moderate	Eliminated (availability of space is limited)
	• Enhanced In-situ Biodegradation: Uses microorganisms to treat contamination by enhancing natural biodegradation mechanisms through the addition of microbes, nutrients, electron donors, and/or electron acceptors. Amendments can be applied using injection wells or infiltration galleries.	• Effective at degradation of VOCs, less effective for PAHs • Heterogeneous conditions and low permeabilities in the subsurface can limit effectiveness • Groundwater circulation system may be installed so that contaminants do not escape from zones of active biodegradation • Potential for vapors to migrate in basements, utility corridors, or other prevential flow paths • Potential for migration of DNAPL and/or contaminants into deeper hydrologic units	• Treatability and pilot testing would be required • Require a permit	Moderate to High	Eliminated (less effective for PAHs)

Table 3 - Description of Potential Process Options
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

General Response Action and Remedial Technology	Description of Process Option	Effectiveness	Implementability	Relative Cost	Status for Remedial Alternative Assembly
Collection/Extraction/ Removal	◆ Interceptor Trenches: Trenches, drains, and piping are used to capture groundwater flow from the contamination zone to discharge location.	◆ Groundwater treatment system required; operation and maintenance required ◆ Less effective in-situ remedial solution without combined with other process option ◆ DNAPL is difficult to extract from the subsurface ◆ Heterogeneous conditions and low permeabilities in the subsurface can limit effectiveness	◆ Implementability would be difficult with presence of extensive amounts of debris and subsurface structures ◆ Pilot testing and/or modeling required	Low to Moderate	Retained
	◆ Extraction Wells: Wells are installed to collect groundwater through pumping to capture groundwater flow from the contamination zone.	◆ Groundwater treatment system required; operation and maintenance required ◆ Less effective in-situ remedial solution without combined with other process option ◆ DNAPL is difficult to extract from the subsurface ◆ Heterogeneous conditions and low permeabilities in the subsurface can limit effectiveness	◆ Implementability would be difficult with presence of extensive amounts of debris and subsurface structures ◆ Pilot testing and/or modeling required	Low to Moderate	Retained
Ex-situ Treatment	◆ Activated Carbon: Contaminated groundwater is extracted and is pumped through one or more vessels containing activated carbon to which dissolved organic contaminants adsorb. Periodically the carbon requires to be replaced.	◆ Effective for removing contaminants at low concentrations (less than 10 mg/L) at nearly any flow rate ◆ Potential for fouling of the carbon from water with high suspended solids, iron and oil & grease ◆ Spent carbon need to be regenerated or disposed	◆ Equipment readily available	Low to Moderate	Retained
	◆ Air Stripping: Contaminated groundwater is extracted and is put into contact with air. Volatile organics are partitioned from extracted groundwater by increasing surface area of the contaminated water exposed to air. The contaminant mass of volatile contaminants are transferred from liquid-phase to gas-phase.	◆ Potential for inorganic or biological fouling of the equipment, require frequent cleaning ◆ Effective only for contaminated water with VOC and SVOC concentrations with dimensionless Henry's constant greater than 0.01 ◆ Potential for high energy cost ◆ Potential for off-gases requiring treatment	◆ Air permit required ◆ Equipment readily available	Low to Moderate	Retained
	◆ Chemical/UV Oxidation: Destruction process that oxidizes organic constituents in wastewater by the addition of strong oxidizers and irradiation with UV light.	◆ Effective on petroleum hydrocarbons ◆ Potential for high turbidity to interfere with the transmission of UV light ◆ Potential for fouling of the equipment with high concentrations of heavy metals (greater than 10 mg/L) or insoluble oil/grease ◆ Potential for off-gases requiring treatment ◆ Potential for high energy cost ◆ Require on-going cleaning and maintenance of equipment	◆ Pilot testing may be required	Low to Moderate	Retained
	◆ Separation: Detach contaminants from the extracted groundwater through physical and chemical means such as distillation, filtration/ultrafiltration/microfiltration, membrane separation and phase separation	◆ Potential for oil & grease to decrease flow rate and interfere with the separation process ◆ Potential for high energy cost ◆ Disposal of spent media	◆ Easy implementation ◆ Equipment readily available	Low to Moderate	Retained
	◆ Bioreactors: Contaminated groundwater is extracted and is put into contact with microorganisms in attached or suspended growth biological reactors (e.g., activated sludge, fluidized beds, batch reactors).	◆ Effective at treating SVOCs, hydrocarbons, and biodegrable organic material ◆ Potential for groundwater not to contain adequate microbial population density to be effective ◆ Very high contaminant concentrations may be toxic to microorganisms, may require special design approaches ◆ Air pollution controls may be required if there is volatilization from activate sludge processes ◆ Low ambient temperatures significantly decrease biodegradation rates; longer time or increase cost for heating ◆ Potential for nuisance microorganisms to colonize bioreactors, reduce effectiveness ◆ Residuals from sludge processes require treatment or disposal	◆ Treatability and pilot testing required ◆ Potential for community not to accept option ◆ Equipment may not be readily available	High	Eliminated (less expensive options are available)
Discharge/Disposal - On-site	◆ Reinjection: Reinject treated groundwater meeting discharge limits to groundwater.	◆ Combined with another process option to treat generated wastewater effectively	◆ Permit required ◆ Potential for negative public perception	Low to Moderate	Eliminated (surface water and POTW are readily available)
	◆ Discharge to Surface Water: Discharge treated groundwater meeting discharge limits to on-site surface water body.	◆ Combined with another process option to treat generated wastewater effectively ◆ Limited by on-site surface water body discharge requirements	◆ Permit required ◆ Pilot testing or modeling may be required	Low	Retained
Discharge/Disposal - Off-site	◆ Publicly Owned Treatment Works: Discharge treated groundwater meeting discharge limits to municipal sewer for treatment at local public wastewater treatment facility.	◆ Combined with another process option to treat generated wastewater effectively ◆ Limited by the POTW acceptable discharge rate and contaminant concentration	◆ Permit required	High	Retained

General Response Action and Remedial Technology	Description of Process Option	Effectiveness	Implementability	Relative Cost	Status for Remedial Alternative Assembly
Sediment					
No Action - None	• No action taken to reduce or monitor site risks.	• No added risk during short term • Not proven or reliable	• Easy implementation • Potential for negative public perception	Low	Retained
Institutional Controls - Access and Use Restrictions	• Dredging/Anchoring Restrictions: Through community ordinance, require a permit for dredging of sediment and prohibit use of boat anchors within the institutional control zone.	• Minimal potential short term exposure risk • Administratively effective and reliable; relies on local government action to establish, enforce and restrict	• Require approval by third-party property owners, if any • Administratively implementable assuming property owner approval	Low	Eliminated (would not fully address ecological risks)
	• Signs: Signs that are installed to prevent access and/or warn of the presence of site-related contaminants in sediment.	• Could be configured to address entire impacted area • Minimal potential short term exposure risk (vapor, odors, and construction worker and community exposures) • Effective and reliable in reducing direct exposure risk; ineffective for addressing COC leaching to surface water or isolating contaminants from ecological receptors	• Requires approval by third-party property owners, if any • Easy implementation • Administratively implementable assuming property owner approval	Low	Eliminated (would not address ecological risks)
Institutional Controls - Environmental Monitoring	• Sediment Monitoring: Perform sediment analyses to monitor contaminant concentrations over time and to assess future environmental effects and compliance with remedial action objectives.	• Minimal potential short term exposure • Could be combined with other process option to be more effective	• Easy implementation	Low	Retained
Containment - Barriers	• Granular cap: Granular material placed on top of sediment to isolate direct contact with the contaminant and reduce exposure risks.	• Effective on controlling risk to human health and isolating contaminants from ecological receptors • Effective on controlling sediment from suspending in water column • Potential for scouring or a catastrophic event that could damage the cap • Disruption to the benthic community • Minimal potential short term exposure risk (vapor, odors, and construction worker and community exposures)	• May be difficult to place in shallow water, steep slope and unstable sediment • River flow velocities and/or scouring potential may make it difficult to implement • May be implemented around infrastructure (e.g., piers, pilings, buried utilities) • Require adequate water depth to accommodate cap with anticipated uses (e.g., navigation, flood control)	Low to Moderate	Retained
	• Reactive cap to enhance chemical isolation with engineered materials (cement, activated carbon, coke)	• Encourage fate processes such as sequestration or degradation of contaminants beneath cap • Discourage recontamination of cap • Encourage degradation to eliminate negative consequences of subsequent cap loss	• Activated carbon or coke are low density materials that may not settle rapidly enough to be placed accurately and uniformly, especially in moving surface waters such as rivers or estuaries.	Low to Moderate	Retained
In-situ Treatment - Biological	• Monitored Natural Recovery: Verify that loss of contaminants is naturally occurring and that contaminant degradation and natural processes will reduce contaminant concentrations to acceptable levels. Demonstrate through a sediment sampling network, contaminant trend analysis, mass balance calculations and modeling.	• Relies on natural deposition of clean sediment to control impacts to environmental receptors • Effectiveness and timeframe of natural recovery is unknown • Does not adversely impact current benthic community	• Easy implementation	Low to Moderate	Retained
Ex-situ Treatment - Biological	• Landfarming: Contaminated soil, sediment, or sludge is excavated, applied into lined beds, and periodically turned over or tilled to aerate the waste to promote volatilization of VOCs from media and to enhance biodegradation.	• Effective at treating more volatile hydrocarbons • Marginally effective at treating PAHs • Moderate potential for short term exposure risk (vapor, odors, and construction worker and community exposures) • Require engineering, erosion and access controls for managing fugitive emissions, sediment, and public access • Require a runoff collection facility, and possibly require treatment	• Limited to availability of space • Topography, erosion, climate, and soil type and permeability at the site dependant on implementability • Require permitting • Pilot testing would be required	Moderate to High	Eliminated (availability of space is limited)
Collection/Extraction/ Removal	• Dredging: River sediments are removed from the river bottom by means of mechanical and/or hydraulic dredging equipment. Dredged sediments are then treated and/or disposed on- or off-site facility.	• Effective at controlling risk to human health and isolating contaminants from ecological receptors • Effective at controlling sediment from suspending in water column • Require engineering, erosion and access controls during construction for managing fugitive emissions, sediment, and public access • Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures) • Short term disruption to the benthic community • Contaminated sediments may resuspend and be transported downstream	• Limited to availability of space for staging and handling of dredge material • Implementability would be difficult with presence of extensive amounts of debris or presence of bedrock or weather bedrock • Typical methods include mechnical or hydraulic • May be implemented via convention excavation method (in the "dry") in shallow waters or if water can be readily diverted, or mechanical or hydraulic methods • Require permitting • River flow velocities may make it difficult to control turbidity • Difficult to remove all contaminated sediment/some residuals may remain	Moderate to High	Retained
Discharge/Disposal - On-site	• Water from dewatered sediment treated in on-site water treatment system and discharged to surface water	• Combined with another process option to treat generated wastewater effectively • Limited by on-site surface water body discharge requirements	• Permit required • Pilot testing or modeling may be required	Low to Moderate	Retained

Table 3 - Description of Potential Process Options
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

General Response Action and Remedial Technology	Description of Process Option	Effectiveness	Implementability	Relative Cost	Status for Remedial Alternative Assembly
Discharge/Disposal - Off-site	• Landfilling: Treated or untreated sediments are disposed of at an off-site state licensed landfill.	• Combined with dredging; limited by the volume of contaminated sediment removed • Effective at reducing direct exposure risk and leaching of COCs from sediment to surface water • Moderate potential short term exposure risk (vapor, odors, and construction worker and community exposures)	• Transportation of the soil through populate areas may affect community acceptance due to noise, potential accidents, and use of carbon-based fuels. • Limited by disposal facility availability	Moderate to High	Retained

Notes:
DNAPL: Dense Nonaqueous Phase Liquid; DNAPL not present in groundwater at Site.
Response Action for:
Soil
Groundwater
Sediment

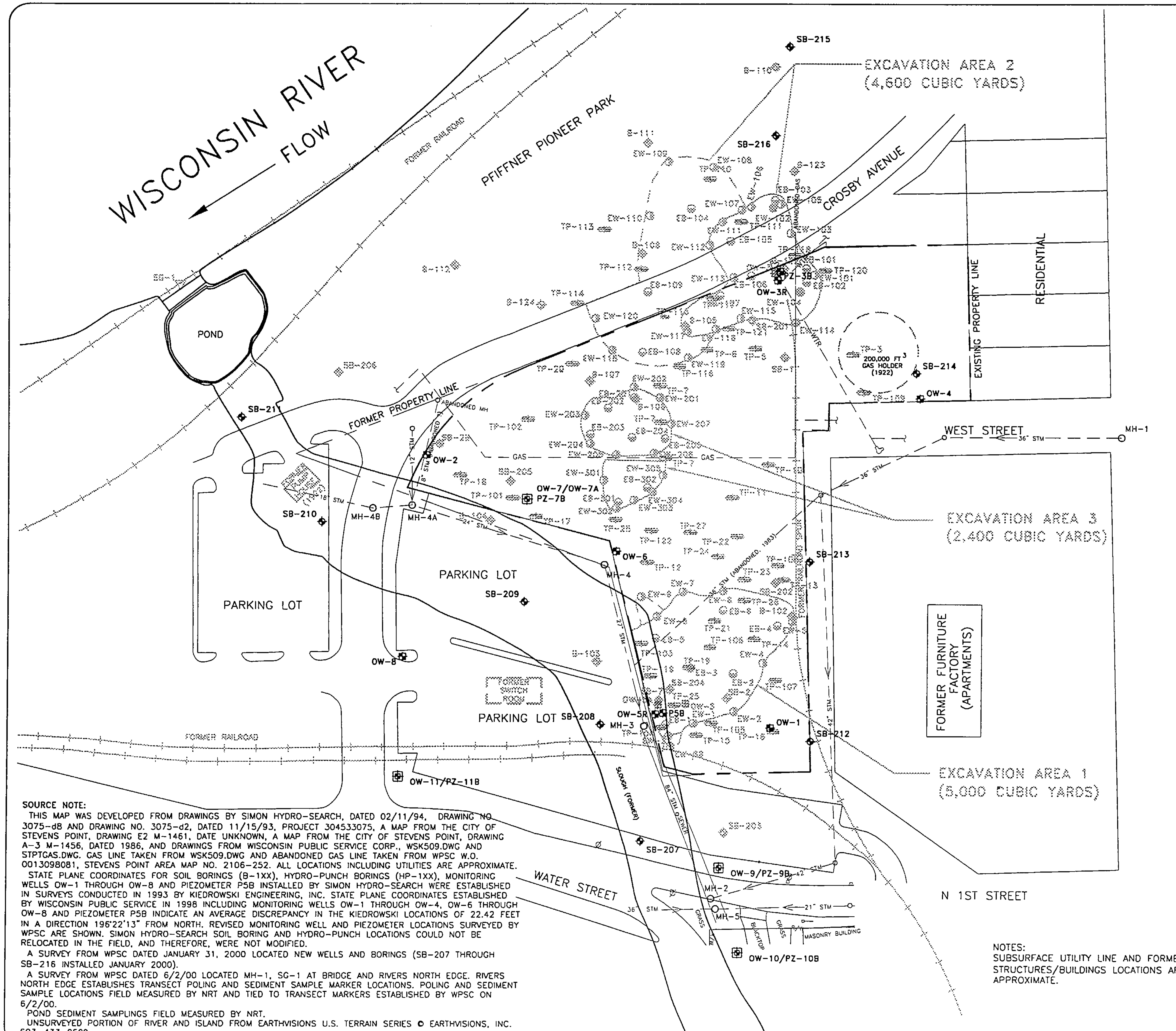
Table 4 - Summary of Remedial Options Compared to Criteria
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

	Threshold Criteria		**Balancing Criteria**				
Remedial Options	**Overall Protection of Human Health and the Environment**	**Compliance with ARARs**	**Long-Term Effectiveness and Permanence**	**Reduction of Toxicity, Mobility, and Volume through Treatment**	**Short-Term Effectiveness (Timeframe)**	**Implementability**	**Present Worth Cost**
Soil							
S1 - No Further Action	Does Not Meet	Does Not Meet	Does Not Meet	Does Not Meet	Meets (none)	Meets	$42,000
S2 - Institutional Controls	Meets	Meets	Meets	Partially Meets	Meets (2 months)	Meets	$128,000
S3 - Limited Excavation and Off-Site Disposal (from the former slough area)	Meets	Meets	Meets	Meets	Partially Meets (3 months)	Partially Meets	$2,930,000
Groundwater							
G1 - No Further Action	Does Not Meet	Does Not Meet	Does Not Meet	Does Not Meet	Meet (none)	Meets	$42,000
G2 - Institutional Controls	Meets	Meets	Partially Meets	Partially Meets	Partially Meets (two months)	Meets	$35,000
G3 - Monitoring Natural Attenuation	Meets	Meets	Meets	Partially Meets	Meets (30 years to demonstrate; 40 to 115 years to achieve)	Meets	$914,000
G4 - Groundwater Extraction, Ex-Situ Treatment and Discharge to Public Wastewater Treatment Plant	Meets	Meets	Meets	Partially Meets	Meets (3 months to construct; 30 years to demonstrate; 40 to 100 years to achieve)	Partially Meets	$3,870,000
River							
R1 - No Further Action	Meets	Meets	Partially Meets	Does Not Meet	Meets (none)	Meets	$42,000
R2a - Placement of Sand Cover (Concentration > PEC)	Meets	Meets	Meets	Partially Meets	Partially Meets (1 to 2 weeks)	Meets	$438,000
R2b - Placement of Sand Cover (Concentration > TEC)	Meets	Meets	Meets	Partially Meets	Partially Meets (3 to 4 weeks)	Meets	$696,000
R3a - Placement of Sand Cover with Armor Layer (Concentration > PEC)	Meets	Meets	Meets	Partially Meets	Partially Meets (1 to 2 weeks)	Meets	$477,000
R3b - Placement of Sand Cover with Armor Layer (Concentration > TEC)	Meets	Meets	Meets	Partially Meets	Partially Meets (3 to 4 weeks)	Meets	$821,000
R4a - Dredge (Concentration > PEC) and Sand Cover (Concentration > TEC)	Meets	Meets	Meets	Meets	Partially Meets (5 to 6 weeks)	Partially Meets	$1,461,000
R4b - Dredge (Concentration > TEC)	Meets	Meets	Meets	Meets	Partially Meets (7 to 8 weeks)	Partially Meets	$2,294,000
Pond							
P1 - No Further Action	Partially Meets	Meets	Partially Meets	Does Not Meet	Meet (none)	Meets	$42,000
P2 - Placement of Sand Cap	Meets	Meets	Meets	Partially Meets	Partially Meets (3 days)	Meets	$216,000
P3 - Placement of Sand Cap with Activated Carbon	Meets	Meets	Meets	Partially Meets	Partially Meets (3 days)	Meets	$232,000
P4 - Dredging and Sand Cover	Meets	Meets	Meets	Meets	Partially Meets (one month)	Partially Meets	$661,000

Notes:
1. See Section 4 of the FS Report for additional details on criteria evaluation.
2. See Figures 5 through 7 of the FS Report for remedial option areas.
3. Present worth cost for remedial options exclude the costs associated with the five year review to allow combining remedial options for a more representative remedial alternative cost. Costs for five year reviews are assumed to be equivalent to the no-further action alternatives (6 events at $15,000).

APPENDIX A

PREVIOUSLY PERFORMED EXCAVATION AREAS



LEGEND

- SB-207 — SOIL BORING (NRT)
- OW-1 — INVESTIGATION WELL
- P5B — BEDROCK WELL
- OW-9/PZ-9B — NESTED MONITORING WELL/BEDROCK WELL
- DEEP EXCAVATION (AVERAGE DEPTH IS 9-10 FEET)
- SHALLOW EXCAVATION (AVERAGE DEPTH IS 2 FEET)
- SG-1 — STAFF GAUGE
- EB-1 — EXCAVATION BASE SAMPLE
- EB-3 — SOIL SAMPLE WHICH WAS EXCAVATED
- EW-1 — EXCAVATION WALL SAMPLE
- OW-3 — ABANDONED INVESTIGATION WELL
- SB-206 — SOIL BORING (HISTORICAL NRT)
- B-124, SB-1 — BOREHOLE
- TP-3 — TEST PIT
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

N

0 50 100 200

SCALE IN FEET

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
STATE PLANE COORDINATES FOR SOIL BORINGS (B-1XX), HYDRO-PUNCH BORINGS (HP-1XX), MONITORING WELLS OW-1 THROUGH OW-8 AND PIEZOMETER P5B INSTALLED BY SIMON HYDRO-SEARCH WERE ESTABLISHED IN SURVEYS CONDUCTED IN 1993 BY KIEDROWSKI ENGINEERING, INC. STATE PLANE COORDINATES ESTABLISHED BY WISCONSIN PUBLIC SERVICE IN 1998 INCLUDING MONITORING WELLS OW-1 THROUGH OW-4, OW-6 THROUGH OW-8 AND PIEZOMETER P5B INDICATE AN AVERAGE DISCREPANCY IN THE KIEDROWSKI LOCATIONS OF 22.42 FEET IN A DIRECTION 196°22'13" FROM NORTH. REVISED MONITORING WELL AND PIEZOMETER LOCATIONS SURVEYED BY WPSC ARE SHOWN. SIMON HYDRO-SEARCH SOIL BORING AND HYDRO-PUNCH LOCATIONS COULD NOT BE RELOCATED IN THE FIELD, AND THEREFORE, WERE NOT MODIFIED.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED NEW WELLS AND BORINGS (SB-207 THROUGH SB-216 INSTALLED JANUARY 2000).
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 6/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

DRAWN BY: TAS	DATE: 03/21/02
CHECKED BY: RJC	DATE: 03/21/02
APPROVED BY: LLP	DATE: 04/11/02
AUTOCAD FILE: 1177-B20.DWG	

SOIL BORING, MONITORING WELL AND STORM SEWER SAMPLE LOCATIONS

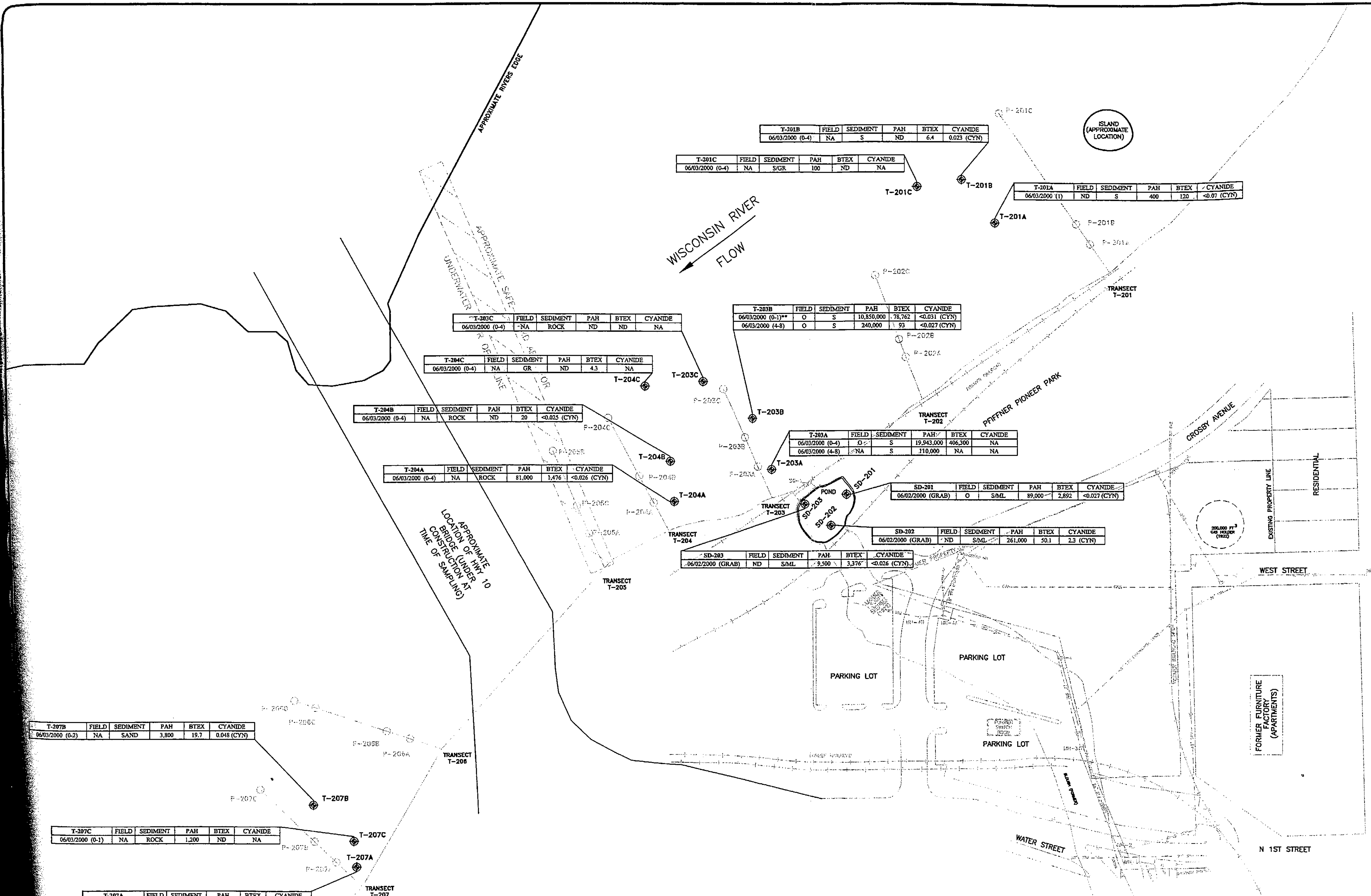
SUPPLEMENTAL SITE INVESTIGATION
AND GROUNDWATER MONITORING REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURED GAS PLANT, STEVENS POINT, WISCONSIN

Natural Resource Technology

PROJECT NO. 1177/12.4/STPT

DRAWING NO. 1177-B20

FIGURE NO. 2



T-201B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	S	ND	6.4	0.023 (CYN)

T-201C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	S/GR	100	ND	NA

T-201A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (1)	ND	S	400	120	<0.07 (CYN)

T-203B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-1)**	O	S	10,850,000	78,762	<0.031 (CYN)
06/03/2000 (4-8)	O	S	240,000	93	<0.027 (CYN)

T-203C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	ND	ND	NA

T-204C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	GR	ND	4.3	NA

T-204B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	ND	20	<0.025 (CYN)

T-203A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	O	S	19,943,000	406,300	NA
06/03/2000 (4-8)	NA	S	110,000	NA	NA

T-204A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	81,000	1,476	<0.026 (CYN)

SD-201	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	O	S/ML	89,000	2,892	<0.027 (CYN)

SD-202	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	ND	S/ML	261,000	50.1	2.3 (CYN)

SD-203	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	ND	S/ML	9,500	3,376	<0.026 (CYN)

T-207B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-2)	NA	SAND	3,800	19.7	0.048 (CYN)

T-207C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-1)	NA	ROCK	1,200	ND	NA

T-207A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-2)	NA	ORGANIC	2,700	76.4	0.08 (CYN)

SAMPLE LOCATION	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
SAMPLE DATE (DEPTH) (FEET BELOW TOP OF SEDIMENT)	FIELD OBSERVATIONS T=TAR C=COAL FRAGMENTS S=SHEEN O=ODOR	SEDIMENT CHARACTERISTIC S=SAND, ML=SILT GR=GRAVEL	TOTAL POLYNUCLEAR AROMATIC HYDROCARBONS (µg/kg)	BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES (µg/kg)	(WAD) WEAK ACID DISSOCIABLE (AVL) AVAILABLE (CYN) TOTAL (mg/kg)

ND = CONSTITUENTS WERE ANALYZED FOR BUT NOT DETECTED AT THE DETECTION LIMIT.
NA = NOT ANALYZED
µg/kg = MICROGRAMS PER KILOGRAM
mg/kg = MILLIGRAM PER KILOGRAM
GRAB=PONAR SAMPLE
**= SAMPLE RE-ANALYZED AFTER HOLD TIME EXPIRED DUE TO QUALITY CONTROL FAILURE ON INITIAL ANALYSIS.
PHYSICAL FORM OF TAR VARIES (eg. TRACE, DROPLETS, SHEEN), REFER TO SEDIMENT INVESTIGATION REPORTS FOR ADDITIONAL DESCRIPTIONS.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1481, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED 8/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 8/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

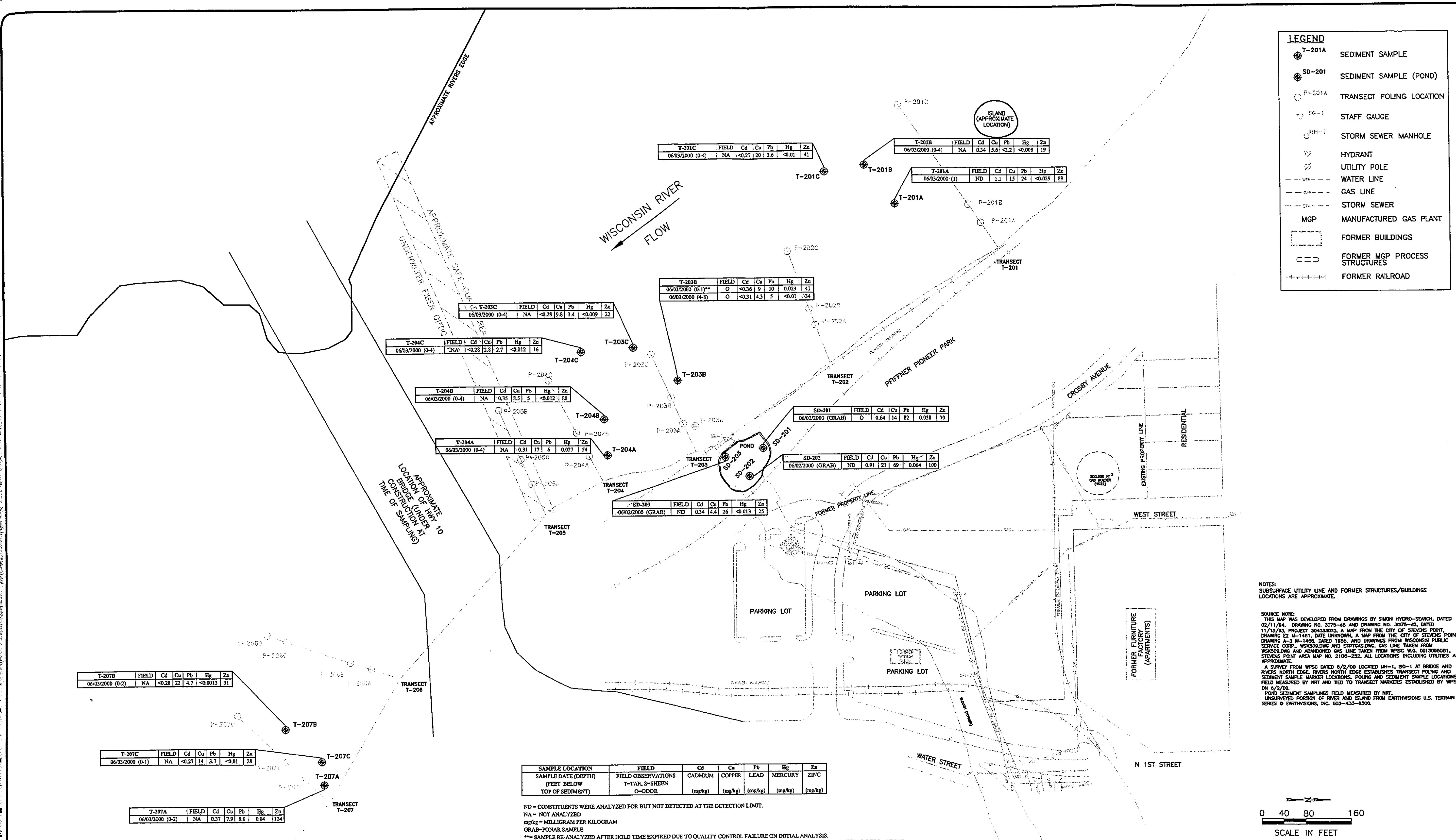
Natural Resource Technology
N R T

SEDIMENT ORGANIC ANALYTICAL SUMMARY

FORMER STEVENS POINT
MANUFACTURED GAS PLANT SITE
WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT, WISCONSIN

CAD FILE: 1515\5\STPT\1515-5S-D01.DWG
REFERENCE FILES:

PROJECT NO. 1515/5/STPT
DRAWN BY: TAS 02/04/05
CHECKED BY: MJR 02/04/05
APPROVED BY: LLP 02/04/05
SHEET NO. ST PT-1



Sample	FIELD	Cd	Cu	Pb	Hg	Zn
T-201C 06/03/2000 (0-4)	NA	<0.27	20	3.6	<0.01	41
T-201B 06/03/2000 (0-4)	NA	0.34	5.6	<2.2	<0.008	19
T-201A 06/03/2000 (1)	ND	1.1	15	24	<0.029	89
T-203B 06/03/2000 (0-1)**	O	<0.36	9	10	0.023	41
T-203B 06/03/2000 (4-8)	O	<0.31	4.3	5	<0.01	34
T-203C 06/03/2000 (0-4)	NA	<0.28	9.8	3.4	<0.009	22
T-204C 06/03/2000 (0-4)	NA	<0.28	2.8	2.7	<0.012	16
T-204B 06/03/2000 (0-4)	NA	0.35	8.5	5	<0.012	80
T-204A 06/03/2000 (0-4)	NA	0.31	17	6	0.027	54
SD-201 06/02/2000 (GRAB)	O	0.64	14	82	0.038	70
SD-202 06/02/2000 (GRAB)	ND	0.91	21	69	0.064	100
SD-203 06/02/2000 (GRAB)	ND	0.34	4.4	26	<0.013	25
T-207B 06/03/2000 (0-2)	NA	<0.28	22	4.7	<0.0013	31
T-207C 06/03/2000 (0-1)	NA	<0.27	14	3.7	<0.01	28
T-207A 06/03/2000 (0-2)	NA	0.37	7.9	8.6	0.04	124

SAMPLE LOCATION	FIELD	Cd	Cu	Pb	Hg	Zn
SAMPLE DATE (DEPTH) (FEET BELOW TOP OF SEDIMENT)	FIELD OBSERVATIONS T=TAR, S=SHEEN O=ODOR	CADMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	ZINC (mg/kg)

ND = CONSTITUENTS WERE ANALYZED FOR BUT NOT DETECTED AT THE DETECTION LIMIT.
NA = NOT ANALYZED
mg/kg = MILLIGRAM PER KILOGRAM
GRAB=PONAR SAMPLE
**= SAMPLE RE-ANALYZED AFTER HOLD TIME EXPIRED DUE TO QUALITY CONTROL FAILURE ON INITIAL ANALYSIS.
PHYSICAL FORM OF TAR VARIES (eg. TRACE, DROPLETS, SHEEN), REFER TO SEDIMENT INVESTIGATION REPORTS FOR ADDITIONAL DESCRIPTIONS.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 6/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

Natural Resource Technology
N R T

SEDIMENT INORGANIC ANALYTICAL SUMMARY

FORMER STEVENS POINT
MANUFACTURED GAS PLANT SITE
WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT, WISCONSIN

CAD FILE: 1515\5\STPT\1515-5S-D02.DWG
REFERENCE FILES:

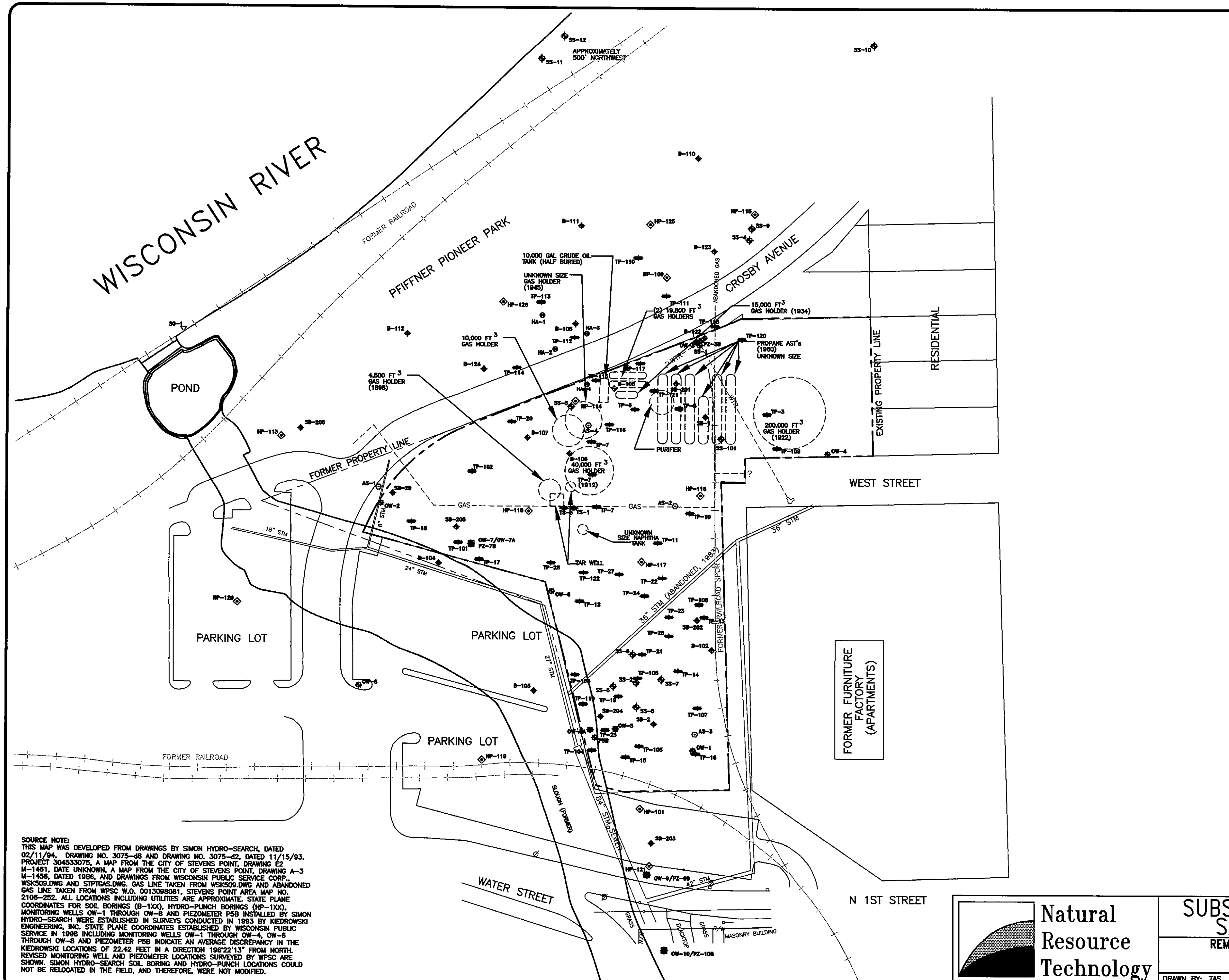
PROJECT NO. 1515/5/STPT
DRAWN BY: TAS 02/04/05
CHECKED BY: MJR 02/04/05
APPROVED BY: LLP 02/04/05
SHEET NO. ST PT-2

APPENDIX B

REMEDIAL INVESTIGATION DATA

APPENDIX B-1

SOIL ANALYTICAL RESULTS AND SAMPLING LOCATIONS



SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE. STATE PLANE COORDINATES FOR SOIL BORINGS (B-1XX), HYDRO-PUNCH BORINGS (HP-1XX), MONITORING WELLS OW-1 THROUGH OW-8 AND PIEZOMETER P5B INSTALLED BY SIMON HYDRO-SEARCH WERE ESTABLISHED IN SURVEYS CONDUCTED IN 1993 BY KIEDROWSKI ENGINEERING, INC. STATE PLANE COORDINATES ESTABLISHED BY WISCONSIN PUBLIC SERVICE IN 1998 INCLUDING MONITORING WELLS OW-1 THROUGH OW-4, OW-6 THROUGH OW-8 AND PIEZOMETER P5B INDICATE AN AVERAGE DISCREPANCY IN THE KIEDROWSKI LOCATIONS OF 22.42 FEET IN A DIRECTION 196°22'13" FROM NORTH. REVISED MONITORING WELL AND PIEZOMETER LOCATIONS SURVEYED BY WPSC ARE SHOWN. SIMON HYDRO-SEARCH SOIL BORING AND HYDRO-PUNCH LOCATIONS COULD NOT BE RELOCATED IN THE FIELD, AND THEREFORE, WERE NOT MODIFIED.

LEGEND

OW-3	ABANDONED INVESTIGATION WELL
OW-1	INVESTIGATION WELL
P5B	BEDROCK WELL
OW-9/PZ-9B	NESTED MONITORING WELL/ BEDROCK WELL
SB-206	SOIL BORING (NRT)
HA-1	HAND AUGER
HP-120	HYDRO-PUNCH
TP-3	TEST PIT
AS-2	AIR SAMPLE
TS-1	TRENCH SAMPLE
B-124 SB-1	BOREHOLE
SS-4	SURFACE SOIL SAMPLE
SG-1	STAFF GAUGE
	HYDRANT
	UTILITY POLE
WTR	WATER LINE
GAS	GAS LINE
AST	ABOVEGROUND STORAGE TANK
STM	STORM SEWER
?	PRECISE LOCATION UNKNOWN
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

N

0 50 100 200

SCALE IN FEET

Natural Resource Technology

N R T

SUBSURFACE INVESTIGATION SAMPLING LOCATIONS

REMEDIAL ACTION DOCUMENTATION REPORT
STEVENS POINT MGP SITE - WPSC
STEVENS POINT, WISCONSIN

DRAWN BY: TAS	CHECKED BY: SLF	APPROVED BY: LJP
DATE: 9/3/98	DATE: 9/3/98	DATE: 9/3/98

PROJECT NO. 1177/8.6/STPT

DRAWING NO. 1177-D10

PLATE 1

Table 4 - Soil Analytical Results - Pre-Treatment Soil
Remedial Action Documenation Report
Former Stevens Point Manufactured Gas Plant Site - WPSC

Sample ID	Sample Date	Percent Solids	Moisture Content (by weight)	BTEX & Naphthalene (mg/kg): Benzene	Ethylbenzene	Toluene	Xylenes	Total BTEX	Naphthalene
PRE-0324-N	3/24/98	82.4	21.4%	1.6	6.4	2.6	13.8	24.4	310
PRE-0324-S	3/24/98	79.8	25.3%	nd	9.3	6.0	22.2	37.5	550
PRE-0330	3/30/98	79.4	25.9%	1.8	6.1	3.6	16	27.5	330
PRE-0401	4/1/98	76.2	31.2%	1.0	3.5	2.9	12.8	20.2	210
PRE-0406	4/6/98	80.2	24.7%	nd	7.4	6.9	25.3	39.6	480
PRE-0408	4/8/98	80.9	23.6%	nd	0.89	0.64	3.4	4.93	78
PRE-0415	4/15/98	83	20.5%	nd	8.2	7.6	29.3	45.1	490
PRE-0416	4/16/98	86.4	15.7%	nd	1.7	1.7	9	12.4	210
PRE-0420	4/20/98	81.6	22.5%	1	3.4	3.3	16.3	24	300
PRE-0422	4/22/98	85.3	17.2%	nd	1.7	1.8	7.7	11.2	150
PRE-0427	4/27/98	84.6	18.2%	nd	0.98	0.98	4.9	6.86	92
PRE-0428	4/28/98	74.1	35.0%	8.9	4.2	18	47	78.1	520
PRE-0505	5/5/98	87.1	14.8%	1.1	2.2	2.4	7.3	13	150
PRE-0506	5/6/98	85.8	16.6%	0.64	0.8	1.2	4.8	7.44	84
PRE-0512	5/12/98	91.2	9.6%	nd	0.052	nd	0.215	0.267	1.9
PRE-0513	5/13/98	89.8	11.4%	0.39	0.4	0.66	2.51	3.96	40
PRE-0519A	5/19/98	91.8	8.9%	nd	0.29	0.41	2.4	3.1	49
PRE-0519B	5/19/98	91.5	9.3%	nd	3	1.4	6	10.4	150
Air Permit Limits				nl	nl	nl	nl	nl	nl

Sample ID	Polynuclear Aromatic Hydrocarbons (mg/kg): Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene [C][POM]	Benzo(a)pyrene [C][POM]	Benzo(b)fluoranthene [C][POM]	Benzo(g,h,i)perylene	Benzo(k)fluoranthene [C]	Chrysene [C]	Dibenzo(a,h)anthracene [C][POM]
PRE-0324-N	67	20	62	66	55	39	22	43	56	12
PRE-0324-S	64	33	77	51	42	27	18	31	48	8.1
PRE-0330	55	23	49	50	39	32	17	26	40	6.5
PRE-0401	45	43	65	72	56	58	24	28	53	8.9
PRE-0406	54	81	120	93	71	61	33	49	83	12
PRE-0408	26	21	39	42	28	25	14	20	32	5.1
PRE-0415	57	69	120	99	64	61	29	37	72	12
PRE-0416	16	15	36	23	18	16	6.9	10	17	3
PRE-0420	64	60	120	74	70	51	33	52	59	9.8
PRE-0422	25	65	93	51	55	30	33	48	46	6.3
PRE-0427	15	17	36	27	27	19	14	20	23	4.3
PRE-0428	14	52	64	36	34	20	15	28	28	4.7
PRE-0505	15	18	29	22	22	12	10	18	17	3.8
PRE-0506	13	15	25	22	25	19	13	18	17	4
PRE-0512	4.3	3.8	8.4	9.7	14	7.2	6.2	7.8	9.1	1.4
PRE-0513	8.3	6.1	16	17	21	17	9.8	11	15	2.8
PRE-0519A	3	14	15	20	20	18	8.3	17	17	2.9
PRE-0519B	8.5	38	36	40	43	30	18	31	33	5.4
Air Permit Limits	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl

Sample ID	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene [C][POM]	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Total POMs (mg/kg)	Total Organics (mg/kg)	Lead (mg/kg)	Cyanide, Total (mg/kg)
PRE-0324-N	150	54	22	41	65	260	180	110	1324	194	1348.4	170	12
PRE-0324-S	110	56	15	46	72	260	180	100	1238.1	143.1	1275.6	70	7.2
PRE-0330	110	51	16	37	64	170	150	81	1016.5	143.5	1044	170	13
PRE-0401	150	59	24	45	81	190	180	110	1291.9	218.9	1312.1	150	17
PRE-0406	210	100	32	78	130	340	280	160	1987	269	2026.6	200	30
PRE-0408	84	34	13	25	47	180	100	60	795.1	113.1	800.03	86	46
PRE-0415	210	92	28	80	130	390	270	130	1950	264	1995.1	86	13
PRE-0416	54	24	7.4	20	29	74	68	34	471.3	67.4	483.7	44	25
PRE-0420	170	84	32	71	100	240	230	120	1639.8	236.8	1663.8	110	13
PRE-0422	180	49	28	42	46	85	240	180	1302.3	170.3	1313.5	42	27
PRE-0427	64	24	13	24	29	70	74	45	545.3	90.3	552.16	24	34
PRE-0428	88	50	14	47	68	290	120	61	1033.7	108.7	1111.8	46	36
PRE-0505	47	24	10	22	30	120	61	35	515.8	69.8	528.8	48	22
PRE-0506	46	22	12	16	21	44	56	36	424	82	431.44	51	30
PRE-0512	16	4.4	4.9	3.5	4.6	1.2	25	28	159.5	37.2	159.767	16	0.73
PRE-0513	34	9.3	8.5	4.7	5.2	5.5	37	32	260.2	66.3	264.16	27	9.6
PRE-0519A	37	12	8.4	9.6	11	19	40	38	310.2	69.3	313.3	31	17
PRE-0519B	76	32	16	28	38	85	110	79	746.9	134.4	757.3	17	11
Air Permit Limits	nl	nl	nl	nl	nl	nl	nl	nl	nl	230	10,000	nl	nl

Notes:
1. [POM] = Polycyclic Organic Matter according to NR 445, Table 3. Consist of benzo(a)anthracene, benzo(a) pyrene, benzo(b) fluoranthene, dibenzo (a,h) anthracene, indeno (1,2,3 - cd) pyrene.
2. [C] = Carcinogenic PAH, classified as B2, probable human carcinogen.
3. Total Organics consists of Total BTEX plus Total PAHs.
4. -- = parameter not analyzed
5. nd = parameter not detected above laboratory detection limit (reference laboratory reports).
6. nl = no air permit limit established for parameter.

By: kmz
Checked by: slm

Table 5 - Soil Analytical Results - Post-Treatment Soil
Remedial Action Documenation Report
Former Stevens Point Manufactured Gas Plant Site - WPSC

Sample ID	Sample Date	BTEX (mg/kg)					Polynuclear Aromatic Hydrocarbons (mg/kg)																						
		Benzene	Ethylbenzene	Toluene	Xylenes	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene [C][POM]	Benzo(a)pyrene [C][POM]	Benzo(b)fluoranthene [C][POM]	Benzo(g,h,i)perylene	Benzo(k)fluoranthene [C]	Chrysene [C]	Dibenzo(a,h)anthracene [C][POM]	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene [C][POM]	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Total Carc. PAHs (mg/kg)	Lead (mg/kg)	Cyanide, Total (mg/kg)
PST-0404 (A)	4/4/98	**0.034**	nd	0.062	0.038	0.134	0.34	**0.83**	4.2	8.1	8.6	6.3	4.9	6.5	7.7	2.2	9.7	1.1	4.5	0.38	0.67	2.5	8.6	7.1	**84.22**	43.9	**290**	1.4
PST-0405	4/5/98	**0.027**	nd	0.086	0.098	0.211	0.088	0.21	0.71	1.1	1.1	0.95	0.84	0.74	0.93	0.24	1.7	0.23	0.68	0.21	0.3	**1.1**	2	1.2	14.33	5.74	**200**	0.5
PST-0407	4/7/98	**0.031**	nd	0.097	0.095	0.223	0.05	0.057	0.27	0.46	0.37	0.38	0.26	0.25	0.38	0.092	0.71	0.11	0.22	0.22	0.25	**0.46**	0.83	0.46	5.829	2.152	**100**	0.54
PST-0408	4/8/98	**0.035**	nd	0.045	0.031	0.111	0.029	0.02	0.092	0.12	0.11	0.1	0.08	0.096	0.14	0.028	0.44	0.04	0.059	0.049	0.055	0.27	0.49	0.28	2.498	0.653	**110**	0.64
PST-0412	4/12/98	**0.03**	nd	0.03	nd	0.06	nd	nd	0.068	0.11	0.073	0.11	0.066	0.074	0.12	0.018	0.42	0.022	0.045	0.033	0.036	0.37	0.39	0.24	2.195	0.55	**250**	nd
PST-0413	4/13/98	**0.045**	nd	0.062	0.039	0.146	nd	0.017	0.1	0.15	0.13	0.13	0.13	0.096	0.14	0.038	0.22	0.044	0.086	0.099	0.14	**0.41**	0.36	0.14	2.43	0.77	**290**	nd
PST-0415	4/15/98	nd	nd	nd	nd	nd	0.022	nd	0.089	0.13	0.1	0.1	0.088	0.087	0.14	0.029	0.22	0.024	0.067	0.039	0.045	0.25	0.32	0.12	1.87	0.653	**94**	nd
PST-0417	4/17/98	**0.036**	nd	0.066	0.036	0.138	0.019	0.049	0.14	0.16	0.14	0.18	0.1	0.084	0.14	0.033	0.35	0.06	0.083	0.073	0.1	0.31	0.41	0.18	2.611	0.82	**140**	nd
PST-0418	4/18/98	**0.042**	nd	0.062	0.038	0.142	0.05	0.11	0.48	0.47	0.44	0.46	0.28	0.3	0.42	0.076	1.1	0.13	0.23	0.11	0.18	**0.63**	1.2	0.67	7.336	2.396	**150**	nd
PST-0420	4/20/98	**0.033**	nd	0.055	0.035	0.123	0.039	0.058	0.38	0.56	0.63	0.53	0.5	0.54	0.48	0.15	0.83	0.11	0.42	0.087	0.13	**0.5**	1	0.55	7.494	3.31	**140**	nd
PST-0421	4/21/98	**0.032**	nd	0.06	0.036	0.128	0.062	0.11	0.51	0.75	0.8	0.74	0.52	0.6	0.66	0.17	1.2	0.18	0.47	0.13	0.17	**0.58**	1.2	0.78	9.632	4.19	**170**	0.58
PST-0423	4/23/98	nd	nd	0.036	nd	0.036	nd	0.022	0.14	0.32	0.31	0.27	0.21	0.34	0.3	0.062	0.43	0.052	0.18	0.033	0.042	0.15	0.38	0.3	3.541	1.782	**53**	0.31
PST-0424	4/24/98	**0.029**	nd	0.055	0.034	0.118	0.016	0.025	0.14	0.19	0.18	0.16	0.11	0.19	0.19	0.037	0.33	0.047	0.097	0.051	0.061	0.24	0.36	0.22	2.644	1.044	**82**	0.31
PST-0427	4/27/98	**0.047**	nd	0.069	0.036	0.152	0.018	0.016	0.087	0.093	0.088	0.067	0.077	0.071	0.094	0.024	0.18	0.046	0.059	0.061	0.072	0.29	0.3	0.13	1.773	0.496	**94**	0.29
PST-0428	4/28/98	nd	nd	0.037	nd	0.037	nd	nd	0.05	0.068	0.065	0.063	0.063	0.056	0.072	0.018	0.13	0.026	0.048	0.043	0.041	0.17	0.2	0.086	1.199	0.39	**150**	0.22
PST-0429	4/29/98	nd	nd	nd	nd	nd	nd	nd	0.028	0.037	0.039	0.035	0.037	0.034	0.04	nd	0.12	0.02	0.028	0.039	0.033	0.27	0.16	0.087	1.007	0.213	48	0.21
PST-0501	5/1/98	**0.05**	nd	0.039	nd	0.089	0.015	nd	0.05	0.056	0.061	0.05	0.054	0.051	0.058	0.017	0.1	0.027	0.041	0.054	0.055	0.23	0.18	0.073	1.172	0.334	**140**	nd
PST-0502	5/1/98	**0.044**	nd	0.05	0.03	0.124	nd	nd	0.062	0.085	0.095	0.076	0.081	0.075	0.079	0.024	0.14	0.035	0.062	0.053	0.057	0.25	0.23	0.097	1.501	0.496	**110**	0.005
PST-0504	5/4/98	**0.04**	nd	0.047	0.028	0.115	nd	nd	0.055	0.075	0.084	0.07	0.071	0.068	0.07	0.022	0.14	0.028	0.054	0.048	0.047	0.23	0.21	0.095	1.367	0.443	**180**	nd
PST-0506A	5/6/98	nd	nd	nd	nd	nd	nd	nd	0.016	0.021	0.021	0.025	0.022	0.018	0.025	nd	0.042	nd	0.018	0.02	0.018	0.1	0.065	0.035	0.446	0.128	**72**	nd
PST-0506B	5/6/98	nd	nd	nd	nd	nd	nd	nd	0.061	0.089	0.11	0.085	0.081	0.078	0.082	0.025	0.15	0.023	0.066	0.035	0.032	0.14	0.2	0.11	1.367	0.535	47	0.23
PST-0508	5/8/98	nd	nd	0.034	nd	0.034	0.026	0.053	0.15	0.15	0.21	0.18	0.14	0.16	0.16	0.067	0.36	0.082	0.13	0.081	0.12	0.34	0.5	0.22	3.129	1.057	**61**	0.26
PST-0509	5/9/98	nd	nd	nd	nd	nd	nd	nd	0.039	0.055	0.089	0.077	0.053	0.08	0.065	0.027	0.097	0.015	0.049	0.023	0.024	0.098	0.12	0.066	0.977	0.442	**78**	nd
PST-0512	5/12/98	nd	nd	nd	nd	nd	0.024	0.069	0.27	0.4	0.46	0.49	0.35	0.39	0.39	0.081	0.78	0.089	0.31	0.056	0.091	0.27	0.68	0.54	5.74	2.521	**77**	0.3
PST-0513	5/12/98	**0.028**	nd	nd	nd	0.028	nd	0.028	0.1	0.2	0.29	0.21	0.24	0.22	0.21	0.05	0.33	0.029	0.2	nd	0.021	0.073	0.25	0.3	2.751	1.38	27	nd
PST-0514	5/14/98	nd	nd	nd	nd	nd	nd	nd	0.039	0.054	0.071	0.068	0.046	0.065	0.072	nd	0.13	nd	0.039	nd	0.015	0.068	0.13	0.12	0.917	0.369	42	nd
PST-0515	5/15/98	nd	nd	nd	nd	nd	nd	nd	0.045	0.066	0.081	0.063	0.047	0.069	0.072	nd	0.12	nd	0.04	nd	0.016	0.06	0.13	0.13	0.939	0.391	33	0.21
PST-0516	5/16/98	nd	nd	nd	nd	nd	0.045	nd	0.051	0.081	0.073	0.083	0.063	0.063	0.085	0.02	0.14	0.036	0.049	0.084	0.15	0.19	0.2	0.14	1.553	0.454	**53**	nd
PST-0519	5/19/98	nd	nd	nd	nd	nd	nd	nd	0.016	0.027	0.027	0.032	0.027	0.024	0.033	nd	0.048	nd	0.023	nd	nd	0.061	0.09	0.05	0.458	0.166	44	nd
PST-0520	5/20/98	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.016	nd	nd	nd	nd	0.04	0.032	nd	0.088	nd	**66**	nd
PST-520A	5/20/98	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.018	nd	nd	0.019	nd	0.03	nd	nd	nd	nd	0.034	0.04	0.026	0.167	0.037	**75**	nd
PST-0521	5/21/98	nd	nd	nd	nd	nd	nd	nd	nd	0.028	0.027	0.039	0.027	0.026	0.036	nd	0.055	nd	0.022	nd	nd	0.069	0.083	0.056	0.468	0.178	**59**	nd
Thermal Treatment Perf. Criteria		0.025	2.9	1.5	4.1	nc	nc	0.7	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.4	1.8	nc	50	10	50	50

Notes:
1. [POM] = Polycyclic Organic Matter according to NR 445, Table 3. Consist of benzo(a)anthracene, benzo(a) pyrene, benzo(b) fluoranthene, dibenzo (a,h) anthracene, indeno (1,2,3 - cd) pyrene.
2. [C] = Carcinogenic, classified as B2, probable human carcinogen.
3. -- = parameter not analyzed
4. nd = parameter not detected above laboratory detection limit
5. bold indicates concentration above thermal treatment performance criteria.

By:
Checked by: slm

Table 6 - Ambient Air Analytical Results - Perimeter
Remedial Action Documentation Report
Former Stevens Point Manufactured Gas Plant Site - WPSC

				Polynuclear Aromatic Hydrocarbons ($\mu g/m^3$)																	
Sample Date	Monitoring Station	Sample Vol. (m^3)	TSP (mg/m^3)	Naphthalene	Acenapthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene
2/(26-27)/98	AM-1	325.44	0.025	0.037	<0.009	<0.009	<0.009	0.006	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
3/(2-3)/98	AM-2	326.34	0.005	0.018	<0.009	<0.009	<0.009	0.003	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
3/(23-24)/98	AM-3	323.33	0.032	1.794	0.049	0.192	0.111	0.084	0.009	0.006	0.006	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
3/(25-26)/98	AM-4	310.50	0.104	2.254	0.100	0.216	0.155	0.167	0.026	0.023	0.019	0.006	0.006	0.006	0.003	0.006	0.006	<0.009	0.006
4/(1-2)98	AM-4	325.35	0.015	2.520	0.065	0.144	0.144	0.105	0.015	0.006	0.006	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
4/(2-3)98	AM-3	324.00	0.014	1.883	0.034	0.102	0.105	0.077	0.006	0.003	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
4/(6-7)/98	AM-4	339.00	0.098	4.130	0.083	0.295	0.186	0.156	0.021	0.027	0.021	0.009	0.009	0.009	0.003	0.006	0.006	<0.009	0.006
4/(14-15)/98	AM-6	324.00	0.129	3.395	0.127	0.340	0.290	0.309	0.059	0.071	0.059	0.022	0.022	0.022	0.009	0.015	0.012	<0.009	0.012
4/(15-16)/98	AM-7	324.16	0.006	0.025	<0.009	0.003	0.003	0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
4/(20-21)/98	AM-7	327.15	0.064	1.559	0.034	0.092	0.070	0.073	0.012	0.015	0.012	0.003	0.003	0.003	<0.009	<0.009	<0.009	<0.009	<0.009
4/(21-22)/98	AM-5	317.31	0.094	0.378	0.019	0.047	0.079	0.136	0.019	0.035	0.025	0.006	0.009	0.009	<0.009	0.006	0.006	<.009	0.006
4/(27-28)/98	AM-8	321.75	0.120	0.684	0.016	0.034	0.056	0.078	0.012	0.019	0.016	0.006	0.006	0.009	0.003	0.006	0.003	<.009	0.003
4/(28-29)/98	AM-1	323.10	0.191	1.919	0.102	0.099	0.124	0.152	0.028	0.034	0.025	0.009	0.009	0.009	0.003	0.006	0.006	<.009	0.006
5/(4-5)/98	AM-1	328.90	**0.292**	1.034	0.070	0.088	0.128	0.222	0.040	0.024	0.018	0.003	0.003	0.006	<0.009	<0.009	<0.009	<0.009	<0.009
5/(5-6)/98	AM-6	320.32	**0.284**	2.092	0.106	0.150	0.162	0.300	0.053	0.069	0.053	0.016	0.019	0.019	0.009	0.012	0.012	0.003	0.012
5/(12-13)/98	AM-9	324.23	**0.276**	0.102	0.015	0.046	0.056	0.204	0.046	0.089	0.077	0.015	0.022	0.022	0.006	0.009	0.012	0.003	0.012
5/(13-14)/98	AM-6	333.90	0.131	0.689	0.075	0.120	0.126	0.299	0.033	0.036	0.033	0.006	0.006	0.009	0.003	0.006	0.006	<0.009	0.006
5/(19-20)/98	AM-6	324.00	**0.358**	1.204	0.167	0.130	0.247	0.463	0.077	0.108	0.102	0.031	0.031	0.037	0.015	0.028	0.028	0.006	0.028
	PELs		0.2	1,200*	--	--	--	200	200	--	200	--	200	--	--	200	--	--	--
	Odor Threshold		--	1,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

				BTEX ($\mu g/m^3$)			
Sample Date	Sample ID	Sample Vol. (mL)	Sample Vol. (m^3)	Benzene	Ethylbenzene	Toluene	Xylenes (total)
2/26/98	AM-1	18,017	0.01802	<4.2	<4.2	<4.2	<4.2
3/3/98	AM-2	27,000	0.02700	<2.8	<2.8	<2.8	<2.8
3/23/98	AM-3	29,200	0.02920	2.9	3.8	5.5	10.5
3/25/98	AM-4	28,370	0.02837	6.7	4.9	6.3	6.3
4/1/98	AM-4	53,800	0.05380	16.0	11.0	18.0	20.6
4/2/98	AM-3	36,900	0.03690	8.3	9.6	14.0	20.1
4/6/98	AM-4	45,500	0.04550	4.2	6.7	8.6	1.4
4/15/98	AM-7	23,500	0.02350	<3.2	<3.2	<3.2	<6.4
4/22/98	AM-5	44,700	0.04470	<1.7	<1.7	<1.7	<3.4
4/29/98	AM-7	56,623	0.05662	2.1	<2	2.0	<4
4/29/98	AM-8	59,700	0.05970	<1.3	<1.3	<1.3	<2.6
5/5/98	AM-1	31,700	0.03170	<2.4	<2.4	<2.4	<4.8
5/12/98	AM-9	14,367	0.01437	<5.2	<5.2	9.1	<5.2
5/13/98	AM-6	29,600	0.02960	2.9	5	7.1	1.25
5/15/98	AM-1	42,000	0.04200	19	13	25	62
5/19/98	AM-6	17,100	0.01710	<4.4	<4.4	9.2	12.9
5/27/98**	AM-4	21,500	0.02150	<3.5	<3.5	<3.5	<3.5
	PELs			3,250	441,000	383,000	441,000
	Odor Threshold			4,800	399	600	86,800

Notes:

AM-1 is located on the north central property boundary approximately 100 ft south of fire hydrant adjacent to West Street (near former AS-2 sample).
AM-2 is located on the northeast corner property boundary.
AM-3 is located on the eastern property boundary - east of HP-101.
AM-4 is located on the north central property boundary - north of TP-13.
AM-5 is located on the southeast corner of the property.
AM-6 is located on the east side of the work area in the city of Stevens Point parking lot.
AM-7 is located on the northwest corner of the property, near Crosby Ave.
AM-8 is located in Pioneer Park, at the west extent of the site perimeter fence.
AM-9 is located on the north central property boundary adjacent to OW-4.
*denotes NR 445 compound limit of 2.5 percent of PEL
**Naphthalene also analyzed and not detected (detection limit = 3.5 $\mu g/m^3$).
PEL = permissible exposure limit.

Table 7 - Water Analytical Results - Wastewater Pretreatment System
Remedial Action Documentation Report
Former Stevens Point Manufactured Gas Plant Site - WPSC

Sample ID	Sample Date	BTEX (µg/L) Benzene	Ethylbenzene	Toluene	Xylenes	Total BTEX	Polynuclear Aromatic Hydrocarbons (µg/L) Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Cyanide, Total (mg/L)	Cyanide, Amenable (mg/L)	Cyanide, Dissociable (mg/L)	Total Suspended Solids (mg/L)	Oil & Grease (mg/L)
INFLUENT																														
INF-0324	3/24/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	510	--
INF-0326	3/26/98	80	53	38.0	101	272	42	12	3.5	0.9	0.95	1	1	0.47	0.93	nd	4.7	17	3	39	51	390	34	4.4	606	0.110	--	--	--	18
INF-0330	3/30/98	170	72	100	168	510	70	13	8.9	0.33	0.37	0.31	nd	nd	nd	nd	3.8	28	0.61	64	12	nd	43	2.8	247	0.076	--	--	--	2.3
INF-0401	4/1/98	64	56	40	120	280	56	nd	14	5.6	7.2	5.1	4.1	2.6	5.1	4	16	25	14	33	7.4	nd	47	13	259	0.150	0.150	0.013	--	1.6
INF-0408	4/8/98	210	86	150	240	686	75	29	8.4	0.96	0.91	0.82	0.8	0.44	0.78	0.61	7.5	33	2.2	78	110	530	61	6.5	946	0.086	--	--	--	nd
INF-0414	4/14/98	190	74	160	240	664	82	56	18	4.6	3.6	3.1	2.7	1.8	4.3	2.9	22	49	5.9	89	140	530	89	17	1121	0.093	--	--	--	1.4
INF-0421	4/21/98	37	21	28	75	161	33	nd	3.6	nd	nd	nd	nd	nd	nd	nd	3.3	13	nd	32	37	140	16	2.9	281	0.120	--	--	--	nd
INF-0428	4/28/98	71	21	55	74	221	26	8.5	3.2	0.28	nd	nd	nd	nd	nd	nd	3.2	9.5	nd	21	20	82	14	3	191	0.170	--	--	--	0.22
INF-0504	5/4/98	9	2.2	10	12.1	33.3	nd	nd	1.2	0.49	0.52	0.41	0.38	0.22	0.45	0.21	1.6	nd	0.97	nd	nd	nd	0.84	1.2	8.49	0.160	--	--	--	--
INF-0513	5/13/98	2.8	1.7	3.2	7.6	15.3	68	17	4.1	0.66	0.85	0.33	0.62	0.25	0.53	0.42	3.5	28	1.2	65	73	49	42	5	359	0.046	--	--	--	--
EFFLUENT																														
EFF-0326	3/26/98	0.87	0.81	0.48	1.65	3.81	0.9	nd	0.21	0.39	0.45	0.46	0.48	0.24	0.43	0.46	0.6	0.31	1.4	0.7	nd	nd	0.87	0.6	8.5	0.032	--	--	12	--
EFF-0330	3/30/98	14	5.9	7.7	13.9	41.5	nd	nd	0.67	nd	0.31	0.31	nd	nd	nd	nd	0.78	nd	0.71	nd	nd	nd	nd	0.65	3.43	0.079	--	--	36	--
EFF-0401	4/1/98	11	10	6.5	23.2	50.7	nd	nd	1.5	1.4	1.6	1.4	0.93	0.78	1.4	1.3	3.3	1.9	3.7	nd	nd	nd	2.1	2.7	24	0.043	0.043	0.006	14	--
EFF-0408	4/8/98	10	2.5	5.6	8.1	26.2	nd	nd	2.1	2.1	2.9	2.6	2.5	1.4	2.2	1.8	4.3	nd	6.8	nd	nd	nd	1.4	4	34.1	0.075	--	--	33	--
EFF-0414	4/14/98	88	21	73	95	277	nd	nd	9.5	6	5.4	4.6	4	3.2	5.8	4	17	3.9	12	nd	nd	nd	6.9	13	95.3	0.077	--	--	26	--
EFF-0421	4/21/98	14	5.8	10	26.2	56	12	nd	1.1	0.29	nd	nd	nd	nd	nd	nd	1.9	3.7	nd	nd	nd	nd	1.7	1.5	22.2	0.110	--	--	5	--
EFF-0428	4/28/98	21	9.3	20	40	90.3	20	nd	1.8	nd	nd	nd	nd	nd	nd	nd	2.3	7.9	nd	14	9.5	13	6.4	2	76.9	0.160	--	--	11	--
EFF-0504	5/4/98	4.1	0.93	4.6	6.2	15.8	nd	nd	1.1	0.66	0.73	0.56	0.49	0.31	0.6	0.58	1.7	nd	1.4	nd	nd	nd	0.64	1.4	10.2	0.120	--	--	40	--
EFF-0513	5/13/98	nd	0.37	nd	nd	0.37	18	4.6	0.41	0.36	0.66	0.37	0.48	0.22	0.4	0.63	1.2	4.3	1.2	16	9.6	nd	2.4	1.6	62.4	0.052	--	--	9	--
SPWWTP Limits		nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	250	nl

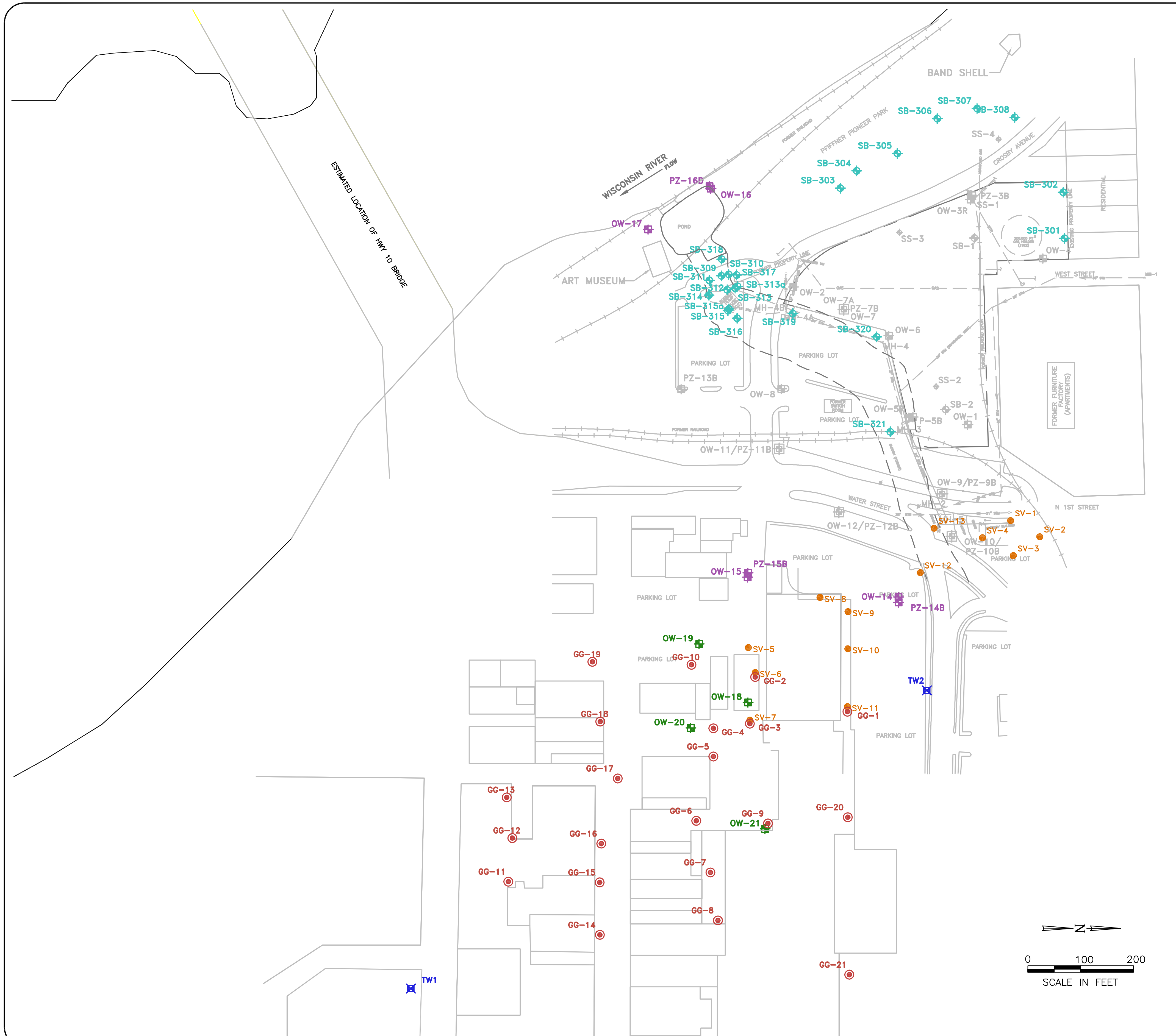
Notes:
1. -- = parameter not analyzed
2. nd = parameter not detected above laboratory detection limit.
3. nl = no effluent limit established for parameter.
4. cyanide samples are not field filtered.

By: KMZ
Checked by: SLF

Table 8 - Soil Analytical Results - Surface Soil Quality
Remedial Action Documentation Report
Former Stevens Point Manufactured Gas Plant Site - WPSC

			BTEX (mg/kg)					Polynuclear Aromatic Hydrocarbons (mg/kg)																						
Sample ID	Sample Date	Sample Depth (feet BGS)	Benzene	Ethylbenzene	Toluene	Xylenes	Total BTEX	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Cyanide, Total (mg/kg)	Cyanide, Amenable (mg/kg)	Cyanide, Dissociable (mg/kg)	Lead (mg/kg)
ON-SITE SURFACE SOIL QUALITY																														
B-107	6/9/93	0-2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12
TP-116	3/4/98	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	59
TP-120	3/4/98	1	--	--	--	--	--	0.062	0.036	0.16	0.82	1.4	1.1	1.0	0.82	0.8	0.35	0.97	0.048	1.1	nd	0.036	0.049	0.46	0.87	10	0.37	--	--	--
EW-3B (1.5)	5/14/98	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.89	0.89	0.16	--
EW-9 (1.5)	5/15/98	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	--	--	38
EW-118 (1.5)	5/5/98	1.5	nd	nd	nd	nd	nd	0.047	0.23	0.46	1.4	2.1	2.4	1.4	2.1	1.6	0.63	2.3	0.057	1.3	nd	0.1	0.2	0.68	1.9	19	13	--	--	58
EW-119 (1.5)	5/6/98	1.5	nd	nd	0.036	0.071	0.1	nd	2	1.2	8.2	12	12	8.9	12	8.4	3.1	12	nd	7.3	nd	0.35	nd	1.2	13	102	6.2	--	--	45
EW-204 (1.5)	5/13/98	1.5	nd	nd	nd	0.028	0.03	0.37	2.1	1.9	9.2	14	9.7	7.3	9.3	8.6	2.2	13	0.55	5.9	nd	0.98	0.53	4.7	19	109	7.2	--	--	34
OFF-SITE SURFACE SOIL QUALITY																														
HA-1	3/26/98	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	--	--
HA-2	3/26/98	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	nd	--	--	--
SS-4	5/23/85	surface	--	--	--	--	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd	nd	nd	--	65
SS-4	5/23/85	6-18"	--	--	--	--	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	--	--	nd	nd	nd	nd	0.28	nd	--	26
B-110	6/9/93	0-0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	nd	--	--	--
B-111	6/9/93	0-0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	nd	--	--	--
B-112	6/9/93	0-0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	nd	--	--	--
HP-113/B-113	6/9/93	0-0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.56	--	--	--
TP-113	3/4/98	0.5	--	--	--	--	--	0.046	nd	0.09	0.17	0.19	0.19	0.14	0.13	0.19	0.034	0.45	0.034	0.15	nd	nd	0.036	0.32	0.36	3	nd	nd	nd	8.9
EW-107 (1.5)	4/21/98	1.5	nd	nd	nd	nd	nd	nd	nd	nd	0.03	0.039	0.029	0.028	0.032	0.025	nd	0.045	nd	0.025	nd	nd	0.033	0.02	0.035	0.3	0.07	--	--	nd
EW-108 (1.5)	4/21/98	1.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	--	--	9.5
EW-109 (1.5)	4/21/98	1.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.05	--	--	4.6
EW-110 (1.5)	4/21/98	1.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.017	nd	nd	nd	nd	nd	0.021	nd	nd	nd	nd	nd	0.018	nd	0.06	0.05	--	--	nd
EW-120 (1.5)	5/13/98	1.5	nd	nd	0.037	0.04	0.08	nd	1	1.5	8.7	11	12	5.5	8.7	8.1	1.9	14	0.47	5.1	nd	nd	0.57	3.4	14	96	1.3	--	--	150
INTERIM AND PRELIMINARY GUIDANCE LEVELS																														
Groundwater Pathway RCL			0.0055	2.9	1.5	4.1	ns	38	0.7	3,000	17	48	360	6,800	870	37	38	500	100	680	23	20	0.4	1.8	8,700	ns	ns	ns	ns	ns
Direct Contact Pathway-Non-industrial RCL			ns	ns	ns	ns	ns	900	18	5,000	0.088	0.0088	0.088	1.8	0.88	8.8	0.0088	600	600	0.088	1,100	600	20	18	500	ns	ns	ns	ns	50
Direct Contact Pathway-Industrial RCL			ns	ns	ns	ns	ns	60,000	360	300,000	3.9	0.39	3.9	39	39	390	0.39	40,000	40,000	3.9	70,000	40,000	110	390	30,000	ns	ns	ns	ns	500
US EPA Residential PRGs			0.63	230	790	320	ns	110	ns	5.7	0.61	0.061	0.61	ns	6.1	7.2	0.061	2,600	90	0.61	ns	ns	240	ns	100	ns	ns	ns	1,300	400
US EPA Industrial PRGs			1.4	230	880	320	ns	110	ns	5.7	2.6	0.26	2.6	ns	26	7.2	0.26	27,000	90	2.6	ns	ns	240	ns	100	ns	ns	ns	1,400	1,000
TACO - Construction Worker SRO			2.1	58	42	410	ns	120,000	ns	610,000	170	17	170	ns	1,700	17,000	17	82,000	82,000	170	ns	ns	8,200	ns	61,000	ns	ns	4,100	ns	400

Notes:
1. -- = parameter not analyzed
2. nd = parameter not detected above laboratory detection limit
3. RCL = WDNR generic Residual Contaminant Level.
4. PRG = US EPA Region 9 Preliminary Remediation Goals for direct contact.
5. PRGs assume all dissociable cyanide as free cyanide.
6. TACO = Illinois Tiered Approach to Corrective Objectives, Title 35 IL Admin. Code.
7. SRO = Soil Remediation Objectives for inhalation (BTEX) and ingestion (PAHs, cyanide, lead).
8. Sample depths measured with respect to pre-remedial ground surface elevations.
9. ns = no interim or guidance level has been established.
10. HP-113 and B-113 appear to be the sampe sample location, based on survey data presented in the Phase II Investigation Report by Simon Hydro-Search. Location is shown as HP-113 in Plates 1 through 4.



LEGEND

PZ-14B OW-17	WELL LOCATION (2007)
SB-308	SOIL BORING (2007)
OW-19	WELL LOCATION (2011)
TW1	TEMPORARY WELL (2008)
SV-11	SOIL VAPOR PROBES (2011)
GG-20	GROUNDWATER GRAB SAMPLES (2011)
OW-1	WATER TABLE OBSERVATION WELL
OW-9 /PZ-9B	WATER TABLE OBSERVATION WELL
P-5B	PIEZOMETER
SS-4	EDI SURFACE SAMPLE (1986)
MH-1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
WTR	WATER LINE
GAS	GAS LINE
STM	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

SOURCE NOTES:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.
TTW-1 AND TW-2 SURVEYED BY WPSC ON DECEMBER 1, 2008.
OW-18 THROUGH OW-21 SURVEYED BY WPSC ON MARCH 1, 2011.
SOIL VAPOR AND GROUNDWATER GRAB SAMPLE LOCATIONS, PORTAGE COUNTY COORDINATES, US SURVEY FEET.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: RLH DATE: 12/14/11
CHECKED BY: EPK DATE: 12/14/11
APPROVED BY: EPK DATE: 12/14/11
DRAWING NO: 1177-1412C-B44C
REFERENCE: NONE

WELL AND SOIL BORING LOCATIONS 2007, 2008, AND 2011

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
5

Table 4. Soil Analytical Results - Polynuclear Aromatic Hydrocarbon (PAH, µg/Kg)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities
1111 Crosby Avenue, Steven's Point, Wisconsin
USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Sample Depth	Collection Date	1-Methyl-naphtahlene	2-Methyl-naphthalene	Acenaphthene	Acenaph-thylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
Soil Screening Benchmarks																				
Ingestion Pathway, Residential			NS	NS	3400000	NS	17000000	600	60	600	NS	6000	62000	60	2300000	2300000	600	3600	NS	1700000
Outdoor Worker Ingestion-Dermal			NS	NS	37000000	NS	180000000	2000	200	2000	NS	23000	230000	200	24000000	24000000	2000	18000	NS	18000000
Indoor Worker Ingestion-Dermal			NS	NS	120000000	NS	610000000	8000	800	8000	NS	78000	780000	800	82000000	82000000	8000	18000	NS	61000000
OW17																				
	10 - 12'	7/17/2007	< 48 Q UJ	< 54 Q UJ	< 52 Q UJ	< 44 Q UJ	< 46 Q UJ	260 Q J	**280 Q J**	240 Q J	130 Q	340 Q J	310 Q J	< 70 Q UJ	320 Q J	< 64 Q UJ	160 Q	< 80 Q UJ	83 Q	280 Q J
	12 - 14'	7/17/2007	< 40 Q UJ	< 45 Q UJ	< 43 Q UJ	< 36 Q UJ	< 39 Q UJ	< 34 Q UJ	< 41 Q UJ	< 43 Q UJ	< 52 Q UJ	< 39 Q UJ	< 53 Q UJ	< 58 Q UJ	< 58 Q UJ	< 53 Q UJ	< 65 Q UJ	< 67 Q UJ	< 34 Q UJ	< 30 Q UJ
PZ16																				
	12 - 14'	7/18/2007	6000	12000	12000	1100	11000	**6600**	**5500**	**4000**	2500	4100	5500	**910**	18000	8600	**2300**	**27000**	29000	13000
SB301																				
	0 - 1'	7/17/2007	< 4.3	< 4.5	< 4.2	< 4.1	< 5.1	10 Q	12 Q	13 Q	10 Q	11 Q	13 Q	< 3.9	25	< 4.9	8.4 Q	9.2 Q	15	20
SB302																				
	0 - 1'	7/17/2007	< 3.6	< 3.7	< 3.5	< 3.4	< 4.2	< 6.2	5.7 Q	6.2 Q	6.1 Q	5.4 Q	6.5 Q	< 3.2	7.7 Q	< 4	4.4 Q	6.2 Q	< 3.5	6.2 Q
SB303																				
	0 - 2'	7/17/2007	8 Q	12	6.7 Q	39	100	160	**200**	200	130	200	230	41	350	8.9 Q	110	15	120	280
SB304																				
	0 - 2'	7/17/2007	< 3.5	< 3.6	3.5 Q	< 3.3	10 Q	26	28	28	21	23	32	6.3 Q	77	< 3.9	17	< 4.6	41	57
SB305																				
	0 - 2'	7/17/2007	< 3.7	< 3.8	< 3.6	< 3.5	< 4.4	7.2 Q	8.7 Q	8.9 Q	6.4 Q	8.2 Q	9.4 Q	< 3.4	16	< 4.2	5.2 Q	< 4.9	6 Q	13
SB306																				
	0 - 2'	7/17/2007	< 4	< 4.1	< 3.9	< 3.8	< 4.7	< 6.9	< 3.7	< 3.7	< 4.6	< 4	< 5.7	< 3.6	4.1 Q	< 4.5	< 3.3	< 5.2	< 3.8	3.4 Q
SB307																				
	0 - 2'	7/17/2007	< 3.4	< 3.5	< 3.3	< 3.2	< 4	< 6	3.8 Q	4 Q	< 4	3.5 Q	5.6 Q	< 3.1	7.6 Q	< 3.8	< 2.8	< 4.5	3.8 Q	6.5 Q
SB308																				
	0 - 2'	7/17/2007	< 3.5	< 3.6	< 3.4	< 3.3	< 4.1	14 Q	16	20	15	18	21	4.9 Q	35	< 3.9	12	< 4.6	13	28
SB311																				
	13 - 15'	7/18/2007	820	1400	2500	240	3300	**1900**	**1900**	**1200**	840	1600	1600	**340**	5100	2200	**830**	1500	8000	3700
	18 - 20'	7/17/2007	< 38 Q UJ	< 43 Q UJ	< 41 Q UJ	< 35 Q UJ	< 37 Q UJ	< 33 Q UJ	< 39 Q UJ	< 41 Q UJ	< 50 Q UJ	< 37 Q UJ	< 51 Q UJ	< 56 Q UJ	< 56 Q UJ	< 51 Q UJ	< 63 Q UJ	< 64 Q UJ	< 32 Q UJ	< 29 Q UJ
SB312																				
	3 - 5'	7/17/2007	< 40 Q UJ	< 45 Q UJ	< 43 Q UJ	< 36 Q UJ	< 39 Q UJ	< 34 Q UJ	< 41 Q UJ	< 43 Q UJ	< 52 Q UJ	< 39 Q UJ	< 53 Q UJ	< 58 Q UJ	< 58 Q UJ	< 53 Q UJ	< 65 Q UJ	< 67 Q UJ	< 34 Q UJ	39 Q
	14 - 16'	7/18/2007	< 40 Q UJ	< 45 Q UJ	< 44 Q UJ	< 37 Q UJ	< 39 Q UJ	< 35 Q UJ	< 41 Q UJ	< 43 Q UJ	< 53 Q UJ	< 39 Q UJ	< 54 Q UJ	< 59 Q UJ	< 59 Q UJ	< 54 Q UJ	< 66 Q UJ	< 68 Q UJ	< 34 Q UJ	< 30 Q UJ
	23 - 25'	7/18/2007	< 3.8	< 4	< 3.8	< 3.6	< 4.5	< 6.7	< 3.6	< 3.6	< 4.5	< 3.9	< 5.5	< 3.5	4.7 Q	< 4.3	< 3.2	< 5.1	4.7 Q	3.2 Q
SB314																				
	14 - 16'	7/18/2007	42	66	110	11 Q	46	68	**86**	59	52	69	68	18	140	66	46	220	130	130
	23 - 25'	7/18/2007	< 3.8	< 3.9	< 3.7	< 3.6	8.9 Q	< 6.6	< 3.6	< 3.5	< 4.4	< 3.8	< 5.4	< 3.4	9.3 Q	4.5 Q	< 3.1	6.9 Q	13	6.6 Q
SB315																				
	11 - 13'	7/18/2007	110 Q	55 Q	530	190	1200	**1700**	**1500**	**1100**	750	1200	1500	**260**	3900	510	**690**	110 Q	2600	2900
SB316																				
	23 - 25'	7/18/2007	< 4	< 4.1	4.5 Q	< 3.8	15 Q	29	30	28	22	24	29	5.5 Q	78	4.7 Q	18	< 5.3	43	58
SB317																				
	13 - 15'	7/18/2007	5 Q	8.4 Q	8.1 Q	< 4.3	17 Q	< 7.8	5.4 Q	< 4.1	< 5.3	4.6 Q	6.5 Q	< 4.1	14	5.9 Q	< 3.7	35	21	12 Q
	16 - 18'	7/18/2007	49	52	89	< 3.6	12 Q	< 6.6	4.6 Q	< 3.5	< 4.4	4.1 Q	5.6 Q	< 3.4	11 Q	61	< 3.1	170	69	11

NATURAL RESOURCE TECHNOLOGY

Sample ID	*Sample Depth*	*Collection Date*	*1-Methyl-naphtahlene*	*2-Methyl-naphthalene*	*Acenaphthene*	*Acenaph-thylene*	*Anthracene*	*Benzo (a) anthracene*	*Benzo (a) pyrene*	*Benzo (b) fluoranthene*	*Benzo (ghi) perylene*	*Benzo (k) fluoranthene*	*Chrysene*	*Dibenz (a,h) anthracene*	*Fluoranthene*	*Fluorene*	*Indeno (1,2,3-cd) pyrene*	*Naphthalene*	*Phenanthrene*	*Pyrene*
Soil Screening Benchmarks																				
Ingestion Pathway, Residential			NS	NS	3400000	NS	17000000	600	60	600	NS	6000	62000	60	2300000	2300000	600	3600	NS	1700000
Outdoor Worker Ingestion-Dermal			NS	NS	37000000	NS	180000000	2000	200	2000	NS	23000	230000	200	24000000	24000000	2000	18000	NS	18000000
Indoor Worker Ingestion-Dermal			NS	NS	120000000	NS	610000000	8000	800	8000	NS	78000	780000	800	82000000	82000000	8000	18000	NS	61000000
SB318																				
	13 - 15'	7/18/2007	38000	72000	45000	23000	64000	**37000**	**28000**	**20000**	12000	**23000**	30000	**5000**	97000	53000	**12000**	**200000**	160000	69000
	18 - 20'	7/18/2007	< 4	< 4.1	4.8 Q	4.7 Q	28	22 Q	18	14	9 Q	15	19 Q	4.4 Q	50	8.4 Q	8.9 Q	6.4 Q	46	36
SB319																				
	2 - 6'	7/18/2007	580 Q	1000 Q	1000 Q	320	1600 Q	**1700 Q**	**2200 Q**	**1500**	1200	1800 Q	1500 Q	**400 Q**	3900 Q	1000 Q	**1100**	1800 Q	3500 Q	2800 Q
	10 - 12'	7/18/2007	64000	120000	110000	13000	75000	**62000**	**51000**	**34000**	22000	**40000**	51000	**8400**	160000	78000	**21000**	**260000**	250000	120000
	18 - 20'	7/18/2007	< 3.4	< 3.5	8.2 Q	< 3.2	9.1 Q	< 5.9	4.4 Q	< 3.1	< 4	3.7 Q	5.3 Q	< 3.1	16	9.9 Q	< 2.8	5.2 Q	23	11
SB320																				
	2 - 6'	7/18/2007	270	340	540	3100	5700	**13000**	**15000**	**12000**	9700	**12000**	13000	**3000**	27000	990	**8600**	950	11000	24000
	10 - 12'	7/18/2007	4900	8300	6900	2700	12000	**7000**	**6700**	**4500**	3700	5400	6400	**1100**	18000	6100	**3300**	**22000**	22000	14000
	18 - 20'	7/18/2007	< 3.6	< 3.7	< 3.5	< 3.4	16	14 Q	12	6.4 Q	6.3 Q	9.1 Q	12 Q	< 3.3	28	< 4.1	4.9 Q	< 4.8	8.5 Q	39
SB321																				
	2 - 6'	7/18/2007	21	32	60	100	230	**740**	**780**	**630**	370	660	700	**130**	1400	51	340	100	420	1100
	13 - 15'	7/18/2007	1300	640	2100	< 45	< 56	< 83	< 45	< 44	< 56	< 48	< 68	< 43	< 45	280	< 39	**8000**	300	50 Q
	19 - 20'	7/18/2007	26	13	110	< 3.5	26	< 6.5	3.7 Q	< 3.5	< 4.4	< 3.8	< 5.4	< 3.4	39	78	< 3.1	56	94	23

Notes

1) Samples that attain or exceed a soil screening benchmark are identified in underlined and bold.

NS: EPA Generic SSL has not been established for this parameter.
<2.0 : Parameter not detected above the Limit of Detection indicated.
-- : Parameter not analyzed.
Q: Analyte result has been qualified, see laboratory analytical report for additional information.
Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.

Table 5. Soil Analytical Summary - Petroleum Volatile Organic Compounds (PVOCs, µg/Kg), Cyanide (µg/Kg), and Phenols (µg/Kg)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities
1111 Crosby Avenue, Steven's Point, Wisconsin
USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Sample Depth	Collection Date	Benzene	Ethyl-benzene	Toluene	Xylenes, M + P	Xylene, O	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	Methyl - Tert - Butyl- Ether	Cyanide, Total	2,4 -Dimethyl phenol	2-Methylphenol	3 and 4 Methylphenol
Wisconsin Generic Soil Residual Contaminant Levels (RCLs) (NR 720, September 2007)														
Non-Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Soil Screening Benchmarks														
Ingestion Pathway, Residential			12000	5400	16000000	160000000	160000000	NS	NS	NS	1600000	1200000	3100000	NS
Outdoor Worker Ingestion-Dermal			58000	27000	230000000	NS	NS	NS	NS	NS	23000000	14000000	34000000	NS
Indoor Worker Ingestion-Dermal			100000	27000	410000000	1000000000	1000000000	NS	NS	NS	41000000	41000000	100000000	NS
OW17														
	10 - 12'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	92 Q	< 120 Q UJ	< 180 Q	< 36 Q UJ
	12 - 14'	7/17/2007	< 25	< 25	< 25	< 51	< 25	< 25	< 25	< 25	63 Q	< 100 Q UJ	< 150 Q	< 30 Q UJ
PZ16														
	12 - 14'	7/18/2007	1700 Q	**11000 Q**	4500 Q	19000 Q	7200 Q	25000 Q	12000 Q	< 1000 Q	340	< 1200 Q	< 1800 Q	< 370 Q
SB301														
	0 - 1'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	260	< 120	< 180	< 36
SB302														
	0 - 1'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	320 Q	< 99	< 150	< 30
SB303														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
SB304														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
SB305														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
SB306														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
SB307														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
SB308														
	0 - 2'	7/17/2007	< 25	< 25	< 25	< 51	< 25	< 25	< 25	< 25	--	--	--	--
SB311														
	13 - 15'	7/18/2007	35 Q	< 25	< 25	< 50	< 25	110	< 25	< 25	260 Q	< 110	< 170	49 Q
	18 - 20'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	62 Q	< 96 Q UJ	< 140 Q	< 29 Q UJ
SB312														
	3 - 5'	7/17/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	66 Q	< 100 Q UJ	< 150 Q	< 30 Q UJ
	14 - 16'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 55	< 100 Q UJ	< 150 Q	< 31 Q UJ
	23 - 25'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 76	< 110	< 160	< 32

Sample ID	Sample Depth	Collection Date	Benzene	Ethyl-benzene	Toluene	Xylenes, M + P	Xylene, O	1,2,4-Trimethly-benzene	1,3,5-Trimethly-benzene	Methyl - Tert - Butyl- Ether	Cyanide, Total	2,4 -Dimethyl phenol	2-Methylphenol	3 and 4 Methylphenol
Wisconsin Generic Soil Residual Contaminant Levels (RCLs) (NR 720, September 2007)														
Non-Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Soil Screening Benchmarks														
Ingestion Pathway, Residential			12000	5400	16000000	160000000	160000000	NS	NS	NS	1600000	1200000	3100000	NS
Outdoor Worker Ingestion-Dermal			58000	27000	230000000	NS	NS	NS	NS	NS	23000000	14000000	34000000	NS
Indoor Worker Ingestion-Dermal			100000	27000	410000000	1000000000	1000000000	NS	NS	NS	41000000	41000000	100000000	NS
SB314														
	14 - 16'	7/18/2007	48 Q	< 25	51 Q	< 50	< 25	63 Q	< 25	< 25	910	< 130	< 190	< 38
	23 - 25'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 97	< 100	< 160	< 32
SB315														
	11 - 13'	7/18/2007	62 Q	< 25	100	< 50	46 Q	< 25	< 25	< 25	490	< 210 Q	< 320 Q	< 64 Q
SB316														
	23 - 25'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 86	< 110	< 170	< 33
SB317														
	13 - 15'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	130 Q	< 120	< 190	< 37
	16 - 18'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 83	< 100	< 160	< 32
SB318														
	13 - 15'	7/18/2007	5600 Q	**16000 Q**	16000 Q	33000 Q	14000 Q	26000 Q	11000 Q	< 1200 Q	140 Q	< 4600 Q	< 6900 Q	< 1400 Q
	18 - 20'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 61	< 110	< 170	< 33
SB319														
	2 - 6'	7/18/2007	55 Q	56 Q	170	130 Q	68 Q	86	34 Q	< 25	--	--	--	--
	10 - 12'	7/18/2007	1500 Q	**7400 Q**	910 Q	11000 Q	4500 Q	25000 Q	11000 Q	< 620 Q	420	< 5700 Q	--	< 1700 Q
	18 - 20'	7/18/2007	30 Q	< 25	< 25	< 50	< 25	< 25	< 25	< 25	160 Q	< 94	< 140	< 28
SB320														
	2 - 6'	7/18/2007	120	46 Q	180	210	150	100	54 Q	< 25	--	--	--	--
	10 - 12'	7/18/2007	110 Q	1500 Q	260 Q	1400 Q	640 Q	1600 Q	790 Q	< 62 Q	3500	< 1100 Q	< 1700 Q	< 330 Q
	18 - 20'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	< 36	< 100	< 150	< 30
SB321														
	2 - 6'	7/18/2007	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	--	--	--	--
	13 - 15'	7/18/2007	< 25	360	< 25	320	220	1200	500	< 25	93 Q	< 130	< 200	< 40
	19 - 20'	7/18/2007	< 25	< 25	< 25	< 50	< 25	71 Q	< 25	< 25	64 Q	< 100	< 150	< 31

Sample ID	Sample Depth	Collection Date	Benzene	Ethyl-benzene	Toluene	Xylenes, M + P	Xylene, O	1,2,4-Trimethly-benzene	1,3,5-Trimethly-benzene	Methyl - Tert - Butyl- Ether	Cyanide, Total	2,4 -Dimethyl phenol	2-Methylphenol	3 and 4 Methylphenol
Wisconsin Generic Soil Residual Contaminant Levels (RCLs) (NR 720, September 2007)														
Non-Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Industrial Direct Contact			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Soil Screening Benchmarks														
Ingestion Pathway, Residential			12000	5400	16000000	160000000	160000000	NS	NS	NS	1600000	1200000	3100000	NS
Outdoor Worker Ingestion-Dermal			58000	27000	230000000	NS	NS	NS	NS	NS	23000000	14000000	34000000	NS
Indoor Worker Ingestion-Dermal			100000	27000	410000000	1000000000	1000000000	NS	NS	NS	41000000	41000000	100000000	NS

Notes

1) Samples that attain or exceed a soil screening benchmark are identified in underlined and bold.
2) Only detected parameters are shown in report, reference the laboratory analytical report for full list of compounds analyzed.
3) The soil screening benchmark for xylenes derived from the EPA Generic SSLs for m-xylene, o-xylene, and p-xylene.
4) The soil screening benchmark for free cyanide is used for the total cyanides Soil Standard Level.

NS: NR 720 Residual Contaminant Level, NR 746 Risk Screening Criteria standard or EPA Generic Soil Standard Level has not been established
<2.0 : Parameter not detected above the Limit of Detection indicated.
--: Analysis not performed.
Q: Analyte result has been qualified, see laboratory analytical report for additional information.
Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.

Table 6. Soil Analytical Results - Metals (µg/Kg)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities
1111 Crosby Avenue, Steven's Point, Wisconsin
USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Sample Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc
Wisconsin Generic Soil Residual Contaminant Levels (RCLs) (NR 720, September 2007)																		
Groundwater Pathway			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Non-industrial Direct Contact Pathway			NS	NS	39	NS	8000	14000	NS	NS	50000	NS	NS	NS	NS	NS	NS	NS
Industrial Direct Contact Pathway			NS	NS	1600	NS	510000	200000	NS	NS	500000	NS	NS	NS	NS	NS	NS	NS
Soil Screening Benchmarks																		
Ingestion Pathway, Residential			NS	31000	400	5500000	70000	230000	3100000	NS	400000	NS	23000	1600000	390000	390000	550000	23000000
Outdoor Worker Ingestion-Dermal			NS	450000	2000	79000000	900000	3400000	41000000	NS	NS	NS	340000	23000000	5700000	5700000	7900000	340000000
Indoor Worker Ingestion-Dermal			NS	820000	4000	140000000	2000000	6100000	NS	NS	NS	NS	610000	41000000	10000000	10000000	14000000	610000000
OW17																		
	10 - 12'	7/17/2007	13000000	--	**2600**	86000 J	320	21000 J	15000	14000000	13000	260000 J	99	13000	420 Q	--	43000 J	70000
	12 - 14'	7/17/2007	10000000	--	**1900**	40000 J	180	24000 J	11000	15000000	4800	160000 J	20	9800	400 Q	--	43000 Q J	28000
PZ16																		
	12 - 14'	7/18/2007	2800000	< 110 Q U	**800**	17000 J	140 Q	7800 J	11000	4800000	13000	64000 J	18	3900	< 77 Q U	< 23	12000 J	26000
SB301																		
	0 - 1'	7/17/2007	5800000	130 Q J	**1400**	47000 J	270	4900 J	5600	11000000	17000	200000 J	13	3900	440 Q	< 22 U	9600 J	44000
SB302																		
	0 - 1'	7/17/2007	7800000	360 Q	**690**	89000 J	850	2000 J	4500	26000000	13000	350000 J	3.7 Q	1800	1200	< 56 Q U	3800 J	85000
SB311																		
	13 - 15'	7/18/2007	7800000	< 80 Q U	**1100**	26000 J	160	18000 J	5000	11000000	6300	64000 J	24	6700	250 Q J	< 21	34000 J	24000
	18 - 20'	7/17/2007	3200000	--	310	16000 J	92 Q	8100 J	9500	5400000	1200	55000 J	< 1.9	5900	120 Q J	--	15000 J	11000 Q
SB312																		
	3 - 5'	7/17/2007	1900000	< 87 Q U	**750**	8900 J	66 Q	4000 J	4000	2300000	3300	22000 J	15	1800	< 100 Q U	< 18	5200 J	11000
	14 - 16'	7/18/2007	2900000 Q J	--	**950 Q**	9800 Q J	140 Q	5800 Q J	4400	3800000 Q J	1100 Q	48000 Q J	5.2 Q	5400	< 120 Q U	--	11000 Q J	9700 Q
	23 - 25'	7/18/2007	1200000	< 32 Q U	220	6100 J	49 Q	3200 J	3100	3000000	610	25000 J	< 2.1	2300	< 100 Q U	< 20	8900 J	5000
SB314																		
	14 - 16'	7/18/2007	3800000	140 Q J	**630**	23000 J	150 Q	8700 J	7100	3900000	11000	74000 J	62	5300	520 Q	< 24	20000 J	36000
	23 - 25'	7/18/2007	3100000	< 31 Q U	**470**	11000 J	97 Q	5900 J	17000	8700000	1100	58000 J	< 2.1	6400	< 120 Q U	< 19	20000 J	12000
SB315																		
	11 - 13'	7/18/2007	3400000	230 Q J	**1500 Q**	32000 Q J	300 Q	6700 Q J	9200 Q J	5500000	32000 Q J	120000 Q J	14	5200 Q J	210 Q J	< 20	11000 Q J	23000
SB316																		
	23 - 25'	7/18/2007	2000000	< 33	390	11000 J	67 Q	5700 J	8100	5100000	1000	46000 J	< 2.2	3900	< 38 Q U	< 21	14000 J	7400
SB317																		
	13 - 15'	7/18/2007	6500000	< 37	**430**	26000 J	120 Q	14000 J	6800	5200000	3600	61000 J	24	5600	510 Q	< 23	21000 J	19000
	16 - 18'	7/18/2007	2000000	< 75 Q U	300	12000 J	52 Q	4800 J	5300	2400000	7300	28000 J	30	2800	< 71 Q U	< 19	6400 J	12000
SB318																		
	13 - 15'	7/18/2007	8300000	320 Q J	**2500**	49000 J	320	24000 J	23000	14000000	15000	120000 J	24	12000	410 Q	< 21	57000 J	18000
	18 - 20'	7/18/2007	3300000	< 33	280	14000 J	110 Q	9400 J	8600	5300000	1300	60000 J	< 2.2	6100	< 38	< 21	13000 J	12000

Natural Resource Technology

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities

1111 Crosby Avenue, Steven's Point, Wisconsin

USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Sample Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc
Wisconsin Generic Soil Residual Contaminant Levels (RCLs) (NR 720, September 2007)																		
Groundwater Pathway			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Non-industrial Direct Contact Pathway			NS	NS	39	NS	8000	14000	NS	NS	50000	NS	NS	NS	NS	NS	NS	NS
Industrial Direct Contact Pathway			NS	NS	1600	NS	510000	200000	NS	NS	500000	NS	NS	NS	NS	NS	NS	NS
Soil Screening Benchmarks																		
Ingestion Pathway, Residential			NS	31000	400	5500000	70000	230000	3100000	NS	400000	NS	23000	1600000	390000	390000	550000	23000000
Outdoor Worker Ingestion-Dermal			NS	450000	2000	79000000	900000	3400000	41000000	NS	NS	NS	340000	23000000	5700000	5700000	7900000	340000000
Indoor Worker Ingestion-Dermal			NS	820000	4000	140000000	2000000	6100000	NS	NS	NS	NS	610000	41000000	10000000	10000000	14000000	610000000
SB319																		
	10 - 12'	7/18/2007	4500000	< 110 Q U	**2500**	46000 J	780	8900 J	16000	6700000	130000	84000 J	46	6400	390 Q	22 Q U	17000 J	190000
	18 - 20'	7/18/2007	4200000	< 74 Q U	**1800**	17000 J	130	14000 J	14000	13000000	1600	96000 J	< 1.9	7200	140 Q J	< 17	26000 J	13000
SB320																		
	10 - 12'	7/18/2007	3000000	340 Q J	**1500**	24000 J	240	6500 J	17000	6800000	58000	63000 J	200	4800	170 Q J	< 20	11000 J	120000
	18 - 20'	7/18/2007	2700000	< 31 Q U	210	19000 J	61 Q	6100 J	6100	3400000	950	39000 J	< 2	4700	< 36 Q U	< 18	8700 J	8800
SB321																		
	13 - 15'	7/18/2007	5600000	< 83 Q U	**530**	38000 J	130 Q	9500 J	5200	4900000	5000	61000 J	17	4700	400 Q	< 24	12000 J	20000
	19 - 20'	7/18/2007	2600000	< 34 Q U	**510**	15000 J	58 Q	5400 J	5000	4600000	1000	36000 J	2.2 Q	3900	< 96 Q U	< 19	9200 J	10000

Notes

1) Samples that attain or exceed a soil screening benchmark are identified in underlined and bold.

NS: Wisconsin Department of Natural Resources Generic Soil Residual Contaminant Level (RCL) or an EPA Generic SSL has not been established for this parameter.

<2.0 : Parameter not detected above the Limit of Detection indicated.

-- : Parameter not analyzed.

Q: Analyte result has been qualified, see laboratory analytical report for additional information.

Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.

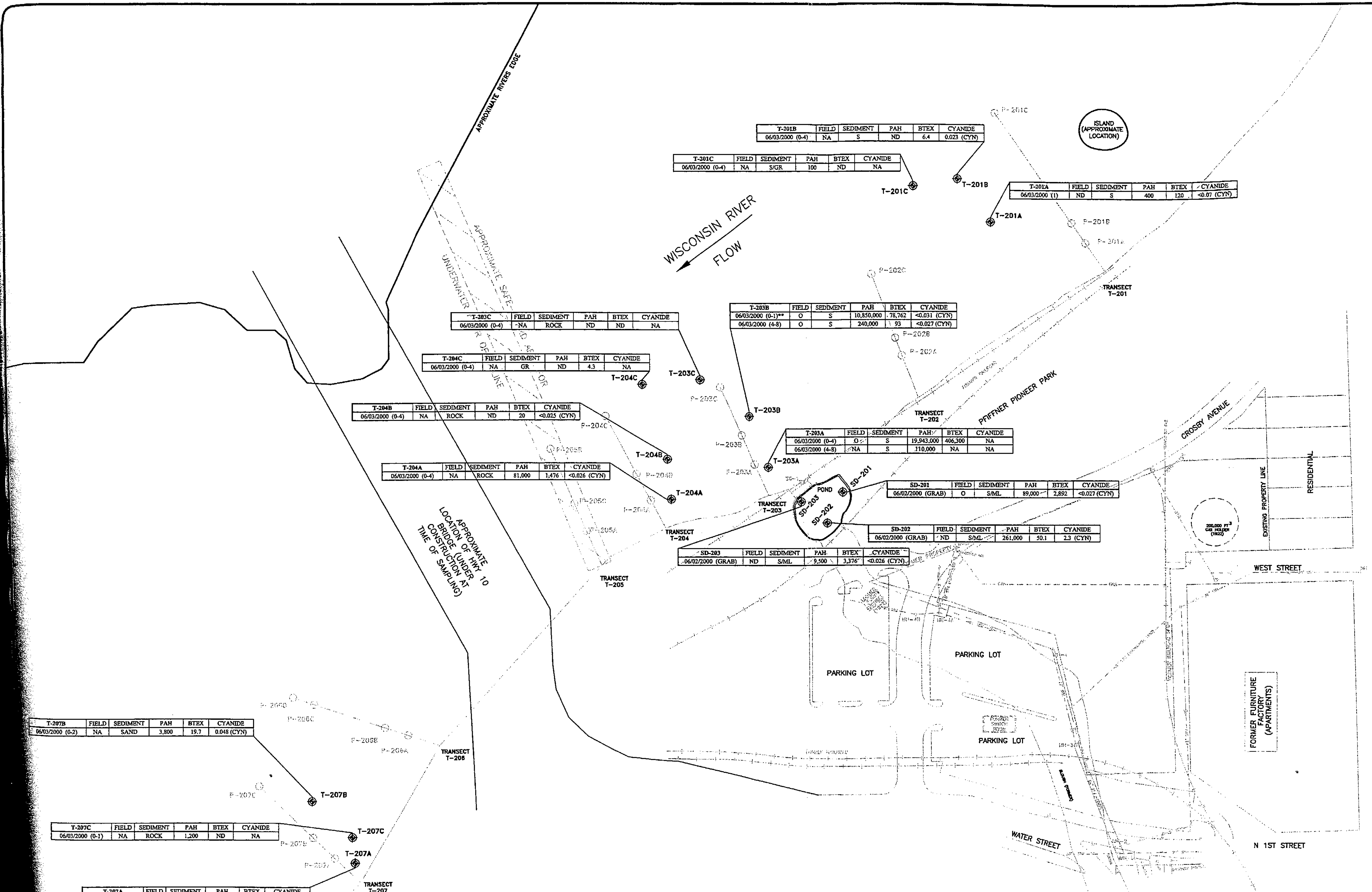
APPENDIX B-2

SEDIMENT PHOTOS, ANALYTICAL RESULTS AND SAMPLING LOCATIONS

Photo #1 – Pfiffner Pioneer Park Pond during river drawdown for dam repairs in 2008 (looking east)

Photo #2 – Wisconsin River adjacent to Pfiffner Pioneer Park Pond during river drawdown for dam repairs in 2008 (looking north from river edge)

Photo #3 – Wisconsin River adjacent to Pfiffner Pioneer Park Pond during river drawdown for dam repairs in 2008 (looking east from river bed)



T-201B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	S	ND	6.4	0.023 (CYN)

T-201C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	S/GR	100	ND	NA

T-201A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (1)	ND	S	400	120	<0.07 (CYN)

T-203B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-1)**	O	S	10,850,000	78,762	<0.031 (CYN)
06/03/2000 (4-8)	O	S	240,000	93	<0.027 (CYN)

T-203C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	ND	ND	NA

T-204C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	GR	ND	4.3	NA

T-204B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	ND	20	<0.025 (CYN)

T-203A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	O	S	19,943,000	406,300	NA
06/03/2000 (4-8)	NA	S	110,000	NA	NA

T-204A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-4)	NA	ROCK	81,000	1,476	<0.026 (CYN)

SD-201	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	O	S/ML	89,000	2,892	<0.027 (CYN)

SD-202	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	ND	S/ML	261,000	50.1	2.3 (CYN)

SD-203	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/02/2000 (GRAB)	ND	S/ML	9,500	3,376	<0.026 (CYN)

T-207B	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-2)	NA	SAND	3,800	19.7	0.048 (CYN)

T-207C	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-1)	NA	ROCK	1,200	ND	NA

T-207A	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
06/03/2000 (0-2)	NA	ORGANIC	2,700	76.4	0.08 (CYN)

LEGEND

- T-201A SEDIMENT SAMPLE
- SD-201 SEDIMENT SAMPLE (POND)
- P-201A TRANSECT POLING LOCATION
- SG-1 STAFF GAUGE
- MH-1 STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WATER LINE
- GAS LINE
- STORM SEWER
- MGP MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SAMPLE LOCATION	FIELD	SEDIMENT	PAH	BTEX	CYANIDE
SAMPLE DATE (DEPTH) (FEET BELOW TOP OF SEDIMENT)	FIELD OBSERVATIONS T=TAR C=COAL FRAGMENTS S=SHEEN O=ODOR	SEDIMENT CHARACTERISTIC S=SAND, ML=SILT GR=GRAVEL	TOTAL POLYNUCLEAR AROMATIC HYDROCARBONS (µg/kg)	BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES (µg/kg)	(WAD) WEAK ACID DISSOCIABLE (AVL) AVAILABLE (CYN) TOTAL (mg/kg)

ND = CONSTITUENTS WERE ANALYZED FOR BUT NOT DETECTED AT THE DETECTION LIMIT.
NA = NOT ANALYZED
µg/kg = MICROGRAMS PER KILOGRAM
mg/kg = MILLIGRAM PER KILOGRAM
GRAB=PONAR SAMPLE
**= SAMPLE RE-ANALYZED AFTER HOLD TIME EXPIRED DUE TO QUALITY CONTROL FAILURE ON INITIAL ANALYSIS.
PHYSICAL FORM OF TAR VARIES (eg. TRACE, DROPLETS, SHEEN), REFER TO SEDIMENT INVESTIGATION REPORTS FOR ADDITIONAL DESCRIPTIONS.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94. DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075. A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1966, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081. STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED 8/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 8/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

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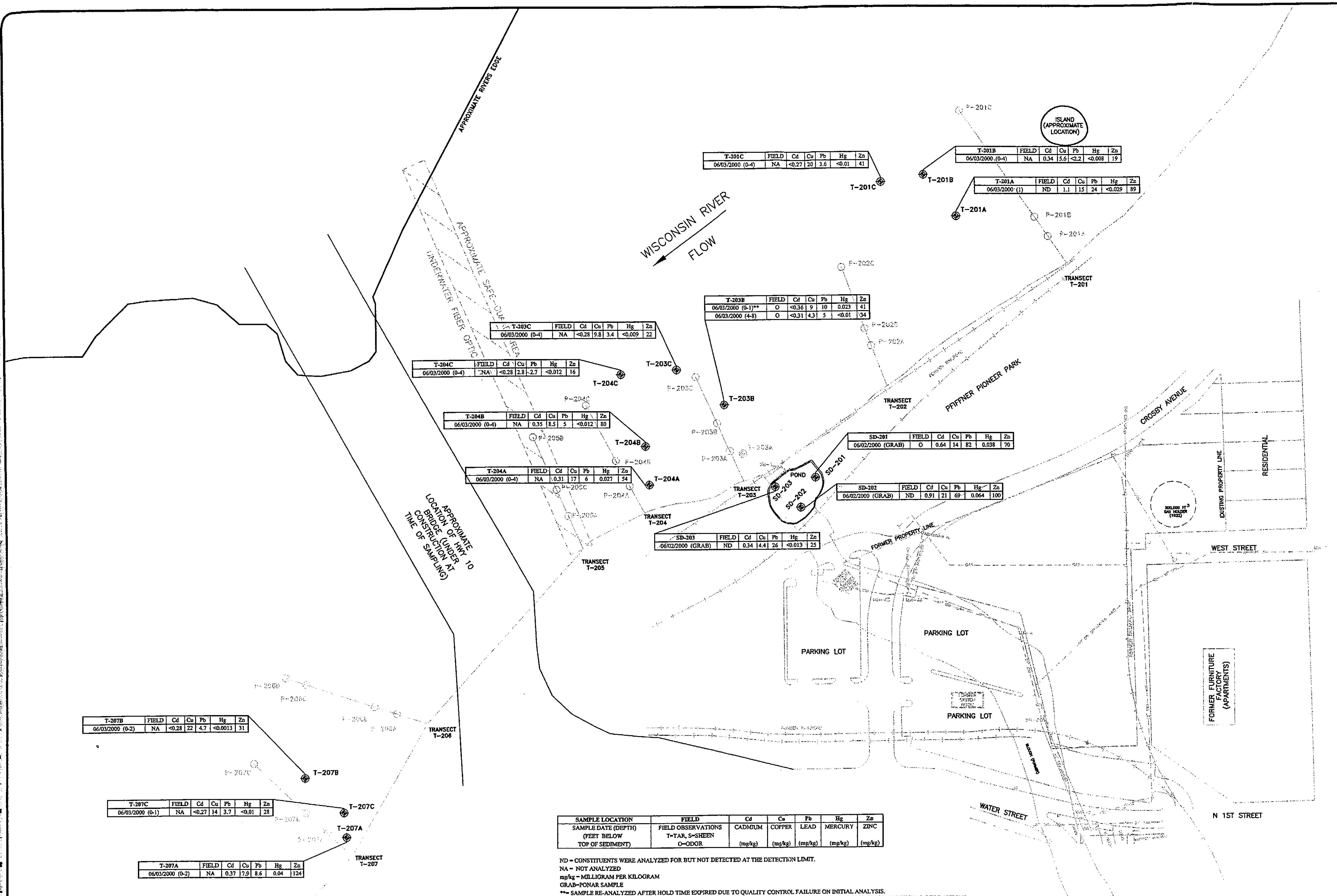
SEDIMENT ORGANIC ANALYTICAL SUMMARY

FORMER STEVENS POINT MANUFACTURED GAS PLANT SITE
WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT, WISCONSIN

CAD FILE: 1515\5\STPT\1515-5S-D01.DWG
REFERENCE FILES:

PROJECT NO. 1515/5/STPT
DRAWN BY: TAS 02/04/05
CHECKED BY: MJR 02/04/05
APPROVED BY: LLP 02/04/05
SHEET NO. ST PT-1



T-201C	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	<0.27	20	3.6	<0.01	41

T-201B	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	0.34	5.6	<2.2	<0.008	19

T-201A	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (1)	ND	1.1	15	24	<0.029	89

T-203B	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-1)**	O	<0.36	9	10	0.023	41
06/03/2000 (4-8)	O	<0.31	4.3	5	<0.01	34

T-203C	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	<0.28	9.8	3.4	<0.009	22

T-204C	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	<0.28	2.8	2.7	<0.012	16

T-204B	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	0.35	8.5	5	<0.012	80

T-204A	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-4)	NA	0.31	17	6	0.027	54

SD-201	FIELD	Cd	Cu	Pb	Hg	Zn
06/02/2000 (GRAB)	O	0.64	14	82	0.038	70

SD-202	FIELD	Cd	Cu	Pb	Hg	Zn
06/02/2000 (GRAB)	ND	0.91	21	69	0.064	100

SD-203	FIELD	Cd	Cu	Pb	Hg	Zn
06/02/2000 (GRAB)	ND	0.34	4.4	26	<0.013	25

T-207B	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-2)	NA	<0.28	22	4.7	<0.0013	31

T-207C	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-1)	NA	<0.27	14	3.7	<0.01	28

T-207A	FIELD	Cd	Cu	Pb	Hg	Zn
06/03/2000 (0-2)	NA	0.37	7.9	8.6	0.04	124

SAMPLE LOCATION	FIELD	Cd	Cu	Pb	Hg	Zn
SAMPLE DATE (DEPTH) (FEET BELOW TOP OF SEDIMENT)	FIELD OBSERVATIONS T=TAR, S=SHEEN O=ODOR	CADMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	ZINC (mg/kg)

ND = CONSTITUENTS WERE ANALYZED FOR BUT NOT DETECTED AT THE DETECTION LIMIT.
NA = NOT ANALYZED
mg/kg = MILLIGRAM PER KILOGRAM
GRAB=PONAR SAMPLE
**= SAMPLE RE-ANALYZED AFTER HOLD TIME EXPIRED DUE TO QUALITY CONTROL FAILURE ON INITIAL ANALYSIS.
PHYSICAL FORM OF TAR VARIES (eg. TRACE, DROPLETS, SHEEN), REFER TO SEDIMENT INVESTIGATION REPORTS FOR ADDITIONAL DESCRIPTIONS.

LEGEND

- T-201A SEDIMENT SAMPLE
- SD-201 SEDIMENT SAMPLE (POND)
- P-201A TRANSECT POLING LOCATION
- SG-1 STAFF GAUGE
- MH-1 STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WATER LINE
- GAS LINE
- STORM SEWER
- MGP MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 6/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

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SEDIMENT INORGANIC ANALYTICAL SUMMARY

FORMER STEVENS POINT MANUFACTURED GAS PLANT SITE
WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT, WISCONSIN

CAD FILE: 1515\5\STPT\1515-5S-D02.DWG
REFERENCE FILES:

PROJECT NO. 1515/5/STPT
DRAWN BY: TAS 02/04/05
CHECKED BY: MJR 02/04/05
APPROVED BY: LLP 02/04/05
SHEET NO. ST PT-2

Table 10. Sediment Analytical Summary - PAHs
Supplemental Site Investigation and Groundwater Monitoring Report
Former Stevens Point Manufactured Gas Plant Site - Wisconsin Public Service Corporation

Sample Identification	Date	Polynuclear Aromatic Hydrocarbons (mg/kg)																		
		Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	1-Methylnaphthalene	2-Methylnaphthalene	Total PAHs
Pond Sampling Results																				
SD-201	06/02/00	0.498	1.24	0.291	0.531	5.19	2.52	15.1	11.2	8.4	8.54	6.44	8.04	8.97	4.82	2.18	4.65	<0.11	0.137	89
SD-202	06/02/00	1.86	3.78	4.47	6.19	35.9	16.7	46.7	32.1	21.6	18.3	15.6	15.8	19.2	8.43	4.17	7.46	0.963	1.39	261
SD-203	06/02/00	0.095	0.154	<0.097	<0.121	0.489	0.279	1.75	1.26	0.913	0.879	0.572	0.954	0.899	0.512	0.25	0.485	<0.106	<0.106	9.5
Wisconsin River Sediment Sampling Results																				
T201A(1)	06/03/00	<0.048	<0.062	<0.053	<0.065	<0.053	<0.051	0.092	0.059	0.077	0.062	0.06	<0.090	0.081	<0.140	<0.128	<0.100	<0.057	<0.057	0.4
T201B(0-4)	06/03/00	<0.016	<0.020	<0.017	<0.022	<0.017	<0.017	<0.013	<0.016	<0.022	<0.020	<0.017	<0.030	<0.017	<0.046	<0.042	<0.033	<0.019	<0.019	nd
T201C(0-4)	06/03/00	0.021	<0.021	0.018	<0.022	0.052	<0.018	<0.013	0.024	<0.022	<0.021	<0.017	<0.031	<017	<0.048	<0.044	<0.034	<0.020	<0.020	0.1
T203A(0-4)	06/03/00	4,860	468	821	967	3,110	1,000	2,060	1,180	742	645	492	555	584	246	133	209	651	1,220	19,943
T203A(4-8)	06/03/00	3.32	1.31	2.3	2.6	15.4	7.1	19.6	13.1	8.63	7.34	5.49	7.75	7.4	2.66	0.947	2.26	0.997	1.48	110
T203B(0-1)*	06/03/00	2,270	81.9	740	607	1,930	603	1,280	828	420	348	368	228	334	123	55.8	97.6	180	356	10,850
T203B(4-8)	06/03/00	13.7	2.31	11.1	11.6	48.7	16.9	34.1	22.5	15	12.9	8.64	9.8	12.1	4.95	2.66	4.12	3.89	4.78	240
T203C(0-4)	06/03/00	<0.017	<0.022	<0.019	<0.023	<0.019	<0.018	<0.014	<0.017	<0.023	<0.022	<0.018	<0.032	<0.018	<0.050	<0.046	<0.036	<0.020	<0.020	bdl
T204A(0-4)	06/03/00	0.267	2.21	0.405	2.5	13	4.32	13.7	9.07	6.13	5.62	4.54	6.00	5.96	3.07	1.50	2.63	0.228	0.147	81
T204B(0-4)	06/03/00	<0.017	<0.022	<0.019	<0.023	<0.019	<0.018	<0.014	<0.017	<0.023	<0.022	<0.018	<0.032	<0.018	<0.050	<0.046	<0.036	<0.020	<0.020	bdl
T204C(0-4)	06/03/00	<0.016	<0.021	<0.018	<0.022	<0.018	<0.017	<0.013	<0.016	<0.022	<0.020	<0.017	<0.030	<0.017	<0.047	<0.043	<0.034	<0.019	<0.019	bdl
T207A(0-2)	06/03/00	0.053	0.039	0.024	0.033	0.246	0.12	0.463	0.34	0.226	0.237	0.167	0.26	0.234	0.11	<0.048	0.098	<0.021	0.029	2.7
T207B(0-2)	06/03/00	<0.016	0.073	<0.018	0.044	0.549	0.176	0.724	0.517	0.332	0.295	0.216	0.246	0.292	0.136	0.052	0.122	<0.020	<0.020	3.8
T207C(0-1)	06/03/00	<0.016	0.02	<0.017	<0.021	0.145	0.046	0.221	0.153	0.096	0.102	0.086	0.106	0.104	0.056	<0.042	0.053	<0.019	<0.019	1.2

[O-AAS/HMS][U-RGF 03/22/02]

Notes:

* = Sample re-analyzed after hold time expired due to quality control failure on initial analysis.

bdl = All PAH compounds below detection limits

Table 11. Sediment Analytical Summary - BTEX, Cyanide, and Metals
Supplemental Site Investigation and Groundwater Monitoring Report
Former Stevens Point Manufactured Gas Plant Site - Wisconsin Public Service Corporation

Sample Location	Date	BTEX (µg/kg)				Total Cyanide (mg/kg)	METALS (mg/kg)				
		Benzene	Ethylbenzene	Toluene	Xylenes (total)		Cadmium	Copper	Lead	Mercury	Zinc
Pond Sampling Results											
SD-201	06/02/00	24	144	24	2,700	<0.027	0.64	14	82	0.038	70
SD-202	06/02/00	14	9.1	27	<19	2.3	0.91	21	69	0.064	100
SD-203	06/02/00	478	168	1,380	1,350	<0.026	0.34	4.4	26	<0.013	25
Wisconsin River Sediment Sampling Results											
T201A(1)	06/03/00	23	11	86	<19	<0.07	1.1	15	24	<0.029	89
T201B(0-4)	06/03/00	<9.0	<4.5	6.4	<19	0.023	0.34	5.6	<2.2	<0.008	19
T201C(0-4)	06/03/00	<9.0	<4.5	<4.2	<19	--	<0.27	20	3.6	<0.010	41
T203A(0-4)	06/03/00	<90,000	70,300	106,000	230,000	--	--	--	--	--	--
T203A(4-8)	06/03/00	--	--	--	--	--	--	--	--	--	--
T203B(0-1)	06/03/00	942	17,200	6,420	54,200	<0.031	<0.36	9.0	10	0.023	41
T203B(4-8)	06/03/00	15	46	32	<19	<0.027	<0.31	4.3	5.0	<0.010	34
T203C(0-4)	06/03/00	<9.0	<4.5	<4.2	<19	--	<0.28	9.8	3.4	<0.009	22
T204A(0-4)	06/03/00	195	79	574	628	<0.026	0.31	17	6.0	0.027	54
T204B(0-4)	06/03/00	10	<4.5	9.8	<19	<0.025	0.35	8.5	5.0	<0.012	80
T204C(0-4)	06/03/00	<9.0	<4.5	4.3	<19	--	<0.28	2.8	2.7	<0.012	16
T207A(0-2)	06/03/00	9.4	9.0	58	<19	0.08	0.37	7.9	8.6	0.040	124
T207B(0-2)	06/03/00	<9.0	11	8.7	<19	0.048	<0.28	22	4.7	<0.013	31
T207C(0-1)	06/03/00	<9.0	<4.5	<4.2	<19	--	<0.27	14	3.7	<0.01	28

[O-AAS/HMS]

Note:
-- = Parameter not analyzed in this sample.

T1-D1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	WB	<mdl	<mdl
6"-18"	N	WB	<mdl	<mdl
18"-24"	N	WB	<mdl	<mdl

T3-C1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	--	<mdl
6"-18"	N	S	--	<mdl
18"-30"	N	S	--	<mdl
30"-42"	N	S	<mdl	<mdl

T3-D1a	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	--	<mdl
6"-18"	N	S	--	<mdl
18"-30"	N	WB	--	<mdl
30"-36"	N	WB	--	<mdl

T1-C1a	Field Obs.	Material*	PAH	Total BTEX
6"-18"	N	M	<mdl	<mdl
60"-72"	N	WB	Rejected	<mdl
72"-84"	N	WB	<mdl	<mdl
84"-96"	N	WB	<mdl	<mdl
96"-108"	N	WB	<mdl	<mdl
108"-120"	N	WB	<mdl	<mdl
120"-132"	N	WB	<mdl	<mdl
132"-144"	N	WB	<mdl	<mdl

T6-D1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	<mdl	103
6"-18"	N	WB	<mdl	<mdl
18"-30"	N	WB	<mdl	<mdl

T4-C1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	914	<mdl
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	--	155
30"-42"	N	S	<mdl	<mdl

T7-C2	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	<mdl	120
6"-18"	N	S	<mdl	130
18"-30"	N	S	<mdl	134

T1-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	Rejected	<mdl
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	<mdl	<mdl
30"-42"	N	S	<mdl	<mdl

T6-C1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	117
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	<mdl	<mdl

T4-D1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	WB	<mdl	<mdl
6"-18"	N	WB	<mdl	117
18"-24"	N	WB	<mdl	<mdl

T2-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	116
6"-18"	N	S	<mdl	217
18"-30"	N	S	<mdl	129
30"-42"	N	S	<mdl	<mdl
42"-48"	N	S	<mdl	--

T1-A	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	<mdl
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	<mdl	--
30"-42"	N	S	Rejected	<mdl
42"-54"	N	S	<mdl	<mdl
54"-66"	N	S	<mdl	<mdl
66"-78"	N	S	<mdl	<mdl
78"-90"	N	S	<mdl	--
90"-102"	N	S	<mdl	--
102"-114"	N	S	<mdl	--
114"-120"	N	S	<mdl	--

T5-D1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	WB	<mdl	<mdl

T6-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	257
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	<mdl	<mdl
30"-42"	N	S	<mdl	<mdl
42"-54"	N	WB	<mdl	163

T5-C1a	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	WB	<mdl	119
6"-18"	N	WB	<mdl	--
18"-24"	N	WB	<mdl	<mdl

T3-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	<mdl
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	--	<mdl
30"-42"	N	S	--	<mdl
42"-54"	N	S	<mdl	<mdl
54"-66"	N	S	<mdl	<mdl

T7-C1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C/S	<mdl	<mdl
6"-18"	N	S	<mdl	120
18"-30"	N	WB	<mdl	125

T3-A2	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	<mdl	<mdl
6"-18"	N	S	<mdl	<mdl
18"-30"	N	S	1,773	<mdl
30"-42"	N	S	<mdl	112
42"-54"	N	S	<mdl	109
54"-66"	N	WB	<mdl	132

T6-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C	10,568	<mdl
6"-18"	N	C	<mdl	<mdl
18"-30"	N	S	<mdl	<mdl
30"-42"	N	S	<mdl	--
42"-54"	N	S	<mdl	--

T5-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S/M	<mdl	150
6"-18"	N	M	<mdl	138
18"-30"	N	M	<mdl	120
30"-42"	N	M	<mdl	118
42"-54"	N	M	834	114

T6-3A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	< mdl	< mdl
6"-18"	N	S	< mdl	< mdl
18"-30"	N	S	< mdl	46
30"-42"	N	S	< mdl	39
42"-54"	N	S	< mdl	< mdl
54"-66"	N	S	< mdl	< mdl

T3-A3A	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C	<mdl	134
6"-18"	N	S	<mdl	139
18"-30"	N	S	<mdl	374
30"-42"	N	S	<mdl	--
42"-54"	N	S	<mdl	<mdl
54"-60"	N	S	<mdl	129

T4-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	--	<mdl
6"-18"	N	S	--	<mdl
18"-30"	N	S	--	<mdl
30"-42"	N	C	<mdl	120
42"-54"	N	C	<mdl	104

PSED-202	Field Obs.	Material*	PAH	Total BTEX
0"-6"	O	C	45,226	<mdl
6"-18"	O	M	409,252	<mdl
18"-30"	O	M	385,864	<mdl

T4-A2	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	<mdl	326
6"-18"	N	S	<mdl	255
18"-30"	N	WB	<mdl	156
30"-42"	N	WB	<mdl	130

T7-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	O	S	162,100	<mdl
6"-18"	O	S	126,618	<mdl
18"-30"	O	S	19,899	<mdl
30"-42"	N	S	3,421	<mdl
42"-54"	N	S	<mdl	112
54"-66"	N	S	<mdl	<mdl
66"-72"	N	S	<mdl	<mdl

PSED-201	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	13,439	168
6"-18"	N	S	42,700	165
18"-30"	N	S	8,050	<mdl

T7-B1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	O	S	665,900	598
6"-18"	N	S	5,968	313
18"-30"	N	S	854	<mdl
30"-42"	N	S	<mdl	<mdl

PSED-203	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	C	53,000	<mdl
6"-18"	O/S	M	815,282	399
18"-25"	O	M	291,928	<mdl

T4-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S/M	<mdl	<mdl
6"-18"	N	S	1,155	<mdl
18"-30"	N	S	25,918	<mdl
30"-42"	N	S	15,374	190
42"-54"	N	S	2,099	120
54"-66"	N	S	<mdl	220
66"-72"	N	S	<mdl	--

T5-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	N	S	9,326	<mdl
6"-18"	N	S	1,434	<mdl
18"-30"	N	S	<mdl	<mdl
30"-42"	N	S	<mdl	123
42"-54"	N	S	<mdl	148

T3-A1	Field Obs.	Material*	PAH	Total BTEX
0"-6"	O	C/S	17,990,000	1,229
6"-18"	O	S	19,622,593	44,900
18"-30"	O/T	S	21,153,595	243,000
30"-42"	O/T	S	466,000	52,800
42"-54"	O/T	S	23,517	416
54"-66"	O	S	6,820	746
66"-78"	N	S	<mdl	109
78"-90"	N	S	<mdl	112
90"-102"	N	S	1,090	151

T3-A3	Field Obs.	Material*	PAH	Total BTEX
0"-6"	O/T	C/M	1,476,000	354
6"-18"	O	S	7,035	218
18"-30"	O	S	3,099	150
30"-42"	O	S	2,891	115
42"-54"	O	S	4,781	<mdl
54"-66"	N	S	<mdl	126
66"-78"	N	S	<mdl	143

LEGEND

- T4-B1 SEDIMENT SAMPLE
- PSED 203 SEDIMENT SAMPLE (POND)
- MH-1 STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR WATER LINE
- GAS GAS LINE
- STM STORM SEWER
- MGP MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

Sample Location	Field Obs.	Material*	PAH	Total BTEX
SAMPLE DEPTH (INCHES BELOW TOP OF SEDIMENT)	FIELD OBSERVATIONS: T=TAR C=COAL FRAGMENTS S=SHEEN O=ODOR N=NONE NOTED	RIVER BOTTOM MATERIAL: S=SAND, ML=SILT, GR=GRAVEL, C=CLAY, BDX=CONSOLIDATED BEDROCK AND/OR W/B=WEATHERED BEDROCK	TOTAL POLYNUCLEAR AROMATIC HYDROCARBONS (µg/kg)	**TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES (µg/kg)**

<mdl = RESULTS BELOW THE METHOD DETECTION LIMIT

µg/kg = MICROGRAMS PER KILOGRAM

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE. RIVERS NORTH EDGE ESTABLISHES TRANSECT POLING AND SEDIMENT SAMPLE MARKER LOCATIONS. POLING AND SEDIMENT SAMPLE LOCATIONS FIELD MEASURED BY NRT AND TIED TO TRANSECT MARKERS ESTABLISHED BY WPSC ON 6/2/00.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12	SEDIMENT ORGANIC ANALYTICAL SUMMARY
DRAWN BY: RLH 06/02/08	REMEDIAL INVESTIGATION REPORT
CHECKED BY: EPK 06/02/08	WISCONSIN PUBLIC SERVICE CORPORATION FORMER MANUFACTURED GAS PLANT, STEVENS POINT, WISCONSIN
APPROVED BY: JMK 06/04/08	DRAWING NO: 1177-1412-D02 REFERENCE: .
SHEET NO.	2

Table 15. Sediment Analytical Results - Polynuclear Aromatic Hydrocarbon (PAH, µg/Kg)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities
1111 Crosby Avenue, Steven's Point, Wisconsin
USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Depth	Collection Date	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-pyrene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph - thalene	Phenanthrene	Pyrene
Sediment Screening Benchmarks																			
Benchmarks			360	396	365	57.2	108	150	788	882	791	166	33	423	77.4	899	176	204	195
Psed-201																			
	0 - 6 "	7/11/2007	< 179	< 179	190	270	1400	1300	2200 J	360 J	1200 J	1200	440 J	2300	< 179	380 J	< 179	710	2400
	6 - 18 "	7/11/2007	< 700	< 700	< 700	1200	5000	2700	2900 J	1000 J	3500 J	3700	< 700 UJ	6200	< 700	2100 J	< 700	4100	12000
	18 - 30 "	7/11/2007	< 225	< 225	< 225	190	930	580	1200 J	< 225 UJ	620 J	700	< 225 UJ	1400	< 225	< 225 UJ	< 225	480	1500
Psed-202																			
	0 - 6 "	7/11/2007	< 2041	< 2041	< 2041	< 2041 UJ	< 2041	< 2041 UJ	22000 J	< 2041	< 2041	< 2041	< 2041 UJ	< 2041 UJ	< 2041	< 2041	< 2041	< 2041 UJ	12000 J
	6 - 18 "	7/11/2007	< 2703 Q	9800	3100	29000 J	36000	28000	51000 J	12000 J	31000 J	34000	5500 J	50000 J	13000	10000 J	< 2703 Q	42000 J	81000 Q J
	18 - 30 "	7/11/2007	< 2564	7800	< 2564	16000 J	38000	21000	40000 J	8200 J	23000 J	42000	< 2564 UJ	51000 J	9500	9400 J	< 2564	38000 J	97000 Q J
Psed-203																			
	0 - 6 "	7/11/2007	< 4000	< 4000	< 4000	< 4000 UJ	< 4000	< 4000 UJ	29000 J	< 4000	< 4000	< 4000	< 4000 UJ	< 4000 UJ	< 4000	< 4000	< 4000	< 4000 UJ	< 4000 UJ
	6 - 18 "	7/11/2007	< 2564	68000	< 2564	26000 J	40000	56000 J	130000 J	37000	48000 J	52000	27000 J	79000 J	48000	50000	16000	170000 J	81000 J
	18 - 25 "	7/11/2007	< 3571	< 3571	< 3571	< 3571 UJ	33000	37000 J	59000 J	< 3571	25000 J	30000	< 3571 UJ	22000 J	< 3571	52000	< 3571	38000 J	39000 J
T1-A1																			
	0 - 6 "	7/10/2007	< 145	< 145	< 145 UJ	< 145 UJ	< 145	< 145	< 145 UJ	< 145	< 145	< 145	< 145 UJ	< 145 UJ	< 145	< 145	< 145 UJ	< 145 UJ	< 145
	6 - 18 "	7/10/2007	< 141	< 141	< 141 UJ	< 141 UJ	< 141	< 141	< 141 UJ	< 141	< 141	< 141	< 141 UJ	< 141 UJ	< 141	< 141	< 141 UJ	< 141 UJ	< 141
	18 - 30 "	7/10/2007	< 125	< 125	< 125 UJ	< 125 UJ	< 125	< 125	< 125 UJ	< 125	< 125	< 125	< 125 UJ	< 125 UJ	< 125	< 125	< 125 UJ	< 125 UJ	< 125
	30 - 42 "	7/10/2007	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R	< 125 R
	42 - 54 "	7/10/2007	< 128	< 128	< 128	< 128	< 128	< 128 UJ	< 128	< 128	< 128	< 128	< 128 UJ	< 128	< 128	< 128 UJ	< 128	< 128 UJ	< 128 UJ
	54 - 66 "	7/10/2007	< 119	< 119	< 119	< 119	< 119	< 119 UJ	< 119	< 119	< 119	< 119	< 119 UJ	< 119	< 119	< 119 UJ	< 119	< 119 UJ	< 119 UJ
	66 - 78 "	7/10/2007	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118 UJ	< 118	< 118 UJ	< 118 UJ
	78 - 90 "	7/10/2007	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109 UJ	< 109 UJ
	90 - 102 "	7/10/2007	< 111	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ
	102 - 114 "	7/10/2007	< 111	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ
	114 - 120 "	7/10/2007	< 112	< 112	< 112	< 112	< 112	< 112 UJ	< 112	< 112	< 112	< 112	< 112 UJ	< 112	< 112	< 112 UJ	< 112	< 112 UJ	< 112 UJ
T1-B1																			
	0 - 6 "	7/10/2007	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114 R	< 114	< 114 R	< 114 R	< 114 R	< 114 R
	6 - 18 "	7/10/2007	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114 UJ	< 114 UJ	< 114
	18 - 30 "	7/10/2007	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R	< 116 Q R
	30 - 42 "	7/10/2007	< 118	< 118	< 118 UJ	< 118 UJ	< 118	< 118	< 118 UJ	160	< 118	< 118	220 J	< 118 UJ	< 118	300	< 118 UJ	< 118 UJ	< 118
T1-C1a																			
	6 - 18 "	7/9/2007	< 211	< 211	< 211 UJ	< 211 UJ	< 211	< 211	< 211 UJ	< 211	< 211	< 211	< 211 UJ	< 211 UJ	< 211	< 211	< 211 UJ	< 211 UJ	< 211
	60 - 72 "	7/9/2007	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R	< 172 R
	72 - 84 "	7/9/2007	< 187	< 187	< 187 UJ	< 187 UJ	< 187	< 187	< 187	< 187	< 187	< 187	< 187 UJ	< 187 UJ	< 187	< 187	< 187 UJ	< 187 UJ	< 187
	84 - 96 "	7/9/2007	< 175	< 175	< 175 UJ	< 175 UJ	< 175	< 175	< 175 UJ	< 175	< 175	< 175	< 175 UJ	< 175 UJ	< 175 R	< 175	< 175 UJ	< 175 UJ	< 175
	96 - 108 "	7/9/2007	< 174	< 174	< 174 UJ	< 174 UJ	< 174	< 174	< 174 UJ	< 174	< 174	< 174	< 174 UJ	< 174 UJ	< 174	< 174	< 174 UJ	< 174 UJ	< 174
	108 - 120 "	7/9/2007	< 177	< 177	< 177 UJ	< 177 UJ	< 177	< 177	< 177 UJ	< 177	< 177	< 177	< 177 UJ	< 177 UJ	< 177	< 177	< 177 UJ	< 177 UJ	< 177
	120 - 132 "	7/9/2007	< 170	< 170	< 170 UJ	< 170 UJ	< 170	< 170	< 170 UJ	< 170	< 170	< 170	< 170 UJ	< 170 UJ	< 170	< 170	< 170 UJ	< 170 UJ	< 170
	132 - 144 "	7/9/2007	< 179	< 179	< 179 UJ	< 179 UJ	< 179	< 179	< 179 UJ	< 179	< 179	< 179	< 179 UJ	< 179 UJ	< 179	< 179	< 179 UJ	< 179 UJ	< 179

Natural Resource Technology

Sample ID	Depth	Collection Date	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-pyrene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph - thalene	Phenanthrene	Pyrene
Sediment Screening Benchmarks																			
Benchmarks			360	396	365	57.2	108	150	788	882	791	166	33	423	77.4	899	176	204	195
T1-D1																			
	0 - 6 "	7/9/2007	< 189	< 189	< 189 UJ	< 189 UJ	< 189	< 189	< 189 UJ	< 189	< 189	< 189	< 189 UJ	< 189 UJ	< 189	430	< 189 UJ	< 189 UJ	< 189
	6 - 18 "	7/9/2007	< 208	< 208	< 208 UJ	< 208 UJ	< 208	< 208	< 208 UJ	< 208	< 208	< 208	< 208 UJ	< 208 UJ	< 208	< 208	< 208 UJ	< 208 UJ	< 208
	18 - 24 "	7/9/2007	< 189	< 189	< 189 UJ	< 189 UJ	< 189	< 189	< 189 UJ	< 189	< 189	< 189	< 189 UJ	< 189 UJ	< 189	< 189	< 189 UJ	< 189 UJ	< 189
T2-A1																			
	0 - 6 "	7/10/2007	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118 UJ	< 118	< 118 UJ	< 118 UJ
	6 - 18 "	7/10/2007	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118 UJ	< 118	< 118 UJ	< 118 UJ
	18 - 30 "	7/10/2007	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110 UJ	< 110 UJ
	30 - 42 "	7/10/2007	< 109 Q	< 109 Q	< 109 Q	< 109 Q	< 109 Q	< 109 Q UJ	< 109 Q	< 109 Q	< 109 Q	< 109 Q	< 109 Q UJ	< 109 Q	< 109 Q	< 109 Q UJ	< 109 Q	< 109 Q UJ	< 109 Q UJ
	42 - 48 "	7/10/2007	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109 UJ	< 109 UJ
T3-A1																			
	0 - 6 "	7/11/2007	**130000**	**960000 J**	**150000 J**	**930000 J**	**1800000 J**	**1100000 J**	**2600000 J**	**460000 J**	**430000 J**	**1500000 J**	**300000 J**	**1800000 J**	**1300000 J**	**490000 J**	**320000 J**	**2800000 Q J**	**2300000 J**
	6 - 18 "	7/11/2007	**340000**	**1300000 J**	< 185185	**1100000 J**	**1400000 J**	**1300000 J**	**3100000 J**	**530000 J**	**690000 J**	**1200000 J**	**420000 J**	**1800000 J**	**1700000 J**	**740000 J**	**940000 J**	**3000000 J**	**2000000 J**
	18 - 30 "	7/11/2007	**1400000**	**1500000 J**	< 1307190	**500000 J**	**830000 J**	**830000 J**	**2700000 J**	**580000 J**	**950000 J**	**890000 J**	**490000 J**	**1600000 J**	**1500000 J**	**870000 J**	**4900000 J**	**2800000 J**	**1500000 J**
	30 - 42 "	7/11/2007	**35000 Q**	**35000**	**5900**	**31000 J**	**37000 Q**	**24000 J**	**44000 Q J**	**11000**	**8100 J**	**27000**	**6500 J**	**35000 J**	**33000**	**12000**	**83000 Q**	**51000 Q J**	**52000 Q J**
	42 - 54 "	7/11/2007	**990**	**1900**	< 633	**2200 J**	**1600**	**1200 J**	**2000 J**	730	**900 J**	**1300**	**740 J**	**2100 J**	**1900**	**1700**	**2000**	**3800 J**	**2300 J**
	54 - 66 "	7/11/2007	**670**	**530**	< 119	**710 J**	**490**	**350 J**	510 J	240	220 J	**430**	**220 J**	**600 J**	**570**	370	**670**	**1000 J**	**680 J**
	66 - 78 "	7/11/2007	< 109	< 109	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109
	78 - 90 "	7/11/2007	< 109	< 109	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109	< 109	< 109 UJ	< 109	< 109	< 109
	90 - 102 "	7/11/2007	< 118	< 118	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118	140	**120**	< 118 UJ	< 118	**240**	< 118
T3-A2																			
	0 - 6 "	7/11/2007	< 116	< 116	< 116	< 116 UJ	< 116	< 116	< 116	< 116 UJ	< 116	< 116	< 116 UJ	< 116 UJ	< 116	< 116 UJ	< 116	< 116 UJ	< 116 UJ
	6 - 18 "	7/11/2007	< 116 Q	< 116 Q	< 116 Q	< 116 Q UJ	< 116 Q	< 116 Q UJ	< 116 Q	< 116 Q	< 116 Q	< 116 Q	< 116 Q UJ	< 116 Q UJ	< 116 Q	< 116 Q	< 116 Q	< 116 Q UJ	< 116 Q UJ
	18 - 30 "	7/11/2007	< 111	< 111	< 111	**160 J**	**140**	< 111	140 J	< 111 UJ	< 111	150	< 111 UJ	230 J	< 111	< 111 UJ	< 111	**260 J**	**360 J**
	30 - 42 "	7/11/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109
	42 - 54 "	7/11/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109
	54 - 66 "	7/11/2007	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114
T3-A3																			
	0 - 6 "	7/12/2007	**63000**	**87000**	**14000**	**140000**	**120000**	**70000**	**130000 J**	**13000 J**	**53000 J**	**74000**	**21000 J**	**170000**	**78000**	**18000 J**	**140000 Q**	**210000**	**190000**
	6 - 18 "	7/12/2007	**380**	**610**	< 203	**520**	**380**	< 203	400 J	< 203 UJ	< 203	**260**	< 203 UJ	**890**	**530**	< 203 UJ	**900**	**1500**	**740**
	18 - 30 "	7/12/2007	< 203	260	< 203	**240**	< 203	< 203	< 203	< 203 UJ	< 203	< 203	< 203 UJ	330	**250**	< 203 UJ	**390**	**710**	**310**
	30 - 42 "	7/12/2007	< 203	< 203	< 203	**300**	< 203	< 203	< 203	< 203 UJ	< 203	< 203	< 203 UJ	260	**460**	< 203 UJ	**400**	**550**	**210**
	42 - 54 "	7/12/2007	< 183	< 183	< 183	**710**	< 183	< 183	< 183	< 183 UJ	< 183	< 183	< 183 UJ	260	**1300**	< 183 UJ	**1000**	**630**	**240**
	54 - 66 "	7/12/2007	< 185	< 185	< 185	< 185	< 185	< 185	< 185	< 185 UJ	< 185	< 185	< 185 UJ	< 185	< 185	< 185 UJ	< 185	< 185	< 185
	66 - 78 "	7/12/2007	< 198	< 198	< 198	< 198	< 198	< 198	< 198	< 198 UJ	< 198	< 198	< 198 UJ	< 198	< 198	< 198 UJ	< 198	< 198	< 198
T3-A3a																			
	0 - 6 "	7/12/2007	< 208	< 208	< 208	< 208	< 208	< 208	< 208	< 208 UJ	< 208	< 208	< 208 UJ	< 208	< 208	< 208 UJ	< 208	< 208	< 208
	6 - 18 "	7/12/2007	< 187	< 187	< 187	< 187	< 187	< 187	< 187	< 187 UJ	< 187	< 187	< 187 UJ	< 187	< 187	< 187 UJ	< 187	< 187	< 187
	18 - 30 "	7/12/2007	< 185	< 185	< 185	< 185	< 185	< 185	< 185	< 185 UJ	< 185	< 185	< 185 UJ	< 185	< 185	< 185 UJ	< 185	< 185	< 185
	30 - 42 "	7/12/2007	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J	< 108 J
	42 - 54 "	7/12/2007	< 108	< 108	< 108 UJ	< 108	< 108	< 108	< 108 UJ	< 108 UJ	< 108	< 108	< 108 UJ	< 108	< 108	< 108 UJ	< 108	< 108	< 108
	54 - 60 "	7/12/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109

Sample ID	Depth	Collection Date	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-pyrene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph - thalene	Phenanthrene	Pyrene
Sediment Screening Benchmarks																			
Benchmarks			360	396	365	57.2	108	150	788	882	791	166	33	423	77.4	899	176	204	195
T3-B1																			
	0 - 6 "	7/10/2007	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110 UJ	< 110 UJ
	6 - 18 "	7/10/2007	< 111	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ
	42 - 54 "	7/10/2007	< 108	< 108	< 108 UJ	< 108	< 108 UJ	< 108	< 108 UJ	< 108 UJ	< 108	< 108	< 108	< 108	< 108	< 108 UJ	< 108	< 108	< 108 UJ
	54 - 66 "	7/10/2007	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R	< 106 R
T3-C1																			
	30 - 42 "	7/10/2007	< 114	< 114	< 114 UJ	< 114	< 114 UJ	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ
T4-A1																			
	0 - 6 "	7/11/2007	< 122	< 122	< 122	< 122 UJ	< 122	< 122 UJ	< 122	< 122	< 122	< 122	< 122 UJ	< 122 UJ	< 122	< 122	< 122	< 122 UJ	< 122 UJ
	6 - 18 "	7/11/2007	< 123	< 123	< 123	< 123 UJ	< 123	< 123 UJ	190 J	160	< 123	< 123	150 J	150 J	< 123	320	< 123	< 123 UJ	200 J
	18 - 30 "	7/11/2007	< 549	< 549	< 549	820 J	2700	2200 J	4300 J	1200	1700 J	2200	770 J	3500 J	< 549	1900	< 549	2200 J	5200 J
	30 - 42 "	7/11/2007	< 147	880	< 147	1200	1100	460	1100 J	< 147 UJ	480 J	650	< 147	2000	1000	< 147 UJ	230	3600	2600
	42 - 54 "	7/11/2007	< 238	450	< 238	< 238	< 238	< 238	< 238	< 238 UJ	< 238	< 238	< 238	< 238	< 238	< 238 UJ	340	< 238	< 238
	54 - 66 "	7/11/2007	< 114	< 114	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114
	66 - 72 "	7/11/2007	< 118	< 118	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118	< 118	< 118	< 118 UJ	< 118	< 118	< 118
T4-A2																			
	0 - 6 "	7/12/2007	< 201	< 201	< 201	< 201	< 201	< 201	< 201	< 201 UJ	< 201	< 201	< 201 UJ	< 201	< 201	< 201 UJ	< 201	< 201	< 201
	6 - 18 "	7/12/2007	< 183	< 183	< 183	< 183	< 183	< 183	< 183	< 183 UJ	< 183	< 183	< 183 UJ	< 183	< 183	< 183 UJ	< 183	< 183	< 183
	18 - 30 "	7/12/2007	< 198	< 198	< 198	< 198	< 198	< 198	< 198	< 198 UJ	< 198	< 198	< 198 UJ	< 198	< 198	< 198 UJ	< 198	< 198	< 198
	30 - 42 "	7/12/2007	< 192	< 192	< 192	< 192	< 192	< 192	< 192	< 192 UJ	< 192	< 192	< 192 UJ	< 192	< 192	< 192 UJ	< 192	< 192	< 192
T4-B1																			
	30 - 42 "	7/10/2007	< 122	< 122	< 122	< 122	< 122	< 122	< 122	< 122 UJ	< 122	< 122	< 122	< 122	< 122	< 122 UJ	< 122	< 122	< 122
	42 - 54 "	7/10/2007	< 114	< 114	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114
T4-C1																			
	0 - 6 "	7/11/2007	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114 UJ	< 114	< 114 UJ	230 J
	6 - 18 "	7/11/2007	< 121 Q	< 121 Q	< 121 Q	< 121 Q UJ	< 122 Q	< 122 Q	< 122 Q	< 122 Q UJ	< 122 Q	< 121 Q	< 121 Q UJ	< 121 Q UJ	< 121 Q	< 122 Q UJ	< 122 Q	< 121 Q UJ	< 121 Q UJ
	30 - 42 "	7/11/2007	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q UJ	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q	< 111 Q UJ	< 111 Q	< 111 Q	< 111 Q
T4-D1																			
	0 - 6 "	7/11/2007	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115 UJ	< 115 UJ	< 115	< 115 UJ	< 115	< 115 UJ	< 115 UJ
	6 - 18 "	7/11/2007	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114
	18 - 24 "	7/11/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109
T5-A1																			
	0 - 6 "	7/11/2007	< 137	< 137	160	210 J	1000	1000 J	1900 J	500	740 J	890	390 J	900 J	< 137	610	< 137	720 J	1600 J
	6 - 18 "	7/11/2007	< 152	< 152	< 152	< 152 UJ	< 152	170 J	190 J	180	< 152	< 152	170 J	180 J	< 152	380	< 152	210 J	< 152 UJ
	18 - 30 "	7/11/2007	< 123	< 123	< 123	< 123 UJ	< 123	< 123 UJ	< 123	< 123	< 123	< 123	< 123 UJ	< 123 UJ	< 123	< 123	< 123	< 123 UJ	< 123 UJ
	30 - 42 "	7/11/2007	< 116	< 116	< 116	< 116	< 116	< 116	< 116	< 116 UJ	< 116	< 116	< 116	< 116	< 116	< 116 UJ	< 116	< 116	< 116
	42 - 54 "	7/11/2007	< 115	< 115	< 115	< 115	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115

NATURAL RESOURCE TECHNOLOGY

Sample ID	Depth	Collection Date	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-pyrene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph - thalene	Phenanthrene	Pyrene
Sediment Screening Benchmarks																			
Benchmarks			360	396	365	57.2	108	150	788	882	791	166	33	423	77.4	899	176	204	195
T5-B1																			
	0 - 6 "	7/11/2007	< 122	< 122	< 122	< 122 UJ	< 122	< 122	< 122	< 122 UJ	< 122	< 122	< 122 UJ	< 122 UJ	< 122	< 122 UJ	< 122	< 122 UJ	< 122 UJ
	6 - 18 "	7/11/2007	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J	< 116 J
	18 - 30 "	7/11/2007	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111 UJ	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ
	30 - 42 "	7/11/2007	< 115	< 115	< 115	< 115	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115	< 115	< 115	< 115 UJ	< 115	< 115	< 115
	42 - 54 "	7/11/2007	< 114	< 114	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	150 J
T5-C1a																			
	0 - 6 "	7/11/2007	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111 UJ	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ
	6 - 18 "	7/11/2007	< 114	< 114	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114
	18 - 24 "	7/11/2007	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ
T5-D1																			
	0 - 6 "	7/11/2007	< 120	< 120	< 120	< 120 UJ	< 120	< 120	< 120	< 120 UJ	< 120	< 120	< 120 UJ	< 120 UJ	< 120	< 120 UJ	< 120	< 120 UJ	< 120 UJ
T6-A1																			
	0 - 6 "	7/11/2007	< 179	< 179	< 179	< 179 UJ	1300 J	970 J	2100 J	570 J	900 J	1100 J	230 J	1100 J	< 179	720 J	< 179	450 J	2200 J
	6 - 18 "	7/11/2007	< 192	< 192	< 192	< 192 UJ	< 192	< 192 UJ	< 192	< 192	< 192	< 192	< 192 UJ	< 192 UJ	< 192	< 192	< 192	< 192 UJ	< 192 UJ
	18 - 30 "	7/11/2007	< 119	< 119	< 119	< 119 UJ	< 119	< 119 UJ	< 119	< 119	< 119	< 119	< 119 UJ	< 119 UJ	< 119	< 119	< 119	< 119 UJ	< 119 UJ
	30 - 42 "	7/11/2007	< 123	< 123	< 123 UJ	< 123	< 123 UJ	< 123	< 123 UJ	< 123 UJ	< 123	< 123	< 123	< 123	< 123	< 123 UJ	< 123	< 123	< 123 UJ
	42 - 54 "	7/11/2007	< 122	< 122	< 122 UJ	< 122	< 122	< 122	< 122 UJ	< 122 UJ	< 122	< 122	< 122 UJ	< 122	< 122	< 122 UJ	< 122	< 122	< 122
T6-B1																			
	0 - 6 "	7/12/2007	< 169	< 169	< 169 UJ	< 169	< 169 UJ	< 169	< 169 UJ	< 169 UJ	< 169	< 169	< 169	< 169	< 169	< 169 UJ	< 169	< 169	< 169 UJ
	6 - 18 "	7/12/2007	< 103	< 103	< 103 UJ	< 103	< 103 UJ	< 103	< 103 UJ	< 103 UJ	< 103	< 103	< 103	< 103	< 103	< 103 UJ	< 103	< 103	< 103 UJ
	18 - 30 "	7/12/2007	< 112	< 112	< 112 UJ	< 112	< 112 UJ	< 112	< 112 UJ	< 112 UJ	< 112	< 112	< 112	< 112	< 112	< 112 UJ	< 112	< 112	< 112 UJ
	30 - 42 "	7/12/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109
	42 - 54 "	7/12/2007	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110 UJ	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110	< 110
T6-C1																			
	0 - 6 "	7/12/2007	< 106	< 106	< 106 UJ	< 106	< 106 UJ	< 106	< 106 UJ	< 106 UJ	< 106	< 106	< 106	< 106	< 106	< 106 UJ	< 106	< 106	< 106 UJ
	6 - 18 "	7/12/2007	< 104	< 104	< 104 UJ	< 104	< 104 UJ	< 104	< 104 UJ	< 104 UJ	< 104	< 104	< 104	< 104	< 104	< 104 UJ	< 104	< 104	< 104 UJ
	18 - 30 "	7/12/2007	< 111	< 111	< 111 UJ	< 111	< 111	< 111	< 111 UJ	< 111 UJ	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ	< 111	< 111	< 111
T6-D1																			
	0 - 6 "	7/12/2007	< 102	< 102	< 102 UJ	< 102	< 102 UJ	< 102	< 102 UJ	< 102 UJ	< 102	< 102	< 102	< 102	< 102	< 102 UJ	< 102	< 102	< 102 UJ
	6 - 18 "	7/12/2007	< 104	< 104	< 104 UJ	< 104	< 104 UJ	< 104	< 104 UJ	< 104 UJ	< 104	< 104	< 104	< 104	< 104	< 104 UJ	< 104	< 104	< 104 UJ
	18 - 30 "	7/12/2007	< 109	< 109	< 109 UJ	< 109	< 109	< 109	< 109 UJ	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109 UJ	< 109	< 109	< 109
T6T3-A1																			
	0 - 6 "	7/12/2007	< 187	< 187	< 187	< 187	< 187	< 187	< 187	< 187 UJ	< 187	< 187	< 187 UJ	< 187	< 187	< 187 UJ	< 187	< 187	< 187
	6 - 18 "	7/12/2007	< 183	< 183	< 183	< 183	< 183	< 183	< 183	< 183 UJ	< 183	< 183	< 183 UJ	< 183	< 183	< 183 UJ	< 183	< 183	< 183
	18 - 30 "	7/12/2007	< 181	< 181	< 181	< 181	< 181	< 181	< 181	< 181 UJ	< 181	< 181	< 181 UJ	< 181	< 181	< 181 UJ	< 181	< 181	< 181
	30 - 42 "	7/12/2007	< 108	< 108	< 108 UJ	< 108	< 108	< 108	< 108 UJ	< 108 UJ	< 108	< 108	< 108 UJ	< 108	< 108	< 108 UJ	< 108	< 108	< 108
	42 - 54 "	7/12/2007	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R	< 110 R
	54 - 66 "	7/12/2007	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110 UJ	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110	< 110 UJ	< 110	< 110	< 110

Natural Resource Technology

Sample ID	Depth	Collection Date	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-pyrene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naph - thalene	Phenanthrene	Pyrene
Sediment Screening Benchmarks																			
Benchmarks			360	396	365	57.2	108	150	788	882	791	166	33	423	77.4	899	176	204	195
T7-A1																			
	0 - 6 "	7/11/2007	**4200**	**8800**	**1500**	**10000 J**	**12000**	**6700**	**13000 J**	**2700 J**	**7400 J**	**11000**	**1500**	**19000 J**	**9200**	**3700 J**	**2500**	**26000 J**	**35000 Q J**
	6 - 18 "	7/11/2007	**3400**	**7400 J**	< 1235	**8400 J**	**10000 J**	**5500 J**	**11000 J**	**2600 J**	**6100 J**	**8200 J**	**1300**	**16000 J**	**7300 J**	**3600 J**	**2100 J**	**21000 J**	**23000 J**
	18 - 30 "	7/11/2007	**640**	240	< 118	**1600 J**	**1800**	**980**	**2000 J**	360 J	**1100 J**	**1500**	**140**	**2700 J**	**980**	400 J	**340**	**4000 Q J**	**2600 J**
	30 - 42 "	7/11/2007	< 111	160 J	< 111	**170 J**	**270 J**	**230 J**	320 J	< 111 UJ	120 J	**180 J**	< 111	**470 J**	**150 J**	< 111 UJ	< 111	**540 J**	**700 J**
	42 - 54 "	7/11/2007	< 110	< 110	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110
	54 - 66 "	7/11/2007	< 105	< 105	< 105 UJ	< 105	< 105 UJ	< 105	< 105 UJ	< 105 UJ	< 105	< 105	< 105	< 105	< 105	< 105 UJ	< 105	< 105	< 105 UJ
	66 - 72 "	7/11/2007	< 111	< 111	< 111 UJ	< 111	< 111 UJ	< 111	< 111 UJ	< 111 UJ	< 111	< 111	< 111	< 111	< 111	< 111 UJ	< 111	< 111	< 111 UJ
T7-B1																			
	0 - 6 "	7/11/2007	**39000 Q**	**42000 Q**	**7900**	**54000 Q J**	**44000 Q**	**26000**	**48000 Q J**	**6400 J**	**28000 J**	**43000 Q**	**2400**	**58000 Q J**	**40000 Q**	**6100 J**	**80000 Q**	**85000 Q J**	**110000 Q J**
	6 - 18 "	7/11/2007	270	**400**	< 115	**370 J**	**420**	**210**	390 J	< 115 UJ	260 J	**330**	< 115 UJ	**620 J**	**400**	< 115 UJ	**530**	**1000 J**	**980 J**
	18 - 30 "	7/11/2007	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114 UJ	< 114	< 114 UJ	170 J
	30 - 42 "	7/11/2007	< 110	< 110	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110	< 110	< 110	< 110 UJ	< 110	< 110	< 110
T7-C1																			
	0 - 6 "	7/11/2007	< 125	< 125	< 125	< 125 UJ	< 125	< 125	< 125	< 125 UJ	< 125	< 125	< 125 UJ	< 125 UJ	< 125	< 125 UJ	< 125	< 125 UJ	< 125 UJ
	6 - 18 "	7/11/2007	< 123	< 123	< 123	< 123 UJ	< 123	< 123	< 123	< 123 UJ	< 123	< 123	< 123 UJ	< 123 UJ	< 123	< 123 UJ	< 123	< 123 UJ	< 123 UJ
	18 - 30 "	7/11/2007	< 116	< 116	< 116 UJ	< 116	< 116	< 116	< 116 UJ	< 116 UJ	< 116	< 116	< 116 UJ	< 116	< 116	< 116 UJ	< 116	< 116	< 116
T7-C2																			
	0 - 6 "	7/11/2007	< 125	< 125	< 125	< 125 UJ	< 125	< 125	< 125	< 125 UJ	< 125	< 125	< 125 UJ	< 125 UJ	< 125	< 125 UJ	< 125	< 125 UJ	< 125 UJ
	6 - 18 "	7/11/2007	< 112	< 112	< 112 UJ	< 112	< 112	< 112	< 112 UJ	< 112 UJ	< 112	< 112	< 112 UJ	< 112	< 112	< 112 UJ	< 112	< 112	< 112
	18 - 30 "	7/11/2007	< 114	< 114	< 114 UJ	< 114	< 114	< 114	< 114 UJ	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114 UJ	< 114	< 114	< 114

Notes

1) Parameters that attain or exceed a Sediment Screening Benchmark are identified in bold and underlined.
2) The hierarchy for the Sediment Benchmarks is provided on Table 14 - Sediment Screening Benchmark Values.

<2.0 : Parameter not detected above the Limit of Detection indicated.
NS : Sediment Quality Guideline Value has not been established for this parameter.
Q: Analyte result has been qualified, see laboratory analytical report for additional information.
Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.
--: Analysis not performed.
QC: Quality Control duplicate sample.

Table 16. Sediment Analytical Results - Petroleum Volatile Organic Compounds (PVOC, µg/Kg), Cyanide (µg/Kg), and Metals (µg/Kg)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities

1111 Crosby Avenue, Steven's Point, Wisconsin

USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Ethyl-benzene	Toluene	Xylene - Total	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Cyanide, Total
Sediment Screening Benchmarks																									
Benchmarks			NS	2000	9790	NS	990	43400	31600	20000000	35800	460000	180	22700	NS	1600	NS	121000	308	459	383	465	NS	NS	NS
Psed-201																									
	0 - 6 "	7/11/2007	3000000 R	< 1800 Q	4300	23000	< 900 Q	< 3600 U UJ	2500 J-	4800000 R	32000	80000	91 J+	2000	< 1800 Q	< 900 Q	7300	82000 J-	< 88 Q	< 88 Q	< 88 Q	36 Q J+	< 177 Q	< 177 Q	--
	6 - 18 "	7/11/2007	2000000 R	< 1400 Q	3700	15000	< 700 Q	700 J-	1700 J-	4400000 R	**45000**	37000	40 J+	1700	700	< 700 Q	4900	34000 J-	< 46 Q	< 46 Q	< 46 Q	96 Q J+	< 92 Q	< 92 Q	--
	18 - 30 "	7/11/2007	2600000 R	< 1400 Q	3900	19000	< 700 Q	700 J-	2200 J-	4600000 R	35000	53000	87 J+	2700	1500	< 700 Q	7000	42000 J-	< 45 Q	< 45 Q	< 45 Q	< 90 Q	< 90 Q	< 90 Q	--
Psed-202																									
	0 - 6 "	7/11/2007	11000000	< 2000 Q UJ	5900 J-	120000 J-	**1300 J-**	23000 J-	31000 J-	19000000 R	**350000 J-**	230000 J-	**490**	10000 J-	< 2000 Q UJ	< 1000 Q UJ	39000 J-	**230000 J-**	< 97	< 97	< 97	< 195	< 195	< 195	--
	6 - 18 "	7/11/2007	15000000	< 2600 Q UJ	7700 J-	180000 J-	< 1300 Q UJ	28000 J-	**46000 J-**	**24000000 R**	**260000 J-**	250000 J-	**790**	12000 J-	< 2600 Q UJ	< 1300 Q UJ	49000 J-	**310000 J-**	< 116	< 116	< 116	< 233	< 233	< 233	--
	18 - 30 "	7/11/2007	21000000	< 2700 Q UJ	9200 J-	300000 J-	**4000 J-**	4000 J-	**59000 J-**	**27000000 R**	**320000 J-**	350000 J-	**1100**	17000 J-	< 2700 Q UJ	< 1300 Q UJ	70000 J-	**430000 J-**	< 138	< 138	< 138	< 275	< 275	< 275	--
Psed-203																									
	0 - 6 "	7/11/2007	13000000	< 4100 Q UJ	6500 J-	150000 J-	< 2000 Q UJ	39000 J-	25000 J-	**20000000 R**	**110000 J-**	310000 J-	**220**	15000 J-	< 4100 Q UJ	< 2000 Q UJ	35000 J-	**190000 J-**	< 199	< 199	< 199	< 399	< 399	< 399	--
	6 - 18 "	7/11/2007	9600000	< 2600 Q UJ	6700 J-	130000 J-	< 1300 Q UJ	18000 J-	**34000 J-**	17000000 R	**120000 J-**	180000 J-	**390**	8800 J-	< 2600 Q UJ	< 1300 Q UJ	31000 J-	**210000 J-**	< 129 Q	130	< 129 Q	140 Q	150 Q	270	--
	18 - 25 "	7/11/2007	24000000	< 3600 Q UJ	**11000 J-**	220000 J-	**2600 J-**	**57000 J-**	**61000 J-**	**39000000 R**	**300000 J-**	**530000 J-**	**680**	**24000 J-**	< 3600 Q UJ	< 1800 Q UJ	68000 J-	**340000 J-**	< 174	< 174	< 174	< 349	< 349	< 349	--
T1-A1																									
	0 - 6 "	7/10/2007	2100000 J+	< 1500 Q R	< 1500 Q	19000	< 700 Q	7800	4600	5600000 R	6200	120000 R	30	3500	< 1500 Q	< 700 Q	10000	14000 R	< 73	< 73	< 73	< 146	< 146	< 146	< 110
	6 - 18 "	7/10/2007	1800000 J+	< 1400 Q R	< 1400 Q	14000	< 700 Q	4400	3500	4200000 R	5800	80000 R	56	3100	< 1400 Q	< 700 Q	10000	12000 R	< 69	< 69	< 69	< 139	< 139	< 139	< 100
	18 - 30 "	7/10/2007	2600000 J+	< 1200 Q R	< 1200 Q	17000	< 600 Q	6000	3600	5400000 R	1600	86000 R	**290**	3400	< 1200 Q	< 600 Q	13000	9400 R	< 62	< 62	< 62	< 124	< 124	< 124	< 130
	30 - 42 "	7/10/2007	3100000	< 1200 Q UJ	1200	46000 J+	< 600 Q UJ	5700 J-	5600	4600000 R	2000	120000 R	12	4100 J-	< 1200 Q UJ	< 600 Q UJ	12000 J-	8700 R	< 61	< 61	< 61	< 122	< 122	< 122	< 78
	42 - 54 "	7/10/2007	2800000	< 1400 Q UJ	< 1400 Q UJ	16000 J+	< 700 Q UJ	6000 J-	3000	5900000 R	1500	92000 R	16	4100 J-	< 1400 Q UJ	< 700 Q UJ	15000 J-	11000 R	< 66	< 66	< 66	< 132	< 132	< 132	< 100
	54 - 66 "	7/10/2007	4100000	< 1300 Q UJ	< 1300 Q UJ	33000 J+	< 600 Q UJ	9600 J-	13000	8300000 R	1800	170000 R	28	6800 J-	< 1300 Q UJ	< 600 Q UJ	22000 J-	18000 R	< 60	< 60	< 60	< 120	< 120	< 120	< 55
	66 - 78 "	7/10/2007	8000000	< 1100 Q UJ	< 1100 Q UJ	79000 J+	< 500 Q UJ	20000 J-	24000	17000000 R	1700	340000 R	8.6	19000 J-	< 1100 Q UJ	< 500 Q UJ	36000 J-	42000 R	< 52	< 52	< 52	< 103	< 103	< 103	< 58
T1-B1																									
	0 - 6 "	7/10/2007	2800000 J+	< 1100 Q R	1100	18000	< 600 Q	6900	3900	6500000 R	1600	190000 R	48	4800	< 1100 Q	< 600 Q	16000	13000 R	< 54	< 54	< 54	< 107	< 107	< 107	< 95
	6 - 18 "	7/10/2007	3100000 J+	< 1200 Q R	< 1200 Q	20000	< 600 Q	11000	6000	8800000 R	2100	170000 R	13	5300	< 1200 Q	< 600 Q	23000	13000 R	< 53	< 53	< 53	< 106	< 106	< 106	< 130
	18 - 30 "	7/10/2007	2600000 J+	< 1200 Q R	< 1200 Q	22000	< 600 Q	9400	6200	6500000 R	1400	99000 R	12	5000	< 1200 Q	< 600 Q UJ	17000	13000 R	< 55	< 55	< 55	< 110	< 110	< 110	< 89
	30 - 42 "	7/10/2007	5500000 J+	< 1200 Q R	< 1200 Q	52000	< 600 Q	10000	11000	14000000 R	1200	110000 R	11	9800	< 1200 Q	< 600 Q	24000	15000 R	< 59	< 59	< 59	< 117	< 117	< 117	< 96
T1-C1a																									
	6 - 18 "	7/9/2007	5400000 J+	< 1300 Q R	< 1300 Q	37000	< 600 Q	14000	**34000**	8300000 R	2200	100000 R	11	8700	< 1300 Q	< 600 Q	37000	15000 R	< 61	< 61	< 61	< 122	< 122	< 122	< 80
	60 - 72 "	7/9/2007	8500000 J+	< 1000 Q R	< 1000 Q	39000	< 500 Q	20000	**63000**	**21000000 R**	< 1000 Q	320000 R	11	22000	< 1000 Q	< 500 Q	85000	28000 R	< 51	< 51	< 51	< 102	< 102	< 102	< 85
	72 - 84 "	7/9/2007	6900000 J+	< 1100 Q R	< 1100 Q	30000	< 600 Q	16000	**52000**	17000000 R	< 1100 Q	260000 R	22	18000	< 1100 Q	< 600 Q	71000	22000 R	< 55	< 55	< 55	< 110	< 110	< 110	< 77
	84 - 96 "	7/9/2007	6600000 J+	< 1000 Q R	< 1000 Q	33000	< 500 Q	15000	**53000**	15000000 R	< 1000 Q	230000 R	24	17000	< 1000 Q	< 500 Q	63000	20000 R	< 52	< 52	< 52	< 105	< 105	< 105	< 80
	96 - 108 "	7/9/2007	8700000 J+	< 1100 Q R	< 1100 Q	54000	< 500 Q	20000	**55000**	19000000 R	1200	270000 R	10	19000	< 1100 Q	< 500 Q	74000	24000 R	< 52	< 52	< 52	< 103	< 103	< 103	< 98
	108 - 120 "	7/9/2007	9900000 J+	< 1100 Q R	< 1100 Q	77000	< 500 Q	24000	**97000**	**22000000 R**	1800	290000 R	6.5	21000	< 1100 Q	< 500 Q	80000	28000 R	< 55	< 55	< 55	< 110	< 110	< 110	< 110
	120 - 132 "	7/9/2007	9184000 J+	< 1000 Q R	< 1000 Q	41000	< 500 Q	21000	**68000**	**21429000 R**	1220	347000 R	11	21400	< 1000 Q	< 500 Q	83000	29000 R	< 52	< 52	< 52	< 103	< 103	< 103	< 75
	132 - 144 "	7/9/2007	11000000 J+	< 1100 Q R	< 1100 Q	65000	< 500 Q	26000	**400000**	**27000000 R**	2300	400000 R	5.1	**29000**	< 1100 Q	620	110000	38000 R	< 52	< 52	< 52	< 103	< 103	< 103	< 58
T1-D1																									
	0 - 6 "	7/9/2007	8500000 J+	< 1200 Q R	< 1200 Q	200000	830	23000	15000	17000000 R	2000	270000 R	13	16000	< 1200 Q	< 600 Q	43000	39000 R	< 60	< 60	< 60	< 120	< 120	< 120	< 74
	6 - 18 "	7/9/2007	11000000 J+	< 1300 Q R	< 1300 Q	330000	< 600 Q	24000	27000	**20000000 R**	2000	430000 R	18	17000	< 1300 Q	< 600 Q	46000	59000 R	< 61	< 61	< 61	< 121	< 121	< 121	< 87
	18 - 24 "	7/9/2007	8800000 J+	< 1100 Q R	< 1100 Q	170000	< 600 Q	35000	**42000**	17000000 R	1500	250000 R	19	16000	< 1100 Q	< 600 Q	43000	36000 R	< 56	< 56	< 56	< 113	< 113	< 113	< 76

Sample ID	Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Ethyl-benzene	Toluene	Xylene - Total	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Cyanide, Total
Sediment Screening Benchmarks																									
Benchmarks			NS	2000	9790	NS	990	43400	31600	20000000	35800	460000	180	22700	NS	1600	NS	121000	308	459	383	465	NS	NS	NS
T2-A1																									
	0 - 6 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 58 Q	< 58 Q	< 58 Q	29 Q	< 114 Q	< 114 Q	--
	6 - 18 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 105 Q	< 105 Q	< 105 Q	59 Q	< 210 Q	< 210 Q	--
	18 - 30 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 61 Q	< 61 Q	< 61 Q	37 Q	< 121 Q	< 121 Q	--
	30 - 42 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	< 108 Q	< 108 Q	< 108 Q	--
T3-A1																									
	0 - 6 "	7/11/2007	4300000	< 3300 Q UJ	7300 J-	53000 J-	**2600 J-**	6600 J-	8300 J-	13000000 R	**69000 J-**	240000 J-	**1600**	3300 J-	3300 J-	< 1700 Q UJ	18000 J-	59000 J-	< 169	270	< 169	**790**	270	610	--
	6 - 18 "	7/11/2007	4200000	< 2800 Q UJ	5100 J-	51000 J-	< 1400 Q	13000 J-	7600 J-	13000000 R	**42000 J-**	310000 J-	**370**	5100 J-	< 2800 Q UJ	< 1400 Q UJ	23000 J-	45000 J-	**2900**	**9400**	**7600**	**25000**	4400	10000	--
	18 - 30 "	7/11/2007	4900000	< 2000 Q UJ	5300 J-	51000 J-	**1200 J-**	11000 J-	6800 J-	9200000 R	23000 J-	150000 J-	**210**	4900 J-	2700 J-	< 1000 Q UJ	20000 J-	39000 J-	**21000**	**49000**	**43000**	**130000**	19000	45000	--
	30 - 42 "	7/11/2007	4300000	< 1500 Q UJ	1900 J-	28000 J-	< 700 Q UJ	8300 J-	3700 J-	7500000 R	9000 J-	90000 J-	65	5200 J-	< 1500 Q UJ	< 700 Q UJ	18000 J-	16000 J-	**4000**	**12000**	**5800**	**31000**	5400	14000	--
	42 - 54 "	7/11/2007	3300000	< 1300 Q UJ	< 1300 Q UJ	19000 J-	< 600 Q UJ	6400 J-	3900 J-	5300000 R	1400 J-	61000 J-	4.2	4700 J-	< 1300 Q UJ	< 600 Q UJ	15000 J-	16000 J-	< 62	94	< 62	260	< 124	140	--
	54 - 66 "	7/11/2007	3300000	< 1200 Q UJ	< 1200 Q UJ	20000 J-	< 600 Q UJ	6600 J-	8000 J-	6900000 R	1400 J-	77000 J-	4.1	4500 J-	< 1200 Q UJ	< 600 Q UJ	17000 J-	14000 J-	< 59	170	86	460	< 118	240	--
	66 - 78 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50 Q	< 50 Q	< 50 Q	34 Q J+	< 100 Q	< 100 Q	--
	78 - 90 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50 Q	< 49 Q	< 49 Q	38 Q J+	< 98 Q	< 98 Q	--
	90 - 102 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	71 Q J+	< 107 Q	30 Q J+	--
T3-A2																									
	0 - 6 "	7/11/2007	3200000	< 1200 Q UJ	1700 J-	21000 J-	< 600 Q UJ	8000 J-	7400 J-	9000000 R	2100 J-	110000 J-	14	5700 J-	< 1200 Q UJ	< 600 Q UJ	15000 J-	17000 J-	< 53	< 53	< 53	< 106	< 106	< 106	--
	6 - 18 "	7/11/2007	4300000	< 1200 Q UJ	1900 J-	23000 J-	< 600 Q UJ	7300 J-	6700 J-	11000000 R	2300 J-	120000 J-	6.5	6600 J-	< 1200 Q UJ	< 600 Q UJ	14000 J-	23000 J-	< 56	< 56	< 56	< 113	< 113	< 113	--
	18 - 30 "	7/11/2007	3600000	< 1100 Q UJ	1300 J-	17000 J-	< 600 Q UJ	8700 J-	8300 J-	9800000 R	2100 J-	100000 J-	11	8200 J-	1300 J-	< 600 Q UJ	18000 J-	19000 J-	< 55	< 55	< 55	< 111	< 111	< 111	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	32 Q	< 106 Q	< 106 Q	--
	42 - 54 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 51 Q	< 51 Q	< 51 Q	32 Q	< 102 Q	< 102 Q	--
	54 - 66 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 46 Q	< 46 Q	< 46 Q	63 Q J+	< 92 Q	< 92 Q	--
T3-A3																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 113 Q	71 Q	26 Q	200 Q	47 Q	120 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 48 Q	50	< 48 Q	120	< 96 Q	56 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 59 Q	30 Q	< 59 Q	61 Q	< 118 Q	48 Q	--
	30 - 42 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	35 Q	< 107 Q	< 50 Q	--
	42 - 54 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	< 108 Q	< 108 Q	< 108 Q	--
	54 - 66 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 52 Q	< 52 Q	< 52 Q	48 Q J+	< 105 Q	< 105 Q	--
	66 - 78 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 60 Q	< 60 Q	< 60 Q	53 Q J+	< 120 Q	< 120 Q	--
T3-A3a																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 52 Q	< 52 Q	< 52 Q	56 Q J+	< 104 Q	< 104 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	56 Q	< 110 Q	< 110 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	78 J+	29 Q J+	240 J+	50 Q J+	53 Q J+	--
	42 - 54 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 77 Q	< 77 Q	< 77 Q	< 154 Q	< 154 Q	< 154 Q	--
	54 - 66 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 52 Q	< 52 Q	< 52 Q	51 Q J+	< 104 Q	< 104 Q	--

Sample ID	Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Ethyl-benzene	Toluene	Xylene - Total	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Cyanide, Total
Sediment Screening Benchmarks																									
Benchmarks			NS	2000	9790	NS	990	43400	31600	20000000	35800	460000	180	22700	NS	1600	NS	121000	308	459	383	465	NS	NS	NS
T3-B1																									
	0 - 6 "	7/10/2007	5000000	< 1300 Q UJ	1800 J-	21000 J+	< 600 Q UJ	8300 J-	10000	11000000 R	2300	200000 R	11	6900 J-	< 1300 Q UJ	< 600 Q UJ	18000 J-	31000 R	< 64	< 64	< 64	< 128	< 128	< 128	< 74
	6 - 18 "	7/10/2007	1900000	< 1200 Q UJ	< 1200 Q UJ	12000 J+	< 600 Q UJ	2900 J-	4200	5100000 R	1400	85000 R	13	3300 J-	< 1200 Q UJ	< 600 Q UJ	7300 J-	17000 R	< 61	< 61	< 61	< 121	< 121	< 121	< 67
	18 - 30 "	7/10/2007	5300000	< 1200 Q UJ	< 1200 Q UJ	24000 J+	< 600 Q UJ	13000 J-	7000	8100000 R	1700	140000 R	9.1	13000 J-	< 1200 Q UJ	< 600 Q UJ	16000 J-	18000 R	< 60	< 60	< 60	< 120	< 120	< 120	< 64
	30 - 42 "	7/10/2007	6700000	< 1100 Q UJ	< 1100 Q UJ	52000 J+	< 500 Q UJ	20000 J-	26000	14000000 R	2600	200000 R	14	11000 J-	< 1100 Q UJ	< 500 Q UJ	34000 J-	23000 R	< 53	< 53	< 53	< 106	< 106	< 106	< 74
	42 - 54 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	< 106 Q	< 106 Q	< 106 Q	--
	54 - 66 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 59 Q	< 59 Q	< 59 Q	< 118 Q	< 118 Q	< 118 Q	--
T3-C1																									
	0 - 6 "	7/10/2007	3000000	< 1100 Q UJ	< 1100 Q UJ	27000 J+	< 600 Q UJ	9900 J-	12000	7200000 R	1900	100000 R	16	8100 J-	< 1100 Q UJ	< 600 Q UJ	19000 J-	14000 R	< 54	< 54	< 54	< 109	< 109	< 109	< 69
	6 - 18 "	7/10/2007	6200000	< 1100 Q UJ	< 1100 Q UJ	41000 J+	< 600 Q UJ	29000 J-	14000	13000000 R	2000	190000 R	10	17000 J-	< 1100 Q UJ	< 600 Q UJ	28000 J-	30000 R	< 49	< 49	< 49	< 97	< 97	< 97	< 77
	18 - 30 "	7/10/2007	3600000	< 1100 Q UJ	< 1100 Q UJ	29000 J+	< 600 Q UJ	9000 J-	17000	7100000 R	1200	88000 R	4.7	7200 J-	< 1100 Q UJ	< 600 Q UJ	19000 J-	16000 R	< 51	< 51	< 51	< 101	< 101	< 101	< 67
	30 - 42 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	< 110 Q	< 110 Q	< 110 Q	--
T3-D1a																									
	0 - 6 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	17	--	--	--	--	--	< 48	< 48	< 48	< 96	< 96	< 96	< 56
	6 - 18 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	17	--	--	--	--	--	< 41	< 41	< 41	< 83	< 83	< 83	< 63
	18 - 30 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	8.8	--	--	--	--	--	< 46	< 46	< 46	< 93	< 93	< 93	< 75
	30 - 36 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	8.9	--	--	--	--	--	< 56	< 56	< 56	< 111	< 111	< 111	< 87
T4-A1																									
	0 - 6 "	7/11/2007	20000000	< 1200 Q UJ	1800 J-	250000 J-	< 600 Q UJ	26000 J-	7800 J-	**44000000 R**	1800 J-	380000 J-	3.2	**23000 J-**	< 1200 Q UJ	< 600 Q UJ	54000 J-	26000 J-	< 61	< 61	< 61	< 121	< 121	< 121	--
	6 - 18 "	7/11/2007	12000000	< 1200 Q UJ	1400 J-	170000 J-	750 J-	18000 J-	5900 J-	**34000000 R**	< 1200 Q U	270000 J-	4.3	17000 J-	< 1200 Q UJ	< 600 Q UJ	38000 J-	28000 J-	< 57	< 57	< 57	< 113	< 113	< 113	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55	< 55	< 55	< 109	< 109	< 109	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 69 Q	< 69 Q	< 69 Q	86 Q J+	< 137 Q	< 137 Q	--
	42 - 54 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 57 Q	< 57 Q	31 Q	32 Q	< 114 Q	< 114 Q	--
	54 - 66 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 62 Q	36 Q J+	< 62 Q	122 Q J+	105 Q J+	122 Q J+	--
T4-A2																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 57 Q	65	32 Q	200	50 Q	55 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 62 Q	< 62 Q	33 Q J+	160 J+	41 Q J+	45 Q J+	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 63 Q	< 63 Q	< 63 Q	61 Q J+	< 127 Q	< 127 Q	--
	30 - 42 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 60 Q	< 60 Q	< 60 Q	40 Q J+	< 120 Q	< 120 Q	--
T4-B1																									
	0 - 6 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	6.4	--	--	--	--	--	< 56	< 56	< 56	< 112	< 112	< 112	< 170
	6 - 18 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	19	--	--	--	--	--	< 48	< 48	< 48	< 95	< 95	< 95	< 44
	18 - 30 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	77	--	--	--	--	--	< 57	< 57	< 57	< 115	< 115	< 115	< 60
	30 - 42 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 58 Q	< 58 Q	< 58 Q	33 Q	< 117 Q	< 117 Q	--
	42 - 54 "	7/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 48 Q	< 48 Q	< 48 Q	32 Q	< 97 Q	< 97 Q	--
T4-C1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 51 Q	< 51 Q	< 51 Q	< 102 Q	< 102 Q	< 102 Q	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 59 Q	< 59 Q	< 59 Q	< 118 Q	< 118 Q	< 118 Q	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 57 Q	< 57 Q	< 57 Q	69 Q J+	< 114 Q	< 114 Q	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	< 110 Q	< 110 Q	< 110 Q	--

Sample ID	Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Ethyl-benzene	Toluene	Xylene - Total	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Cyanide, Total
Sediment Screening Benchmarks																									
Benchmarks			NS	2000	9790	NS	990	43400	31600	20000000	35800	460000	180	22700	NS	1600	NS	121000	308	459	383	465	NS	NS	NS
T4-D1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 51 Q	< 51 Q	< 51 Q	< 101 Q	< 101 Q	< 101 Q	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 56 Q	< 56 Q	< 56 Q	33 Q	< 111 Q	< 111 Q	--
	18 - 24 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 51 Q	< 51 Q	< 51 Q	< 103 Q	< 103 Q	< 103 Q	--
T5-A1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 71	< 71	< 71	< 143	< 143	< 143	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 78	< 78	< 78	< 157	< 157	< 157	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 63	< 63	< 63	< 125	< 125	< 125	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	40 Q	< 110 Q	< 110 Q	--
	42 - 54 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	67 Q	< 108 Q	28 Q	--
T5-B1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 60 Q	< 60 Q	< 60 Q	< 119 Q	< 119 Q	< 119 Q	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 58 Q	< 58 Q	< 58 Q	51 Q J+	< 115 Q	< 115 Q	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 52 Q	< 52 Q	< 52 Q	42 Q J+	< 103 Q	< 103 Q	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	35 Q	< 109 Q	< 109 Q	--
	42 - 54 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 57 Q	< 57 Q	< 57 Q	28 Q	< 113 Q	< 113 Q	--
T5-C1a																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 56 Q	< 56 Q	< 56 Q	35 Q	< 112 Q	< 112 Q	--
	18 - 24 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	< 110 Q	< 110 Q	< 110 Q	--
T5-D1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 46 Q	< 46 Q	< 46 Q	< 92 Q	< 92 Q	< 92 Q	--
T6-A1																									
	0 - 6 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 89	< 89	< 89	< 178	< 178	< 178	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 95	< 95	< 95	< 190	< 190	< 190	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 59	< 59	< 59	< 118	< 118	< 118	--
T6-B1																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 114 Q	< 114 Q	< 114 Q	86 Q	72 Q	86 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 48 Q	< 48 Q	< 48 Q	< 96 Q	< 96 Q	< 96 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	< 109 Q	< 109 Q	< 109 Q	--
	30 - 42 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	< 106 Q	< 106 Q	< 106 Q	--
	42 - 54 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	83 Q J+	< 106 Q	< 106 Q	--
T6-C1																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	36 Q	< 108 Q	< 108 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 48 Q	< 48 Q	< 48 Q	< 96 Q	< 96 Q	< 96 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	< 109 Q	< 109 Q	< 109 Q	--
T6-D1																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50 Q	< 50 Q	< 50 Q	28 Q	< 100 Q	< 100 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50 Q	< 50 Q	< 50 Q	< 100 Q	< 100 Q	< 100 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	< 106 Q	< 106 Q	< 106 Q	--

Sample ID	Depth	Collection Date	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc	Benzene	Ethyl-benzene	Toluene	Xylene - Total	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	Cyanide, Total
Sediment Screening Benchmarks																									
Benchmarks			NS	2000	9790	NS	990	43400	31600	20000000	35800	460000	180	22700	NS	1600	NS	121000	308	459	383	465	NS	NS	NS
T6T3-A1																									
	0 - 6 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 63 Q	< 63 Q	< 63 Q	< 126 Q	< 126 Q	< 126 Q	--
	6 - 18 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 58 Q	< 58 Q	< 58 Q	< 117 Q	< 117 Q	< 117 Q	--
	18 - 30 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 45 Q	< 45 Q	< 45 Q	46 Q	< 91 Q	< 91 Q	--
	30 - 42 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	39 Q J+	< 108 Q	< 108 Q	--
	42 - 54 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 60 Q	< 60 Q	< 60 Q	< 119 Q	< 119 Q	< 119 Q	--
	54 - 66 "	7/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 56 Q	< 56 Q	< 56 Q	< 113 Q	< 113 Q	< 113 Q	--
T7-A1																									
	0 - 6 "	7/11/2007	3800000 R	< 1200 Q UJ	3700	35000 J-	< 600 Q	7200 J-	10000 J-	9000000 R	**<u>43000 J-</u>**	150000	30 J+	5100	1300	< 600 Q	15000	17000 J-	< 60	< 60	< 60	< 121	< 121	< 121	--
	6 - 18 "	7/11/2007	9600000 R	< 1200 Q	4100	< 1200	< 600 Q	12000 J-	28000 J-	**<u>20000000 R</u>**	31000	330000	13 J+	12000	1500	< 600 Q	33000	44000 J-	< 54	< 54	< 54	< 109	< 109	170	--
	18 - 30 "	7/11/2007	10000000 R	< 1200 Q	2800	190000	< 600 Q	18000 J-	26000 J-	**<u>24000000 R</u>**	2800	**<u>570000</u>**	10 J+	14000	< 1200 Q	< 600 Q	40000	61000 J-	< 57	< 57	< 57	< 114	< 114	< 114	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	< 108 Q	< 108 Q	< 108 Q	--
	42 - 54 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	29 Q	< 110 Q	< 110 Q	--
	54 - 66 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 59 Q	< 59 Q	< 59 Q	< 118 Q	< 118 Q	< 118 Q	--
	66 - 72 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 53 Q	< 53 Q	< 53 Q	< 105 Q	< 105 Q	< 105 Q	--
T7-B1																									
	0 - 6 "	7/11/2007	3000000 R	< 1300 Q	3600	18000	< 600 Q	5900 J-	**<u>91000 J-</u>**	7100000 R	1900	120000	42 J+	4400	< 1300	< 600 Q	8600	13000 J-	< 58	130	< 58	410	190	440	--
	6 - 18 "	7/11/2007	2100000 R	< 1500 Q	2600	13000	< 600 Q	< 2300 Q UJ	3100 J-	4600000 R	< 1500 Q	60000	10 J+	2400	< 1500 Q	< 600 Q	11000	5500 J-	< 53	60	< 53	200	< 106	170	--
	18 - 30 "	7/11/2007	13000000 R	< 1100 Q	2400	56000	< 600 Q	14000 J-	4800 J-	**<u>28000000 R</u>**	< 1100 Q	210000	8.3 J+	**<u>25000</u>**	< 1100 Q	< 600 Q	31000	19000 J-	< 55	< 55	< 55	< 111	< 111	< 111	--
	30 - 42 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 55 Q	< 55 Q	< 55 Q	< 109 Q	< 109 Q	< 109 Q	--
T7-C1																									
	0 - 6 "	7/11/2007	2000000 R	< 1200 Q	3100	12000	< 600 Q	600 J-	< 1200 Q UJ	5400000 R	1300	66000	29 J+	2500	1000	< 600 Q	5700	8700 J-	< 59 Q	< 59 Q	< 59 Q	< 119 Q	< 119 Q	< 119 Q	--
	6 - 18 "	7/11/2007	24000000 R	< 1300 Q	3800	210000	< 600 Q	26000 J-	**<u>45000 J-</u>**	**<u>35000000 R</u>**	2300	450000	3.6 J+	19000	2100	< 600 Q	53000	83000 J-	< 59 Q	< 59 Q	< 59 Q	31 Q	< 118 Q	< 118 Q	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 62 Q	< 62 Q	< 62 Q	32 Q	< 124 Q	< 124 Q	--
T7-C2																									
	0 - 6 "	7/11/2007	3300000 R	< 1200 Q	3200	26000	< 600 Q	2800 J-	2300 J-	8800000 R	1500	120000	< 2 Q UJ	4300	1100	< 600 Q	14000	16000 J-	< 59 Q	< 59 Q	< 59 Q	31 Q	< 117 Q	< 117 Q	--
	6 - 18 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 51 Q	< 51 Q	< 51 Q	53 Q J+	< 101 Q	< 101 Q	--
	18 - 30 "	7/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 54 Q	< 54 Q	< 54 Q	53 Q J+	< 108 Q	< 108 Q	--

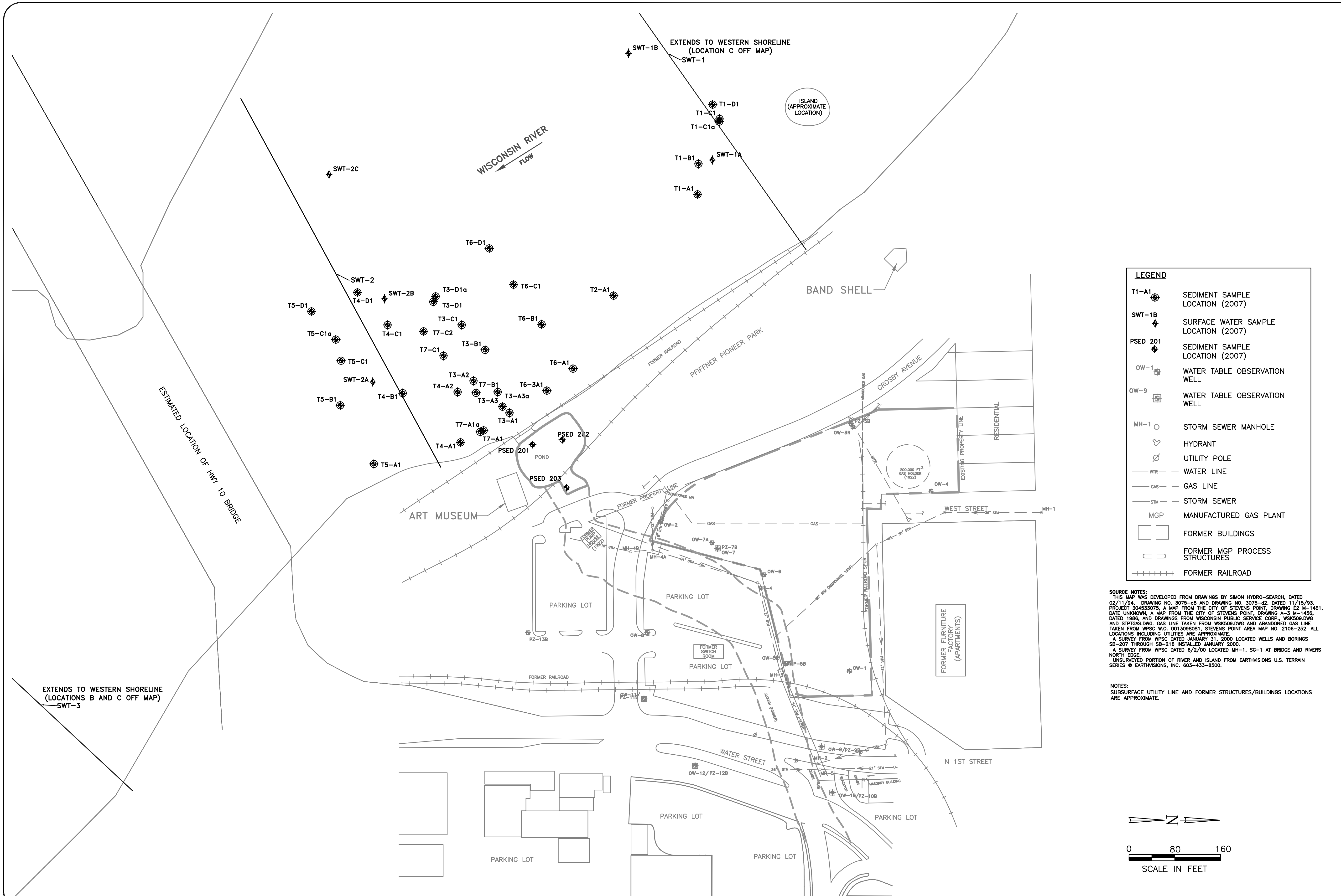
Notes
1) Parameters that attain or exceed a Sediment Screening Benchmark are identified in bold and underlined.
2) The hierarchy for the Sediment Benchmarks is provided on Table 14 - Sediment Screening Benchmark Values.

<2.0 : Parameter not detected above the Limit of Detection indicated.
NS : Sediment Quality Guideline Value has not been established for this parameter.
Q: Analyte result has been qualified, see laboratory analytical report for additional information.
Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.
--: Analysis not performed.
QC: Quality Control duplicate sample.

NATURAL RESOURCE TECHNOLOGY

APPENDIX B-3

SURFACE WATER AND STORM SEWER ANALYTICAL RESULTS AND SAMPLING LOCATIONS



SOURCE NOTES:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: RLH DATE: 05/20/08
CHECKED BY: EPK DATE: 05/30/08
APPROVED BY: JMK DATE: 06/04/08
DRAWING NO: 1177-1412-B06
REFERENCE: NONE

SEDIMENT SAMPLING AND SURFACE WATER SAMPLING LOCATIONS

REMEDIAL INVESTIGATION REPORT
WISCONSIN PUBLIC SERVICE CORPORATION
FORMER MANUFACTURE GAS PLANT, STEVENS POINT, WISCONSIN

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12

FIGURE NO. 6

Table 12. Storm Water Analytical Results - Polynuclear Aromatic Hydrocarbons (PAH, µg/L)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities

1111 Crosby Avenue, Steven's Point, Wisconsin

USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID	Collection Date	1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaph- thylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
Wisconsin Groundwater Quality Standards (NR 140, January 2007)																			
Enforcement Standard		NS	NS	NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	100	NS	250
EPA Groundwater Quality Standards																			
Maximum Contaminant Levels (MCLs)		NS	NS	NS	NS	NS	NS	0.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MH01																			
	7/24/2007	0.019 Q	< 0.011	0.04	< 0.0081	< 0.012	< 0.016	< 0.018	0.016 Q U	< 0.019	0.019 Q U	< 0.019	< 0.019	< 0.015	0.012 Q	< 0.019	< 0.012	0.013 Q	< 0.015
	10/23/2007	0.026 Q	0.022 Q	0.037	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016 Q	< 0.019	< 0.019 Q	< 0.019	< 0.019	< 0.015	0.0099 Q	< 0.019	0.066	0.013 Q	< 0.015
	1/15/2008	0.018 Q	0.018 Q	0.029	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016 Q	< 0.019	< 0.019 Q	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.094	0.012 Q	< 0.015
MH03																			
	7/24/2007	4 Q	0.019 Q	17 Q	0.27	1.7 Q	0.057	0.021 Q	0.038 Q J	0.02 Q	0.021 Q J	0.063	< 0.019	0.86 Q	8.7 Q	< 0.019	0.031 Q	7.9 Q	0.62 Q
	10/23/2007	12	7.9	22	< 1.6	4 Q	< 3.1	< 3.7	< 3.1 Q	< 3.9	< 3.9 Q	< 3.8	< 3.8	< 3.1	9.7	< 3.8	56	14	< 2.9
MH04																			
	7/24/2007	0.33	< 0.011	7.6 Q	0.35	1.7 Q	0.13	0.045 Q	0.058 Q J	0.031 Q	0.043 Q J	0.11	< 0.019	2.3 Q	6.1 Q	0.024 Q	0.022 Q	0.44	1.4 Q
	10/23/2007	16	13	23	< 0.81	5.4	< 1.6	< 1.8	< 1.6 Q	< 1.9	< 1.9 Q	< 1.9	< 1.9	3.1 Q	11	< 1.9	39	18	1.6 Q
	1/15/2008	17	18	26	< 1.6	4.9 Q	< 3.1	< 3.7	< 3.2 Q	< 3.9	< 3.9 Q	< 3.8	< 3.8	< 3.1	14	< 3.8	78	18	< 2.9
MH05																			
	7/24/2007	0.17	< 0.011	0.65 Q	0.034	0.03 Q	< 0.016	< 0.018	0.016 Q U	< 0.019	0.019 Q U	< 0.019	< 0.019	0.08	0.22	< 0.019	< 0.012	0.063	0.046 Q
	10/23/2007	0.7 Q	0.02 Q	1.5 Q	0.1	0.086	< 0.016	< 0.018	< 0.016 Q	< 0.019	< 0.019 Q	< 0.019	< 0.019	0.12	0.46 Q	< 0.019	0.09	0.28	0.07
	1/15/2008	0.96	0.21	1.5	0.076 Q	0.11 Q	< 0.078	< 0.092	< 0.078 Q	< 0.096	< 0.097 Q	< 0.095	< 0.094	0.11 Q	0.59	< 0.094	2	0.79	< 0.073
QC01																			
(MH04)	7/24/2007	0.33	< 0.011	9.1 Q	0.36	1.6 Q	0.12	0.022 Q	0.022 Q J	< 0.019	0.02 Q J	0.081	< 0.019	1.8 Q	8 Q	< 0.019	0.023 Q	1.5 Q	1.4 Q
(MH05)	10/23/2007	1.3	0.28 Q	2.5	0.22 Q	0.38 Q	0.35 Q	**<u>0.48 Q</u>**	**<u>0.51 Q</u>**	0.47 Q	0.7 Q	**<u>0.74 Q</u>**	< 0.38	1.4	0.99	< 0.38	5.5	1.8	0.88 Q
(MH04)	1/15/2008	15	7.1	25	0.88 Q	4.2	< 1.6	< 1.9	< 1.6 Q	< 1.9	< 2 Q	< 1.9	< 1.9	3.8 Q	13	< 1.9	3.5 Q	16	2.8 Q

Notes

1) Parameters that attain or exceed the EPA Groundwater Quality Standards (MCL) are shown in bold and underlined.
2) If no MCL standard has been established, then parameters that attain or exceed the NR 140 Wisconsin Groundwater Quality Enforcement Standard (ES) are identified in bold and underlined.
3) Reference the laboratory analytical report for full list of compounds analyzed.

<2.0 : Parameter not detected above the Limit of Detection indicated.
NS : NR 140 Wisconsin Groundwater Quality Standard has not been established for this parameter.
QC: Quality Control duplicate sample.
Q: Analyte result has been qualified, see laboratory analytical report for additional information.
Other Qualifiers (J, N, R, etc.): Analyte result has been qualified by data validator, see validation report for additional information.
--: Analysis not performed.

Table 13. Storm Water Analytical Results - Petroleum Volatile Organic Compounds (PVOCs, µg/L)

1177 Wisconsin Public Service Corp., Stevens Point MGP Site Remediation Activities
1111 Crosby Avenue, Steven's Point, Wisconsin
USEPA# : WIN000509983 BRRTS# : 0250000079

Sample ID		Collection Date	Benzene	Ethyl-benzene	Toluene	Xylene, O	Xylenes, m+p	1,2,4 - Trimethyl-benzene	1,,3,5 - Trimethyl - benzene	MTBE
Wisconsin Groundwater Quality Standards (NR 140, February 2004)										
Enforcement Standard (ES)			5	700	1000	10000	10000	480	480	60
EPA Groundwater Quality Standards										
Maximum Contaminant Level (MCLs)			5	700	1000	10000	10000	NS	NS	NS
MH01										
		7/24/2007	< 0.21	< 0.4	< 0.36	< 0.36	< 0.74	< 0.39	< 0.4	< 0.36
		10/23/2007	< 0.14	< 0.4	< 0.36	< 0.36	< 0.74	< 0.39	< 0.4	< 0.36
		1/15/2008	< 0.14	< 0.4	< 0.36	< 0.36	< 0.74	< 0.39	< 0.4	< 0.36
MH03										
		7/24/2007	**6.9**	5	0.69 Q	3.7	4.8	2.6	0.73 Q	< 0.36
		10/23/2007	**7.5**	7.2	0.91 Q	5.3	8	5	1.7	< 0.36
MH04										
		7/24/2007	4.8	9.3	1.4	5.2	9.5	5.5	1.6	< 0.36
		10/23/2007	**5.7**	12	1.7	6.8	13	7.4	2.6	< 0.36
		1/15/2008	4.9	14	2.2	7.8	15	9.2	3.4	< 0.36
MH05										
		7/24/2007	0.6 Q	< 0.4	< 0.36	< 0.36	< 0.74	< 0.39	< 0.4	< 0.36
		10/23/2007	0.67	0.49 Q	< 0.36	0.39 Q	< 0.74	0.47 Q	< 0.4	< 0.36
		1/15/2008	0.7	0.4 Q	< 0.36	0.36 Q	< 0.74	< 0.39	< 0.4	< 0.36
QC01										
	(MH04)	7/24/2007	4.9	9.9	1.3	5.1	9.2	4.4	1.2 Q	< 0.36
	(MH05)	10/23/2007	0.67	0.53 Q	< 0.36	0.4 Q	< 0.74	0.49 Q	< 0.4	< 0.36
	(MH04)	1/15/2008	4.7	13	2.1	7.7	15	9	3.4	< 0.36

Notes

1) Parameters that attain or exceed the EPA Groundwater Quality Standards (MCL) are shown in bold and underlined.

2) If no MCL standard has been established, then parameters that attain or exceed the NR 140 Wisconsin Groundwater Quality Enforcement Standard (ES) are identified in bold and underlined.

3) Reference the laboratory analytical report for full list of compounds analyzed.

4) 1,2,4 and 1,3,5- Trimethylbenzene analytical results combined for comparison against the NR 140 PAL and ES standards.

<2.0 : Parameter not detected above the Limit of Detection indicated.

Q : Analyte result has been qualified, see laboratory analytical report for additional information.

NS : Groundwater Quality Standard not established for this parameter.

--: Analysis not performed.

QC: Quality Control duplicate sample.

APPENDIX B-4

SOIL VAPOR SAMPLING RESULTS AND LOCATIONS

Table 20. Soil Vapor Analytical Results

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

Vapor Intrusion Point	Sample Date	Benzene ppbv	Benzene ug/m^3	Naphthalene ppbv	Naphthalene ug/m^3	Carbon Dioxide mol %	Oxygen mol %	Methane mol %
Screening Levels/Pathways (ug/m3)								
Shallow Soil Gas, Residential		---	3.1	---	0.72	**No Screening Levels**		
Deep Soil Gas, Residential		---	31	---	7.2			
Shallow Soil Gas, Industrial		---	16	---	3.6			
Deep Soil Gas, Industrial		---	160	---	36			
SV1S	01/25/11	1.0	**3.2**	<0.44	<2.3	8.42	8.50	<0.110
	03/18/11	0.57	1.8	<0.41	<2.1	4.39	8.57	<0.102
SV1D	01/25/11	0.89	2.9	<0.43	<2.2	9.87	5.18	<0.106
	03/18/11	1.1	3.4	<0.42	<2.2	6.15	5.02	<0.105
SV2S	01/20/11	<0.43	<1.3	<0.43	<2.3	7.42	7.61	<0.107
	03/18/11	0.47	1.5	<0.41	<2.1	7.74	5.37	<0.102
SV2D	01/20/11	<0.42	<1.3	<0.42	<2.2	10.3	4.42	<0.106
	03/18/11	0.53	1.7	<0.39	<2.0	10.7	2.58	<0.0977
SV3S	01/20/11	0.53	1.7	<0.39	<2.0	11.6	4.61	<0.0974
	03/18/11	0.62	2.0	<0.43	<2.2	9.09	5.16	<0.107
SV3D	01/20/11	<0.36	<1.1	<0.36	<1.9	13	2.40	<0.0911
	03/18/11	<0.43	<1.3	<0.43	<2.2	12.9	1.99	<0.107
SV4S	01/20/11	0.40	1.3	<0.38	<2.0	6.68	10.9	<0.0952
	03/18/11	<0.43	<1.3	<0.43	<2.3	8.9	7.58	<0.107
SV4D	01/20/11	0.62	2.0	<0.4	<2.1	9.59	8.37	<0.100
	03/18/11	<0.41	<1.2	<0.41	<2.1	10.4	6.34	<0.102
SV5S	01/19/11	10	***<u>33</u>***	<0.37	<1.9	0.166	15.7	<0.0924
	03/15/11	No Sample Due to Blocked Air Line						
SV5D	01/19/11	1.1	3.4	<0.43	<2.3	0.812	15.5	<0.107
	03/15/11	1.5	4.9	<0.4	<2.1	0.796	15.2	<0.099
SV6S	01/19/11	0.87	2.8	<0.4	<2.1	0.316	16.7	<0.0989
	03/15/11	1.0	**3.3**	<0.39	<2.0	0.271	15.8	<0.0963
SV6D	01/19/11	0.92	2.9	<0.4	<2.1	0.496	16.2	<0.0997
	03/15/11	0.60	1.9	<0.4	<2.1	0.416	15.9	<0.0999
SV7S	01/20/11	2.9	**9.3**	<0.38	<2.0	0.378	16.6	<0.0949
	03/15/11	0.72	2.3	<0.4	<2.1	0.257	15.4	<0.101
SV7D	01/20/11	<0.38	<1.1	<0.38	<2.0	0.668	16.4	<0.0946
	03/15/11	<0.41	<1.3	<0.41	<2.1	0.538	15.6	<0.101
SV8S	01/17/11	1.5	**4.7**	<0.37	<2.0	1.27	15.4	<0.0934
	03/16/11	0.58	1.8	<0.38	<2.0	1.05	14.6	<0.0961
SV8D	01/17/11	0.98	3.1	<0.36	<1.9	1.51	14.3	<0.0906
	03/16/11	0.39	1.2	<0.39	<2.0	1.46	14.3	<0.0977
SV9S	01/18/11	12	***<u>38</u>***	<0.41	<2.1	0.376	13.1	<0.102
	03/16/11	4.1	**13**	<0.41	<2.2	2.06	13.0	<0.103
SV9D	01/18/11	2.8	9.0	<0.36	<1.9	2.54	12.4	<0.0896
	03/16/11	1.2	3.7	<0.39	<2.0	2.47	12.3	<0.0975
SV10S	01/18/11	2.8	**9.0**	<0.42	<2.2	1.15	15.3	<0.104
	03/16/11	1.1	**3.4**	<0.42	<2.2	1.22	14.8	<0.104
SV10D	01/18/11	0.56	1.8	<0.39	<2.0	1.25	15.5	<0.0968
	03/16/11	0.95	3.0	<0.41	<2.2	1.41	14.6	<0.103
SV11S	01/19/11	0.40	1.3	<0.38	<2.0	2.58	14.2	<0.0942
	03/16/11	0.82	2.6	<0.42	<2.2	2.16	13.9	<0.105
SV11D	01/19/11	<0.39	<1.2	<0.39	<2.1	2.58	14.3	<0.0979
	03/16/11	0.63	2.0	<0.45	<2.4	2.38	14.0	<0.113
SV12S	01/25/11	2.1	**6.8**	<0.4	<2.1	4.84	12.3	<0.0999
	03/16/11	2.9	**9.3**	<0.43	<2.3	4.34	11.9	<0.109
SV12D	01/25/11	3.1	9.7	<0.41	<2.2	5.36	11.8	<0.103
	03/16/11	2.9	9.1	<0.43	<2.2	4.89	11.4	<0.106
SV13S	01/25/11	0.66	2.1	<0.44	<2.3	2.25	14.2	<0.110
	03/18/11	<0.43	<1.3	<0.43	<2.3	2.14	13.7	<0.108
SV13D	01/25/11	<0.41	<1.2	<0.41	<2.2	2.87	13.4	<0.103
	03/18/11	<0.41	<1.2	<0.41	<2.2	2.76	13.1	<0.103
Quality Control/Quality Assurance Duplicate Samples								
SV1S - Dup	03/18/11	0.55	1.8	<0.41	<2.1	4.25	9.08	<0.102
SV2S-Dup	01/20/11	<0.41	<1.2	<0.41	<2.2	6.86	8.37	<0.103
SV3D-Dup	03/18/11	<0.42	<1.3	<0.42	<2.2	12.2	2.81	<0.105
SV10S-Dup	01/18/11	2.8	**8.9**	<0.43	<2.2	1.07	14.9	<0.107
SV10S-Dup	03/16/11	1.1	**3.5**	<0.42	<2.2	1.29	14.5	<0.104
SV13D-Dup	01/25/11	<0.42	<1.3	<0.42	<2.2	3.19	13.3	<0.106

[EPK/BGH 4/22/11]

Notes:

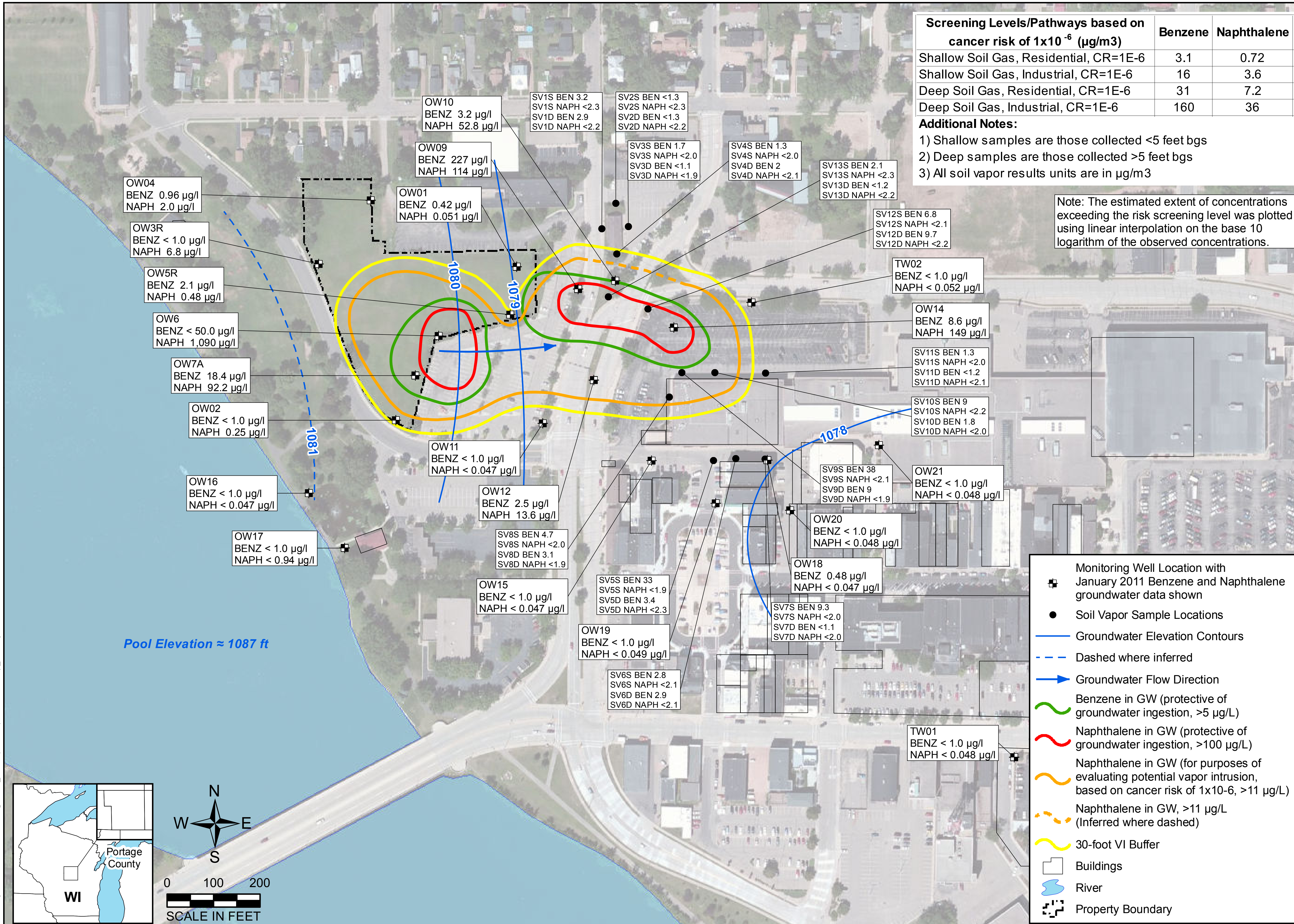
1) Residential vapor intrusion screening values based on a target cancer risk of 1 x10^{-6}.
Results exceeding the residential vapor intrusion screening values are bold.
2) Industrial/commercial worker vapor intrusion screening values based on a target cancer risk of 1 x10^{-6}
Results exceeding the industrial/commercial worker vapor intrusion screening values are italicized/underlined.
3) Shallow samples are those collected <5 feet bgs.
4) Deep samples are those collected >5 feet bgs.

NRT

Screening Levels/Pathways based on cancer risk of 1x10^{-6} (µg/m3)	Benzene	Naphthalene
Shallow Soil Gas, Residential, CR=1E-6	3.1	0.72
Shallow Soil Gas, Industrial, CR=1E-6	16	3.6
Deep Soil Gas, Residential, CR=1E-6	31	7.2
Deep Soil Gas, Industrial, CR=1E-6	160	36

Additional Notes:
1) Shallow samples are those collected <5 feet bgs
2) Deep samples are those collected >5 feet bgs
3) All soil vapor results units are in µg/m3

Note: The estimated extent of concentrations exceeding the risk screening level was plotted using linear interpolation on the base 10 logarithm of the observed concentrations.



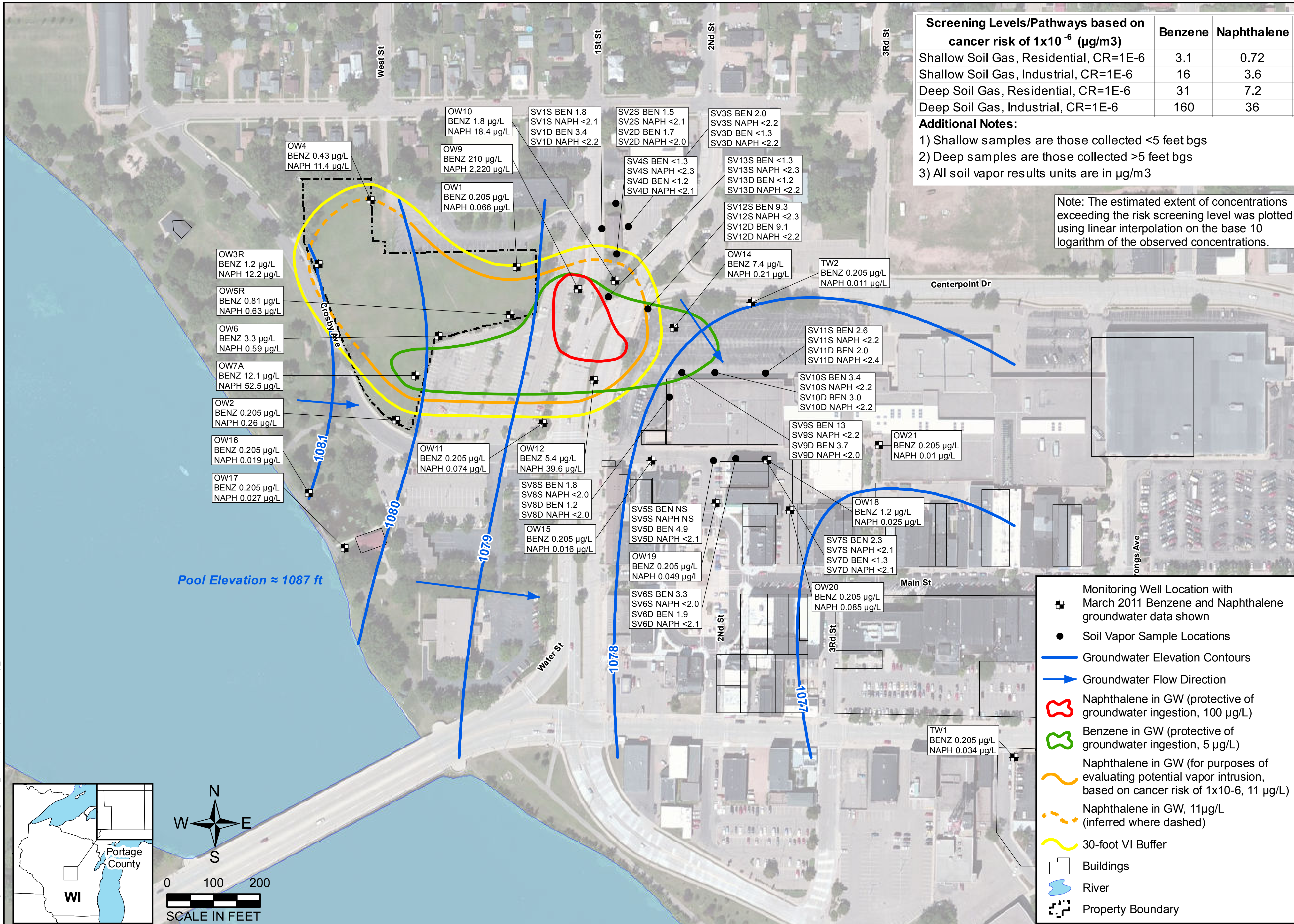
Benzene and Naphthalene Concentrations in Soil Vapor
January 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 37

4/17/2012



Screening Levels/Pathways based on cancer risk of 1x10 $^{-6}$ (µg/m3)	Benzene	Naphthalene
Shallow Soil Gas, Residential, CR=1E-6	3.1	0.72
Shallow Soil Gas, Industrial, CR=1E-6	16	3.6
Deep Soil Gas, Residential, CR=1E-6	31	7.2
Deep Soil Gas, Industrial, CR=1E-6	160	36

Additional Notes:

1) Shallow samples are those collected <5 feet bgs
2) Deep samples are those collected >5 feet bgs
3) All soil vapor results units are in µg/m3

Note: The estimated extent of concentrations exceeding the risk screening level was plotted using linear interpolation on the base 10 logarithm of the observed concentrations.

- Monitoring Well Location with March 2011 Benzene and Naphthalene groundwater data shown
- Soil Vapor Sample Locations
- Groundwater Elevation Contours
- Groundwater Flow Direction
- Naphthalene in GW (protective of groundwater ingestion, 100 µg/L)
- Benzene in GW (protective of groundwater ingestion, 5 µg/L)
- Naphthalene in GW (for purposes of evaluating potential vapor intrusion, based on cancer risk of 1x10-6, 11 µg/L)
- Naphthalene in GW, 11µg/L (inferred where dashed)
- 30-foot VI Buffer
- Buildings
- River
- Property Boundary

Y:\GIS\Projects\1\1177\MXD\GW\Figure 38_Soil Vapor Sample Location Map_March 2011.mxd

Benzene and Naphthalene Concentrations in Soil Vapor
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 38

4/17/2012

APPENDIX C

GROUNDWATER ANALYSIS

APPENDIX C1

GROUNDWATER QUALITY AND TREND ANALYSIS

1 APPENDIX C-1: GROUNDWATER QUALITY AND TRENDS

1.1 Overview

This appendix summarizes groundwater analytical results through March 2011 and concentration trends presented in the RI Report - Revision 2 (NRT, 2011). Post-remediation monitoring has been performed to assess the extent of groundwater impacts as well as the efficacy of monitored natural attenuation. Samples have been collected in accordance USEPA and ASTM low-flow sampling methods since November 2003. Groundwater analytical results are compared to either the federal MCL or the State of Wisconsin enforcement standard (ES) for PAHs that do not have a federal MCL.

1.1.1 Groundwater Flow Direction and Gradients

1.1.1.1 Groundwater Flow Direction and Conceptual Model

Groundwater elevation is measured in all monitoring network wells during each sample event (Attachment 1, Table 1). Groundwater flow between July 2007 and March 2011 was eastward, away from the Wisconsin River (Attachment 2, Figures 12 through 25). This flow pattern has remained consistent with historic observations; therefore, not all sampling events were mapped.

The easterly flow direction is caused by the river water pooled behind the Main Street dam, 0.5 mile downstream of the site, which is recharging the aquifer. Groundwater elevations at OW-17, about 40 feet from the river, are lower than the average daily flowage elevation on the upstream side of dam, as listed below.

Date	OW-17 Groundwater Elevation (ft)	Flowage Elevation (ft)
July 24, 2007	1,086.37	1,087.01
Oct. 22, 2007	1,086.28	1,086.99
Jan. 14, 2008	1,086.14	1,086.99

As groundwater flows to the east, it eventually turns toward the south around the dam and then flows back to the river downstream of the dam.

The conceptual groundwater flow model (Attachment 2, Figure 26) illustrates how local groundwater flow in the vicinity of the facility and regional flow from areas further to the east are diverted toward the south and discharge below the dam. The area where the two flow systems converge will move closer to or further from the river in response to changes in pool elevation or regional precipitation which is driving hydraulic heads/groundwater levels in the regional flow system.

Data were reviewed for four Stevens Point GIS Registry properties in the site vicinity for which WDNR had approved closure. The generalized direction of groundwater flow (Attachment 2, Figure 27) at these sites is consistent with the conceptual model presented herein (Attachment 2, Figure 26) as well as the groundwater flow maps shown in Attachment 2 on Figures 12 through 25. The Lullabye site reflects the regional groundwater flow system, while the WPSC, Schierl, Cooper Oil, and Belts sites are within the local flow system influenced by recharge from the dam.

Based on this conceptual flow model, interpretation of Site data should consider the following:

- The extent to which groundwater flows to the east will be limited by the regional flow system;
- Enhanced dilution and dispersion of dissolved constituents can be expected to occur where groundwater flow from beneath the site converges with the regional flow system; and
- The existing monitoring well network is located appropriately to monitor the dynamics of these converging flow systems.

1.1.1.2 Hydraulic Gradients

Horizontal gradients measured from the water table contour lines on the shallow groundwater flow maps range from approximately 6×10^{-3} to 1×10^{-2}, and are similar to previous observations. Using historic hydraulic conductivity values, groundwater velocities at the site are high and range from about 40 to 140 ft/year.

Vertical hydraulic gradients are variable across the site (Attachment 1, Table 7) and are summarized below.

Well Nest	Vertical Gradient (over time)
OW-3R/PZ-3B	Upward
OW-5R/P-5B	Generally Downward or Flat
OW-7A/PZ-7B	Downward
OW-9/PZ-9B	Generally Flat
OW-10/PZ-10B	Variable (Equally Down, Up & Flat)
OW-11R/PZ-11B	Upward
OW-12/PZ-12B	Variable (Predominantly Up or Flat)
OW-14/PZ-14B	Downward
OW-15/PZ-15B	Flat (Negligible)
OW-16/PZ-16B	Predominantly Upward

Vertical gradients vary in direction and magnitude as groundwater moves across the Site. More of the locations have an upward or flat gradient, which reflects the river as the regional discharge point for groundwater. It appears bedrock competency also strongly influences vertical gradients at the site. Piezometer PZ-14B is completed in extremely competent bedrock and has a consistently very steep downward gradients ranging from 0.1 to 1.0. It appears the bedrock may be comparatively more competent at piezometers P-5B and PZ-7B than at other piezometers (like PZ-9B and PZ-10B, which penetrate a weathered zone before being completed in more massive bedrock). Piezometer PZ-15B is completed in sand, which reflects that the well and piezometer are screened in the same aquifer.

1.1.2 Groundwater Quality and Trends

Groundwater samples were analyzed for PAHs, benzene, and several MNA indicators including dissolved iron, nitrate/nitrite, sulfate and DO. The analytical results are summarized in Attachment 1, on Tables 8, 9, and 10. Field parameters (water temperature, conductivity, pH, dissolved oxygen, and oxidation/reduction potential) are also listed in Attachment 1 on Table 10. The laboratory reports for April 2007 through March 2011 are presented in Appendix M of the RI Report Revision 2. Concentration trend plots (regression analyses) presented in the RI Report Revision 2 are included in Attachment 3.

Benzene and naphthalene concentrations in the wells and piezometers through March 2011 are summarized in Attachment 2 on Figures 28 and 29. Naphthalene is typically the PAH of concern in site groundwater, although B(a)P, benzo(b)fluoranthene, and chrysene are also present at low levels.

Groundwater results indicate these PAHs continue to exceed the MCL and/or ES in select site wells (Attachment 1, Table 8).

Monitoring wells that historically exceeded the benzene or naphthalene screening levels are highlighted in Attachment 2 on Figure 28 and the March 2011 groundwater plume in the water table wells are in Attachment 2 on Figures 30 and 31, respectively. Wells with lower concentrations delineate the groundwater plume to the north, south, east, and west. Downgradient to the east, benzene and naphthalene concentrations in well OW-9 have been generally stable since 2004. Further east in well OW-10, the concentrations have varied since 2004, though concentrations have been decreasing in the last four sampling events. At OW-14, benzene only slightly exceeds the MCL and trends for both benzene and naphthalene trends have been decreasing since the well was installed. Wells OW-15, OW-19, OW-20, OW-21, and TW-2 define the plume to the south and east.

The plume is limited at depth in the aquifer. Piezometer PZ-12B was the only location where benzene exceeded the MCL in March 2011 (Attachment 2, Figure 29). Previously, naphthalene exceeded the ES in P-5B and PZ-7B but concentrations were below the ES in March 2011. Low concentrations in the piezometers to the south and east indicate the plume extent is greater near the water table than at depth.

Regression plots were prepared to evaluate the relationship between groundwater concentrations, elevation, and time for monitoring wells and piezometers with either 1) elevated benzene and/or naphthalene concentrations or 2) which are located within or on the edge of the plume. The 95% confidence limit for the regression line is plotted to provide an additional indicator of correlation. Precipitation data are illustrated on additional plots for each well. The regression analysis statistics for each well/piezometer are listed in Attachment 1 on Table 11 and the plots are included in Attachment 3.

Evaluating all groundwater data since 2000, monitoring wells OW-9 and OW-10 exhibit potential increasing concentration trends (however, the regression plots appear to have stabilized since 2004). Wells OW-3R, OW-5R, PZ-11B, PZ-12B, and OW-14 show decreasing trends for the same time period (Attachment 1, Table 11). There is no correlation between groundwater concentrations, elevations, and time at wells OW-5R, OW-6, and OW-7A, which are central to the former MGP facility. Possible explanations for the observed concentration trends at OW-5R, OW-9, and OW-10 may be related to MGP residuals detected along the base of the slough under the City parking lot, fluctuating groundwater levels, and/or convergence of regional and local flow systems on the eastern end of the Site.

Mann-Kendall statistical tests were completed using the January 2008 through March 2011 (the 10 most recent) benzene and naphthalene results for wells/piezometers within or on the leading edge of the plume (Attachment 3). The wells/piezometers evaluated were OW-5R, OW-6, OW-7A, OW-9, OW-10, OW-14, P-5B, PZ-7B, and PZ-12B. According to the Mann-Kendall tests, benzene concentrations were stable or declining in all nine wells. Naphthalene concentrations in wells OW-10 and P-5B exhibited non-stable trend, which means the parameter concentrations fluctuate too much to determine if there is a definitive declining correlation for the data (although it should be noted that there is ***not*** an increasing trend). Regardless of the non-stable trends at these locations, wells located downgradient of OW-10 and P-5B exhibited stable or declining trends, and along with the regression analyses, and associated confidence limits, the results indicate the plume is stable and not expanding.

Contaminant transport velocity was estimated for benzene and naphthalene (Attachment 3, Table N-1) based on the groundwater flow velocity values of 40 to 140 feet/year. Contaminant transport estimates for benzene and naphthalene range from 40 to 130 feet and 10 to 30 feet per year, respectively. These transport results have been used to estimate the distance the contaminants could be expected to travel over period of 60 years, which coincides with approximate closure of the MGP facility in the early 1950s. OW-9 was selected as the point of origin based on its historical impacts since this well was installed (Attachment 2, Figure 28). Using a groundwater flow velocity of 40 feet per year and the associated contaminant flow velocities, benzene and naphthalene were estimated to travel 2,200 and 550 feet respectively. These calculated distances indicate benzene and naphthalene should have traveled well beyond wells OW-18 through OW-21, TW-2, and OW-15 during this time period. This evaluation of contaminant flow velocity suggests natural attenuation mechanisms (such as biodegradation, dispersion, and dilution) are present and have restricted plume expansion over time

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. Iron, nitrate, sulfate, and DO results are plotted with benzene and naphthalene concentrations for wells near or within the plume (Attachment 3, MNA Plots), and the graphs indicate many of the MNA parameters fluctuate with the benzene and/or naphthalene concentrations. The MNA averages have been determined for benzene and naphthalene concentrations that are near the MDL, below the MCL/ES (5 µg/L and 100 µg/L), and above the MCL/ES (Attachment1, Table 12).

The MNA results for the shallow and deep groundwater from March 2011 are plotted in Attachment 2, on Figures 32 through 35, and they show the variability present at the site. The March 2011 benzene and naphthalene plumes are shown on Figures 32 and 34 for the water table monitoring wells, and there appears to be little correlation. Based on site characteristics, the variability of the MNA parameters may be related to either the mixing of surface and groundwater in the vicinity of the site or degradation of organics in the subsurface. It is likely a combination of both these factors along with the regional flow system that is responsible for overall plume stability.

A summary of groundwater quality and trends indicate the following:

- The groundwater plume is well defined by the well network;
- The regression plots and Mann-Kendall tests indicate generally stable or decreasing trends, especially for wells outside of the plume in both the shallow and deep flow systems;
- The contaminant transport assessment indicates natural attenuation mechanisms (such as biodegradation, dispersion, and dilution) have restricted plume expansion over time; and
- The MNA geochemical indicator parameters are confounding, likely due to the presence of two groundwater flow systems that converge in the vicinity of the site.

Thus, groundwater sampling results indicate natural attenuation mechanisms are present and the plume appears to be stable rather than expanding at the site regardless of contaminant concentration variability at individual wells. This conclusion is based on analytical results from downgradient and side gradient wells including the January and March 2011 rounds of analytical results from OW-18 through OW-21 (the leading edge).

Attachments:

Attachment 1	Stevens Point RI Report Revision 1 (Tables 1, 7, 8, 9, 10, 11, and 12)
Attachment 2	Stevens Point RI Report Revision 1 (Figures 12-25, 28, 29, and 30-35)
Attachment 3	Stevens Point RI Report Revision 1 (Appendix N)

Attachment 1

Stevens Point RI Report Revision 3

(Tables 1, 7, 8, 9, 10, 11, and 12)

Table 1. Groundwater Elevation Summary

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

Well Data	OW-1				OW-2		OW-3	
Well Depth from TOC (feet)	12.51		15.62		15.6		13.98	
Screen Length (feet)	5		5		5		5	
Surface Elevation (MSL)[A]	1085.80		1089.75		1086.65		1088.60	
Top of Casing Elevation (MSL)[A]	1088.21		1091.02		1089.55		1091.58	
Top of Screen Elevation (MSL)	1080.7		1080.4		1078.95		1082.6	
Bottom of Screen Elevation (MSL)	1075.7		1075.4		1073.95		1077.6	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
09/16/93	8.88	1079.33			9.42	1080.13 *	8.85	1082.73 *
08/15/96	8.94	1079.27			9.21	1080.34 *	9.49	1082.09
08/16/97	9.08	1079.13			9.35	1080.20 *	10.44	1081.14
09/03 & 04/97	9.20	1079.01	Casing added		9.46	1080.09 *	10.67	1080.91
02/26/98	9.29	1078.92	to the top of the well		9.26	1080.29 *	10.57	1081.01
06/22/99	Casing added		not measured		9.00	1080.55 *	Abandoned April 1998	
01/31/00	to the top of the well		12.87	1078.15	9.45	1080.10 *	Replaced with OW-3R	
05/31/00			13.00	1078.02	9.08	1080.47 *		
08/31/00			12.15	1078.87	9.10	1080.45 *		
11/21/00			12.82	1078.20	9.38	1080.17 *		
04/01/02			12.33	1078.69	9.06	1080.49 *		
07/22/02			12.05	1078.97	9.05	1080.50 *		
10/28/02			11.95	1079.07	9.00	1080.55 *		
06/16/03			11.76	1079.26	8.68	1080.87 *		
11/20/03			12.33	1078.69	9.06	1080.49 *		
04/20/04			12.18	1078.84	8.90	1080.65 *		
07/20/04			11.68	1079.34	8.78	1080.77 *		
10/12/04			12.31	1078.71	9.09	1080.46 *		
01/25/05			12.43	1078.59	9.10	1080.45 *		
04/11/05			12.31	1078.71	8.90	1080.65 *		
07/11/05			12.33	1078.69	8.91	1080.64 *		
10/03/05			12.15	1078.87	8.92	1080.63 *		
01/05/06			12.51	1078.51	9.11	1080.44 *		
04/11/06			12.42	1078.60	8.91	1080.64 *		
07/21/06			13.10	1077.92	9.06	1080.49 *		
10/04/06			12.38	1078.64	9.08	1080.47 *		
2/22/2007			12.62	1078.40	9.2	1080.35 *		
4/19/2007			12.27	1078.75	8.88	1080.67 *		
7/19/2007			12.43	1078.59	8.95	1080.60 *		
10/22/2007			12.18	1078.84	8.88	1080.67 *		
1/14/2008			12.48	1078.54	9.12	1080.43 *		
4/28/2008			11.69	1079.33	8.56	1080.99 *		
8/12/2008			12.10	1078.92	9.00	1080.55 *		
10/29/2008			12.44	1078.58	9.05	1080.50 *		
04/13/09			12.60	1078.42	8.94	1080.61 *		
10/5/2009			12.43	1078.59	8.97	1080.58 *		
4/13/2010			12.39	1078.63	8.88	1080.67 *		
10/20/2010			11.85	1079.17	8.92	1080.63 *		
1/18/2011			12.41	1078.61	9.10	1080.45 *		
3/16/2011			12.13	1078.89	8.9	1080.65 *		

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

Well Data	OW-3R		PZ-3B		OW-4		OW-5	
Well Depth from TOC (feet)	17.21		41.76		16.98		22.51	
Screen Length (feet)	10		5		10		10	
Surface Elevation (MSL)[A]	1088.20		1088.20		1086.65		1085.50	
Top of Casing Elevation (MSL)[A]	1090.54		1090.85		1090.05		1088.39	
Top of Screen Elevation (MSL)	1083.3		1054.1		1083.1		1075.9	
Bottom of Screen Elevation (MSL)	1073.3		1049.1		1073.1		1065.9	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
09/16/93			Constructed in 1996		9.56	1080.49	8.88	1079.51 *
08/15/96			9.74	1081.11 *	9.89	1080.16	8.93	1079.46 *
08/16/97			9.76	1081.09 *	9.86	1080.19	9.03	1079.36 *
09/03 & 04/97			9.87	1080.98 *	9.96	1080.09	9.14	1079.25 *
02/26/98			10.79	1080.06 *	9.66	1080.39	9.31	1079.08 *
06/22/99	Constructed January 2000		9.74	1081.11 *	9.88	1080.17	Abandoned April 1998	
01/31/00	9.97	1080.57	10.18	1080.67 *	10.04	1080.01	Well Was Not Replaced	
05/31/00	9.75	1080.79	9.91	1080.94 *	9.95	1080.10		
08/31/00	9.68	1080.86	9.78	1081.07 *	9.92	1080.13		
11/21/00	9.32	1081.22	10.71	1080.14 *	10.04	1080.01		
04/01/02	9.69	1080.85	9.92	1080.93 *	9.81	1080.24		
07/22/02	9.72	1080.82	9.90	1080.95 *	9.90	1080.15		
10/28/02	9.65	1080.89	9.90	1080.95 *	9.85	1080.20		
06/16/03	9.48	1081.06	9.76	1081.09 *	9.66	1080.39		
11/20/03	9.76	1080.78	10.08	1080.77 *	10.83	1079.22		
04/20/04	9.71	1080.83	9.92	1080.93 *	9.80	1080.25		
07/20/04	9.54	1081.00	9.71	1081.14 *	9.78	1080.27		
10/12/04	9.89	1080.65	10.01	1080.84 *	10.10	1079.95		
01/25/05	9.91	1080.63	10.11	1080.74 *	10.02	1080.03		
04/11/05	9.71	1080.83	9.70	1081.15 *	9.84	1080.21		
07/11/05	9.89	1080.65	10.09	1080.76 *	10.19	1079.86		
10/03/05	9.67	1080.87	9.87	1080.98 *	9.89	1080.16		
01/05/06	9.86	1080.68	10.04	1080.81 *	9.88	1080.17		
04/11/06	9.75	1080.79	9.99	1080.86 *	9.82	1080.23		
07/21/06	10.00	1080.54	10.13	1080.72 *	10.17	1079.88		
10/04/06	10.10	1080.44	9.94	1080.91 *	10.00	1080.05		
2/22/2007	10.02	1080.52	10.17	1080.68 *	10.03	1080.02		
4/19/2007	9.83	1080.71	10.03	1080.82 *	9.88	1080.17		
7/19/2007	10.03	1080.51	10.15	1080.70 *	10.25	1079.80		
10/22/2007	9.70	1080.84	9.90	1080.95 *	9.89	1080.16		
1/14/2008	9.99	1080.55	10.11	1080.74 *	10.02	1080.03		
4/28/2008	9.45	1081.09	9.72	1081.13 *	9.52	1080.53		
8/12/2008	9.85	1080.69	9.95	1080.90 *	10.05	1080.00		
10/29/2008	9.90	1080.64	10.01	1080.84 *	10.09	1079.96		
04/13/09	9.80	1080.74	10.05	1080.80 *	9.88	1080.17		
10/05/09	9.98	1080.56	10.13	1080.72 *	10.22	1079.83		
04/13/10	9.93	1080.61	10.11	1080.74 *	10.08	1079.97		
10/19/2010	9.68	1080.86	9.84	1081.01 *	9.88	1080.17		
01/18/11	9.86	1080.68	10.12	1080.73 *	10.01	1080.04		
03/16/11	9.75	1080.79	10.08	1080.77 *	9.86	1080.19		

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

Well Data	OW-5A		OW-5R		P-5B		OW-6	
Well Depth from TOC (feet)	18.14		16.35		48.78		18.04	
Screen Length (feet)	10		10		5		10	
Surface Elevation (MSL)[A]	1085.50		1086.54		1086.54		1084.48	
Top of Casing Elevation (MSL)[A]	1088.39		1089.15		1088.20		1087.56	
Top of Screen Elevation (MSL)	1080.3		1082.8		1044.4		1079.5	
Bottom of Screen Elevation (MSL)	1070.3		1072.8		1039.4		1069.5	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
09/16/93	8.88	1079.51			8.73	1079.47 *	6.99	1080.57 *
08/15/96	8.93	1079.46			8.76	1079.44 *	7.10	1080.46 *
08/16/97	9.03	1079.36			8.88	1079.32 *	7.16	1080.40 *
09/03 & 04/97	9.14	1079.25			8.99	1079.21 *	7.19	1080.37 *
02/26/98	9.31	1079.08			9.22	1078.98 *	7.36	1080.20 *
06/22/99	Abandoned April 1998		Constructed January 2000		9.00	1079.20 *	7.10	1080.46 *
01/31/00	Replaced with OW-5R		10.60	1078.55	9.70	1078.50 *	7.71	1079.85 *
05/31/00			9.92	1079.23	9.32	1078.88 *	7.41	1080.15 *
08/31/00			9.73	1079.42	8.97	1079.23 *	7.15	1080.41 *
11/21/00			10.19	1078.96	9.30	1078.90 *	7.44	1080.12 *
04/01/02			10.16	1078.99	9.33	1078.87 *	7.47	1080.09 *
07/22/02			9.75	1079.40	9.00	1079.20 *	7.18	1080.38 *
10/28/02			9.62	1079.53	8.85	1079.35 *	7.10	1080.46 *
06/16/03			9.28	1079.87	9.85	1078.35 *	6.97	1080.59 *
11/20/03			10.04	1079.11	9.26	1078.94 *	7.39	1080.17 *
04/20/04			--	-- *	--	--	--	-- *
07/20/04			9.48	1079.67	8.62	1079.58 *	6.90	1080.66 *
10/12/04			10.02	1079.13	9.06	1079.14 *	7.25	1080.31 *
01/25/05			10.15	1079.00	9.33	1078.87 *	7.44	1080.12 *
04/11/05			9.95	1079.20	9.24	1078.96 *	7.37	1080.19 *
07/11/05			10.01	1079.14	9.16	1079.04 *	7.30	1080.26 *
10/03/05			9.67	1079.48	8.97	1079.23 *	7.13	1080.43 *
01/05/06			10.18	1078.97	9.38	1078.82 *	7.49	1080.07 *
04/11/06			10.11	1079.04	9.36	1078.84 *	7.47	1080.09 *
07/21/06			10.23	1078.92	9.28	1078.92 *	7.38	1080.18 *
10/04/06			10.19	1078.96	9.27	1078.93 *	7.41	1080.15 *
2/22/2007			10.33	1078.82	9.28	1078.92 *	7.58	1079.98 *
4/19/2007			9.9	1079.25	9.27	1078.93 *	7.36	1080.20 *
7/19/2007			10.22	1078.93	9.23	1078.97 *	7.38	1080.18 *
10/22/2007			10.02	1079.13	9.05	1079.15 *	7.18	1080.38 *
1/14/2008			--	---	9.35	1078.85 *	7.50	1080.06 *
4/28/2008			9.29	1079.86	8.62	1079.58 *	7.07	1080.49 *
8/12/2008			9.97	1079.18	9.00	1079.20 *	7.20	1080.36 *
10/29/2008			10.18	1078.97	9.23	1078.97 *	7.33	1080.23 *
04/13/09			9.96	1079.19	9.25	1078.95 *	7.37	1080.19
10/05/09			10.18	1078.97	9.24	1078.96 *	7.33	1080.23
04/13/10			10.08	1079.07	9.25	1078.95 *	7.40	1080.16
10/20/2010			9.62	1079.53	8.71	1079.49 *	7.02	1080.54
1/18/2011			9.88	1079.27	9.1	1079.10 *	7.29	1080.27
03/16/11			9.6	1079.55	9.21	1078.99 *	7.34	1080.22

Table 1. Groundwater Elevation Summary

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

Well Data	OW-7A		OW-7		PZ-7B		OW-8	
Well Depth from TOC (feet)	18.15		27.1		43.17		17.62	
Screen Length (feet)	10		10		5		10	
Surface Elevation (MSL)[A]	1085.39		1085.60		1085.39		1089.70	
Top of Casing Elevation (MSL)[A]	1088.65		1088.46		1086.51		1092.13	
Top of Screen Elevation (MSL)	1080.5		1071.4		1048.3		1084.5	
Bottom of Screen Elevation (MSL)	1070.5		1061.4		1043.3		1074.5	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
09/16/93	8.94	1079.71	7.84	1080.62 *	Constructed in 1996		12.54	1079.59
08/15/96	8.73	1079.92	7.93	1080.53 *	8.12	1078.39 *	12.60	1079.53
08/16/97	8.80	1079.85	8.04	1080.42 *	8.35	1078.16 *	12.68	1079.45
09/03 & 04/97	8.90	1079.75	8.11	1080.35 *	8.47	1078.04 *	12.81	1079.32
02/26/98	8.75	1079.90	8.36	1080.10 *	8.71	1077.80 *	13.17	1078.96
06/22/99	8.25	1080.40	Abandoned April 1998		6.88	1079.63 *	12.87	1079.26
01/31/00	8.63	1080.02	Well Was Not Replaced		7.56	1078.95 *	13.72	1078.41
05/31/00	8.35	1080.30			7.22	1079.29 *	13.34	1078.79
08/31/00	8.35	1080.30			6.89	1079.62 *	12.90	1079.23
11/21/00	8.50	1080.15			7.22	1079.29 *	13.30	1078.83
04/01/02	8.35	1080.30			7.29	1079.22 *	13.42	1078.71
07/22/02	8.33	1080.32			6.88	1079.63 *	12.90	1079.23
10/28/02	8.30	1080.35			6.80	1079.71 *	12.80	1079.33
06/16/03	8.31	1080.34			6.79	1079.72 *	12.82	1079.31
11/20/03	8.28	1080.37			7.20	1079.31 *	13.31	1078.82
04/20/04	8.24	1080.41			7.15	1079.36 *	13.19	1078.94
07/20/04	8.21	1080.44			6.50	1080.01 *	12.37	1079.76
10/12/04	8.30	1080.35			7.02	1079.49 *	12.96	1079.17
01/25/05	8.40	1080.25			7.28	1079.23 *	13.29	1078.84
04/11/05	8.24	1080.41			7.20	1079.31 *	13.27	1078.86
07/11/05	8.29	1080.36			7.10	1079.41 *	13.06	1079.07
10/03/05	8.23	1080.42			6.92	1079.59 *	12.91	1079.22
01/05/06	8.41	1080.24			7.31	1079.20 *	13.26	1078.87
04/11/06	8.31	1080.34			7.30	1079.21 *	13.38	1078.75
07/21/06	8.35	1080.30			7.22	1079.29 *	13.30	1078.83
10/04/06	8.40	1080.25			7.21	1079.30 *	13.19	1078.94
2/22/2007	8.4	1080.25			7.42	1079.09 *	13.49	1078.64
4/19/2007	8.48	1080.17			7.18	1079.33 *	13.19	1078.94
7/19/2007	8.35	1080.30			7.15	1079.36 *	13.10	1079.03
10/22/2007	8.22	1080.43			6.99	1079.52 *	12.95	1079.18
1/14/2008	8.43	1080.22			7.33	1079.18 *	13.30	1078.83
4/28/2008	8.13	1080.52 *			6.62	1079.89 *	12.54	1079.59
8/12/2008	8.33	1080.32			6.96	1079.55 *	12.88	1079.25
10/29/2008	8.36	1080.29			7.11	1079.40 *	13.12	1079.01
04/13/09	8.26	1080.39			7.21	1079.30 *	nm	---
10/05/09	8.38	1080.27			7.13	1079.38 *	nm	---
04/13/10	8.28	1080.37			7.21	1079.30 *	13.20	1078.93
10/19/2010	8.26	1080.39			6.68	1079.83 *	12.58	1079.55
1/18/2011	8.4	1080.25			6.95	1079.56 *	12.85	1079.28
03/16/11	8.23	1080.42			7.12	1079.39 *	13.2	1078.93

Table 1. Groundwater Elevation Summary

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

Well Data	OW-9		PZ-9B		OW-10		PZ-10B	
Well Depth from TOC (feet)	21.18		53.65		21.3		53.3	
Screen Length (feet)	10		5		10		5	
Surface Elevation (MSL)[A]	1088.33		1088.33		1088.41		1088.41	
Top of Casing Elevation (MSL)[A]	1090.92		1090.85		1090.95		1090.99	
Top of Screen Elevation (MSL)	1079.7		1042.2		1079.7		1042.7	
Bottom of Screen Elevation (MSL)	1069.7		1037.2		1069.7		1037.7	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
08/16/97	Constructed August 1997		Constructed August 1997		Constructed August 1997		Constructed August 1997	
09/03 & 04/97	12.25	1078.67	12.17	1078.68 *	12.30	1078.65	12.44	1078.55 *
02/26/98	12.37	1078.55	12.37	1078.48 *	12.55	1078.40	12.51	1078.48 *
06/22/99	12.24	1078.68	12.25	1078.60 *	12.38	1078.57	13.14	1077.85 *
01/31/00	12.85	1078.07	12.85	1078.00 *	13.05	1077.90	12.95	1078.04 *
05/31/00	12.55	1078.37	12.47	1078.38 *	12.63	1078.32	12.70	1078.29 *
08/31/00	12.98	1077.94	12.08	1078.77 *	11.26	1079.69 *	11.29	1079.70 *
11/21/00	12.51	1078.41	12.43	1078.42 *	12.60	1078.35	12.64	1078.35 *
04/01/02	12.42	1078.50	12.36	1078.49 *	12.44	1078.51	12.54	1078.45 *
07/22/02	12.20	1078.72	12.10	1078.75 *	12.28	1078.67	12.16	1078.83 *
10/28/02	12.00	1078.92	11.90	1078.95 *	12.10	1078.85	12.12	1078.87 *
06/16/03	11.92	1079.00	11.87	1078.98 *	11.97	1078.98	12.20	1078.79 *
11/20/03	12.28	1078.64	12.30	1078.55 *	12.40	1078.55	12.48	1078.51 *
04/20/04	12.17	1078.75	12.15	1078.70 *	12.21	1078.74	12.36	1078.63 *
07/20/04	12.79	1078.13	12.70	1078.15 *	11.94	1079.01	11.77	1079.22 *
10/12/04	12.28	1078.64	12.23	1078.62 *	12.43	1078.52	12.23	1078.76 *
01/25/05	12.44	1078.48	12.41	1078.44 *	12.72	1078.23	12.43	1078.56 *
04/12/05	12.33	1078.59	12.32	1078.53 *	12.34	1078.61	12.55	1078.44 *
07/11/05	12.32	1078.60	12.27	1078.58 *	12.38	1078.57	12.64	1078.35 *
10/03/05	12.16	1078.76	12.05	1078.80 *	12.30	1078.65	12.39	1078.60 *
01/05/06	12.49	1078.43	12.38	1078.47 *	12.49	1078.46	12.80	1078.19 *
04/11/06	12.41	1078.51	12.39	1078.46 *	12.55	1078.40	12.59	1078.40 *
07/21/06	12.41	1078.51	12.38	1078.47 *	12.61	1078.34	12.68	1078.31 *
10/04/06	12.37	1078.55	12.35	1078.50 *	12.52	1078.43	12.51	1078.48 *
2/22/2007	12.54	1078.38	12.56	1078.29 *	12.71	1078.24	12.27	1078.72 *
4/19/2007	12.30	1078.62	12.30	1078.55 *	12.33	1078.62	12.97	1078.02 *
7/19/2007	12.40	1078.52	12.38	1078.47 *	12.55	1078.40	12.34	1078.65
10/22/2007	12.16	1078.76	12.10	1078.75 *	12.28	1078.67	12.50	1078.49
1/14/2008	12.40	1078.52	12.48	1078.37 *	12.58	1078.37	12.67	1078.32
4/28/2008	11.80	1079.12	11.68	1079.17 *	11.70	1079.25	12.30	1078.69
8/12/2008	12.18	1078.74	12.15	1078.70 *	12.54	1078.41	12.25	1078.74
10/29/2008	12.38	1078.54	12.36	1078.49 *	12.57	1078.38	12.41	1078.58
04/13/09	12.35	1078.57	12.29	1078.56 *	12.47	1078.48	12.30	1078.69
10/05/09	12.40	1078.52	12.36	1078.49 *	12.51	1078.44	12.42	1078.57
04/13/10	12.35	1078.57	12.31	1078.54 *	12.41	1078.54	12.49	1078.50
10/19/10	11.84	1079.08	11.77	1079.08 *	11.85	1079.10	11.89	1079.1
01/18/11	12.13	1078.79	12.05	1078.80 *	12.22	1078.73	12.22	1078.77
03/16/11	12.14	1078.78	12.15	1078.70 *	12.25	1078.70	12.63	1078.36

Table 1. Groundwater Elevation Summary
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Well Data	**OW-11**		**PZ-11B**			**OW-12[A]**		**PZ-12B[A]**		
Well Depth from TOC (feet)	16.07		51.42			18.35		43.8		
Screen Length (feet)	10		5			10		5		
Surface Elevation (MSL)[A]	1091.51		1091.51			1090.23		1090.23		
Top of Casing Elevation (MSL)[A]	1094.09		1093.73			1089.98		1089.93		
Top of Screen Elevation (MSL)	1088.0		1047.3			1081.6		1051.1		
Bottom of Screen Elevation (MSL)	1078.0		1042.3			1071.6		1046.1		
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**		**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	
06/22/99	Constructed January 2000		Constructed January 2000			Constructed September 2004		Constructed September 2004		
01/31/00	16.07	1078.02	15.43	1078.30	*					
05/31/00	15.76	1078.33	14.95	1078.78	*					
08/31/00	14.25	1079.84	14.60	1079.13	*					
11/21/00	15.71	1078.38	14.91	1078.82	*					
04/01/02	15.82	1078.27	14.94	1078.79	*					
07/22/02	15.23	1078.86	14.53	1079.20	*					
10/28/02	15.05	1079.04	14.40	1079.33	*					
06/16/03	15.20	1078.89	14.39	1079.34	*					
11/20/03	15.70	1078.39	14.88	1078.85	*					
04/20/04	15.54	1078.55	14.75	1078.98	*					
07/20/04	14.65	1079.44	14.13	1079.60	*					
10/12/04	15.30	1078.79	14.71	1079.02	*	11.42	1078.56	11.36	1078.57	*
01/25/05	15.70	1078.39	14.95	1078.78	*	11.56	1078.42	11.69	1078.24	*
4/11 & 12/05	15.61	1078.48	14.88	1078.85	*	11.87	1078.11	11.79	1078.14	*
07/11/05	15.41	1078.68	14.77	1078.96	*	11.60	1078.38	11.51	1078.42	*
10/03/05	15.26	1078.83	14.59	1079.14	*	11.43	1078.55	11.40	1078.53	*
01/05/06	15.56	1078.53	14.90	1078.83	*	11.68	1078.30	11.59	1078.34	*
04/11/06	16.73	1077.36	14.98	1078.75	*	11.88	1078.10	11.96	1077.97	*
07/21/06	15.55	1078.54	15.01	1078.72	*	11.74	1078.24	11.62	1078.31	*
10/04/06	15.54	1078.55	14.90	1078.83	*	11.75	1078.23	11.65	1078.28	*
2/22/2007	15.86	1078.23	15.02	1078.71	*	12.04	1077.94	11.68	1078.25	*
4/19/2007	15.56	1078.53	14.83	1078.90	*	11.73	1078.25	11.66	1078.27	*
7/19/2007	15.44	1078.65	14.70	1079.03	*	11.61	1078.37	11.54	1078.39	*
10/22/2007	15.30	1078.79	14.68	1079.05	*	11.45	1078.53	11.35	1078.58	*
1/14/2008	15.68	1078.41	14.83	1078.90	*	11.61	1078.37	11.87	1078.06	*
4/28/2008	14.87	1079.22	14.20	1079.53	*	11.00	1078.98	10.88	1079.05	*
8/12/2008	15.20	1078.89	14.60	1079.13	*	11.35	1078.63	11.25	1078.68	*
10/29/2008	15.49	1078.60	14.86	1078.87	*	11.66	1078.32	11.55	1078.38	*
04/13/09	15.67	1078.42	14.90	1078.83	*	11.88	1078.10	11.69	1078.24	*
10/05/09	15.51	1078.58	14.86	1078.87	*	11.70	1078.28	11.45	1078.48	*
04/13/10	15.59	1078.50	14.89	1078.84	*	11.86	1078.12	11.59	1078.34	*
10/19/10	14.89	1079.20	14.30	1079.43	*	11.02	1078.96	10.94	1078.99	*
01/18/11	15.26	1078.83	14.67	1079.06	*	11.30	1078.68	11.18	1078.75	*
03/16/11	15.59	1078.50	14.63	1079.10	*	11.71	1078.27	11.57	1078.36	*

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USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Well Data	PZ-13[A]			OW-14		PZ-14B		OW-15	
Well Depth from TOC (feet)	45.55			17.76		47.94		17.2	
Screen Length (feet)	5			10		5		10	
Surface Elevation (MSL)[A]	1090.75			1089.64		1089.64		1091.15	
Top of Casing Elevation (MSL)[A]	1090.40			1089.04		1089.35		1090.94	
Top of Screen Elevation (MSL)	1049.9			1081.3		1046.4		1083.7	
Bottom of Screen Elevation (MSL)	1044.9			1071.3		1041.4		1073.7	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**		**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
10/12/04	11.63	1078.77	*	Constructed July 2007		Constructed July 2007		Constructed July 2007	
01/25/05	12.11	1078.29	*						
04/11/05	12.05	1078.35	*						
07/11/05	11.78	1078.62	*						
10/03/05	11.55	1078.85	*						
01/05/06	11.95	1078.45	*						
04/11/06	12.19	1078.21	*						
07/21/06	12.04	1078.36	*						
10/04/06	11.89	1078.51	*						
2/22/2007	12.31	1078.09	*						
4/19/2007	11.96	1078.44	*						
7/19/2007	11.84	1078.56	*	10.96	1078.08	46.89	1042.46	12.96	1077.98
10/22/2007	11.67	1078.73	*	10.72	1078.32	43.9	1045.45	12.75	1078.19
1/14/2008	12.10	1078.3	*	nm	---	nm	---	13.13	1077.81
4/28/2008	11.20	1079.20	*	10.22	1078.82	31.79	1057.56	12.25	1078.69
8/12/2008	11.68	1078.72	*	10.63	1078.41	30.97	1058.38	12.6	1078.34
10/29/2008	11.95	1078.45	*	10.97	1078.07	31.55	1057.80	12.98	1077.96
04/13/09	11.94	1078.46	*	11.08	1077.96	20.45	1068.90	13.18	1077.76
10/05/09	11.7	1078.70	*	10.96	1078.08	32.13	1057.22	13.00	1077.94
04/14/10	11.96	1078.44	*	11.02	1078.02	24.70	1064.65	13.01	1077.93
10/20/10	11.32	1079.08	*	10.23	1078.81	20.7	1068.65	12.28	1078.66
01/18/11	11.59	1078.81	*	10.56	1078.48	18.65	1070.70	12.50	1078.44
03/16/11	11.97	1078.43	*	10.91	1078.13	21.78	1067.57	13.02	1077.92

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Well Data	**PZ-15B**		**OW-16**		**PZ-16B**		**OW-17**	
Well Depth from TOC (feet)	47.4		13.4		45.5		13.25	
Screen Length (feet)	5		10		5		10	
Surface Elevation (MSL)[A]	1091.15		1088.61		1088.61		1089.47	
Top of Casing Elevation (MSL)[A]	1090.89		1088.44		1088.11		1089.40	
Top of Screen Elevation (MSL)	1048.5		1085.0		1047.6		1086.2	
Bottom of Screen Elevation (MSL)	1043.5		1075.0		1042.6		1076.2	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed July 2007		Constructed July 2007		Constructed July 2007		Constructed July 2007	
07/19/07	12.88	1078.01 *	7.33	1081.11	6.83	1081.28 *	3.03	1086.37 *
10/22/2007	12.68	1078.21 *	7.20	1081.24	6.58	1081.53 *	3.12	1086.28 *
1/14/2008	13.06	1077.83 *	7.62	1080.82	7.60	1080.51 *	3.26	1086.14
4/28/2008	12.21	1078.68	7.14	1081.30	6.67	1081.44 *	3.00	1086.40 *
8/12/2008	12.52	1078.37	7.21	1081.23	6.71	1081.40 *	3.13	1086.27 *
10/29/2008	12.90	1077.99	7.28	1081.16	6.72	1081.39 *	3.25	1086.15
04/13/09	13.12	1077.77	7.52	1080.92	7.05	1081.06 *	2.98	1086.42 *
10/05/09	12.94	1077.95	7.28	1081.16	6.75	1081.36 *	3.19	1086.21 *
04/14/10	13.01	1077.88	6.86	1081.58	6.99	1081.12 *	2.89	1086.51 *
10/20/10	12.21	1078.68	5.67	1082.77	6.59	1081.52 *	3.38	1086.02
01/18/11	12.41	1078.48	7.3	1081.14	6.91	1081.20 *	3.23	1086.17 *
03/16/11	12.95	1077.94	7.52	1080.92	7.12	1080.99 *	3.13	1086.27 *

Well Data	**OW-18**		**OW-19**		**OW-20**		**OW-21**	
Well Depth from TOC (feet)	19.5		19.5		19.5		19.5	
Screen Length (feet)	10		10		10		10	
Surface Elevation (MSL)[A]	1091.889		1091.163		1091.809		1091.282	
Top of Casing Elevation (MSL)[A]	1091.357		1090.817		1091.282		1091.03	
Top of Screen Elevation (MSL)	1081.9		1081.3		1081.8		1081.5	
Bottom of Screen Elevation (MSL)	1071.9		1071.3		1071.8		1071.5	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed January 2011		Constructed January 2011		Constructed January 2011		Constructed January 2011	#
01/18/11	13.31	1078.05 *	12.71	1078.11	13.35	1077.93 *	13.11	1077.92
3/16/2011	14.85	1076.51	13.19	1077.63	13.93	1077.35	13.74	1077.29

Table 1. Groundwater Elevation Summary
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Well Data	TW-1			TW-2	
Well Depth from TOC (feet)	20			15	
Screen Length (feet)	10			10	
Surface Elevation (MSL)[A]	1091.95			1087.79	
Top of Casing Elevation (MSL)[A]	1091.52			1087.18	
Top of Screen Elevation (MSL)	1081.5			1082.2	
Bottom of Screen Elevation (MSL)	1071.5			1072.2	
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**		**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**
	Constructed October 2008			Constructed October 2008	
10/29/08	14.91	1076.61	*	9.20	1077.98
04/13/09	15.34	1076.18	*	9.30	1077.88
10/05/09	15.01	1076.51	*	9.20	1077.98
04/14/10	15.05	1076.47	*	9.18	1078.00
10/20/10	13.99	1077.53	*	8.43	1078.75
01/18/11	14.46	1077.06	*	8.74	1078.44
03/16/11	14.99	1076.53	*	9.10	1078.08

[U-EPK/JTB 1/05][U-EPK/PAR 5/05][U-PAR/RLH 8/05][U-EPK/PAR 6/06][U-RFS/KJB 11/10]

TOC : Top of PVC well casing

OW : Water table monitoring well

--: Not measured

Water level stopped functioning during field activities on 4/20/04.

* : Water level elevation above top of screen elevation

P/PZ : Piezometer

MSL: Elevations are referenced to feet above Mean Sea Level

A: Elevations for all the site wells were re-surveyed on June 6 and 7, 2007 for previously existing wells and on August 15, 2007 for new wells by WPSC personnel.

Table 7. Groundwater Vertical Gradient Summary
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Well Data	OW-3R		PZ-3B					
Well Depth from TOC (feet)	17.21		41.76					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1088.20		1088.20					
Top of Casing Elevation (MSL)[A]	1090.54		1090.85					
Top of Screen Elevation (MSL)	1083.3		1054.1					
Bottom of Screen Elevation (MSL)	1073.3		1049.1		Middle of screen elevation (piez.)			1051.6
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
04/20/04	9.71	1080.83	9.92	1080.93	-0.10	29.24	-3.4E-03	up
07/20/04	9.54	1081.00	9.71	1081.14	-0.14	29.41	-4.8E-03	up
10/12/04	9.89	1080.65	10.01	1080.84	-0.19	29.06	-6.5E-03	up
01/25/05	9.91	1080.63	10.11	1080.74	-0.11	29.04	-3.8E-03	up
04/11/05	9.71	1080.83	9.70	1081.15	-0.32	29.24	-1.1E-02	up
07/11/05	9.89	1080.65	10.09	1080.76	-0.11	29.06	-3.8E-03	up
10/03/05	9.67	1080.87	9.87	1080.98	-0.11	29.28	-3.8E-03	up
01/05/06	9.86	1080.68	10.04	1080.81	-0.13	29.09	-4.5E-03	up
04/11/06	9.75	1080.79	9.99	1080.86	-0.07	29.20	-2.4E-03	up
07/21/06	10.00	1080.54	10.13	1080.72	-0.18	28.95	-6.2E-03	up
10/04/06	10.10	1080.44	9.94	1080.91	-0.47	28.85	-1.6E-02	up
2/22/2007	10.02	1080.52	10.17	1080.68	-0.16	28.93	-5.5E-03	up
4/19/2007	9.83	1080.71	10.03	1080.82	-0.11	29.12	-3.8E-03	up
7/19/2007	10.03	1080.51	10.15	1080.70	-0.19	28.92	-6.6E-03	up
10/22/2007	9.70	1080.84	9.90	1080.95	-0.11	29.25	-3.8E-03	up
1/14/2008	9.99	1080.55	10.11	1080.74	-0.19	28.96	-6.6E-03	up
4/28/2008	9.45	1081.09	9.72	1081.13	-0.04	29.50	-1.4E-03	flat
8/12/2008	9.85	1080.69	9.95	1080.90	-0.21	29.10	-7.2E-03	up
10/29/2008	9.90	1080.64	10.01	1080.84	-0.20	29.05	-6.9E-03	up
04/13/09	9.80	1080.74	10.05	1080.80	-0.06	29.15	-2.1E-03	up
10/05/09	9.98	1080.56	10.13	1080.72	-0.16	28.97	-5.5E-03	up
04/13/10	9.93	1080.61	10.11	1080.74	-0.13	29.02	-4.5E-03	up
10/19/2010	9.68	1080.86	9.84	1081.01	-0.15	29.27	-5.1E-03	up
01/18/11	9.86	1080.68	10.12	1080.73	-0.05	29.09	-1.7E-03	up
03/16/11	9.75	1080.79	10.08	1080.77	0.02	29.20	6.8E-04	flat

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-5R		P-5B					
Well Depth from TOC (feet)	16.35		48.78					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1086.54		1086.54					
Top of Casing Elevation (MSL)[A]	1089.15		1088.20					
Top of Screen Elevation (MSL)	1082.8		1044.4					
Bottom of Screen Elevation (MSL)	1072.8		1039.4		Middle of screen elevation (piez.)			1041.9
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
04/20/04	--	--	--	--	---	---	---	---
07/20/04	9.48	1079.67	8.62	1079.58	0.09	37.75	2.4E-03	down
10/12/04	10.02	1079.13	9.06	1079.14	-0.01	37.21	-2.7E-04	flat
01/25/05	10.15	1079.00	9.33	1078.87	0.13	37.08	3.5E-03	down
04/11/05	9.95	1079.20	9.24	1078.96	0.24	37.28	6.4E-03	down
07/11/05	10.01	1079.14	9.16	1079.04	0.10	37.22	2.7E-03	down
10/03/05	9.67	1079.48	8.97	1079.23	0.25	37.56	6.7E-03	down
01/05/06	10.18	1078.97	9.38	1078.82	0.15	37.05	4.0E-03	down
04/11/06	10.11	1079.04	9.36	1078.84	0.20	37.12	5.4E-03	down
07/21/06	10.23	1078.92	9.28	1078.92	0.00	37.00	0.0E+00	flat
10/04/06	10.19	1078.96	9.27	1078.93	0.03	37.04	8.1E-04	flat
2/22/2007	10.33	1078.82	9.28	1078.92	-0.10	36.90	-2.7E-03	up
4/19/2007	9.9	1079.25	9.27	1078.93	0.32	37.33	8.6E-03	down
7/19/2007	10.22	1078.93	9.23	1078.97	-0.04	37.01	-1.1E-03	flat
10/22/2007	10.02	1079.13	9.05	1079.15	-0.02	37.21	-5.4E-04	flat
1/14/2008	nm	---	9.35	1078.85	---	---	---	flat
4/28/2008	9.29	1079.86	8.62	1079.58	0.28	37.94	7.4E-03	down
8/12/2008	9.97	1079.18	9.00	1079.20	-0.02	37.26	-5.4E-04	flat
10/29/2008	10.18	1078.97	9.23	1078.97	0.00	37.05	0.0E+00	flat
04/13/09	9.96	1079.19	9.25	1078.95	0.24	37.27	6.4E-03	down
10/05/09	10.18	1078.97	9.24	1078.96	0.01	37.05	2.7E-04	flat
04/13/10	10.08	1079.07	9.25	1078.95	0.12	37.15	3.2E-03	down
10/20/2010	9.62	1079.53	8.71	1079.49	0.04	37.61	1.1E-03	flat
1/18/2011	9.88	1079.27	9.1	1079.10	0.17	37.35	4.6E-03	down
03/16/11	9.6	1079.55	9.21	1078.99	0.56	37.63	1.5E-02	down

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-7A	PZ-7B[A]
Well Depth from TOC (feet)	18.15	43.17
Screen Length (feet)	10	5
Surface Elevation (MSL)[A]	1085.39	1085.39
Top of Casing Elevation (MSL)[A]	1088.65	1086.51
Top of Screen Elevation (MSL)	1080.5	1048.3
Bottom of Screen Elevation (MSL)	1070.5	1043.3

Middle of screen elevation (piez.): 1045.8

Date	OW-7A Depth to Water from TOC (feet)	OW-7A Water Elevation (MSL)	PZ-7B Depth to Water from TOC (feet)	PZ-7B Water Elevation (MSL)	Head Change (dH)	Dist. Change (dL)	Vertical Hydraulic Gradient (dH/dL)*	
04/20/04	8.24	1080.41	7.15	1079.36	1.05	34.57	3.0E-02	down
07/20/04	8.21	1080.44	6.50	1080.01	0.43	34.60	1.2E-02	down
10/12/04	8.30	1080.35	7.02	1079.49	0.86	34.51	2.5E-02	down
01/25/05	8.40	1080.25	7.28	1079.23	1.02	34.41	3.0E-02	down
04/11/05	8.24	1080.41	7.20	1079.31	1.10	34.57	3.2E-02	down
07/11/05	8.29	1080.36	7.10	1079.41	0.95	34.52	2.8E-02	down
10/03/05	8.23	1080.42	6.92	1079.59	0.83	34.58	2.4E-02	down
01/05/06	8.41	1080.24	7.31	1079.20	1.04	34.40	3.0E-02	down
04/11/06	8.31	1080.34	7.30	1079.21	1.13	34.50	3.3E-02	down
07/21/06	8.35	1080.30	7.22	1079.29	1.01	34.46	2.9E-02	down
10/04/06	8.40	1080.25	7.21	1079.30	0.95	34.41	2.8E-02	down
2/22/2007	8.4	1080.25	7.42	1079.09	1.16	34.41	3.4E-02	down
4/19/2007	8.48	1080.17	7.18	1079.33	0.84	34.33	2.4E-02	down
7/19/2007	8.35	1080.30	7.15	1079.36	0.94	34.46	2.7E-02	down
10/22/2007	8.22	1080.43	6.99	1079.52	0.91	34.59	2.6E-02	down
1/14/2008	8.43	1080.22	7.33	1079.18	1.04	34.38	3.0E-02	down
4/28/2008	8.13	1080.52	6.62	1079.89	0.63	34.68	1.8E-02	down
8/12/2008	8.33	1080.32	6.96	1079.55	0.77	34.48	2.2E-02	down
10/29/2008	8.36	1080.29	7.11	1079.40	0.89	34.45	2.6E-02	down
04/13/09	8.26	1080.39	7.21	1079.30	1.09	34.55	3.2E-02	down
10/05/09	8.38	1080.27	7.13	1079.38	0.89	34.43	2.6E-02	down
04/13/10	8.28	1080.37	7.21	1079.30	1.07	34.53	3.1E-02	down
10/19/2010	8.26	1080.39	6.68	1079.83	0.56	34.55	1.6E-02	down
1/18/2011	8.4	1080.25	6.95	1079.56	0.69	34.41	2.0E-02	down
03/16/11	8.23	1080.42	7.12	1079.39	1.03	34.58	3.0E-02	down

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-9		PZ-9B					
Well Depth from TOC (feet)	21.18		53.65					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1088.33		1088.33					
Top of Casing Elevation (MSL)[A]	1090.92		1090.85					
Top of Screen Elevation (MSL)	1079.7		1042.2					
Bottom of Screen Elevation (MSL)	1069.7		1037.2		Middle of screen elevation (piez.)			1039.7
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
04/20/04	12.17	1078.75	12.15	1078.70	0.05	39.05	1.3E-03	flat
07/20/04	12.79	1078.13	12.70	1078.15	-0.02	38.43	-5.2E-04	flat
10/12/04	12.28	1078.64	12.23	1078.62	0.02	38.94	5.1E-04	flat
01/25/05	12.44	1078.48	12.41	1078.44	0.04	38.78	1.0E-03	flat
04/12/05	12.33	1078.59	12.32	1078.53	0.06	38.89	1.5E-03	down
07/11/05	12.32	1078.60	12.27	1078.58	0.02	38.90	5.1E-04	flat
10/03/05	12.16	1078.76	12.05	1078.80	-0.04	39.06	-1.0E-03	flat
01/05/06	12.49	1078.43	12.38	1078.47	-0.04	38.73	-1.0E-03	flat
04/11/06	12.41	1078.51	12.39	1078.46	0.05	38.81	1.3E-03	flat
07/21/06	12.41	1078.51	12.38	1078.47	0.04	38.81	1.0E-03	flat
10/04/06	12.37	1078.55	12.35	1078.50	0.05	38.85	1.3E-03	flat
2/22/2007	12.54	1078.38	12.56	1078.29	0.09	38.68	2.3E-03	down
4/19/2007	12.30	1078.62	12.30	1078.55	0.07	38.92	1.8E-03	down
7/19/2007	12.40	1078.52	12.38	1078.47	0.05	38.82	1.3E-03	flat
10/22/2007	12.16	1078.76	12.10	1078.75	0.01	39.06	2.6E-04	flat
1/14/2008	12.40	1078.52	12.48	1078.37	0.15	38.82	3.9E-03	down
4/28/2008	11.80	1079.12	11.68	1079.17	-0.05	39.42	-1.3E-03	flat
8/12/2008	12.18	1078.74	12.15	1078.70	0.04	39.04	1.0E-03	flat
10/29/2008	12.38	1078.54	12.36	1078.49	0.05	38.84	1.3E-03	flat
04/13/09	12.35	1078.57	12.29	1078.56	0.01	38.87	2.6E-04	flat
10/05/09	12.40	1078.52	12.36	1078.49	0.03	38.82	7.7E-04	flat
04/13/10	12.35	1078.57	12.31	1078.54	0.03	38.87	7.7E-04	flat
10/19/10	11.84	1079.08	11.77	1079.08	0.00	39.38	0.0E+00	flat
01/18/11	12.13	1078.79	12.05	1078.80	-0.01	39.09	-2.6E-04	flat
03/16/11	12.14	1078.78	12.15	1078.70	0.08	39.08	2.0E-03	down

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-10		PZ-10B					
Well Depth from TOC (feet)	21.3		53.3					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1088.41		1088.41					
Top of Casing Elevation (MSL)[A]	1090.95		1090.99					
Top of Screen Elevation (MSL)	1079.7		1042.7					
Bottom of Screen Elevation (MSL)	1069.7		1037.7		Middle of screen elevation (piez.)			1040.2
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
04/20/04	12.21	1078.74	12.36	1078.63	0.11	38.55	2.9E-03	down
07/20/04	11.94	1079.01	11.77	1079.22	-0.21	38.82	-5.4E-03	up
10/12/04	12.43	1078.52	12.23	1078.76	-0.24	38.33	-6.3E-03	up
01/25/05	12.72	1078.23	12.43	1078.56	-0.33	38.04	-8.7E-03	up
04/12/05	12.34	1078.61	12.55	1078.44	0.17	38.42	4.4E-03	down
07/11/05	12.38	1078.57	12.64	1078.35	0.22	38.38	5.7E-03	down
10/03/05	12.30	1078.65	12.39	1078.60	0.05	38.46	1.3E-03	flat
01/05/06	12.49	1078.46	12.80	1078.19	0.27	38.27	7.1E-03	down
04/11/06	12.55	1078.40	12.59	1078.40	0.00	38.21	0.0E+00	flat
07/21/06	12.61	1078.34	12.68	1078.31	0.03	38.15	7.9E-04	flat
10/04/06	12.52	1078.43	12.51	1078.48	-0.05	38.24	-1.3E-03	flat
2/22/2007	12.71	1078.24	12.27	1078.72	-0.48	38.05	-1.3E-02	up
4/19/2007	12.33	1078.62	12.97	1078.02	0.60	38.43	1.6E-02	down
7/19/2007	12.55	1078.40	12.34	1078.65	-0.25	38.21	-6.5E-03	up
10/22/2007	12.28	1078.67	12.50	1078.49	0.18	38.48	4.7E-03	down
1/14/2008	12.58	1078.37	12.67	1078.32	0.05	38.18	1.3E-03	flat
4/28/2008	11.70	1079.25	12.30	1078.69	0.56	39.06	1.4E-02	down
8/12/2008	12.54	1078.41	12.25	1078.74	-0.33	38.22	-8.6E-03	up
10/29/2008	12.57	1078.38	12.41	1078.58	-0.20	38.19	-5.2E-03	up
04/13/09	12.47	1078.48	12.30	1078.69	-0.21	38.29	-5.5E-03	up
10/05/09	12.51	1078.44	12.42	1078.57	-0.13	38.25	-3.4E-03	up
04/13/10	12.41	1078.54	12.49	1078.50	0.04	38.35	1.0E-03	flat
10/19/10	11.85	1079.10	11.89	1079.1	0.00	38.91	0.0E+00	flat
01/18/11	12.22	1078.73	12.22	1078.77	-0.04	38.54	-1.0E-03	flat
03/16/11	12.25	1078.70	12.63	1078.36	0.34	38.51	8.8E-03	down

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-11		PZ-11B					
Well Depth from TOC (feet)	16.07		51.42					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1091.51		1091.51					
Top of Casing Elevation (MSL)[A]	1094.09		1093.73					
Top of Screen Elevation (MSL)	1088.0		1047.3					
Bottom of Screen Elevation (MSL)	1078.0		1042.3		Middle of screen elevation (piez.)			1044.8
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
04/20/04	15.54	1078.55	14.75	1078.98	-0.43	33.74	-1.3E-02	up
07/20/04	14.65	1079.44	14.13	1079.60	-0.16	34.63	-4.6E-03	up
10/12/04	15.30	1078.79	14.71	1079.02	-0.23	33.98	-6.8E-03	up
01/25/05	15.70	1078.39	14.95	1078.78	-0.39	33.58	-1.2E-02	up
4/11 & 12/05	15.61	1078.48	14.88	1078.85	-0.37	33.67	-1.1E-02	up
07/11/05	15.41	1078.68	14.77	1078.96	-0.28	33.87	-8.3E-03	up
10/03/05	15.26	1078.83	14.59	1079.14	-0.31	34.02	-9.1E-03	up
01/05/06	15.56	1078.53	14.90	1078.83	-0.30	33.72	-8.9E-03	up
04/11/06	16.73	1077.36	14.98	1078.75	-1.39	32.55	-4.3E-02	up
07/21/06	15.55	1078.54	15.01	1078.72	-0.18	33.73	-5.3E-03	up
10/04/06	15.54	1078.55	14.90	1078.83	-0.28	33.74	-8.3E-03	up
2/22/2007	15.86	1078.23	15.02	1078.71	-0.48	33.42	-1.4E-02	up
4/19/2007	15.56	1078.53	14.83	1078.90	-0.37	33.72	-1.1E-02	up
7/19/2007	15.44	1078.65	14.70	1079.03	-0.38	33.84	-1.1E-02	up
10/22/2007	15.30	1078.79	14.68	1079.05	-0.26	33.98	-7.7E-03	up
1/14/2008	15.68	1078.41	14.83	1078.90	-0.49	33.60	-1.5E-02	up
4/28/2008	14.87	1079.22	14.20	1079.53	-0.31	34.41	-9.0E-03	up
8/12/2008	15.20	1078.89	14.60	1079.13	-0.24	34.08	-7.0E-03	up
10/29/2008	15.49	1078.60	14.86	1078.87	-0.27	33.79	-8.0E-03	up
04/13/09	15.67	1078.42	14.90	1078.83	-0.41	33.61	-1.2E-02	up
10/05/09	15.51	1078.58	14.86	1078.87	-0.29	33.77	-8.6E-03	up
04/13/10	15.59	1078.50	14.89	1078.84	-0.34	33.69	-1.0E-02	up
10/19/10	14.89	1079.20	14.30	1079.43	-0.23	34.39	-6.7E-03	up
01/18/11	15.26	1078.83	14.67	1079.06	-0.23	34.02	-6.8E-03	up
03/16/11	15.59	1078.50	14.63	1079.10	-0.60	33.69	-1.8E-02	up

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-12[A]		PZ-12B[A]					
Well Depth from TOC (feet)	18.35		43.8					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1090.23		1090.23					
Top of Casing Elevation (MSL)[A]	1089.98		1089.93					
Top of Screen Elevation (MSL)	1081.6		1051.1					
Bottom of Screen Elevation (MSL)	1071.6		1046.1		Middle of screen elevation (piez.)			1048.6
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
10/12/04	11.42	1078.56	11.36	1078.57	-0.01	29.93	-3.3E-04	flat
01/25/05	11.56	1078.42	11.69	1078.24	0.18	29.79	6.0E-03	down
4/11 & 12/05	11.87	1078.11	11.79	1078.14	-0.03	29.48	-1.0E-03	flat
07/11/05	11.60	1078.38	11.51	1078.42	-0.04	29.75	-1.3E-03	flat
10/03/05	11.43	1078.55	11.40	1078.53	0.02	29.92	6.7E-04	flat
01/05/06	11.68	1078.30	11.59	1078.34	-0.04	29.67	-1.3E-03	flat
04/11/06	11.88	1078.10	11.96	1077.97	0.13	29.47	4.4E-03	down
07/21/06	11.74	1078.24	11.62	1078.31	-0.07	29.61	-2.4E-03	up
10/04/06	11.75	1078.23	11.65	1078.28	-0.05	29.60	-1.7E-03	up
2/22/2007	12.04	1077.94	11.68	1078.25	-0.31	29.31	-1.1E-02	up
4/19/2007	11.73	1078.25	11.66	1078.27	-0.02	29.62	-6.8E-04	flat
7/19/2007	11.61	1078.37	11.54	1078.39	-0.02	29.74	-6.7E-04	flat
10/22/2007	11.45	1078.53	11.35	1078.58	-0.05	29.90	-1.7E-03	up
1/14/2008	11.61	1078.37	11.87	1078.06	0.31	29.74	1.0E-02	down
4/28/2008	11.00	1078.98	10.88	1079.05	-0.07	30.35	-2.3E-03	up
8/12/2008	11.35	1078.63	11.25	1078.68	-0.05	30.00	-1.7E-03	up
10/29/2008	11.66	1078.32	11.55	1078.38	-0.06	29.69	-2.0E-03	up
04/13/09	11.88	1078.10	11.69	1078.24	-0.14	29.47	-4.8E-03	up
10/05/09	11.70	1078.28	11.45	1078.48	-0.20	29.65	-6.7E-03	up
04/13/10	11.86	1078.12	11.59	1078.34	-0.22	29.49	-7.5E-03	up
10/19/10	11.02	1078.96	10.94	1078.99	-0.03	30.33	-9.9E-04	flat
01/18/11	11.30	1078.68	11.18	1078.75	-0.07	30.05	-2.3E-03	up
03/16/11	11.71	1078.27	11.57	1078.36	-0.09	29.64	-3.0E-03	up

Table 7. Groundwater Vertical Gradient Summary
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Well Data	OW-14	PZ-14B		
Well Depth from TOC (feet)	17.76	47.94		
Screen Length (feet)	10	5		
Surface Elevation (MSL)[A]	1089.64	1089.64		
Top of Casing Elevation (MSL)[A]	1089.04	1089.35		
Top of Screen Elevation (MSL)	1081.3	1046.4		
Bottom of Screen Elevation (MSL)	1071.3	1041.4	Middle of screen elevation (piez.)	1043.9

Date	OW-14 Depth to Water from TOC (feet)	OW-14 Water Elevation (MSL)	PZ-14B Depth to Water from TOC (feet)	PZ-14B Water Elevation (MSL)	Head Change (dH)	Dist. Change (dL)	Vertical Hydraulic Gradient (dH/dL)*	
7/19/2007	10.96	1078.08	46.89	1042.46	35.62	34.17	1.0E+00	down
10/22/2007	10.72	1078.32	43.90	1045.45	32.87	34.41	9.6E-01	down
1/14/2008	nm	---	nm	---	---	---	---	---
4/28/2008	10.22	1078.82	31.79	1057.56	21.26	34.91	6.1E-01	down
8/12/2008	10.63	1078.41	30.97	1058.38	20.03	34.50	5.8E-01	down
10/29/2008	10.97	1078.07	31.55	1057.80	20.27	34.16	5.9E-01	down
04/13/09	11.08	1077.96	20.45	1068.90	9.06	34.05	2.7E-01	down
10/05/09	10.96	1078.08	32.13	1057.22	20.86	34.17	6.1E-01	down
04/14/10	11.02	1078.02	24.70	1064.65	13.37	34.11	3.9E-01	down
10/20/10	10.23	1078.81	20.7	1068.65	10.16	34.90	2.9E-01	down
01/18/11	10.56	1078.48	18.65	1070.70	7.78	34.57	2.3E-01	down
03/16/11	10.91	1078.13	21.78	1067.57	10.56	34.22	3.1E-01	down

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-15		PZ-15B					
Well Depth from TOC (feet)	17.2		47.4					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1091.15		1091.15					
Top of Casing Elevation (MSL)[A]	1090.94		1090.89					
Top of Screen Elevation (MSL)	1083.7		1048.5					
Bottom of Screen Elevation (MSL)	1073.7		1043.5		Middle of screen elevation (piez.)			1046.0
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
07/19/07	12.96	1077.98	12.88	1078.01	-0.03	31.99	-9.4E-04	flat
10/22/2007	12.75	1078.19	12.68	1078.21	-0.02	32.20	-6.2E-04	flat
1/14/2008	13.13	1077.81	13.06	1077.83	-0.02	31.82	-6.3E-04	flat
4/28/2008	12.21	1078.68	12.25	1078.69	-0.01	32.69	-3.1E-04	flat
8/12/2008	12.52	1078.37	12.6	1078.34	0.03	32.38	9.3E-04	flat
10/29/2008	12.90	1077.99	12.98	1077.96	0.03	32.00	9.4E-04	flat
04/13/09	13.12	1077.77	13.18	1077.76	0.01	31.78	3.1E-04	flat
10/05/09	12.94	1077.95	13.00	1077.94	0.01	31.96	3.1E-04	flat
04/14/10	13.01	1077.88	13.01	1077.93	-0.05	31.89	-1.6E-03	up
10/20/10	12.21	1078.68	12.28	1078.66	0.02	32.69	6.1E-04	flat
01/18/11	12.41	1078.48	12.50	1078.44	0.04	32.49	1.2E-03	flat
03/16/11	12.95	1077.94	13.02	1077.92	0.02	31.95	6.3E-04	flat

Table 7. Groundwater Vertical Gradient Summary

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

Well Data	OW-16		PZ-16B					
Well Depth from TOC (feet)	13.4		45.5					
Screen Length (feet)	10		5					
Surface Elevation (MSL)[A]	1088.61		1088.61					
Top of Casing Elevation (MSL)[A]	1088.44		1088.11					
Top of Screen Elevation (MSL)	1085.0		1047.6					
Bottom of Screen Elevation (MSL)	1075.0		1042.6		Middle of screen elevation (piez.)			1045.1
Date	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Depth to Water from TOC (feet)**	**Water Elevation (MSL)**	**Head Change (dH)**	**Dist. Change (dL)**	**Vertical Hydraulic Gradient (dH/dL)***	
07/19/07	7.33	1081.11	6.83	1081.28	-0.17	36.00	-4.7E-03	up
10/22/2007	7.20	1081.24	6.58	1081.53	-0.29	36.13	-8.0E-03	up
1/14/2008	7.62	1080.82	7.60	1080.51	0.31	35.71	8.7E-03	down
4/28/2008	7.14	1081.30	6.67	1081.44	-0.14	36.19	-3.9E-03	up
8/12/2008	7.21	1081.23	6.71	1081.40	-0.17	36.12	-4.7E-03	up
10/29/2008	7.28	1081.16	6.72	1081.39	-0.23	36.05	-6.4E-03	up
04/13/09	7.52	1080.92	7.05	1081.06	-0.14	35.81	-3.9E-03	up
10/05/09	7.28	1081.16	6.75	1081.36	-0.20	36.05	-5.5E-03	up
04/14/10	6.86	1081.58	6.99	1081.12	0.46	36.47	1.3E-02	down
10/20/10	5.67	1082.77	6.59	1081.52	1.25	37.66	3.3E-02	down
01/18/11	7.3	1081.14	6.91	1081.20	-0.06	36.03	-1.7E-03	up
03/16/11	7.52	1080.92	7.12	1080.99	-0.07	35.81	-2.0E-03	up

TOC : Top of PVC well casing
MSL: Elevations are referenced to feet above Mean Sea Level
A: Elevations for all the site wells were re-surveyed on June 6 and 7, 2007 for previously existing wells and on August 15, 2007 for new wells by WPSC personnel.
*: Vertical gradients less than ±0.0015 are considered flat, and they typically have less than 0.05 foot difference between wells.

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW01	06/02/93	ND	ND	ND	0.36	ND	0.12	ND	ND	**0.3**	ND	0.8	0.54	ND	--	--	ND	ND	0.56
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	< 0.2	0.2	**0.32**	0.1	0.35	0.1	0.19	< 0.1	0.28	< 0.4	0.28	< 1	< 1	< 1	< 0.4	0.21
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	< 0.96	< 0.89	< 0.02	< 0.032	< 0.063	< 0.088	< 0.11	< 0.061	< 0.021	< 0.13	< 0.06	< 0.075	< 0.057	< 0.58	< 0.65	< 0.31	< 0.025	< 0.064
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	7.7	< 0.55	< 0.018	< 0.017	< 0.027	< 0.043	< 0.1	< 0.029	< 0.013	< 0.16	< 0.1	0.13	< 0.083	3.9	0.71	16	0.035	< 0.047
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	30	0.47	0.39	1.3	**3.2**	**2**	1.4	< 0.11	**1.1**	0.28	2.2	7.1	1.5	13	< 0.072	4.1	1.7	2.7
	05/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	13	0.34	0.079	0.37	**0.47**	**0.37**	0.32	0.32	**0.3**	0.099	0.49	< 1.1	0.28	3	< 0.028	< 1.3	0.29	0.44
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	59	< 1.8	< 1.6	< 1.5	< 0.96	< 1.1	< 1.2	< 1	< 1.4	< 1.4	< 2.2	11	< 1.1	37	< 2.2	8.1	8.9	< 1.6
	06/16/03	28	0.5	< 0.41	< 0.25	< 0.29	< 0.27	< 0.33	< 0.39	< 0.29	< 0.33	< 0.27	2.4	< 0.44	15	< 0.35	6.9	1.4	< 0.35
	11/20/03	27	< 1.5	< 1.6	< 0.96	< 1.1	< 1	< 1.3	< 1.5	< 1.1	< 1.3	< 1	1.6	< 1.7	5.9	< 1.4	< 1.9	1.5	< 1.4
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	14	< 0.97	< 0.88	< 0.98	< 0.91	< 0.89	< 1	< 0.97	< 0.82	< 1.1	< 0.82	< 1.1	< 0.85	< 1	< 1.1	< 1.1	< 1	< 0.81
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	25	0.58	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	4.1	< 0.38	3.4	< 0.22	< 0.25	2.2	< 0.29
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/22/07	26	0.71	0.093	< 0.016	< 0.019	< 0.016	< 0.02	< 0.02	< 0.019	< 0.019	0.044	5.5	< 0.019	2.5	0.02	0.13	3.2	0.025
	04/19/07	23	< 0.65	< 0.93	< 1.2	< 1.5	< 1.3	< 1.5	< 1.5	< 1.5	< 1.5	< 1.2	3.5	< 1.5	0.82	< 0.9	< 0.99	2.4	< 1.2
	07/19/07	26	< 0.81	< 1.2	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	3.2	< 1.9	< 1	< 1.1	< 1.2	1.9	< 1.5
	10/22/07	50	1.6	0.26	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	9.1	< 0.38	0.7	< 0.22	< 0.25	3.7	< 0.29
	01/14/08	68	2	< 2.3	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	13	< 3.8	14	< 2.2	< 2.5	6	< 2.9
	04/28/08	18.5	0.45	0.045	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.018	4.7	< 0.0036	1.2	0.023	0.062	3.6	0.0096
	10/29/08	31.5	1.1	< 0.81	< 0.43	< 0.67	< 0.64	< 0.78	< 0.97	< 0.87	< 0.54	< 0.67	4.2	< 0.45	< 1.2	< 1.3	< 2	3.8	< 0.85

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW1	04/13/09	37.2	1.1	< 0.13	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.14	11.5	< 0.072	2	< 0.21	< 0.33	9.6	< 0.14
	10/05/09	34.7	0.83	< 0.57	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	< 0.44	7.8	< 0.47	0.71	< 0.39	0.66	6.7	< 0.47
	04/13/10	35	1.1	0.84	< 0.072	< 0.057	< 0.068	< 0.096	< 0.087	< 0.07	< 0.064	< 0.088	8.7	< 0.094	2.2	0.13	1.4	7.3	< 0.095
	10/19/10	12	0.34	0.2	< 0.072	< 0.057	< 0.068	< 0.096	< 0.087	< 0.07	< 0.064	< 0.088	1.8	< 0.094	< 0.1	< 0.077	< 0.097	1.5	< 0.095
	01/20/11	22.3	0.6	< 0.047	0.0042	< 0.047	< 0.047	< 0.047	< 0.047	0.0049	< 0.047	0.04	1.7	< 0.047	0.088	0.015	0.051	2.3	0.015
	03/17/11	30.4	0.76	0.084	0.0055	0.0037	0.0049	< 0.047	< 0.047	0.0062	< 0.047	0.052	< 4.7	< 0.047	0.13	< 0.047	0.066	< 4.7	0.02
OW02	06/03/93	ND	ND	0.41	ND	ND	ND	ND	ND	**0.44**	ND	1.4	5	ND	--	--	11	2.8	0.38
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	1.3	< 2	< 0.2	0.46	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	0.39	3.1	< 0.1	< 1	1.6	10	2.3	0.35
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	7.8	< 0.89	0.41	0.37	< 0.063	< 0.088	< 0.11	< 0.061	< 0.021	< 0.13	0.66	5.2	< 0.057	< 0.58	< 0.65	11	2.4	0.25
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	14	< 0.55	0.77	0.7	**0.34**	**0.22**	0.26	0.13	**0.23**	< 0.16	1.3	7	0.31	0.77	2.5	10	3.3	0.31
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	14	< 0.15	0.52	< 0.11	< 0.013	**0.24**	0.39	0.16	**0.57**	< 0.068	0.87	7.1	0.91	2.9	1	8	3.2	0.28
	05/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	7.8	2.7	< 0.4	< 0.38	**0.26**	< 0.28	< 0.3	0.3	< 0.36	< 0.34	< 0.56	3.3	< 0.28	0.71	0.68	1.2	1.8	0.41
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/03	12	0.1	< 1	0.18	0.15	0.17	0.12	0.14	0.15	0.036	0.5	4.6	0.11	0.32	0.031	< 1.2	3	0.45
	11/20/03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	7.7	< 0.39	0.59	< 0.39	< 0.36	< 0.36	< 0.41	< 0.39	< 0.33	< 0.44	0.36	3	< 0.34	0.41	< 0.45	< 0.45	1.8	< 0.33
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	4.2	< 0.16	0.27	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	1.6	< 0.38	0.21	< 0.22	< 0.25	0.93	< 0.29
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/22/07	6.6	0.1	0.53	0.066	0.028	0.031	0.02	0.041	0.059	< 0.019	0.44	2.8	< 0.019	0.38	0.056	0.18	1.4	0.33

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW2	04/19/07	7.3	< 0.16	0.4	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	3	< 0.38	0.26	< 0.22	0.66	1.8	< 0.29
	07/19/07	9.4	0.099	0.58	0.044	< 0.018	0.016	< 0.019	0.022	0.036	< 0.019	0.45	3.9	< 0.019	0.58	0.074	0.59	2	0.3
	10/22/07	8.3	0.11	0.89	0.056	< 0.018	0.02	< 0.019	0.024	0.054	< 0.019	0.55	3.4	< 0.019	0.44	0.052	0.24	2.4	0.38
	01/14/08	10	0.11	0.72	0.041	< 0.018	0.017	< 0.019	0.022	0.043	< 0.019	0.47	4.5	< 0.019	0.58	0.075	0.17	2.6	0.32
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/29/08	7.3	< 0.2	0.44	< 0.14	< 0.22	< 0.21	< 0.25	< 0.31	< 0.28	< 0.17	0.37	3	< 0.14	< 0.38	< 0.43	< 0.66	1.7	< 0.27
	04/13/09	6.1	< 0.099	0.28	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.22	2.5	< 0.072	< 0.19	< 0.21	< 0.33	1.2	0.16
	10/05/09	7.8	< 0.076	0.69	< 0.077	< 0.061	< 0.072	< 0.1	< 0.093	< 0.074	< 0.068	0.5	3.7	< 0.099	0.29	< 0.082	0.33	1.9	0.36
	04/13/10	4.9	< 0.072	0.63	< 0.072	< 0.057	< 0.068	< 0.096	< 0.087	< 0.07	< 0.064	0.33	2.3	< 0.094	0.13	< 0.077	0.23	1	0.24
	10/19/10	9.7	0.11	0.97	< 0.091	< 0.071	< 0.085	< 0.12	< 0.11	0.1	< 0.08	0.55	4.5	< 0.12	0.34	< 0.096	0.52	2	0.49
	01/25/11	12	0.058	0.4	0.022	0.0047	< 0.047	< 0.047	0.0068	0.02	< 0.047	0.33	5.3	< 0.047	0.42	0.043	0.25	1.8	0.2
	03/17/11	5.8	< 0.94	0.31	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	0.29	2.2	< 0.94	0.28	< 0.94	0.26	0.21	0.2
OW03	06/04/93	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.45	2	ND	--	--	**620**	3.4	ND
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	< 0.2	< 0.05	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	< 0.2	< 0.4	< 0.1	4.2	3.1	56	< 0.4	< 0.2
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	94	580	< 0.1	< 0.16	< 0.32	< 0.44	< 0.55	< 0.3	< 0.1	< 0.65	< 0.44	4.4	< 0.28	130	119	**2500**	2.3	< 0.32
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW03R	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	203	119	124	126	**75**	**73**	27	17	**36**	5	202	244	24	158	428	**950**	390	146
	05/31/00	115	70	145	64	**86**	**137**	27	71	**55**	6.9	254	208	25	82	235	**432**	424	219
	08/31/00	43	21	77	163	**28**	**25**	17	12	**34**	5.7	190	87	17	32	68	**363**	240	98
	11/21/00	5.5	31	27	44	**2.1**	**1.4**	0.36	0.81	**5.3**	< 0.068	29	32	0.32	19	34	**150**	70	24
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	< 22	34	84	120	**110**	**63**	51	75	**98**	< 20	240	30	46	< 32	< 34	88	160	200
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	< 14	< 18	< 16	< 15	< 9.6	< 11	< 12	< 10	< 14	< 14	< 22	< 17	< 11	< 22	< 22	**260**	21	< 16
	06/16/03	1.2	1.1	3	3.4	**2.7**	**1.9**	1.4	2.1	**3**	< 0.41	7.7	2.1	1.2	0.6	< 0.44	1.6	3.6	6
	11/20/03	9	2.1	4.6	1.3	**0.95**	**0.67**	0.5	0.92	**1.3**	< 0.4	5.5	7.7	< 0.52	8.4	9.4	76	12	3.9
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	1.6	0.36	0.68	0.24	0.15	0.11	< 0.1	0.13	0.17	< 0.11	1.1	0.89	< 0.085	0.98	0.15	1.7	2	0.82
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW3R	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	0.47	0.12	0.35	0.04	< 0.037	< 0.031	< 0.039	< 0.039	< 0.038	< 0.038	0.54	0.36	< 0.038	0.27	< 0.022	0.11	0.42	0.33
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/21/07	1.4	0.16	1.1	0.23	< 0.23	< 0.2	< 0.24	< 0.24	< 0.24	< 0.24	1.6	1.1	< 0.24	0.81	0.58	1.9	3.6	1.1
	04/19/07	0.32	0.068	0.23	0.12	0.098	0.07	0.054	0.077	0.1	< 0.038	0.53	0.2	0.051	0.15	0.049	0.33	0.35	0.4
	07/19/07	12	4.8	1.9	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	3.7	< 1.9	17	19	**310**	5.5	< 1.5
	10/22/07	13	3.7	2.4	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	4.9	< 1.9	14	20	**260**	6.2	< 1.5
	01/14/08	10	< 4.1	< 5.8	< 7.8	< 9.2	< 7.8	< 9.6	< 9.7	< 9.5	< 9.4	< 7.7	< 4.5	< 9.4	8.5	15	**130**	7.5	< 7.3
	04/29/08	0.78	< 0.099	0.3	0.13	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.42	0.47	< 0.072	0.45	< 0.21	5.3	0.61	0.29
	10/29/08	12.6	< 2.5	< 3.3	< 1.7	< 2.7	< 2.6	< 3.1	< 3.9	< 3.5	< 2.2	< 2.7	< 3.1	< 1.8	14.6	22.3	**228**	4	< 3.4
	04/13/09	1.9	0.17	0.35	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.47	0.83	< 0.072	1.3	< 0.21	4.5	1.1	0.43
	10/05/09	15.8	3.3	< 3	0.24	0.042	0.031	0.0095	0.034	0.14	< 0.0034	< 2.3	5.8	0.0087	16.6	17.7	**421**	6.4	< 2.5
	04/13/10	0.83	0.12	0.32	0.057	0.026	0.04	0.029	0.04	0.05	0.02	0.41	0.46	0.026	0.45	0.23	0.72	0.7	0.27
	10/19/10	2.9	0.52	1	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	0.48	1.2	< 0.47	3	2	57.1	1.2	< 0.47
	01/25/11	0.36	0.033	0.091	0.026	0.021	< 0.047	0.0099	0.02	0.026	< 0.047	0.084	0.24	0.0075	0.48	0.28	6.8	0.15	0.057
	03/17/11	0.49	0.075	0.5	0.035	0.012	0.012	0.0065	0.015	0.035	< 0.047	0.4	0.86	< 0.047	0.43	0.083	12.2	0.63	0.27
OW04	06/10/93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND	ND	ND
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	< 0.2	< 0.05	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	< 0.2	< 0.4	< 0.1	< 1	< 1	< 1	< 0.4	< 0.2
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	< 1	< 0.92	< 0.021	< 0.033	< 0.066	< 0.092	< 0.11	< 0.063	< 0.022	< 0.14	< 0.062	< 0.078	< 0.059	< 0.6	< 0.68	< 0.32	< 0.026	< 0.066
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	< 0.23	< 0.57	< 0.019	< 0.018	< 0.028	< 0.045	< 0.1	< 0.03	< 0.014	< 0.17	< 0.1	< 0.03	< 0.086	< 0.42	< 0.62	< 0.23	< 0.015	< 0.049
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	< 0.13	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	< 0.082	< 0.072	< 0.056	< 0.045	< 0.032
	05/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	0.033	< 0.023	< 0.02	< 0.019	0.022	0.015	< 0.015	0.015	< 0.018	< 0.017	< 0.028	< 0.021	< 0.014	< 0.027	< 0.028	0.051	0.029	0.023
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/03	0.02	< 0.019	< 0.02	0.013	0.016	0.014	< 0.016	< 0.019	< 0.014	< 0.016	0.018	< 0.017	< 0.021	< 0.018	< 0.017	0.041	0.019	0.018
	11/20/03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW4	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	0.03	< 0.019	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	< 0.016	< 0.022	< 0.017	0.02	< 0.023	0.38	< 0.02	< 0.016
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	0.059	0.0092	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.093	0.017	1.5	< 0.011	< 0.015
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/21/07	0.032	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.04	< 0.011	0.094	0.012	< 0.015
	04/19/07	0.029	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.03	< 0.011	0.09	< 0.011	< 0.015
	07/19/07	0.043	0.0087	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.011	< 0.019	0.026	0.015	0.12	0.017	< 0.015
	10/22/07	0.063	0.0097	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.053	< 0.011	0.12	< 0.011	< 0.015
	01/14/08	0.055	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.031	< 0.011	0.059	0.016	< 0.015
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/29/08	0.08	0.014	0.0081	0.0038	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.0089	0.01	< 0.0036	0.11	0.021	1.9	0.022	0.007
	04/13/09	0.049	0.006	< 0.0065	0.019	0.023	0.032	0.022	0.03	0.032	0.0058	0.056	0.0074	0.019	0.055	< 0.011	0.49	0.025	0.047
	10/05/09	0.17	0.028	0.0068	0.0087	0.0068	0.0063	< 0.0051	0.0054	0.008	< 0.0034	0.0098	0.013	< 0.005	0.1	0.029	0.29	0.015	0.0098
	04/13/10	0.68	0.08	0.014	< 0.0073	< 0.0058	< 0.0069	< 0.0097	< 0.0088	< 0.007	< 0.0065	0.014	0.034	< 0.0094	0.25	0.045	0.58	0.043	0.013
	10/19/10	0.54	0.055	< 0.057	< 0.036	< 0.029	< 0.034	< 0.048	< 0.044	< 0.035	< 0.032	< 0.044	< 0.048	< 0.047	0.69	0.068	3.1	< 0.081	< 0.047
	01/20/11	0.28	0.044	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.0088	< 0.05	0.25	0.0086	2	0.0093	< 0.05
	03/17/11	0.72	0.085	0.007	0.0074	0.0073	0.0055	0.006	0.0091	0.0079	< 0.047	0.011	< 0.047	< 0.047	0.39	< 0.047	11.4	< 0.047	0.01
OW05	06/03/93	450	810	56	44	**46**	**21**	18	15	**27**	0.97	210	260	25	--	--	**9000**	330	74
	08/16/96	710	1800	100	60	**47**	**22**	36	27	**28**	< 2	280	270	34	1300	1500	**6700**	350	69
	09/04/97	20	46	16	26	**1.2**	**8.3**	19	9.6	**12**	< 0.65	54	23	15	110	97	**120**	37	34
OW05A	06/03/93	350	240	45	78	**68**	**30**	26	20	**36**	ND	260	140	35	--	--	**2700**	220	96
	08/16/96	60	230	23	22	**18**	**8.1**	18	5.9	**9.1**	< 1	67	31	15	190	110	**440**	63	24
	09/04/97	240	< 22	40	20	**15**	**6.1**	13	7.1	**10**	< 3.2	87	170	9.8	900	880	**5300**	170	36
OW05R	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	1180	1020	882	37	**541**	**256**	181	126	**223**	< 0.34	**1610**	**1390**	192	34	17	**15700**	2360	**1190**
	05/31/00	305	341	194	74	**102**	**64**	87	64	**56**	9.1	304	317	48	303	580	**3900**	527	221
	08/31/00	373	222	513	419	**101**	**218**	138	104	**253**	< 3.4	**909**	**472**	127	294	566	**3010**	1110	**694**
	11/21/00	328	155	410	320	**244**	**142**	87	66	**252**	29	**683**	393	103	247	423	**2500**	1150	**461**
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW5R	04/02/02	180	170	420	410	**370**	**250**	200	310	**370**	64	**990**	180	210	100	< 90	**540**	1000	**720**
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	24	23	57	57	**58**	**51**	36	49	**63**	10	140	19	32	16	< 14	54	140	100
	06/16/03	< 0.36	0.47	0.99	1.6	**1.6**	**1.1**	0.76	1.4	**1.5**	< 0.32	4.4	< 0.34	0.75	< 0.36	< 0.34	< 0.48	1.6	3.1
	11/20/03	31	11	9.2	6.9	**6.5**	**4.8**	2.9	4.9	**5.2**	1	18	13	3	32	0.7	34	30	13
	04/20/04	4.2	1.5	1.1	1	**1.1**	**0.63**	0.35	0.41	**0.88**	0.12	2.1	1.4	0.37	2.8	0.13	5.7	1.3	1.5
	07/20/04	8.6	5.5	1.2	0.13	0.05	0.034	0.02	0.04	0.079	< 0.015	1.9	4.4	< 0.02	9.5	0.082	11	5	1.2
	10/12/04	48	< 15	6.9	0.52	< 0.36	< 0.36	< 0.41	< 0.39	**0.43**	< 0.44	7.6	< 17	< 0.34	73	1.6	**190**	25	4.6
	01/25/05	68	21	22	18	**18**	**12**	7.6	13	**15**	2.3	46	22	7.6	77	2.6	**220**	48	29
	04/11/05	6.9	3.8	1.5	< 0.39	< 0.36	< 0.36	< 0.41	< 0.39	< 0.33	< 0.44	2.3	3.6	< 0.34	6.8	< 0.45	6	4.6	1.6
	07/11/05	10	4.9	1.7	< 0.78	< 0.92	< 0.78	< 0.96	< 0.97	< 0.95	< 0.94	1.9	5	< 0.94	11	< 0.56	15	3.8	1.3
	10/03/05	2.3	0.99	0.18	< 0.16	< 0.18	< 0.16	< 0.19	< 0.19	< 0.19	< 0.19	1.1	0.46	< 0.19	1.2	< 0.11	< 0.47	< 0.11	0.67
	01/05/06	5.3	2.7	1.3	0.11	0.033	0.019	< 0.019	< 0.39	0.059	< 0.019	1.4	2.9	< 0.019	4.2	0.026	0.54	3.3	1.1
	04/11/06	6.6	2.1	0.92	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	1.8	2.9	< 0.38	5.3	< 0.22	2.8	2.4	1.1
	07/21/06	100	8.7	9.2	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	10	21	< 3.8	130	6	**590**	39	6.7
	10/04/06	130	9.3	10	1.6	**1.1**	**0.86**	0.55	0.94	**1.2**	< 0.38	14	24	0.5	150	22	**700**	43	9.3
	02/21/07	4.8	1.1	0.46	0.1	0.04	0.034	< 0.019	0.035	0.065	< 0.019	1.3	1.3	< 0.019	3.1	0.2	1.4	0.12	0.87
	04/19/07	0.045	0.028	0.024	0.056	0.098	0.079	0.054	0.065	0.046	< 0.019	0.097	0.011	0.054	0.038	0.012	0.29	0.051	0.073
	07/19/07	110	7.2	12	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	11	30	< 1.9	130	23	**750**	49	7.3
	10/22/07	350	73	210	130	**130**	**67**	61	130	**100**	< 15	**440**	190	55	230	140	**1100**	700	**290**
	01/14/08	55	14	41	27	**22**	**14**	12	19	**20**	3.9	84	38	11	27	24	**120**	120	60
	04/29/08	3	0.8	0.81	0.59	**0.62**	**0.38**	0.36	0.58	**0.64**	0.1	2.1	0.94	0.33	2.4	0.11	0.57	1.8	1.6
	08/12/08	123	15	32.7	24.8	**20.7**	**15.2**	10	16.9	**17.3**	2.8	74.7	52.8	9.4	120	43	**490**	147	57
	10/29/08	98	5.7	13.9	< 0.87	0.18	0.15	0.054	0.13	**0.3**	0.016	10.5	25.4	0.052	103	15.8	**169**	44.1	6.3
	04/13/09	9.4	1.3	0.8	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	1.1	3.6	< 0.072	7.9	< 0.21	0.88	2.5	0.84
	10/05/09	25.8	3	4.8	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	5.1	8.9	< 0.47	16.3	< 0.39	16.4	19.7	3.6
	04/14/10	20.2	2.4	3.6	0.57	**0.34**	**0.3**	0.17	0.26	**0.32**	0.047	3.9	8.5	0.17	14.1	0.26	15.7	8.5	2.6
	10/19/10	4.9	1.1	0.85	0.12	0.058	0.055	0.027	0.045	0.093	0.0062	1.2	2	0.023	2.5	0.077	0.96	2.2	0.92
	01/25/11	8.5	2.2	0.71	0.066	0.025	< 0.047	0.01	0.025	0.044	< 0.047	1.5	4.2	0.0086	5	0.03	0.48	5.2	0.64
	03/17/11	4.4	1.1	0.57	0.088	0.043	0.043	0.021	0.038	0.064	0.0043	0.97	2	0.019	2.3	0.05	0.63	2.1	0.72
OW06	06/03/93	63	47	13	ND	**1.1**	**0.68**	ND	0.46	**0.93**	ND	35	38	ND	--	--	**230**	100	18
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	8.6	44	4.3	1.4	**0.35**	0.06	< 0.2	< 0.05	**0.39**	< 0.1	14	8.2	< 0.1	4.6	2.8	50	32	11
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	5.2	110	12	1.6	< 0.32	< 0.44	< 0.55	< 0.3	**0.41**	< 0.65	22	42	< 0.28	340	35	**330**	99	19
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW6	06/23/99	78	450	12	< 0.34	< 0.54	< 0.86	< 2	< 0.58	< 0.26	< 3.2	23	79	< 1.7	250	270	**2600**	98	16
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	40	21	9.7	1.6	**3.8**	**1.4**	6.2	< 0.11	< 0.059	< 0.068	9.7	19	6.5	38	28	**283**	31	8.8
	05/31/00	25	34	5.1	3.5	**0.68**	**1.6**	2.1	0.68	**3.3**	0.4	9.1	14	2.5	36	28	**333**	20	9
	08/31/00	87	275	20	< 0.11	**4.5**	**2.8**	2.8	< 0.11	**4.5**	< 0.068	33	84	3.1	238	218	**2280**	140	30
	11/21/00	50	42	9.1	2.6	**2.3**	**1.5**	1.7	1.2	**1.7**	0.38	11	25	1.7	53	39	**477**	50	13
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	31	4.2	4.4	2.6	**2.1**	**1.4**	0.91	1.5	**1.9**	0.39	7.3	14	0.94	22	15	**160**	27	8.6
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	88	150	9	< 1.9	< 1.2	< 1.4	< 1.5	< 1.3	< 1.8	< 1.7	8	41	< 1.4	170	< 110	**1800**	100	10
	06/16/03	29	4.9	2.4	0.64	**0.44**	**0.33**	< 0.32	0.39	**0.56**	< 0.32	2.9	10	< 0.42	10	0.39	1.9	2.3	4.4
	11/20/03	31	20	3.8	< 1.2	< 1.4	< 1.3	< 1.6	< 1.9	< 1.4	< 1.6	3.5	14	< 2.1	33	25	**370**	21	3.9
	07/20/04	46	26	13	< 1.1	< 1.3	< 1.2	< 1.5	< 1.8	< 1.3	< 1.5	8.4	28	< 2	59	18	**190**	88	10
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	9.6	0.49	1.3	< 0.39	< 0.36	< 0.36	< 0.41	< 0.39	< 0.33	< 0.44	1.2	4.5	< 0.34	7.2	5.1	45	4	1.1
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	79	120	5.1	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	21	< 3.8	130	100	**1800**	40	< 2.9
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	11	0.31	1.6	< 0.31	< 0.37	< 0.32	< 0.39	< 0.39	< 0.38	< 0.38	1.1	5.2	< 0.38	7.3	6.3	51	6.2	0.84
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	16	29	2.9	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	2	7.2	< 1.9	27	19	**390**	17	2.4
	02/21/07	12	0.31	1.8	0.13	0.084	0.062	0.041	0.069	0.087	< 0.019	1.4	4.9	0.039	8.5	5.4	8.3	4	1.3
	04/19/07	7.3	< 1	< 1.4	< 1.9	< 2.3	< 2	< 2.4	< 2.4	< 2.4	< 2.4	< 1.9	2.7	< 2.4	5.2	3.7	33	3	< 1.8
	07/19/07	17	29	2.4	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	7.5	< 1.9	28	27	**450**	8.1	< 1.5
	10/22/07	55	120	10	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	2.1	21	< 1.9	110	110	**2100**	32	1.9
	01/14/08	14	< 0.81	3.9	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	6.7	< 1.9	10	7.6	41	7.2	< 1.5
	04/29/08	43.9	72.2	< 16.3	0.19	0.02	0.016	< 0.0062	0.016	0.095	< 0.0043	< 13.4	< 15.7	< 0.0036	72.4	58	**3060**	< 18.7	< 16.9
	08/12/08	55.7	101	7	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	2.9	17.4	< 0.36	94.3	95.8	**1720**	39.9	3.5
	10/29/08	44.9	62.9	< 6.5	< 3.5	< 5.4	< 5.1	< 6.2	< 7.8	< 7	< 4.3	< 5.3	10.2	< 3.6	71.7	63.2	**1090**	17.7	< 6.8
	04/13/09	12.2	0.3	0.82	0.072	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.97	4.4	< 0.072	6.8	1.2	5.3	< 0.15	1.1
	10/05/09	75.7	36.8	3.7	0.089	< 0.057	< 0.068	< 0.096	< 0.087	0.072	< 0.064	1.6	14.9	< 0.094	47.4	31.1	**1130**	16.5	1.5
	04/13/10	4.2	0.21	0.5	0.094	0.051	0.052	0.054	0.064	0.07	0.013	0.81	1.2	0.043	0.05	0.008	0.048	0.059	0.71
	10/19/10	230	< 18	< 28.7	< 18.1	< 14.3	< 17	< 24.1	< 21.8	< 17.4	< 16	< 22	< 23.9	< 23.4	154	117	**1440**	< 40.5	< 23.7
	01/19/11	219	< 236	< 236	< 236	< 236	< 236	< 236	< 236	< 236	< 236	< 236	< 236	< 236	117	97.2	**1090**	< 236	< 236
	03/17/11	20.8	0.48	2.4	0.074	< 0.94	< 0.94	< 0.94	< 0.94	0.07	< 0.94	1.5	7.9	< 0.94	4.5	< 0.94	0.59	10.7	1.7

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW07	06/04/93	40	70	9	2.5	**1.8**	**0.85**	ND	0.97	**1.6**	ND	23	33	1.2	--	--	**460**	64	9.7
	08/16/96	< 1	22	3.1	0.4	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	2.3	14	< 0.1	26	46	70	18	1
	09/03/97	2	< 0.89	1.8	0.3	0.18	< 0.088	< 0.11	< 0.061	0.12	< 0.13	2.6	7.5	< 0.057	18	19	48	10	1.3
OW07A	06/02/93	26	ND	24	ND	**12**	**3.9**	5.1	2	**7.4**	ND	82	25	5.4	--	--	88	170	65
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	25	33	**9.9**	**1.8**	6.9	3.1	**7.1**	< 0.1	72	24	4.4	87	100	76	130	66
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	14	< 4.4	14	9.2	**5.9**	**1.2**	5.2	1.6	**4.2**	< 0.65	43	15	3.1	110	5.9	56	78	51
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	40	3.3	15	13	**13**	**4.3**	11	4.8	**6.2**	1.1	67	27	5.3	28	56	**270**	60	63
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	49	7.5	23	3	**18**	**6.4**	6.7	2.7	**6.1**	5.9	57	27	5.2	31	28	**460**	80	74
	05/31/00	38	< 0.15	17	13	**5.6**	**6.8**	5.7	3.2	**26**	1.6	50	40	6.9	21	20	**160**	62	69
	08/31/00	56	< 0.15	29	21	**11**	**11**	14	11	**24**	2.1	61	39	12	35	26	**316**	93	102
	11/21/00	49	3.8	14	13	**4.7**	**2.8**	3.2	1.2	**15**	< 0.068	23	32	1.8	32	29	**383**	51	32
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	35	5.2	16	15	**11**	**5.6**	6.6	5.4	**13**	1.6	34	21	4.7	18	12	40	55	60
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	48	< 2.3	5.1	< 1.9	< 1.2	< 1.4	< 1.5	< 1.3	< 1.8	< 1.7	5.1	23	< 1.4	49	48	**640**	34	6
	06/16/03	29	1.7	3.7	1.8	**1.6**	**0.85**	0.96	0.84	**1.7**	< 0.32	4.7	13	0.63	11	4.7	2.1	5.6	9
	11/20/03	46	3.2	10	5.1	**5.1**	**3**	3.2	3	**5.6**	< 1.6	16	25	< 2.1	33	32	**300**	45	23
	04/20/04	15	0.68	2	0.7	**0.61**	**0.26**	0.33	< 0.37	**0.51**	< 0.31	2.1	7	< 0.4	7.8	3.8	5	2.4	2.7
	07/20/04	38	< 1.8	4	< 1.1	< 1.3	< 1.2	< 1.5	< 1.8	< 1.3	< 1.5	2.7	16	< 2	34	16	**360**	22	2.5
	10/12/04	42	< 1.9	4	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	3	18	< 1.7	43	42	**510**	25	2.7
	01/25/05	45	6.7	18	9.9	**9.8**	**5**	5.9	5.4	**10**	< 4.4	28	24	3.5	33	31	**400**	56	38
	04/11/05	20	< 1.9	4	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	2.7	8.9	< 1.7	13	11	65	9.2	3.8
	07/11/05	31	< 1.6	4.9	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	11	< 3.8	30	27	**260**	16	2.9
	10/03/05	40	< 1.6	3.8	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	17	< 3.8	34	36	**400**	21	< 2.9
	01/05/06	24	0.57	2.5	0.2	0.059	0.033	0.023	< 2.4	0.11	< 0.019	1.7	11	< 0.019	18	20	**110**	9.6	1.8
	04/11/06	26	0.69	2.9	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	1.7	11	< 0.38	17	15	**200**	12	1.4
	07/21/06	33	< 1.6	4	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	13	< 3.8	28	30	**330**	20	3.8
	10/04/06	38	1.3	5.8	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	4.3	17	< 1.9	36	42	**370**	24	4.5
	02/21/07	9.7	0.56	1.2	< 0.31	< 0.37	< 0.32	< 0.39	< 0.39	< 0.38	< 0.38	1.9	3	< 0.38	1.6	< 0.23	0.92	< 0.23	1.8
	04/19/07	16	< 1.6	< 2.3	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	5.6	< 3.8	11	12	66	5.4	< 2.9
	07/19/07	23	0.52	3.8	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	2.4	< 9.1	< 0.38	15	15	**250**	13	2
	10/22/07	53	1.3	7.8	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	4	21	< 1.9	49	59	**670**	33	3.3

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW7R	01/14/08	38	< 4.1	6.5	< 7.8	< 9.2	< 7.8	< 9.6	< 9.7	< 9.5	< 9.4	< 7.7	15	< 9.4	27	28	**130**	18	< 7.3
	04/29/08	29.7	< 8	< 10.4	< 5.6	< 8.6	< 8.2	< 10	< 12.4	< 11.2	< 6.9	< 8.5	< 10	< 5.8	23.7	25.2	**348**	< 12	< 10.8
	08/12/08	23.7	< 5 0	< 6.5 0	< 3.5 0	< 5.4 0	< 5.1 0	< 6.2 0	< 7.8 0	< 7 0	< 4.3 0	< 5.3 0	12.3	< 3.6 0	19.6	23.2	**219**	21.7	< 6.8 0
	10/29/08	42	< 5	< 6.5	< 3.5	< 5.4	< 5.1	< 6.2	< 7.8	< 7	< 4.3	< 5.3	13.2	< 3.6	44.6	47.5	**496**	20.8	< 6.8
	04/13/09	19.5	0.55	2.3	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	1.6	9.3	< 0.36	14.3	7.5	87.8	8.4	1.8
	10/05/09	25	0.52	4.1	0.15	< 0.057	< 0.068	< 0.096	< 0.087	0.12	< 0.064	2.6	13.1	< 0.094	16.9	10.2	**250**	18.1	2.3
	04/13/10	22.4	0.34	< 2.3	0.16	0.033	0.02	0.0065	0.023	0.097	< 0.0032	< 1.8	7.2	0.0057	15.4	15.9	**105**	13.4	< 1.9
	10/19/10	49.3	0.98	10.8	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	3.5	21.6	< 0.47	45.5	41.5	**478**	28.5	3.3
	01/19/11	31.3	1	5.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	3.1	12.5	< 9.4	28.8	25.1	92.2	16	3.3
	03/17/11	18.7	0.29	2.7	0.17	< 0.94	< 0.94	< 0.94	< 0.94	0.16	< 0.94	2.4	9.4	< 0.94	16.6	16.6	52.5	12.7	2.3
OW08	06/02/93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	ND	ND	5.4
	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	< 0.2	< 0.05	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	< 0.2	< 0.4	< 0.1	< 1	< 1	1.9	< 0.4	< 0.2
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	< 1	< 0.96	< 0.022	< 0.034	< 0.068	< 0.095	< 0.12	< 0.066	< 0.023	< 0.14	< 0.065	< 0.081	< 0.062	< 0.63	< 0.7	< 0.33	< 0.027	5.4
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	0.66	< 0.56	0.089	< 0.017	< 0.027	< 0.043	< 0.1	< 0.029	< 0.013	< 0.16	0.11	0.032	< 0.084	< 0.4	< 0.6	0.62	0.62	< 0.11
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	< 0.13	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	< 0.082	< 0.072	0.18	< 0.045	5.4
	05/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.15
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/03	0.5	< 0.019	0.071	0.021	0.02	0.017	< 0.016	< 0.019	0.019	< 0.016	0.14	0.059	< 0.021	< 0.018	< 0.017	0.038	0.63	0.14
	11/20/03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	1	0.029	0.046	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	0.047	0.33	< 0.017	0.61	0.09	1.2	0.52	0.053
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW8	04/11/06	2.1	0.08	0.13	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.063	0.76	< 0.019	1.6	0.21	4.5	0.95	0.055
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/22/07	2.3	0.063	0.05	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	0.03	0.5	< 0.019	0.88	0.032	1.4	0.73	0.046
	04/20/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/19/07	0.7	0.022	0.11	< 0.031	< 0.037	< 0.031	< 0.039	< 0.039	< 0.038	< 0.038	0.056	0.095	< 0.038	0.18	< 0.022	0.091	0.66	0.054
	10/22/07	0.86	0.021	0.043	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.024	0.11	< 0.019	0.067	0.019	0.093	0.39	0.042
	01/14/08	2.1	0.054	0.06	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.05	0.38	< 0.019	0.62	0.045	1.2	0.46	0.055
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/13/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW09	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/04/97	61	200	1.7	< 0.32	< 0.63	< 0.88	< 1.1	< 0.63	< 0.21	< 1.3	< 0.6	23	< 0.57	140	75	**1000**	17	< 0.64
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	260	210	15	< 0.34	< 0.54	< 0.86	< 2	< 0.58	< 0.26	< 3.2	22	160	< 1.7	340	680	**4800**	110	7.2
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	203	163	28	< 0.11	**4.3**	**1.9**	9.3	< 0.11	< 0.059	< 0.068	48	49	13	291	42	**1980**	153	25
	05/31/00	200	190	11	< 0.11	**0.33**	**0.6**	0.13	0.71	< 0.059	< 0.068	19	101	0.27	277	63	**2960**	84	8.7
	08/31/00	269	85	10	< 0.11	**2**	< 0.055	1.3	< 0.11	< 0.059	< 0.068	17	111	3.8	268	42	**2710**	91	8.5
	11/21/00	215	77	11	< 0.11	**1.7**	0.19	< 0.074	< 0.11	< 0.059	< 0.068	7.7	89	3.8	223	< 0.072	**1920**	87	5.8
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	160	35	4.5	0.32	**0.32**	< 0.28	< 0.3	< 0.26	< 0.36	< 0.34	< 34	48	< 0.28	150	1.8	**530**	70	6.8
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	110	< 9.2	< 8	< 7.6	< 4.8	< 5.6	< 6	< 5.2	< 7.2	< 6.8	< 11	25	< 5.6	63	< 11	< 11	52	< 8
	06/16/03	85	6.7	< 2.1	< 1.3	< 1.5	< 1.4	< 1.7	< 2	< 1.5	< 1.7	3.4	7.2	< 2.2	38	< 1.8	35	21	2.4
	11/20/03	110	7.7	< 5	< 3	< 3.5	< 3.2	< 4	< 4.8	< 3.5	< 4	5.4	9.8	< 5.2	62	< 4.2	78	28	< 4.2
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	92	8.7	2.4	< 1.1	< 1.3	< 1.2	< 1.5	< 1.8	< 1.3	< 1.5	4.1	14	< 2	63	< 1.6	**110**	27	2.5
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	100	31	5.2	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	4.9	42	< 1.7	130	20	**1100**	56	2.7
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	120	50	6.3	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	5.8	59	< 3.8	160	49	**1700**	72	3.7
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	76	39	3.8	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	5.3	37	< 1.9	92	15	**1100**	48	2.6
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW9	10/04/06	190	44	8.6	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	7	58	< 1.9	220	64	**1800**	80	4.1
	02/21/07	130	23	8.2	< 1.6	< 1.9	< 1.6	< 1.9	< 2	< 1.9	< 1.9	7.9	50	< 1.9	140	47	**1200**	76	4.6
	04/19/07	190	< 81	< 120	< 160	< 180	< 160	< 190	< 190	< 190	< 190	< 150	< 91	< 190	190	< 110	**3100**	< 110	< 150
	07/19/07	210	43	12	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	6.8	80	< 1.9	230	62	**1700**	78	3.6
	10/22/07	270	71	19	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	10	110	< 1.9	320	96	**3600**	120	5.2
	01/14/08	220	< 160	< 230	< 310	< 370	< 310	< 390	< 390	< 380	< 380	< 310	< 180	< 380	310	< 220	**4500**	< 230	< 290
	04/29/08	198	< 49.7	< 65	< 34.7	< 54	< 51.5	< 62.4	< 77.8	< 69.9	< 43.1	< 53.4	< 62.7	< 36.1	224	< 107	**2910**	< 74.8	< 67.6
	08/12/08	206	35.8	18.4	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	< 13.4	89.6	< 0.072	229	79.7	**1630**	105	5.9
	10/29/08	178	44.2	18	< 3.5	< 5.4	< 5.1	< 6.2	< 7.8	< 7	< 4.3	6.9	74.7	< 3.6	248	66.9	**1950**	71.8	< 6.8
	04/13/09	183	21.4	8.7	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	5.7	71	< 0.36	155	63.6	**1650**	72.6	3.5
	10/05/09	213	48.2	16.9	< 3.8	< 3	< 3.6	< 5.1	< 4.6	< 3.7	< 3.4	7.1	93.9	< 5	212	76.8	**2560**	87.1	< 5
	04/13/10	175	33.3	22.9	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	9.8	91.3	< 0.47	157	90.7	**2370**	< 80.9	5.5
	10/19/10	210	< 45	< 71.7	< 45.3	< 35.7	< 42.5	< 60.1	< 54.6	< 43.5	< 40	< 55.1	77.8	< 58.5	213	99.1	**3720**	103	< 59.3
	01/20/11	8	< 16.8	12.9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	9.4	3.1	< 1	8.1	2.5	**114**	3.9	4.9
	03/17/11	152	18.7	12.4	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	9.1	53.6	< 0.94	157	39.6	**2220**	82.3	4.9
OW10	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/04/97	< 0.96	< 0.89	0.84	1	**0.62**	**0.24**	0.46	0.24	**0.51**	< 0.13	2.8	1.2	0.4	< 0.58	< 0.65	0.89	3.7	1.6
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	6.6	6.1	0.28	0.51	**0.5**	**0.24**	0.51	0.27	**0.37**	< 0.16	1.8	0.45	0.31	11	5.2	**130**	0.71	1.6
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	10	4	1	< 0.11	**3.9**	**2.9**	1	0.69	**2**	< 0.068	5.9	2.8	1.1	9.2	< 0.072	75	2.7	4.6
	05/31/00	1.2	0.37	0.17	0.28	**0.28**	0.11	0.21	0.18	**0.35**	< 0.068	0.79	0.27	0.24	0.78	< 0.072	4.1	0.44	0.65
	08/31/00	32	6.9	1.2	3.3	**1.7**	**5.9**	1.1	1.9	**1.9**	< 0.068	4.4	4.6	1.2	26	< 0.072	0.22	3.1	4.1
	11/21/00	14	2	0.64	1.6	**0.83**	**0.46**	0.3	0.18	**0.59**	< 0.068	1.7	4.7	0.39	7.2	< 0.072	15	1.7	1.5
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	3.5	0.73	0.94	3	**2.9**	**1.8**	1.5	2.3	**2.7**	0.49	5.5	0.61	1.3	0.8	< 0.56	1.4	3	4.7
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	4.7	< 0.46	< 0.4	< 0.38	< 0.24	< 0.28	< 0.3	< 0.26	< 0.36	< 0.34	< 0.56	< 0.42	< 0.28	< 0.54	< 0.56	< 0.54	< 0.38	< 0.4
	06/16/03	0.43	0.59	0.56	2.7	**2.4**	**2.1**	1.4	2	**2.5**	0.48	3.9	< 0.34	1.3	< 0.36	< 0.34	< 0.48	1.4	4.3
	11/20/03	2.1	< 0.38	< 0.4	1.3	**1.2**	**1**	0.68	1.1	**1.3**	< 0.32	2.7	< 0.34	0.59	0.47	< 0.34	0.51	1.2	2
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	20	7.1	< 0.35	< 0.39	< 0.36	< 0.36	< 0.41	< 0.39	< 0.33	< 0.44	< 0.33	4	< 0.34	30	3.3	**340**	< 0.41	< 0.33
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW10	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	2.4	0.37	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	0.5	< 0.38	2.8	0.35	19	< 0.23	< 0.29
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	160	23	0.62	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	0.31	37	< 0.38	160	0.65	**150**	31	< 0.29
	02/21/07	45	5.6	< 1.2	< 1.6	< 1.9	< 1.6	< 1.9	< 2	< 1.9	< 1.9	< 1.6	10	< 1.9	54	3.2	**320**	6.7	< 1.5
	04/19/07	9.8	< 1.6	< 2.3	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	< 1.8	< 3.8	10	< 2.2	38	< 2.3	< 2.9
	07/19/07	120	17	< 1.2	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	39	< 1.9	97	< 1.1	**100**	40	< 1.5
	10/23/07	85	9.9	2.6	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	23	< 1.9	73	< 1.1	**180**	16	< 1.5
	01/14/08	160	4.1	3.1	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	45	< 1.9	150	24	**970**	40	< 1.5
	04/29/08	1.1	< 0.2	< 0.26	< 0.14	< 0.22	< 0.21	< 0.25	< 0.31	< 0.28	< 0.17	< 0.21	0.33	< 0.14	1.2	< 0.43	10.6	0.3	< 0.27
	08/12/08	114	10.2	< 2.6 0	< 1.4 0	< 2.2 0	< 2.1 0	< 2.5 0	< 3.1 0	< 2.8 0	< 1.7 0	< 2.1 0	44.3	< 1.4 0	82.1	< 4.3 0	42.3	40.5	< 2.7 0
	10/29/08	80.6	< 5	< 6.5	< 3.5	< 5.4	< 5.1	< 6.2	< 7.8	< 7	< 4.3	< 5.3	18.7	< 3.6	76	< 10.7	**282**	18	< 6.8
	04/13/09	50.2	2	< 0.65	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	< 0.53	14.7	< 0.36	53.4	1.8	**145**	11.2	< 0.68
	10/05/09	281	17.6	< 12.2	< 7.7	< 6.1	< 7.2	< 10.2	< 9.3	< 7.4	< 6.8	< 9.3	83.8	< 9.9	181	27.8	**2370**	59.4	< 10.1
	04/13/10	26.1	0.63	1.5	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	< 0.44	6.2	< 0.47	22.4	3.5	**119**	2.9	< 0.47
	10/19/10	42.5	1.8	2.1	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	< 0.44	12.1	< 0.47	32	< 0.39	15.1	7.2	< 0.47
	01/18/11	78.8	1.2	1.5	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	27.3	< 4.7	56.8	1	52.8	21.7	< 4.7
	03/16/11	20.5	0.3	0.42	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	0.14	7.9	< 0.94	16	0.21	18.4	6.6	0.096
OW11	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	< 0.13	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	< 0.082	< 0.072	< 0.056	< 0.045	< 0.032
	05/31/00	6.3	< 0.15	0.4	0.29	0.013	< 0.055	< 0.074	< 0.11	**0.2**	< 0.068	0.95	1.7	< 0.08	0.6	0.22	1.7	0.45	0.95
	08/31/00	3.4	< 0.16	0.25	0.7	**0.21**	**0.48**	0.33	< 0.12	**0.43**	< 0.07	1	< 0.12	0.55	< 0.084	< 0.074	0.22	0.33	0.96
	11/21/00	3.3	< 0.15	0.13	< 0.11	< 0.013	**0.29**	0.17	< 0.11	0.16	< 0.068	0.42	0.48	0.27	0.32	< 0.072	0.36	0.13	0.41
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	4.2	< 0.34	< 0.3	< 0.28	< 0.18	< 0.21	< 0.23	< 0.2	< 0.27	< 0.26	< 0.42	0.9	< 0.21	< 0.4	< 0.42	< 0.4	< 0.28	< 0.3
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	1.9	< 0.11	< 0.1	0.096	0.093	0.095	< 0.075	0.077	0.092	< 0.085	0.21	0.52	< 0.07	< 0.14	< 0.14	< 0.14	< 0.095	0.24
	06/16/03	4.3	0.14	0.059	0.075	0.071	0.058	0.045	0.06	0.06	< 0.016	0.17	1.2	0.041	0.06	0.024	0.061	0.053	0.22
	11/20/03	2.6	< 0.19	< 0.2	< 0.12	< 0.14	< 0.13	< 0.16	< 0.19	< 0.14	< 0.16	< 0.13	0.63	< 0.21	0.36	< 0.17	< 0.24	< 0.16	< 0.17
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	2.5	0.072	0.027	< 0.011	< 0.013	< 0.012	< 0.015	< 0.018	< 0.013	< 0.015	0.054	0.85	< 0.02	0.022	< 0.016	< 0.023	< 0.015	0.068
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	1.3	0.043	0.025	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	0.044	0.19	< 0.017	0.023	< 0.023	0.024	< 0.02	0.068
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene [2]	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene [2]	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene [2]	Dibenz(a,h)anthracene	Fluoranthene [2]	Fluorene [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW11	04/11/06	2	0.078	< 0.058	< 0.079	< 0.093	< 0.079	< 0.097	< 0.098	< 0.096	< 0.095	< 0.078	0.47	< 0.095	0.14	< 0.057	1.1	< 0.057	< 0.073
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/21/07	2.8	0.086	0.028	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	0.053	0.16	< 0.019	0.016	< 0.011	0.037	0.013	0.061
	04/19/07	1.9	0.058	0.019	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.041	0.47	< 0.019	0.044	< 0.011	0.27	< 0.011	0.043
	07/19/07	1.6	< 0.065	< 0.093	< 0.12	< 0.15	< 0.13	< 0.15	< 0.15	< 0.15	< 0.15	< 0.12	1.1	< 0.15	< 0.081	< 0.09	< 0.099	< 0.091	< 0.12
	10/22/07	3.5	0.082	0.043	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.087	0.48	< 0.019	0.11	< 0.011	0.038	0.016	0.081
	01/14/08	2	0.043	0.03	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.074	0.17	< 0.019	< 0.01	< 0.011	0.014	0.012	0.073
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/29/08	0.83	0.031	< 0.026	< 0.014	< 0.022	< 0.021	< 0.025	< 0.031	< 0.028	< 0.017	0.069	0.051	< 0.014	0.14	0.17	0.79	0.034	0.055
	04/13/09	1.9	0.038	0.014	0.0044	0.0058	0.0075	< 0.0062	< 0.0078	0.007	< 0.0043	0.053	0.38	0.0042	0.022	< 0.011	0.02	0.011	0.057
	10/05/09	1.4	0.054	0.054	0.012	0.0098	0.0092	0.0057	0.0062	0.0097	< 0.0034	0.1	0.45	< 0.005	0.15	0.2	0.44	0.07	0.094
	04/13/10	2.7	0.086	0.03	0.0039	0.0037	0.0046	< 0.0048	0.0057	0.0052	< 0.0032	0.081	0.25	< 0.0047	0.075	0.026	0.22	0.067	0.07
	10/19/10	1.3	0.032	0.031	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.11	0.11	< 0.0047	0.0074	0.0077	0.07	0.015	0.11
	01/25/11	0.5	0.011	0.0083	< 0.047	0.0047	< 0.047	< 0.047	0.0089	0.0085	< 0.047	0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.036
	03/17/11	0.48	0.011	0.016	0.0084	0.0068	0.011	0.015	0.013	0.012	0.012	0.07	0.012	0.012	0.016	0.01	0.074	0.009	0.064
OW12	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	23	0.36	< 1.8	0.046	0.03	0.025	< 0.021	0.022	0.039	< 0.022	2.3	13	< 0.017	4.1	0.094	2.5	19	< 1.6
	01/25/05	24	< 2	2.7	< 2	< 1.8	< 1.8	< 2.1	< 2	< 1.7	< 2.2	2.1	8.5	< 1.7	19	7.7	79	15	< 1.7
	04/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	20	< 1.9	5	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	2	7.2	< 1.7	6.6	< 2.3	3.8	12	< 1.6
	07/11/05	16	< 0.41	1.6	< 0.78	< 0.92	< 0.78	< 0.96	< 0.97	< 0.95	< 0.94	1.3	4.7	< 0.94	7.5	< 0.56	2.1	6.2	0.82
	10/03/05	14	< 0.41	1.7	< 0.78	< 0.92	< 0.78	< 0.96	< 0.97	< 0.95	< 0.94	2.3	6.6	< 0.94	4.5	< 0.56	13	13	1.5
	01/05/06	21	0.46	4.1	0.18	0.16	0.15	0.1	< 1.9	0.14	0.02	2.7	8.8	0.084	9.3	1.5	27	17	2
	04/11/06	< 0.0082	0.022	< 0.012	0.026	0.023	0.017	< 0.019	0.02	0.023	< 0.019	0.042	< 0.0091	< 0.019	< 0.01	< 0.011	0.013	0.012	0.037
	07/21/06	5.5	< 0.2	1	< 0.39	< 0.46	< 0.39	< 0.48	< 0.48	< 0.47	< 0.47	2.2	3.6	< 0.47	0.35	< 0.28	< 0.31	6.2	1.4
	10/04/06	19	0.53	2.3	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	3.6	7.6	< 0.38	2.7	< 0.22	8.6	17	2.5
	02/21/07	23	0.45	3.4	< 0.31	< 0.37	< 0.32	< 0.39	< 0.39	< 0.38	< 0.38	3.7	9.6	< 0.38	6	1.1	11	17	2.7
	04/19/07	5.5	0.11	0.39	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	1.4	2	< 0.019	1.8	< 0.011	1.5	1.6	1
	07/19/07	12	0.18	0.71	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	2.2	2.5	< 0.019	0.96	0.068	0.9	1.5	1.4
	10/22/07	11	< 0.81	1.8	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	3.9	3.7	< 1.9	2.4	< 1.1	22	4.9	1.7
	01/15/08	53	2.5	< 1.4	< 1.9	< 2.3	< 2	< 2.4	< 2.4	< 2.4	< 2.4	< 1.9	7.5	< 2.4	12	< 1.4	< 1.5	< 1.4	< 1.8
	04/29/08	9.3	0.2	< 0.27	0.027	0.026	0.028	0.019	0.023	0.022	< 0.0044	1.7	3.8	0.014	3.1	0.02	0.8	7	1.1
	08/12/08	10	< 0.25	0.38	< 0.17	< 0.27	< 0.26	< 0.31	< 0.39	< 0.35	< 0.22	1.4	4.2	< 0.18	< 0.48	< 0.53	< 0.82	1.3	1.1
	10/30/08	6.3	0.12	0.28	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	1.1	1.3	< 0.0036	0.45	0.014	0.23	1.4	0.84
	04/13/09	13.7	0.17	1.9	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	2.6	8.5	< 0.072	4.2	1.2	2.2	11.2	2.4
	10/05/09	22.3	< 0.31	3.5	< 0.31	< 0.24	< 0.29	< 0.41	< 0.37	< 0.3	< 0.27	4.2	11.6	< 0.4	1.6	< 0.33	4.7	16.5	3.5
	04/14/10	11.4	0.14	1.6	< 0.0036	0.0045	0.0053	< 0.0048	< 0.0044	0.0039	< 0.0032	2.6	5.4	< 0.0047	0.69	0.11	0.31	6.7	1.9

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW12	10/19/10	25.3	0.31	3.8	0.006	0.0058	0.0058	< 0.0048	0.0053	0.0053	< 0.0032	3.3	9.7	< 0.0047	5.3	0.11	6	15.2	3
	01/19/11	18.1	0.22	2.1	0.0058	0.0056	0.0069	0.0057	0.0071	0.0075	< 0.047	2.9	8.1	0.0048	3.2	2	13.6	11.5	2.6
	03/17/11	27.1	0.32	2.9	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	3.5	9.7	< 0.94	17.2	4.6	39.6	15.5	2.9
OW14	07/25/07	9.5	1.1	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	0.77	< 0.38	8.8	< 0.22	52	1.3	< 0.29
	10/22/07	190	14	1.5	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	19	< 1.9	170	29	**1600**	14	< 1.5
	04/29/08	181	< 9.9	< 13	< 6.9	< 10.8	< 10.3	< 12.5	< 15.6	< 14	< 8.6	< 10.7	< 12.5	< 7.2	108	< 21.4	**608**	26.4	< 13.5
	08/12/08	132	< 0.5	0.86	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	< 0.53	11.3	< 0.36	54	4.8	**387**	21.3	< 0.68
	10/30/08	101	2.2	< 2.6	< 1.4	< 2.2	< 2.1	< 2.5	< 3.1	< 2.8	< 1.7	< 2.1	16.2	< 1.4	58.8	5.1	95.7	31.3	< 2.7
	04/13/09	123	1.6	< 0.65	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	< 0.53	27	< 0.36	65.3	8.3	**244**	31.3	< 0.68
	10/05/09	17.8	< 0.31	< 0.49	< 0.31	< 0.24	< 0.29	< 0.41	< 0.37	< 0.3	< 0.27	< 0.37	< 0.4	< 0.4	2.9	< 0.33	9.5	22.7	< 0.4
	04/13/10	35.1	0.52	1.7	< 0.072	< 0.057	< 0.068	< 0.096	< 0.087	< 0.07	< 0.064	< 0.088	0.48	< 0.094	2.1	< 0.077	4.3	6.1	< 0.095
	10/19/10	56	1.4	0.85	< 0.072	< 0.057	< 0.068	< 0.096	< 0.087	< 0.07	< 0.064	< 0.088	4.2	< 0.094	27.8	4.3	**173**	7.4	< 0.095
	01/18/11	42.9	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	< 11.8	10.4	< 11.8	28.3	6.3	**149**	9	< 11.8
	03/16/11	26.4	< 0.94	< 0.94	0.079	0.15	**0.43**	0.3	0.4	**0.41**	< 0.94	< 0.94	10	0.21	19.1	1.6	< 0.94	7	< 0.94
OW15	07/24/07	0.61	0.013	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.013	< 0.019	< 0.01	< 0.011	0.019	0.017	< 0.015
	10/22/07	0.14	0.0097	0.022	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.077	0.02	< 0.015
	01/15/08	0.032	< 0.016	0.029	0.067	0.089	0.11	0.1	0.13	0.17	< 0.038	0.36	< 0.018	0.077	< 0.02	< 0.022	< 0.025	0.16	0.25
	04/29/08	0.18	0.0076	0.01	0.0099	0.012	0.015	0.011	0.015	0.016	< 0.0043	0.033	< 0.0063	0.0081	< 0.0096	< 0.011	0.022	0.018	0.035
	08/12/08	0.14	0.011	0.016	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	0.025	0.029	0.16	0.013	0.0096
	10/30/08	0.2	0.0075	0.0092	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	< 0.0095	< 0.011	0.017	0.009	0.0084
	04/13/09	< 0.0078	< 0.005	< 0.0065	0.0039	< 0.0054	0.0081	< 0.0062	< 0.0078	0.0072	< 0.0043	0.012	< 0.0063	0.004	< 0.0095	< 0.011	< 0.016	< 0.0075	0.017
	10/05/09	0.22	0.0094	0.018	0.0044	0.0051	0.0058	< 0.0051	0.0065	0.0067	< 0.0034	0.012	< 0.0051	< 0.005	0.011	0.005	0.056	0.035	0.021
	04/13/10	0.16	0.0055	0.0082	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.0098	0.025	< 0.0047	0.0099	0.0084	0.053	0.025	0.0089
	10/19/10	0.011	< 0.0036	0.0076	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	< 0.0044	< 0.0048	< 0.0047	0.01	0.0047	0.09	< 0.0081	< 0.0047
	01/19/11	< 0.047	0.0036	0.017	0.0058	0.0043	0.0045	0.0063	0.0071	0.006	0.0032	0.014	0.0048	0.0055	< 0.047	0.0047	< 0.047	0.019	0.012
	03/17/11	0.011	0.0044	0.012	0.008	0.0067	0.0072	0.007	0.0072	0.01	< 0.048	0.022	< 0.048	< 0.048	< 0.048	0.0075	0.016	0.02	0.023
OW16	07/24/07	0.039	0.011	0.025	0.02	0.02	0.021	< 0.019	< 0.019	0.021	< 0.019	0.11	0.024	< 0.019	< 0.01	< 0.011	0.02	0.014	0.077
	10/22/07	0.057	0.16	0.11	0.46	**0.61**	**0.43**	0.36	0.48	**0.48**	0.097	0.76	0.033	0.33	< 0.025	< 0.028	0.058	0.033	0.6
	01/14/08	0.085	0.57	0.2	2	**2.4**	**1.7**	1.3	1.9	**2.1**	0.36	2.9	< 0.091	1.3	< 0.1	< 0.11	0.18	< 0.11	2.4
	04/29/08	0.075	0.011	0.0092	0.016	0.015	0.016	0.013	0.017	0.018	< 0.0043	0.045	0.017	0.0092	0.059	< 0.011	0.19	0.0096	0.046
	10/29/08	0.072	0.013	0.017	0.023	0.024	0.021	0.015	0.022	0.021	< 0.0043	0.1	0.043	0.014	0.032	0.03	0.062	0.0099	0.076
	04/13/09	0.039	< 0.005	< 0.0065	0.01	0.011	0.0096	0.0079	0.011	0.011	< 0.0043	0.03	0.018	0.0069	< 0.0095	< 0.011	< 0.016	< 0.0075	0.027
	10/05/09	0.028	0.042	0.035	0.13	0.15	0.11	0.072	0.089	0.1	0.025	0.2	0.018	0.066	< 0.0053	0.0057	0.028	0.01	0.17
	04/14/10	0.079	0.018	0.017	0.057	0.055	0.045	0.04	0.055	0.047	0.01	0.094	0.035	0.035	0.017	0.0089	0.041	0.039	0.076
	10/19/10	0.019	0.0092	0.042	0.012	0.012	0.0089	0.011	0.014	0.014	< 0.0032	0.04	0.013	0.0075	0.0055	< 0.0039	0.02	< 0.0081	0.039
	01/19/11	< 0.047	0.011	0.021	0.025	0.033	0.023	0.024	0.031	0.028	0.0059	0.047	0.0077	0.021	< 0.047	< 0.047	< 0.047	< 0.047	0.042
	03/16/11	< 0.047	< 0.047	< 0.047	0.018	0.02	0.018	0.014	0.02	0.021	< 0.047	0.042	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
OW17	07/24/07	5.4	< 0.16	0.24	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	1.7	< 0.38	1.2	< 0.22	< 0.25	0.65	< 0.29
	10/22/07	10	0.08	0.26	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.068	3.7	< 0.019	1.9	0.18	0.082	2.3	0.037
	01/14/08	8.7	0.069	0.25	0.023	0.026	0.018	< 0.019	0.025	0.025	< 0.019	0.081	3.1	< 0.019	1.6	0.1	0.093	1.9	0.051
	04/29/08	5.2	< 0.005	0.15	0.014	0.013	0.011	0.0068	0.012	0.012	< 0.0043	0.051	1.5	0.0055	0.9	0.037	0.15	0.87	0.037
	10/29/08	5.2	< 0.099	0.19	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	< 0.11	1.9	< 0.072	< 0.19	< 0.21	< 0.33	0.69	< 0.14
	04/13/09	2.8	< 0.04	< 0.052	< 0.028	< 0.043	< 0.041	< 0.05	< 0.062	< 0.056	< 0.034	< 0.043	1.1	< 0.029	< 0.076	< 0.086	< 0.13	< 0.06	< 0.054
	10/05/09	5.2	< 0.038	0.092	< 0.038	< 0.03	< 0.036	< 0.051	< 0.046	< 0.037	< 0.034	0.059	2.1	< 0.05	0.16	< 0.041	0.053	0.55	< 0.05
	04/14/10	1.9	0.009	0.039	0.013	0.01	0.01	0.0068	0.01	0.0097	< 0.0032	0.049	0.7	0.0063	0.012	0.0092	0.055	0.019	0.029
	10/19/10	4.2	< 0.072	0.15	< 0.072	0.077	< 0.068	< 0.096	< 0.087	0.072	< 0.064	0.13	1.6	< 0.094	< 0.1	< 0.077	< 0.097	0.31	0.1
	01/19/11	3.3	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	1.1	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94
	03/16/11	3	< 0.047	< 0.047	0.015	0.015	0.016	0.013	0.018	0.016	0.0041	< 0.047	0.96	0.011	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
OW18	01/20/11	2.5	0.053	0.062	0.013	0.0056	0.0061	< 0.047	0.0064	0.014	< 0.047	0.14	0.62	< 0.047	0.0078	0.0058	< 0.047	0.11	0.083
	03/16/11	4.2	0.048	0.036	0.011	0.011	0.021	0.013	0.014	0.017	< 0.047	0.071	0.65	0.0098	0.018	0.005	0.025	0.036	0.021
OW19	01/20/11	0.25	0.068	0.013	0.012	0.011	0.012	0.011	0.013	0.015	< 0.049	0.028	< 0.049	0.0062	0.0096	0.016	< 0.049	0.026	0.029
	03/17/11	0.084	0.0064	0.014	0.015	0.015	0.016	0.018	0.022	0.019	0.0048	0.034	0.006	0.013	0.016	0.015	0.049	0.027	0.042
OW20	01/20/11	0.0093	0.022	0.034	0.071	0.082	0.071	0.066	0.079	0.092	0.013	0.19	< 0.048	0.049	0.0054	0.0074	< 0.048	0.063	0.17
	03/17/11	0.0083	0.0084	0.014	0.0086	0.0087	0.0091	0.01	0.01	0.013	< 0.047	0.028	0.0091	0.0069	0.018	0.024	0.085	0.03	0.024
OW21	01/20/11	< 0.048	0.013	0.081	0.051	0.053	0.045	0.045	0.055	0.065	0.01	0.24	0.018	0.035	< 0.048	0.0071	< 0.048	0.19	0.18
	03/16/11	< 0.047	0.079	0.065	0.26	**0.33**	**0.36**	0.27	0.27	**0.28**	0.068	0.42	< 0.047	0.21	< 0.047	< 0.047	0.047	0.066	0.4
P05B	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/17/93	ND	ND	20	0.71	ND	ND	ND	ND	**0.23**	ND	17	130	ND	--	--	ND	110	5.7
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 5	< 10	12	0.25	< 0.12	< 0.25	< 1	< 0.25	< 0.5	< 0.5	11	97	< 0.5	660	390	**3500**	76	3.2
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/04/97	110	770	110	< 0.16	< 0.32	< 0.44	< 0.55	< 0.3	< 0.1	< 0.65	11	110	< 0.28	630	300	**2600**	67	3.5
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	190	180	13	< 0.17	< 0.27	< 0.43	< 1	< 0.29	< 0.13	< 1.6	17	130	< 0.83	250	530	**2800**	84	5.3
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	4.3	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	1.3	< 0.08	< 0.082	< 0.072	< 0.056	< 0.045	< 0.032
	05/31/00	29	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	0.06	< 0.069	0.72	13	< 0.081	< 0.072	29	0.51	2.6	0.42
	08/31/00	262	< 0.15	18	2.4	**0.85**	**0.5**	< 0.074	< 0.11	**0.74**	< 0.068	14	159	< 0.08	340	134	**3030**	93	10
	11/21/00	266	141	15	1.3	< 0.013	**0.26**	0.18	0.14	**0.65**	< 0.068	7.4	156	< 0.08	326	94	**3420**	103	7.8
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	< 220	< 280	< 240	0.55	**0.34**	< 0.28	< 0.3	< 0.26	< 0.36	< 0.34	5.7	< 250	< 0.28	< 320	< 340	**2900**	< 230	3.6
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	230	< 120	< 100	< 95	< 60	< 70	< 75	< 65	< 90	< 85	< 140	< 110	< 70	320	< 140	**3800**	110	< 100

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
P05B	06/16/03	260	< 95	< 100	0.29	< 0.28	< 0.26	< 0.32	< 0.38	< 0.28	< 0.32	8.1	110	< 0.42	360	130	**3900**	100	6.5
	11/20/03	260	82	17	< 6	< 7	< 6.5	< 8	< 9.5	< 7	< 8	8	120	< 10	370	170	**4800**	110	< 8.5
	04/20/04	79	< 65	4.2	< 0.48	< 0.56	< 0.52	< 0.64	< 0.76	< 0.56	< 0.64	2	< 58	< 0.84	91	18	**1000**	< 54	1.2
	07/20/04	62	6	2	< 1.1	< 1.3	< 1.2	< 1.5	< 1.8	< 1.3	< 1.5	2.5	20	< 2	24	< 1.6	< 2.3	5.8	1.7
	10/12/04	< 160	32	8.2	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	6.7	< 170	< 1.7	< 160	42	**1500**	< 160	4.4
	01/25/05	210	66	18	< 3.9	< 3.6	< 3.6	< 4.1	< 3.9	< 3.3	< 4.4	10	100	< 3.4	270	140	**3300**	95	5.6
	04/11/05	94	12	< 3.5	< 3.9	< 3.6	< 3.6	< 4.1	< 3.9	< 3.3	< 4.4	< 3.3	21	< 3.4	38	< 4.5	< 4.5	< 4.1	< 3.3
	07/11/05	100	21	5.8	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	35	< 3.8	92	18	**430**	22	< 2.9
	10/03/05	130	21	5.2	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	44	< 3.8	130	31	**440**	30	< 2.9
	01/05/06	80	4.4	1	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	0.93	12	< 0.38	8.8	< 0.22	< 0.25	< 0.23	0.59
	04/11/06	90	7.8	3.2	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	29	< 3.8	57	5.3	34	11	< 2.9
	07/21/06	150	19	9.2	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	3.9	49	< 3.8	130	21	**240**	41	< 2.9
	10/04/06	140	20	8.6	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	4.2	41	< 0.38	130	38	**1200**	48	2.7
	02/21/07	110	11	10	< 1.6	< 1.9	< 1.6	< 1.9	< 2	< 1.9	< 1.9	5	50	< 1.9	110	46	**1300**	64	3
	04/19/07	0.019	0.031	0.12	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.019	0.0094	< 0.019	< 0.01	< 0.011	0.022	0.025	0.037
	07/19/07	85	17	2.4	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	3	25	< 1.9	36	1.6	**480**	3.9	1.8
	10/22/07	170	15	11	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	5.1	43	< 0.38	130	10	**1300**	39	3.1
	01/14/08	0.022	0.047	0.11	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.2	0.021	< 0.019	0.013	< 0.011	0.029	0.043	0.055
	04/28/08	140	< 24.8	< 32.5	< 17.3	< 27	< 25.7	< 31.2	< 38.9	< 34.9	< 21.5	< 26.7	< 31.3	< 18	109	< 53.5	**947**	38.2	< 33.8
	08/12/08	118	12.9	11	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	6.9	45.8	< 0.36	98.1	20.1	**485**	50	4.4
	10/29/08	152	7.9	14.2	< 3.5	< 5.4	< 5.1	< 6.2	< 7.8	< 7	< 4.3	< 5.3	51	< 3.6	131	29.9	**1030**	42.5	< 6.8
	04/13/09	12.1	0.56	0.24	< 0.069	< 0.11	< 0.1	< 0.12	< 0.16	< 0.14	< 0.086	0.96	1.3	< 0.072	< 0.19	< 0.21	< 0.33	< 0.15	0.85
	10/05/09	132	9.5	10.1	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	4.9	47.8	< 0.47	67.7	8.5	**555**	37.6	3.4
	04/14/10	< 0.0045	0.047	0.024	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	0.0048	< 0.0032	0.0091	< 0.0048	< 0.0047	< 0.005	0.0047	0.016	< 0.0081	0.011
	10/20/10	146	20.5	15.6	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	7.6	73.3	< 0.47	119	24.9	**1600**	67.4	5.2
	01/25/11	19.5	0.73	1.6	0.017	0.0038	< 0.047	< 0.047	< 0.047	0.018	< 0.047	1.2	12.3	< 0.047	19.2	1.4	14.8	5.1	0.71
	03/17/11	< 0.047	0.06	0.036	0.0075	0.0056	0.0075	0.005	0.0053	0.008	< 0.047	0.022	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.017
PZ03B	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/09/96	< 1	< 2	< 0.2	< 0.05	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	< 0.2	< 0.4	< 0.1	< 1	< 1	< 1	< 0.4	< 0.2
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	< 1	< 2	< 0.2	< 0.05	< 0.024	< 0.05	< 0.2	< 0.05	< 0.1	< 0.1	< 0.2	< 0.4	< 0.1	< 1	< 1	< 1	< 0.4	< 0.2
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	< 1	< 0.94	< 0.021	< 0.034	< 0.067	< 0.093	< 0.12	< 0.065	< 0.022	< 0.14	< 0.064	< 0.08	< 0.06	< 0.61	< 0.69	< 0.33	< 0.026	< 0.068
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	< 0.23	< 0.57	< 0.019	0.06	0.12	0.049	< 0.1	< 0.03	0.047	< 0.17	< 0.1	< 0.03	< 0.086	< 0.42	< 0.62	< 0.23	0.055	< 0.049
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	< 0.13	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	< 0.082	< 0.072	0.12	< 0.045	< 0.032

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ03B	05/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	< 0.018	< 0.023	< 0.02	0.049	0.062	0.05	0.046	0.047	0.049	< 0.017	0.055	< 0.021	0.038	< 0.027	< 0.028	0.029	0.021	0.052
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/16/03	< 0.018	< 0.019	< 0.02	0.016	0.016	< 0.013	< 0.016	< 0.019	< 0.014	< 0.016	0.026	< 0.017	< 0.021	< 0.018	< 0.017	0.033	< 0.016	0.025
	11/20/03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	< 0.019	< 0.019	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	< 0.016	< 0.022	< 0.017	< 0.02	< 0.023	< 0.022	< 0.02	< 0.016
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	0.078	< 0.0082	0.014	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	< 0.016	0.045	< 0.019	0.054	0.056	0.23	0.062	< 0.015
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/21/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.014	< 0.011	< 0.015
	04/19/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.024	< 0.011	< 0.015
	07/19/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	0.013	0.043	< 0.011	< 0.015
	10/22/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.034	< 0.011	< 0.015
	01/14/08	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.018	< 0.011	< 0.015
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/29/08	0.011	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	< 0.0095	< 0.011	0.039	< 0.0075	< 0.0068
	04/13/09	0.021	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	0.02	< 0.011	0.066	< 0.0075	< 0.0068
	10/05/09	0.0072	0.0053	< 0.0061	0.0095	0.0084	0.0056	< 0.0051	0.0056	0.007	< 0.0034	0.017	0.0059	< 0.005	0.0074	0.0093	0.031	0.018	0.014
	04/13/10	0.13	0.01	0.026	0.013	0.013	0.011	0.0095	0.017	0.018	0.0038	0.036	0.055	0.0081	0.074	0.06	0.51	0.056	0.029
	10/19/10	0.0087	< 0.0036	0.013	0.027	0.015	0.029	0.022	0.039	0.036	0.016	0.051	< 0.0048	0.018	0.011	0.011	0.11	0.023	0.03
	01/25/11	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.007	< 0.047	< 0.047
	03/17/11	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.0071	< 0.047	< 0.047

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ07B	09/16/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/09/96	440	< 40	10	< 1	< 0.48	< 1	< 4	< 1	< 2	< 2	5.6	130	< 2	1700	350	**2600**	87	< 4
	08/15/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/16/96	390	450	1.4	< 0.25	< 0.12	< 0.25	< 1	< 0.25	< 0.5	< 0.5	1.5	36	< 0.5	620	180	**870**	15	0.76
	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	290	350	2.4	< 0.16	< 0.32	< 0.44	< 0.55	< 0.3	< 0.1	< 0.65	< 0.3	32	< 0.28	110	53	< 1.6	15	< 0.32
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	190	100	2.7	< 0.017	< 0.027	< 0.043	< 0.1	< 0.029	< 0.013	< 0.16	2.2	52	< 0.083	170	170	**970**	23	1
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	223	< 0.15	3.1	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	0.13	< 0.068	3.4	54	< 0.08	219	224	**1000**	20	1.8
	05/31/00	154	207	11	0.23	< 0.013	< 0.055	< 0.074	< 0.11	0.09	< 0.068	6.2	164	< 0.08	289	348	**1700**	101	6.2
	08/31/00	173	195	17	0.36	< 0.013	< 0.055	< 0.074	< 0.11	0.15	< 0.068	7.3	181	< 0.08	300	324	**358**	93	7.8
	11/21/00	174	176	15	0.25	< 0.013	< 0.055	< 0.074	< 0.11	0.11	< 0.068	8.3	111	< 0.08	305	374	**966**	98	7.3
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	160	< 170	8.3	< 0.38	< 0.24	< 0.28	< 0.3	< 0.26	< 0.36	< 0.34	2.9	< 150	< 0.28	270	350	**2300**	< 140	4.5
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	160	130	7.4	< 1.9	< 1.2	< 1.4	< 1.5	< 1.3	< 1.8	< 1.7	3.3	< 84	< 1.4	300	380	**1700**	98	5.4
	06/16/03	150	25	11	< 1.2	< 1.4	< 1.3	< 1.6	< 1.9	< 1.4	< 1.6	2.9	50	< 2.1	190	5.5	< 2.4	87	6
	11/20/03	< 180	< 190	15	< 3	< 3.5	< 3.2	< 4	< 4.8	< 3.5	< 4	< 3.2	56	< 5.2	310	400	**2700**	95	5.2
	04/20/04	140	32	1.3	< 0.46	< 0.53	< 0.5	< 0.61	< 0.72	< 0.53	< 0.61	< 0.5	30	< 0.8	160	140	48	18	< 0.65
	07/20/04	50	8.5	< 1.9	< 1.1	< 1.3	< 1.2	< 1.5	< 1.8	< 1.3	< 1.5	< 1.2	8.6	< 2	52	46	62	11	< 1.6
	10/12/04	< 78	9.8	< 1.8	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	< 1.6	7.9	< 1.7	< 80	< 91	**980**	5.9	< 1.6
	01/25/05	140	170	15	< 3.9	< 3.6	< 3.6	< 4.1	< 3.9	< 3.3	< 4.4	4.4	55	< 3.4	290	390	**2800**	88	6.3
	04/11/05	84	41	16	< 3.9	< 3.6	< 3.6	< 4.1	< 3.9	< 3.3	< 4.4	< 3.3	19	< 3.4	120	130	**700**	39	< 3.3
	07/11/05	77	26	4.2	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	10	< 3.8	95	98	**810**	8.6	< 2.9
	10/03/05	72	20	< 2.3	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	9.5	< 3.8	97	85	**890**	7.9	< 2.9
	01/05/06	94	26	< 4.6	< 6.2	< 7.3	< 6.3	< 7.7	< 7.7	< 7.6	< 7.5	< 6.2	12	< 7.5	120	160	**1600**	9.6	< 5.8
	04/11/06	78	30	1.4	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	13	< 1.9	110	100	**590**	9.1	< 1.5
	07/21/06	110	42	7.4	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	24	< 3.8	150	170	**1000**	50	4.7
	10/04/06	180	110	11	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	4.8	41	< 0.38	300	380	**2000**	97	7.9
	02/21/07	81	28	4.9	< 0.31	< 0.37	< 0.32	< 0.39	< 0.39	< 0.38	< 0.38	1.9	20	< 0.38	120	140	**730**	43	3.1
	04/19/07	130	43	< 46	< 62	< 73	< 63	< 77	< 77	< 76	< 75	< 62	< 36	< 75	150	180	**1200**	48	< 58
	07/19/07	100	12	3.1	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	18	< 1.9	87	1.6	< 1.2	14	< 1.5
	10/22/07	170	70	26	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	3.5	44	< 1.9	270	310	**1600**	69	6.2
	01/14/08	140	< 20	< 29	< 39	< 46	< 39	< 48	< 48	< 47	< 47	< 39	< 23	< 47	160	170	**940**	< 28	< 36
	04/28/08	25.5	6	< 1	< 0.56	< 0.86	< 0.82	< 1	< 1.2	< 1.1	< 0.69	< 0.85	3	< 0.58	34.9	26.4	24.7	4.4	< 1.1
	08/12/08	99.5	45	8.1	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	3.8	27	< 0.36	154	192	**794**	63	6.4

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene [2]**	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene [2]**	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene [2]**	**Dibenz(a,h)anthracene**	**Fluoranthene [2]**	**Fluorene [2]**	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ07B	10/29/08	240	< 24.8	< 32.5	< 17.3	< 27	< 25.7	< 31.2	< 38.9	< 34.9	< 21.5	< 26.7	< 31.3	< 18	287	327	**1680**	< 37.4	< 33.8
	04/13/09	180	25.3	4	< 0.35	< 0.54	< 0.51	< 0.62	< 0.78	< 0.7	< 0.43	0.66	35.8	< 0.36	176	101	65.7	25.3	1.4
	10/05/09	124	50.1	11.6	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	2.7	37.6	< 0.47	138	136	**701**	60.6	5.1
	04/13/10	117	23.8	5.1	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	0.48	22.2	< 0.47	103	50.5	14.1	15	0.79
	10/19/10	87.4	26.6	16.4	< 0.36	< 0.29	< 0.34	< 0.48	< 0.44	< 0.35	< 0.32	2.1	21.7	< 0.47	107	117	**587**	35.3	4.4
	01/19/11	152	46.8	< 189	< 189	< 189	< 189	< 189	< 189	< 189	< 189	< 189	< 189	< 189	190	203	**945**	61.1	< 189
	03/17/11	81.8	24.1	3.5	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	0.59	19.3	< 4.7	79.1	37.7	5.8	15.9	0.95
PZ09B	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/04/97	< 0.96	< 0.89	0.08	< 0.032	< 0.063	< 0.088	< 0.11	< 0.061	< 0.021	< 0.13	< 0.06	2	< 0.057	14	6.6	81	0.95	< 0.064
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	32	< 0.55	0.58	< 0.017	< 0.027	< 0.043	< 0.1	< 0.029	< 0.013	< 0.16	0.89	3.9	< 0.083	12	29	8.4	0.85	0.33
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	2.1	< 0.51	< 0.067	< 0.38	< 0.045	< 0.18	< 0.25	< 0.38	< 0.2	< 0.23	< 0.22	< 0.38	< 0.27	< 0.28	< 0.24	< 0.19	< 0.15	< 0.11
	05/31/00	17	< 0.15	0.39	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	0.56	< 0.11	< 0.08	5.7	< 0.072	0.78	0.23	0.35
	08/31/00	2.1	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	0.78	0.12	0.52	0.12	< 0.032
	11/21/00	40	< 0.15	0.95	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	2.2	< 0.08	11	< 0.072	1.2	< 0.045	< 0.032
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	1.1	0.12	0.07	< 0.019	< 0.012	< 0.014	< 0.015	< 0.013	< 0.018	< 0.017	0.15	0.12	< 0.014	0.49	< 0.028	0.95	0.17	0.15
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	0.059	< 0.023	< 0.02	< 0.019	< 0.012	< 0.014	< 0.015	< 0.013	< 0.018	< 0.017	0.052	< 0.021	< 0.014	< 0.027	< 0.028	0.032	< 0.019	0.11
	06/16/03	0.036	< 0.019	0.063	< 0.012	< 0.014	< 0.013	< 0.016	< 0.019	< 0.014	< 0.016	0.15	< 0.017	< 0.021	< 0.018	< 0.017	0.035	< 0.016	0.27
	11/20/03	34	0.25	0.46	< 0.013	< 0.015	< 0.014	< 0.017	< 0.02	< 0.015	< 0.017	0.43	0.056	< 0.022	14	0.13	5	0.069	0.39
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	0.15	< 0.018	< 0.019	< 0.011	< 0.013	< 0.012	< 0.015	< 0.018	< 0.013	< 0.015	< 0.012	< 0.016	< 0.02	0.032	< 0.016	0.037	< 0.015	< 0.016
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	0.4	0.021	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	< 0.016	< 0.022	< 0.017	0.18	< 0.023	0.58	< 0.02	< 0.016
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	1.6	0.044	0.014	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.023	< 0.019	0.72	0.034	1.2	0.019	< 0.015
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	1.4	0.048	0.013	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.024	< 0.019	0.86	0.029	0.75	0.02	< 0.015
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	1.4	< 0.041	< 0.058	< 0.078	< 0.092	< 0.078	< 0.096	< 0.097	< 0.095	< 0.094	< 0.077	< 0.045	< 0.094	0.63	< 0.056	< 0.062	< 0.057	< 0.073
	02/21/07	4.8	0.094	0.031	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.02	< 0.019	2.6	0.022	0.92	0.029	< 0.015
	04/19/07	6.9	< 0.16	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	< 0.18	< 0.38	3.3	< 0.22	1.9	< 0.23	< 0.29
	07/19/07	0.67	0.032	< 0.029	< 0.039	< 0.046	< 0.039	< 0.048	< 0.048	< 0.047	< 0.047	< 0.039	< 0.023	< 0.047	0.089	< 0.028	< 0.031	< 0.028	< 0.036

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ09B	10/22/07	0.019	0.017	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.0096	< 0.019	0.065	0.045	0.46	< 0.011	< 0.015
	01/14/08	2.6	0.063	0.02	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.99	< 0.011	0.29	0.012	< 0.015
	04/28/08	2.3	< 0.05	< 0.065	< 0.035	< 0.054	< 0.051	< 0.062	< 0.078	< 0.07	< 0.043	< 0.053	< 0.063	< 0.036	0.51	< 0.11	< 0.16	< 0.075	< 0.068
	10/29/08	3.3	0.067	0.019	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.0087	0.01	< 0.0036	0.044	< 0.011	0.1	0.0092	< 0.0068
	04/13/09	1.9	0.03	0.016	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.011	0.0078	< 0.0036	0.043	< 0.011	0.29	0.01	0.0097
	10/05/09	8.3	0.083	0.063	< 0.0038	< 0.003	< 0.0036	< 0.0051	< 0.0046	< 0.0037	< 0.0034	0.016	0.039	< 0.005	0.1	0.0077	0.079	0.015	0.012
	04/13/10	0.44	0.024	0.0095	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.0058	0.012	< 0.0047	0.02	0.012	0.24	< 0.0081	< 0.0047
	10/19/10	8	0.096	0.057	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.019	0.043	< 0.0047	0.11	0.016	0.15	0.017	0.014
	01/20/11	11.3	0.12	0.24	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.18	0.2	< 0.047	2.9	0.04	4.2	0.42	0.13
	03/17/11	0.46	0.027	0.013	< 0.047	< 0.047	< 0.047	0.0048	< 0.047	< 0.047	< 0.047	0.0049	0.029	< 0.047	0.11	0.046	0.66	0.014	< 0.047
PZ10B	08/16/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/03/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/04/97	< 1	< 0.97	< 0.022	< 0.035	< 0.069	< 0.096	< 0.12	< 0.066	< 0.023	< 0.14	< 0.065	< 0.082	< 0.062	< 0.63	< 0.71	< 0.34	< 0.027	< 0.07
	02/26/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/23/99	< 0.22	< 0.55	< 0.018	< 0.017	< 0.027	< 0.043	< 0.1	< 0.029	< 0.013	< 0.16	< 0.1	< 0.029	< 0.083	< 0.4	< 0.6	< 0.22	< 0.014	< 0.047
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	< 0.12	< 0.14	< 0.019	< 0.11	< 0.012	< 0.052	< 0.069	< 0.11	< 0.056	< 0.064	< 0.062	< 0.11	< 0.076	< 0.077	< 0.068	0.16	< 0.043	< 0.03
	05/31/00	< 0.13	< 0.15	< 0.02	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	< 0.11	< 0.08	< 0.082	< 0.072	0.13	< 0.045	< 0.032
	08/31/00	< 0.14	< 0.16	< 0.021	0.23	< 0.014	< 0.057	< 0.077	< 0.12	**0.21**	< 0.071	< 0.069	< 0.12	< 0.086	< 0.084	< 0.075	< 0.058	< 0.048	< 0.034
	11/21/00	< 0.19	< 0.21	< 0.028	< 0.16	< 0.019	< 0.077	< 0.1	< 0.16	< 0.084	< 0.096	< 0.093	< 0.16	< 0.11	< 0.12	< 0.1	0.21	< 0.064	< 0.045
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	0.26	< 0.023	< 0.02	0.034	0.033	0.037	0.029	0.031	0.04	< 0.017	0.087	< 0.021	0.024	0.039	< 0.028	0.24	0.048	0.07
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	0.021	< 0.023	< 0.02	< 0.019	0.017	0.02	0.018	0.013	< 0.018	< 0.017	0.032	< 0.021	< 0.014	< 0.027	< 0.028	0.08	0.027	0.027
	06/16/03	0.046	< 0.019	< 0.02	< 0.012	< 0.014	< 0.013	< 0.016	< 0.019	< 0.014	< 0.016	0.019	< 0.017	< 0.021	0.034	0.022	0.072	0.038	0.019
	11/20/03	< 0.018	< 0.019	< 0.02	0.015	0.019	0.021	0.016	< 0.019	**0.22**	< 0.016	0.037	< 0.017	< 0.021	< 0.018	< 0.017	0.042	0.024	0.028
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	0.033	< 0.019	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	0.018	< 0.022	< 0.017	< 0.02	< 0.023	0.04	< 0.02	< 0.016
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	< 0.0083	< 0.0083	< 0.012	< 0.016	< 0.019	< 0.016	< 0.02	< 0.02	< 0.019	< 0.019	0.02	< 0.0092	< 0.019	< 0.01	0.013	0.045	< 0.012	0.016
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.015	< 0.011	< 0.015

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ10B	02/21/07	< 0.0082	< 0.0082	< 0.012	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	< 0.016	< 0.0091	< 0.019	< 0.01	< 0.011	0.045	< 0.011	< 0.015
	04/19/07	0.22	< 0.16	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	< 0.18	< 0.38	0.25	< 0.22	3.7	< 0.23	< 0.29
	07/19/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	< 0.012	< 0.011	< 0.015
	10/23/07	0.011	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.014	< 0.011	0.058	< 0.011	< 0.015
	01/14/08	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	0.013	0.035	0.014	< 0.015
	04/28/08	< 0.0088	< 0.0056	< 0.0073	< 0.0039	< 0.0061	< 0.0058	< 0.007	< 0.0088	< 0.0079	< 0.0049	< 0.006	< 0.0071	< 0.0041	< 0.011	< 0.012	0.021	0.0098	< 0.0076
	10/29/08	0.017	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	0.014	< 0.011	0.03	< 0.0075	< 0.0068
	04/13/09	0.094	0.0055	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.011	0.021	< 0.0036	0.1	< 0.011	0.32	0.012	0.0079
	10/05/09	0.22	0.014	0.019	< 0.0042	< 0.0033	< 0.0039	< 0.0055	< 0.005	< 0.004	< 0.0037	0.0075	0.044	< 0.0054	0.14	0.037	0.15	0.088	0.0057
	04/13/10	0.16	0.014	0.027	< 0.0037	< 0.0029	< 0.0034	< 0.0049	< 0.0044	< 0.0035	< 0.0032	0.013	0.074	< 0.0047	0.056	0.042	0.3	0.1	0.0086
	10/19/10	0.0086	< 0.0036	< 0.0057	< 0.0036	< 0.0029	0.0036	< 0.0048	< 0.0044	0.005	< 0.0032	0.0046	< 0.0048	< 0.0047	0.007	0.0072	0.038	0.0084	< 0.0047
	01/18/11	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
	03/16/11	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.0051	0.018	< 0.047	< 0.047
PZ11B	06/22/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/31/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/01/00	6.6	< 0.14	0.4	< 0.11	< 0.012	< 0.052	< 0.069	< 0.11	< 0.056	< 0.064	0.17	< 0.11	< 0.076	< 0.077	< 0.068	< 0.053	0.16	0.29
	05/31/00	30	6.2	0.12	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	4.7	< 0.08	30	11	**174**	0.5	0.12
	08/31/00	54	< 0.15	0.44	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	11	< 0.08	52	25	**344**	4	< 0.032
	11/21/00	17	< 0.15	0.11	< 0.11	< 0.013	< 0.055	< 0.074	< 0.11	< 0.059	< 0.068	< 0.066	3.3	< 0.08	14	6.4	38	1.5	< 0.032
	04/01/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/02/02	46	3.7	0.69	< 0.38	< 0.24	< 0.28	< 0.3	< 0.26	< 0.36	< 0.34	< 0.56	7.3	< 0.28	44	< 28	**290**	7.3	< 0.4
	07/22/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/28/02	68	2	< 1.6	< 1.5	< 0.96	< 1.1	< 1.2	< 1	< 1.4	< 1.4	< 2.2	8.5	< 1.1	55	5.2	34	7.9	< 1.6
	06/16/03	20	< 1.9	0.16	< 0.012	< 0.014	< 0.013	< 0.016	< 0.019	< 0.014	< 0.016	0.032	< 1.7	< 0.021	0.23	0.058	0.31	0.19	0.061
	11/20/03	23	< 0.95	< 1	< 0.6	< 0.7	< 0.65	< 0.8	< 0.95	< 0.7	< 0.8	< 0.65	2.1	< 1	16	< 0.85	20	< 0.8	< 0.85
	04/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/20/04	0.018	< 0.018	< 0.019	< 0.011	< 0.013	< 0.012	< 0.015	< 0.018	< 0.013	< 0.015	< 0.012	< 0.016	< 0.02	< 0.017	< 0.016	< 0.023	< 0.015	< 0.016
	10/12/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/25/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/05	0.034	< 0.019	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	< 0.016	< 0.022	< 0.017	< 0.02	< 0.023	< 0.022	< 0.02	< 0.016
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	0.023	0.0096	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.0091	< 0.019	0.019	< 0.011	0.14	0.015	< 0.015
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	< 0.0082	< 0.0082	< 0.012	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	< 0.016	< 0.0091	< 0.019	< 0.01	< 0.011	0.026	0.013	< 0.015
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	0.018	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.017	< 0.011	< 0.015
	02/21/07	< 0.0082	< 0.0082	< 0.012	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	< 0.016	< 0.0091	< 0.019	< 0.01	< 0.011	0.013	< 0.011	< 0.015
	04/19/07	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	< 0.012	< 0.011	< 0.015

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)

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

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ11B	07/19/07	0.085	< 0.041	< 0.058	< 0.078	< 0.092	< 0.078	< 0.096	< 0.097	< 0.095	< 0.094	< 0.077	< 0.045	< 0.094	0.12	< 0.056	1.1	< 0.057	< 0.073
	10/22/07	< 0.0082	0.009	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	< 0.012	< 0.011	< 0.015
	01/14/08	0.56	0.031	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.017	< 0.011	< 0.015
	04/28/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/29/08	< 0.0078	0.0091	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	< 0.0095	0.016	0.025	< 0.0075	< 0.0068
	04/13/09	0.0089	0.013	< 0.0065	0.0089	0.01	0.013	0.01	0.013	0.012	0.0063	0.014	0.0097	0.0088	0.03	0.032	0.041	0.02	< 0.0068
	10/05/09	< 0.0049	0.009	< 0.0062	0.0042	0.0055	0.0059	< 0.0052	0.0055	0.0053	< 0.0035	0.01	< 0.0052	< 0.0051	< 0.0054	0.0051	0.017	< 0.0088	0.0078
	04/13/10	0.032	0.012	< 0.0057	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	< 0.0044	0.01	< 0.0047	0.02	0.0089	0.25	0.0091	< 0.0047
	10/19/10	0.018	0.013	0.0064	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	< 0.0044	0.0081	< 0.0047	0.014	0.0097	0.13	0.017	< 0.0047
	01/25/11	1.6	0.079	0.016	< 0.047	0.0029	< 0.047	< 0.047	0.0044	0.0055	< 0.047	0.0088	0.044	< 0.047	0.37	< 0.047	0.075	0.027	0.0097
	03/17/11	0.022	0.0081	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.0058	< 0.047	0.013	0.0091	0.035	< 0.047	< 0.047
PZ12B	07/20/04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/04	26	6.7	0.21	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	< 0.016	< 0.022	0.047	< 5.4	< 0.017	36	< 5.7	**160**	< 5.1	0.041
	01/25/05	160	42	7.6	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	< 1.6	35	< 1.7	160	14	**830**	47	< 1.6
	04/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/05	39	5.3	1.9	< 2	< 1.8	< 1.8	< 2.1	< 1.9	< 1.6	< 2.2	< 1.6	5.5	< 1.7	24	< 2.3	8.3	7	< 1.6
	07/11/05	91	14	7.2	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	15	< 1.9	88	14	21	28	< 1.5
	10/03/05	0.016	0.038	0.024	0.066	0.064	0.057	0.051	0.044	0.065	< 0.019	0.13	< 0.0091	0.039	0.016	< 0.011	0.12	0.069	0.18
	01/05/06	0.28	0.033	0.012	< 0.016	0.019	0.024	0.021	< 0.02	< 0.019	< 0.019	0.045	0.055	< 0.019	0.098	0.03	0.58	0.041	0.046
	04/11/06	9.9	0.22	1.2	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	1.3	6	< 0.019	1.8	0.29	0.74	5.1	0.94
	07/21/06	7.7	2.8	< 0.46	< 0.62	< 0.73	< 0.63	< 0.77	< 0.77	< 0.76	< 0.75	< 0.62	< 0.36	< 0.75	< 0.41	< 0.45	1.6	< 0.45	0.76
	10/04/06	83	2.4	3.2	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	1.2	11	< 0.38	53	18	72	22	1.2
	02/21/07	7	0.76	< 0.29	< 0.39	< 0.46	< 0.39	< 0.49	< 0.49	< 0.48	< 0.48	< 0.39	0.25	< 0.47	< 0.26	< 0.28	< 0.31	< 0.29	< 0.37
	04/19/07	92	8.2	< 5.8	< 7.8	< 9.2	< 7.8	< 9.6	< 9.7	< 9.5	< 9.4	< 7.7	12	< 9.4	70	18	**260**	18	< 7.3
	07/19/07	85	3.5	3.8	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	< 1.5	17	< 1.9	36	< 1.1	< 1.2	13	< 1.5
	10/22/07	98	2.9	11	< 3.1	< 3.7	< 3.1	< 3.9	< 3.9	< 3.8	< 3.8	< 3.1	16	< 3.8	87	25	**160**	33	< 2.9
	01/15/08	24	< 0.81	3.9	< 1.6	< 1.8	< 1.6	< 1.9	< 1.9	< 1.9	< 1.9	4.7	9.4	< 1.9	11	4.2	33	21	3.2
	04/28/08	61.9	< 2.5	< 3.3	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 2.7	< 3.1	< 0.0036	29.1	< 5.3	**140**	< 3.7	< 3.4
	08/12/08	86.5	7.7	4.1	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	1.6	17.4	< 0.0036	65.6	3.3	0.21	22.1	1.7
	10/30/08	74.7	3.8	4.2	< 0.69	< 1.1	< 1	< 1.2	< 1.6	< 1.4	< 0.86	< 1.1	10.9	< 0.72	61.5	15.1	21.7	17	< 1.4
	04/13/09	1.4	0.39	0.027	0.0043	< 0.0054	0.0069	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.21	0.051	< 0.0036	0.024	0.012	0.044	0.018	0.77
	10/05/09	84.2	3.2	4.8	< 0.48	< 0.38	< 0.45	< 0.64	< 0.58	< 0.46	< 0.42	1.4	11.9	< 0.62	49.4	8.1	14.3	22.2	1.6
	04/14/10	25.7	0.67	0.76	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.67	3.8	< 0.0047	8	0.32	0.039	1.1	0.72
	10/20/10	63.5	2.3	6.1	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	1.2	13.4	< 0.0047	29.4	0.24	0.074	27.4	1.7
	01/19/11	< 0.19	1.9	0.03	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	0.57	0.025	< 0.19	< 0.19	0.022	< 0.19	0.04	1.4
	03/17/11	39.5	1.9	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	< 0.94	1	1.5	< 0.94	0.17	< 0.94	0.23	< 0.94	1.2

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	**Sample Date**	**Acenaphthene**	**Acenaphthylene**	**Anthracene** [2]	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene** [2]	**Benzo(ghi)perylene**	**Benzo(k)fluoranthene**	**Chrysene** [2]	**Dibenz(a,h)anthracene**	**Fluoranthene** [2]	**Fluorene** [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ13B	10/12/04	< 0.019	< 0.019	< 0.018	0.032	0.026	0.021	< 0.021	0.02	0.026	< 0.022	0.045	< 0.022	< 0.017	0.033	< 0.023	0.099	0.022	0.046
	01/25/05	0.028	< 0.02	< 0.018	< 0.02	< 0.018	< 0.018	< 0.021	< 0.019	0.018	< 0.022	0.031	< 0.022	< 0.017	0.059	0.045	0.44	0.029	0.027
	04/11/05	0.055	< 0.019	< 0.018	0.025	0.029	0.039	0.026	0.029	0.035	< 0.022	0.058	< 0.022	0.021	< 0.02	< 0.023	< 0.022	0.046	0.055
	07/11/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/05	0.04	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.01	< 0.019	0.015	0.022	0.067	0.012	< 0.015
	01/05/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/06	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	0.029	< 0.0091	< 0.019	< 0.01	< 0.011	< 0.012	0.014	0.023
	07/21/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/04/06	< 0.0082	0.013	0.012	0.05	0.082	0.073	0.057	0.066	0.05	< 0.019	0.089	< 0.0091	0.051	< 0.01	< 0.011	0.019	0.03	0.071
	02/22/07	< 0.0083	< 0.0083	< 0.012	< 0.016	< 0.019	< 0.016	< 0.02	< 0.02	< 0.019	< 0.019	0.03	< 0.0092	< 0.019	< 0.01	0.011	0.03	0.021	0.024
	04/20/07	0.022	< 0.0081	0.076	0.4	**0.59**	**0.65**	0.45	0.46	**0.53**	0.14	1.3	0.033	0.46	< 0.01	< 0.011	< 0.012	0.55	0.89
	07/19/07	< 0.041	< 0.041	0.12	0.43	**0.75**	**0.7**	0.58	0.069	**0.72**	0.11	1.6	< 0.045	0.46	< 0.051	< 0.056	< 0.062	0.59	1.3
	10/22/07	0.0094	< 0.0081	< 0.012	0.028	0.044	0.041	0.038	0.052	0.054	< 0.019	0.1	< 0.0091	0.03	< 0.01	< 0.011	0.037	0.047	0.075
	01/14/08	< 0.0082	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.013	< 0.011	< 0.015
	04/28/08	0.011	< 0.0051	0.026	0.21	**0.25**	**0.3**	0.19	0.23	**0.27**	0.038	0.66	0.01	0.16	< 0.0097	< 0.011	0.035	0.24	0.55
	10/29/08	< 0.0078	< 0.005	< 0.0065	0.015	0.029	0.034	0.027	0.036	0.033	0.0052	0.062	< 0.0063	0.022	0.035	0.072	0.11	0.022	0.042
	04/13/09	< 0.0079	< 0.005	0.008	0.06	0.1	0.13	0.089	0.12	0.12	0.02	0.22	< 0.0063	0.076	< 0.0096	< 0.011	< 0.017	0.071	0.18
	10/05/09	0.15	< 0.018	< 0.029	0.29	**0.49**	**0.63**	0.38	0.46	**0.54**	0.075	0.91	0.043	0.32	0.11	0.023	1.9	0.23	0.66
	04/14/10	0.094	0.0041	0.014	0.0087	0.012	0.017	0.013	0.014	0.014	< 0.0032	0.026	0.022	0.0094	0.038	0.022	0.11	0.057	0.022
	10/19/10	0.0053	< 0.0036	0.0094	0.032	0.045	0.062	0.044	0.052	0.058	0.01	0.087	< 0.0048	0.031	< 0.005	0.0056	0.018	0.03	0.077
	01/19/11	< 0.047	0.0046	< 0.047	0.0096	0.017	0.02	0.016	0.017	0.019	0.0036	0.026	< 0.047	0.013	< 0.047	0.016	0.077	0.011	0.024
	03/16/11	< 0.047	< 0.047	< 0.047	0.02	0.029	0.035	0.024	0.032	0.038	0.0082	0.084	< 0.047	0.02	< 0.047	< 0.047	< 0.047	0.05	0.062
PZ14B	07/25/07	41	2.4	< 2.6	< 3.5	< 4.1	< 3.5	< 4.3	< 4.4	< 4.3	< 4.3	< 3.5	13	< 4.2	37	3.6	**200**	7.3	< 3.3
	10/22/07	5.3	0.22	< 0.23	< 0.31	< 0.37	< 0.31	< 0.39	< 0.39	< 0.38	< 0.38	< 0.31	0.91	< 0.38	1.6	< 0.22	< 0.25	< 0.23	< 0.29
	04/28/08	0.2	0.015	0.011	0.048	0.066	0.16	0.094	0.09	0.12	0.023	0.17	0.023	0.074	0.015	< 0.011	0.018	0.052	0.14
	08/12/08	0.067	0.017	0.012	0.024	0.035	0.071	0.045	0.046	0.06	0.011	0.074	0.013	0.039	0.021	< 0.011	0.12	0.036	0.055
	10/30/08	0.019	0.0052	< 0.0065	0.0096	0.025	0.043	0.037	0.035	0.028	0.0067	0.032	< 0.0063	0.027	0.011	< 0.011	0.022	0.014	0.025
	04/13/09	0.28	0.014	0.0074	0.016	0.034	0.07	0.055	0.044	0.046	0.011	0.049	0.043	0.042	0.15	0.024	0.61	0.036	0.044
	10/05/09	0.12	0.014	0.016	0.043	0.095	0.14	0.12	0.12	0.096	0.023	0.11	0.011	0.096	0.013	< 0.0041	0.022	0.032	0.08
	04/13/10	< 0.0045	0.0042	< 0.0057	0.014	0.033	0.078	0.059	0.048	0.049	0.01	0.044	< 0.0048	0.043	< 0.005	0.0083	0.021	0.012	0.031
	10/19/10	0.0081	< 0.0036	< 0.0057	0.0076	0.028	0.045	0.049	0.044	0.037	0.008	0.026	< 0.0048	0.034	0.006	0.0047	0.038	0.0082	0.023
	01/18/11	< 0.047	0.022	0.022	0.081	0.16	**0.47**	0.31	0.23	**0.35**	0.054	0.4	0.018	0.22	< 0.047	0.0053	< 0.047	0.077	0.32
	03/16/11	< 0.047	< 0.047	< 0.047	0.031	0.078	**0.21**	0.14	0.13	0.11	0.027	0.1	< 0.047	0.1	< 0.047	< 0.047	< 0.047	< 0.047	0.085
PZ15B	07/24/07	1.6	0.047	0.31	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.61	< 0.019	1.4	0.31	0.52	1.4	0.36
	10/22/07	2.3	0.061	0.051	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.08	< 0.019	1.5	0.079	0.28	0.024	0.42
	01/15/08	2.4	0.058	0.43	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	0.92	< 0.019	1.7	0.041	0.2	3	0.74
	04/29/08	0.73	0.025	< 0.016	< 0.0087	< 0.013	< 0.013	< 0.016	< 0.019	< 0.017	< 0.011	< 0.013	0.032	< 0.009	0.26	< 0.027	0.18	< 0.019	0.19
	08/12/08	1.4	0.047	0.2	< 0.017	< 0.027	< 0.026	< 0.031	< 0.039	< 0.035	< 0.022	< 0.027	0.52	< 0.018	1	0.054	0.18	1.4	0.44

Table 8. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAHs)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Polynuclear Aromatic Hydrocarbons (µg/l)																	
Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene [2]	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene [2]	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene [2]	Dibenz(a,h)anthracene	Fluoranthene [2]	Fluorene [2]	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene [2]	Phenanthrene	Pyrene [2]
Quality Standard[1]		NS	NS	3000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	NS	NS	100	NS	250
PZ15B	10/30/08	1.4	0.039	0.24	0.0042	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.0077	0.53	< 0.0036	0.96	0.015	0.098	1.6	0.43
	04/13/09	< 0.0078	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	< 0.0095	< 0.011	< 0.016	< 0.0075	< 0.0068
	10/05/09	1.7	0.054	0.23	< 0.015	< 0.012	< 0.014	< 0.02	< 0.019	0.016	< 0.014	0.022	0.66	< 0.02	1.1	0.088	0.31	1.2	0.56
	04/13/10	0.01	0.004	< 0.0057	< 0.0036	0.0035	0.0047	< 0.0048	0.0046	0.0053	< 0.0032	0.0071	< 0.0048	< 0.0047	0.014	0.0075	0.21	< 0.0081	0.0072
	10/19/10	1.3	0.048	0.22	0.0059	0.003	< 0.0034	< 0.0048	< 0.0044	0.0075	< 0.0032	0.012	0.45	< 0.0047	0.9	0.072	0.3	0.85	0.39
	01/19/11	1.6	0.042	0.29	0.0057	< 0.047	< 0.047	< 0.047	< 0.047	0.0066	< 0.047	0.0077	0.68	< 0.047	1.1	0.036	0.13	2.1	0.54
	03/17/11	0.027	0.0047	0.021	0.005	< 0.047	0.005	0.0078	0.0049	0.0042	< 0.047	< 0.047	0.085	0.0052	0.006	< 0.047	0.0061	0.028	0.12
PZ16B	07/24/07	0.093	< 0.0082	< 0.012	< 0.016	< 0.019	< 0.016	< 0.019	< 0.02	< 0.019	< 0.019	< 0.016	< 0.0091	< 0.019	< 0.01	< 0.011	< 0.012	< 0.011	< 0.015
	10/22/07	0.16	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	< 0.01	< 0.011	0.031	0.017	< 0.015
	01/14/08	0.13	< 0.0081	< 0.012	< 0.016	< 0.018	< 0.016	< 0.019	< 0.019	< 0.019	< 0.019	< 0.015	< 0.0091	< 0.019	0.017	0.013	0.28	0.015	< 0.015
	04/29/08	0.085	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.0058	< 0.0063	< 0.0036	< 0.0095	< 0.011	0.032	0.013	< 0.0068
	10/29/08	0.087	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	< 0.0063	< 0.0036	< 0.0095	0.011	0.025	0.0081	< 0.0068
	04/13/09	0.064	< 0.005	< 0.0065	< 0.0035	< 0.0054	< 0.0051	< 0.0062	< 0.0078	< 0.007	< 0.0043	< 0.0053	0.014	< 0.0036	0.026	< 0.011	0.092	< 0.0075	< 0.0068
	10/05/09	0.18	0.025	0.017	0.019	0.016	0.016	0.012	0.016	0.02	< 0.0068	0.03	0.032	< 0.0099	0.15	0.12	0.74	0.053	0.031
	04/14/10	0.25	0.0084	0.019	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	0.013	0.041	< 0.0047	0.079	0.037	0.28	0.08	0.012
	10/20/10	0.089	< 0.0036	< 0.0057	0.0057	0.0062	0.0053	< 0.0048	0.0061	0.0062	< 0.0032	0.0076	< 0.0048	< 0.0047	< 0.005	0.0076	0.04	0.009	0.009
	01/19/11	0.098	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.0099	0.0055
	03/16/11	0.072	< 0.047	< 0.047	< 0.047	0.0035	0.0058	0.0075	0.0056	0.0059	0.0032	< 0.047	< 0.047	0.0051	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047
TW01	10/30/08	< 0.0078	< 0.005	< 0.0065	0.0079	0.0089	0.011	0.0064	0.01	0.011	< 0.0043	0.027	< 0.0063	0.0051	< 0.0095	< 0.011	< 0.016	0.012	0.021
	04/14/09	0.01	< 0.005	< 0.0065	0.0096	0.011	0.013	0.011	0.011	0.013	< 0.0043	0.021	< 0.0063	0.0077	< 0.0095	< 0.011	< 0.016	0.015	0.02
	10/05/09	0.065	< 0.0076	< 0.012	< 0.0077	< 0.0061	0.0088	< 0.01	< 0.0093	0.0074	< 0.0068	< 0.0093	0.021	< 0.0099	0.046	0.013	0.54	0.018	< 0.01
	04/14/10	0.023	< 0.0036	0.0068	< 0.0036	0.0029	0.0052	< 0.0048	< 0.0044	0.004	< 0.0032	0.0067	0.0057	< 0.0047	0.056	0.093	0.11	0.012	0.0062
	10/20/10	< 0.0045	< 0.0036	0.0082	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	< 0.0044	< 0.0048	< 0.0047	< 0.005	< 0.0039	0.012	< 0.0081	< 0.0047
	01/20/11	< 0.048	< 0.048	0.0059	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	0.0058	< 0.048	< 0.048	< 0.048
	03/17/11	< 0.047	< 0.047	0.0067	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.005	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	0.0063
TW02	10/30/08	< 0.0078	< 0.005	< 0.0065	< 0.0035	< 0.0054	0.0054	< 0.0062	< 0.0078	< 0.007	< 0.0043	0.0097	< 0.0063	< 0.0036	< 0.0095	< 0.011	0.016	0.011	0.007
	04/14/09	< 0.0078	< 0.005	< 0.0065	0.0065	0.0091	0.014	0.0097	0.011	0.015	< 0.0043	0.024	< 0.0063	0.0076	< 0.0095	< 0.011	< 0.016	0.013	0.019
	10/05/09	0.048	0.0063	0.0079	0.011	0.019	0.037	0.023	0.024	0.03	< 0.0034	0.03	0.016	0.019	0.031	0.013	0.15	0.025	0.022
	04/13/10	0.19	< 0.0036	0.015	< 0.0036	< 0.0029	< 0.0034	< 0.0048	0.0044	0.0039	< 0.0032	0.0097	0.016	< 0.0047	0.02	0.0066	0.075	0.048	0.0071
	10/19/10	0.0056	< 0.0036	< 0.0057	< 0.0036	< 0.0029	< 0.0034	< 0.0048	< 0.0044	< 0.0035	< 0.0032	< 0.0044	< 0.0048	< 0.0047	< 0.005	< 0.0039	0.026	< 0.0081	< 0.0047
	01/19/11	< 0.052	0.019	0.036	0.065	0.058	0.045	0.036	0.058	0.06	0.0094	0.16	0.026	0.032	< 0.052	0.007	< 0.052	0.14	0.13
	03/16/11	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047

NOTES:
1) Parameters that attain or exceed the EPA Groundwater Quality Standards (MCL) are shown in bold.
2) If no MCL standard has been established, then the parameters that attain or exceed the NR 140 Wisconsin Groundwater Quality Enforcement Standard (ES) are identified in bold.
3) Reference the laboratory analytical report for a full list of compounds analyzed.

< 2.0: Parameter not detected above the limit of detection indicated.
NS: No standard established for this compound.
--: Analysis not performed.

Table 9. Groundwater Analytical Results - Benzene
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW01	06/02/93	ND
	09/16/93	--
	08/15/96	--
	08/16/96	< 0.5
	08/16/97	--
	09/03/97	0.4
	02/26/98	--
	06/22/99	--
	06/23/99	**15**
	01/31/00	--
	02/01/00	**56**
	05/31/00	--
	08/31/00	--
	11/21/00	--
	04/01/02	--
	04/02/02	1.4
	07/22/02	--
	10/28/02	0.71
	06/16/03	2.4
	11/20/03	0.36
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	0.26
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	1.1
	07/21/06	--
	10/04/06	--
	02/22/07	1.5
	04/19/07	0.69
	07/19/07	1.1
	10/22/07	1
	01/14/08	1.6
	04/28/08	1.2
	10/29/08	0.37
	04/13/09	**27.9**
	10/05/09	0.98
	04/13/10	**5.8**
	10/19/10	< 0.41
	01/20/11	0.42
	03/17/11	< 1
OW02	06/03/93	2.4
	09/16/93	--
	08/15/96	--
	08/16/96	< 0.5
	08/16/97	--
	09/03/97	< 0.13
	02/26/98	--
	06/22/99	--
	06/23/99	0.19
	01/31/00	--
	02/01/00	< 0.5
	05/31/00	--
	08/31/00	--
	11/21/00	--
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	--
	06/16/03	< 0.3
	11/20/03	--
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	< 0.14
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	--
	02/22/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/28/08	--

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW08	06/02/93	ND
	09/16/93	--
	08/15/96	--
	08/16/96	--
	08/16/97	--
	09/03/97	--
	02/26/98	--
	06/22/99	--
	06/23/99	0.43
	01/31/00	--
	02/01/00	3.7
	05/31/00	--
	08/31/00	--
	11/21/00	--
	04/01/02	--
	04/02/02	--
	07/22/02	--
	10/28/02	--
	06/16/03	< 0.3
	11/20/03	--
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	0.44
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	--
	02/22/07	< 0.14
	04/20/07	< 0.41
	07/19/07	0.66
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/28/08	--
	04/13/10	--
	10/19/10	--
OW09	08/16/97	--
	09/03/97	--
	09/04/97	**240**
	02/26/98	--
	06/22/99	--
	06/23/99	**330**
	01/31/00	--
	02/01/00	**146**
	05/31/00	**123**
	08/31/00	**294**
	11/21/00	**259**
	04/01/02	--
	04/02/02	**77**
	07/22/02	--
	10/28/02	**6.1**
	06/16/03	**8.9**
	11/20/03	**100**
	04/20/04	--
	07/20/04	**98**
	10/12/04	--
	01/25/05	--
	04/12/05	**100**
	07/11/05	--
	10/03/05	**180**
	01/05/06	--
	04/11/06	**98**
	07/21/06	--
	10/04/06	**150**
	02/21/07	**190**
	04/19/07	**130**
	07/19/07	**150**
	10/22/07	**88**
	01/14/08	**190**
	04/29/08	**144**
	08/12/08	**134**
	10/29/08	**349**
	04/13/09	**448**
	10/05/09	**358**
	04/13/10	**252**
	10/19/10	**137**
	01/20/11	**227**
	03/17/11	**210**

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
PZ03B	09/16/93	--
	07/09/96	< 0.5
	08/15/96	--
	08/16/96	< 0.5
	08/16/97	--
	09/03/97	< 0.13
	02/26/98	--
	06/22/99	--
	06/23/99	< 0.13
	01/31/00	--
	02/01/00	< 0.5
	05/31/00	--
	08/31/00	--
	11/21/00	--
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	--
	06/16/03	< 0.3
	11/20/03	--
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	< 0.14
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	--
	02/21/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/28/08	--
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/25/11	< 1
	03/17/11	< 1
PZ07B	09/16/93	--
	07/09/96	3.7
	08/15/96	--
	08/16/96	2.9
	08/16/97	--
	09/03/97	3.3
	02/26/98	--
	06/22/99	--
	06/23/99	< 13
	01/31/00	--
	02/01/00	0.75
	05/31/00	0.75
	08/31/00	< 5
	11/21/00	< 10
	04/01/02	--
	04/02/02	< 9
	07/22/02	--
	10/28/02	< 0.9
	06/16/03	< 6
	11/20/03	< 7.5
	04/20/04	< 2.8
	07/20/04	2.3
	10/12/04	< 2.8
	01/25/05	< 2.8
	04/11/05	1.5
	07/11/05	3.1
	10/03/05	1.4
	01/05/06	< 10
	04/11/06	< 2.8
	07/21/06	< 2.8
	10/04/06	1
	02/21/07	< 6.9
	04/19/07	< 10
	07/19/07	3.2
	10/22/07	< 10
	01/14/08	1.4
	04/28/08	0.8

Table 9. Groundwater Analytical Results - Benzene
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW02	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/25/11	< 1
	03/17/11	< 1
OW03	06/04/93	**220**
	09/16/93	--
	08/15/96	--
	08/16/96	**700**
	08/16/97	--
	09/03/97	**1300**
	02/26/98	--
	04/01/98	--
OW03R	06/22/99	--
	01/31/00	--
	02/01/00	< 0.5
	05/31/00	1.1
	08/31/00	1.8
	11/21/00	< 5
	04/01/02	--
	04/02/02	0.46
	07/22/02	--
	10/28/02	0.73
	06/16/03	0.32
	11/20/03	< 0.3
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	0.38
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	0.34
	07/21/06	--
	10/04/06	--
	02/21/07	0.5
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 2
	01/14/08	< 0.14
	04/29/08	4.5
	10/29/08	2.8
	04/13/09	< 0.23
	10/05/09	**33.7**
	04/13/10	< 0.39
	10/19/10	2.4
	01/25/11	< 1
	03/17/11	1.2
OW04	06/10/93	ND
	09/16/93	--
	08/15/96	--
	08/16/96	< 0.5
	08/16/97	--
	09/03/97	< 0.13
	02/26/98	--
	06/22/99	--
	06/23/99	< 0.13
	01/31/00	--
	02/01/00	< 0.5
	05/31/00	--
	08/31/00	--
	11/21/00	--
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	--
	06/16/03	< 0.3
	11/20/03	--
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/11/05	0.23
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	--
	02/21/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	0.18
	04/28/08	--
	10/29/08	0.61
	04/13/09	< 0.23

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW10	08/16/97	--
	09/03/97	--
	09/04/97	< 0.13
	02/26/98	--
	06/22/99	--
	06/23/99	1.9
	01/31/00	--
	02/01/00	3.9
	05/31/00	< 0.5
	08/31/00	1.4
	11/21/00	< 0.5
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	< 0.45
	06/16/03	< 0.3
	11/20/03	< 0.3
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/12/05	**47**
	07/11/05	--
	01/05/06	--
	04/11/06	1.8
	07/21/06	--
	10/04/06	**38**
	02/21/07	**30**
	04/19/07	1.9
	07/19/07	**76**
	10/23/07	**47**
	01/14/08	**51**
	04/29/08	0.88
	08/12/08	**9.2**
	10/29/08	**15.1**
	04/13/09	**46.7**
	10/05/09	**13.9**
	04/13/10	**9**
	10/19/10	4.9
	01/18/11	3.2
	03/16/11	1.8
OW11	06/22/99	--
	01/31/00	--
	02/01/00	3.9
	05/31/00	3.1
	08/31/00	0.61
	11/21/00	< 0.5
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	< 0.45
	06/16/03	< 0.3
	11/20/03	< 0.3
	04/20/04	--
	07/20/04	0.3
	10/12/04	--
	01/25/05	--
	04/11/05	< 0.14
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	0.26
	07/21/06	--
	10/04/06	--
	02/21/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/28/08	--
	10/29/08	< 0.23
	04/13/09	0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/25/11	< 1
	03/17/11	< 1
OW12	07/20/04	--
	10/12/04	2.2
	01/25/05	**9.1**
	04/11/05	--
	04/12/05	3.6
	07/11/05	**8.8**
	10/03/05	**9.4**
	01/05/06	**6.9**
	04/11/06	< 0.14
	07/21/06	4
	10/04/06	**9.9**
	02/21/07	**5.1**
	04/19/07	1

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
PZ07B	08/12/08	< 3.4
	10/29/08	< 11.4
	04/13/09	< 2.3
	10/05/09	< 4.6
	04/13/10	< 0.39
	10/19/10	< 2
	01/19/11	0.91
	03/17/11	< 5
PZ09B	08/16/97	--
	09/03/97	--
	09/04/97	**37**
	02/26/98	--
	06/22/99	--
	06/23/99	1.7
	01/31/00	--
	02/01/00	1.5
	05/31/00	0.6
	08/31/00	< 0.5
	11/21/00	1.7
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	< 0.45
	06/16/03	< 0.3
	11/20/03	1
	04/20/04	--
	07/20/04	< 0.14
	10/12/04	--
	01/25/05	--
	04/12/05	< 0.14
	07/11/05	--
	10/03/05	< 0.14
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	0.19
	02/21/07	0.92
	04/19/07	1
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	0.41
	04/28/08	0.21
	10/29/08	0.39
	04/13/09	< 0.23
PZ09B	10/05/09	0.27
	04/13/10	< 0.39
	10/19/10	1.4
	01/20/11	1.2
	03/17/11	< 1
PZ10B	08/16/97	--
	09/03/97	--
	09/04/97	0.14
	02/26/98	--
	06/22/99	--
	06/23/99	2.6
	01/31/00	--
	02/01/00	< 0.5
	05/31/00	< 0.5
	08/31/00	< 0.5
	11/21/00	< 0.5
	04/01/02	--
	04/02/02	< 0.45
	07/22/02	--
	10/28/02	< 0.45
	06/16/03	< 0.3
	11/20/03	< 0.3
	04/20/04	--
	07/20/04	--
	10/12/04	--
	01/25/05	--
	04/12/05	< 0.14
	07/11/05	--
	10/03/05	--
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	< 0.14
	02/21/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/23/07	< 0.41
	01/14/08	< 0.14
	04/28/08	< 0.14
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/18/11	< 1
	03/16/11	< 1

Table 9. Groundwater Analytical Results - Benzene
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW04	10/05/09	1.2
	04/13/10	3.1
	10/19/10	0.8
	01/20/11	0.96
	03/17/11	0.43
OW05	06/03/93	**1300**
	09/16/93	--
	08/15/96	--
	08/16/96	**750**
	08/16/97	--
	09/03/97	--
	09/04/97	**50**
	02/26/98	--
	04/01/98	--
OW05A	06/03/93	**820**
	09/16/93	--
	08/15/96	--
	08/16/96	**140**
	08/16/97	--
	09/03/97	--
	09/04/97	**650**
	02/26/98	--
	04/01/98	--
OW05R	06/22/99	--
	01/31/00	--
	02/01/00	**529**
	05/31/00	**66**
	08/31/00	**45**
	11/21/00	**52**
	04/01/02	--
	04/02/02	**36**
	07/22/02	--
	10/28/02	**5.5**
	06/16/03	2.1
	11/20/03	**34**
	04/20/04	1.5
	07/20/04	4.1
	10/12/04	**64**
	01/25/05	**77**
	04/11/05	1.8
	07/11/05	**10**
	10/03/05	1.7
	01/05/06	1.4
	04/11/06	**15**
	07/21/06	**69**
	10/04/06	**90**
	02/21/07	2.9
	04/19/07	0.56
	07/19/07	**150**
	10/22/07	**96**
	01/14/08	**10**
	04/29/08	1.1
	08/12/08	**110**
	10/29/08	**114**
	04/13/09	4.1
	10/05/09	**54.7**
	04/14/10	**36.7**
	10/19/10	**13.2**
	01/25/11	2.1
	03/17/11	0.81
OW06	06/03/93	**5.2**
	09/16/93	--
	08/15/96	--
	08/16/96	< 3
	08/16/97	--
	09/03/97	2.3
	02/26/98	--
	06/22/99	--
	06/23/99	**19**
	01/31/00	--
	02/01/00	**10**
	05/31/00	**6.8**
	08/31/00	**9.7**
	11/21/00	< 10
	04/01/02	--
	04/02/02	**7.3**
	07/22/02	--
	10/28/02	4.2
	06/16/03	**6.1**
	11/20/03	**5.4**
	07/20/04	0.77
	10/12/04	--
	01/25/05	--
OW12	07/19/07	3.3
	10/22/07	3.6
	01/15/08	**20**
	04/29/08	0.98
	08/12/08	0.69
	10/30/08	2.5
	04/13/09	3.7
	10/05/09	4.5
	04/14/10	2.1
	10/19/10	4.8
	01/19/11	2.5
	03/17/11	**5.4**
OW14	07/25/07	**23**
	10/22/07	**82**
	04/29/08	**57.3**
	08/12/08	**27.7**
	10/30/08	**33.5**
	04/13/09	**43**
	10/05/09	**16.3**
	04/13/10	**11.7**
	10/19/10	**11.9**
	01/18/11	**8.6**
	03/16/11	**7.4**
OW15	07/24/07	< 0.41
	10/22/07	< 0.41
	01/15/08	< 0.14
	04/29/08	< 0.14
	08/12/08	< 0.14
	10/30/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/19/11	< 1
	03/17/11	< 1
OW16	07/24/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/29/08	< 0.14
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/14/10	< 0.39
	10/19/10	< 0.41
	01/19/11	< 1
	03/16/11	< 1
OW17	07/24/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/29/08	< 0.14
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/14/10	< 0.39
	10/19/10	< 0.41
	01/19/11	< 1
	03/16/11	< 1
OW18	01/20/11	0.48
	03/16/11	1.2
OW19	01/20/11	< 1
	03/17/11	< 1
OW20	01/20/11	< 1
	03/17/11	< 1
OW21	01/20/11	< 1
	03/16/11	< 1
P05B	09/16/93	--
	09/17/93	ND
	08/15/96	--
	08/16/96	< 2.5
	08/16/97	--
	09/03/97	--
	09/04/97	2
	02/26/98	--
	06/22/99	--
	06/23/99	< 0.13
	01/31/00	--
	02/01/00	**6.4**
	05/31/00	4
	08/31/00	**11**
	11/21/00	**12**
	04/01/02	--
	04/02/02	**11**
	07/22/02	--
PZ11B	06/22/99	--
	01/31/00	--
	02/01/00	**10**
	05/31/00	**27**
	08/31/00	**53**
	11/21/00	**20**
	04/01/02	--
	04/02/02	**24**
	07/22/02	--
	10/28/02	**19**
	06/16/03	**18**
	11/20/03	**14**
	04/20/04	--
	07/20/04	0.75
	10/12/04	--
	01/25/05	--
	04/11/05	< 0.14
	07/11/05	--
	10/03/05	< 0.14
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	< 0.14
	02/21/07	< 0.14
	04/19/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	0.48
	04/28/08	--
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/25/11	**7.8**
	03/17/11	< 1
PZ12B	07/20/04	--
	10/12/04	**25**
	01/25/05	**52**
	04/11/05	--
	04/12/05	**16**
	07/11/05	**33**
	10/03/05	< 0.14
	01/05/06	< 0.41
	04/11/06	3.3
	07/21/06	**15**
	10/04/06	**27**
	02/21/07	3.5
	04/19/07	**30**
	07/19/07	**29**
	10/22/07	**27**
	01/15/08	**8.9**
	04/28/08	**22.8**
	08/12/08	**31.3**
	10/30/08	**29.7**
	04/13/09	**11.9**
	10/05/09	**27.2**
	04/14/10	**15.6**
	10/20/10	**34.4**
	01/19/11	**13.2**
	03/17/11	**19.7**
PZ13B	10/12/04	< 0.14
	01/25/05	< 0.14
	04/11/05	< 0.14
	07/11/05	--
	10/03/05	< 0.14
	01/05/06	--
	04/11/06	< 0.14
	07/21/06	--
	10/04/06	< 0.14
	02/22/07	< 0.14
	04/20/07	< 0.41
	07/19/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/28/08	< 0.14
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/14/10	< 0.39
	10/19/10	0.44
	01/19/11	< 1
	03/16/11	< 1

Table 9. Groundwater Analytical Results - Benzene
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
OW06	04/11/05	**5.7**
	07/11/05	--
	10/03/05	< 6.9
	01/05/06	--
	04/11/06	**5**
	07/21/06	--
	10/04/06	3.1
	02/21/07	4.9
	04/19/07	4.4
	07/19/07	2.7
	10/22/07	< 16
	01/14/08	4.4
	04/29/08	3.7
	08/12/08	4.1
	10/29/08	3.7
	04/13/09	4
	10/05/09	2.8
	04/13/10	1.6
	10/19/10	< 4.1
	01/19/11	< 50
	03/17/11	3.3
OW07	06/04/93	**21**
	09/16/93	--
	08/15/96	--
	08/16/96	< 0.5
	08/16/97	--
	09/03/97	0.23
	02/26/98	--
	04/01/98	--
OW07A	06/02/93	**6**
	09/16/93	--
	08/15/96	--
	08/16/96	**7**
	08/16/97	--
	09/03/97	2.1
	02/26/98	--
	06/22/99	--
	06/23/99	**14**
	01/31/00	--
	02/01/00	**23**
	05/31/00	**9.3**
	08/31/00	**14**
	11/21/00	**27**
	04/01/02	--
	04/02/02	**12**
	07/22/02	--
	10/28/02	**15**
	06/16/03	**11**
	11/20/03	**14**
	04/20/04	**8.3**
	07/20/04	**13**
	10/12/04	**18**
	01/25/05	**16**
	04/11/05	**8.1**
	07/11/05	**15**
	10/03/05	**14**
	01/05/06	**13**
	04/11/06	**7.8**
	07/21/06	**14**
	10/04/06	**22**
	02/21/07	**9.1**
	04/19/07	**8.2**
	07/19/07	**16**
	10/22/07	**17**
	01/14/08	**13**
	04/29/08	**15.8**
	08/12/08	**15.2**
	10/29/08	**23.7**
	04/13/09	**6.9**
	10/05/09	**13.2**
	04/13/10	**10.2**
	10/19/10	**29.6**
	01/19/11	**18.4**
	03/17/11	**12.1**

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
P05B	10/28/02	**12**
	06/16/03	< 12
	11/20/03	**13**
	04/20/04	**13**
	07/20/04	**9.6**
	10/12/04	**14**
	01/25/05	**13**
	04/11/05	**6.7**
	07/11/05	**9.5**
	10/03/05	**8.4**
	01/05/06	2.8
	04/11/06	3.5
	07/21/06	**6.3**
	10/04/06	**9.2**
	02/21/07	**11**
	04/19/07	< 0.41
	07/19/07	< 8.2
	10/22/07	**5.2**
	01/14/08	0.25
	04/28/08	**8**
	08/12/08	**7.1**
	10/29/08	**7.8**
	04/13/09	0.28
	10/05/09	**6**
	04/14/10	2.3
	10/20/10	**6.8**
	01/25/11	< 1
	03/17/11	< 1

Sample Location	Sample Date	Benzene (µg/l)
Quality Standard[1]		5
PZ14B	07/25/07	**9.8**
	10/22/07	0.69
	04/28/08	< 0.14
	08/12/08	< 0.14
	10/30/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/18/11	0.63
	03/16/11	< 1
PZ15B	07/24/07	< 0.41
	10/22/07	< 0.41
	01/15/08	< 0.14
	04/29/08	< 0.14
	08/12/08	< 0.14
	10/30/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/19/11	< 1
	03/17/11	< 1
PZ16B	07/24/07	< 0.41
	10/22/07	< 0.41
	01/14/08	< 0.14
	04/29/08	< 0.14
	10/29/08	< 0.23
	04/13/09	< 0.23
	10/05/09	< 0.23
	04/14/10	< 0.39
	10/20/10	< 0.41
	01/19/11	< 1
	03/16/11	< 1
TW01	10/30/08	< 0.23
	04/14/09	< 0.23
	10/05/09	< 0.23
	04/14/10	< 0.39
	10/20/10	< 0.41
	01/20/11	< 1
	03/17/11	< 1
TW02	10/30/08	< 0.23
	04/14/09	< 0.23
	10/05/09	< 0.23
	04/13/10	< 0.39
	10/19/10	< 0.41
	01/19/11	< 1
	03/16/11	< 1

NOTES:
1) Parameters that attain or exceed the EPA Groundwater Quality Standards (MCL) are shown in bold.
2) Reference the laboratory analytical report for a full list of compounds analyzed.

< 2.0: Parameter not detected above the limit of detection indicated.
NS: No standard established for this compound.
--: Analysis not performed.

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW01	06/23/99	--	1.32	--	--	--	179	7.9	0.047	--	20.94	--
OW01	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW01	02/01/00	--	--	--	--	--	--	--	--	--	--	--
OW01	05/31/00	--	4.48	--	--	--	300	6.24	0	--	15.25	--
OW01	08/31/00	--	--	--	--	--	--	--	--	--	--	--
OW01	11/21/00	--	--	--	--	--	--	--	--	--	--	--
OW01	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW01	04/02/02	--	4.81	--	--	--	499	6.94	0.002	--	9.13	--
OW01	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW01	10/28/02	--	5.93	--	--	--	350	6.85	0.732	--	13.26	--
OW01	06/16/03	--	1.35	--	--	--	100	--	0.478	--	9.58	--
OW01	11/20/03	--	--	--	--	--	--	--	--	--	--	--
OW01	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW01	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW01	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW01	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW01	04/11/05	230	0.47	**30000**	150	< 0.061	237	6.84	1.17	< 0.83	9.57	--
OW01	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW01	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW01	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW01	04/11/06	260	0.48	**20000**	260	0.25	-125	6.32	1.121	240	10.03	--
OW01	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW01	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW01	02/22/07	--	0.41	--	--	--	-209	6.49	1.062	--	8.43	--
OW01	04/19/07	340	0.33	**14000**	--	0.29	74	6.14	1.025	200	9.78	--
OW01	07/19/07	--	0.82	--	--	--	-62	6.62	0.93	--	12.57	--
OW01	10/22/07	300	3.64	**11000**	190	0.21	-80	6.61	0.866	180	13.09	--
OW01	01/14/08	--	0.41	--	--	--	-71	6.91	0.582	--	10	--
OW01	04/28/08	295	0.92	**2980**	--	5.8	25	6.61	1.02	180	11.21	--
OW01	10/29/08	267	1.46	**10700**	191	< 0.096	-88	7.3	0.76	126	12.51	4.8
OW01	04/13/09	237	1.07	**18600**	--	< 0.096	-53	6.7	0.96	**250**	8.36	10.3
OW01	10/05/09	338	0.44	**15100**	269	0.17	-18	6.47	0.955	179	13.27	3.6
OW01	04/13/10	276	0.76	**12600**	--	< 0.12	-60	6.98	0.823	111	9.31	74.9
OW01	10/19/10	378	0.36	**2860**	15.2	1.4	183	6.98	0.765	59.8	14.08	18.3
OW01	01/20/11	346	1	**7660**	--	< 0.25	3	7.42	0.684	87.7	9.09	15.2
OW01	03/17/11	318	0.26	**11800**	--	< 0.25	-41	6.63	0.839	101	9	49.3
OW02	06/23/99	--	1.96	--	--	--	146	8.49	0.33	--	15.07	--
OW02	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW02	02/01/00	--	--	--	--	--	--	--	--	--	--	--
OW02	05/31/00	--	3.67	--	--	--	212	6.7	0.148	--	11.87	--
OW02	08/31/00	--	--	--	--	--	--	--	--	--	--	--
OW02	11/21/00	--	--	--	--	--	--	--	--	--	--	--
OW02	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW02	04/02/02	--	1.4	**12000**	7400	0.031	316	7.37	0.412	9.4	6.53	--
OW02	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW02	10/28/02	--	3.29	**17000**	5300	0.39	332	7.14	0.294	2.5	15.62	--
OW02	06/16/03	--	1.51	**9400**	4100	< 0.047	91	--	0.214	19	11.64	--
OW02	11/20/03	--	--	**14000**	4300	0.055	--	--	--	3.5	--	--
OW02	04/20/04	--	--	--	--	--	--	--	--	--	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW02	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW02	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW02	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW02	04/11/05	120	0.28	**11000**	6200	< 0.061	148	6.77	0.56	2.4	5.82	--
OW02	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW02	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW02	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW02	04/11/06	100	0.21	**11000**	3800	< 0.11	119	6.76	0.522	3.7	8.31	--
OW02	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW02	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW02	02/22/07	--	0.4	--	--	--	-202	6.57	0.335	--	6.18	--
OW02	04/19/07	97	0.42	**11000**	--	< 0.096	100	6.42	0.5	2.8	6.79	--
OW02	07/19/07	--	0.78	--	--	--	-83	6.69	0.344	--	15.24	--
OW02	10/22/07	130	2.32	**9400**	5800	< 0.096	-60	6.52	0.428	2.9	16.29	--
OW02	01/14/08	--	0.43	--	--	--	-61	6.7	0.387	--	9.29	--
OW02	04/28/08	--	--	--	--	--	--	--	--	--	--	--
OW02	10/29/08	131	0.28	**9690**	6470	< 0.096	-136	6.4	0.287	2.2	14.84	1.4
OW02	04/13/09	112	0.37	**9860**	--	< 0.096	-113	6.73	0.63	6.5	5.35	5.8
OW02	10/05/09	103	0.34	**10700**	13000	< 0.12	-48	6.42	0.403	2.2	16.72	13.9
OW02	04/13/10	97.9	0.58	**11000**	--	< 0.12	-101	7.2	0.574	2.9	6.65	51.9
OW02	10/19/10	141	0.31	**18900**	9780	< 0.12	79	7.07	0.567	2.8	17.03	46
OW02	01/25/11	112	0.7	**10100**	--	< 0.25	-17	8.51	0.31	3.2	4.51	16.1
OW02	03/17/11	113	0.22	**10600**	--	< 0.25	-39	6.51	0.416	2.6	7	56.2
OW03R	06/22/99	--	--	--	--	--	--	--	--	--	--	--
OW03R	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW03R	02/01/00	176	--	**28000**	3420	< 0.069	--	--	--	4.3	--	--
OW03R	05/31/00	264	2.46	**9500**	3320	< 0.069	146	7.24	4.674	**866**	11.11	--
OW03R	08/31/00	244	1.35	**61000**	976	< 0.069	204	6.89	3.176	**626**	15.89	--
OW03R	11/21/00	137	2.8	**48000**	2080	< 0.069	174	6.47	0.582	9.1	13.04	--
OW03R	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW03R	04/02/02	--	3.4	**4400**	350	0.057	291	7.13	3.183	**910**	6.98	--
OW03R	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW03R	10/28/02	--	2.4	**31000**	750	0.14	303	6.93	1.263	200	13.47	--
OW03R	06/16/03	--	1.58	**3600**	150	0.42	105	--	1.15	**270**	12.85	--
OW03R	11/20/03	--	--	**63000**	1400	0.06	--	--	--	**380**	--	--
OW03R	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW03R	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW03R	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW03R	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW03R	04/11/05	450	0.4	**33000**	950	< 0.061	227	6.9	4.76	**320**	7.76	--
OW03R	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW03R	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW03R	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW03R	04/11/06	490	0.24	**16000**	260	< 0.11	93	6.79	0.616	**250**	8.47	--
OW03R	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW03R	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW03R	02/21/07	--	0.51	--	--	--	-242	6.42	0.788	--	8.75	--
OW03R	04/19/07	210	0.33	**10000**	--	< 0.096	137	6.47	1.387	87	9.31	--
OW03R	07/19/07	--	0.77	--	--	--	-93	6.62	0.63	--	13.18	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW03R	10/22/07	310	3.27	**27000**	1800	< 0.096	-91	6.71	3.01	120	14.37	--
OW03R	01/14/08	--	0.42	--	--	--	-83	6.76	0.622	--	9.49	--
OW03R	04/29/08	210	0.56	**13900**	--	2.1	-41	8.32	1.384	151	6.76	--
OW03R	10/29/08	141	1.22	**69600**	5880	< 0.096	-162	7.82	0.012	21.9	14.13	89.4
OW03R	04/13/09	362	0.22	**33300**	--	< 0.096	-87	6.43	5.09	244	7.28	100
OW03R	10/05/09	77.2	0.23	**53000**	6050	< 0.12	-81	6.66	0.575	5.7	14.33	39.3
OW03R	04/13/10	236	0.57	**41000**	--	< 0.12	-76	6.94	1.374	79	8.88	68.2
OW03R	10/19/10	252	0.29	**23600**	2290	0.38	140	6.99	0.975	63.8	14.82	10.7
OW03R	01/25/11	174	0.73	**11400**	--	0.15	18	8.13	0.467	31.5	3.98	55.1
OW03R	03/17/11	198	0.01	**14500**	--	< 0.25	-60	6.78	0.693	38.2	7.6	123
OW04	06/23/99	64	1.39	**15000**	--	0.07	106	8.86	0.203	15	13.95	--
OW04	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW04	02/01/00	63	--	**6800**	--	0.069	--	--	--	< 0.26	--	--
OW04	05/31/00	64	1.59	**9900**	--	< 0.069	143	6.85	0.3	< 0.38	10.57	--
OW04	08/31/00	54	1.02	**12000**	--	< 0.069	222	6.78	0.287	< 0.38	15.62	--
OW04	11/21/00	65	5.15	**12000**	--	< 0.069	169	6.84	0.26	< 0.38	11.32	--
OW04	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW04	04/02/02	--	3.39	**5100**	--	0.029	269	7.32	0.317	8.9	6.53	--
OW04	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW04	10/28/02	--	3.69	**15000**	--	< 0.022	314	7.36	0.38	2.7	12.99	--
OW04	06/16/03	--	0.36	**5600**	--	< 0.047	82	--	0.111	2.6	10.32	--
OW04	11/20/03	--	--	**11000**	--	0.052	--	--	--	< 1.1	--	--
OW04	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW04	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW04	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW04	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW04	04/11/05	140	0.39	**18000**	2800	< 0.061	259	6.96	0.5	1.6	7.51	--
OW04	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW04	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW04	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW04	04/11/06	110	0.24	**22000**	2300	< 0.11	117	6.84	2.54	2.3	8.26	--
OW04	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW04	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW04	02/21/07	--	0.41	--	--	--	-259	7.08	0.549	--	6.98	--
OW04	04/19/07	110	0.39	**15000**	--	< 0.096	106	6.33	0.35	1.8	9.04	--
OW04	07/19/07	--	0.76	--	--	--	-95	6.79	0.262	--	13.28	--
OW04	10/22/07	120	4.1	**9500**	2800	< 0.096	-94	6.84	0.234	< 0.51	13.52	--
OW04	01/14/08	--	--	--	--	--	-104	6.6	1.067	--	7.26	--
OW04	04/28/08	--	--	--	--	--	--	--	--	--	--	--
OW04	10/29/08	102	1.22	**28600**	3930	< 0.096	-138	7.52	0.621	1.9	13.58	26.3
OW04	04/13/09	115	0.76	**14100**	--	< 0.096	-72	6.9	0.433	4	6.83	46.3
OW04	10/05/09	83.8	0.6	**24400**	3300	< 0.12	-55	6.49	0.437	2	14.31	43.1
OW04	04/13/10	155	1.66	**27400**	--	< 0.12	-87	7.03	0.79	7.1	7.98	88.9
OW04	10/19/10	99.6	0.22	**18200**	2290	< 0.12	83	7.15	0.433	< 2	15.43	28.2
OW04	01/20/11	113	1.9	**20100**	--	< 0.25	-27	7.48	0.455	2.7	6.57	34.2
OW04	03/17/11	116	0.55	**15800**	--	< 0.25	-70	6.78	0.468	2.3	7.4	89.2
OW05R	06/22/99	--	--	--	--	--	--	--	--	--	--	--
OW05R	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW05R	02/01/00	388	--	**154000**	293	< 0.069	--	--	--	**2220**	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site

1111 Crosby Avenue, Stevens Point, Wisconsin

USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW05R	05/31/00	346	1.91	**49000**	153	< 0.069	164	6.66	3.811	**2030**	10.78	--
OW05R	08/31/00	352	4.66	**52000**	264	< 0.069	270	6.65	3.972	**2070**	17.12	--
OW05R	11/21/00	357	2.84	**69000**	349	0.13	201	6.5	3.811	**989**	11.21	--
OW05R	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW05R	04/02/02	--	3.67	**32000**	150	0.044	194	7.3	2.754	**1400**	6.56	--
OW05R	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW05R	10/28/02	--	0.77	**16000**	120	0.38	373	7.35	1.1	**940**	13.34	--
OW05R	06/16/03	--	2.22	24	11	1.8	102	--	0.639	**270**	10.07	--
OW05R	11/20/03	--	--	**33000**	420	< 0.047	--	--	--	**770**	--	--
OW05R	04/20/04	320	1.74	**8700**	42	0.3	-76	6.86	1.297	**420**	8.41	--
OW05R	07/20/04	360	0.67	**8400**	45	0.94	11	7.23	1.52	**470**	14.11	--
OW05R	10/12/04	300	0.59	**34000**	690	< 0.063	213	7.4	1.55	**480**	13.15	--
OW05R	01/25/05	300	1.22	**27000**	1100	< 0.063	139.3	7.98	0.392	**310**	9.23	--
OW05R	04/11/05	360	0.32	**30000**	190	< 0.061	269	6.82	0.36	**410**	10.21	--
OW05R	07/11/05	350	2.06	**23000**	34	< 0.061	75	7.68	1.41	**340**	14.06	--
OW05R	10/03/05	350	1.1	**11000**	49	< 0.061	-8	7.48	1.39	**400**	18.25	--
OW05R	01/05/06	300	1.25	**20000**	55	0.083	283	7.11	1.4	**380**	6.7	--
OW05R	04/11/06	350	1.06	**22000**	97	< 0.11	-153	6.57	1.311	**250**	8.06	--
OW05R	07/21/06	210	0.21	**3700**	2500	< 0.56	42	6.71	0.767	12	12.83	--
OW05R	10/04/06	200	0.24	**36000**	3700	< 0.11	-54	6.86	0.7	5.2	13.65	--
OW05R	02/21/07	--	1.68	--	--	--	-210	6.54	1.012	--	7.21	--
OW05R	04/19/07	300	2.28	**7400**	--	< 0.096	106	6.57	1.084	**270**	7.47	--
OW05R	07/19/07	--	0.8	--	--	--	-106	6.76	0.632	--	11.72	--
OW05R	10/22/07	200	--	**30000**	1800	0.11	-134	6.9	0.587	16	13.23	--
OW05R	01/14/08	--	--	--	--	--	--	--	--	--	--	--
OW05R	04/29/08	235	1.25	**7200**	--	< 0.096	-40	6.48	0.976	206	5.15	--
OW05R	08/12/08	167	0.24	**32700**	--	< 0.096	-70	6.35	0.6	4.2	12.88	80.1
OW05R	10/29/08	224	--	**47000**	2810	< 0.096	-127	6.77	0.78	44.6	13.01	28.3
OW05R	04/13/09	252	0.77	**15800**	--	< 0.096	-85	6.89	0.862	145	5.7	5.1
OW05R	10/05/09	251	0.24	**26900**	741	< 0.12	-53	6.62	1.51	83	13.83	45.5
OW05R	04/14/10	258	1.12	**17000**	--	< 0.12	-83	7.13	0.973	60.4	7.6	66.5
OW05R	10/19/10	350	0.2	**16400**	278	< 0.12	102	7.11	0.883	108	15.09	26.5
OW05R	01/25/11	339	1.01	**18500**	--	< 0.25	-36	8.64	0.718	94.2	4.04	25.4
OW05R	03/17/11	283	0.88	**21700**	--	< 0.25	-43	6.72	0.94	108	7.1	49.3
OW06	06/23/99	--	2.14	--	--	--	94	8.82	0.522	--	13.12	--
OW06	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW06	02/01/00	--	--	--	--	--	--	--	--	--	--	--
OW06	05/31/00	--	3.4	--	--	--	281	6.21	0.239	--	12.04	--
OW06	08/31/00	--	3.6	--	--	--	196	6.83	1.034	--	14.34	--
OW06	11/21/00	--	5.73	--	--	--	199	6.49	0.337	--	12	--
OW06	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW06	04/02/02	--	4.58	--	--	--	234	7.28	0.38	--	6.47	--
OW06	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW06	10/28/02	--	4.19	--	--	--	290	7.05	0.484	--	13.41	--
OW06	06/16/03	--	1.78	--	--	--	120	--	0.171	--	9.19	--
OW06	11/20/03	--	--	--	--	--	--	--	--	--	--	--
OW06	07/20/04	130	0.41	**9300**	2000	< 0.063	-2	7.49	0.353	3.7	11.68	--
OW06	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW06	01/25/05	--	--	--	--	--	--	--	--	--	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW06	04/11/05	110	0.38	**12000**	4900	< 0.061	119	6.66	0.001	4.9	7.44	--
OW06	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW06	10/03/05	350	0.34	**4100**	1600	< 0.061	-329	6.56	0.88	11	16.93	--
OW06	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW06	04/11/06	95	0.33	**11000**	6800	< 0.11	-126	5.98	0.494	6.2	7.4	--
OW06	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW06	10/04/06	190	0.44	**16000**	6100	< 0.11	-77	5.94	0.54	6.4	14.04	--
OW06	02/21/07	--	0.38	--	--	--	-241	6.55	0.571	--	7.27	--
OW06	04/19/07	93	0.31	**10000**	--	< 0.096	75	6.02	0.898	8.6	8	--
OW06	07/19/07	--	0.87	--	--	--	-71	6.22	0.531	--	12.49	--
OW06	10/22/07	290	1.84	**5000**	5300	< 0.096	-44	6.44	0.598	7.6	13.56	--
OW06	01/14/08	--	0.34	--	--	--	-61	6.45	0.53	--	9.03	--
OW06	04/29/08	338	1.55	**7780**	--	< 0.096	-105	7.75	0.717	7.4	7.17	--
OW06	08/12/08	294	0.44	**5540**	--	< 0.096	-70	6.7	0.681	4.2	11.81	20.4
OW06	10/29/08	243	--	**8920**	5880	< 0.096	-116	6.59	0.994	7.9	13.15	5.8
OW06	04/13/09	89.9	0.39	**7180**	--	< 0.096	-89	6.5	0.538	8	6.44	4
OW06	10/05/09	242	0.44	**5920**	7390	< 0.12	-44	6.43	0.62	6.9	13.75	0
OW06	04/13/10	65.2	0.65	**8610**	--	< 0.12	-81	6.83	0.363	7.9	7.79	105
OW06	10/19/10	324	0.35	**4550**	2680	< 0.12	85	7.41	0.854	< 2	14.51	7.2
OW06	01/19/11	328	2.4	**4270**	--	< 0.25	-23	7.98	0.653	2.4	7.39	2.6
OW06	03/17/11	121	0.07	**8210**	--	< 0.25	-19	6.48	0.426	2.3	9	24.3
OW07A	06/23/99	180	1.27	**19000**	6500	0.2	104	8.85	0.66	18	12.53	--
OW07A	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW07A	02/01/00	94	--	**8700**	12000	0.071	--	--	--	< 0.26	--	--
OW07A	05/31/00	106	2.72	**5300**	8300	< 0.069	178	6.55	0.343	< 0.38	10.54	--
OW07A	08/31/00	223	8.65	**14000**	7140	< 0.069	192	6.81	1.081	< 0.38	7.35	--
OW07A	11/21/00	127	4.53	**8400**	8820	< 0.069	193	6.47	0.44	< 0.38	10.81	--
OW07A	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW07A	04/02/02	--	2.96	**6400**	7800	0.026	226	7.21	0.391	5.4	6.57	--
OW07A	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW07A	10/28/02	--	4.92	**20000**	5200	< 0.022	385	7.14	0.507	< 1.1	13.96	--
OW07A	06/16/03	--	1.05	**4300**	2600	< 0.047	110	--	0.278	3	8.82	--
OW07A	11/20/03	--	--	**12000**	5700	0.06	--	--	--	< 1.1	--	--
OW07A	04/20/04	94	2.75	**8400**	3200	< 0.063	-119	6.72	0.487	2.3	7.17	--
OW07A	07/20/04	250	0.46	**20000**	3500	< 0.063	20	7.33	0.973	0.67	13.03	--
OW07A	10/12/04	210	1.13	**25000**	6400	< 0.063	195	7.42	0.91	3.5	14.64	--
OW07A	01/25/05	130	1.21	**12000**	4900	< 0.063	92	8.07	1.447	0.96	9.28	--
OW07A	04/11/05	110	0.26	**8300**	6100	< 0.061	113	6.67	0.54	1.3	7.77	--
OW07A	07/11/05	150	0.73	**16000**	5400	< 0.061	70	7.64	0.25	< 0.83	14.69	--
OW07A	10/03/05	210	0.44	**26000**	7100	< 0.061	-319	6.18	1.26	< 0.83	17.59	--
OW07A	01/05/06	130	0.78	**13000**	4900	< 0.061	237	6.68	0.61	1.9	8.82	--
OW07A	04/11/06	100	0.7	**8200**	7100	< 0.11	-157	6.4	0.507	2.2	7.29	--
OW07A	07/21/06	120	0.33	**14000**	5300	< 0.11	53	5.95	0.805	1.6	13.15	--
OW07A	10/04/06	180	0.4	**20000**	12000	< 0.11	-45	7.03	1.04	2.1	14.88	--
OW07A	02/21/07	--	0.48	--	--	--	-250	7.43	0.342	--	7.95	--
OW07A	04/19/07	100	0.49	**8100**	--	< 0.096	126	6.32	0.508	2.1	7.71	--
OW07A	07/19/07	--	1.13	--	--	--	-114	6.13	0.772	--	12.86	--
OW07A	10/22/07	220	1.12	**17000**	7000	< 0.096	-54	6.44	1.003	< 0.51	14.29	--
OW07A	01/14/08	--	--	--	--	--	-124	6.32	0.466	--	9.71	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site

1111 Crosby Avenue, Stevens Point, Wisconsin

USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved ^{2} (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW07A	04/29/08	164	0.81	**19800**	--	< 0.096	-114	6.19	1.5	28.4	--	--
OW07A	08/12/08	203	0.87	**18800**	--	< 0.096	-65	6.31	1.27	2.2	13.31	18.3
OW07A	10/29/08	180	0.66	**19600**	10200	< 0.096	-111	6.4	0.905	< 0.51	13.29	6.9
OW07A	04/13/09	112	2.95	**7130**	--	< 0.096	-86	2.85	0.668	9.1	6.45	79.4
OW07A	10/05/09	167	0.41	**18400**	7800	< 0.12	-56	6.52	1.097	< 2	14.17	6.7
OW07A	04/13/10	118	-84	**7880**	--	< 0.12	152	6.23	0.565	2.3	6.16	19.4
OW07A	10/19/10	295	0.63	**21100**	6450	< 0.12	103	6.73	1.198	< 2	14.49	0.9
OW07A	01/19/11	202	2.4	**17700**	--	< 0.25	-14	8.59	0.673	2.3	2.55	10
OW07A	03/17/11	124	0	**8890**	--	< 0.25	-29	6.41	0.475	2.1	8.5	17.9
OW08	06/23/99	56	2.48	**29000**	--	0.33	116	8.8	0.26	4.9	14.85	--
OW08	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW08	02/01/00	85	--	**15000**	--	< 0.069	--	--	--	< 0.26	--	--
OW08	05/31/00	107	2.2	**20000**	--	< 0.069	141	6.92	0.395	0.52	11.82	--
OW08	08/31/00	101	3.52	**28000**	--	< 0.069	159	6.87	0.465	5.8	14.31	--
OW08	11/21/00	95	8.73	**19000**	--	< 0.069	166	6.84	0.294	0.51	12.89	--
OW08	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW08	04/02/02	--	--	--	--	--	--	--	--	--	--	--
OW08	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW08	10/28/02	--	2.4	**23000**	--	< 0.022	266	6.97	0.277	< 1.1	14.19	--
OW08	06/16/03	--	1.52	**14000**	--	< 0.047	67	--	0.118	< 1.1	12.21	--
OW08	11/20/03	--	--	**35000**	--	0.05	--	--	--	< 1.1	--	--
OW08	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW08	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW08	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW08	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW08	04/11/05	70	0.62	**24000**	2300	< 0.061	236	6.63	0.32	< 0.83	7.47	--
OW08	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW08	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW08	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW08	04/11/06	58	0.46	**40000**	2900	< 0.11	-169	6.23	0.727	< 0.77	8.5	--
OW08	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW08	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW08	02/22/07	--	0.62	--	--	--	-240	6.91	0.725	--	6.6	--
OW08	04/20/07	62	0.46	**29000**	--	< 0.096	143	6.54	0.311	< 0.51	9.32	--
OW08	07/19/07	--	0.67	--	--	--	-117	6.77	0.886	--	16.6	--
OW08	10/22/07	77	2.37	**36000**	3500	< 0.096	-92	6.7	0.573	< 0.51	14.89	--
OW08	01/14/08	--	--	--	--	--	-103	6.84	0.777	--	7.38	--
OW08	04/28/08	--	--	--	--	--	--	--	--	--	--	--
OW08	04/13/10	--	--	--	--	--	--	--	--	--	--	--
OW08	10/19/10	--	--	--	--	--	--	--	--	--	--	--
OW09	06/23/99	140	0.64	**21000**	--	0.62	125	8.59	0.517	42	11.01	--
OW09	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW09	02/01/00	127	--	**14000**	--	0.079	--	--	--	6.1	--	--
OW09	05/31/00	197	2.53	**23000**	--	< 0.069	143	6.62	0.775	68	11.01	--
OW09	08/31/00	107	3.41	**28000**	--	< 0.069	201	7.04	0.562	73	13.98	--
OW09	11/21/00	163	2.31	**24000**	--	< 0.069	208	6.49	0.811	75	13.39	--
OW09	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW09	04/02/02	--	3.82	**14000**	--	0.043	258	7.62	1.005	**250**	10.07	--
OW09	07/22/02	--	--	--	--	--	--	--	--	--	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site

1111 Crosby Avenue, Stevens Point, Wisconsin

USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW09	10/28/02	--	3.45	**20000**	--	< 0.022	201	6.95	0.68	**270**	13.13	--
OW09	06/16/03	--	0.58	**16000**	--	0.34	124	--	0.589	200	9.59	--
OW09	11/20/03	--	--	**13000**	--	0.048	--	--	--	230	--	--
OW09	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW09	07/20/04	210	0.66	**12000**	750	< 0.063	34	7.29	1.111	**250**	11.8	--
OW09	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW09	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW09	04/12/05	210	0.8	**8800**	1900	< 0.061	153	6.81	0.63	2.2	9.76	--
OW09	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW09	10/03/05	230	0.28	**11000**	3300	< 0.061	-372	6.24	0.67	15	15.05	--
OW09	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW09	04/11/06	250	0.14	**10000**	2100	< 0.11	68	6.56	0.793	15	10.17	--
OW09	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW09	10/04/06	230	0.61	**13000**	3700	< 0.11	-61	6.08	0.87	6.9	13	--
OW09	02/21/07	--	-223	--	--	--	0.4	6.5	0.729	--	10.32	--
OW09	04/19/07	210	0.33	**9100**	--	< 0.096	115	6.11	0.538	8.1	11.68	--
OW09	07/19/07	--	0.89	--	--	--	-75	6.79	0.567	--	11.76	--
OW09	10/22/07	200	2.33	**12000**	3400	< 0.096	-46	6.53	0.522	4.4	12.49	--
OW09	01/14/08	--	--	--	--	--	-94	6.95	0.591	--	10.55	--
OW09	04/29/08	158	0.36	**14200**	--	< 0.096	-117	7.68	0.447	2.8	9.34	--
OW09	08/12/08	165	0.67	**20200**	--	< 0.096	-62	6.5	0.581	4.7	11.55	9.1
OW09	10/29/08	185	1.33	**18800**	5320	< 0.096	-176	8.4	0.56	7.3	12.47	6.2
OW09	04/13/09	220	0.25	**14800**	--	< 0.096	-82	6.5	0.648	4.6	9.48	19.4
OW09	10/05/09	114	0.35	**29800**	4180	< 0.12	-34	6.48	0.947	3.1	12.46	0
OW09	04/13/10	173	0.51	**12500**	--	< 0.12	-94	7.03	0.576	2.1	10.69	6
OW09	10/19/10	182	0.48	**19500**	2150	< 0.12	112	7.15	0.58	4.6	14.02	3
OW09	01/20/11	261	1.38	**13900**	--	< 0.25	-40	7.29	0.397	2.7	9.93	5.1
OW09	03/17/11	206	0.09	**17500**	--	< 0.25	-60	6.63	0.748	4.6	10.9	8.5
OW10	06/23/99	880	1.94	**340**	--	0.35	133	8.45	0.659	73	11.53	--
OW10	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW10	02/01/00	988	--	**5500**	--	0.099	--	--	--	2.2	--	--
OW10	05/31/00	1030	3.02	**890**	--	< 0.069	178	7.07	6.251	32	11.05	--
OW10	08/31/00	704	0.91	**1900**	--	< 0.069	155	7.11	6.588	31	13.61	--
OW10	11/21/00	921	2.5	**880**	--	< 0.069	150	6.91	6.22	11	13.39	--
OW10	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW10	04/02/02	--	5.01	**1200**	--	0.16	296	7.52	7.364	16	8.88	--
OW10	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW10	10/28/02	--	1.98	**1500**	--	0.041	275	6.95	1.412	51	13.26	--
OW10	06/16/03	--	1.24	< 18	--	0.14	52	--	3.39	210	10.39	--
OW10	11/20/03	--	--	**44000**	--	0.061	--	--	--	9.5	--	--
OW10	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW10	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW10	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW10	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW10	04/12/05	670	0.22	**13000**	2000	< 0.061	67	7.2	6.82	16	8.44	--
OW10	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW10	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW10	04/11/06	890	0.51	**17000**	3200	< 0.11	101	6.76	9.13	4.4	8.99	--
OW10	07/21/06	--	--	--	--	--	--	--	--	--	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW10	10/04/06	410	0.24	**18000**	1900	< 0.11	-67	7.08	5.69	9.5	13.62	--
OW10	02/21/07	--	0.29	--	--	--	-289	6.77	7.09	--	10.02	--
OW10	04/19/07	840	0.53	**12000**	--	< 0.096	80	6.58	9.19	7.2	9.32	--
OW10	07/19/07	--	0.69	--	--	--	-104	6.89	1.028	--	11.99	--
OW10	10/23/07	410	2.63	**20000**	2800	< 0.096	-115	6.63	3.88	5.9	13.13	--
OW10	01/14/08	--	0.24	--	--	--	-96	7.05	4.98	--	10.8	--
OW10	04/29/08	2330	1.7	**2550**	--	0.81	-20	6.75	13.59	**408**	6.54	--
OW10	08/12/08	163	0.15	**8390**	--	< 0.096	-67	6.61	0.623	21.5	12.02	8.7
OW10	10/29/08	353	0.31	**18300**	4370	< 0.096	-106	6.84	3.53	13.9	13.16	4.2
OW10	04/13/09	468	0.42	**9650**	--	< 0.096	-113	7.13	6.84	19.1	8.56	--
OW10	10/05/09	163	0.16	**9490**	6950	< 0.12	-81	6.86	1.67	< 2	12.35	6.4
OW10	04/13/10	832	5.44	**12800**	--	< 0.12	-95	7.15	13.27	55	8.94	128
OW10	10/19/10	688	0.32	**9520**	2110	< 0.12	60	7.47	6.08	91.9	12.41	7.1
OW10	01/18/11	614	0.65	**10000**	--	< 0.25	-97	7.59	5.8	73	7.34	9.9
OW10	03/16/11	778	0.21	**10500**	--	< 0.25	-98	6.74	8.72	192	8.8	31.8
OW11	06/22/99	--	--	--	--	--	--	--	--	--	--	--
OW11	01/31/00	--	--	--	--	--	--	--	--	--	--	--
OW11	02/01/00	74	--	**7900**	975	< 0.069	--	--	--	< 0.26	--	--
OW11	05/31/00	120	1.72	**16000**	591	< 0.069	149	6.86	0.654	1.2	9.21	--
OW11	08/31/00	94	1.81	**30000**	1550	< 0.069	197	6.92	0.368	15	16.37	--
OW11	11/21/00	99	2.1	**17000**	1040	< 0.069	146	6.76	0.542	3.4	14.18	--
OW11	04/01/02	--	--	--	--	--	--	--	--	--	--	--
OW11	04/02/02	--	3.25	**12000**	610	0.043	164	7.47	0.597	5	6.98	--
OW11	07/22/02	--	--	--	--	--	--	--	--	--	--	--
OW11	10/28/02	--	2.31	**14000**	360	0.1	2.68	6.92	0.489	7.2	16.59	--
OW11	06/16/03	--	1.18	**16000**	820	< 0.047	84	--	0.373	5.7	9.73	--
OW11	11/20/03	--	--	**22000**	1200	< 0.047	--	--	--	< 1.1	--	--
OW11	04/20/04	--	--	--	--	--	--	--	--	--	--	--
OW11	07/20/04	150	1.29	**18000**	410	0.38	163	6.8	0.858	16	14.13	--
OW11	10/12/04	--	--	--	--	--	--	--	--	--	--	--
OW11	01/25/05	--	--	--	--	--	--	--	--	--	--	--
OW11	04/11/05	170	0.52	**34000**	420	< 0.061	77	6.98	1.12	4.1	7.77	--
OW11	07/11/05	--	--	--	--	--	--	--	--	--	--	--
OW11	10/03/05	--	--	--	--	--	--	--	--	--	--	--
OW11	01/05/06	--	--	--	--	--	--	--	--	--	--	--
OW11	04/11/06	110	0.32	**26000**	670	< 0.11	74	6.5	1.275	5	8.72	--
OW11	07/21/06	--	--	--	--	--	--	--	--	--	--	--
OW11	10/04/06	--	--	--	--	--	--	--	--	--	--	--
OW11	02/21/07	--	0.54	--	--	--	-281	6.84	1.096	--	8.29	--
OW11	04/19/07	170	0.36	**27000**	--	< 0.096	89	6.2	1.118	2.2	8.17	--
OW11	07/19/07	--	0.85	--	--	--	-88	6.82	1.52	--	14.52	--
OW11	10/22/07	160	3	**18000**	880	< 0.096	-89	6.74	1.069	2.2	16.6	--
OW11	01/14/08	--	0.41	--	--	--	-99	7.11	0.661	--	9.94	--
OW11	04/28/08	--	--	--	--	--	--	--	--	--	--	--
OW11	10/29/08	123	1.32	**28000**	1870	< 0.096	-180	8.19	0.926	< 0.51	15.75	11.9
OW11	04/13/09	124	0.57	**23900**	--	< 0.096	-111	7.2	0.727	2.2	6.67	0.4
OW11	10/05/09	138	0.38	**13300**	523	< 0.12	-72	6.64	1.089	2.8	16.38	14.8
OW11	04/13/10	135	0.95	**17700**	--	< 0.12	-101	7.31	0.865	2	8.08	61.6
OW11	10/19/10	110	0.37	**20000**	940	< 0.12	81	7.02	0.771	< 2	17.32	10.1

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW11	01/25/11	111	0.95	**15100**	--	< 0.25	-60	8.23	0.673	2.2	6.33	13.2
OW11	03/17/11	191	0.18	**16700**	--	< 0.25	-98	6.9	1.2	6.7	8.2	19.7
OW12	07/20/04	--	--	--	--	--	--	--	--	--	--	--
OW12	10/12/04	180	0.48	**11000**	1300	< 0.063	219	7.5	0.86	6.6	15.51	--
OW12	01/25/05	170	2.13	**15000**	2200	< 0.063	139.7	7.51	0.73	2.5	10.34	--
OW12	04/11/05	--	--	--	--	--	--	--	--	--	--	--
OW12	04/12/05	97	1.14	**28000**	1600	< 0.061	56	6.97	1.68	3.1	8.27	--
OW12	07/11/05	170	1.47	**17000**	1300	< 0.061	91	6.8	1.54	3.4	13.71	--
OW12	10/03/05	150	0.61	**19000**	1700	< 0.061	-13	7.77	0.7	< 0.83	20.13	--
OW12	01/05/06	150	0.52	**23000**	1800	0.07	251	6.72	146	4.4	11.18	--
OW12	04/11/06	39	4.04	< 50	< 10	0.2	114	6.37	1.64	7	10.14	--
OW12	07/21/06	180	0.15	**24000**	780	< 0.11	-79	6.21	2.38	17	14.68	--
OW12	10/04/06	160	1.53	**21000**	1900	< 0.11	-38	6.16	1.12	2.1	16.47	--
OW12	02/21/07	--	0.32	--	--	--	-234	6.58	0.738	--	9.8	--
OW12	04/19/07	200	0.39	**12000**	--	< 0.096	128	6.38	4.79	18	9.25	--
OW12	07/19/07	--	0.77	--	--	--	-76	6.54	2.12	--	14.95	--
OW12	10/22/07	230	2.25	**6400**	1500	0.11	-70	6.61	1.068	5.6	15.93	--
OW12	01/15/08	--	0.33	--	--	--	-43	7.4	0.321	--	12.02	--
OW12	04/29/08	183	0.14	**17100**	--	0.23	-139	7.97	4.34	15.8	7.95	--
OW12	08/12/08	202	0.14	**6590**	--	< 0.096	-51	6.63	1.7	18	14.75	49.6
OW12	10/30/08	139	1	**16200**	3330	< 0.096	-60	6.66	0.947	2.1	14.72	24.5
OW12	04/13/09	124	0.27	**21700**	--	< 0.096	-78	6.95	0.771	9.5	7.74	77.3
OW12	10/05/09	133	0.41	**19300**	2970	< 0.12	-72	6.66	0.926	3.2	15.56	11.9
OW12	04/14/10	190	0.36	**15800**	--	< 0.12	-99	7.16	1.086	5	8.49	19.9
OW12	10/19/10	137	0.28	**14400**	2350	< 0.12	104	7.08	0.786	< 2	16.19	43.2
OW12	01/19/11	160	1.17	**15200**	--	< 0.25	-32	7.25	0.946	3.8	9.88	53.2
OW12	03/17/11	165	5.43	**15500**	--	< 0.25	-87	6.87	0.68	2	9.3	71.4
OW14	07/25/07	--	1.19	--	--	--	-22	6.74	1.76	--	16.35	--
OW14	10/22/07	210	6.39	**2200**	790	< 0.096	-14	6.32	0.78	2	16.24	--
OW14	04/29/08	225	0.49	**5620**	--	0.22	-70	7.81	0.954	7.9	8.25	--
OW14	08/12/08	246	0.2	**3180**	--	1.1	-10	6.46	1.51	33.4	16.4	9.2
OW14	10/30/08	234	1.32	**11600**	2560	< 0.096	-174	8.77	1.33	16.3	15.58	11
OW14	04/13/09	191	0.32	**10600**	--	< 0.096	-56	6.78	1.168	4.5	8.28	0
OW14	10/05/09	373	0.22	**684**	681	3.3	28	6.7	1.8	40.2	17.41	9.1
OW14	04/13/10	344	0.37	**1100**	--	5.2	-2	6.94	2.06	35.2	9.47	10
OW14	10/19/10	293	--	**1500**	519	0.13	--	--	--	22.8	--	--
OW14	01/18/11	333	97	**1840**	--	1.4	96	7.07	1.164	17.8	6.31	36.2
OW14	03/16/11	98.2	0.55	**1340**	--	0.93	-21	6.82	4.59	17.5	8.2	88.1
OW15	07/24/07	--	1.16	--	--	--	-109	6.47	1.48	--	15.1	--
OW15	10/22/07	130	3.35	**22000**	260	< 0.096	-56	6.4	1.93	8.7	14.93	--
OW15	01/15/08	--	0.81	--	--	--	-34	6.96	1.5	--	10.75	--
OW15	04/29/08	128	0.24	**17100**	--	0.1	-72	6.78	1.434	5.7	7.56	--
OW15	08/12/08	91.1	1.73	**22100**	--	< 0.096	-70	6.48	1.89	12.4	14.48	55.7
OW15	10/30/08	148	1.2	**12200**	386	0.31	-161	8.73	1.8	8.4	14.14	50
OW15	04/13/09	166	1.1	**6640**	--	< 0.096	-60	7.09	1.031	3.7	8.68	74
OW15	10/05/09	116	0.46	**13400**	275	< 0.12	-60	6.77	1.75	6.6	15.1	18.4
OW15	04/13/10	134	1.89	**8780**	--	0.5	-78	7.02	1.543	10.2	9.29	87.6
OW15	10/19/10	193	1.26	16	< 0.93	4.2	243	7	2.47	24.3	15.9	15.5
OW15	01/19/11	237	2.97	30.5	--	0.3	10	7.5	1.271	9.1	9.43	19.1

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USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
OW15	03/17/11	226	2.33	95.4	--	2.3	66	7.04	1.93	13.2	9.1	73.6
OW16	07/24/07	--	1.29	--	--	--	24	6.46	0.132	--	20.96	--
OW16	10/22/07	79	2.86	**8200**	3300	< 0.096	-43	6.67	0.212	7.4	15.12	--
OW16	01/14/08	--	--	--	--	--	-84	7.03	0.197	--	5.71	--
OW16	04/29/08	31.8	1.75	**10400**	--	< 0.096	-25	5.37	0.258	14.1	9.21	--
OW16	10/29/08	65.6	0.3	**17400**	4020	< 0.096	-97	6.48	0.3	71.6	13.98	8.5
OW16	04/13/09	68.8	0.47	**13400**	--	< 0.096	-103	6.83	0.255	8.7	4.04	7
OW16	10/05/09	41.1	0.18	**5780**	3170	< 0.12	-64	6.73	0.231	6.4	16.73	75.9
OW16	04/14/10	29.4	0.51	**5180**	--	< 0.12	-41	7.07	0.193	6.7	5.33	130
OW16	10/19/10	22.4	1	**4260**	4560	< 0.12	159	6.75	0.153	5.2	15.37	37
OW16	01/19/11	34.6	1	**10700**	--	< 0.25	-18	8.46	0.162	7	1.21	32
OW16	03/16/11	43.5	0.35	**12300**	--	< 0.25	-59	6.6	0.233	5	4.1	187
OW17	07/24/07	--	1.04	--	--	--	-79	6.43	0.184	--	15	--
OW17	10/22/07	81	2.42	**5000**	7400	< 0.096	-47	6.58	0.204	< 0.51	15.74	--
OW17	01/14/08	--	--	--	--	--	-77	7.02	0.207	--	6.52	--
OW17	04/29/08	71.2	0.66	**6380**	--	< 0.096	-150	8.43	0.209	2.2	5.82	--
OW17	10/29/08	74.9	1.26	**5260**	5810	< 0.096	-202	8.63	0.229	10	14.79	39.4
OW17	04/13/09	61.6	0.39	**4540**	--	< 0.096	-109	6.9	0.226	8.5	5.99	5.1
OW17	10/05/09	74.1	0.31	**4580**	11400	< 0.12	-40	6.6	0.238	< 2	15.57	12.3
OW17	04/14/10	73.6	0.5	**4530**	--	< 0.12	-66	6.86	0.21	4	5.59	19.4
OW17	10/19/10	73.1	0.35	**5170**	8720	< 0.12	139	6.93	0.207	< 2	15.39	60.1
OW17	01/19/11	61.3	1.45	**6000**	--	< 0.25	-35	8.25	0.156	2.9	7.53	11.7
OW17	03/16/11	66.3	0	**4240**	--	< 0.25	-62	6.29	0.204	3.9	6.6	56.9
OW18	01/20/11	135	0.51	**5740**	--	0.32	-61	7.44	1.159	7.4	9.96	10.8
OW18	03/16/11	154	1.12	**6180**	--	< 0.25	-110	7.31	0.943	3.4	10.2	88.7
OW19	01/20/11	145	0.79	**22000**	--	< 0.25	-44	8.3	1.55	8.2	6.21	39.1
OW19	03/17/11	188	0.57	**27400**	--	< 0.25	-100	6.91	2.07	10.5	8.6	134
OW20	01/20/11	216	0.84	11.5	--	4.9	25	7.75	1.358	14.2	6.37	23.2
OW20	03/17/11	194	0.3	40	--	0.39	-15	7.09	1.71	8.4	10.2	8.8
OW21	01/20/11	279	2.25	17	--	1.3	-10	7.83	1.358	23.4	6.82	26.4
OW21	03/16/11	222	0.05	< 100	--	2.9	70	6.7	1.9	19.6	10.8	24
P05B	06/23/99	100	2.43	**2300**	1200	0.07	84	8.95	0.199	5.4	12.92	--
P05B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
P05B	02/01/00	107	--	**1900**	1140	< 0.069	--	--	--	8.3	--	--
P05B	05/31/00	118	2.98	32	62	< 0.069	107	7.27	0.282	0.8	11.18	--
P05B	08/31/00	119	1.84	**2700**	1430	< 0.069	175	7.28	0.306	1.9	15.05	--
P05B	11/21/00	121	3.8	**1200**	1210	< 0.069	174	7	0.329	2.2	12.33	--
P05B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
P05B	04/02/02	--	3.81	**1100**	780	< 0.014	168	7.65	0.345	12	8.23	--
P05B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
P05B	10/28/02	--	0.28	**4100**	610	< 0.022	367	7.81	0.235	< 1.1	13.46	--
P05B	06/16/03	--	1.28	**2900**	290	< 0.047	104	--	0.187	13	9.18	--
P05B	11/20/03	--	--	**4700**	750	< 0.047	--	--	--	< 1.1	--	--
P05B	04/20/04	150	1.6	**2500**	380	< 0.063	-83	6.98	0.355	0.71	9.6	--
P05B	07/20/04	150	0.83	**3500**	460	< 0.063	180	6.91	0.37	1.3	12.68	--
P05B	10/12/04	140	2.58	**3300**	640	< 0.063	245	7.64	0.37	0.77	10.08	--
P05B	01/25/05	150	1.81	**6400**	800	< 0.063	132.4	7.92	0.37	0.69	8.97	--
P05B	04/11/05	150	0.75	**1500**	160	< 0.061	94	6.94	1.23	< 0.83	6.89	--
P05B	07/11/05	140	0.77	**3600**	250	< 0.061	79	7.53	0.37	< 0.83	11.52	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
P05B	10/03/05	140	0.3	**3500**	560	< 0.061	-389	6.55	0.35	< 0.83	13.9	--
P05B	01/05/06	140	0.4	**880**	270	0.08	83	7.1	0.35	1.8	8.93	--
P05B	04/11/06	140	0.22	**1700**	230	< 0.11	84	6.74	0.361	1.9	10.01	--
P05B	07/21/06	130	0.24	**3800**	530	< 0.11	-10	6.02	0.371	< 0.77	11.72	--
P05B	10/04/06	130	1.39	**5100**	750	< 0.11	-62	6.15	0.37	< 0.77	11.56	--
P05B	02/21/07	--	0.39	--	--	--	-221	6.57	0.334	--	10.17	--
P05B	04/19/07	140	0.33	110	--	< 0.096	137	6.47	1.387	1.9	9.31	--
P05B	07/19/07	--	0.9	--	--	--	-80	6.86	0.309	--	11.03	--
P05B	10/22/07	120	--	**3800**	570	< 0.096	-115	7.35	0.316	< 0.51	11.46	--
P05B	01/14/08	--	2.07	--	--	--	165	7.14	0.326	--	9.45	--
P05B	04/28/08	129	0.63	**5200**	--	< 0.096	-133	7.96	0.339	2	9.74	--
P05B	08/12/08	140	0.28	**5180**	--	< 0.096	-37	6.37	0.351	< 0.51	11.67	1.6
P05B	10/29/08	123	1.04	**5990**	2020	< 0.096	-75	6.85	0.28	< 0.51	10.99	1.8
P05B	04/13/09	134	0.35	**812**	--	< 0.096	-37	6	0.33	1.9	9.25	26.5
P05B	10/05/09	106	0.46	**6440**	1130	< 0.12	-60	6.8	0.361	< 2	11.65	0
P05B	04/14/10	130	1.6	**4020**	--	< 0.12	-32	7.21	0.368	< 2	10.62	8.9
P05B	10/20/10	107	--	**7140**	495	< 0.12	--	--	--	< 2	--	--
P05B	01/25/11	129	3.3	**4460**	--	< 0.25	-26	8.81	0.305	< 4	7.56	8.5
P05B	04/13/09	134	0.35	**812**	--	< 0.096	-37	6	0.33	1.9	9.25	26.5
PZ03B	06/23/99	--	3.48	**2340**	--	--	214	7.59	0.17	--	15.12	--
PZ03B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
PZ03B	02/01/00	63	--	**6000**	--	< 0.069	--	--	--	< 0.26	--	--
PZ03B	05/31/00	70	3.08	**10000**	--	< 0.069	198	7.16	0.162	< 0.38	12.02	--
PZ03B	08/31/00	61	1.83	**4000**	2200	< 0.069	151	7.28	0.246	< 0.38	15.89	--
PZ03B	11/21/00	--	--	--	--	--	--	--	--	--	--	--
PZ03B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
PZ03B	04/02/02	--	3.19	**7200**	1400	0.017	246	7.41	0.171	3.3	8.27	--
PZ03B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
PZ03B	10/28/02	--	2.8	**9100**	1400	< 0.022	265	7.45	0.131	< 1.1	15.04	--
PZ03B	06/16/03	--	2.16	**8500**	410	< 0.047	90	--	0.089	< 1.1	9.86	--
PZ03B	11/20/03	--	--	**7700**	1400	0.048	--	--	--	< 1.1	--	--
PZ03B	04/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ03B	07/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ03B	10/12/04	--	--	--	--	--	--	--	--	--	--	--
PZ03B	01/25/05	--	--	--	--	--	--	--	--	--	--	--
PZ03B	04/11/05	78	2.6	**5800**	190	0.12	267	7.09	0.19	< 0.83	9.53	--
PZ03B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ03B	10/03/05	--	--	--	--	--	--	--	--	--	--	--
PZ03B	01/05/06	--	--	--	--	--	--	--	--	--	--	--
PZ03B	04/11/06	45	0.38	< 50	14	0.26	-50	6.41	0.181	9.9	8.98	--
PZ03B	07/21/06	--	--	--	--	--	--	--	--	--	--	--
PZ03B	10/04/06	--	--	--	--	--	--	--	--	--	--	--
PZ03B	02/21/07	--	0.52	--	--	--	-223	6.41	0.229	--	10.67	--
PZ03B	04/19/07	64	5.31	**4700**	--	0.17	154	6.44	0.167	2	11.45	--
PZ03B	07/19/07	--	0.88	--	--	--	-86	6.93	0.183	--	13.15	--
PZ03B	10/22/07	67	3.38	**9600**	1900	< 0.096	-108	6.99	0.205	< 0.51	12.21	--
PZ03B	01/14/08	--	--	--	--	--	-97	7.04	0.221	--	10.24	--
PZ03B	04/28/08	--	--	--	--	--	--	--	--	--	--	--
PZ03B	10/29/08	81.2	0.52	130	27.1	0.12	67	6.85	0.153	1.9	12.6	8.7

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
PZ03B	04/13/09	68.5	1.3	**8090**	--	< 0.096	-55	6.97	0.216	1.8	9.66	6.9
PZ03B	10/05/09	73.6	0.29	**7290**	179	< 0.12	-70	6.75	0.231	< 2	13.09	6.7
PZ03B	04/13/10	75.8	5.19	253	--	0.41	-36	6.91	0.203	2.1	9.42	86
PZ03B	10/19/10	67.1	0.59	**10400**	132	< 0.12	170	7.25	0.209	< 2	13.4	15.5
PZ03B	01/25/11	63.6	0.68	**11100**	--	< 0.25	-36	7.8	0.198	< 4	6.75	6.8
PZ03B	03/17/11	66.8	0.9	**12500**	--	< 0.25	-109	6.94	0.257	2	9.9	9.6
PZ07B	06/23/99	130	1.97	220	1600	0.17	113	8.85	0.177	11	11.69	--
PZ07B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
PZ07B	02/01/00	113	--	160	1530	< 0.069	--	--	--	< 0.26	--	--
PZ07B	05/31/00	125	3.2	65	1520	< 0.069	189	7.19	0.207	< 0.38	10.6	--
PZ07B	08/31/00	116	5.28	64	1820	< 0.069	172	7.35	0.298	< 0.38	9.8	--
PZ07B	11/21/00	120	4.18	91	1250	< 0.069	173	6.91	0.23	2.6	12.89	--
PZ07B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
PZ07B	04/02/02	--	3.92	**630**	960	< 0.014	189	7.66	0.241	3.3	7.23	--
PZ07B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
PZ07B	10/28/02	--	4.64	**1500**	850	< 0.022	281	7.35	0.15	< 1.1	14.8	--
PZ07B	06/16/03	--	1.11	**1700**	710	< 0.047	112	--	0.132	< 1.1	8.56	--
PZ07B	11/20/03	--	--	**2000**	1000	< 0.047	--	--	--	< 1.1	--	--
PZ07B	04/20/04	99	1.29	**2000**	1000	< 0.063	-109	7.25	0.227	0.72	9.63	--
PZ07B	07/20/04	97	2.73	**2900**	1100	< 0.063	188	7.05	0.236	< 0.37	11.79	--
PZ07B	10/12/04	47	0.55	**3100**	1500	< 0.063	222	7.58	0.24	53	12.3	--
PZ07B	01/25/05	120	2	**2200**	980	< 0.063	86.7	8.05	0.229	< 0.36	9.7	--
PZ07B	04/11/05	110	0.37	**1600**	1500	< 0.061	337	6.92	0.25	< 0.83	10.96	--
PZ07B	07/11/05	100	0.81	**3000**	1200	< 0.061	54	7.61	0.25	< 0.83	12.59	--
PZ07B	10/03/05	96	0.54	**3000**	1900	< 0.061	-83	7.31	0.26	< 0.83	16.57	--
PZ07B	01/05/06	95	0.4	**3000**	1200	< 0.061	63	7.33	0.25	< 0.83	10.01	--
PZ07B	04/11/06	94	0.17	**2000**	830	< 0.11	99	6.53	0.251	< 0.77	9.19	--
PZ07B	07/21/06	120	0.53	**1500**	1200	< 0.11	0.261	6.54	0.261	< 0.77	11.72	--
PZ07B	10/04/06	120	2.18	**1800**	1500	< 0.11	1	6.66	0.26	< 0.77	11.78	--
PZ07B	02/21/07	--	0.46	--	--	--	-224	6.94	0.228	--	9.72	--
PZ07B	04/19/07	110	0.34	**1800**	--	< 0.096	126	6.5	0.226	< 0.51	10.16	--
PZ07B	07/19/07	--	0.95	--	--	--	-68	6.87	0.205	--	11.85	--
PZ07B	10/22/07	150	2.3	**1300**	940	< 0.096	-89	6.93	0.249	< 0.51	11.94	--
PZ07B	01/14/08	--	0.64	--	--	--	26	7.06	0.222	--	10.54	--
PZ07B	04/28/08	93	1.63	**1900**	--	< 0.096	-66	7.88	0.222	< 0.51	7.67	--
PZ07B	08/12/08	108	0.29	**1700**	--	< 0.096	-78	6.95	0.275	< 0.51	11.92	7.5
PZ07B	10/29/08	121	2.26	**3040**	2780	< 0.096	-78	6.63	0.32	< 0.51	11.73	2.6
PZ07B	04/13/09	100	0.61	**2020**	--	< 0.096	-74	6.99	0.236	< 0.51	9.75	0
PZ07B	10/05/09	128	0.75	**2040**	1930	< 0.12	-50	6.76	0.268	< 2	11.82	0
PZ07B	04/13/10	96.8	0.82	**1330**	--	< 0.12	-5	6.95	0.254	2.6	9.22	11.7
PZ07B	10/19/10	129	--	**1860**	1150	< 0.12	--	--	--	< 2	--	--
PZ07B	01/19/11	129	1.27	**1930**	--	< 0.25	-43	8.54	0.23	< 4	7.32	0.3
PZ07B	03/17/11	96.3	1.29	**1210**	--	< 0.25	-49	6.81	0.261	< 4	9.6	8.2
PZ09B	06/23/99	110	3.55	< 24	--	< 0.017	181	7.78	0.424	10	12.07	--
PZ09B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
PZ09B	02/01/00	108	--	120	--	< 0.069	--	--	--	10	--	--
PZ09B	05/31/00	107	5.48	41	--	< 0.069	179	7.45	0.533	9.4	11.41	--
PZ09B	08/31/00	106	2.38	**1000**	86	< 0.069	206	6.62	0.717	7.6	12.8	--
PZ09B	11/21/00	111	11.2	120	--	< 0.069	402	7.5	0.559	4.9	12.89	--

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1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
PZ09B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
PZ09B	04/02/02	--	4.65	130	40	< 0.014	225	7.54	0.577	12	9.92	--
PZ09B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
PZ09B	10/28/02	--	3.26	< 61000	< 10	< 0.022	267	7	0.381	19	13.59	--
PZ09B	06/16/03	--	0.81	100	13	< 0.047	131	--	0.328	18	10.18	--
PZ09B	11/20/03	--	--	200	120	< 0.047	--	--	--	--	--	--
PZ09B	04/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ09B	07/20/04	110	2.73	**800**	< 10	< 0.063	356	6.91	0.532	9.1	13.46	--
PZ09B	10/12/04	--	--	--	--	--	--	--	--	--	--	--
PZ09B	01/25/05	--	--	--	--	--	--	--	--	--	--	--
PZ09B	04/12/05	120	7.77	**3300**	< 10	0.12	451	7.2	0.55	11	9.45	--
PZ09B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ09B	10/03/05	110	4.08	**3400**	< 10	0.066	33	7.28	0.57	11	15.15	--
PZ09B	01/05/06	--	--	--	--	--	--	--	--	--	--	--
PZ09B	04/11/06	110	4.64	**3200**	18	< 0.11	5	7.18	0.577	11	10.76	--
PZ09B	07/21/06	--	--	--	--	--	--	--	--	--	--	--
PZ09B	10/04/06	120	3.72	**4000**	77	< 0.11	-40	6.96	0.55	9.5	12.01	--
PZ09B	02/21/07	--	0.73	--	--	--	-225	6.59	0.462	--	10.88	--
PZ09B	04/19/07	130	1.45	**2700**	--	< 0.096	120	6.11	0.443	8.2	11.73	--
PZ09B	07/19/07	--	4.32	--	--	--	-27	7.29	0.423	--	11.91	--
PZ09B	10/22/07	110	4.1	**870**	< 10	< 0.096	-1	6.9	0.426	9	12.05	--
PZ09B	01/14/08	--	0.26	--	--	--	-2	6.95	0.447	--	10.57	--
PZ09B	04/28/08	121	6.74	**2090**	--	< 0.096	47	7.04	0.527	9	8.8	--
PZ09B	10/29/08	136	2.43	**1980**	35.7	< 0.096	-30	6.89	0.33	8.3	11.78	6.6
PZ09B	04/13/09	123	6.78	**1200**	--	< 0.096	22	7.47	0.441	7.6	9.98	0
PZ09B	10/05/09	109	3.57	**1310**	24.3	< 0.12	41	7.25	0.453	7	11.76	25.5
PZ09B	04/13/10	129	10.78	**931**	--	< 0.12	-45	7.3	0	6.9	11.41	271
PZ09B	10/19/10	138	0.52	**1100**	170	< 0.12	112	7.55	0.411	5.2	13.49	6.1
PZ09B	01/20/11	137	0.88	**989**	--	0.17	-30	7.29	0.342	6	9.22	3.3
PZ09B	03/17/11	136	8.73	**826**	--	< 0.25	-60	7.21	0.447	5.8	10.9	7.8
PZ10B	06/23/99	180	1.76	82	--	0.34	215	7.25	0.405	54	11.9	--
PZ10B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
PZ10B	02/01/00	--	--	< 8.9	--	--	--	--	--	--	--	--
PZ10B	05/31/00	84	5.04	200	--	< 0.069	246	7.59	0.357	20	10.86	--
PZ10B	08/31/00	118	8.47	66	--	< 0.069	172	7.83	0.375	18	11.55	--
PZ10B	11/21/00	123	7.26	< 15	--	0.097	155	7.21	0.368	15	12.36	--
PZ10B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
PZ10B	04/02/02	--	3.62	47	--	0.096	224	8.54	0.391	28	11.13	--
PZ10B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
PZ10B	10/28/02	--	7.72	< 61	--	0.12	--	7.4	0.302	18	14.04	--
PZ10B	06/16/03	--	2.89	290	--	0.12	89	--	0.213	16	11.69	--
PZ10B	11/20/03	--	--	110	--	0.16	--	--	--	16	--	--
PZ10B	04/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ10B	07/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ10B	10/12/04	--	--	--	--	--	--	--	--	--	--	--
PZ10B	01/25/05	--	--	--	--	--	--	--	--	--	--	--
PZ10B	04/12/05	150	8.27	< 17	< 10	0.11	4.61	7.17	0.42	15	9.17	--
PZ10B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ10B	10/03/05	--	--	--	--	--	--	--	--	--	--	--

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	Sample Date	Alkalinity, Total (mg/l)	Dissolved Oxygen (mg/l)	Iron, Dissolved [2] (µg/l)	Methane (µg/l)	Nitrogen, NO3 + NO2, Total (mg/l)	Oxidation Reduction Potential (mV)	PH, Field (Standard Units)	Specific Conductance, Field (mmhos/cm)	Sulfate, Total (mg/l)	Temperature, Water (Degrees Centigrade)	Turbidity, Quantitative (NTU)
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
PZ10B	01/05/06	--	--	--	--	--	--	--	--	--	--	--
PZ10B	04/11/06	120	0.49	< 50	< 10	0.17	-18	7.62	0.442	16	10.32	--
PZ10B	07/21/06	--	--	--	--	--	--	--	--	--	--	--
PZ10B	10/04/06	130	7.03	< 50	< 10	0.16	-19	6.67	0.44	16	13.95	--
PZ10B	02/21/07	--	6.2	--	--	--	-244	7.11	0.4	--	10.84	--
PZ10B	04/19/07	140	6.57	< 50	--	0.15	118	6.92	0.387	16	11.69	--
PZ10B	07/19/07	--	5.22	--	--	--	-19	7.54	0.346	--	12.6	--
PZ10B	10/23/07	140	5.16	< 25	< 10	0.17	-47	7.32	0.357	16	11.8	--
PZ10B	01/14/08	--	--	--	--	--	-40	7.36	0.393	--	8.96	--
PZ10B	04/28/08	135	6.62	< 6.9	--	< 0.096	-48	8.68	0.379	15.2	8.5	--
PZ10B	10/29/08	139	6.99	< 6.9	< 2	< 0.096	-148	9.58	0.369	14.4	12.01	6.1
PZ10B	04/13/09	136	6.99	16.4	--	< 0.096	7	7.65	0.392	13.8	8.9	11
PZ10B	10/05/09	126	5.86	3.7	< 0.93	0.14	15	7.3	0.38	14.1	12.1	0
PZ10B	04/13/10	139	7.73	< 8.3	--	< 0.12	-25	7.75	0.399	13.8	10.94	100.1
PZ10B	10/19/10	139	4.4	< 8.3	< 0.93	< 0.12	132	8	0.382	12.2	13	4.2
PZ10B	01/18/11	140	6.57	< 100	--	< 0.25	-20	8.2	0.324	12.4	8.43	0
PZ10B	03/16/11	146	6.8	< 100	--	< 0.25	-57	7.79	0.451	12.2	10.5	46.5
PZ11B	06/22/99	--	--	--	--	--	--	--	--	--	--	--
PZ11B	01/31/00	--	--	--	--	--	--	--	--	--	--	--
PZ11B	02/01/00	116	--	220	243	0.094	--	--	--	0.81	--	--
PZ11B	05/31/00	145	4.46	**300**	141	< 0.069	205	7.38	0.286	< 0.38	10.84	--
PZ11B	08/31/00	< 5.8	3.64	**3000**	4250	< 0.069	165	7.56	0.318	**5920**	17.2	--
PZ11B	11/21/00	155	5.44	**2600**	1980	< 0.069	128	7.1	0.3	3.4	14.71	--
PZ11B	04/01/02	--	--	--	--	--	--	--	--	--	--	--
PZ11B	04/02/02	--	3.34	**1500**	5500	0.044	195	7.55	0.339	5.1	9.2	--
PZ11B	07/22/02	--	--	--	--	--	--	--	--	--	--	--
PZ11B	10/28/02	--	3.19	270	970	0.041	251	7.07	0.214	5.8	15.74	--
PZ11B	06/16/03	--	1.59	**1300**	490	< 0.047	72	--	0.156	3.8	10.85	--
PZ11B	11/20/03	--	--	**4000**	590	< 0.047	--	--	--	5.4	--	--
PZ11B	04/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ11B	07/20/04	150	3.22	< 17	< 10	0.091	48	7.76	0.332	7.8	17.25	--
PZ11B	10/12/04	--	--	--	--	--	--	--	--	--	--	--
PZ11B	01/25/05	--	--	--	--	--	--	--	--	--	--	--
PZ11B	04/11/05	160	6.41	< 17	< 10	0.11	352	6.86	0.33	7.9	7.28	--
PZ11B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ11B	10/03/05	140	3.87	54	< 10	0.17	278	7.15	0.34	8.3	16.51	--
PZ11B	01/05/06	--	--	--	--	--	--	--	--	--	--	--
PZ11B	04/11/06	--	0.82	< 50	< 10	0.17	4	7.47	0.353	--	8.98	--
PZ11B	07/21/06	--	--	--	--	--	--	--	--	--	--	--
PZ11B	10/04/06	140	4.89	< 50	< 10	0.14	-32	7.03	0.34	9.5	12.26	--
PZ11B	02/21/07	--	5.72	--	--	--	-226	6.86	0.316	--	9.45	--
PZ11B	04/19/07	160	3.98	< 50	--	< 0.096	112	6.54	0.313	9.5	9.93	--
PZ11B	07/19/07	--	0.94	--	--	--	-50	7.41	0.282	--	12.87	--
PZ11B	10/22/07	140	1.38	54	< 10	< 0.096	-46	7.2	0.29	8.4	14.81	--
PZ11B	01/14/08	--	--	--	--	--	-74	7.36	0.32	--	9.91	--
PZ11B	04/28/08	--	--	--	--	--	--	--	--	--	--	--
PZ11B	10/29/08	151	2	12.6	< 2	< 0.096	45	7.37	0.254	7.7	14.33	38
PZ11B	04/13/09	149	4.9	8.5	--	< 0.096	43	7.48	0.322	8.9	7.05	14.5
PZ11B	10/05/09	132	5.52	22.7	< 0.93	< 0.12	-1	7.21	0.327	6.6	15.25	8.4

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
PZ11B	04/13/10	154	5.06	63.1	--	< 0.12	-67	8.14	0.324	6.8	9.41	40.2
PZ11B	10/19/10	156	2.5	< 8.3	< 0.93	< 0.12	142	7.6	0.312	5.9	14.13	13.6
PZ11B	01/25/11	156	0.73	**1400**	--	< 0.25	-79	9.21	0.27	6.5	4.45	18.5
PZ11B	03/17/11	152	5.75	< 100	--	< 0.25	-66	7.3	0.346	6.4	9.9	4.2
PZ12B	07/20/04	--	--	--	--	--	--	--	--	--	--	--
PZ12B	10/12/04	110	0.36	**330**	330	< 0.063	139	8	0.31	6.2	13.62	--
PZ12B	01/25/05	140	--	**510**	930	< 0.063	125.6	7.78	0.358	< 0.36	10.96	--
PZ12B	04/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ12B	04/12/05	150	1.09	**490**	120	< 0.061	400	7.08	0.36	1.8	10.56	--
PZ12B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ12B	10/03/05	27	0.26	9	< 10	0.24	-403	6.46	0.07	1.6	15.7	--
PZ12B	01/05/06	14	4.83	41	< 10	0.42	140	7.5	0.09	3.5	10.89	--
PZ12B	04/11/06	140	0.49	**16000**	590	< 0.11	-147	6.46	3.01	10	8.85	--
PZ12B	07/21/06	130	0.22	**1200**	820	< 0.11	6	6.58	0.314	1.6	12.44	--
PZ12B	10/04/06	130	0.67	**1400**	1000	< 0.11	-37	6.67	0.32	1.5	12.98	--
PZ12B	02/21/07	--	2.9	--	--	--	-158	6.6	0.271	--	11.11	--
PZ12B	04/19/07	150	0.75	**730**	--	< 0.096	151	6.61	0.301	1.5	12.1	--
PZ12B	07/19/07	--	1.26	--	--	--	-123	7.35	0.277	--	13.39	--
PZ12B	10/22/07	150	3.03	**800**	4500	< 0.096	-100	7.02	0.287	< 0.51	12.67	--
PZ12B	01/15/08	--	--	--	--	--	-105	7.04	0.841	--	11.41	--
PZ12B	04/28/08	149	0.66	**659**	--	< 0.096	-62	7	0.375	2	9.75	--
PZ12B	08/12/08	145	--	**788**	--	< 0.096	-81	7.21	0.321	3.1	12.86	7.3
PZ12B	10/30/08	163	1.46	**969**	1320	< 0.096	-228	9.32	0.31	< 0.51	12.77	5.4
PZ12B	04/13/09	153	1.23	**386**	--	< 0.096	-69	7.35	0.437	2.3	10.14	0
PZ12B	10/05/09	132	0.41	**1370**	1460	< 0.12	-93	7.42	0.371	< 2	13.38	6.5
PZ12B	04/14/10	162	4.03	**608**	--	< 0.12	-93	7.75	0.367	2.1	10.75	0.2
PZ12B	10/20/10	150	0.3	**791**	1470	< 0.12	73	7.72	0.329	< 2	12.7	131
PZ12B	01/19/11	160	0.73	**746**	--	< 0.25	-56	7.96	0.411	2.5	8.15	1.1
PZ12B	03/17/11	157	0.02	**750**	--	< 0.25	-68	7.08	0.454	2.1	11	9
PZ13B	10/12/04	--	--	--	--	--	--	--	--	--	--	--
PZ13B	01/25/05	--	--	--	--	--	--	--	--	--	--	--
PZ13B	04/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ13B	07/11/05	--	--	--	--	--	--	--	--	--	--	--
PZ13B	10/03/05	180	0.88	210	36	< 0.061	-96	7.47	0.54	13	18.18	--
PZ13B	01/05/06	--	--	--	--	--	--	--	--	--	--	--
PZ13B	04/11/06	170	1.21	< 50	< 10	< 0.11	157	6.91	0.569	17	8.21	--
PZ13B	07/21/06	--	--	--	--	--	--	--	--	--	--	--
PZ13B	10/04/06	190	0.6	**430**	40	< 0.11	-8	7.14	0.58	27	14.49	--
PZ13B	02/22/07	--	2.7	--	--	--	-189	6.77	0.544	--	9.73	--
PZ13B	04/20/07	200	3	< 50	--	< 0.096	238	7.05	0.565	39	11.82	--
PZ13B	07/19/07	--	0.9	--	--	--	-15	7.41	0.526	--	13.95	--
PZ13B	10/22/07	220	3.57	< 25	< 10	0.12	-21	7.04	0.536	46	16.75	--
PZ13B	01/14/08	--	--	--	--	--	1	7.46	0.586	--	11.25	--
PZ13B	04/28/08	199	5.97	< 6.9	--	< 0.096	15	8.38	0.592	46.6	9.17	--
PZ13B	10/29/08	206	2.13	< 6.9	< 2	0.1	64	7.16	0.5	54.1	15.91	5.8
PZ13B	04/13/09	198	5.96	14.1	--	< 0.096	57	7.49	0.678	54.9	9.18	21.3
PZ13B	10/05/09	176	5.84	14	< 0.93	< 0.12	-3	7.23	0.663	61.4	17.12	0
PZ13B	04/14/10	210	7	< 8.3	--	< 0.12	38	7.57	0.701	61	10.62	7.6
PZ13B	10/19/10	205	0.45	< 8.3	6	< 0.12	190	7.62	0.707	63.4	14.65	6.3

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

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
PZ13B	01/19/11	199	1.69	< 100	--	< 0.25	13	8.18	0.571	55.2	7.33	1.9
PZ13B	03/16/11	193	5.67	9.4	--	< 0.25	80	7.18	0.737	47.5	11.2	7.5
PZ14B	07/25/07	--	--	--	--	--	--	--	--	--	--	--
PZ14B	10/22/07	130	--	**330**	< 10	5.8	--	--	--	20	--	--
PZ14B	04/28/08	159	5.87	**353**	--	< 0.096	14	6.92	0.625	16.4	9.88	--
PZ14B	08/12/08	136	4.26	34.6	--	0.24	10	6.53	0.368	16.4	21.25	53.5
PZ14B	10/30/08	141	3.55	39.3	< 2	0.23	110	6.72	0.32	16	11.12	15.7
PZ14B	04/13/09	148	2.77	99.4	--	< 0.096	2	7	0.547	15.4	11.56	118
PZ14B	10/05/09	128	5.27	**310**	9.1	< 0.12	2	6.76	0.474	15.4	13.19	42.6
PZ14B	04/13/10	141	2.48	< 8.3	--	< 0.12	81	6.92	0.192	16.6	16.13	138
PZ14B	10/19/10	139	3.83	< 8.3	< 0.93	< 0.12	209	7.28	0.432	15.1	13.89	18.7
PZ14B	01/18/11	116	2.46	80	--	< 0.25	159	6.75	0.574	17.3	7.03	16
PZ14B	03/16/11	134	2.28	< 100	--	< 0.25	70	7.28	0.91	17.6	9.9	109
PZ15B	07/24/07	--	1.13	--	--	--	-117	6.81	0.218	--	13.02	--
PZ15B	10/22/07	63	5.95	**15000**	2400	< 0.096	-99	6.78	0.235	< 0.51	12.58	--
PZ15B	01/15/08	--	--	--	--	--	-135	7.22	0.228	--	11.95	--
PZ15B	04/29/08	51.5	0.94	**11000**	--	< 0.096	-31	7.74	0.189	< 0.51	10.38	--
PZ15B	08/12/08	68.8	--	**20500**	--	< 0.096	-104	6.79	0.29	2.1	11.99	9.8
PZ15B	10/30/08	68.4	0.52	**20600**	4310	< 0.096	-122	7.05	0.232	< 0.51	12.22	2.7
PZ15B	04/13/09	25.4	0.29	**3860**	--	< 0.096	3	6.79	0.191	2	10.26	99.1
PZ15B	10/05/09	44.1	0.32	**20500**	1390	< 0.12	-108	6.86	0.258	< 2	14.55	1.1
PZ15B	04/13/10	39.1	0.67	236	--	0.27	40	7.59	0.191	2	11.81	150
PZ15B	10/19/10	52.7	0.4	**18600**	1180	< 0.12	48	7.6	0.256	< 2	12.93	13.6
PZ15B	01/19/11	48.6	0.6	**16800**	--	< 0.25	-51	7.41	0.206	2.6	9.18	1.4
PZ15B	03/17/11	57.6	1.48	**3500**	--	< 0.25	55	7.07	0.282	2.2	11.5	89.7
PZ16B	07/24/07	--	1	--	--	--	-122	6.94	0.194	--	12.29	--
PZ16B	10/22/07	81	1.9	**1200**	1900	< 0.096	-42	6.96	0.195	< 0.51	11.23	--
PZ16B	01/14/08	--	--	--	--	--	-81	7.32	0.22	--	9.03	--
PZ16B	04/29/08	101	0.47	**2440**	--	< 0.096	-180	8.66	0.205	2.2	9.6	--
PZ16B	10/29/08	102	1.6	**747**	3070	< 0.096	-159	8.56	0.233	< 0.51	10.9	5
PZ16B	04/13/09	76.2	0.39	81.1	--	0.16	75	6.58	0.207	4.2	8.88	6.9
PZ16B	10/05/09	72.2	1.06	**3160**	2590	< 0.12	-21	6.83	0.249	< 2	11.36	0
PZ16B	04/14/10	93.6	0.43	240	--	< 0.12	-35	7.46	0.256	2	10.34	11.1
PZ16B	10/20/10	91	0.46	**5340**	1880	< 0.12	94	7.52	0.258	< 2	12.01	6.8
PZ16B	01/19/11	71	0.97	**4860**	--	< 0.25	-26	8.61	0.211	< 4	4.5	1.1
PZ16B	03/16/11	96.2	1	**2600**	--	< 0.25	-15	6.87	0.259	2	11	10.7
TW01	10/30/08	203	1.28	< 6.9	2.2	0.45	-66	9.1	1.88	19	15.19	56.9
TW01	04/14/09	208	2.16	14.3	--	2.4	79	7.76	2.13	38	8.9	90
TW01	10/05/09	168	3.28	11.5	< 0.93	6.1	23	7.02	2.51	31.7	15.06	12.2
TW01	04/14/10	217	1.07	< 8.3	--	1	78	7.23	1.75	16.8	9.85	23.5
TW01	10/20/10	207	0.67	< 8.3	2.8	2.6	277	6.91	2.1	23.1	14.98	147
TW01	01/20/11	226	0.66	< 100	--	0.92	57	7.65	1.65	18.4	8.8	20.1
TW01	03/17/11	229	0.2	< 100	--	< 0.25	57	7.02	1.89	18.2	9.9	55

Table 10. Groundwater Results - Laboratory and Field MNA Parameters (After 1998)
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

		Laboratory and Field Monitored Natural Attenuation (MNA) Parameters										
Sample ID	**Sample Date**	**Alkalinity, Total (mg/l)**	**Dissolved Oxygen (mg/l)**	**Iron, Dissolved [2] (µg/l)**	**Methane (µg/l)**	**Nitrogen, NO3 + NO2, Total (mg/l)**	**Oxidation Reduction Potential (mV)**	**PH, Field (Standard Units)**	**Specific Conductance, Field (mmhos/cm)**	**Sulfate, Total (mg/l)**	**Temperature, Water (Degrees Centigrade)**	**Turbidity, Quantitative (NTU)**
Quality Standard[1]		NS	NS	300	NS	10	NS	NS	NS	250	NS	NS
TW02	10/30/08	215	1.39	40.9	< 2	0.2	-50	8.64	1.83	19	14.35	43.1
TW02	04/14/09	237	0.45	48	--	0.12	73	7.28	1.76	17.7	6.95	10.5
TW02	10/05/09	173	0.23	179	25.8	0.28	26	6.68	2.33	22.6	15.63	13.8
TW02	04/13/10	198	0.2	8.6	--	< 0.12	10	7.19	1.459	17.6	8.83	17.1
TW02	10/19/10	145	0.23	17.8	16.4	1.1	211	7.03	0.397	15.1	15.16	19.2
TW02	01/19/11	95.3	1.21	23.4	--	0.12	16	7.8	0.79	15.6	4	6.4
TW02	03/16/11	201	0.03	17.4	--	< 0.25	8	6.7	1.4	20	9.6	132

NOTES:
1) Parameters that attain or exceed the EPA Groundwater Quality Standards (MCL) are shown in bold.
2) If no MCL standard has been established, then the parameters that attain or exceed the NR 140 Wisconsin Groundwater Quality Enforcement Standard (ES) are identified in bold.
3) Reference the laboratory analytical report for a full list of compounds analyzed.

< 2.0: Parameter not detected above the limit of detection indicated.
NS: No standard established for this compound.
--: Analysis not performed.

Table 11. Groundwater Concentration Trends and Relationships
Wisconsin Public Service - Former Stevens Point Manufactured Gas Plant Site
1111 Crosby Avenue, Stevens Point, Wisconsin
USEPA WIN000509983 / BRRTS # 02-50-000079 / FID # 750081200

Location	Benzene Relationships	R^2	Trend/Relationship	Naphthalene Relationships	R^2	Trend/Relationship
OW-3	Time	0.2%	None	Time	13.3%	Decreasing/Slight
	GW Elevation	0.2%	None	GW Elevation	0.4%	None
OW-5	Time	6.5%	None	Time	26.4%	Decreasing/Moderate
	GW Elevation	37.2%	Inverse/Modrate	GW Elevation	27.1%	Inverse/Modrate
P-5B	Time	29.8%	Decreasing/Moderate	Time	4.4%	None
	GW Elevation	2.4%	None	GW Elevation	4.8%	None
OW-6	Time	16.9%	None	Time	4.9%	None
	GW Elevation	14.4%	None	GW Elevation	6.9%	None
OW-7	Time	<0.1%	None	Time	<0.1%	None
	GW Elevation	6.7%	None	GW Elevation	<0.1%	None
PZ-7B	Time	2.6%	None	Time	5.4%	None
	GW Elevation	1.0%	None	GW Elevation	8.6%	None
OW-9	Time	13.6%	None	Time	10.6%	Increasing/Slight
	GW Elevation	14.6%	None	GW Elevation	2.7%	None
OW-10	Time	31.3%	Increasing/Moderate	Time	32.7%	Increasing/Moderate
	GW Elevation	7.9%	None	GW Elevation	29.2%	Inverse/Moderate
PZ-11B	Time	50.9%	Decreasing/Strong	Time	40.2%	Decreasing/Strong
	GW Elevation	0.2%	None	GW Elevation	0.2%	None
OW-12	Time	0.3%	None	Time	<0.1%	None
	GW Elevation	<0.1%	None	GW Elevation	2.3%	None
PZ-12	Time	7.2%	None	Time	19.6%	Decreasing/Moderate
	GW Elevation	2.6%	None	GW Elevation	0.1%	None
OW-14	Time	72.2%	Decreasing/Strong	Time	34.3%	Decreasing/Moderate
	GW Elevation	0.4%	None	GW Elevation	22.4%	None

Notes:
1) "Decreasing" or "Increasing" trends indicate that concentrations show this particular trend at this location for the representative parameter. "Variable" indicates that concentrations fluctuate too much for a definite trend to have been observed.
2) "Direct" or "Inverse" indicate the relationship between concentrations and groundwater elevations at this location for the representative parameter. "Inconclusive" indicates that no definite relationship has been established based on the plotted data.

Table 12. Comparison of Benzene and Naphthalene Concentrations with MNA Indicator Parameters
Former Stevens Point MGP Site

Well	Benzene Concentration Range (µg/l)	Average Dissolved Oxygen (mg/l) (# of samples)	Average Oxidation Reduction Potential (millivolts) (# of samples)	Average Specific Conductance (mhos/cm) (# of samples)	Average Nitrogen, NO3 + NO2, Total (mg/l) (# of samples)	Average Dissolved Iron (µg/l) (# of samples)	Average Sulfate (mg/l) (# of samples)
OW01	< 0.5	0.71 (5)	58.80 (5)	0.84 (5)	0.32 (5)	12,604 (5)	75.0 (5)
	< 5	0.93 (8)	-58.25 (8)	0.95 (8)	1.34 (5)	12,616 (5)	195.8 (5)
	> 5	0.92 (2)	-56.50 (2)	0.89 (2)	0.08 (2)	15,600 (2)	180.5 (2)
OW02	< 0.5	0.84 (17)	12.06 (17)	0.41 (17)	0.05 (13)	11,127 (13)	4.8 (13)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
OW03R	< 0.5	0.87 (10)	53.20 (10)	1.93 (10)	0.10 (10)	24,370 (10)	257.6 (10)
	< 5	1.49 (10)	37.10 (10)	1.66 (10)	0.32 (9)	33,122 (9)	232.9 (9)
	> 5	0.23 (1)	-81.00 (1)	0.58 (1)	0.06 (1)	53,000 (1)	5.7 (1)
OW04	< 0.5	1.18 (12)	23.50 (12)	0.59 (12)	0.05 (9)	12,433 (9)	2.7 (9)
	< 5	1.12 (5)	-44.80 (5)	0.55 (5)	0.06 (5)	23,740 (5)	2.9 (5)
	> 5	---	---	---	---	---	---
OW05R	< 0.5	---	---	---	---	---	---
	< 5	1.26 (12)	22.75 (12)	1.02 (12)	0.31 (11)	13,520 (11)	288.5 (11)
	> 5	1.36 (18)	55.18 (18)	1.53 (18)	0.08 (19)	37,932 (19)	638.5 (19)
OW06	< 0.5	---	---	---	---	---	---
	< 5	0.50 (15)	-76.33 (15)	0.63 (15)	0.05 (12)	8,009 (12)	6.3 (12)
	> 5	1.24 (4)	-18.50 (4)	0.44 (4)	0.05 (4)	8,068 (4)	5.3 (4)
OW07A	< 0.5	---	---	---	---	---	---
	< 5	---	---	---	---	---	---
	> 5	1.54 (31)	17.81 (31)	0.75 (31)	0.04 (30)	13,813 (30)	2.6 (30)
OW08	< 0.5	1.01 (7)	-22.57 (7)	0.51 (7)	0.04 (5)	28,600 (5)	0.4 (5)
	< 5	1.44 (2)	12.00 (2)	0.64 (2)	0.03 (1)	15,000 (1)	0.1 (1)
	> 5	---	---	---	---	---	---
OW09	< 0.5	---	---	---	---	---	---
	< 5	---	---	---	---	---	---
	> 5	1.17 (25)	3.24 (25)	0.68 (25)	0.06 (24)	16,213 (24)	62.9 (24)
OW10	< 0.5	2.75 (5)	190.20 (5)	4.93 (5)	0.08 (6)	8,080 (6)	54.9 (6)
	< 5	0.69 (7)	25.86 (7)	8.44 (7)	0.15 (8)	8,621 (8)	101.2 (8)
	> 5	0.98 (11)	-96.91 (11)	5.04 (11)	0.05 (8)	13,704 (8)	17.7 (8)
OW11	< 0.5	1.10 (19)	-15.70 (19)	0.89 (19)	0.07 (17)	19,924 (17)	4.0 (17)
	< 5	1.77 (2)	173.00 (2)	0.51 (2)	0.03 (3)	17,967 (3)	5.4 (3)
	> 5	---	---	---	---	---	---
OW12	< 0.5	4.04 (1)	114.00 (1)	1.64 (1)	0.20 (1)	25 (1)	7.0 (1)
	< 5	0.64 (14)	-17.79 (14)	1.74 (14)	0.07 (13)	15,976 (13)	8.4 (13)
	> 5	1.54 (8)	8.34 (8)	18.98 (8)	0.05 (6)	18,417 (6)	2.5 (6)
OW14	< 0.5	---	---	---	---	---	---
	< 5	---	---	---	---	---	---
	> 5	1.20 (10)	-24.50 (10)	1.71 (10)	1.24 (10)	3,966 (10)	19.8 (10)
OW15	< 0.5	1.54 (12)	-31.75 (12)	1.67 (12)	0.79 (10)	10,236 (10)	10.2 (10)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
OW16	< 0.5	0.97 (11)	-31.91 (11)	0.21 (11)	0.05 (9)	9,736 (9)	14.7 (9)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
OW17	< 0.5	0.84 (11)	-66.18 (11)	0.21 (11)	0.05 (9)	5,078 (9)	3.8 (9)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---

Table 12. Comparison of Benzene and Naphthalene Concentrations with MNA Indicator Parameters
Former Stevens Point MGP Site

Well	Benzene Concentration Range (µg/l)	Average Dissolved Oxygen (mg/l) (# of samples)	Average Oxidation Reduction Potential (millivolts) (# of samples)	Average Specific Conductance (mhos/cm) (# of samples)	Average Nitrogen, NO3 + NO2, Total (mg/l) (# of samples)	Average Dissolved Iron (µg/l) (# of samples)	Average Sulfate (mg/l) (# of samples)
P05B	< 0.5	1.51 (5)	43.00 (5)	0.55 (5)	0.05 (4)	1,393 (4)	1.7 (4)
	< 5	1.22 (5)	32.40 (5)	0.33 (5)	0.05 (4)	1,283 (4)	1.7 (4)
	> 5	1.27 (20)	26.67 (20)	0.38 (20)	0.04 (22)	3,889 (22)	2.2 (22)
PZ03B	< 0.5	1.94 (17)	18.94 (17)	0.19 (17)	0.11 (14)	6,542 (14)	2.0 (14)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
PZ07B	< 0.5	2.73 (2)	138.00 (2)	0.20 (2)	0.04 (2)	1,415 (2)	1.6 (2)
	< 5	1.42 (23)	36.17 (23)	0.24 (23)	0.04 (23)	1,756 (23)	2.9 (23)
	> 5	1.90 (5)	39.00 (5)	0.26 (5)	0.04 (5)	1,846 (5)	0.8 (5)
PZ09B	< 0.5	4.54 (18)	87.72 (18)	0.46 (18)	0.05 (16)	3,477 (16)	10.1 (16)
	< 5	3.38 (6)	93.00 (6)	0.46 (6)	0.06 (7)	753 (7)	7.3 (7)
	> 5	---	---	---	---	---	---
PZ10B	< 0.5	6.00 (22)	22.74 (22)	0.38 (22)	0.10 (20)	45 (20)	15.9 (20)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
PZ11B	< 0.5	3.84 (15)	27.60 (15)	0.32 (15)	0.09 (12)	26 (12)	7.8 (12)
	< 5	3.22 (1)	48.00 (1)	0.33 (1)	0.09 (1)	9 (1)	7.8 (1)
	> 5	3.20 (7)	133.86 (7)	0.27 (7)	0.04 (9)	1,621 (9)	4.1 (9)
PZ12B	< 0.5	2.55 (2)	-131.50 (2)	0.08 (2)	0.33 (2)	25 (2)	2.6 (2)
	< 5	1.70 (2)	-152.50 (2)	1.64 (2)	0.06 (1)	16,000 (1)	10.0 (1)
	> 5	1.08 (18)	-12.24 (18)	0.37 (18)	0.05 (16)	783 (16)	1.8 (16)
PZ13B	< 0.5	3.17 (16)	32.56 (16)	0.60 (16)	0.06 (13)	58 (13)	45.1 (13)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
PZ14B	< 0.5	3.79 (8)	62.25 (8)	0.48 (8)	0.10 (8)	106 (8)	16.1 (8)
	< 5	2.46 (1)	159.00 (1)	0.57 (1)	2.93 (2)	205 (2)	18.7 (2)
	> 5	---	---	---	---	---	---
PZ15B	< 0.5	1.23 (12)	-51.75 (12)	0.23 (12)	0.08 (10)	13,060 (10)	1.4 (10)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
PZ16B	< 0.5	0.93 (11)	-46.55 (11)	0.23 (11)	0.07 (9)	2,296 (9)	1.5 (9)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
TW01	< 0.5	1.33 (7)	72.14 (7)	1.99 (7)	1.93 (7)	7 (7)	23.6 (7)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---
TW02	< 0.5	0.53 (7)	42.00 (7)	1.42 (7)	0.28 (7)	48 (7)	18.2 (7)
	< 5	---	---	---	---	---	---
	> 5	---	---	---	---	---	---

Table 12. Comparison of Benzene and Naphthalene Concentrations with MNA Indicator Parameters
Former Stevens Point MGP Site

Well	Naphthalene Concentration Range (µg/l)	Average Dissolved Oxygen (mg/l) (# of samples)	Average Oxidation Reduction Potential (millivolts) (# of samples)	Average Specific Conductance (mhos/cm) (# of samples)	Average Nitrogen, NO3 + NO2, Total (mg/l) (# of samples)	Average Dissolved Iron (µg/l) (# of samples)	Average Sulfate (mg/l) (# of samples)
OW01	< 1	0.85 (12)	-5.50 (12)	0.95 (12)	0.83 (10)	13,400 (10)	147.8 (10)
	< 100	0.88 (3)	-73.00 (3)	0.72 (3)	0.08 (2)	11,650 (2)	118.5 (2)
	> 100	---	---	---	---	---	---
OW02	< 1	0.61 (15)	-21.53 (15)	0.43 (15)	0.05 (12)	11,054 (12)	4.4 (12)
	< 100	2.54 (2)	264.00 (2)	0.28 (2)	0.03 (1)	12,000 (1)	9.4 (1)
	> 100	---	---	---	---	---	---
OW03R	< 1	0.38 (3)	51.33 (3)	1.13 (3)	0.05 (3)	22,333 (3)	138.7 (3)
	< 100	0.86 (9)	39.00 (9)	2.05 (9)	0.37 (9)	22,300 (9)	267.6 (9)
	> 100	1.66 (9)	35.22 (9)	1.62 (9)	0.05 (8)	40,888 (8)	231.6 (8)
OW04	< 1	1.31 (12)	7.75 (12)	0.45 (12)	0.05 (9)	13,989 (9)	3.2 (9)
	< 100	0.83 (5)	-7.00 (5)	0.90 (5)	0.06 (5)	20,940 (5)	2.0 (5)
	> 100	---	---	---	---	---	---
OW05R	< 1	1.22 (9)	42.33 (9)	0.99 (9)	0.25 (9)	13,114 (9)	220.1 (9)
	< 100	1.07 (9)	17.00 (9)	1.17 (9)	0.21 (9)	20,556 (9)	415.9 (9)
	> 100	1.64 (12)	61.03 (12)	1.70 (12)	0.07 (12)	47,200 (12)	798.4 (12)
OW06	< 1	0.36 (2)	-50.00 (2)	0.39 (2)	0.06 (2)	8,410 (2)	5.1 (2)
	< 100	0.36 (6)	-53.83 (6)	0.51 (6)	0.05 (4)	10,045 (4)	6.9 (4)
	> 100	0.91 (11)	-72.36 (11)	0.67 (11)	0.05 (10)	7,138 (10)	5.9 (10)
OW07A	< 1	0.48 (1)	-250.00 (1)	0.34 (1)	---	---	---
	< 100	1.61 (8)	40.88 (8)	0.50 (8)	0.04 (8)	8,653 (8)	3.5 (8)
	> 100	1.57 (22)	21.59 (22)	0.86 (22)	0.04 (22)	15,690 (22)	2.3 (22)
OW08	< 1	1.69 (4)	-0.25 (4)	0.49 (4)	0.04 (3)	21,667 (3)	0.3 (3)
	< 100	0.54 (5)	-26.60 (5)	0.57 (5)	0.04 (2)	32,000 (2)	0.4 (2)
	> 100	---	---	---	---	---	---
OW09	< 1	---	---	---	---	---	---
	< 100	2.02 (2)	162.50 (2)	0.63 (2)	0.13 (3)	16,333 (3)	233.3 (3)
	> 100	1.09 (23)	-10.61 (23)	0.68 (23)	0.05 (21)	16,195 (21)	38.6 (21)
OW10	< 1	1.38 (3)	160.67 (3)	3.80 (3)	0.07 (4)	11,852 (4)	75.4 (4)
	< 100	1.46 (10)	58.30 (10)	7.30 (10)	0.13 (11)	7,130 (11)	78.1 (11)
	> 100	1.06 (10)	-99.90 (10)	5.48 (10)	0.05 (7)	14,463 (7)	17.2 (7)
OW11	< 1	1.18 (19)	-9.23 (19)	0.85 (19)	0.07 (18)	19,478 (18)	4.4 (18)
	< 100	1.02 (2)	111.50 (2)	0.96 (2)	0.04 (2)	21,000 (2)	3.1 (2)
	> 100	---	---	---	---	---	---
OW12	< 1	0.87 (8)	-54.13 (8)	1.82 (8)	0.11 (6)	13,286 (6)	10.8 (6)
	< 100	1.23 (15)	24.31 (15)	10.89 (15)	0.05 (14)	17,036 (14)	4.7 (14)
	> 100	---	---	---	---	---	---
OW14	< 1	0.55 (1)	-21.00 (1)	4.59 (1)	0.93 (1)	1,340 (1)	17.5 (1)
	< 100	0.78 (4)	-42.50 (4)	1.74 (4)	2.85 (3)	4,461 (3)	30.6 (3)
	> 100	0.50 (5)	-10.80 (5)	1.12 (5)	0.49 (6)	4,157 (6)	14.7 (6)
OW15	< 1	1.54 (12)	-31.75 (12)	1.67 (12)	0.79 (10)	10,236 (10)	10.2 (10)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
OW16	< 1	0.97 (11)	-31.91 (11)	0.21 (11)	0.05 (9)	9,736 (9)	14.7 (9)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
OW17	< 1	0.84 (11)	-66.18 (11)	0.21 (11)	0.05 (9)	5,078 (9)	3.8 (9)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---

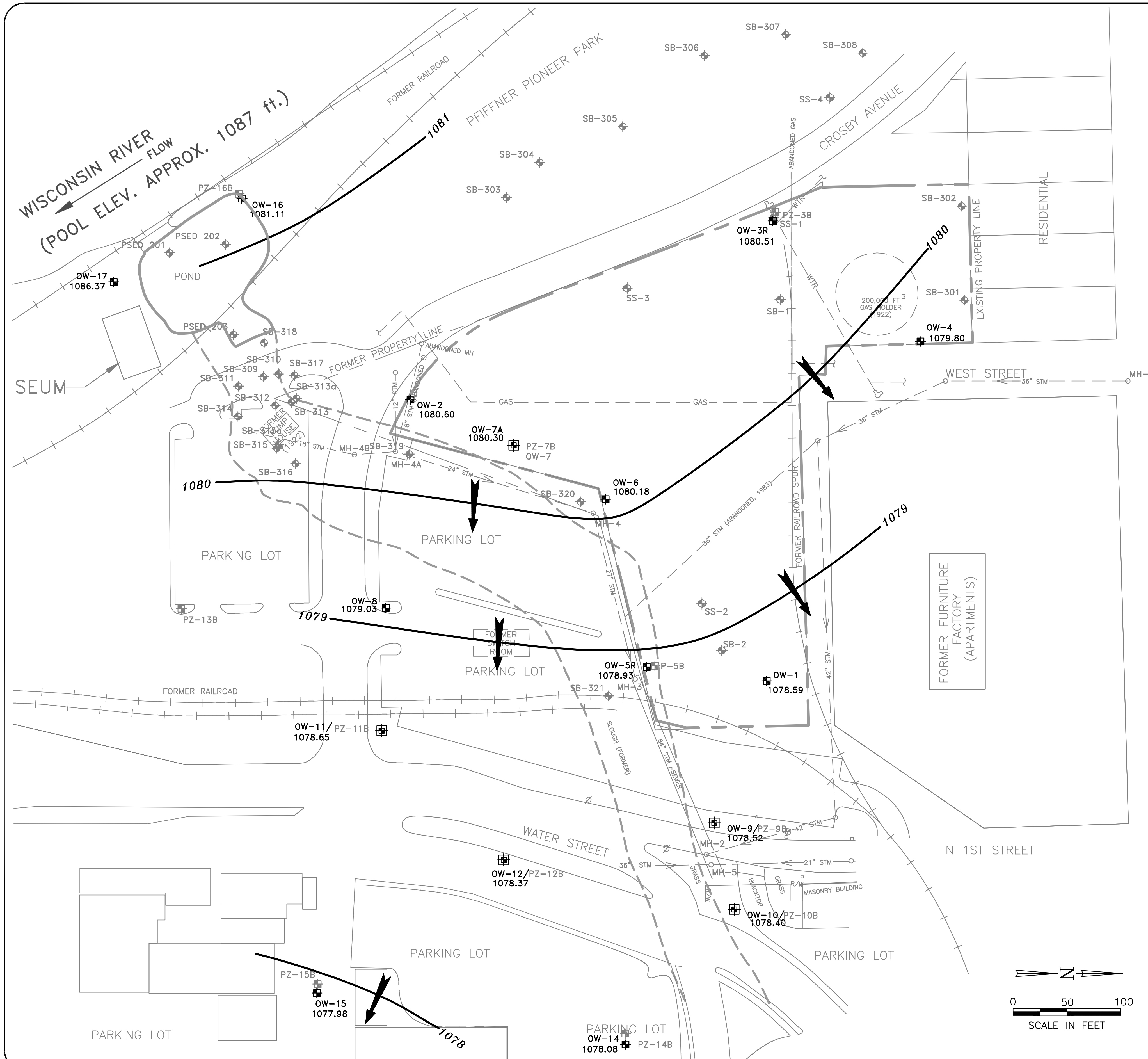
Table 12. Comparison of Benzene and Naphthalene Concentrations with MNA Indicator Parameters
Former Stevens Point MGP Site

Well	Naphthalene Concentration Range (µg/l)	Average Dissolved Oxygen (mg/l) (# of samples)	Average Oxidation Reduction Potential (millivolts) (# of samples)	Average Specific Conductance (mhos/cm) (# of samples)	Average Nitrogen, NO3 + NO2, Total (mg/l) (# of samples)	Average Dissolved Iron (µg/l) (# of samples)	Average Sulfate (mg/l) (# of samples)
P05B	< 1	1.32 (7)	57.00 (7)	0.49 (7)	0.05 (7)	1,135 (7)	2.5 (7)
	< 100	1.28 (4)	83.00 (4)	0.57 (4)	0.04 (4)	2,790 (4)	1.2 (4)
	> 100	1.30 (19)	9.44 (19)	0.33 (19)	0.04 (19)	4,139 (19)	2.0 (19)
PZ03B	< 1	1.94 (17)	18.94 (17)	0.19 (17)	0.11 (14)	6,542 (14)	2.0 (14)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
PZ07B	< 1	0.95 (1)	-68.00 (1)	0.21 (1)	---	---	---
	< 100	1.35 (7)	-0.43 (7)	0.22 (7)	0.04 (7)	1,866 (7)	0.8 (7)
	> 100	1.69 (22)	62.45 (22)	0.25 (22)	0.04 (23)	1,712 (23)	2.9 (23)
PZ09B	< 1	4.22 (20)	80.60 (20)	0.46 (20)	0.05 (18)	2,972 (18)	9.7 (18)
	< 100	4.40 (4)	131.25 (4)	0.48 (4)	0.07 (5)	1,482 (5)	7.5 (5)
	> 100	---	---	---	---	---	---
PZ10B	< 1	5.97 (21)	17.98 (21)	0.38 (21)	0.09 (19)	46 (19)	15.9 (19)
	< 100	6.57 (1)	118.00 (1)	0.39 (1)	0.15 (1)	25 (1)	16.0 (1)
	> 100	---	---	---	---	---	---
PZ11B	< 1	3.65 (17)	29.71 (17)	0.31 (17)	0.08 (16)	202 (16)	7.0 (16)
	< 100	3.19 (3)	109.67 (3)	0.27 (3)	0.03 (3)	2,290 (3)	4.9 (3)
	> 100	3.81 (3)	188.33 (3)	0.31 (3)	0.04 (3)	1,600 (3)	3.7 (3)
PZ12B	< 1	1.61 (11)	-89.55 (11)	0.55 (11)	0.12 (9)	2,235 (9)	3.1 (9)
	< 100	0.77 (6)	-9.50 (6)	0.42 (6)	0.05 (5)	1,086 (5)	1.2 (5)
	> 100	1.20 (5)	50.72 (5)	0.33 (5)	0.04 (5)	606 (5)	2.0 (5)
PZ13B	< 1	2.98 (15)	34.93 (15)	0.60 (15)	0.06 (12)	62 (12)	43.7 (12)
	< 100	5.84 (1)	-3.00 (1)	0.66 (1)	0.06 (1)	14 (1)	61.4 (1)
	> 100	---	---	---	---	---	---
PZ14B	< 1	3.64 (9)	73.00 (9)	0.49 (9)	0.67 (10)	126 (10)	16.6 (10)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
PZ15B	< 1	1.23 (12)	-51.75 (12)	0.23 (12)	0.08 (10)	13,060 (10)	1.4 (10)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
PZ16B	< 1	0.93 (11)	-46.55 (11)	0.23 (11)	0.07 (9)	2,296 (9)	1.5 (9)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
TW01	< 1	1.33 (7)	72.14 (7)	1.99 (7)	1.93 (7)	7 (7)	23.6 (7)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---
TW02	< 1	0.53 (7)	42.00 (7)	1.42 (7)	0.28 (7)	48 (7)	18.2 (7)
	< 100	---	---	---	---	---	---
	> 100	---	---	---	---	---	---

Attachment 2

Stevens Point RI Report Revision 3

(Figures 12-25, 28, 29, and 30-35)



LEGEND

	WATER TABLE ELEVATION CONTOURS, FT.
	GROUNDWATER FLOW DIRECTION
OW-1 1078.59	WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
OW-9 1078.52 /PZ-9B	WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
SB-308	SOIL BORING (2007)
P-5B	PIEZOMETER
SS-4	EDI SURFACE SAMPLE (1986)
MH-1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
WTR	WATER LINE
GAS	GAS LINE
STM	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

SOURCE NOTE:

THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.

A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.

A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.

POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.

BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/23/11
APPROVED BY: EPK	DATE: 05/23/11
DRAWING NO: 1177-1412C-B12	
REFERENCE: NONE	

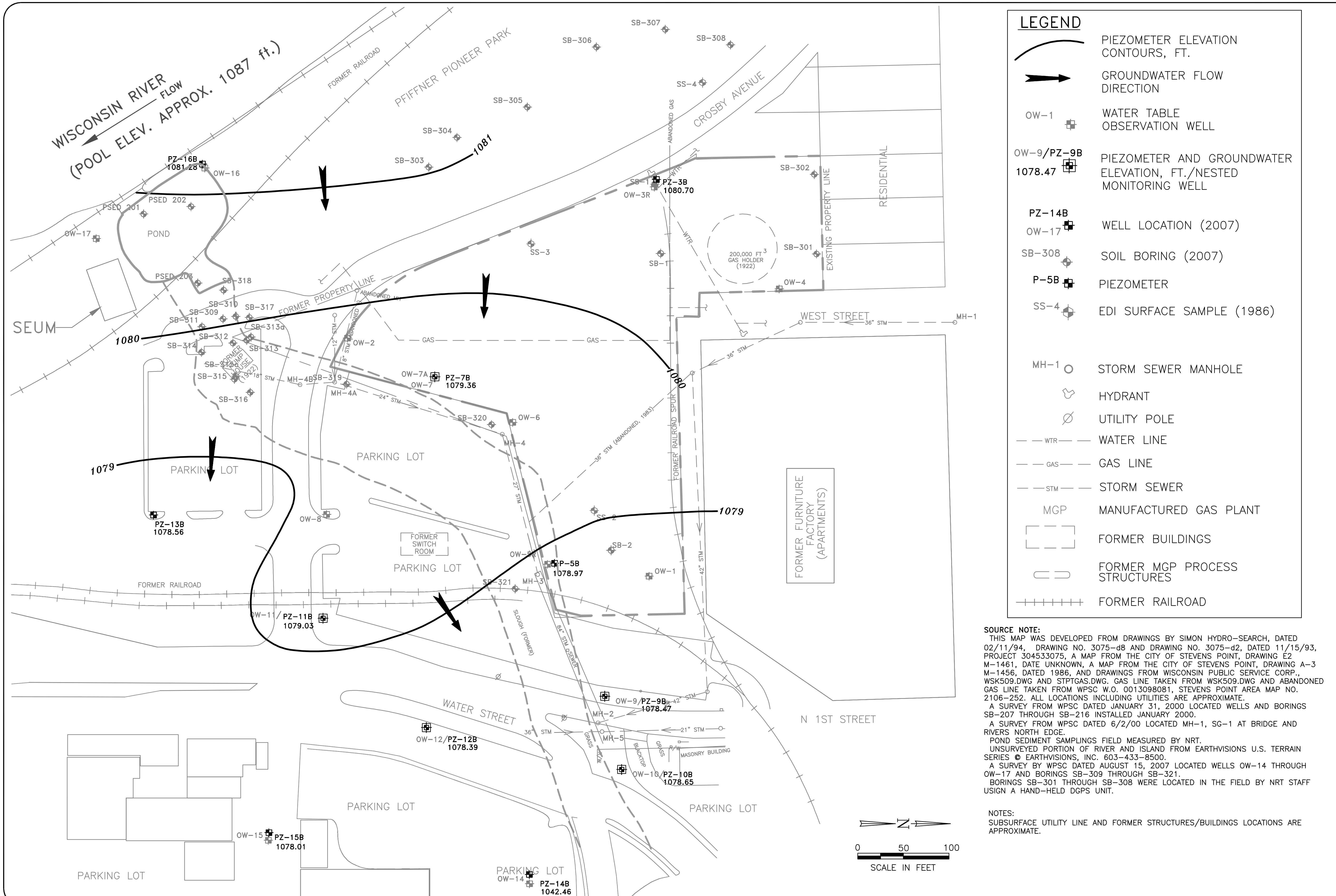
WATER TABLE CONTOURS–JULY 2007

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
12



SOURCE NOTE:
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POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
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BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/23/11
APPROVED BY: EPK	DATE: 05/23/11
DRAWING NO: 1177-1412C-B13	
REFERENCE: NONE	

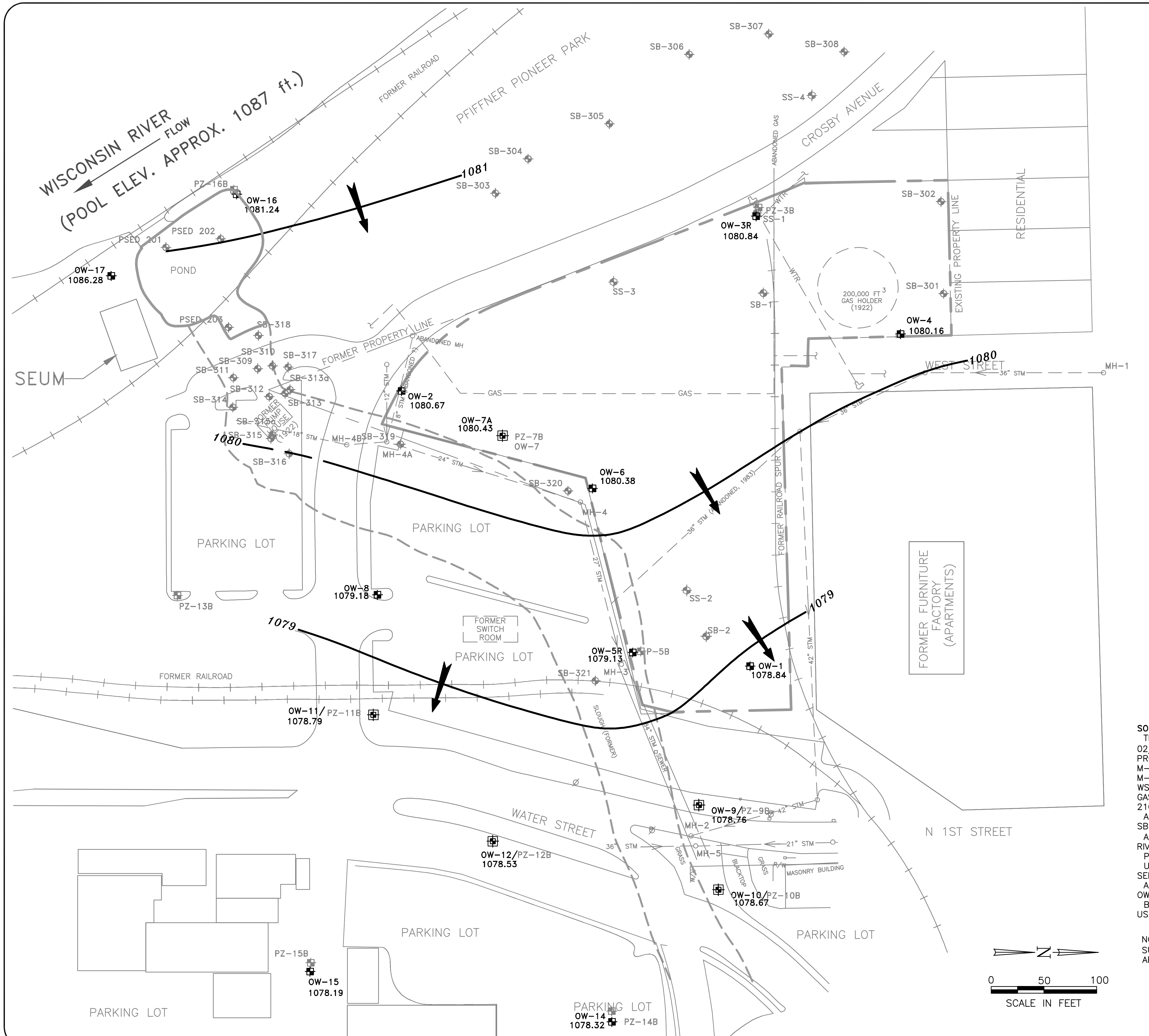
PIEZOMETRIC SURFACE–JULY 2007

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
13



LEGEND

- WATER TABLE ELEVATION CONTOURS, FT., DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION
- OW-1 1078.84 — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
- OW-9 1078.76 /PZ-9B — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTE:
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A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.
BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/23/11
APPROVED BY: EPK	DATE: 05/23/11
DRAWING NO: 1177-1412C-B14	REFERENCE: NONE

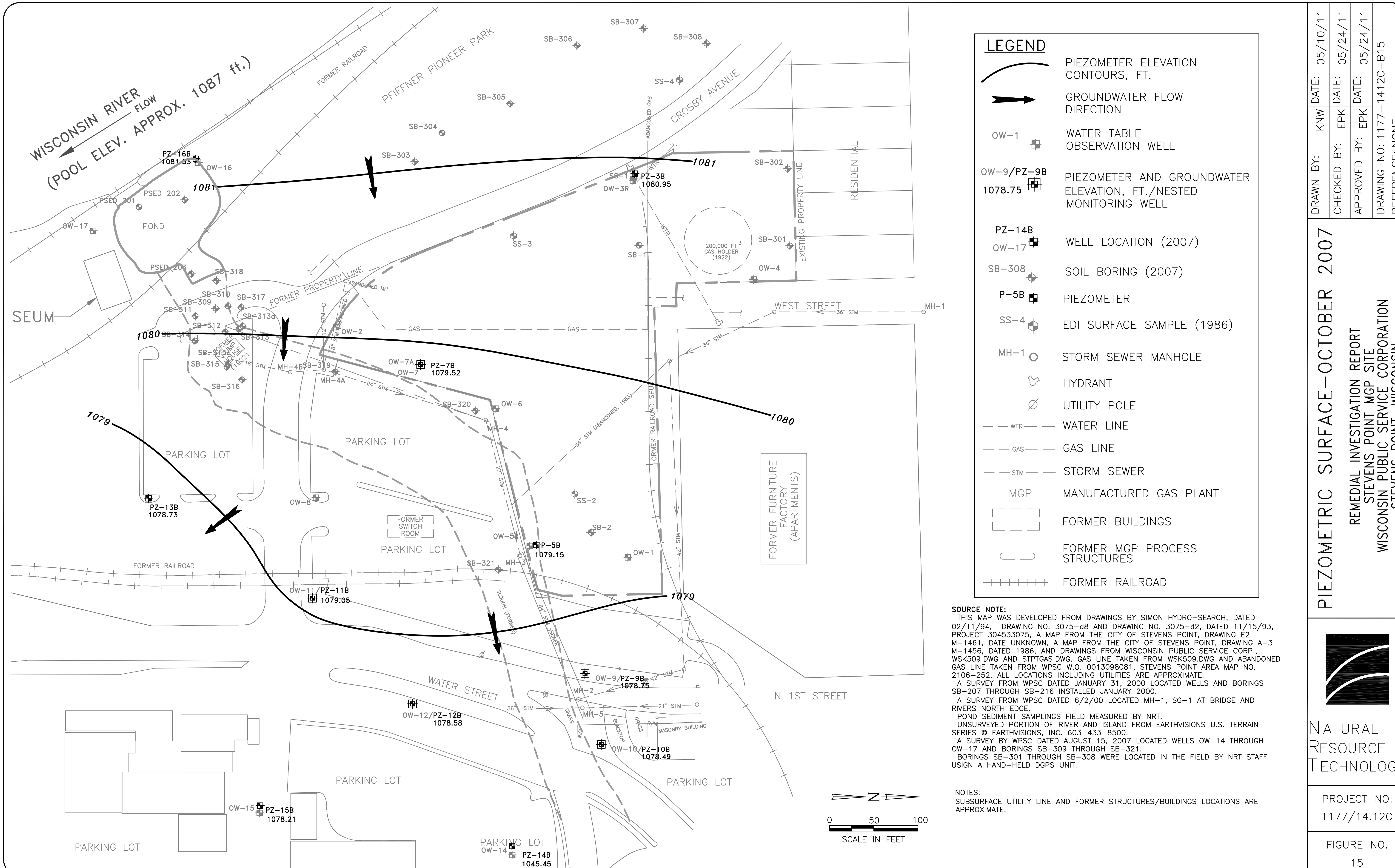
WATER TABLE CONTOURS-OCTOBER 2007

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 14



WISCONSIN RIVER
FLOW
(POOL ELEV. APPROX. 1087 ft.)
PFIFFNER PIONEER PARK
FORMER RAILROAD
CROSBY AVENUE
RESIDENTIAL
EXISTING PROPERTY LINE
FORMER PROPERTY LINE
WEST STREET
WATER STREET
N 1ST STREET
FORMER RAILROAD SPUR
FORMER FURNITURE FACTORY (APARTMENTS)
FORMER SWITCH ROOM
200,000 FT3 GAS HOLDER (1922)
FORMER PUMP HOUSE (1922)
POND
PARKING LOT
MASONRY BUILDING
SEUM
PZ-16B 1081.53
PZ-3B 1080.95
PZ-7B 1079.52
PZ-13B 1078.73
P-5B 1079.15
PZ-11B 1079.05
OW-9/PZ-9B 1078.75
OW-12/PZ-12B 1078.58
OW-10/PZ-10B 1078.49
PZ-15B 1078.21
PZ-14B 1045.45
1081
1080
1079
LEGEND
PIEZOMETER ELEVATION CONTOURS, FT.
GROUNDWATER FLOW DIRECTION
OW-1 WATER TABLE OBSERVATION WELL
OW-9/PZ-9B 1078.75 PIEZOMETER AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
PZ-14B OW-17 WELL LOCATION (2007)
SB-308 SOIL BORING (2007)
P-5B PIEZOMETER
SS-4 EDI SURFACE SAMPLE (1986)
MH-1 STORM SEWER MANHOLE
HYDRANT
UTILITY POLE
WTR WATER LINE
GAS GAS LINE
STM STORM SEWER
MGP MANUFACTURED GAS PLANT
FORMER BUILDINGS
FORMER MGP PROCESS STRUCTURES
FORMER RAILROAD
SOURCE NOTE:
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POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
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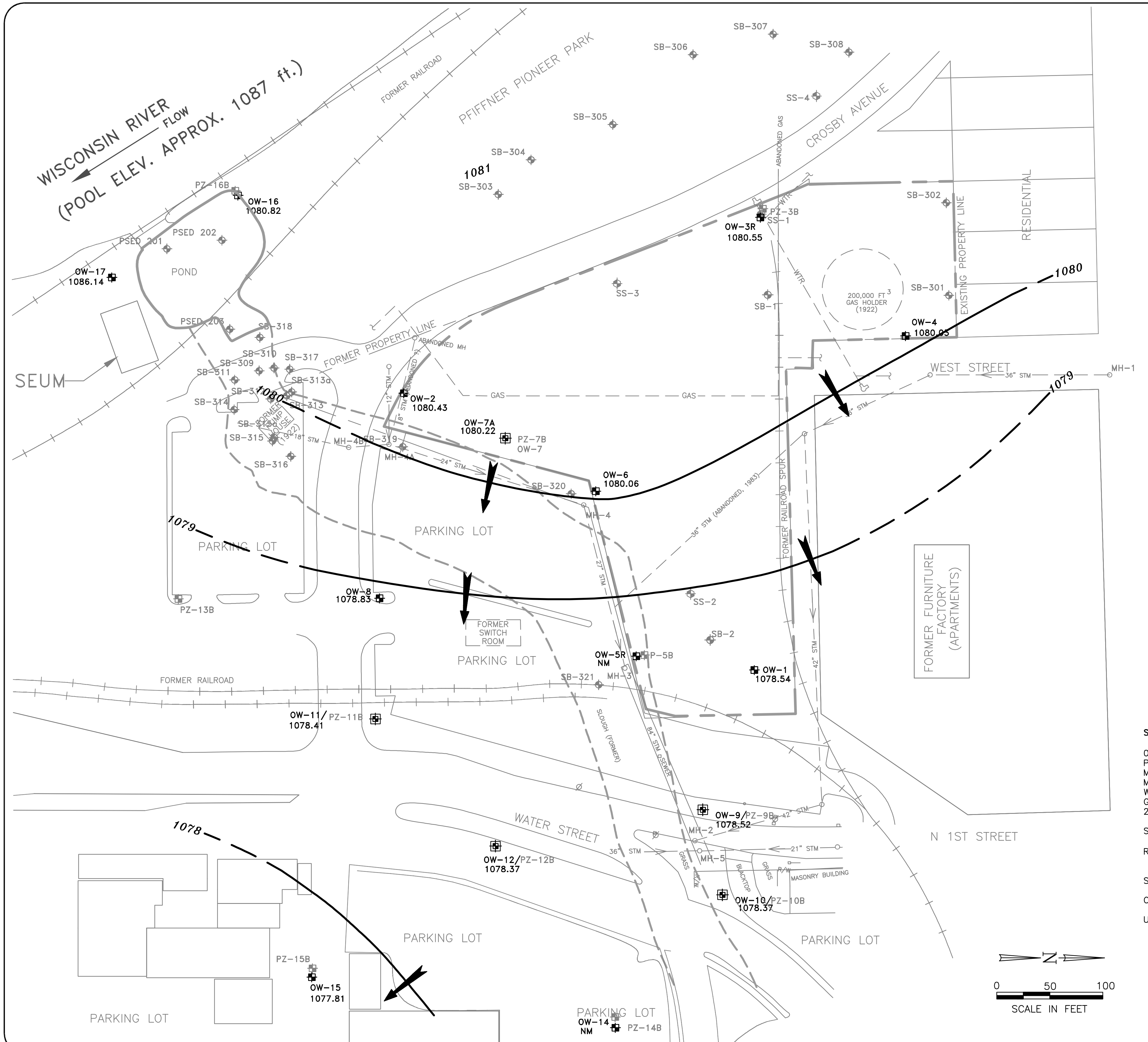
BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.
NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.
0 50 100
SCALE IN FEET
DRAWN BY: KNW DATE: 05/10/11
CHECKED BY: EPK DATE: 05/24/11
APPROVED BY: EPK DATE: 05/24/11
DRAWING NO: 1177-1412C-B15
REFERENCE: NONE
PIEZOMETRIC SURFACE-OCTOBER 2007
REMEDIAL INVESTIGATION REPORT
STEVENS POINT MGP SITE
WISCONSIN PUBLIC SERVICE CORPORATION
STEVENS POINT, WISCONSIN
NATURAL RESOURCE TECHNOLOGY
PROJECT NO. 1177/14.12C
FIGURE NO. 15



LEGEND

- WATER TABLE ELEVATION CONTOURS, FT., DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION
- OW-1 1078.54 — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
- OW-9 1078.52 /PZ-9B — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTES:

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A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.

POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.

BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B16	
REFERENCE: NONE	

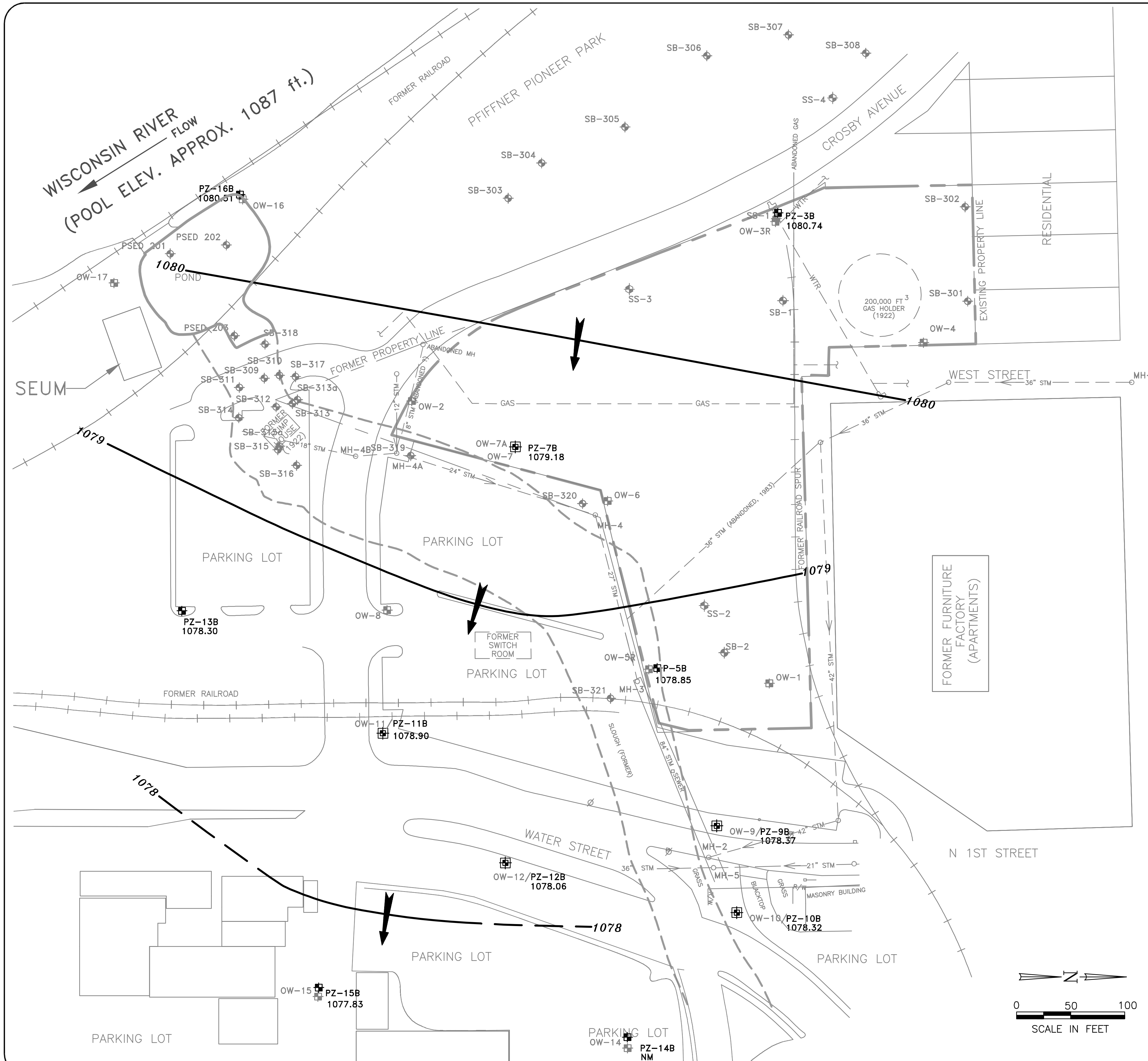
WATER TABLE CONTOURS–JANUARY 2008

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 16



LEGEND

- PIEZOMETRIC CONTOURS, FT., DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION
- OW-1 — WATER TABLE OBSERVATION WELL
- OW-9/PZ-9B 1078.37 — PIEZOMETER AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTES:

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POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

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BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B17	
REFERENCE: NONE	

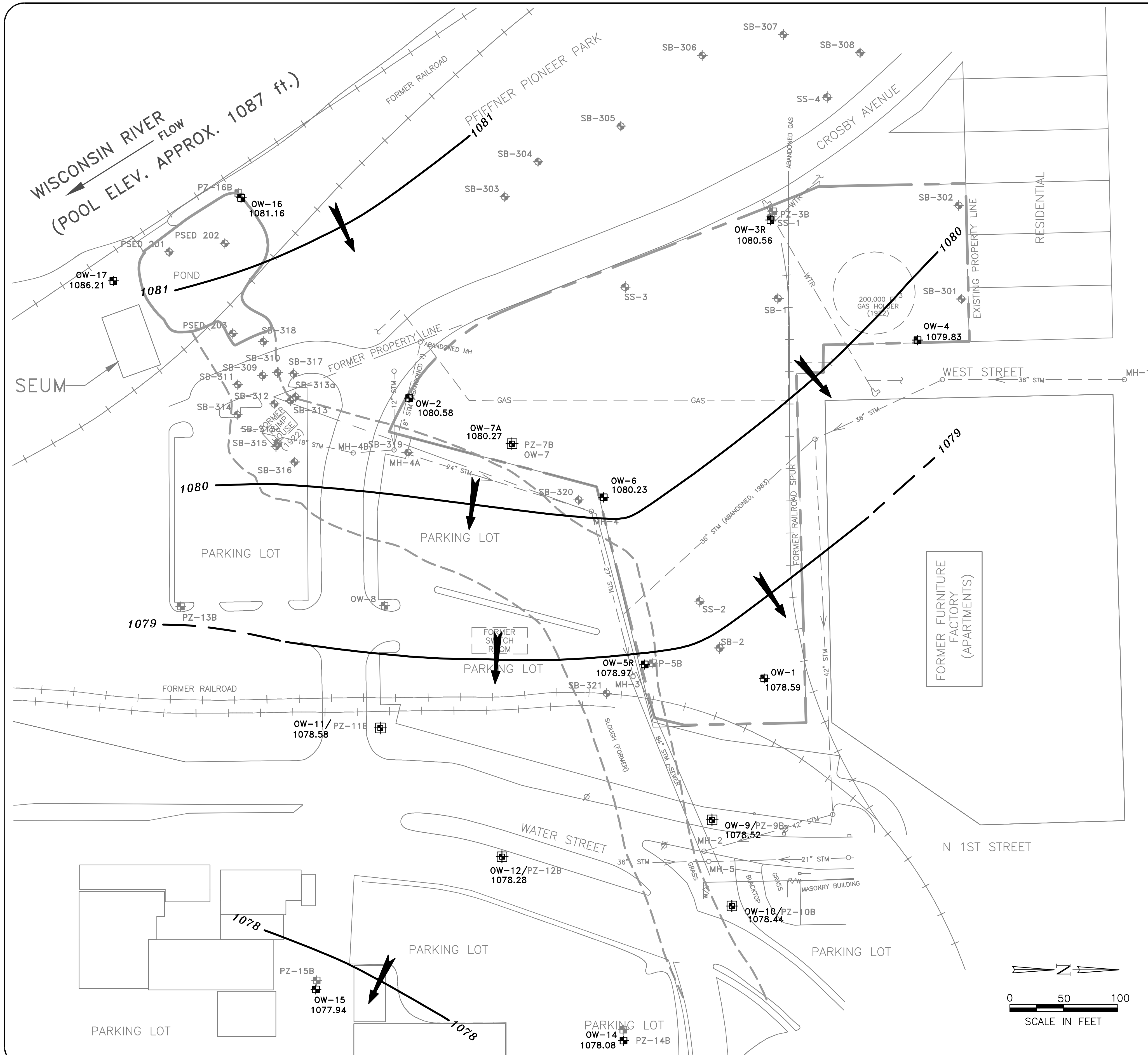
PIEZOMETRIC SURFACE–JANUARY 2008

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 17



LEGEND

- WATER TABLE ELEVATION CONTOURS, FT.
- GROUNDWATER FLOW DIRECTION
- OW-1 1078.59 — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
- OW-9 1078.52 /PZ-9B — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
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- FORMER RAILROAD

SOURCE NOTE:

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A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.

POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.

BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B18	
REFERENCE: NONE	

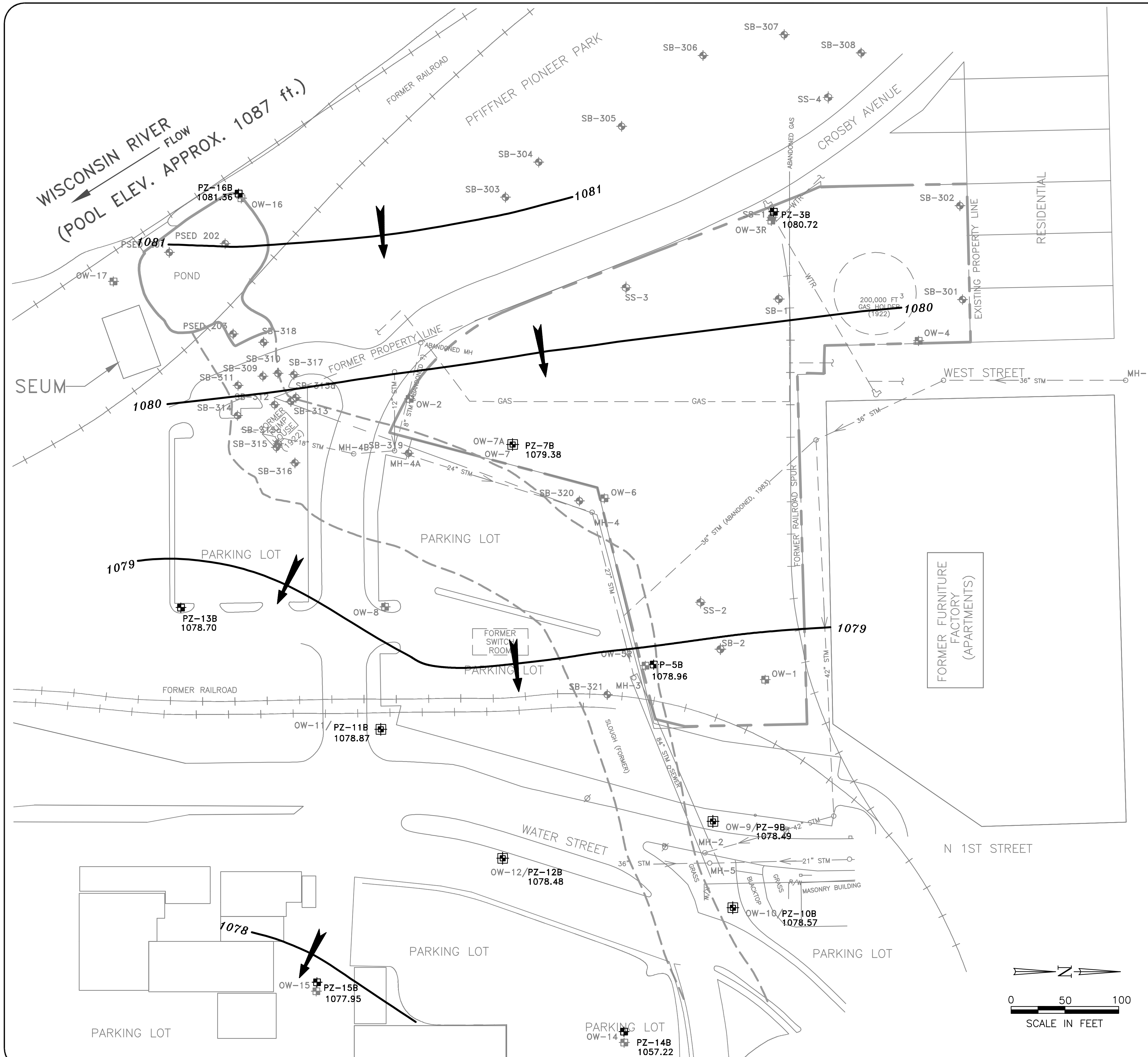
WATER TABLE CONTOURS-OCTOBER 2009

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 18



LEGEND

- PIEZOMETER ELEVATION CONTOURS, FT.
- GROUNDWATER FLOW DIRECTION
- OW-1 — WATER TABLE OBSERVATION WELL
- OW-9/PZ-9B 1078.49 — PIEZOMETER AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTE:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.
BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B19	
REFERENCE: NONE	

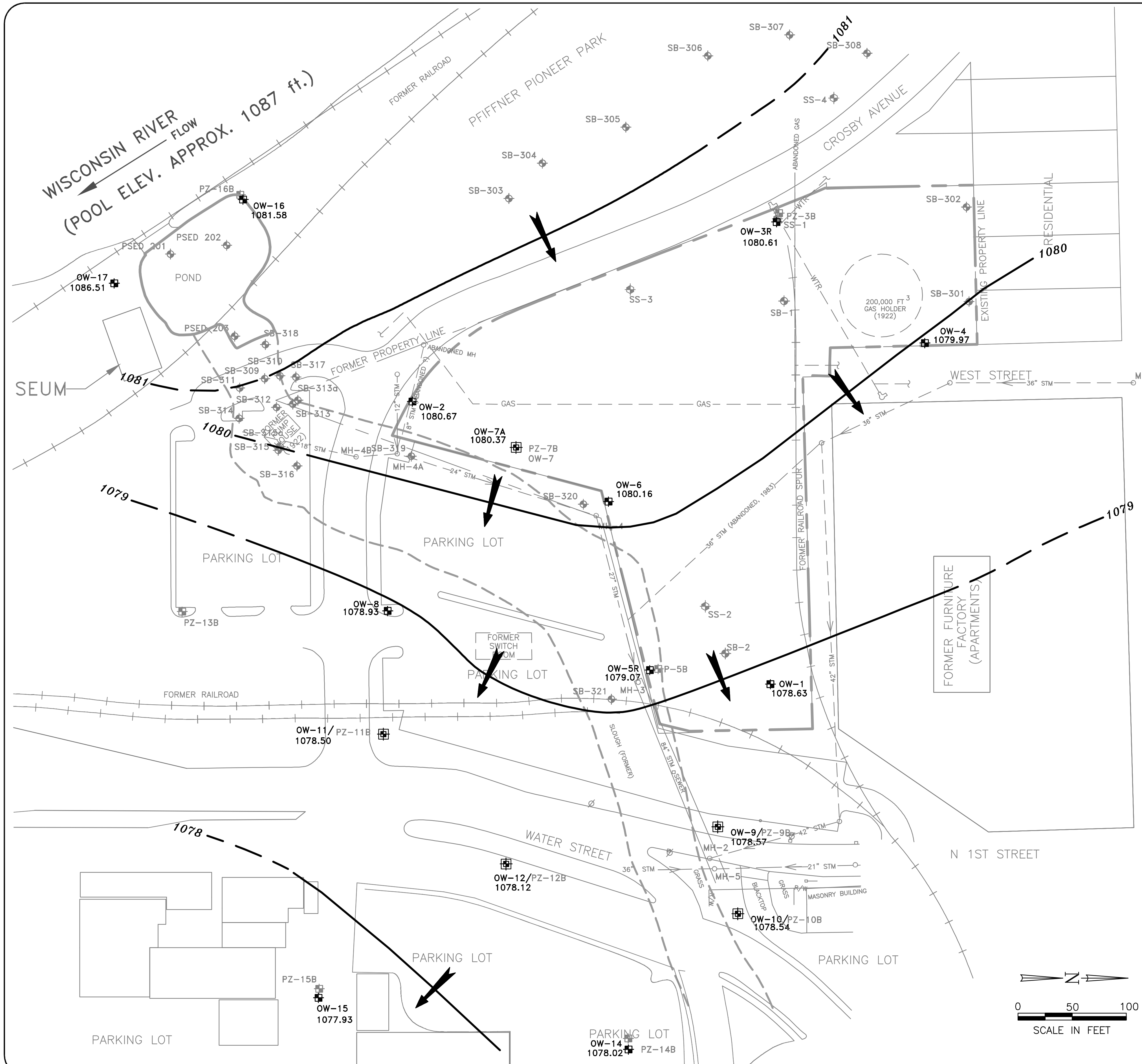
PIEZOMETRIC SURFACE-OCTOBER 2009

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
19



LEGEND

- WATER TABLE ELEVATION CONTOURS, FT., DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION
- OW-1 1078.63 — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
- OW-9 1078.57 /PZ-9B — WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTES:

THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO–SEARCH, DATED 02/11/94, DRAWING NO. 3075–d8 AND DRAWING NO. 3075–d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M–1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A–3 M–1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106–252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.

A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB–207 THROUGH SB–216 INSTALLED JANUARY 2000.

A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH–1, SG–1 AT BRIDGE AND RIVERS NORTH EDGE.

POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603–433–8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW–14 THROUGH OW–17 AND BORINGS SB–309 THROUGH SB–321.

BORINGS SB–301 THROUGH SB–308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND–HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	CHECKED BY: EPK	APPROVED BY: EPK	DRAWING NO: 1177–1412C–B20
DATE: 05/10/11	DATE: 05/24/11	DATE: 05/24/11	REFERENCE: NONE

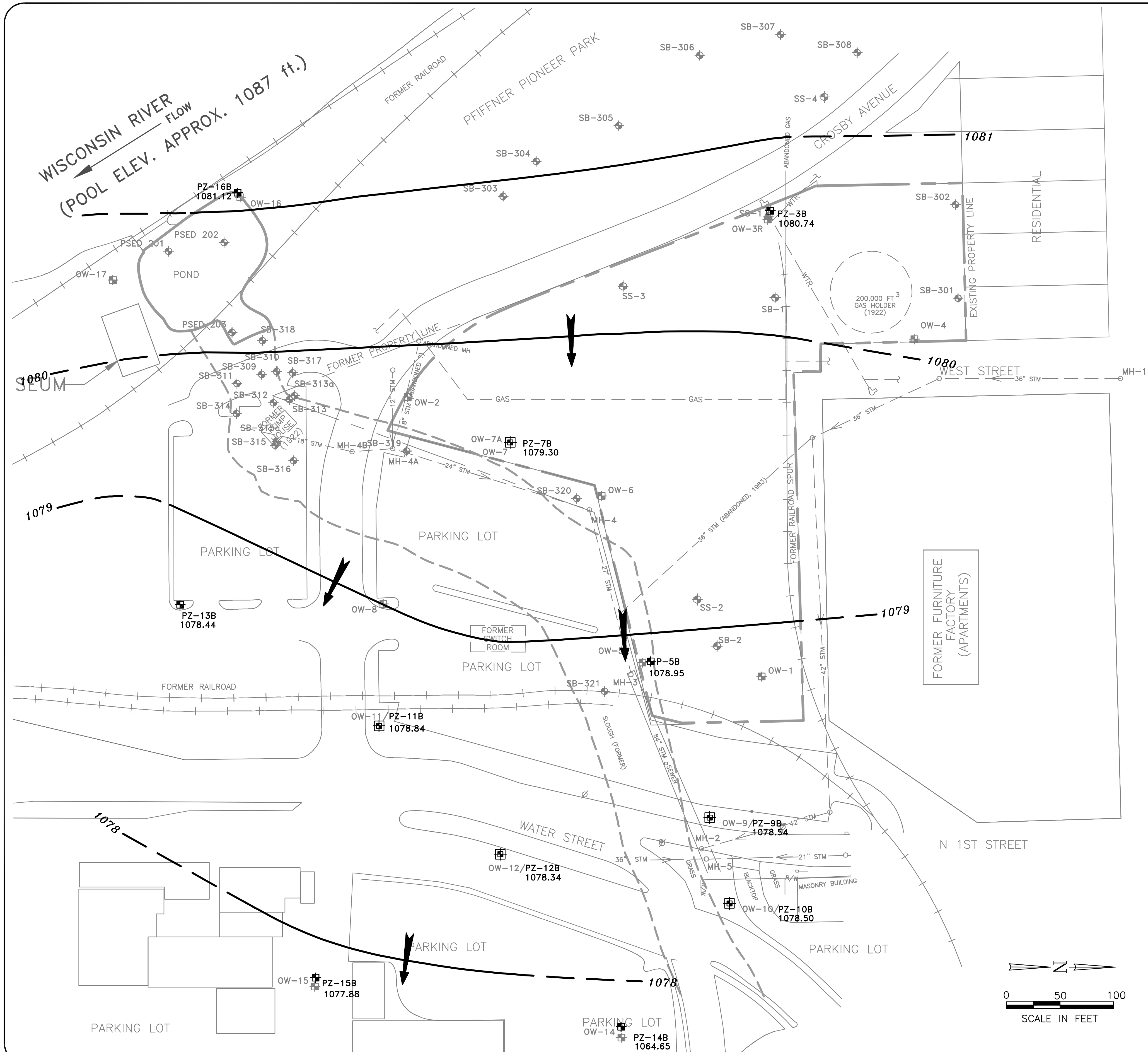
WATER TABLE CONTOURS–APRIL 2010

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
20



LEGEND

- PIEZOMETRIC CONTOURS, FT., DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION
- OW-1 — WATER TABLE OBSERVATION WELL
- OW-9/PZ-9B 1078.54 — PIEZOMETER AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
- PZ-14B OW-17 — WELL LOCATION (2007)
- SB-308 — SOIL BORING (2007)
- P-5B — PIEZOMETER
- SS-4 — EDI SURFACE SAMPLE (1986)
- MH-1 — STORM SEWER MANHOLE
- HYDRANT
- UTILITY POLE
- WTR — WATER LINE
- GAS — GAS LINE
- STM — STORM SEWER
- MGP — MANUFACTURED GAS PLANT
- FORMER BUILDINGS
- FORMER MGP PROCESS STRUCTURES
- FORMER RAILROAD

SOURCE NOTES:

THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.

A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.

A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.

POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.

A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.

BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B21	
REFERENCE: NONE	

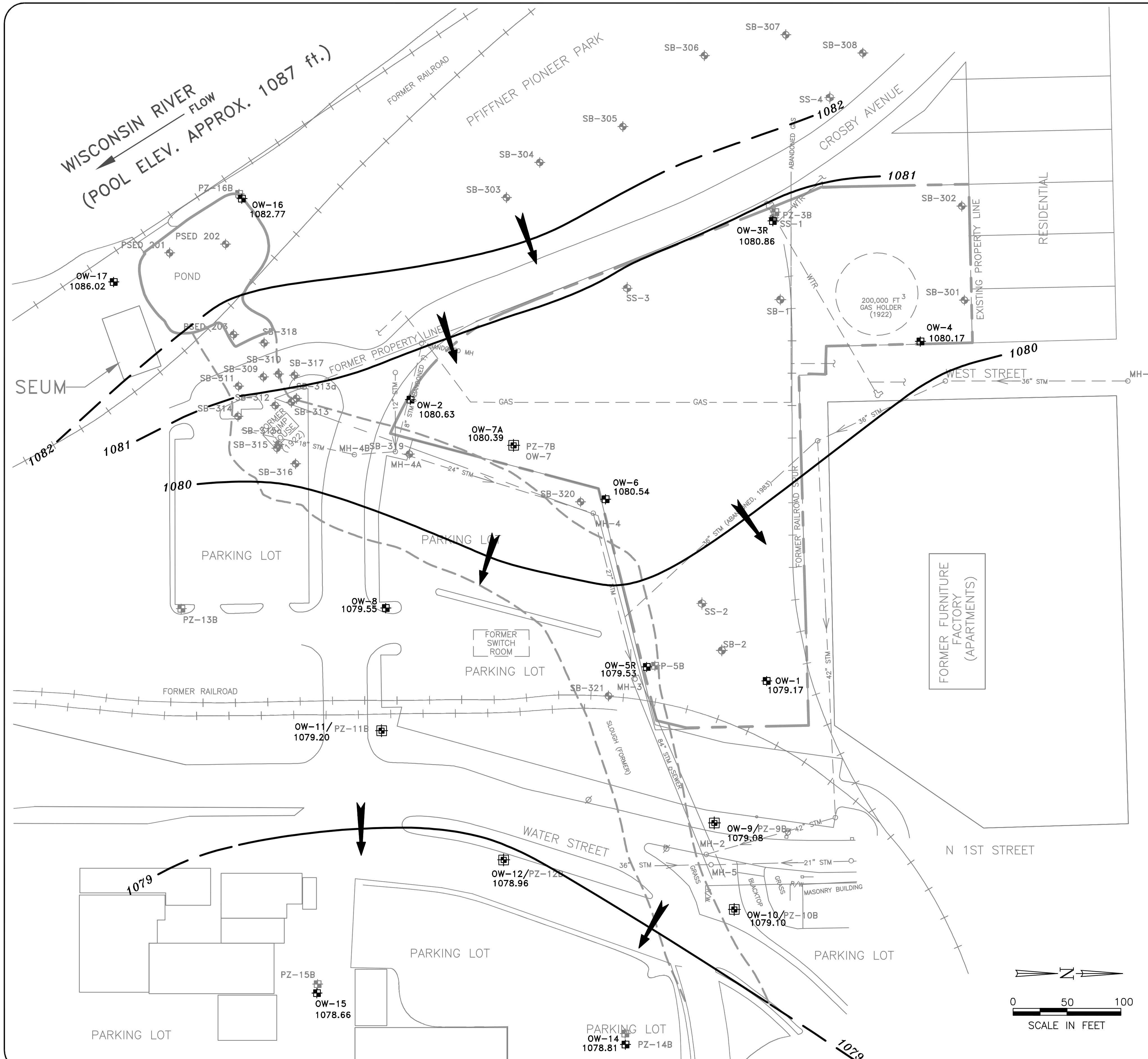
PIEZOMETRIC SURFACE-APRIL 2010

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 21



LEGEND

	WATER TABLE ELEVATION CONTOURS, FT., DASHED WHERE INFERRED
	GROUNDWATER FLOW DIRECTION
OW-1 1079.17	WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT.
OW-9 1079.08 /PZ-9B	WATER TABLE OBSERVATION WELL AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL
PZ-14B OW-17	WELL LOCATION (2007)
SB-308	SOIL BORING (2007)
P-5B	PIEZOMETER
SS-4	EDI SURFACE SAMPLE (1986)
MH-1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
— WTR —	WATER LINE
— GAS —	GAS LINE
— STM —	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

SOURCE NOTE:
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A SURVEY FROM WPSC DATED 6/2/00 LOCATED MH-1, SG-1 AT BRIDGE AND RIVERS NORTH EDGE.
POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
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BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW DATE: 05/10/11
CHECKED BY: EPK DATE: 05/24/11
APPROVED BY: EPK DATE: 05/24/11
DRAWING NO: 1177-1412C-B22
REFERENCE: NONE

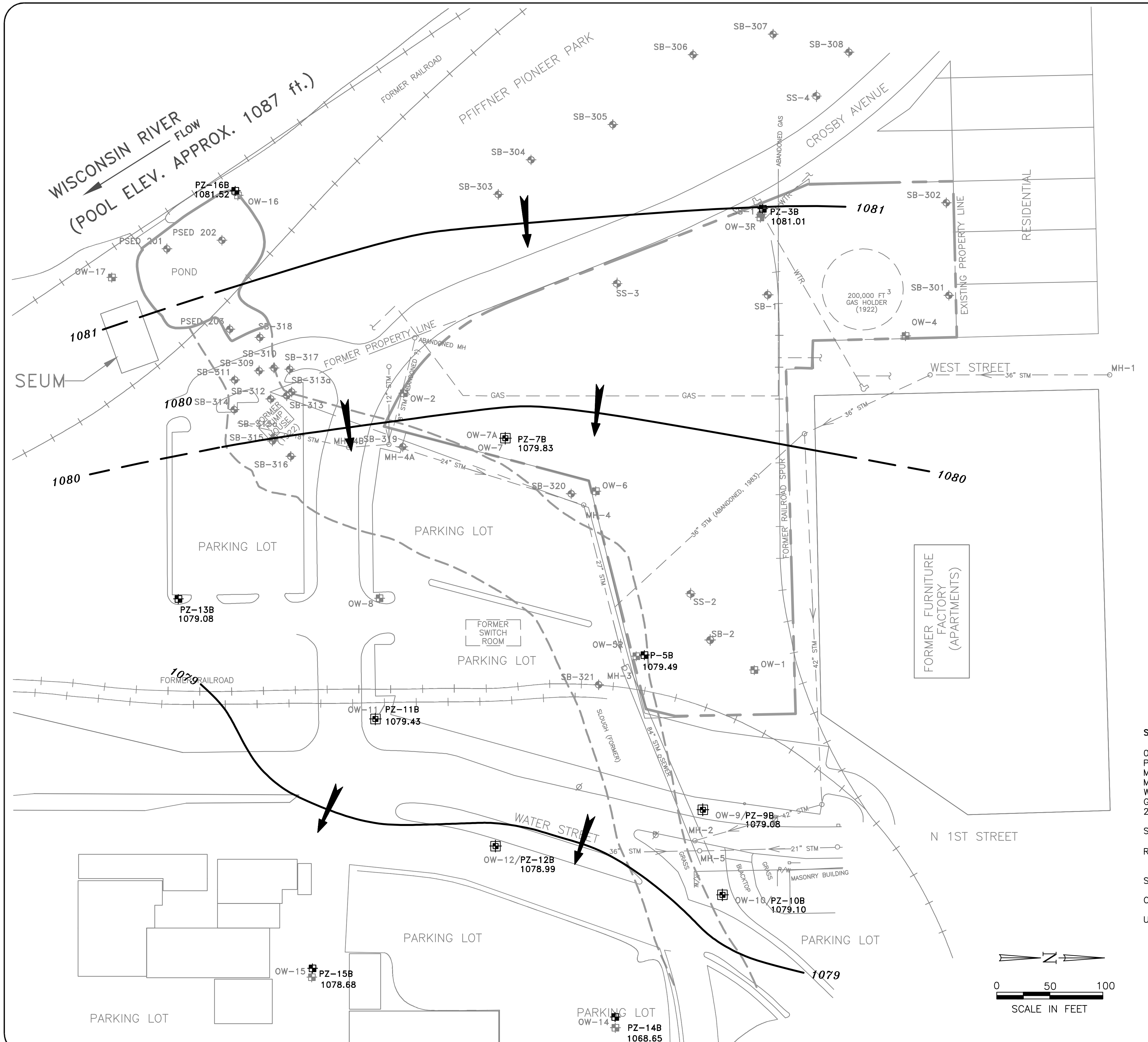
WATER TABLE CONTOURS–OCTOBER 2010

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
22



LEGEND

PIEZOMETER ELEVATION CONTOURS, FT.

GROUNDWATER FLOW DIRECTION

OW-1 — WATER TABLE OBSERVATION WELL

OW-9/PZ-9B 1079.08 — PIEZOMETER AND GROUNDWATER ELEVATION, FT./NESTED MONITORING WELL

PZ-14B OW-17 — WELL LOCATION (2007)

SB-308 — SOIL BORING (2007)

P-5B — PIEZOMETER

SS-4 — EDI SURFACE SAMPLE (1986)

MH-1 — STORM SEWER MANHOLE

HYDRANT

UTILITY POLE

WTR — WATER LINE

GAS — GAS LINE

STM — STORM SEWER

MGP — MANUFACTURED GAS PLANT

FORMER BUILDINGS

FORMER MGP PROCESS STRUCTURES

FORMER RAILROAD

SOURCE NOTE:

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POND SEDIMENT SAMPLINGS FIELD MEASURED BY NRT.

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BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.

NOTES:

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DRAWN BY: KNW	DATE: 05/10/11
CHECKED BY: EPK	DATE: 05/24/11
APPROVED BY: EPK	DATE: 05/24/11
DRAWING NO: 1177-1412C-B23	REFERENCE: NONE

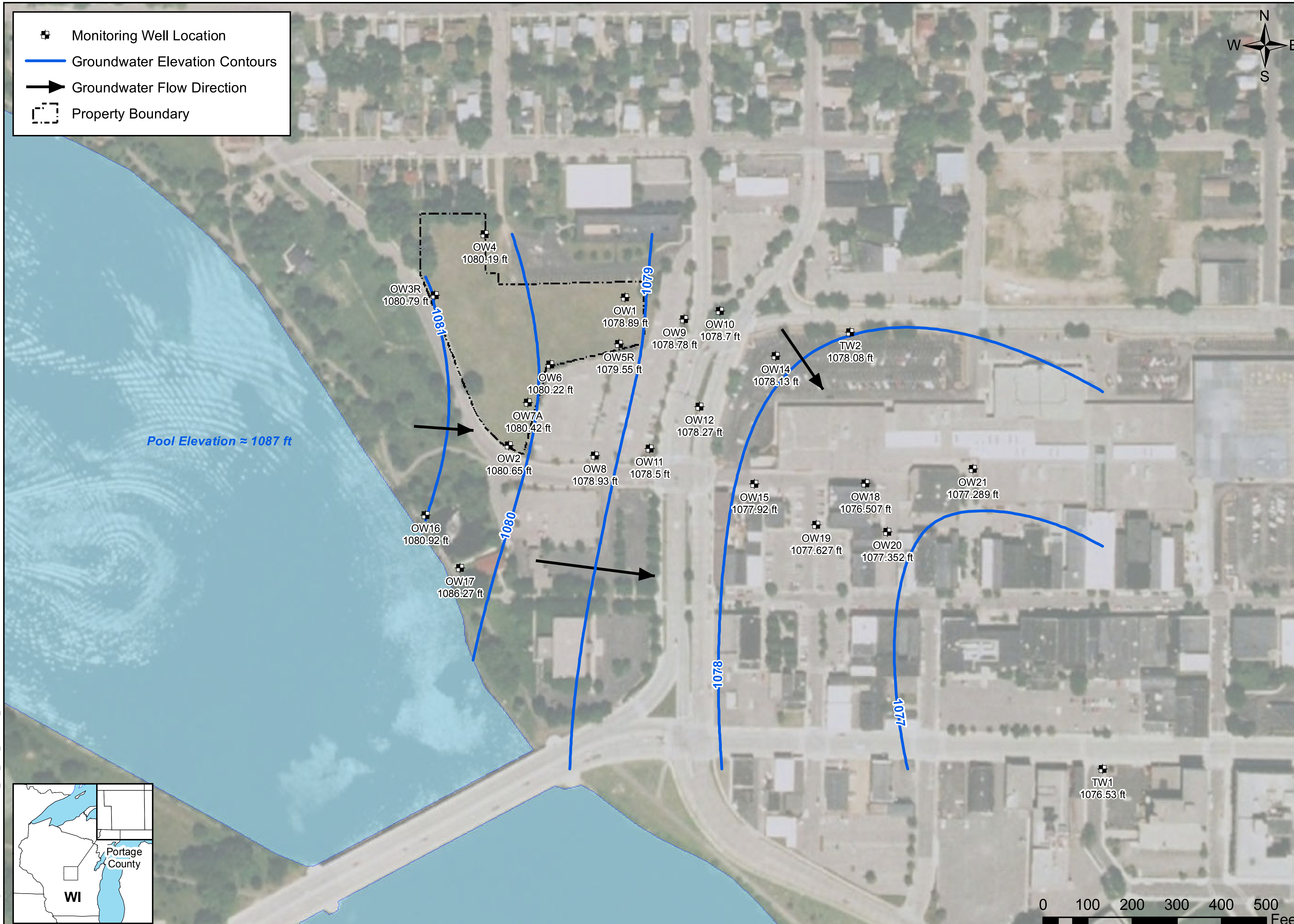
PIEZOMETRIC SURFACE–OCTOBER 2010

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 23



Water Table Contours
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

Natural Resource Technology

Project No. 1177
Figure No. 24

5/16/2011

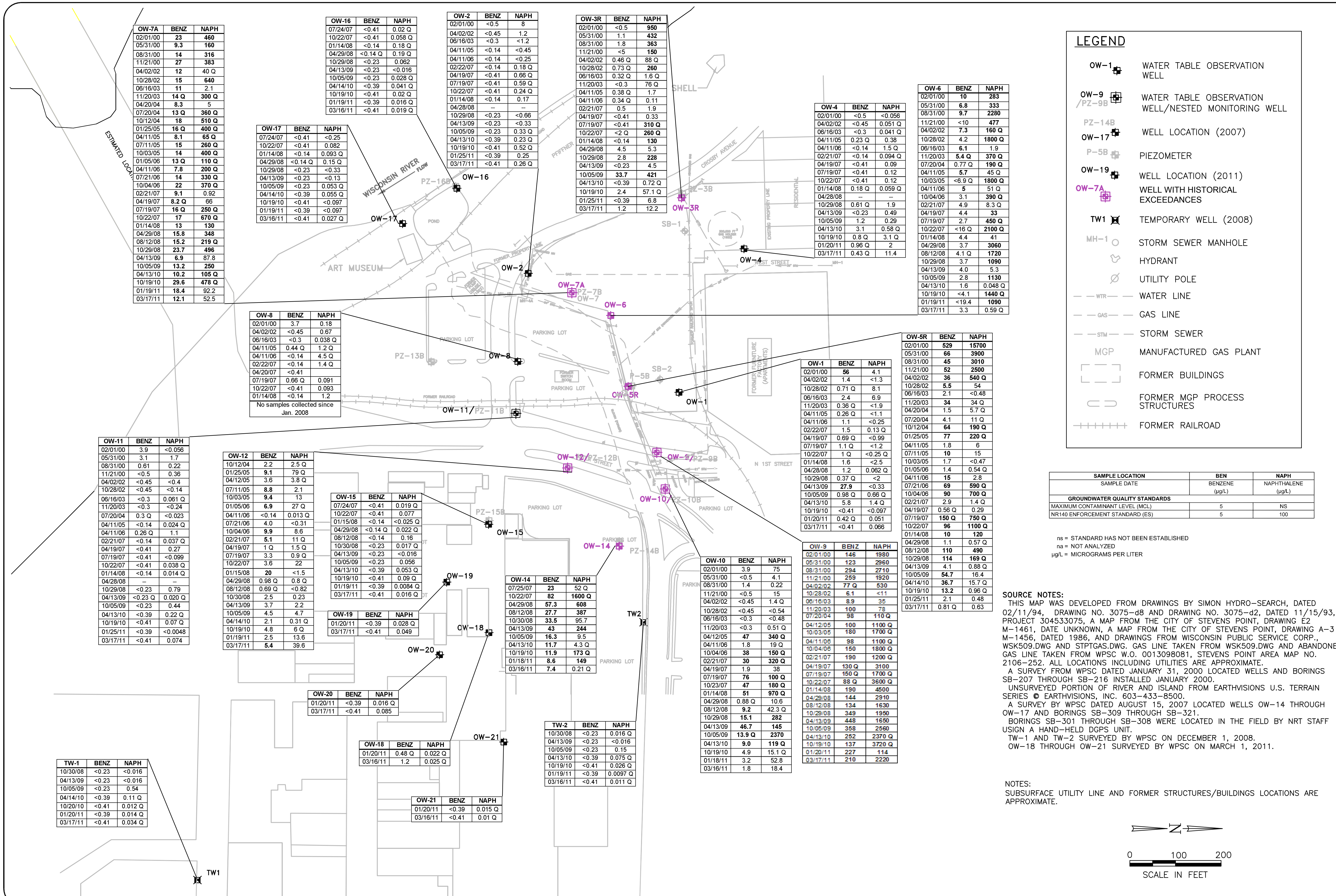
Piezometric Surface
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 25

5/16/2011



OW-7A	BENZ	NAPH
02/01/00	23	460
05/31/00	9.3	160
08/31/00	14	316
11/21/00	27	383
04/02/02	12	40 Q
10/28/02	15	640
06/16/03	11	2.1
11/20/03	14 Q	300 Q
04/20/04	8.3	5
07/20/04	13 Q	360 Q
10/12/04	18	510 Q
01/25/05	16 Q	400 Q
04/11/05	8.1	65 Q
07/11/05	15	260 Q
10/03/05	14	400 Q
01/05/06	13 Q	110 Q
04/11/06	7.8	200 Q
07/21/06	14	330 Q
10/04/06	22	370 Q
02/21/07	9.1	0.92
04/19/07	8.2 Q	66
07/19/07	16 Q	250 Q
10/22/07	17	670 Q
01/14/08	13	130
04/29/08	15.8	348
08/12/08	15.2	219 Q
10/29/08	23.7	496
04/13/09	6.9	87.8
10/05/09	13.2	250
04/13/10	10.2	105 Q
10/19/10	29.6	478 Q
01/19/11	18.4	92.2
03/17/11	12.1	52.5

OW-16	BENZ	NAPH
07/24/07	<0.41	0.02 Q
10/22/07	<0.41	0.058 Q
01/14/08	<0.14	0.18 Q
04/29/08	<0.14 Q	0.19 Q
10/29/08	<0.23	0.062
04/13/09	<0.23	<0.016
10/05/09	<0.23	0.028 Q
04/14/10	<0.39	0.041 Q
10/19/10	<0.41	0.02 Q
01/19/11	<0.39	0.016 Q
03/16/11	<0.41	0.019 Q

OW-2	BENZ	NAPH
02/01/00	<0.5	8
04/02/02	<0.45	1.2
06/16/03	<0.3	<1.2
04/11/05	<0.14	<0.45
04/11/06	<0.14	<0.25
02/22/07	<0.14	0.18 Q
04/19/07	<0.41	0.66 Q
07/19/07	<0.41	0.59 Q
10/22/07	<0.41	0.24 Q
01/14/08	<0.14	0.17
04/28/08	--	--
10/29/08	<0.23	<0.66
04/13/09	<0.23	<0.33
10/05/09	<0.23	0.33 Q
04/13/10	<0.39	0.23 Q
10/19/10	<0.41	0.52 Q
01/25/11	<0.39	0.25
03/17/11	<0.41	0.26 Q

OW-3R	BENZ	NAPH
02/01/00	<0.5	950
05/31/00	1.1	432
08/31/00	1.8	363
11/21/00	<5	150
04/02/02	0.46 Q	88 Q
10/28/02	0.73 Q	260
06/16/03	0.32 Q	1.6 Q
11/20/03	<0.3	76 Q
04/11/05	0.38 Q	1.7
04/11/06	0.34 Q	0.11
02/21/07	0.5	1.9
04/19/07	<0.41	0.33
07/19/07	<0.41	310 Q
10/22/07	<2 Q	260 Q
01/14/08	<0.14	130
04/29/08	4.5	5.3
10/29/08	2.8	228
04/13/09	<0.23	4.5
10/05/09	33.7	421
04/13/10	<0.39	0.72 Q
10/19/10	2.4	57.1 Q
01/25/11	<0.39	6.8
03/17/11	1.2	12.2

OW-17	BENZ	NAPH
07/24/07	<0.41	<0.25
10/22/07	<0.41	0.082
01/14/08	<0.14	0.093 Q
04/29/08	<0.14 Q	0.15 Q
10/29/08	<0.23	<0.33
04/13/09	<0.23	<0.13
10/05/09	<0.23	0.053 Q
04/14/10	<0.39	0.055 Q
10/19/10	<0.41	<0.097
01/19/11	<0.39	<0.097
03/16/11	<0.41	0.027 Q

OW-4	BENZ	NAPH
02/01/00	<0.5	<0.056
04/02/02	<0.45	0.051 Q
06/16/03	<0.3	0.041 Q
04/11/05	0.23 Q	0.38
04/11/06	<0.14	1.5 Q
02/21/07	<0.14	0.094 Q
04/19/07	<0.41	0.09
07/19/07	<0.41	0.12
10/22/07	<0.41	0.12
01/14/08	0.18 Q	0.059 Q
04/28/08	--	--
10/29/08	0.61 Q	1.9
04/13/09	<0.23	0.49
10/05/09	1.2	0.29
04/13/10	3.1	0.58 Q
10/19/10	0.8 Q	3.1 Q
01/20/11	0.96 Q	2
03/17/11	0.43 Q	11.4

OW-6	BENZ	NAPH
02/01/00	10	283
05/31/00	6.8	333
08/31/00	9.7	2280
11/21/00	<10	477
04/02/02	7.3	160 Q
10/28/02	4.2	1800 Q
06/16/03	6.1	1.9
11/20/03	5.4 Q	370 Q
07/20/04	0.77 Q	190 Q
04/11/05	5.7	45 Q
10/03/05	<6.9 Q	1800 Q
04/11/06	5	51 Q
10/04/06	3.1	390 Q
02/21/07	4.9	8.3 Q
04/19/07	4.4	33
07/19/07	2.7	450 Q
10/22/07	<16 Q	2100 Q
01/14/08	4.4	41
04/29/08	3.7	3060
08/12/08	4.1 Q	1720
10/29/08	3.7	1090
04/13/09	4.0	5.3
10/05/09	2.8	1130
04/13/10	1.6	0.048 Q
10/19/10	<4.1	1440 Q
01/19/11	<19.4	1090
03/17/11	3.3	0.59 Q

OW-8	BENZ	NAPH
02/01/00	3.7	0.18
04/02/02	<0.45	0.67
06/16/03	<0.3	0.038 Q
04/11/05	0.44 Q	1.2 Q
04/11/06	<0.14	4.5 Q
02/22/07	<0.14	1.4 Q
04/20/07	<0.41	
07/19/07	0.66 Q	0.091
10/22/07	<0.41	0.093
01/14/08	<0.14	1.2
No samples collected since Jan. 2008		

OW-5R	BENZ	NAPH
02/01/00	529	15700
05/31/00	66	3900
08/31/00	45	3010
11/21/00	52	2500
04/02/02	36	540 Q
10/28/02	5.5	54
06/16/03	2.1	<0.48
11/20/03	34	34 Q
04/20/04	1.5	5.7 Q
07/20/04	4.1	11 Q
10/12/04	64	190 Q
01/25/05	77	220 Q
04/11/05	1.8	6
07/11/05	10	15
10/03/05	1.7	<0.47
01/05/06	1.4	0.54 Q
04/11/06	15	2.8
07/21/06	69	590 Q
10/04/06	90	700 Q
02/21/07	2.9	1.4 Q
04/19/07	0.56 Q	0.29
07/19/07	150 Q	750 Q
10/22/07	96	1100 Q
01/14/08	10	120
04/29/08	1.1	0.57 Q
08/12/08	110	490
10/29/08	114	169 Q
04/13/09	4.1	0.88 Q
10/05/09	54.7	16.4
04/14/10	36.7	15.7 Q
10/19/10	13.2	0.96 Q
01/25/11	2.1	0.48
03/17/11	0.81 Q	0.63

OW-1	BENZ	NAPH
02/01/00	56	4.1
04/02/02	1.4	<1.3
10/28/02	0.71 Q	8.1
06/16/03	2.4	6.9
11/20/03	0.36 Q	<1.9
04/11/05	0.26 Q	<1.1
04/11/06	1.1	<0.25
02/22/07	1.5	0.13 Q
04/19/07	0.69 Q	<0.99
07/19/07	1.1 Q	<1.2
10/22/07	1 Q	<0.25 Q
01/14/08	1.6	<2.5
04/28/08	1.2	0.062 Q
10/29/08	0.37 Q	<2
04/13/09	27.9	<0.33
10/05/09	0.98 Q	0.66 Q
04/13/10	5.8	1.4 Q
10/19/10	<0.41	<0.097
01/20/11	0.42 Q	0.051
03/17/11	<0.41	0.066

OW-11	BENZ	NAPH
02/01/00	3.9	<0.056
05/31/00	3.1	1.7
08/31/00	0.61	0.22
11/21/00	<0.5	0.36
04/02/02	<0.45	<0.4
10/28/02	<0.45	<0.14
06/16/03	<0.3	0.061 Q
11/20/03	<0.3	<0.24
07/20/04	0.3 Q	<0.023
04/11/05	<0.14	0.024 Q
04/11/06	0.26 Q	1.1
02/21/07	<0.14	0.037 Q
04/19/07	<0.41	0.27
07/19/07	<0.41	<0.099
10/22/07	<0.41	0.038 Q
01/14/08	<0.14	0.014 Q
04/28/08	–	–
10/29/08	<0.23	0.79
04/13/09	<0.23 Q	0.020 Q
10/05/09	<0.23	0.44
04/13/10	<0.39	0.22 Q
10/19/10	<0.41	0.07 Q
01/25/11	<0.39	<0.0048
03/17/11	<0.41	0.074

OW-12	BENZ	NAPH
10/12/04	2.2	2.5 Q
01/25/05	9.1	79 Q
04/12/05	3.6	3.8 Q
07/11/05	8.8	2.1
10/03/05	9.4	13
01/05/06	6.9	27 Q
04/11/06	<0.14	0.013 Q
07/21/06	4.0	<0.31
10/04/06	9.9	8.6
02/21/07	5.1	11 Q
04/19/07	1 Q	1.5 Q
07/19/07	3.3	0.9 Q
10/22/07	3.6	22
01/15/08	20	<1.5
04/29/08	0.98 Q	0.8 Q
08/12/08	0.69 Q	<0.82
10/30/08	2.5	0.23
04/13/09	3.7	2.2
10/05/09	4.5	4.7
04/14/10	2.1	0.31 Q
10/19/10	4.8	6 Q
01/19/11	2.5	13.6
03/17/11	5.4	39.6

OW-15	BENZ	NAPH
07/24/07	<0.41	0.019 Q
10/22/07	<0.41	0.077
01/15/08	<0.14	<0.025 Q
04/29/08	<0.14 Q	0.022 Q
08/12/08	<0.14	0.16
10/30/08	<0.23	0.017 Q
04/13/09	<0.23	<0.016
10/05/09	<0.23	0.056
04/13/10	<0.39	0.053 Q
10/19/10	<0.41	0.09 Q
01/19/11	<0.39	0.0084 Q
03/17/11	<0.41	0.016 Q

OW-19	BENZ	NAPH
01/20/11	<0.39	0.028 Q
03/17/11	<0.41	0.049

OW-14	BENZ	NAPH
07/25/07	23	52 Q
10/22/07	82	1600 Q
04/29/08	57.3	608
08/12/08	27.7	387
10/30/08	33.5	95.7
04/13/09	43	244
10/05/09	16.3	9.5
04/13/10	11.7	4.3 Q
10/19/10	11.9	173 Q
01/18/11	8.6	149
03/16/11	7.4	0.21 Q

OW-10	BENZ	NAPH
02/01/00	3.9	75
05/31/00	<0.5	4.1
08/31/00	1.4	0.22
11/21/00	<0.5	15
04/02/02	<0.45	1.4 Q
10/28/02	<0.45	<0.54
06/16/03	<0.3	<0.48
11/20/03	<0.3	0.51 Q
04/12/05	47	340 Q
04/11/06	1.8	19 Q
10/04/06	38	150 Q
02/21/07	30	320 Q
04/19/07	1.9	38
07/19/07	76	100 Q
10/23/07	47	180 Q
01/14/08	51	970 Q
04/29/08	0.88 Q	10.6
08/12/08	9.2	42.3 Q
10/29/08	15.1	282
04/13/09	46.7	145
10/05/09	13.9 Q	2370
04/13/10	9.0	119 Q
10/19/10	4.9	15.1 Q
01/18/11	3.2	52.8
03/16/11	1.8	18.4

OW-9	BENZ	NAPH
02/01/00	146	1980
05/31/00	123	2960
08/31/00	294	2710
11/21/00	259	1920
04/02/02	77 Q	530
10/28/02	6.1	<11
06/16/03	8.9	35
11/20/03	100	78
07/20/04	98	110 Q
04/12/05	100	1100 Q
10/03/05	180	1700 Q
04/11/06	98	1100 Q
10/04/06	150	1800 Q
02/21/07	190	1200 Q
04/19/07	130 Q	3100
07/19/07	150 Q	1700 Q
10/22/07	88 Q	3600 Q
01/14/08	190	4500
04/29/08	144	2910
08/12/08	134	1630
10/29/08	349	1950
04/13/09	448	1650
10/05/09	358	2560
04/13/10	252	2370 Q
10/19/10	137	3720 Q
01/20/11	227	114
03/17/11	210	2220

TW-2	BENZ	NAPH
10/30/08	<0.23	0.016 Q
04/13/09	<0.23	<0.016
10/05/09	<0.23	0.15
04/13/10	<0.39	0.075 Q
10/19/10	<0.41	0.026 Q
01/19/11	<0.39	0.0097 Q
03/16/11	<0.41	0.011 Q

OW-20	BENZ	NAPH
01/20/11	<0.39	0.016 Q
03/17/11	<0.41	0.085

OW-18	BENZ	NAPH
01/20/11	0.48 Q	0.022 Q
03/16/11	1.2	0.025 Q

OW-21	BENZ	NAPH
01/20/11	<0.39	0.015 Q
03/16/11	<0.41	0.01 Q

TW-1	BENZ	NAPH
10/30/08	<0.23	<0.016
04/13/09	<0.23	<0.016
10/05/09	<0.23	0.54
04/14/10	<0.39	0.11 Q
10/20/10	<0.41	0.012 Q
01/20/11	<0.39	0.014 Q
03/17/11	<0.41	0.034 Q

SAMPLE LOCATION	BEN	NAPH
SAMPLE DATE	BENZENE (μg/L)	NAPHTHALENE (μg/L)
GROUNDWATER QUALITY STANDARDS		
MAXIMUM CONTAMINANT LEVEL (MCL)	5	NS
NR140 ENFORCEMENT STANDARD (ES)	5	100

ns = STANDARD HAS NOT BEEN ESTABLISHED
na = NOT ANALYZED
μg/L = MICROGRAMS PER LITER

SOURCE NOTES:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.
BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.
TW-1 AND TW-2 SURVEYED BY WPSC ON DECEMBER 1, 2008.
OW-18 THROUGH OW-21 SURVEYED BY WPSC ON MARCH 1, 2011.

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW DATE: 05/13/11
CHECKED BY: EPK DATE: 05/24/11
APPROVED BY: EPK DATE: 05/24/11
DRAWING NO: 1177-1412C-B31C
REFERENCE: NONE

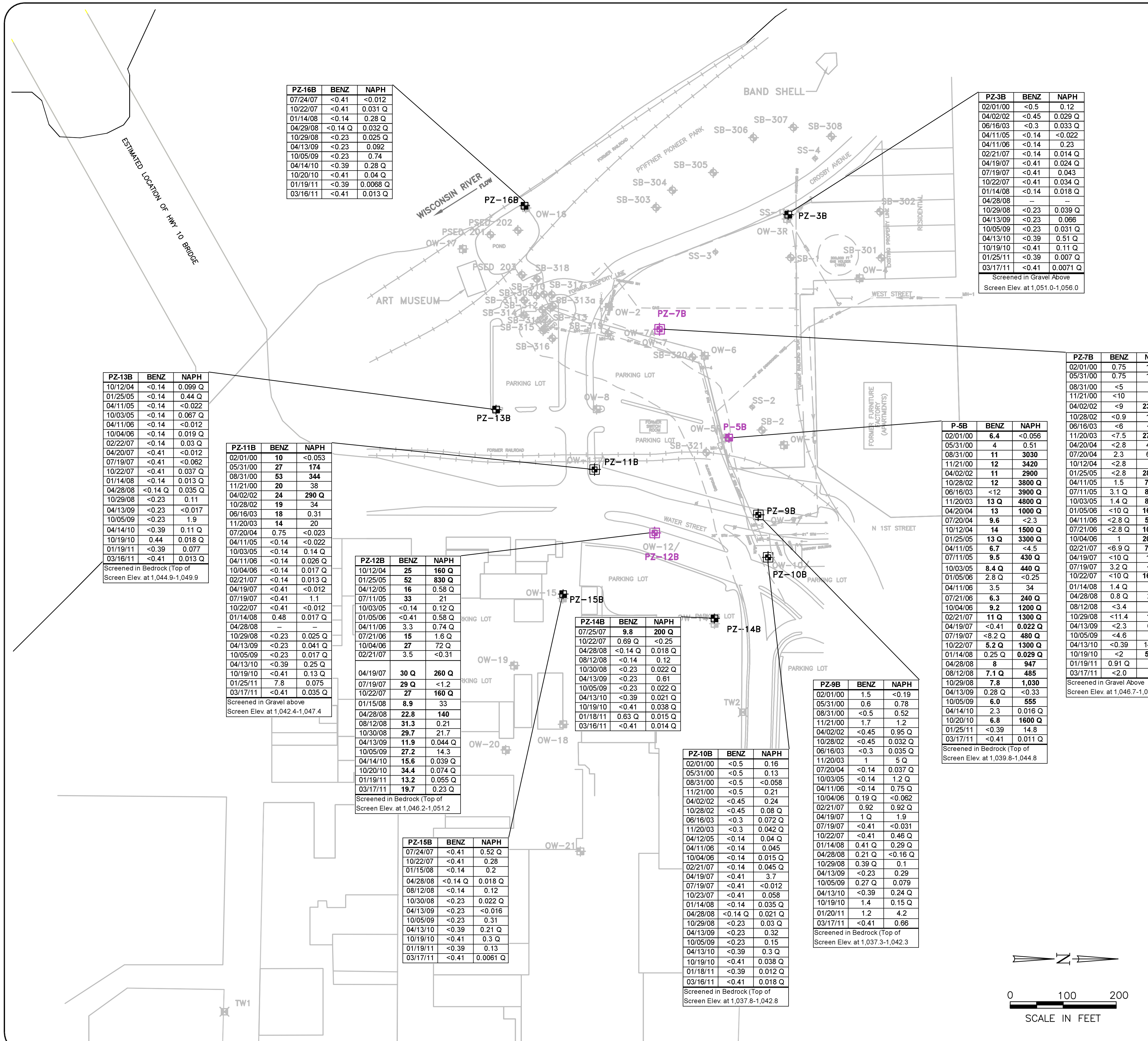
SHALLOW GROUNDWATER QUALITY 2000-2011

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO. 1177/14.12C

FIGURE NO. 28



PZ-16B	BENZ	NAPH
07/24/07	<0.41	<0.012
10/22/07	<0.41	0.031 Q
01/14/08	<0.14	0.28 Q
04/29/08	<0.14 Q	0.032 Q
10/29/08	<0.23	0.025 Q
04/13/09	<0.23	0.092
10/05/09	<0.23	0.74
04/14/10	<0.39	0.28 Q
10/20/10	<0.41	0.04 Q
01/19/11	<0.39	0.0068 Q
03/16/11	<0.41	0.013 Q

PZ-3B	BENZ	NAPH
02/01/00	<0.5	0.12
04/02/02	<0.45	0.029 Q
06/16/03	<0.3	0.033 Q
04/11/05	<0.14	<0.022
04/11/06	<0.14	0.23
02/21/07	<0.14	0.014 Q
04/19/07	<0.41	0.024 Q
07/19/07	<0.41	0.043
10/22/07	<0.41	0.034 Q
01/14/08	<0.14	0.018 Q
04/28/08	--	--
10/29/08	<0.23	0.039 Q
04/13/09	<0.23	0.066
10/05/09	<0.23	0.031 Q
04/13/10	<0.39	0.51 Q
10/19/10	<0.41	0.11 Q
01/25/11	<0.39	0.007 Q
03/17/11	<0.41	0.0071 Q
Screened in Gravel Above Screen Elev. at 1,051.0-1,056.0		

PZ-13B	BENZ	NAPH
10/12/04	<0.14	0.099 Q
01/25/05	<0.14	0.44 Q
04/11/05	<0.14	<0.022
10/03/05	<0.14	0.067 Q
04/11/06	<0.14	<0.012
10/04/06	<0.14	0.019 Q
02/22/07	<0.14	0.03 Q
04/20/07	<0.41	<0.012
07/19/07	<0.41	<0.062
10/22/07	<0.41	0.037 Q
01/14/08	<0.14	0.013 Q
04/28/08	<0.14 Q	0.035 Q
10/29/08	<0.23	0.11
04/13/09	<0.23	<0.017
10/05/09	<0.23	1.9
04/14/10	<0.39	0.11 Q
10/19/10	0.44	0.018 Q
01/19/11	<0.39	0.077
03/16/11	<0.41	0.013 Q
Screened in Bedrock (Top of Screen Elev. at 1,044.9-1,049.9		

PZ-11B	BENZ	NAPH
02/01/00	**10**	<0.053
05/31/00	**27**	**174**
08/31/00	**53**	**344**
11/21/00	**20**	38
04/02/02	**24**	**290 Q**
10/28/02	**19**	34
06/16/03	**18**	0.31
11/20/03	**14**	20
07/20/04	0.75	<0.023
04/11/05	<0.14	<0.022
10/03/05	<0.14	0.14 Q
04/11/06	<0.14	0.026 Q
10/04/06	<0.14	0.017 Q
02/21/07	<0.14	0.013 Q
04/19/07	<0.41	<0.012
07/19/07	<0.41	1.1
10/22/07	<0.41	<0.012
01/14/08	0.48	0.017 Q
04/28/08	–	–
10/29/08	<0.23	0.025 Q
04/13/09	<0.23	0.041 Q
10/05/09	<0.23	0.017 Q
04/13/10	<0.39	0.25 Q
10/19/10	<0.41	0.13 Q
01/25/11	7.8	0.075
03/17/11	<0.41	0.035 Q
Screened in Gravel above Screen Elev. at 1,042.4-1,047.4		

PZ-12B	BENZ	NAPH
10/12/04	**25**	**160 Q**
01/25/05	**52**	**830 Q**
04/12/05	**16**	0.58 Q
07/11/05	**33**	21
10/03/05	<0.14	0.12 Q
01/05/06	<0.41	0.58 Q
04/11/06	3.3	0.74 Q
07/21/06	**15**	1.6 Q
10/04/06	**27**	72 Q
02/21/07	3.5	<0.31
04/19/07	**30 Q**	**260 Q**
07/19/07	**29 Q**	<1.2
10/22/07	**27**	**160 Q**
01/15/08	**8.9**	33
04/28/08	**22.8**	**140**
08/12/08	**31.3**	0.21
10/30/08	**29.7**	21.7
04/13/09	**11.9**	0.044 Q
10/05/09	**27.2**	14.3
04/14/10	**15.6**	0.039 Q
10/20/10	**34.4**	0.074 Q
01/19/11	**13.2**	0.055 Q
03/17/11	**19.7**	0.23 Q
Screened in Bedrock (Top of Screen Elev. at 1,046.2-1,051.2		

PZ-15B	BENZ	NAPH
07/24/07	<0.41	0.52 Q
10/22/07	<0.41	0.28
01/15/08	<0.14	0.2
04/28/08	<0.14 Q	0.018 Q
08/12/08	<0.14	0.12
10/30/08	<0.23	0.022 Q
04/13/09	<0.23	<0.016
10/05/09	<0.23	0.31
04/13/10	<0.39	0.21 Q
10/19/10	<0.41	0.3 Q
01/19/11	<0.39	0.13
03/17/11	<0.41	0.0061 Q

PZ-14B	BENZ	NAPH
07/25/07	**9.8**	**200 Q**
10/22/07	0.69 Q	<0.25
04/28/08	<0.14 Q	0.018 Q
08/12/08	<0.14	0.12
10/30/08	<0.23	0.022 Q
04/13/09	<0.23	0.61
10/05/09	<0.23	0.022 Q
04/13/10	<0.39	0.021 Q
10/19/10	<0.41	0.038 Q
01/18/11	0.63 Q	0.015 Q
03/16/11	<0.41	0.014 Q

PZ-10B	BENZ	NAPH
02/01/00	<0.5	0.16
05/31/00	<0.5	0.13
08/31/00	<0.5	<0.058
11/21/00	<0.5	0.21
04/02/02	<0.45	0.24
10/28/02	<0.45	0.08 Q
06/16/03	<0.3	0.072 Q
11/20/03	<0.3	0.042 Q
04/12/05	<0.14	0.04 Q
04/11/06	<0.14	0.045
10/04/06	<0.14	0.015 Q
02/21/07	<0.14	0.045 Q
04/19/07	<0.41	3.7
07/19/07	<0.41	<0.012
10/23/07	<0.41	0.058
01/14/08	<0.14	0.035 Q
04/28/08	<0.14 Q	0.021 Q
10/29/08	<0.23	0.03 Q
04/13/09	<0.23	0.32
10/05/09	<0.23	0.15
04/13/10	<0.39	0.3 Q
10/19/10	<0.41	0.038 Q
01/18/11	<0.39	0.012 Q
03/16/11	<0.41	0.018 Q
Screened in Bedrock (Top of Screen Elev. at 1,037.8-1,042.8		

PZ-9B	BENZ	NAPH
02/01/00	1.5	<0.19
05/31/00	0.6	0.78
08/31/00	<0.5	0.52
11/21/00	1.7	1.2
04/02/02	<0.45	0.95 Q
10/28/02	<0.45	0.032 Q
06/16/03	<0.3	0.035 Q
11/20/03	1	5 Q
07/20/04	<0.14	0.037 Q
10/03/05	<0.14	1.2 Q
04/11/06	<0.14	0.75 Q
10/04/06	0.19 Q	<0.062
02/21/07	0.92	0.92 Q
04/19/07	1 Q	1.9
07/19/07	<0.41	<0.031
10/22/07	<0.41	0.46 Q
01/14/08	0.41 Q	0.29 Q
04/28/08	0.21 Q	<0.16 Q
10/29/08	0.39 Q	0.1
04/13/09	<0.23	0.29
10/05/09	0.27 Q	0.079
04/13/10	<0.39	0.24 Q
10/19/10	1.4	0.15 Q
01/20/11	1.2	4.2
03/17/11	<0.41	0.66
Screened in Bedrock (Top of Screen Elev. at 1,037.3-1,042.3		

P-5B	BENZ	NAPH
02/01/00	**6.4**	<0.056
05/31/00	4	0.51
08/31/00	**11**	**3030**
11/21/00	**12**	**3420**
04/02/02	**11**	**2900**
10/28/02	**12**	**3800 Q**
06/16/03	<12	**3900 Q**
11/20/03	**13 Q**	**4800 Q**
04/20/04	**13**	**1000 Q**
07/20/04	**9.6**	<2.3
10/12/04	**14**	**1500 Q**
01/25/05	**13 Q**	**3300 Q**
04/11/05	**6.7**	<4.5
07/11/05	**9.5**	**430 Q**
10/03/05	**8.4 Q**	**440 Q**
01/05/06	2.8 Q	<0.25
04/11/06	3.5	34
07/21/06	**6.3**	**240 Q**
10/04/06	**9.2**	**1200 Q**
02/21/07	**11 Q**	**1300 Q**
04/19/07	<0.41	**0.022 Q**
07/19/07	<8.2 Q	**480 Q**
10/22/07	**5.2 Q**	**1300 Q**
01/14/08	0.25 Q	**0.029 Q**
04/28/08	8	**947**
08/12/08	**7.1 Q**	**485**
10/29/08	**7.8**	**1,030**
04/13/09	0.28 Q	<0.33
10/05/09	**6.0**	**555**
04/14/10	2.3	0.016 Q
10/20/10	**6.8**	**1600 Q**
01/25/11	<0.39	14.8
03/17/11	<0.41	0.011 Q
Screened in Bedrock (Top of Screen Elev. at 1,039.8-1,044.8		

PZ-7B	BENZ	NAPH
02/01/00	0.75	**1000**
05/31/00	0.75	**1700**
08/31/00	<5	**358**
11/21/00	<10	**966**
04/02/02	<9	**2300 Q**
10/28/02	<0.9	**1700**
06/16/03	<6	<2.4
11/20/03	<7.5	**2700 Q**
04/20/04	<2.8	48 Q
07/20/04	2.3	62 Q
10/12/04	<2.8	**980**
01/25/05	<2.8	**2800 Q**
04/11/05	1.5	**700 Q**
07/11/05	3.1 Q	**810 Q**
10/03/05	1.4 Q	**890 Q**
01/05/06	<10 Q	**1600 Q**
04/11/06	<2.8 Q	**590 Q**
07/21/06	<2.8 Q	**1000 Q**
10/04/06	1	**2000 Q**
02/21/07	<6.9 Q	**730 Q**
04/19/07	<10 Q	**1200**
07/19/07	3.2 Q	<1.2
10/22/07	<10 Q	**1600 Q**
01/14/08	1.4 Q	**940**
04/28/08	0.8 Q	24.7
08/12/08	<3.4	**794**
10/29/08	<11.4	**1680**
04/13/09	<2.3	65.7
10/05/09	<4.6	**701**
04/13/10	<0.39	14.1 Q
10/19/10	<2	**587 Q**
01/19/11	0.91 Q	**945**
03/17/11	<2.0	5.8
Screened in Gravel Above Screen Elev. at 1,046.7-1,051.7		

LEGEND

OW-1	WATER TABLE OBSERVATION WELL
OW-9/PZ-9B	PIEZOMETER/NESTED MONITORING WELL
SB-308	SOIL BORING (2007)
PZ-13B	PIEZOMETER
PZ-7B	WELL WITH HISTORICAL EXCEEDANCES
SS-4	EDI SURFACE SAMPLE (1986)
OW-19	WELL LOCATION (2011)
TW1	TEMPORARY WELL (2008)
MH-1	STORM SEWER MANHOLE
	HYDRANT
	UTILITY POLE
WTR	WATER LINE
GAS	GAS LINE
STM	STORM SEWER
MGP	MANUFACTURED GAS PLANT
	FORMER BUILDINGS
	FORMER MGP PROCESS STRUCTURES
	FORMER RAILROAD

SAMPLE LOCATION	BEN	NAPH
SAMPLE DATE	BENZENE (µg/L)	NAPHTHALENE (µg/L)
GROUNDWATER QUALITY STANDARDS		
MAXIMUM CONTAMINANT LEVEL (MCL)	5	NS
NR140 ENFORCEMENT STANDARD (ES)	5	100

ns = STANDARD HAS NOT BEEN ESTABLISHED
na = NOT ANALYZED
µg/L = MICROGRAMS PER LITER

SOURCE NOTES:
THIS MAP WAS DEVELOPED FROM DRAWINGS BY SIMON HYDRO-SEARCH, DATED 02/11/94, DRAWING NO. 3075-d8 AND DRAWING NO. 3075-d2, DATED 11/15/93, PROJECT 304533075, A MAP FROM THE CITY OF STEVENS POINT, DRAWING E2 M-1461, DATE UNKNOWN, A MAP FROM THE CITY OF STEVENS POINT, DRAWING A-3 M-1456, DATED 1986, AND DRAWINGS FROM WISCONSIN PUBLIC SERVICE CORP., WSK509.DWG AND STPTGAS.DWG. GAS LINE TAKEN FROM WSK509.DWG AND ABANDONED GAS LINE TAKEN FROM WPSC W.O. 0013098081, STEVENS POINT AREA MAP NO. 2106-252. ALL LOCATIONS INCLUDING UTILITIES ARE APPROXIMATE.
A SURVEY FROM WPSC DATED JANUARY 31, 2000 LOCATED WELLS AND BORINGS SB-207 THROUGH SB-216 INSTALLED JANUARY 2000.
UNSURVEYED PORTION OF RIVER AND ISLAND FROM EARTHVISIONS U.S. TERRAIN SERIES © EARTHVISIONS, INC. 603-433-8500.
A SURVEY BY WPSC DATED AUGUST 15, 2007 LOCATED WELLS OW-14 THROUGH OW-17 AND BORINGS SB-309 THROUGH SB-321.
BORINGS SB-301 THROUGH SB-308 WERE LOCATED IN THE FIELD BY NRT STAFF USIGN A HAND-HELD DGPS UNIT.
TW-1 AND TW-2 SURVEYED BY WPSC ON DECEMBER 1, 2008.
OW-18 THROUGH OW-21 SURVEYED BY WPSC ON MARCH 1, 2011.

0 100 200
SCALE IN FEET

NOTES:
SUBSURFACE UTILITY LINE AND FORMER STRUCTURES/BUILDINGS LOCATIONS ARE APPROXIMATE.

DRAWN BY: KNW DATE: 05/13/11
CHECKED BY: EPK DATE: 05/24/11
APPROVED BY: EPK DATE: 05/24/11
DRAWING NO: 1177-1412C-B30C
REFERENCE: NONE

DEEP GROUNDWATER QAULITY 2000-2011

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

NATURAL RESOURCE TECHNOLOGY

PROJECT NO.
1177/14.12C

FIGURE NO.
29

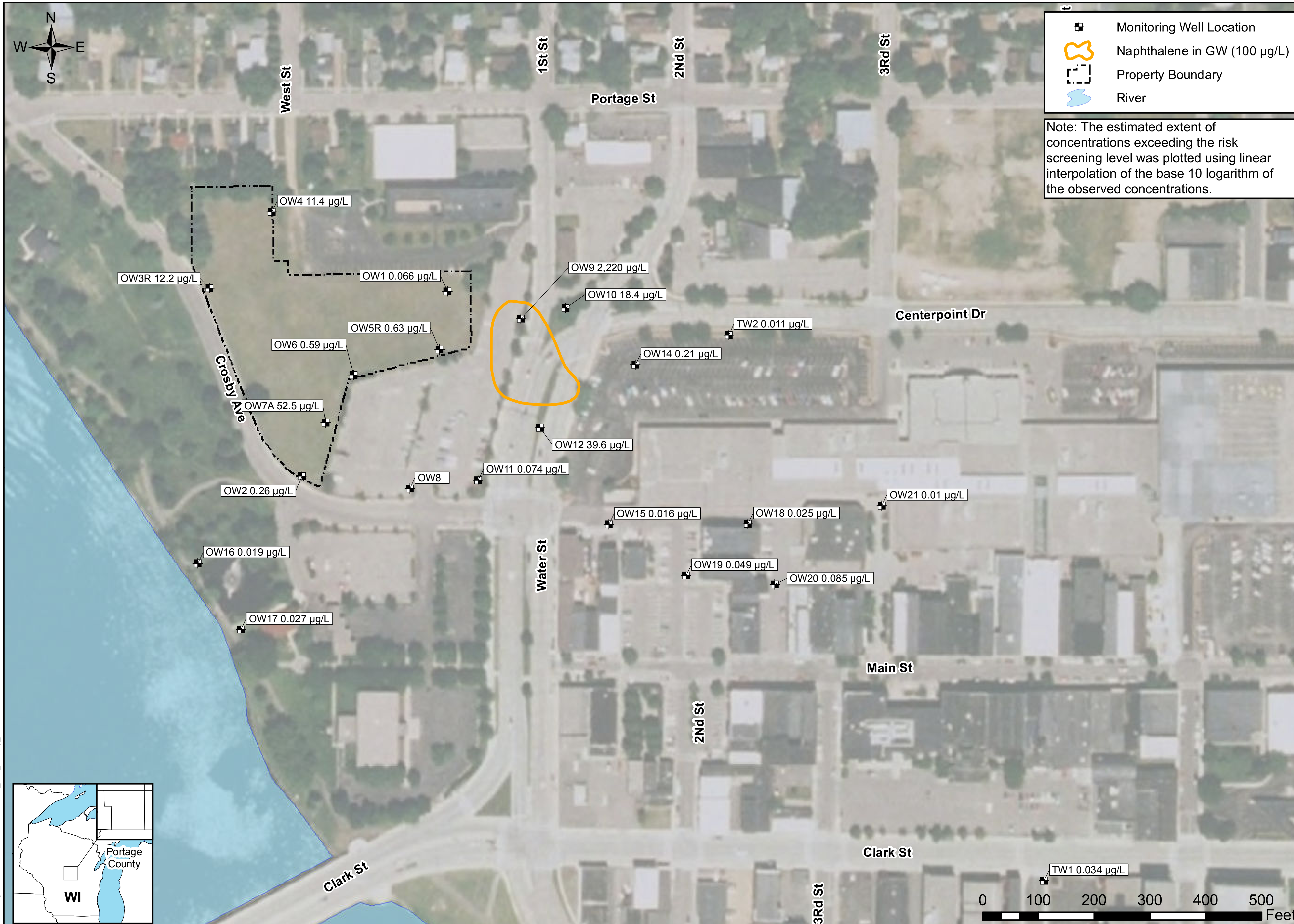
Benzene Concentration in Water Table Monitoring Wells
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

Natural Resource Technology

Project No. 1177
Figure No. 30

5/25/2011



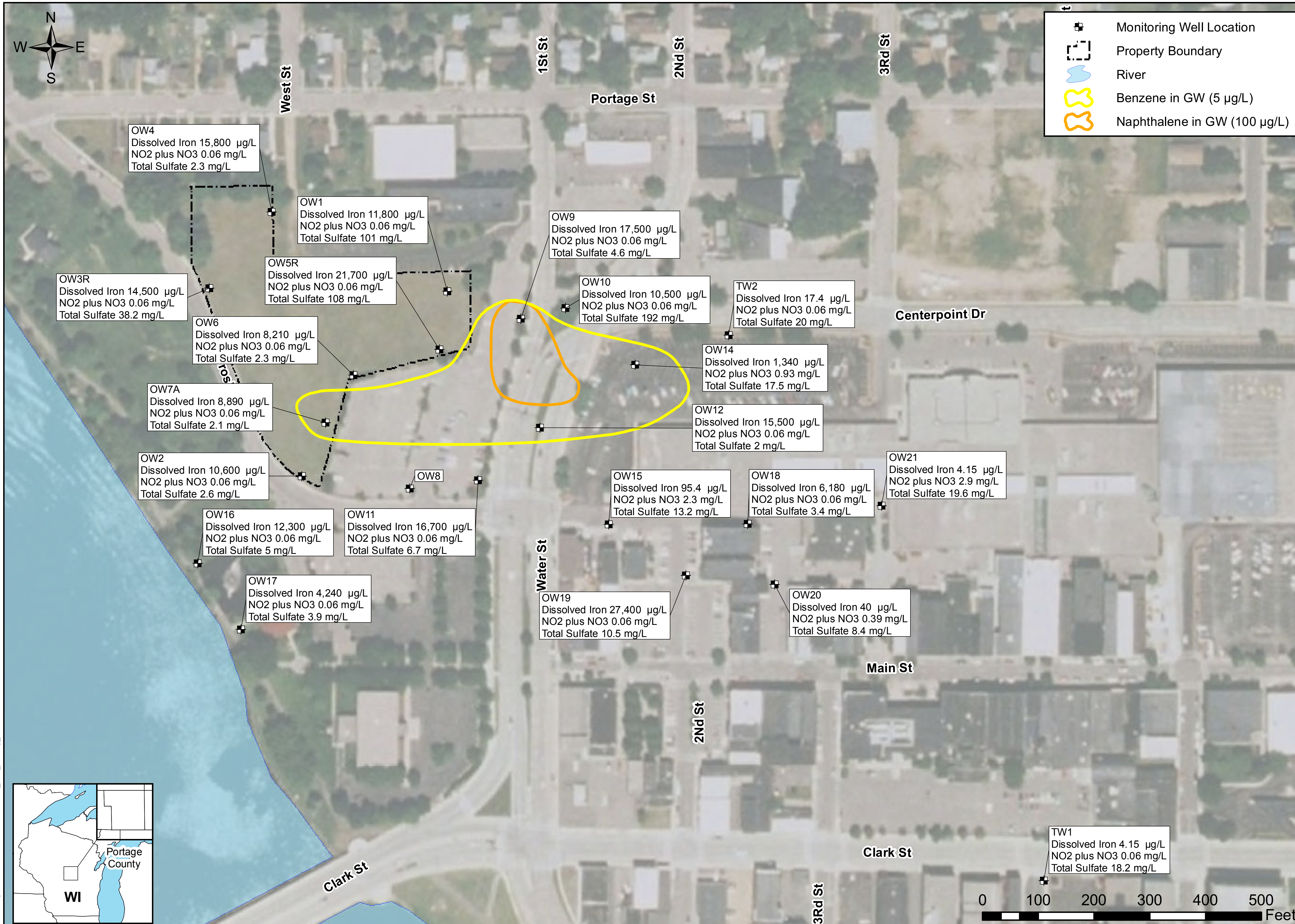
Naphthalene Concentration in Water Table Monitoring Wells
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 31

5/25/2011



Iron, Nitrate, and Sulfate in Water Table Wells
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

Natural Resource Technology

Project No. 1177
Figure No. 32

5/25/2011

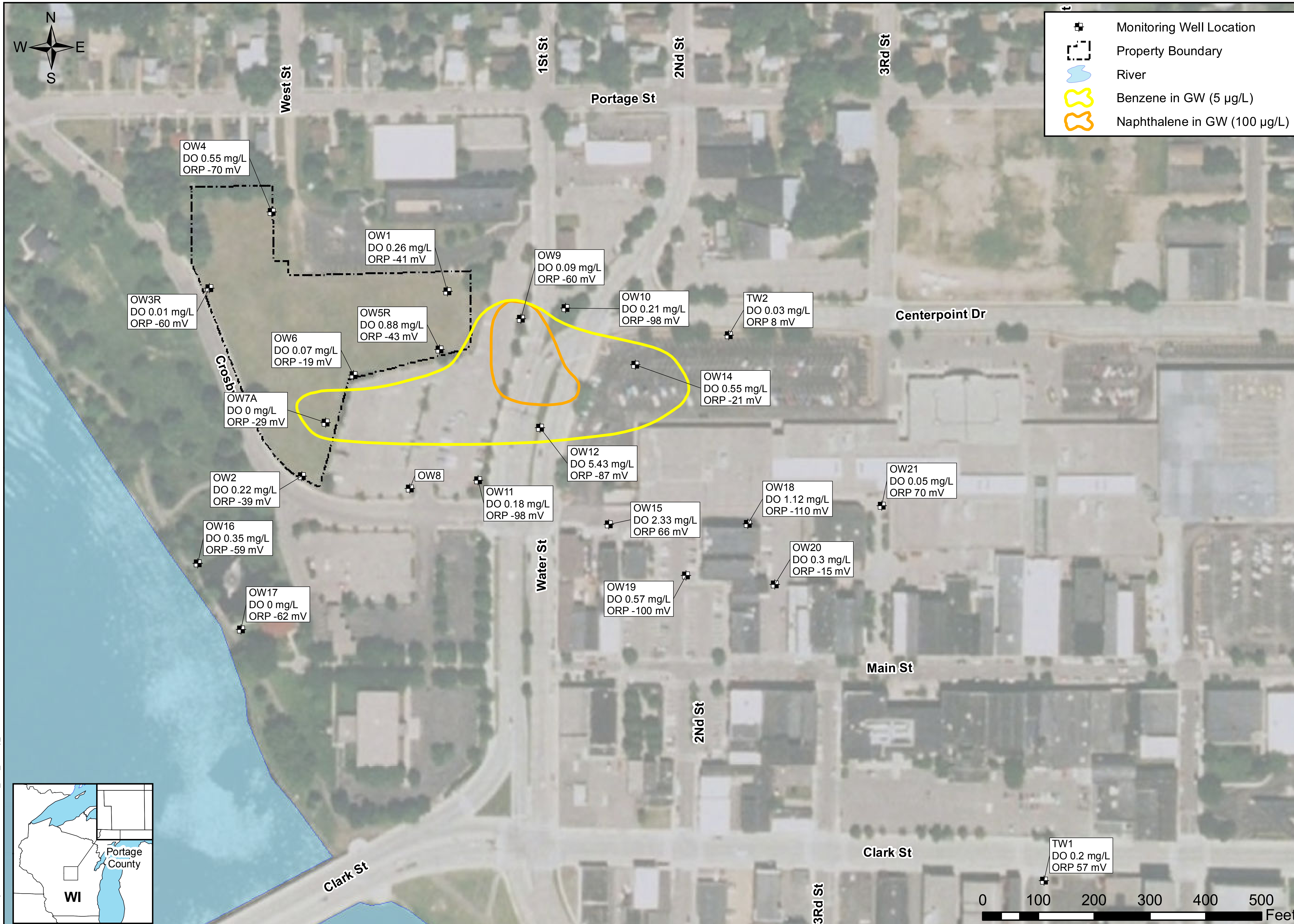
Iron, Nitrate, and Sulfate in Piezometers
March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 33

5/25/2011



Dissolved Oxygen and Oxidation Reduction Potential in Water Table Wells - March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 34

5/25/2011

Dissolved Oxygen and Oxidation Reduction Potential
in Piezometers - March 2011

Wisconsin Public Service Corporation
Former Manufactured Gas Plant, Stevens Point, Wisconsin

NATURAL RESOURCE TECHNOLOGY

Project No. 1177
Figure No. 35

5/25/2011

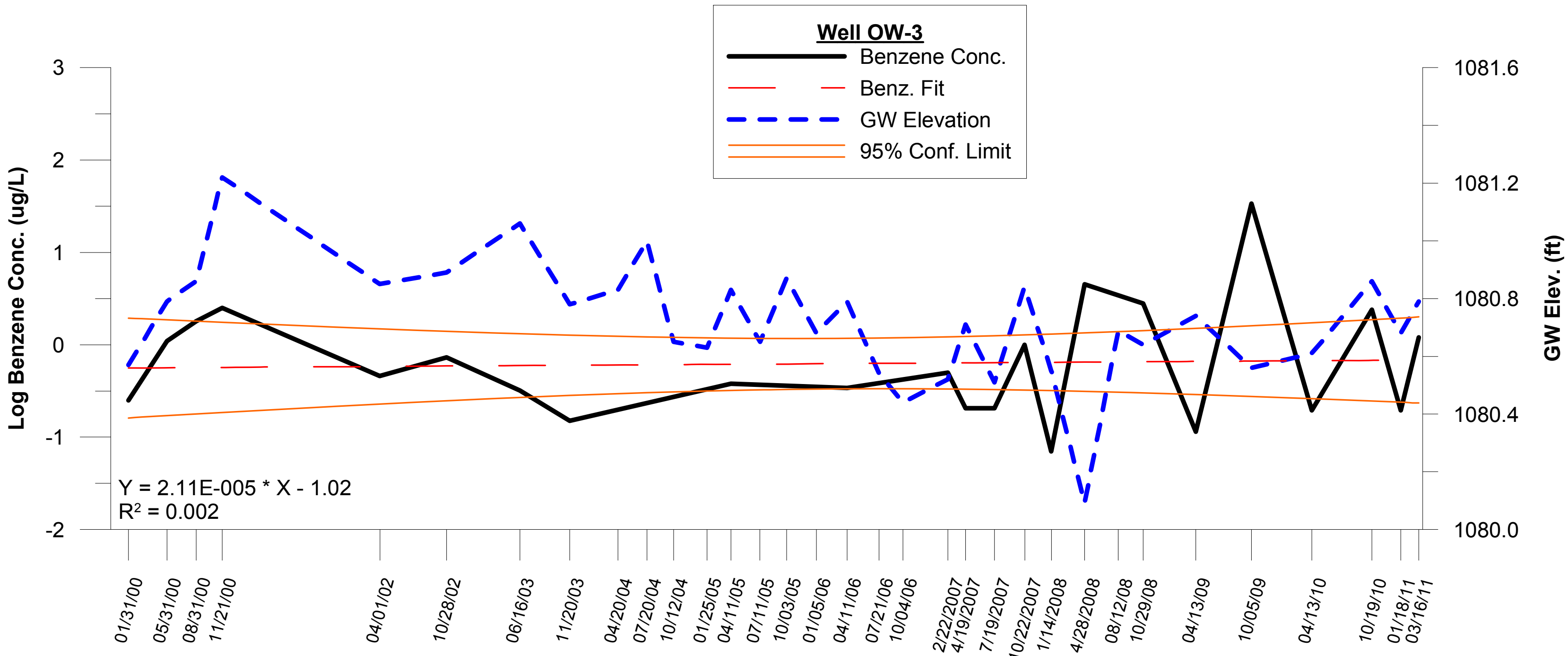
Attachment 3

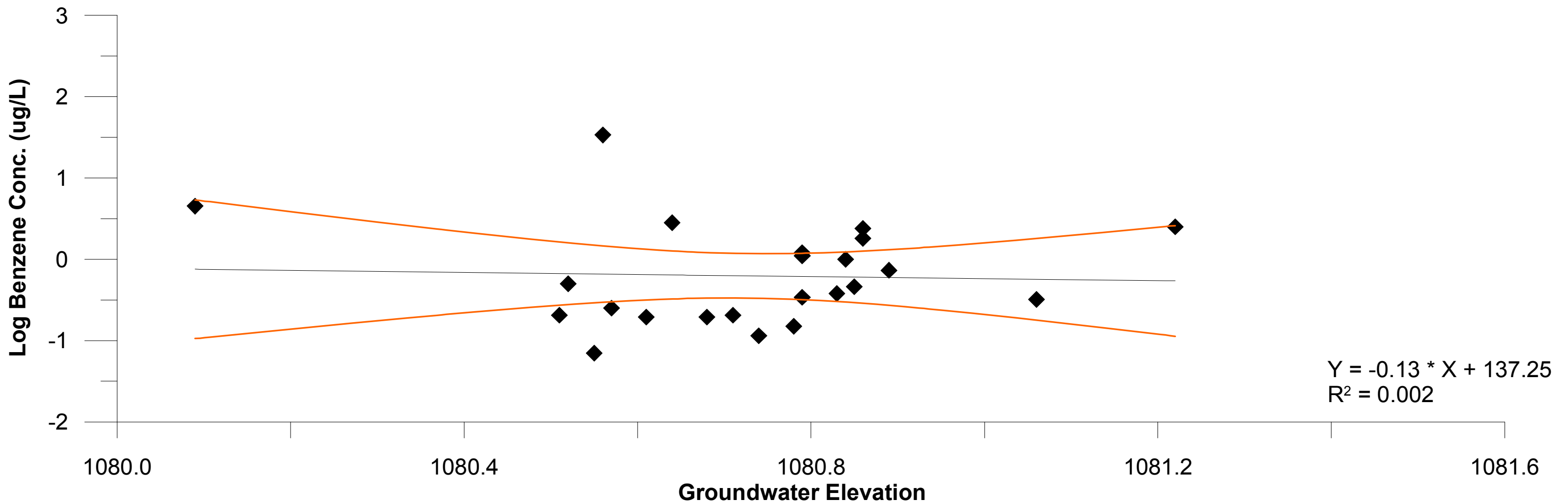
Stevens Point RI Report Revision 3

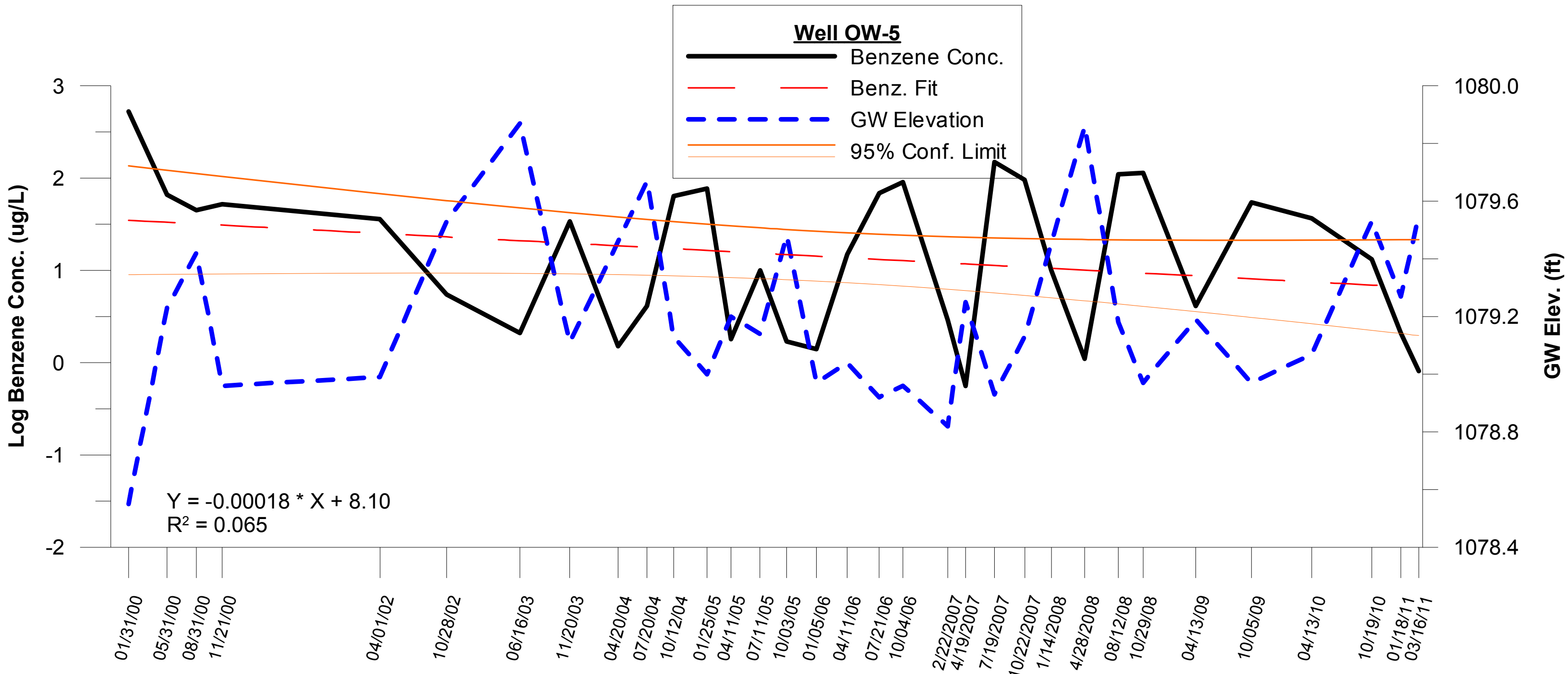
(Appendix N)

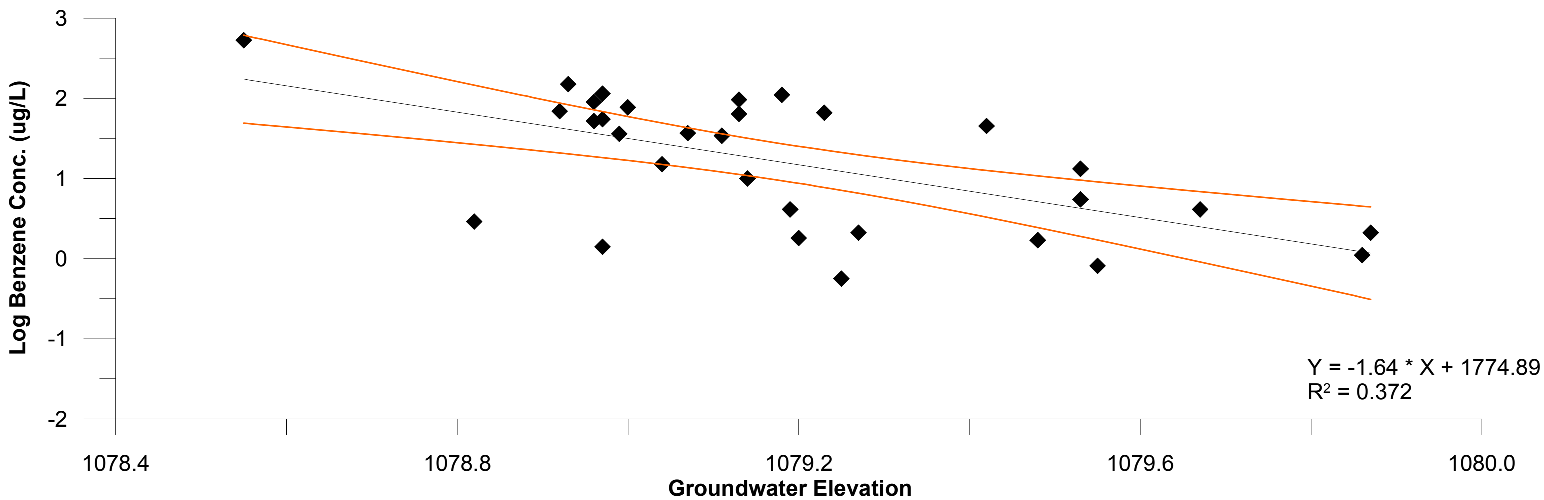
APPENDIX N

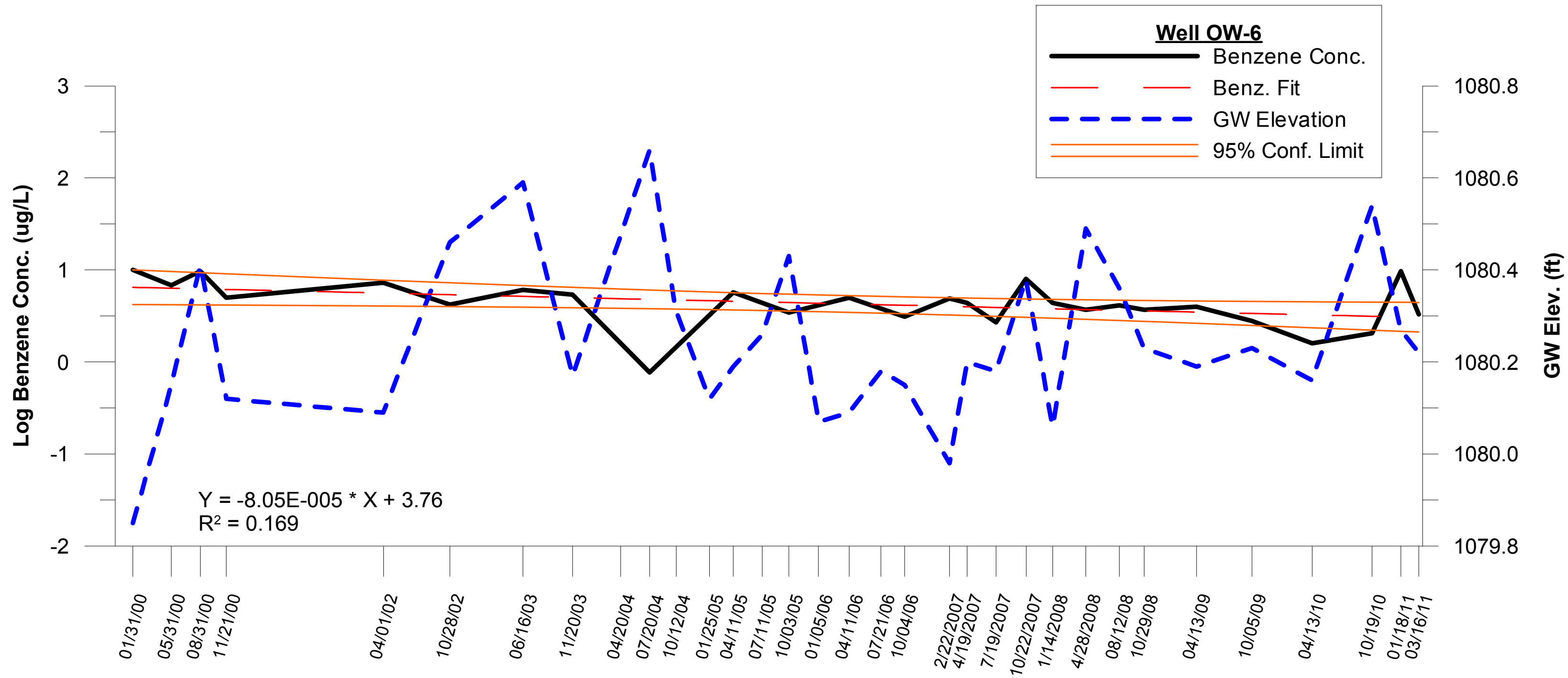
BENZENE AND NAPHTHALENE GROUNDWATER CONCENTRATION TREND PLOTS/REGRESSION ANALYSES, MANN-KENDALL RESULTS, AND MNA PLOTS

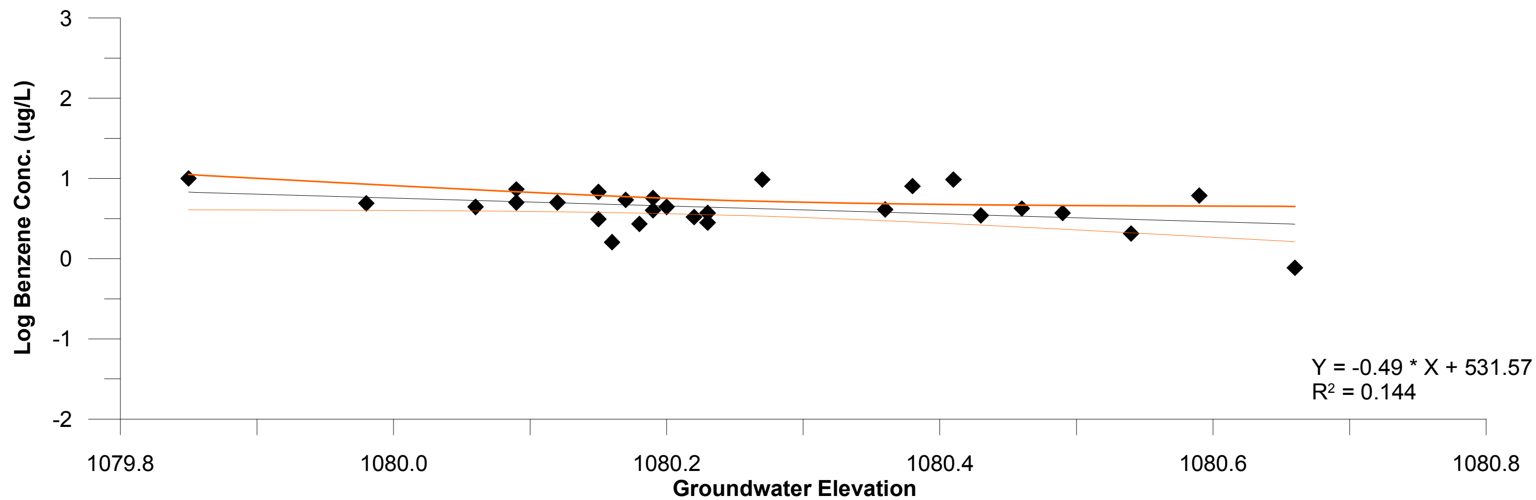

Well OW-3
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = 2.11E-005 * X - 1.02
R² = 0.002
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

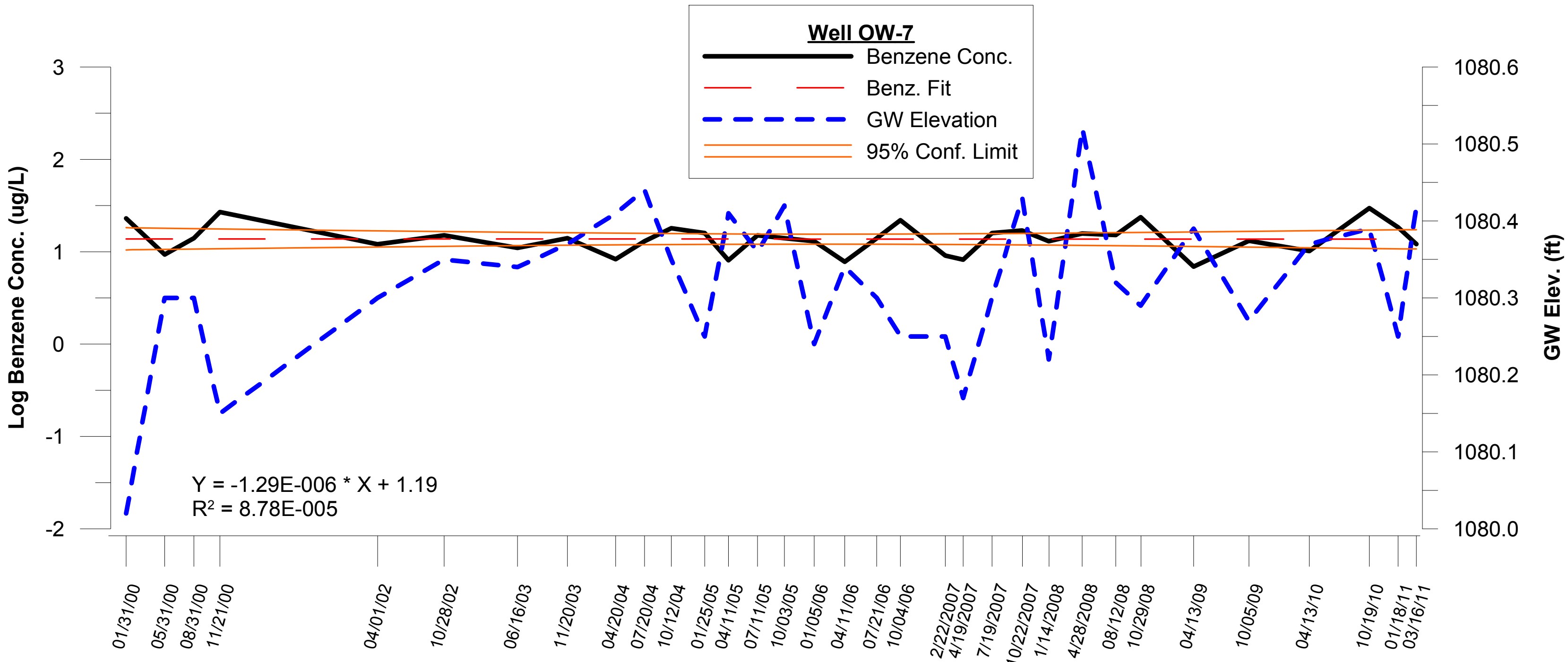

Log Benzene Conc. (ug/L)
Y = -0.13 * X + 137.25
R² = 0.002
Groundwater Elevation


Well OW-5
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -0.00018 * X + 8.10
R² = 0.065
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = -1.64 * X + 1774.89
R² = 0.372


Well OW-6
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -8.05E-005 * X + 3.76
R² = 0.169
3
2
1
0
-1
-2
1080.8
1080.6
1080.4
1080.2
1080.0
1079.8
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
3
2
1
0
-1
-2
Y = -0.49 * X + 531.57
R² = 0.144
1079.8
1080.0
1080.2
1080.4
1080.6
1080.8
Groundwater Elevation


Well OW-7
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -1.29E-006 * X + 1.19
R² = 8.78E-005
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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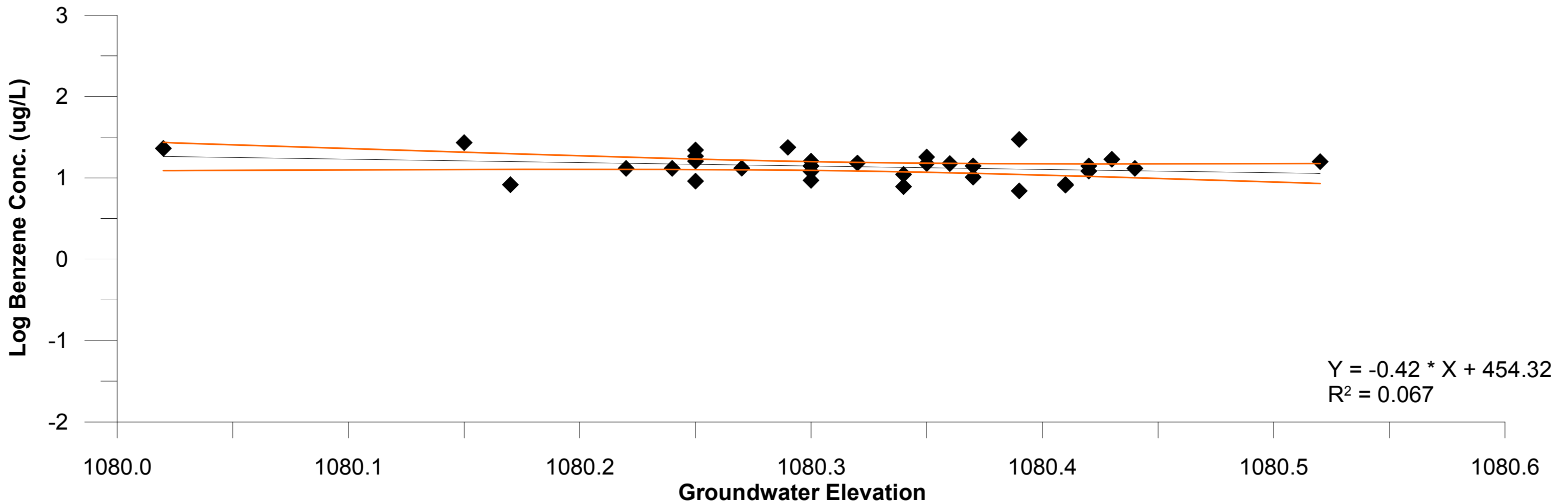
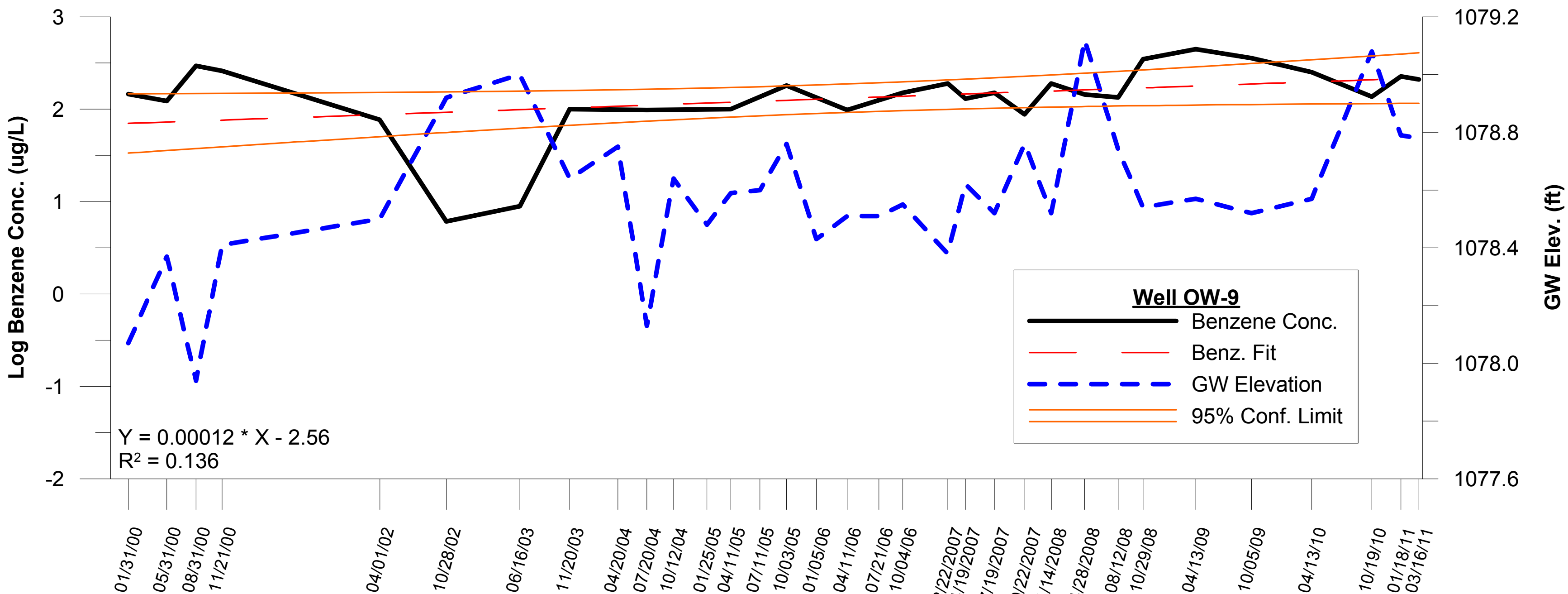
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = -0.42 * X + 454.32
R² = 0.067



Well OW-9
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = 0.00012 * X - 2.56
R^2 = 0.136
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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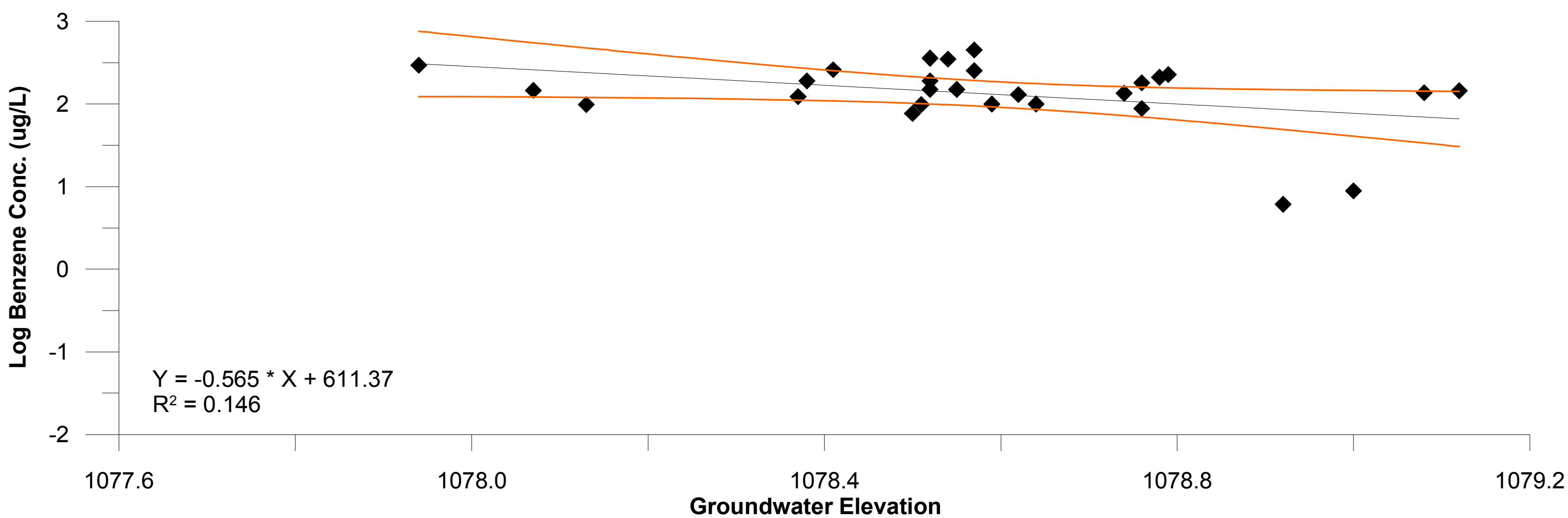
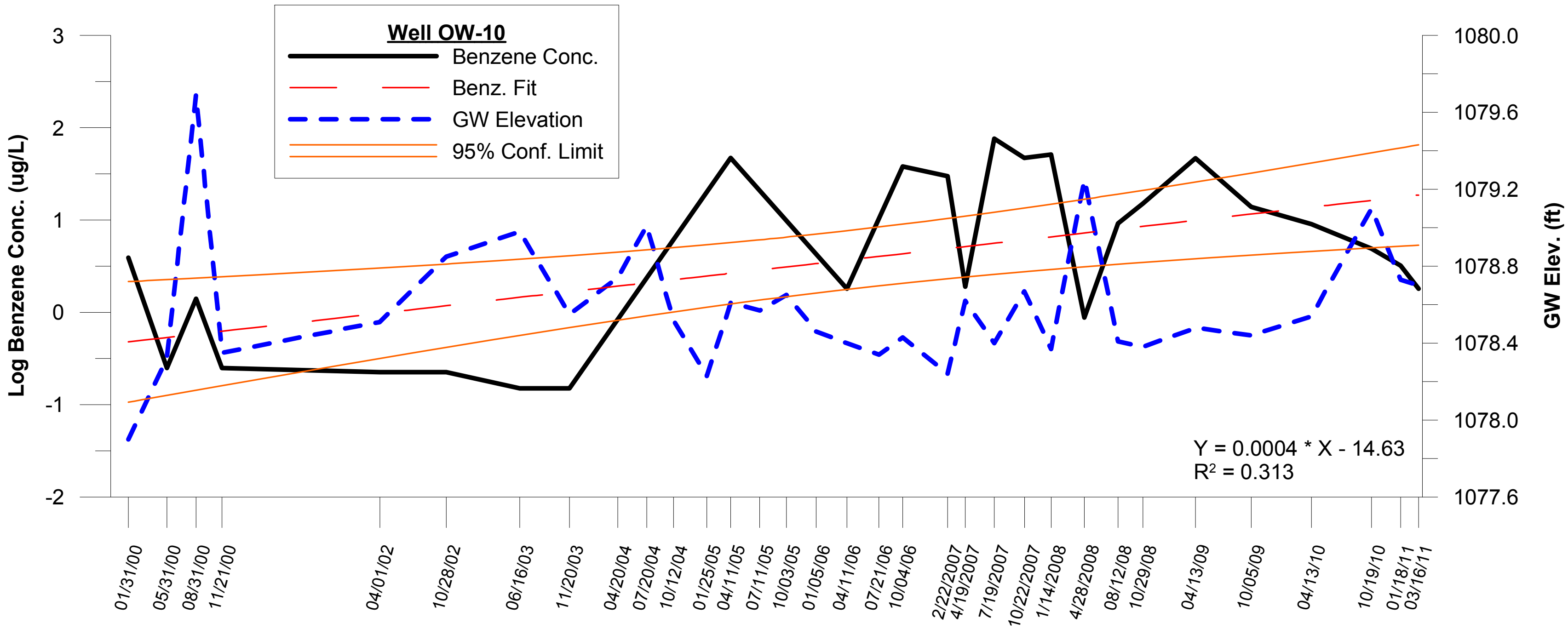
04/13/10
10/19/10
01/18/11
03/16/11



Log Benzene Conc. (ug/L)
Y = -0.565 * X + 611.37
R^2 = 0.146
Groundwater Elevation


Well OW-10
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = 0.0004 * X - 14.63
R² = 0.313
3
2
1
0
-1
-2
1080.0
1079.6
1079.2
1078.8
1078.4
1078.0
1077.6
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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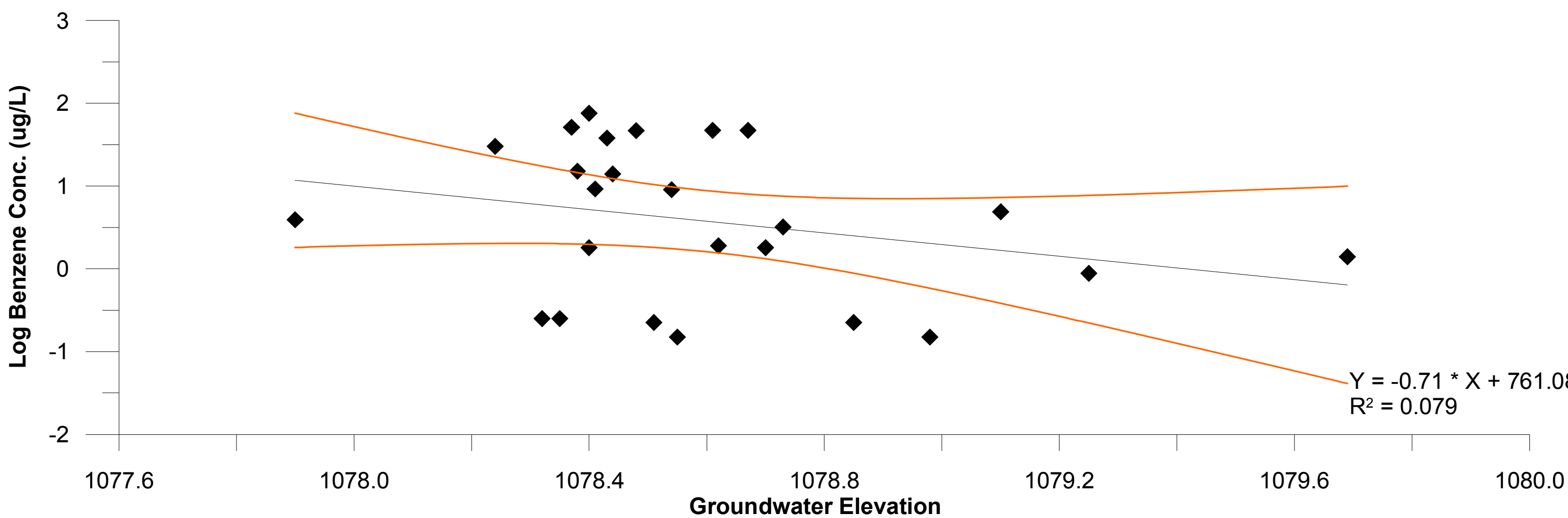
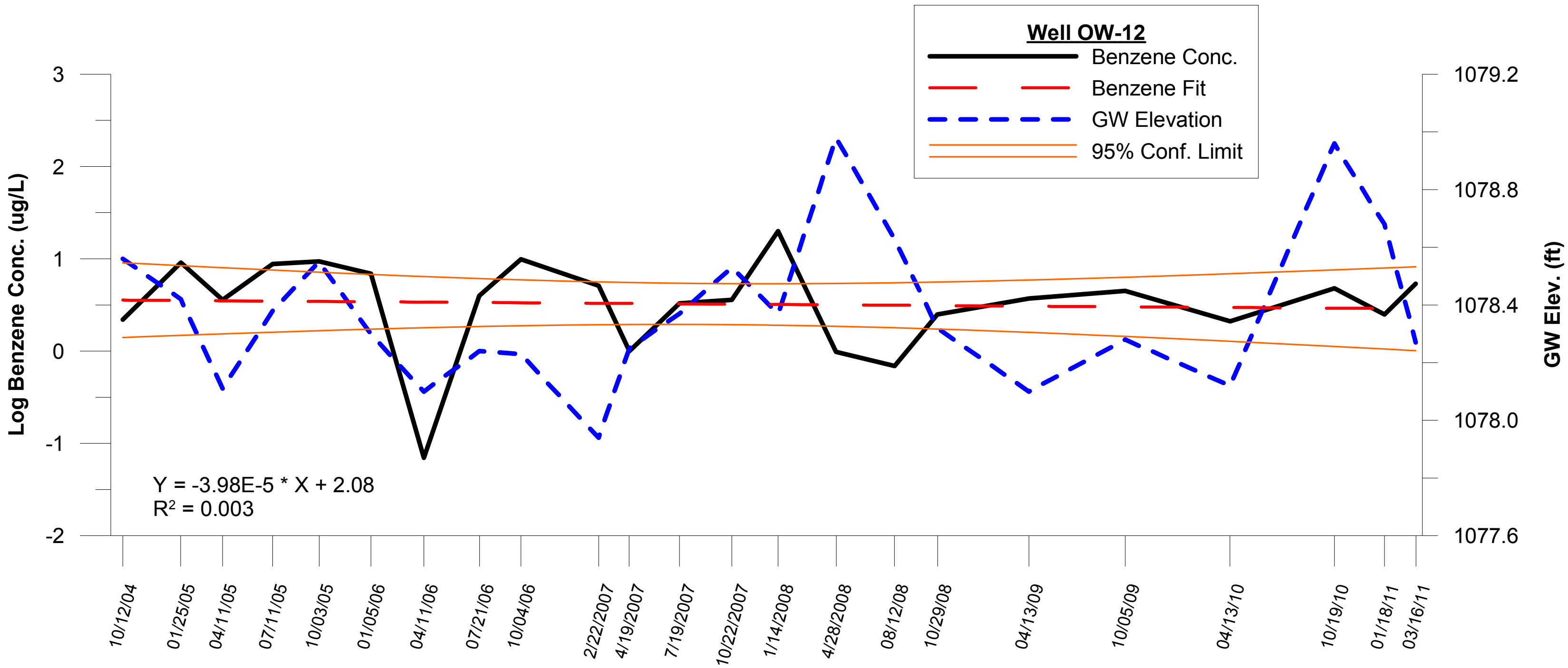
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = -0.71 * X + 761.08
R² = 0.079
3
2
1
0
-1
-2
1077.6
1078.0
1078.4
1078.8
1079.2
1079.6
1080.0



Well OW-12
Benzene Conc.
Benzene Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -3.98E-5 * X + 2.08
R² = 0.003
3
2
1
0
-1
-2
1079.2
1078.8
1078.4
1078.0
1077.6
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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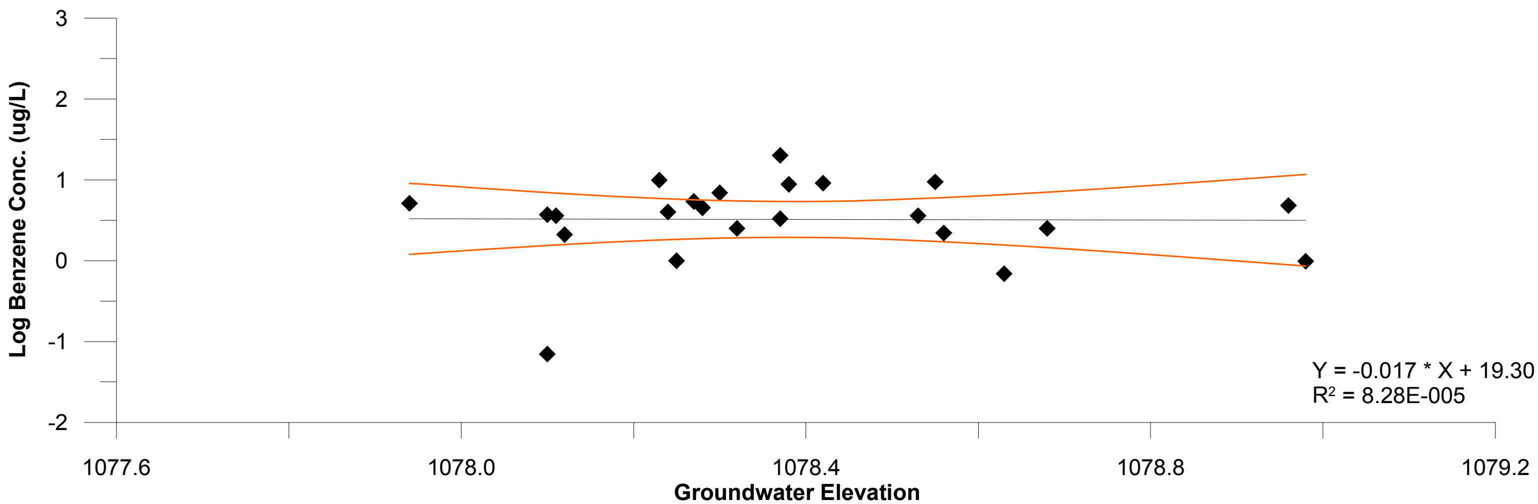
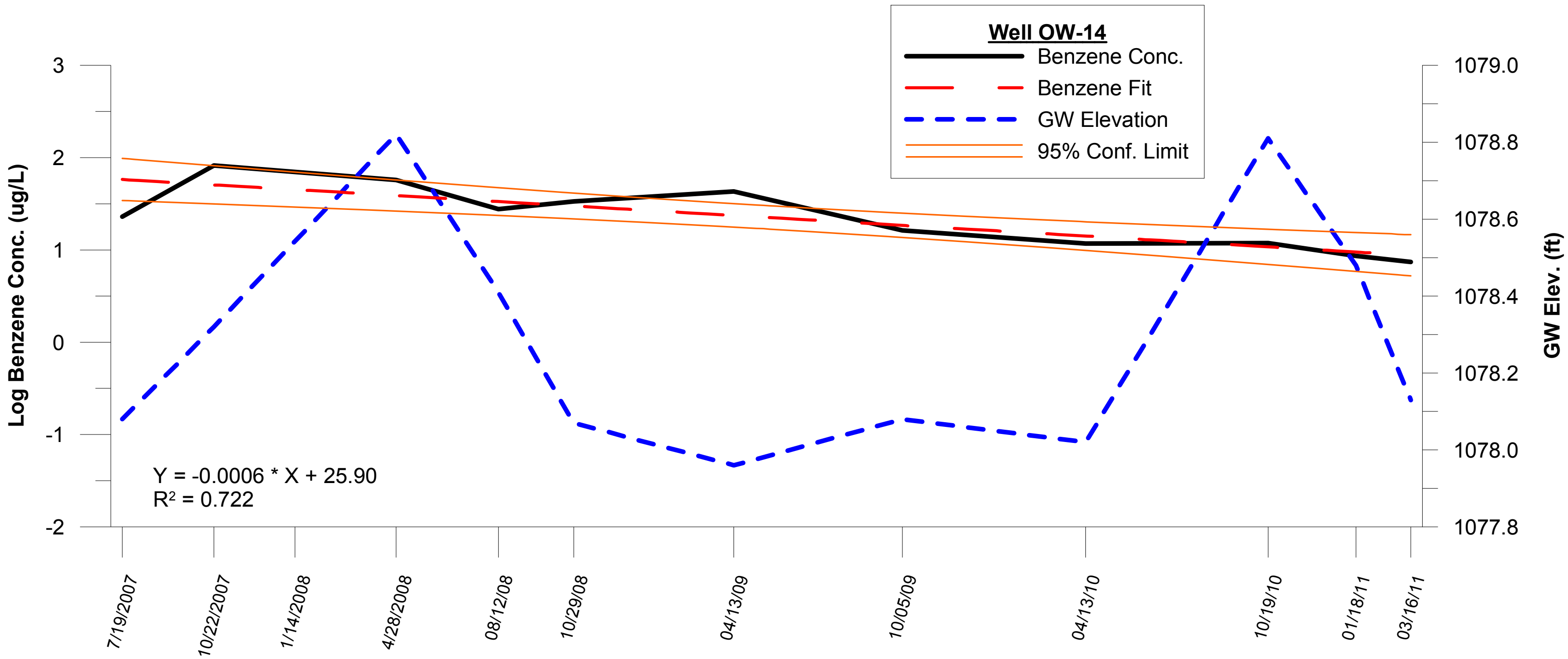
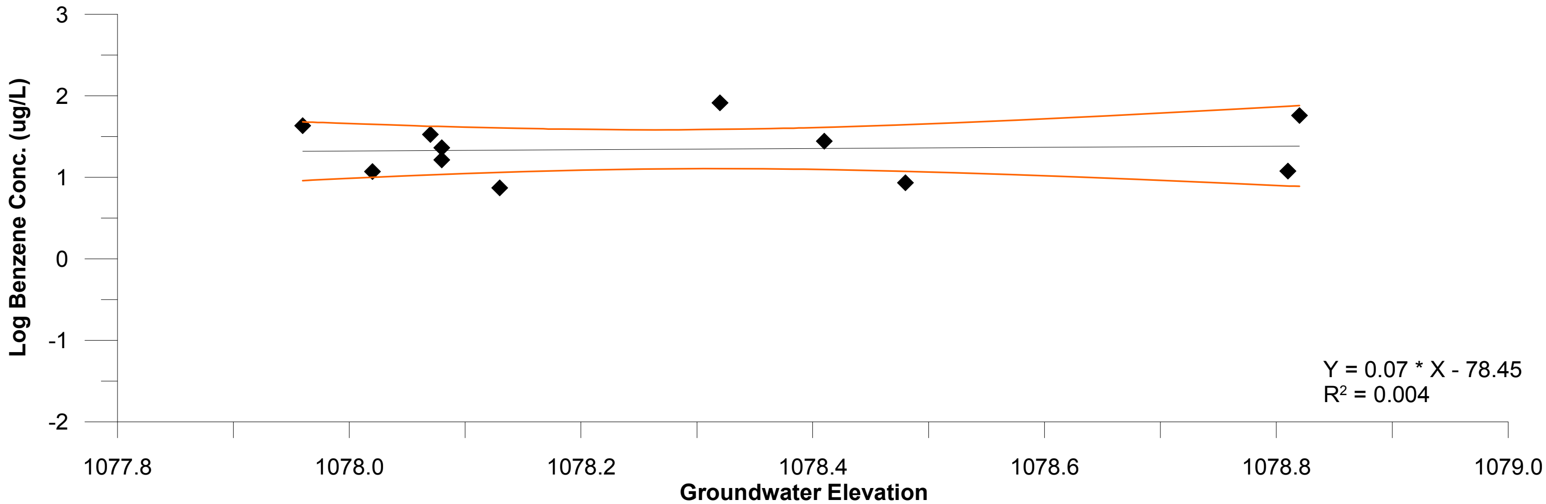
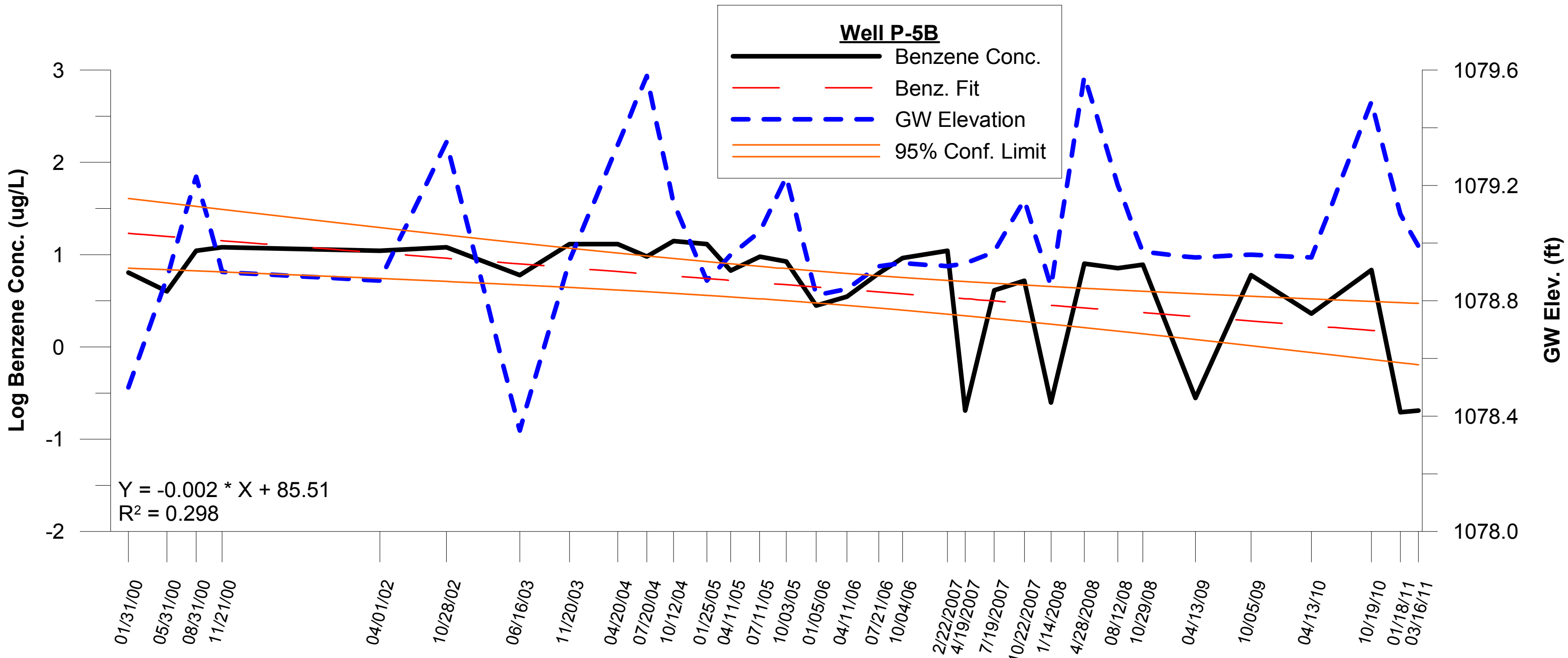
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11



Log Benzene Conc. (ug/L)
3
2
1
0
-1
-2
1077.6
1078.0
1078.4
1078.8
1079.2
Groundwater Elevation
Y = -0.017 * X + 19.30
R² = 8.28E-005


Well OW-14
Benzene Conc.
Benzene Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0006 * X + 25.90
R² = 0.722
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = 0.07 * X - 78.45
R² = 0.004


Well P-5B
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -0.002 * X + 85.51
R² = 0.298
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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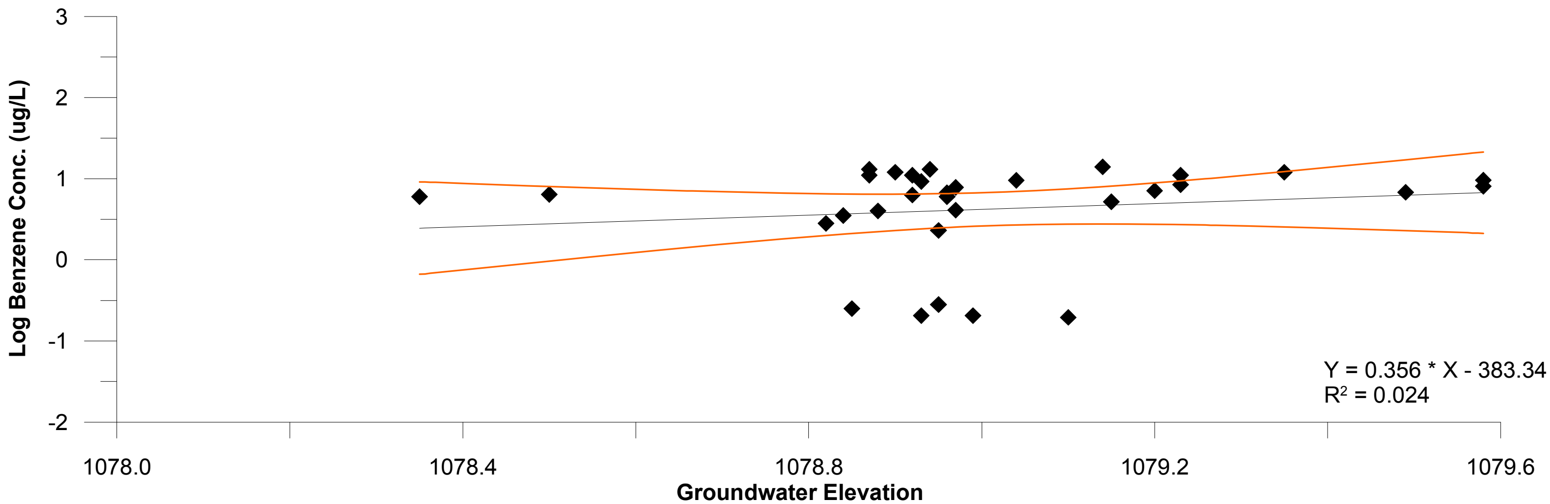
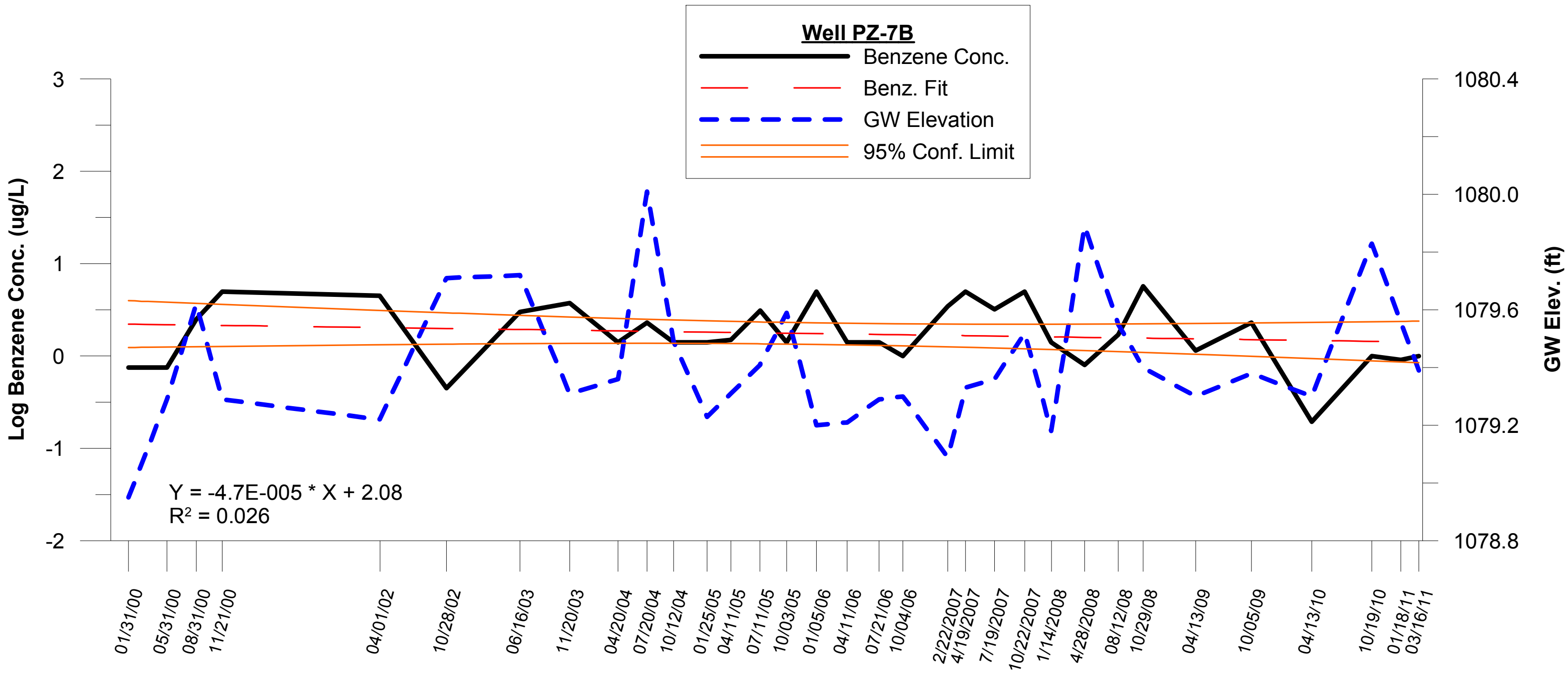
04/13/10
10/19/10
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = 0.356 * X - 383.34
R² = 0.024



Well PZ-7B
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -4.7E-005 * X + 2.08
R² = 0.026
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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04/13/09
10/05/09
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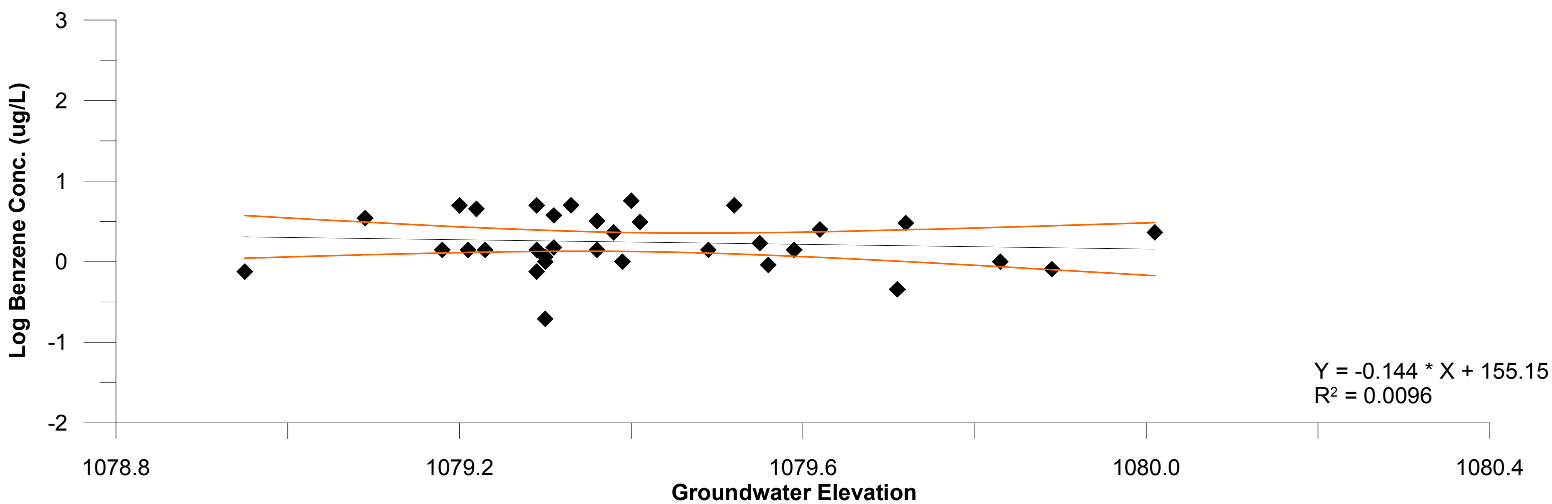
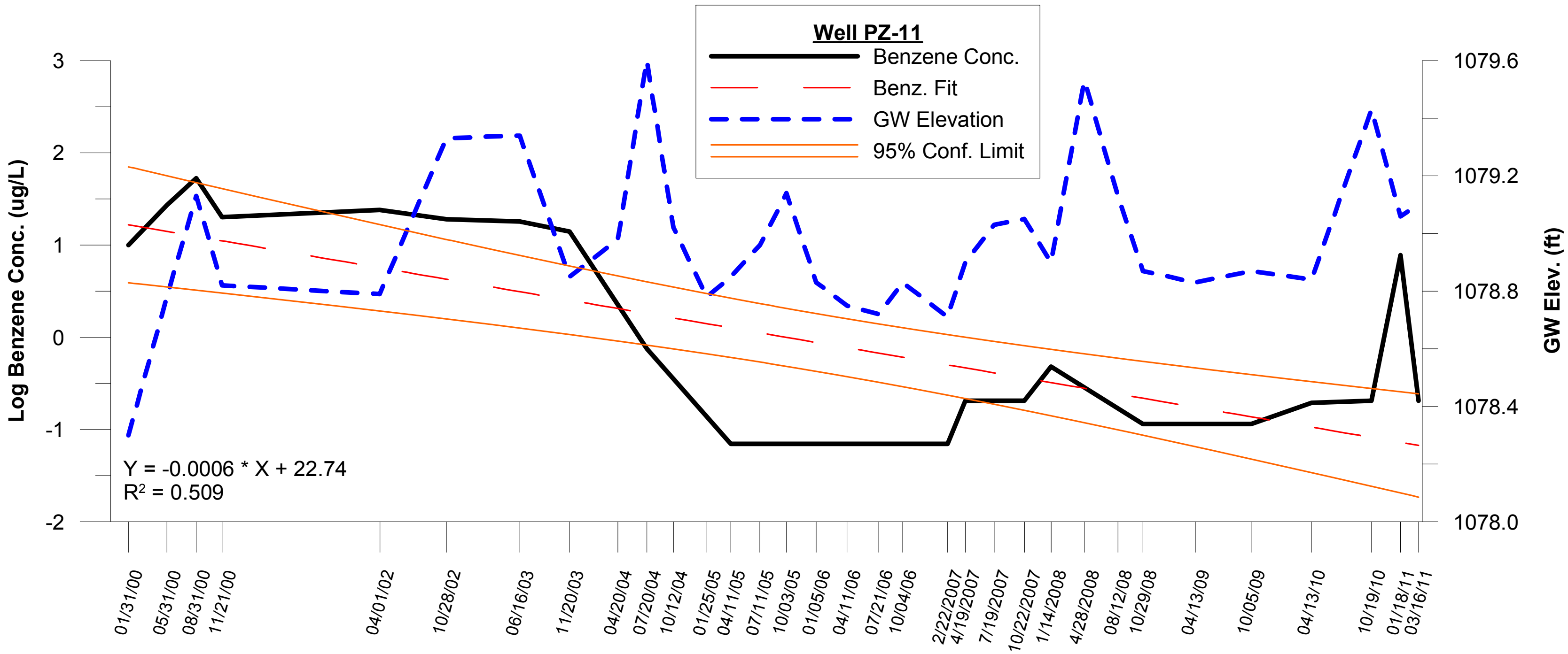
01/18/11
03/16/11



Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = -0.144 * X + 155.15
R² = 0.0096


Well PZ-11
Benzene Conc.
Benz. Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0006 * X + 22.74
R² = 0.509
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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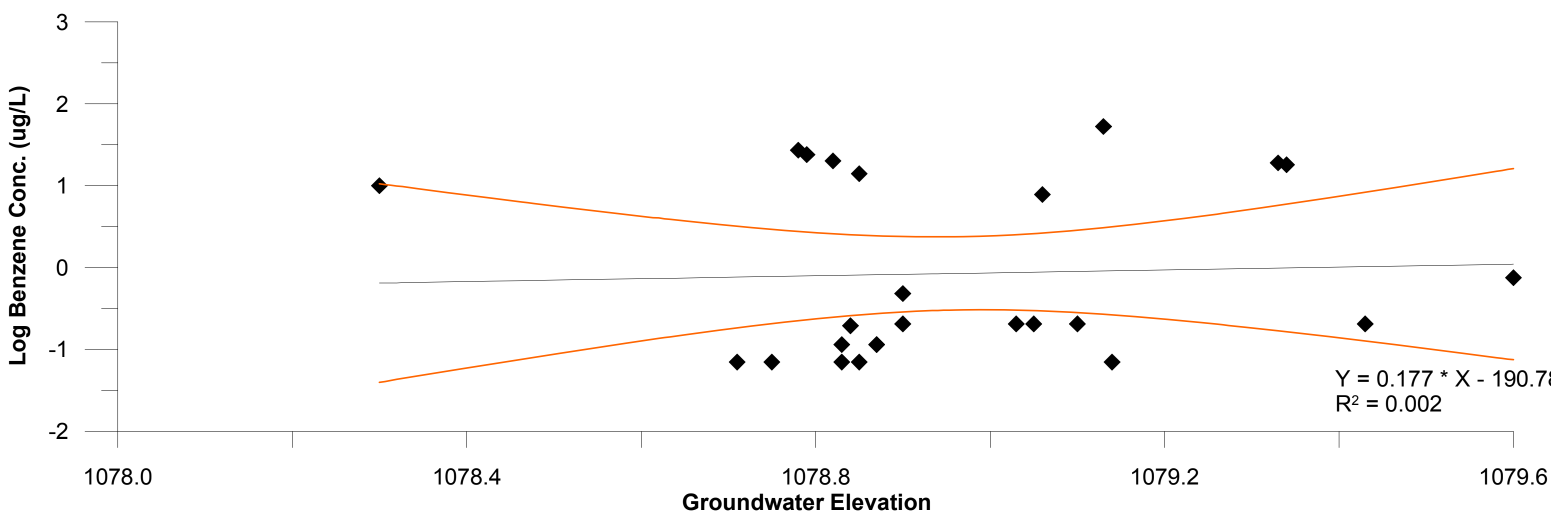
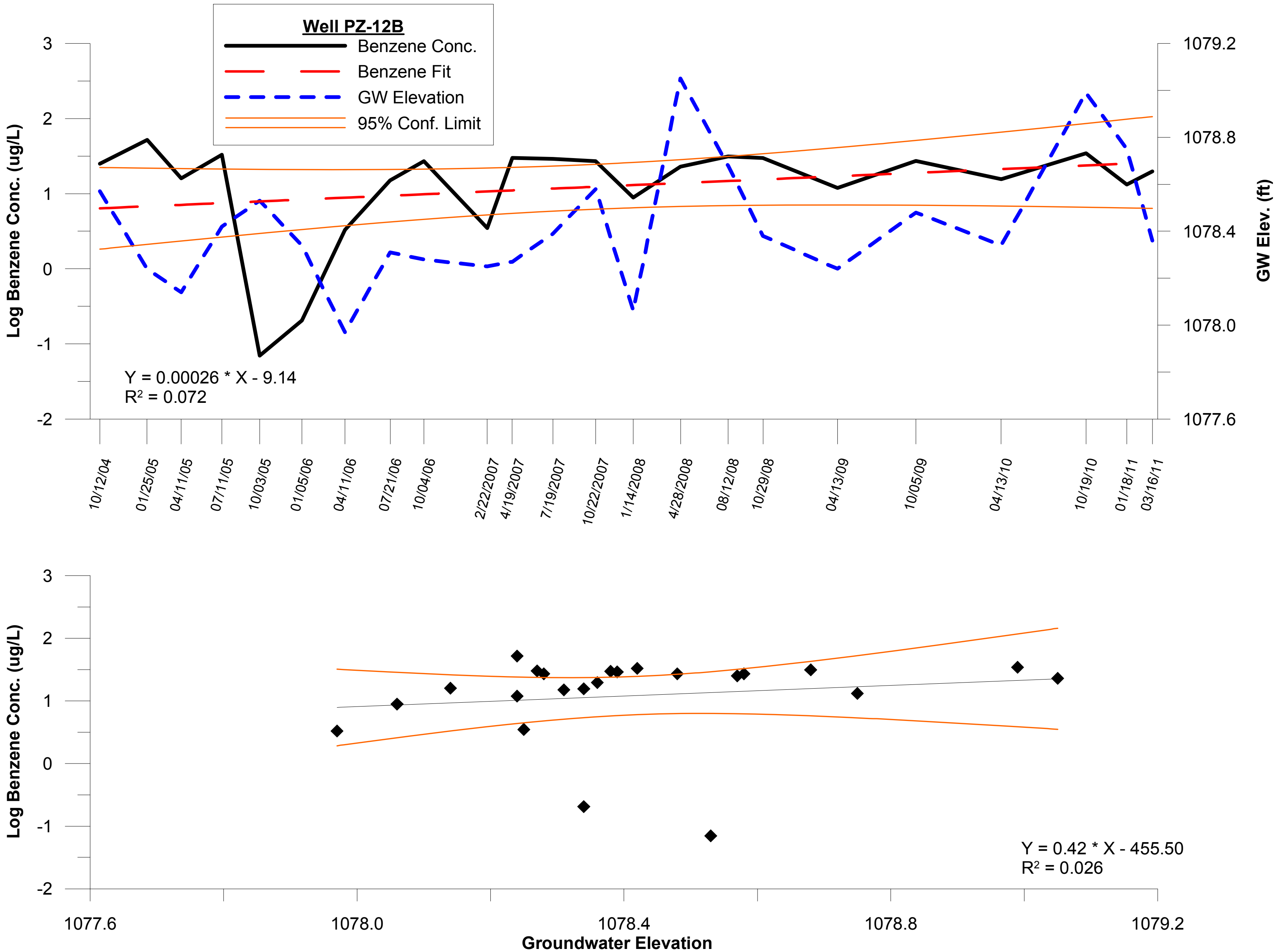
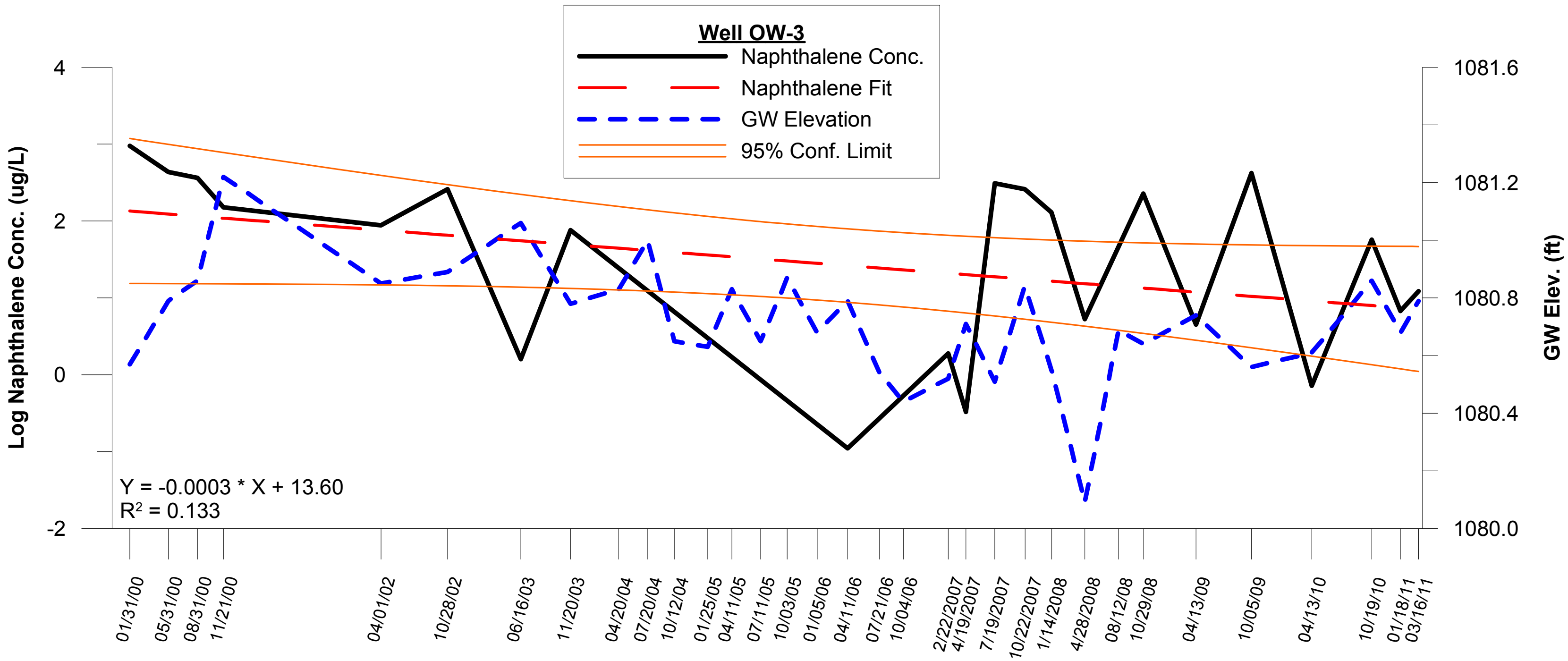
01/18/11
03/16/11


Log Benzene Conc. (ug/L)
Groundwater Elevation
Y = 0.177 * X - 190.78
R² = 0.002


Well PZ-12B
Benzene Conc.
Benzene Fit
GW Elevation
95% Conf. Limit
Log Benzene Conc. (ug/L)
GW Elev. (ft)
Y = 0.00026 * X - 9.14
R² = 0.072
3
2
1
0
-1
-2
1079.2
1078.8
1078.4
1078.0
1077.6
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11
Log Benzene Conc. (ug/L)
Y = 0.42 * X - 455.50
R² = 0.026
1077.6
1078.0
1078.4
1078.8
1079.2
Groundwater Elevation


Well OW-3
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0003 * X + 13.60
R² = 0.133
4
2
0
-2
1081.6
1081.2
1080.8
1080.4
1080.0
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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10/29/08
04/13/09
10/05/09
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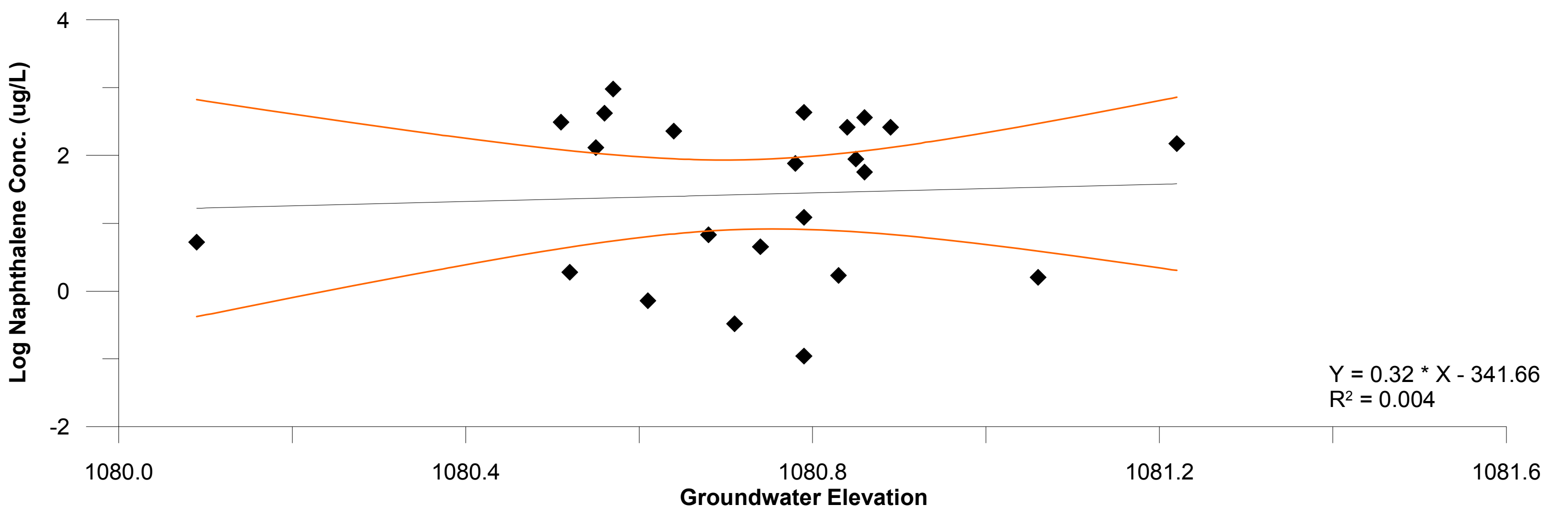
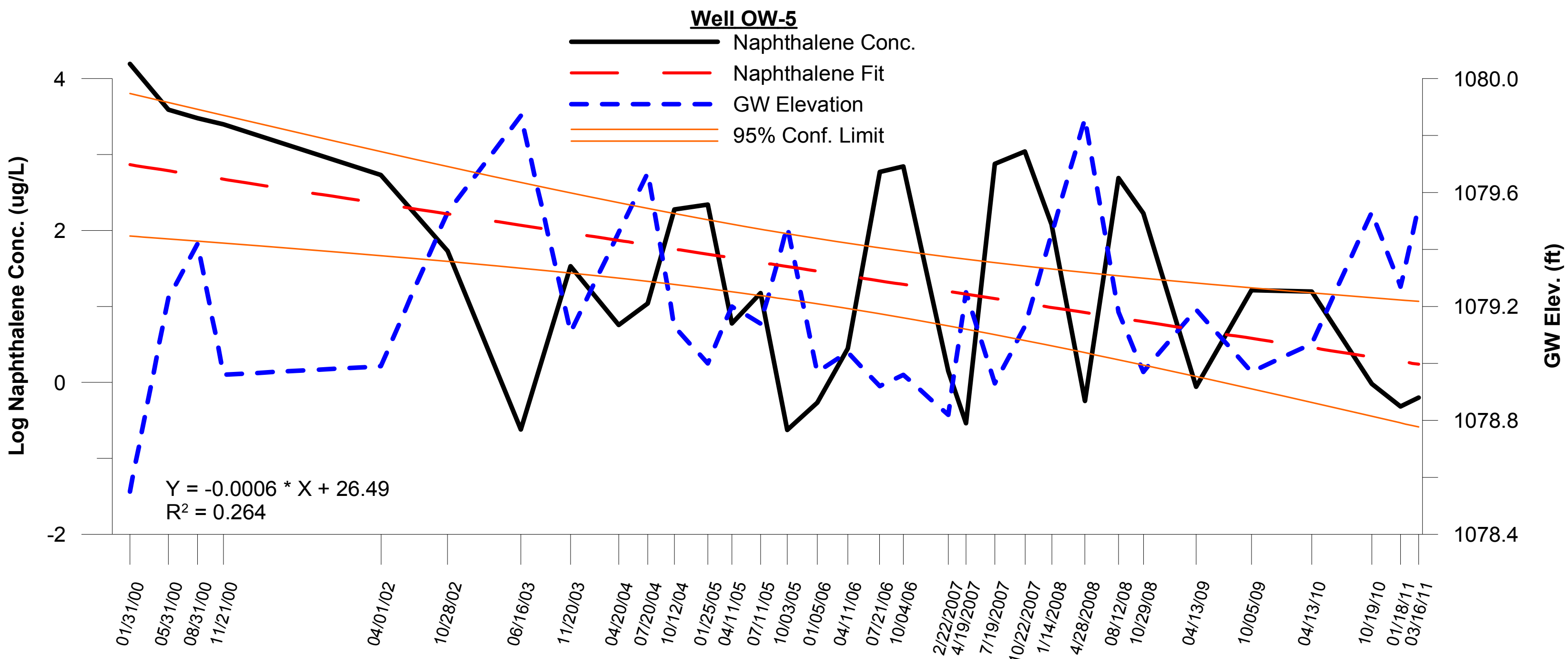
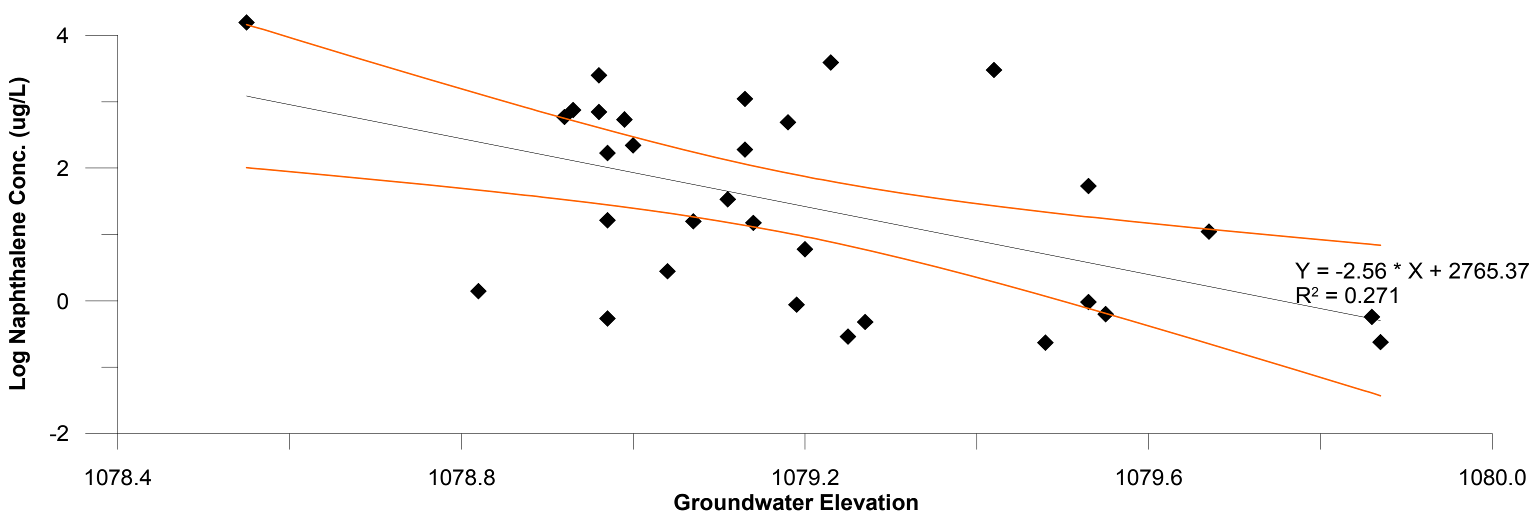
10/19/10
01/18/11
03/16/11

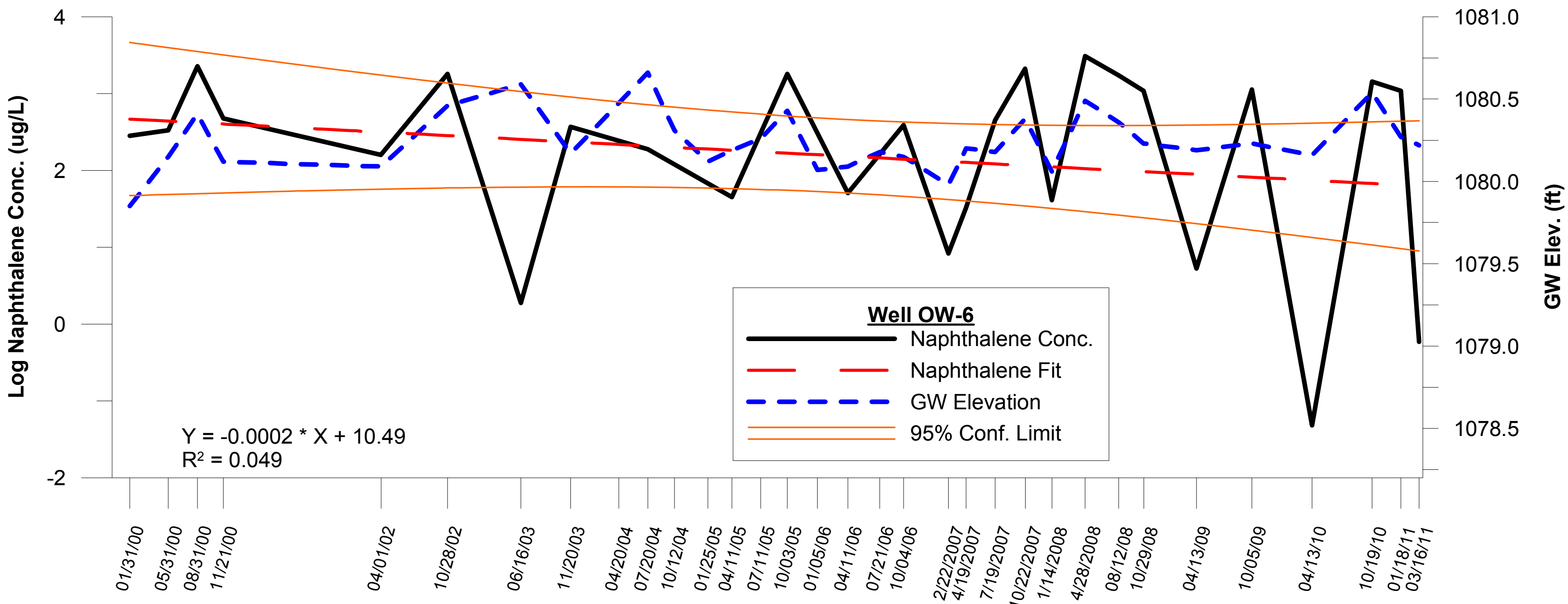

Log Naphthalene Conc. (ug/L)
Groundwater Elevation
Y = 0.32 * X - 341.66
R² = 0.004
4
2
0
-2
1080.0
1080.4
1080.8
1081.2
1081.6



Well OW-5
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
4
2
0
-2
1080.0
1079.6
1079.2
1078.8
1078.4
Y = -0.0006 * X + 26.49
R² = 0.264
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11



Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = -2.56 * X + 2765.37
R² = 0.271
1078.4
1078.8
1079.2
1079.6
1080.0
Groundwater Elevation


Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Well OW-6
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Y = -0.0002 * X + 10.49
R² = 0.049
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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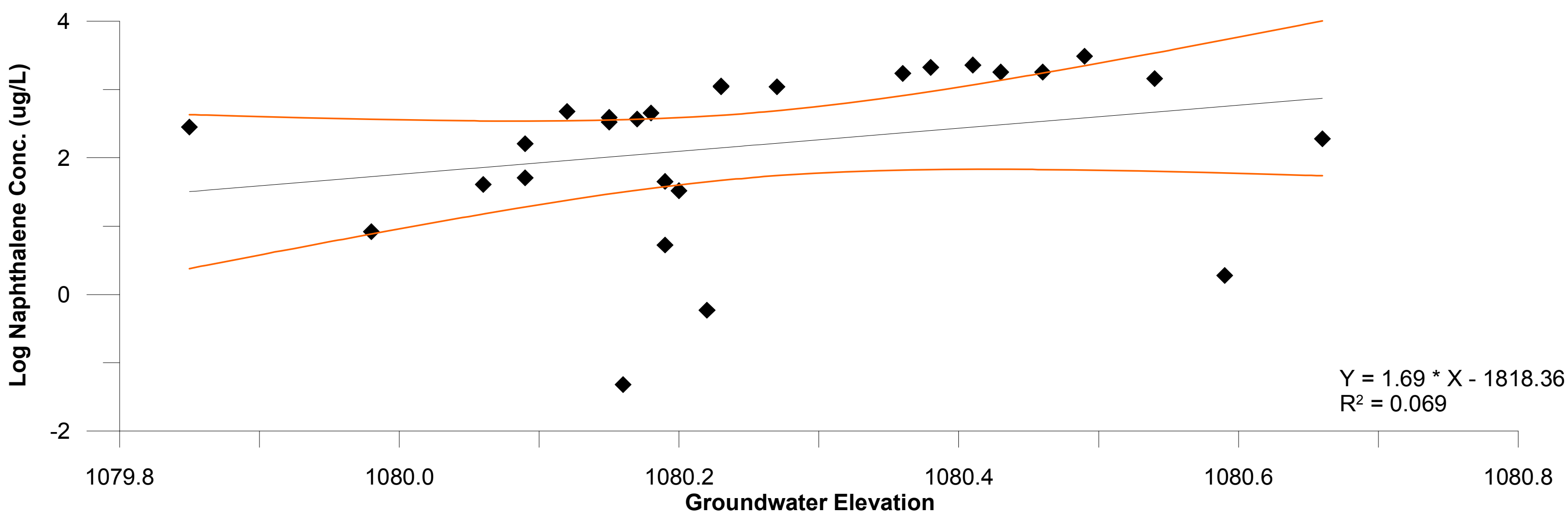
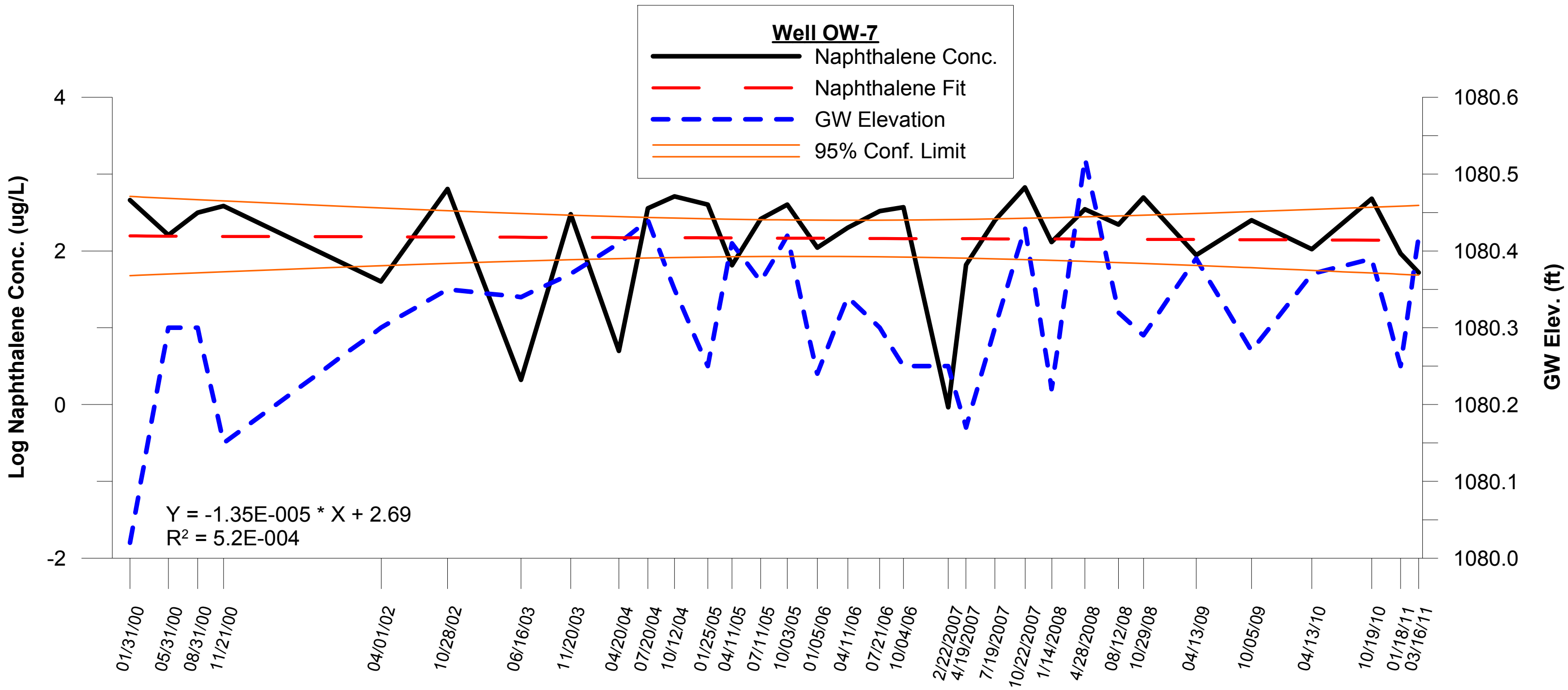
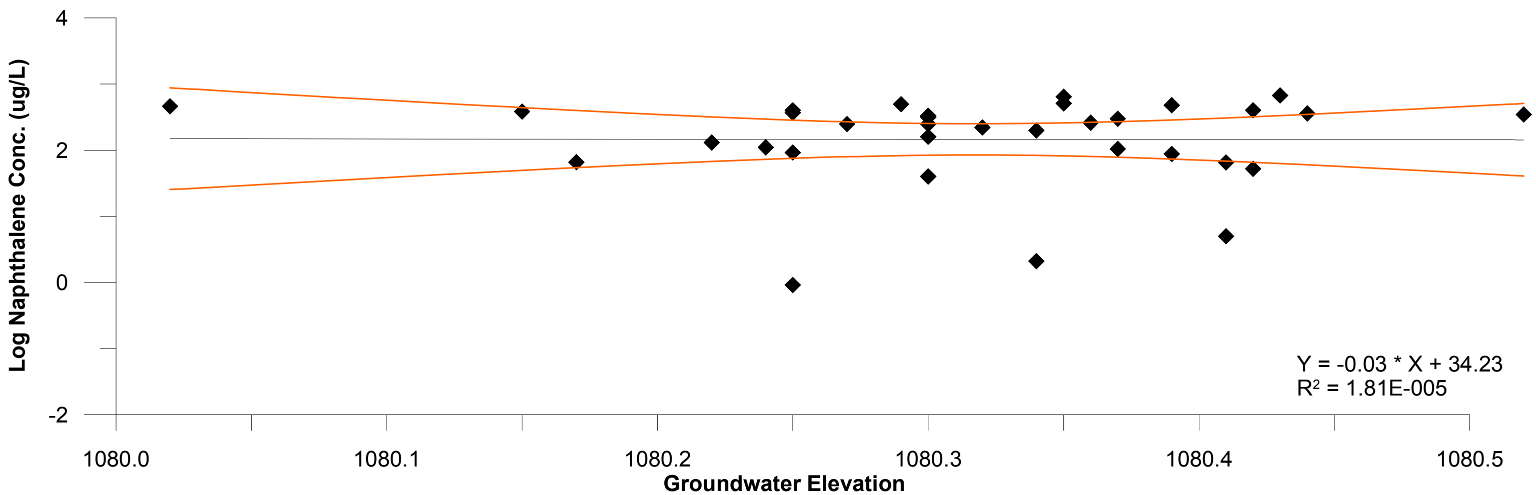
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

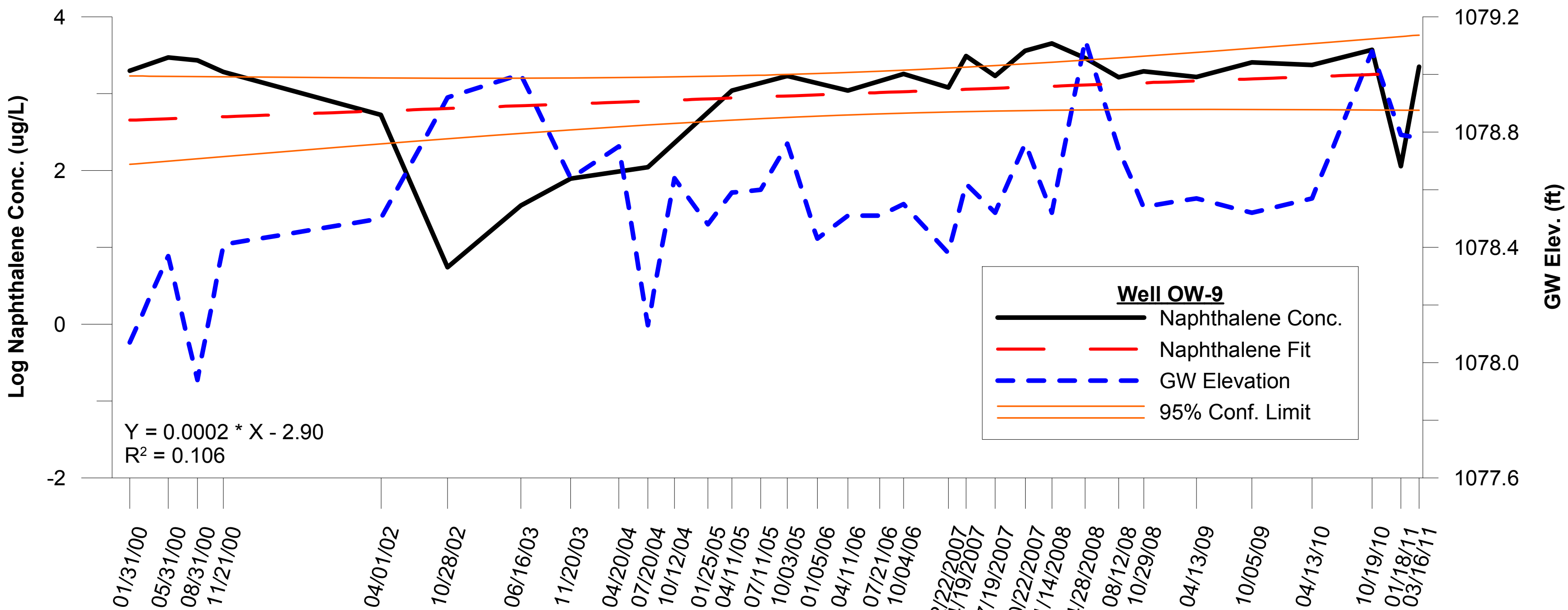

Log Naphthalene Conc. (ug/L)
Groundwater Elevation
Y = 1.69 * X - 1818.36
R² = 0.069

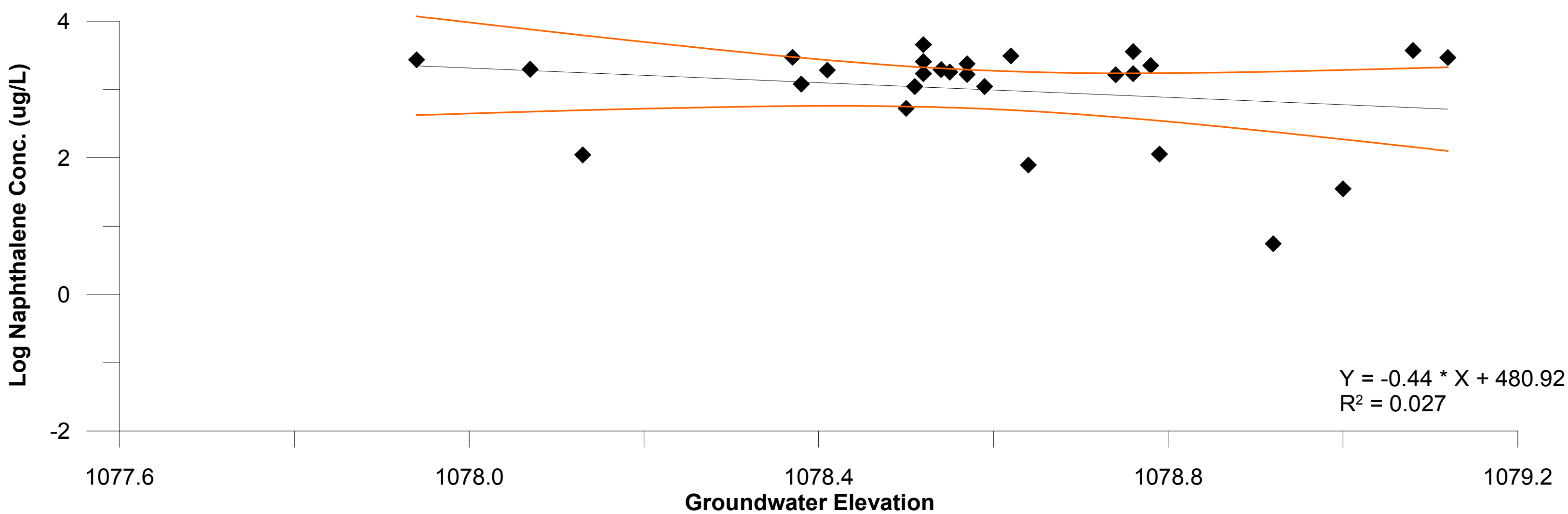


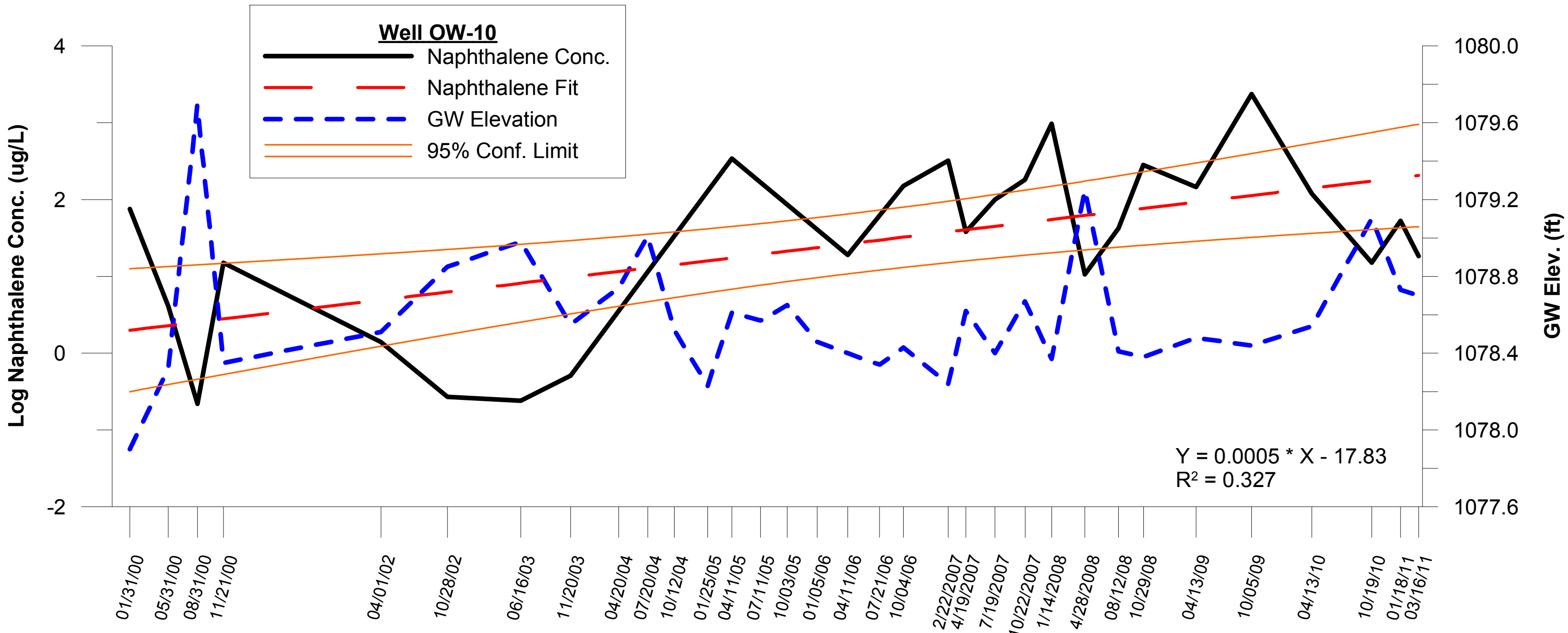
Well OW-7
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -1.35E-005 * X + 2.69
R² = 5.2E-004
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11



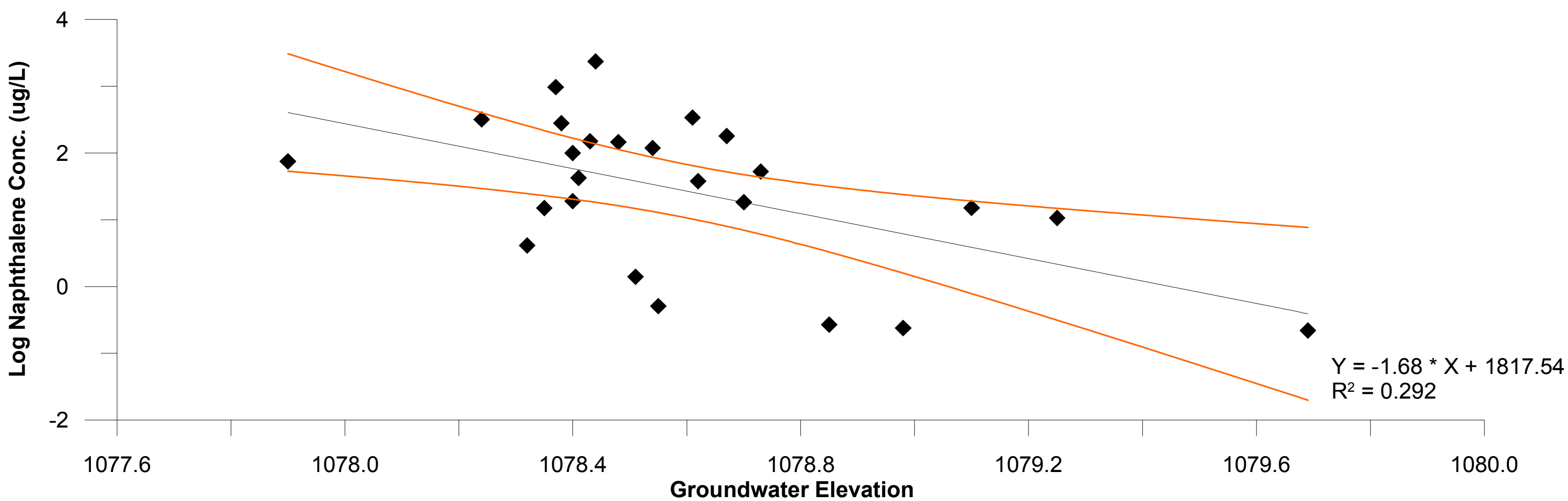
Log Naphthalene Conc. (ug/L)
Groundwater Elevation
Y = -0.03 * X + 34.23
R² = 1.81E-005


Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
4
2
0
-2
1079.2
1078.8
1078.4
1078.0
1077.6
Well OW-9
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Y = 0.0002 * X - 2.90
R² = 0.106
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

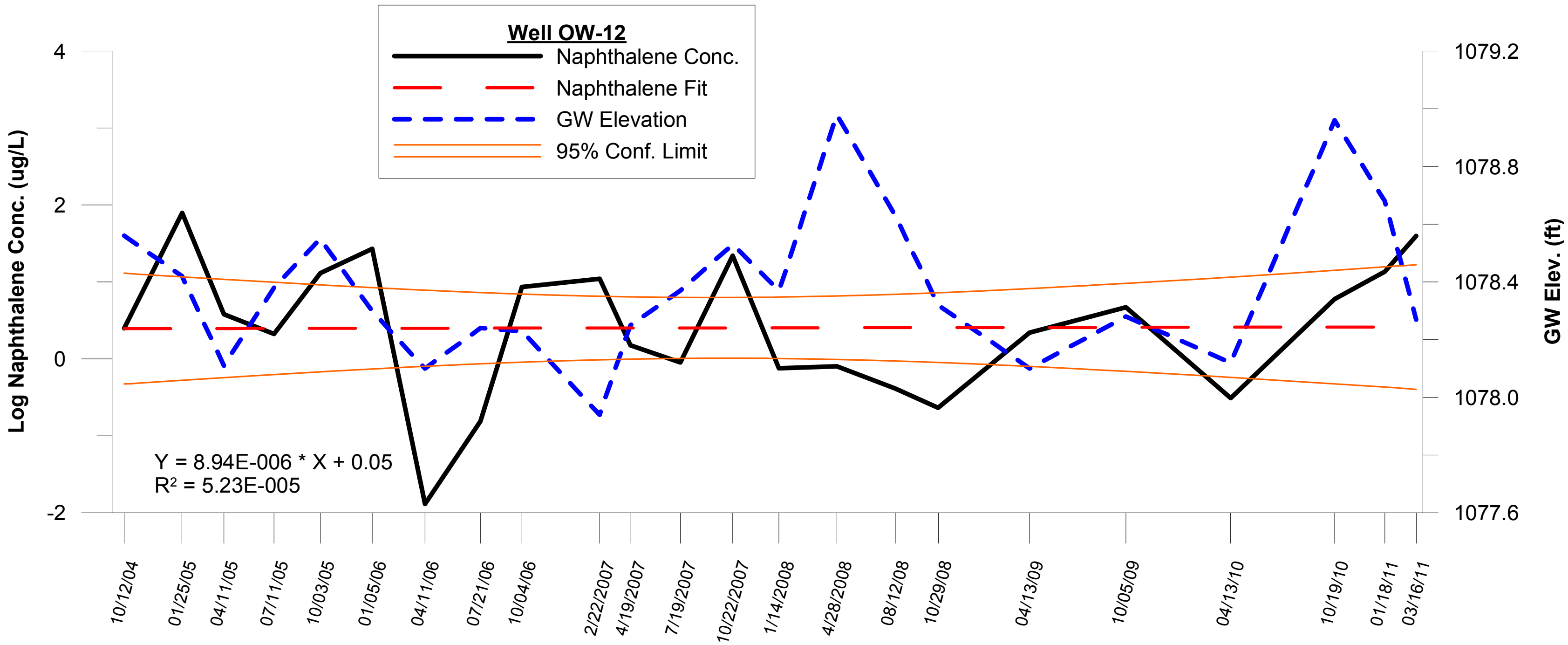

Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = -0.44 * X + 480.92
R² = 0.027
1077.6
1078.0
1078.4
1078.8
1079.2
Groundwater Elevation

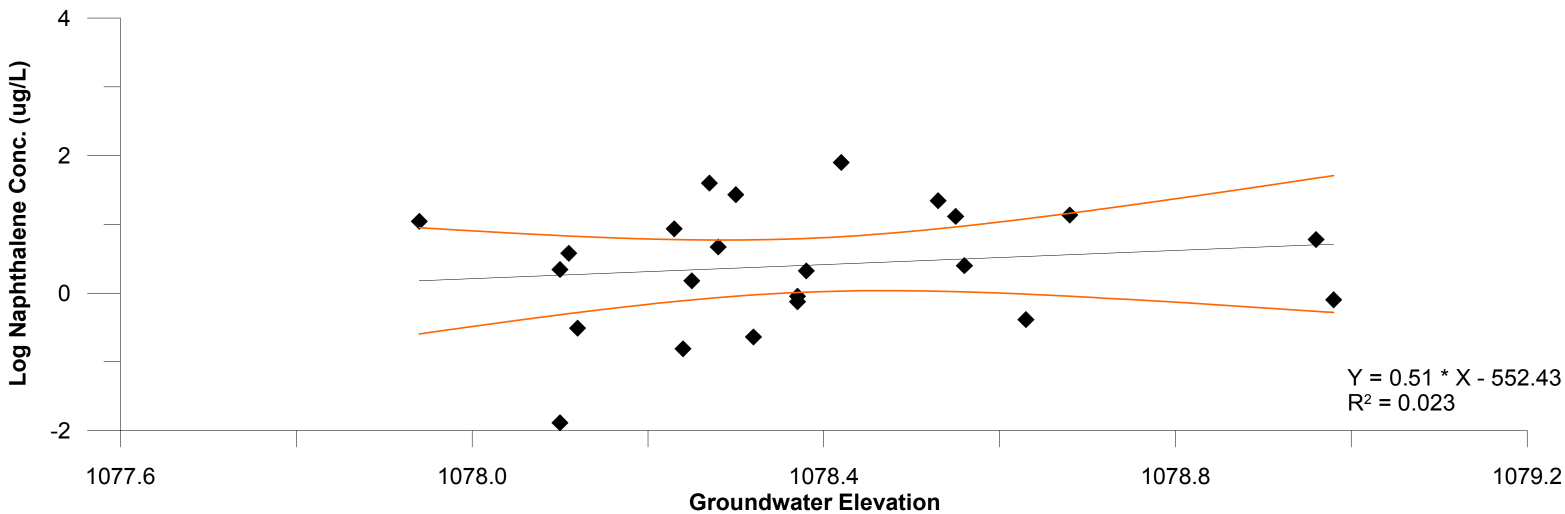


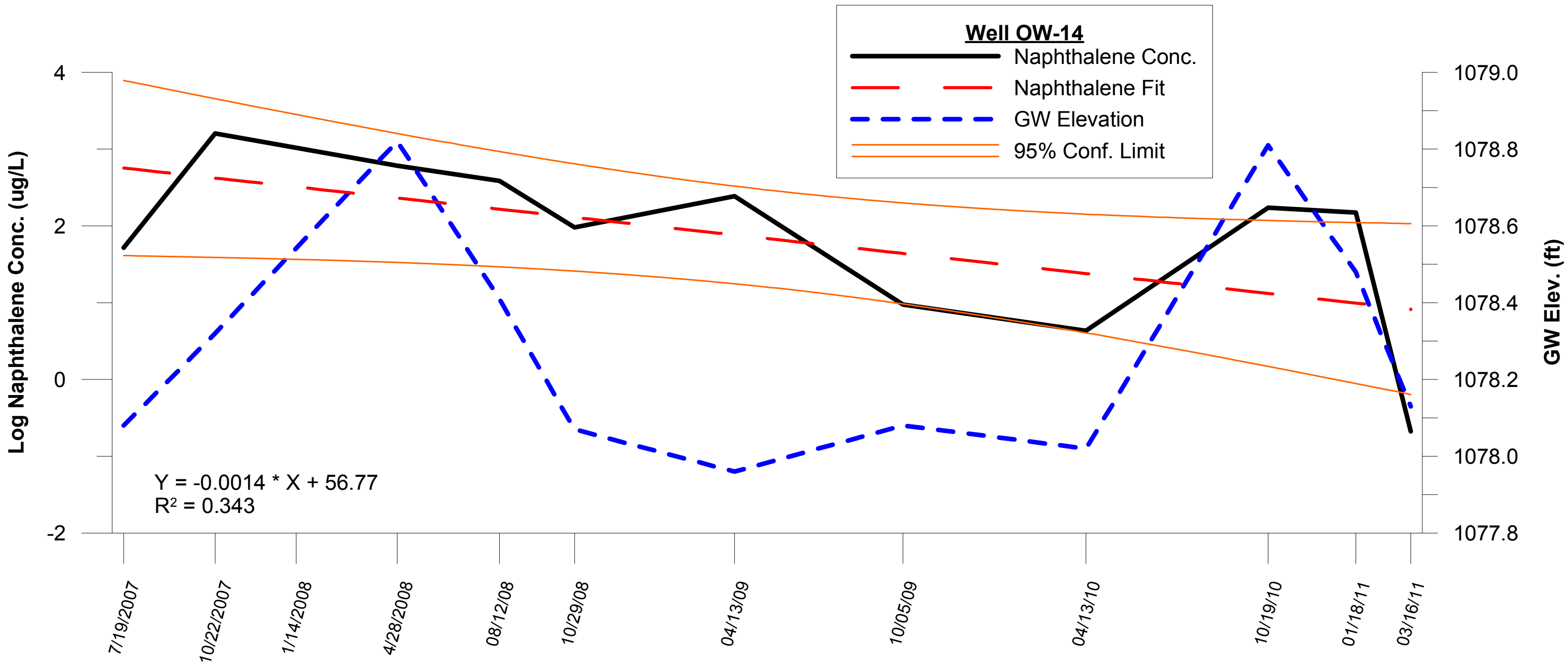
Well OW-10
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = 0.0005 * X - 17.83
R² = 0.327
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

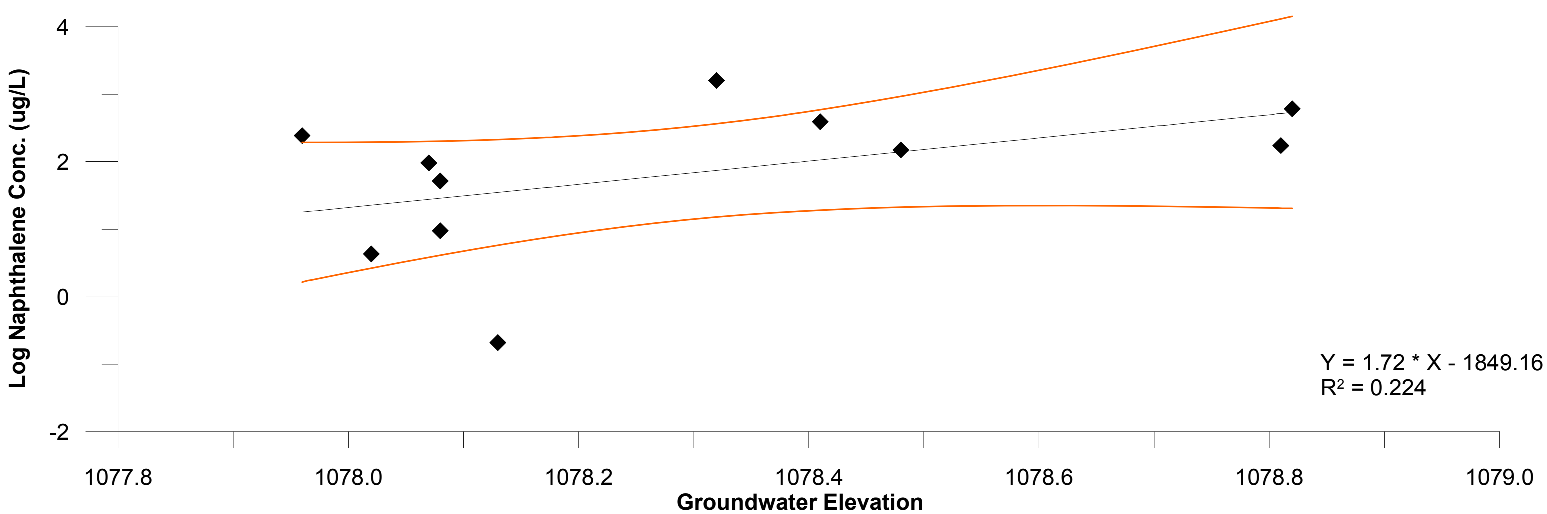


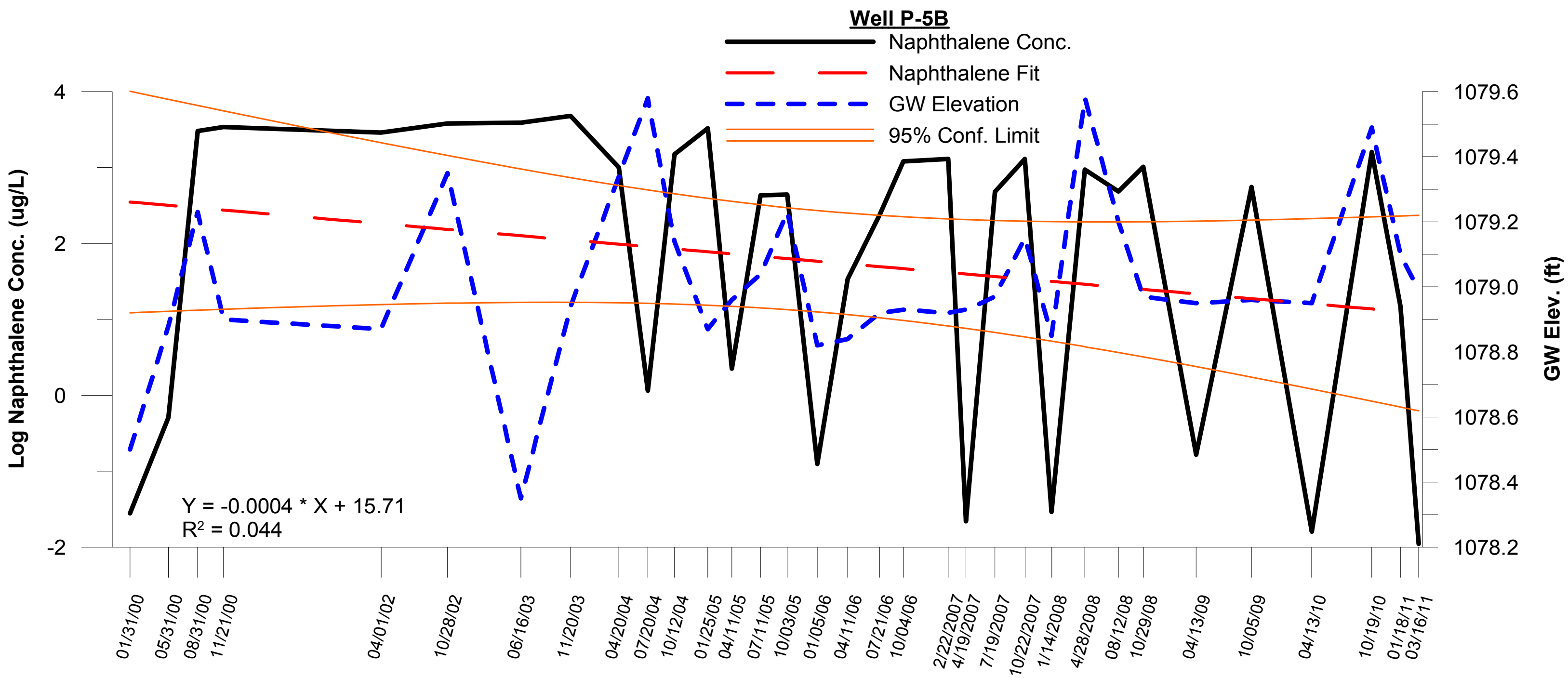
Log Naphthalene Conc. (ug/L)
Groundwater Elevation
Y = -1.68 * X + 1817.54
R² = 0.292

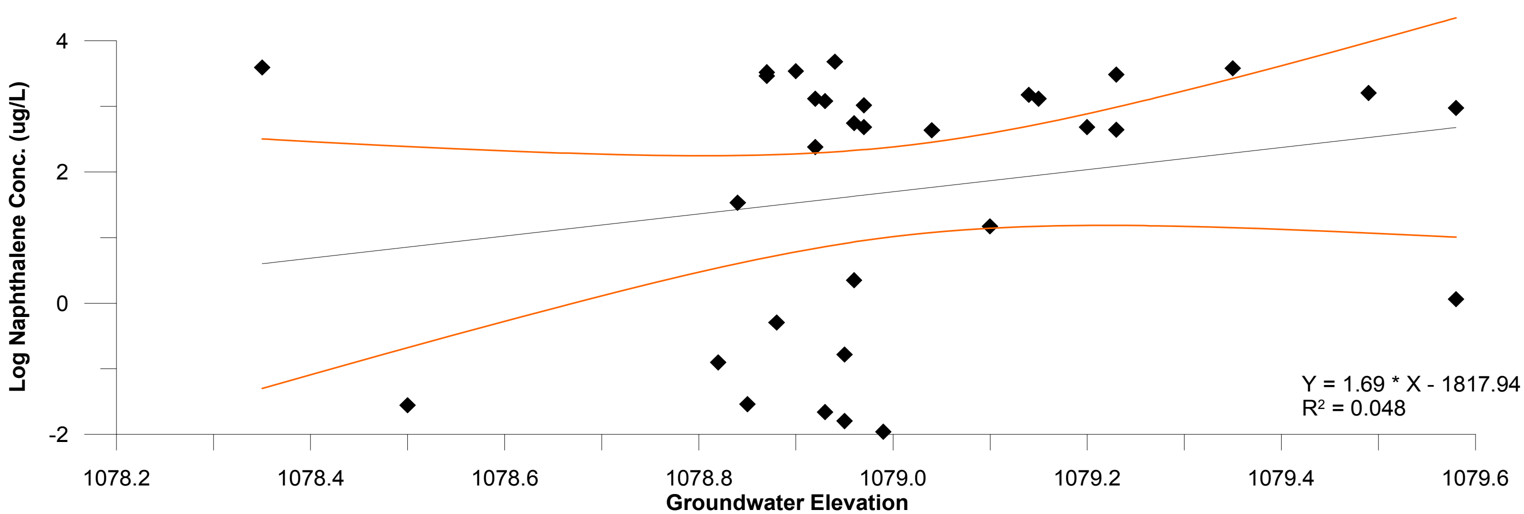

Well OW-12
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = 8.94E-006 * X + 0.05
R² = 5.23E-005
4
2
0
-2
1079.2
1078.8
1078.4
1078.0
1077.6
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

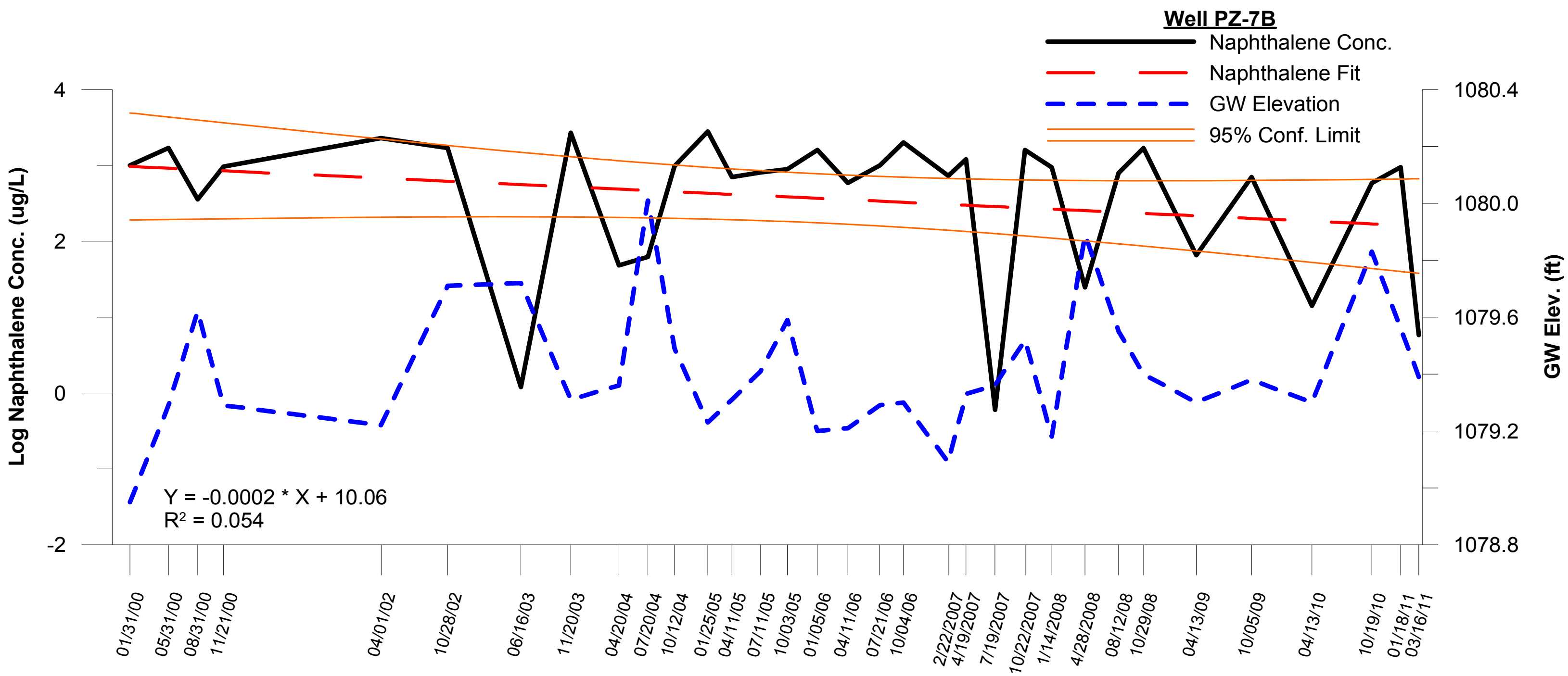

Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = 0.51 * X - 552.43
R² = 0.023
1077.6
1078.0
1078.4
1078.8
1079.2
Groundwater Elevation


Well OW-14
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0014 * X + 56.77
R² = 0.343
4
2
0
-2
1079.0
1078.8
1078.6
1078.4
1078.2
1078.0
1077.8
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

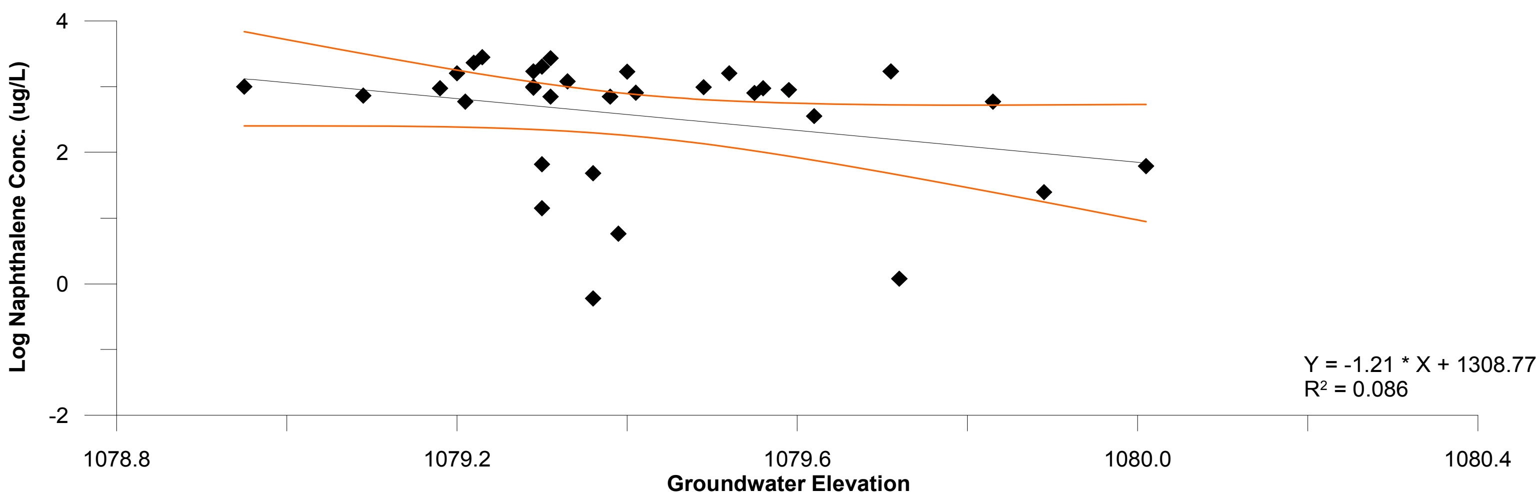

Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = 1.72 * X - 1849.16
R² = 0.224
1077.8
1078.0
1078.2
1078.4
1078.6
1078.8
1079.0
Groundwater Elevation


Well P-5B
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0004 * X + 15.71
R² = 0.044
4
2
0
-2
1079.6
1079.4
1079.2
1079.0
1078.8
1078.6
1078.4
1078.2
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

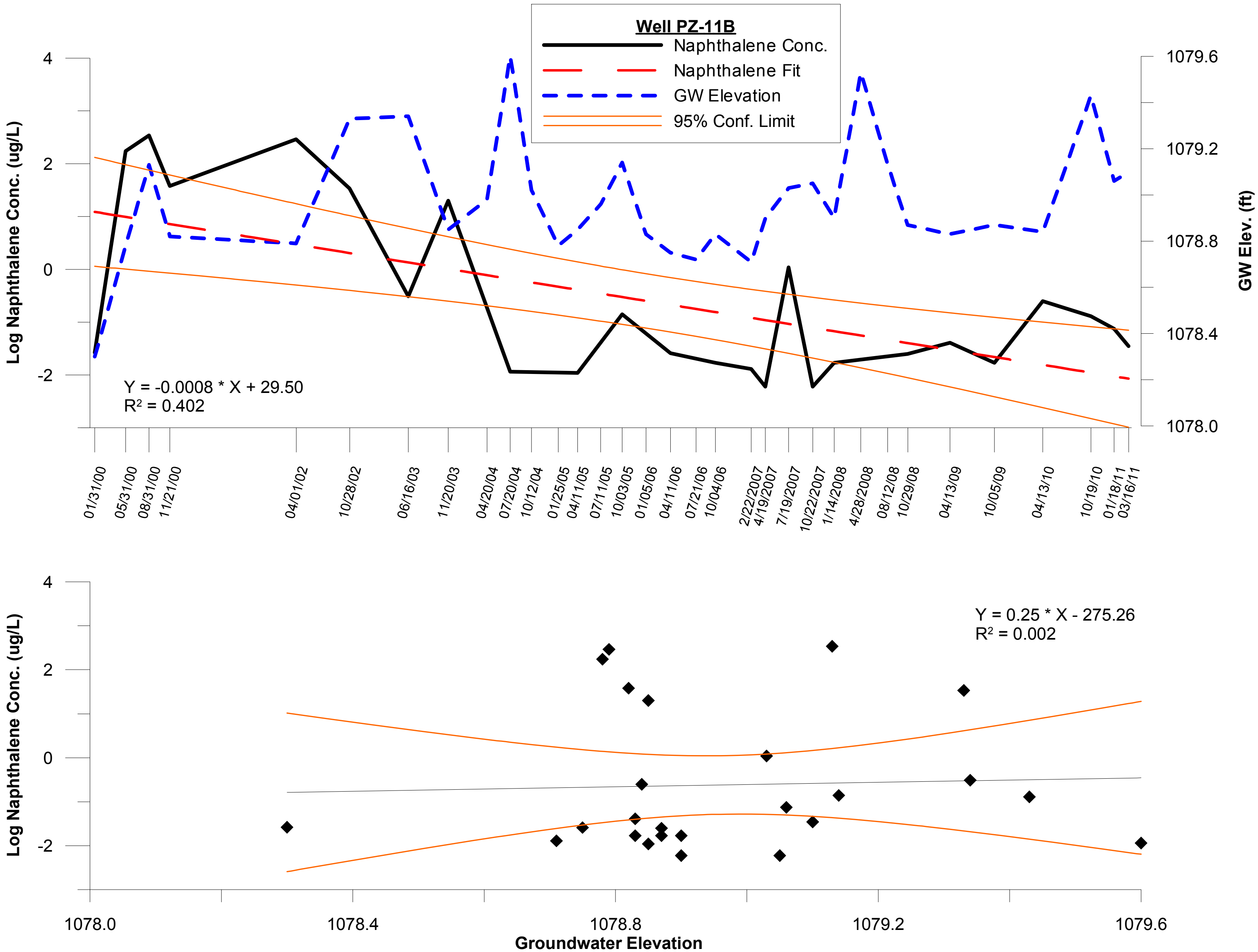

Log Naphthalene Conc. (ug/L)
Groundwater Elevation
Y = 1.69 * X - 1817.94
R² = 0.048
4
2
0
-2
1078.2
1078.4
1078.6
1078.8
1079.0
1079.2
1079.4
1079.6

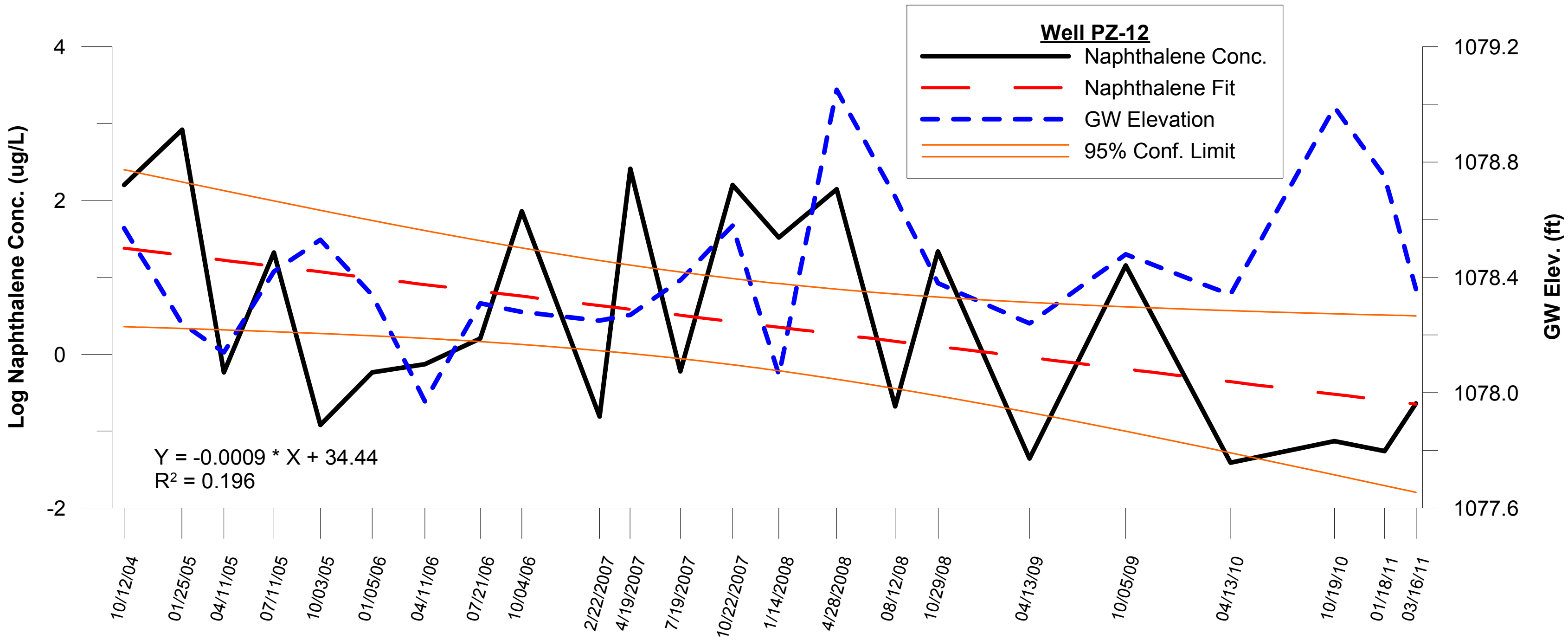


Well PZ-7B
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0002 * X + 10.06
R² = 0.054
4
2
0
-2
1080.4
1080.0
1079.6
1079.2
1078.8
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

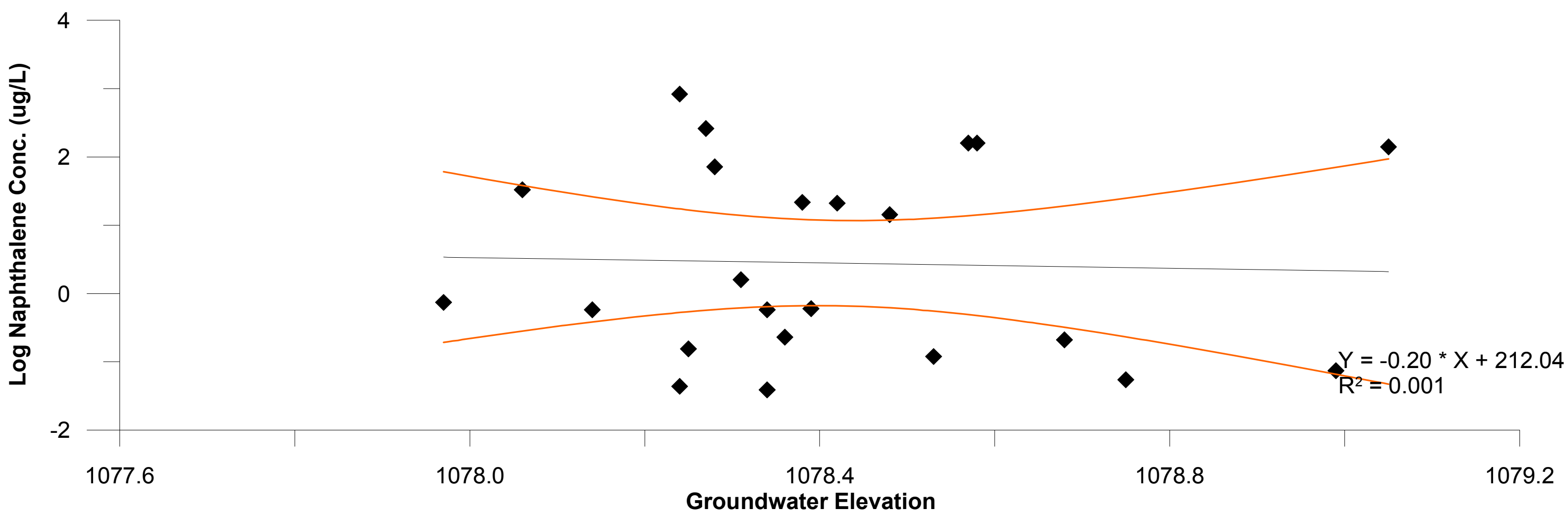


Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = -1.21 * X + 1308.77
R² = 0.086
1078.8
1079.2
1079.6
1080.0
1080.4
Groundwater Elevation

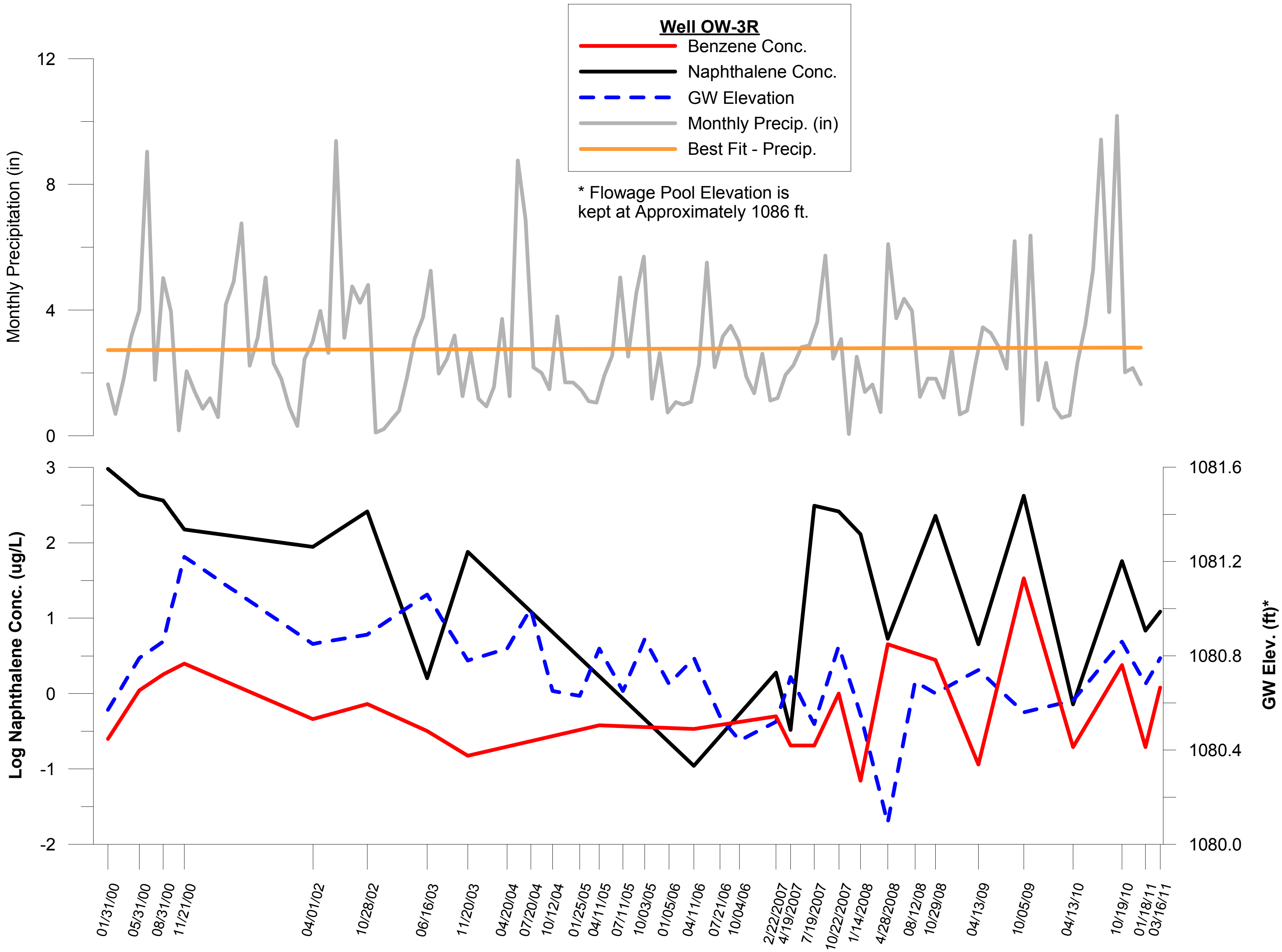

Well PZ-11B
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0008 * X + 29.50
R² = 0.402
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11
Y = 0.25 * X - 275.26
R² = 0.002
Groundwater Elevation



Well PZ-12
Naphthalene Conc.
Naphthalene Fit
GW Elevation
95% Conf. Limit
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)
Y = -0.0009 * X + 34.44
R² = 0.196
4
2
0
-2
1079.2
1078.8
1078.4
1078.0
1077.6
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11



Log Naphthalene Conc. (ug/L)
4
2
0
-2
Y = -0.20 * X + 212.04
R² = 0.001
1077.6
1078.0
1078.4
1078.8
1079.2
Groundwater Elevation


Well OW-3R
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)*
12
8
4
0
3
2
1
0
-1
-2
1081.6
1081.2
1080.8
1080.4
1080.0
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
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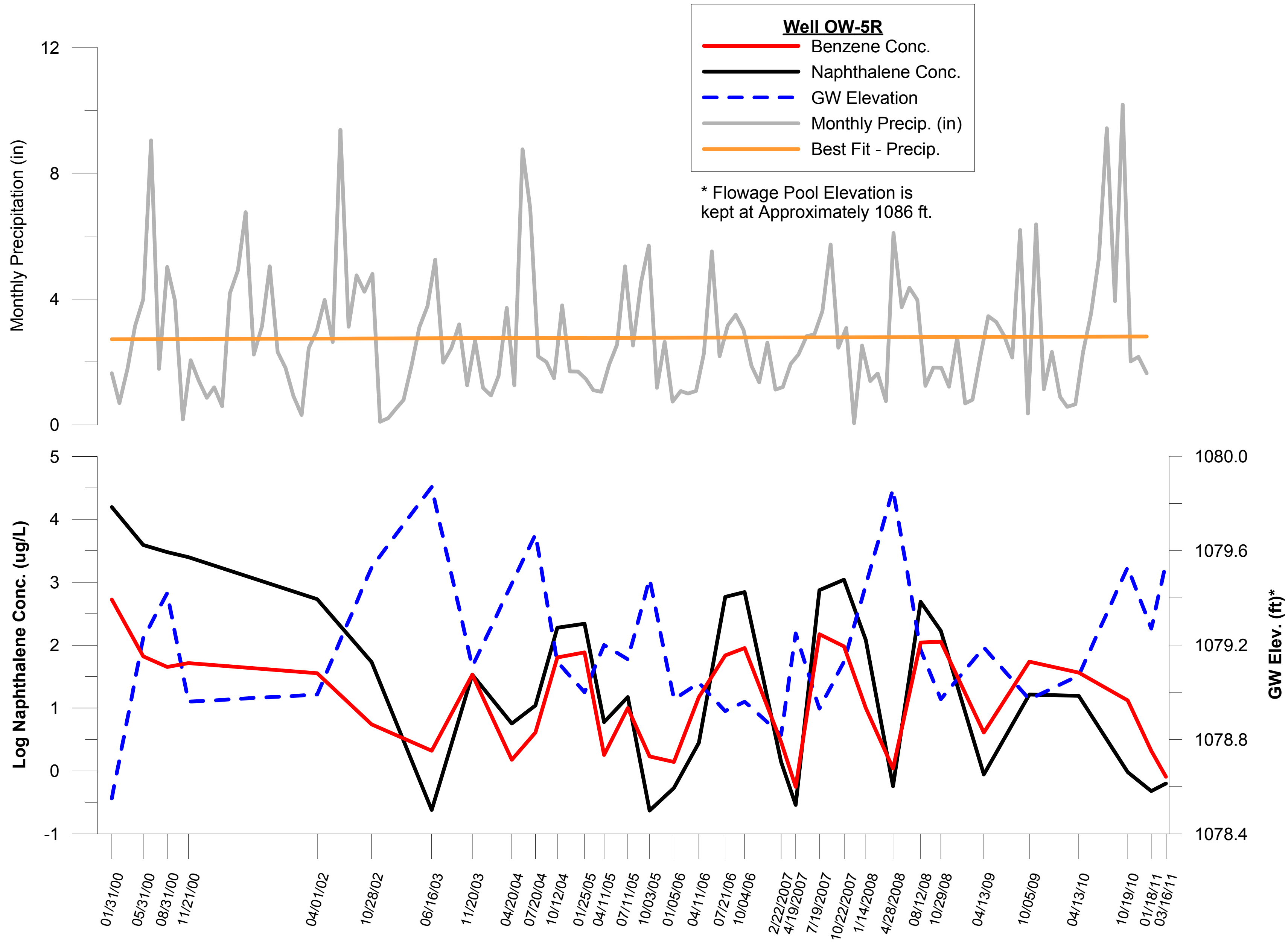
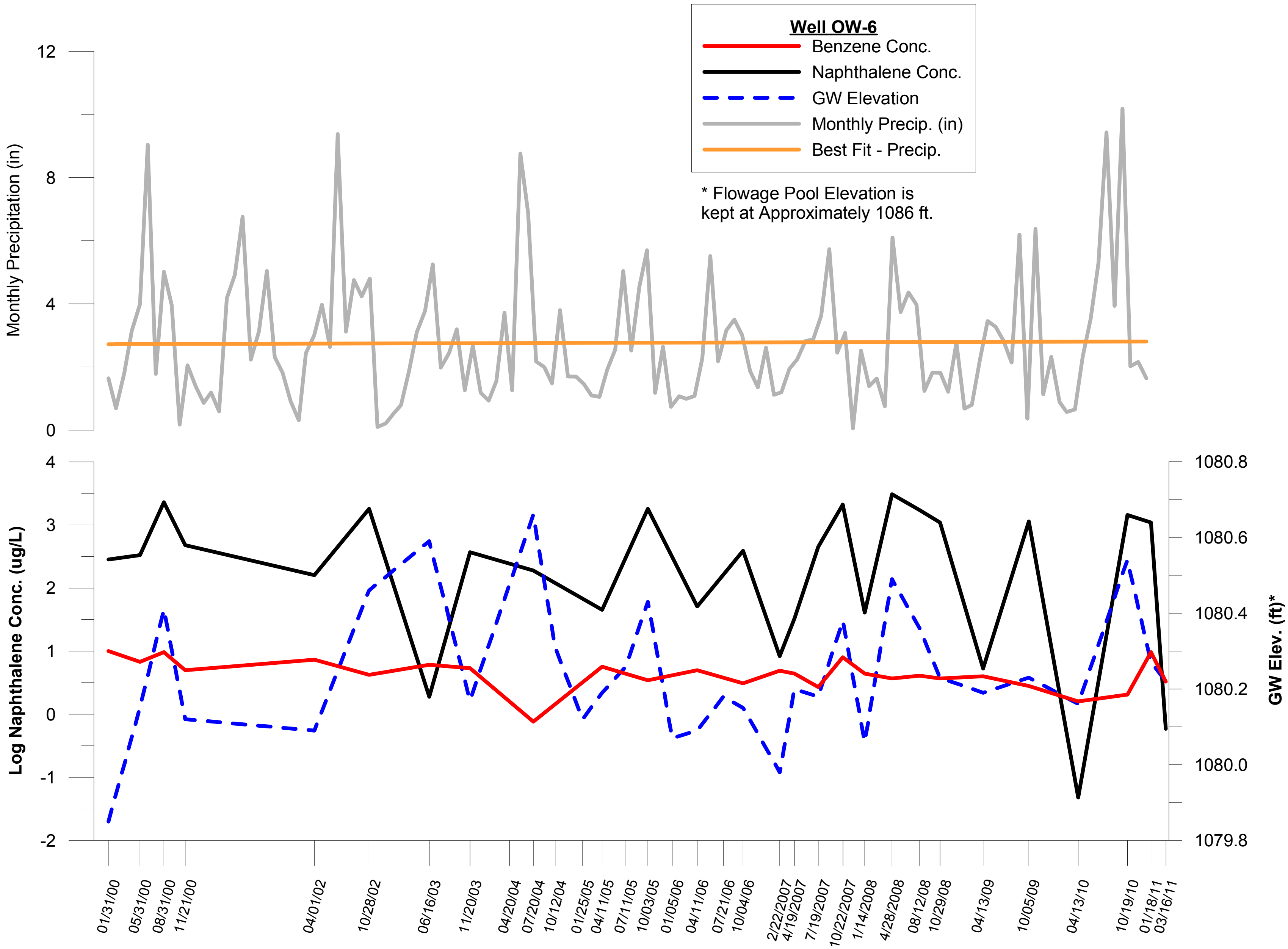
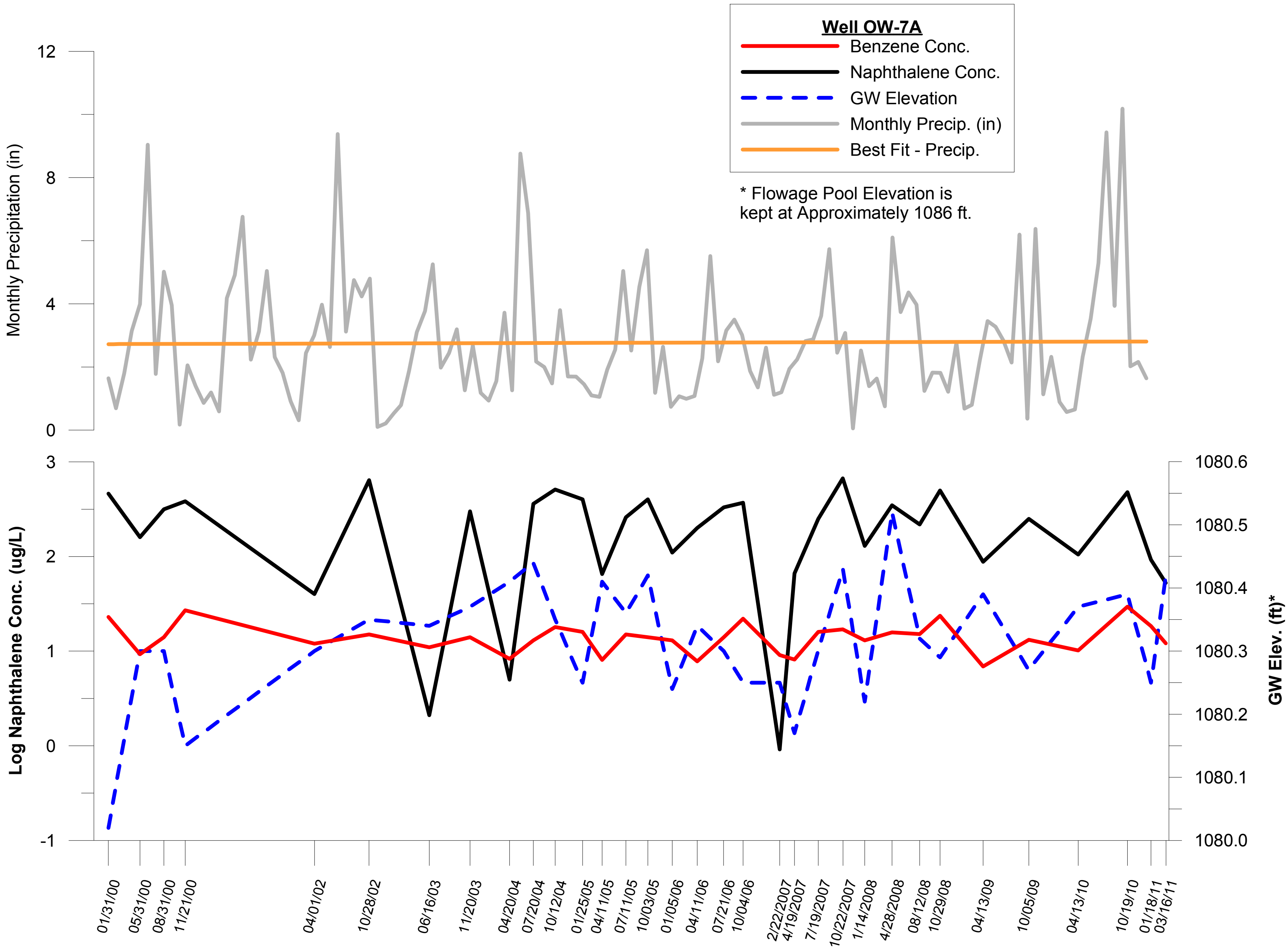
01/18/11
03/16/11

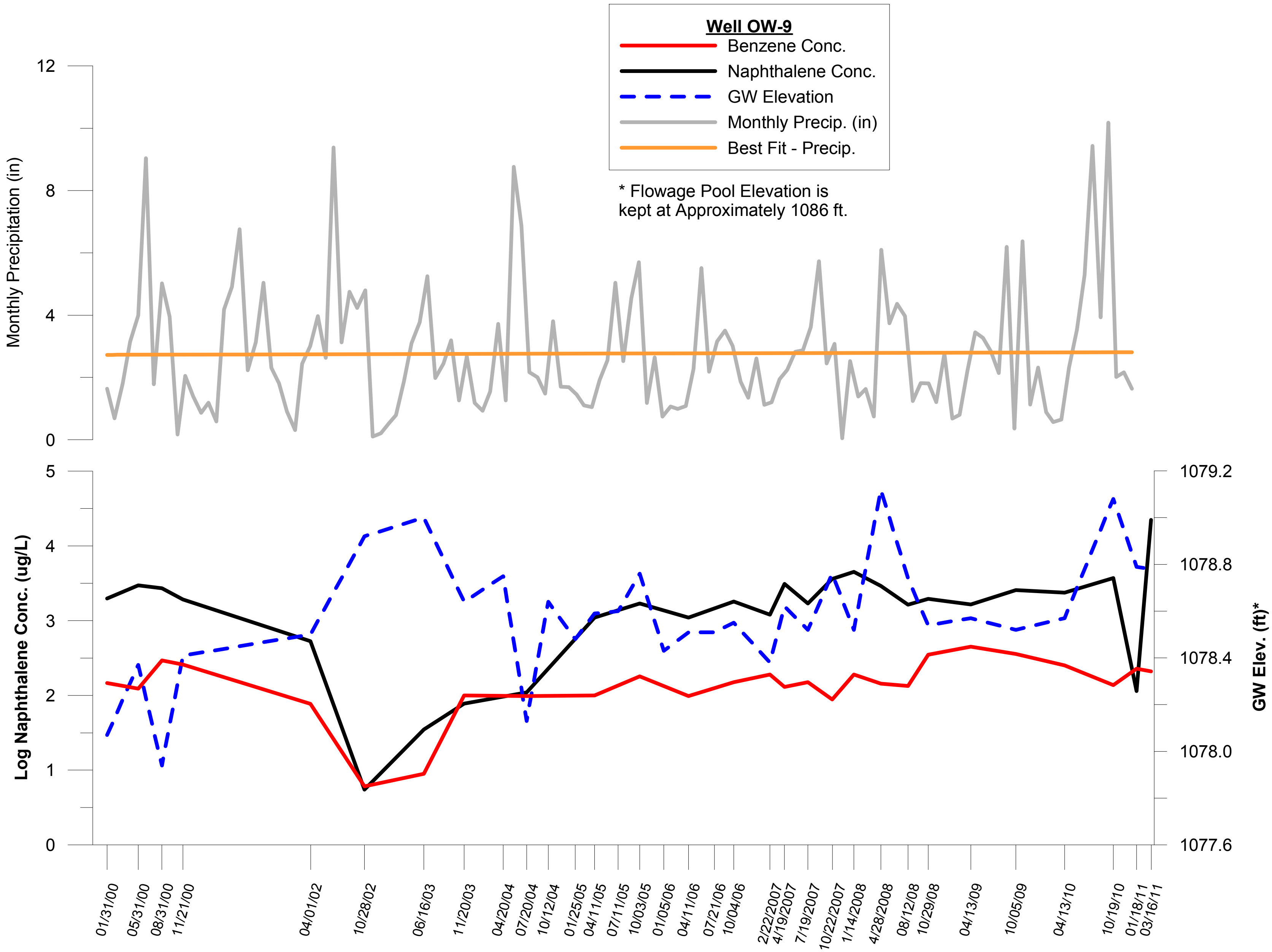


Well OW-5R
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
Log Naphthalene Conc. (ug/L)
GW Elev. (ft)*
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

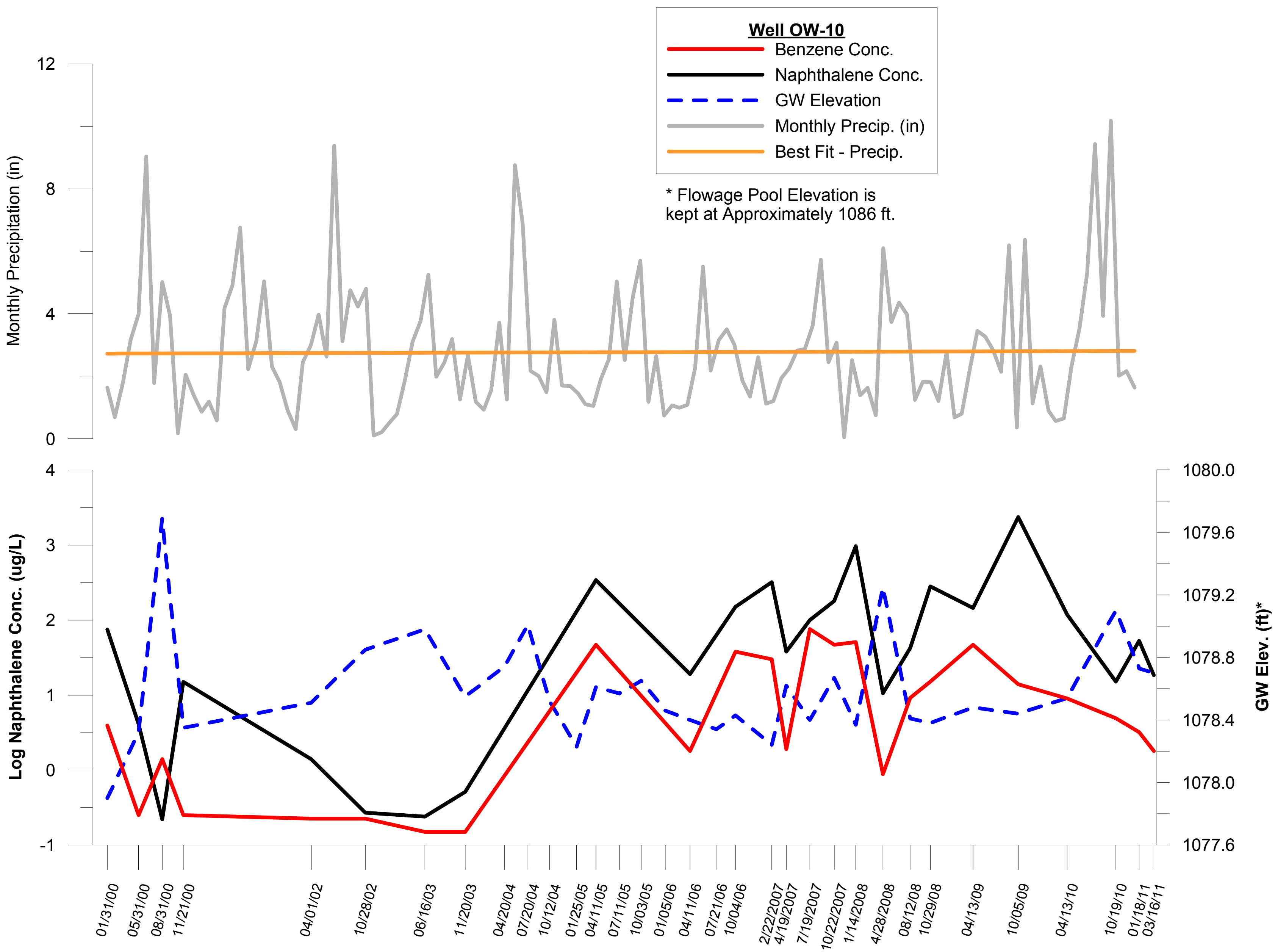


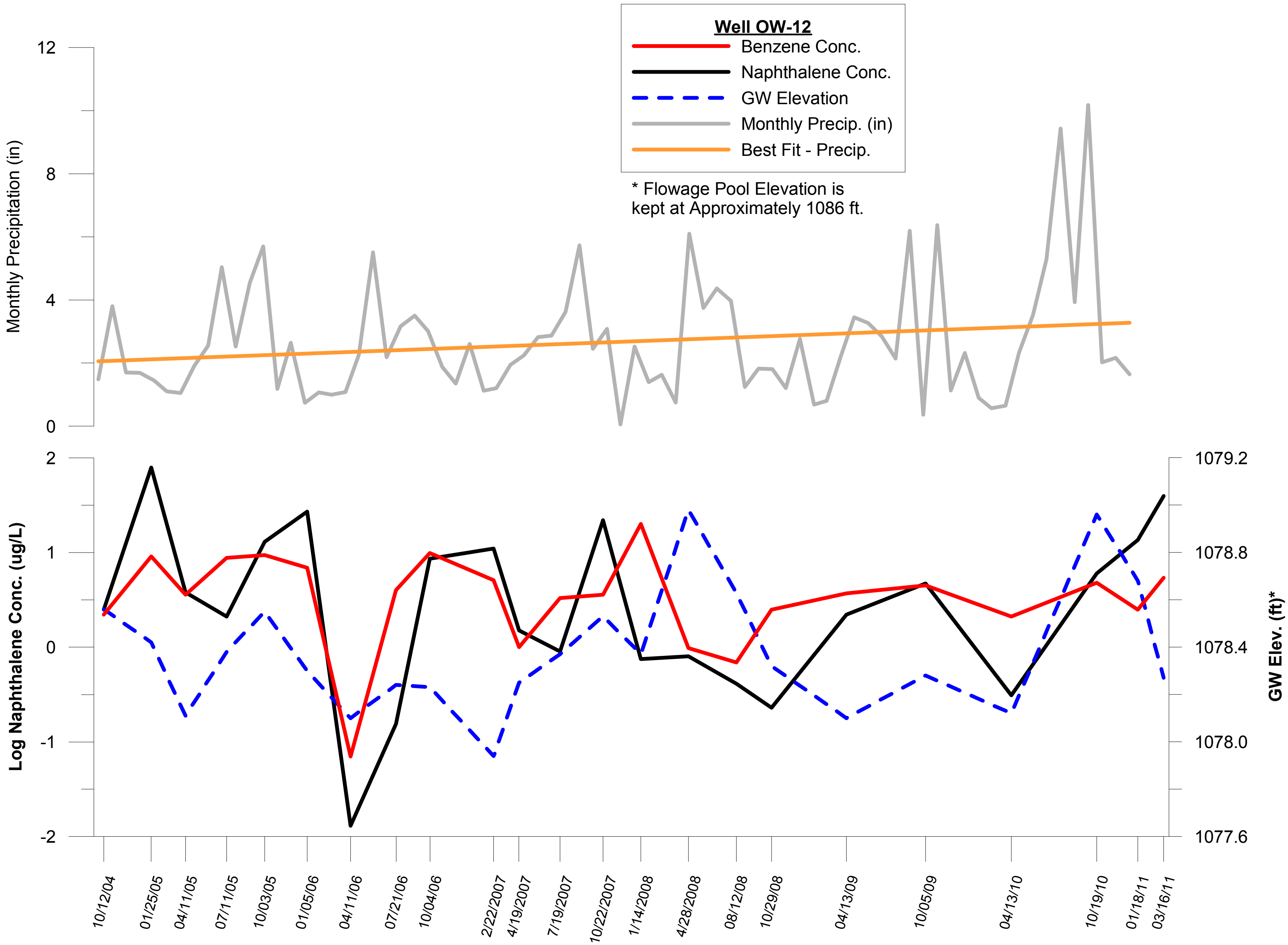
Well OW-6
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
4
3
2
1
0
-1
-2
GW Elev. (ft)*
1080.8
1080.6
1080.4
1080.2
1080.0
1079.8
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

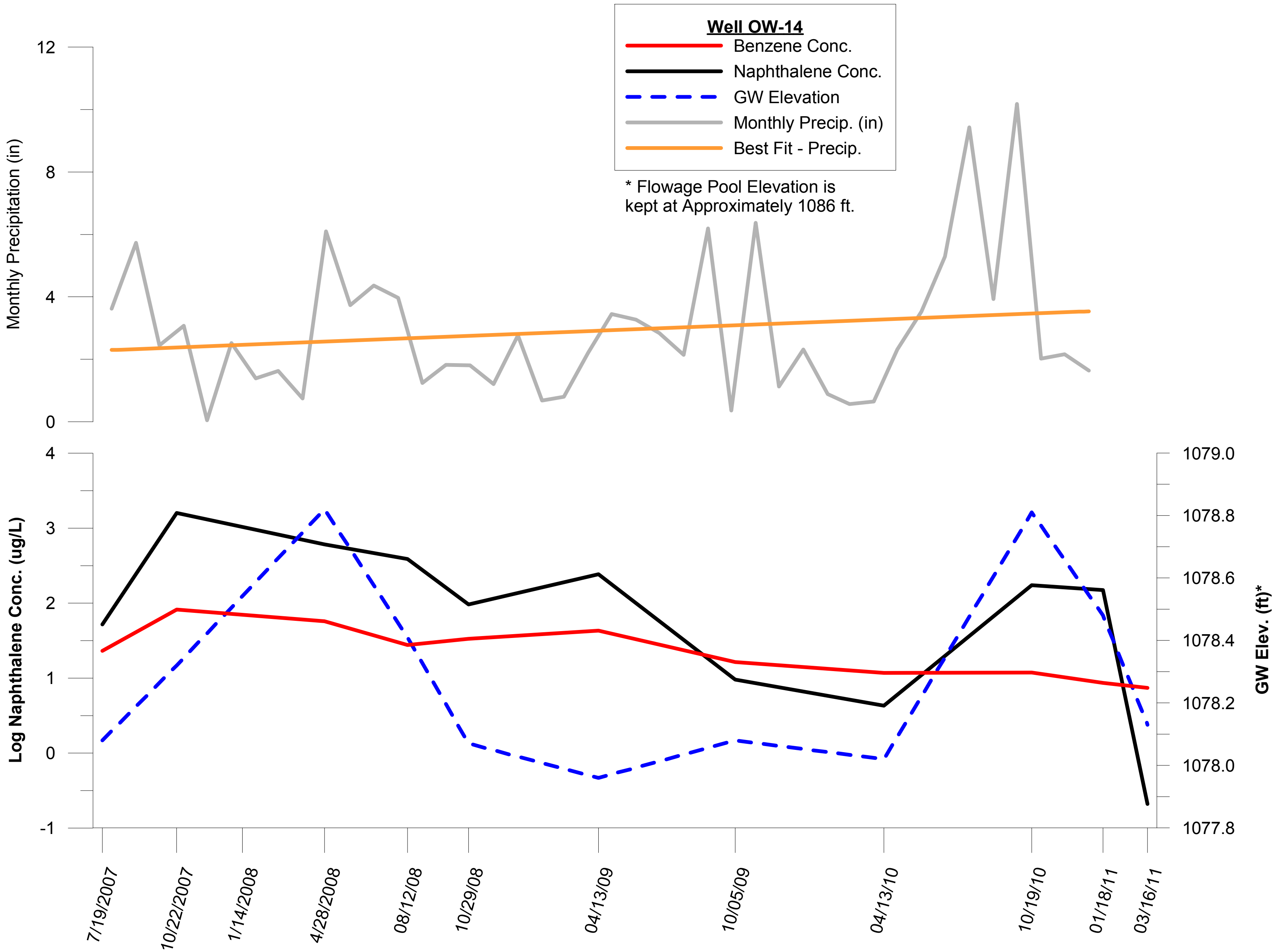

Well OW-7A
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
3
2
1
0
-1
GW Elev. (ft)*
1080.6
1080.5
1080.4
1080.3
1080.2
1080.1
1080.0
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11

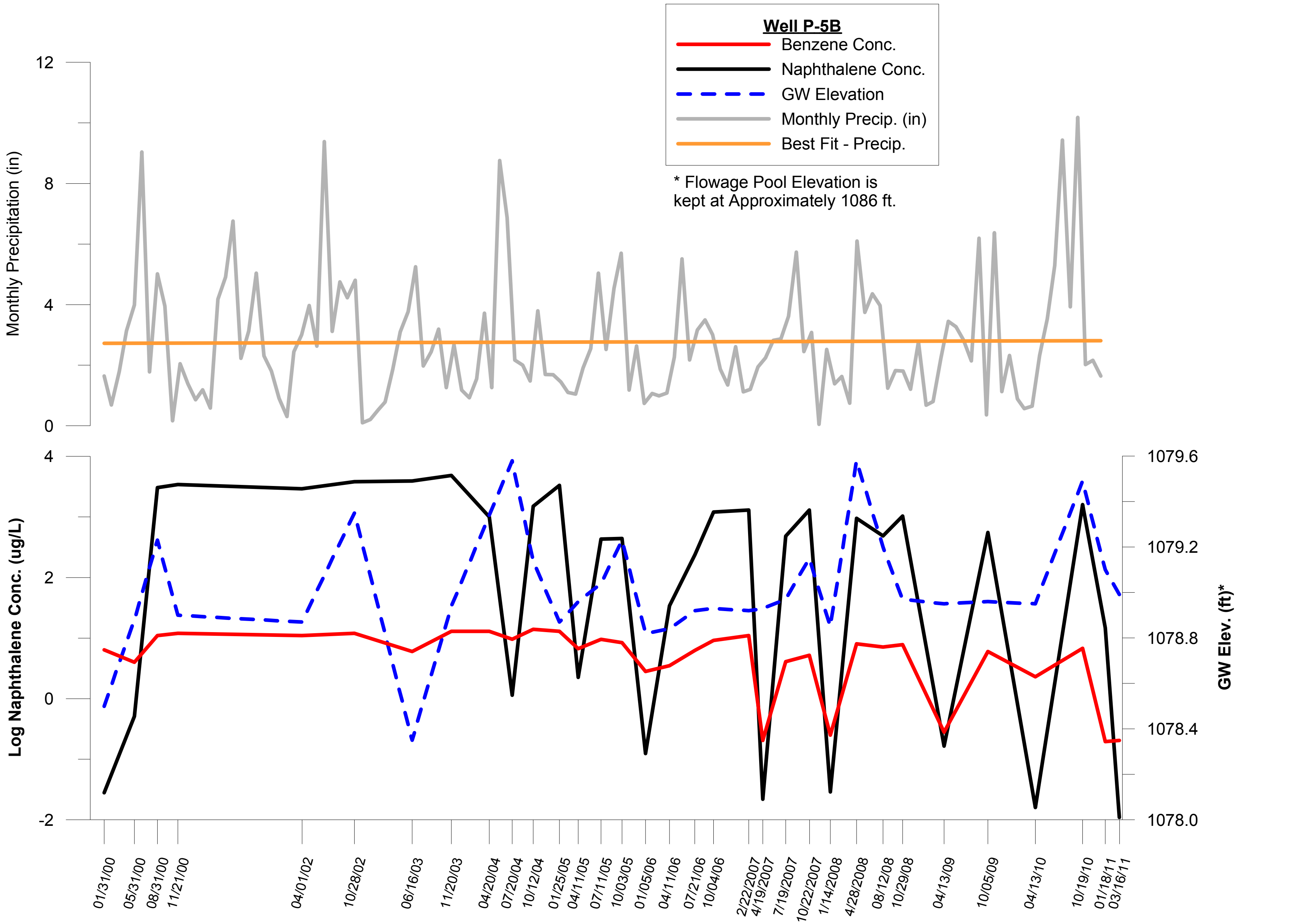


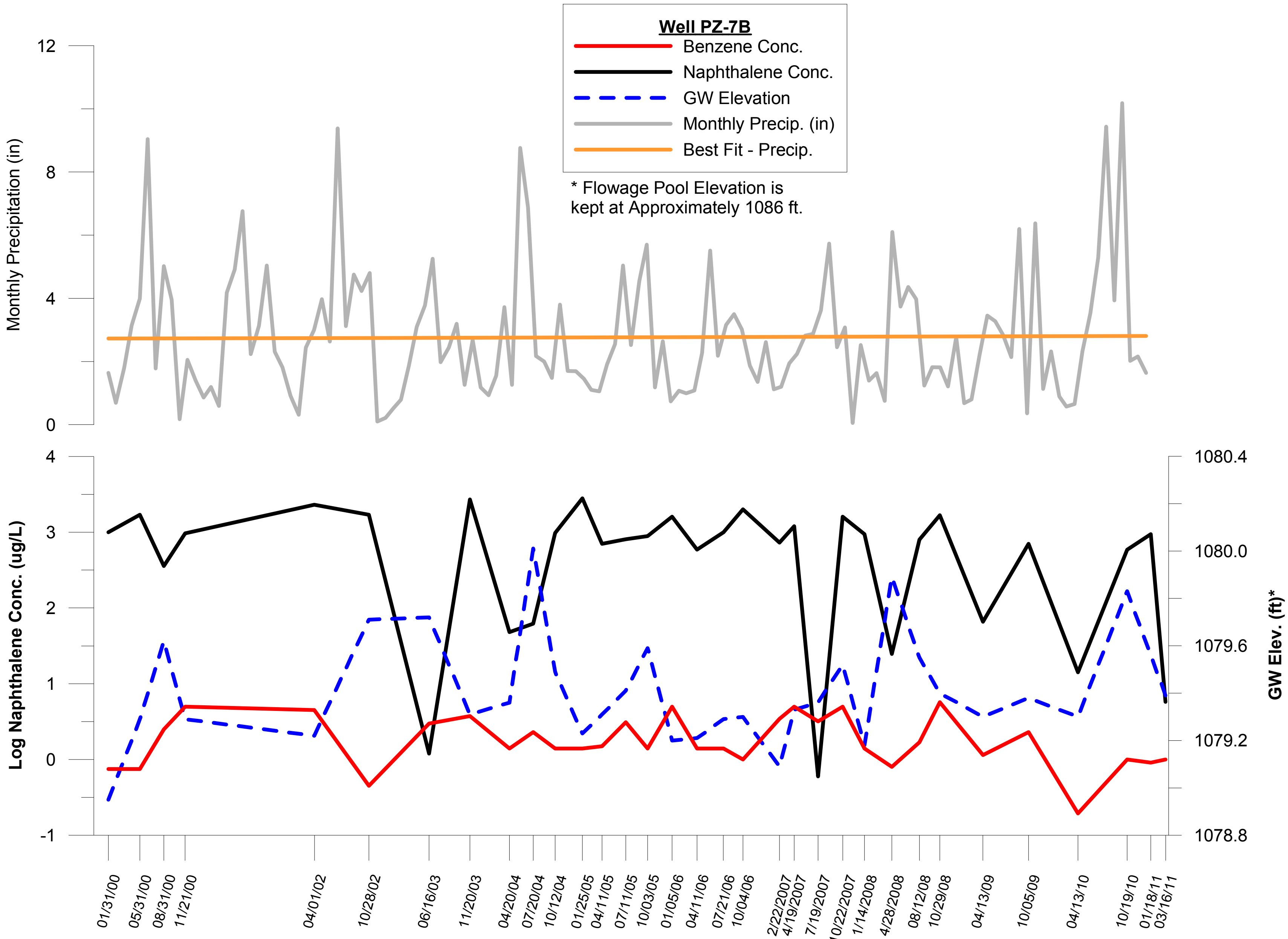
Well OW-9
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
5
4
3
2
1
0
GW Elev. (ft)*
1079.2
1078.8
1078.4
1078.0
1077.6
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Well OW-10
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
4
3
2
1
0
-1
GW Elev. (ft)*
1080.0
1079.6
1079.2
1078.8
1078.4
1078.0
1077.6
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Well OW-12
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
2
1
0
-1
-2
GW Elev. (ft)*
1079.2
1078.8
1078.4
1078.0
1077.6
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Well OW-14
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
4
3
2
1
0
-1
GW Elev. (ft)*
1079.0
1078.8
1078.6
1078.4
1078.2
1078.0
1077.8
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Well P-5B
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is
kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
4
2
0
-2
GW Elev. (ft)*
1079.6
1079.2
1078.8
1078.4
1078.0
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
08/12/08
10/29/08
04/13/09
10/05/09
04/13/10
10/19/10
01/18/11
03/16/11


Well PZ-7B
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
4
3
2
1
0
-1
GW Elev. (ft)*
1080.4
1080.0
1079.6
1079.2
1078.8
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
4/28/2008
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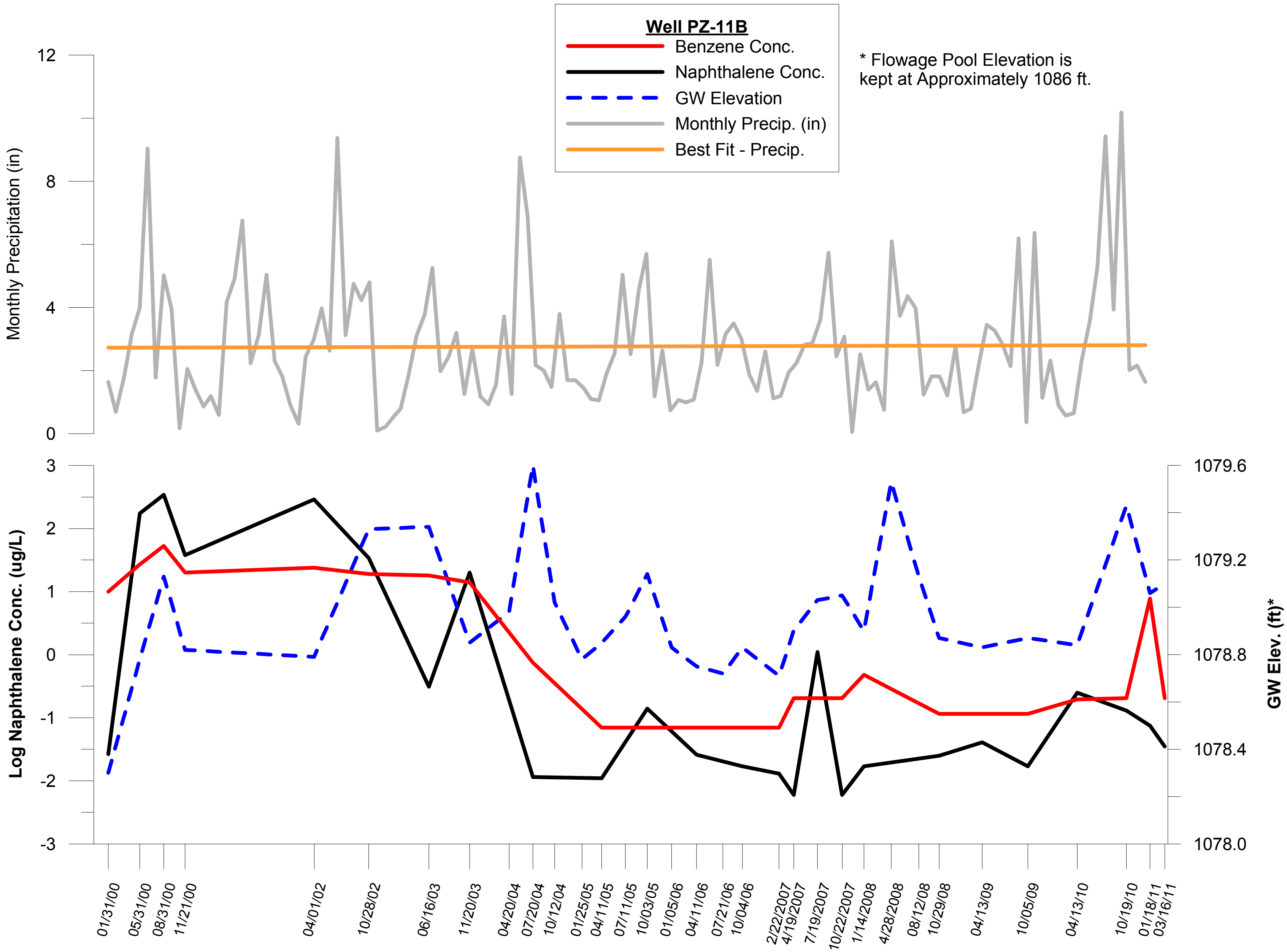
10/19/10
01/18/11
03/16/11



Well PZ-11B
Benzene Conc.
Naphthalene Conc.
GW Elevation
Monthly Precip. (in)
Best Fit - Precip.
* Flowage Pool Elevation is kept at Approximately 1086 ft.
Monthly Precipitation (in)
12
8
4
0
Log Naphthalene Conc. (ug/L)
3
2
1
0
-1
-2
-3
GW Elev. (ft)*
1079.6
1079.2
1078.8
1078.4
1078.0
01/31/00
05/31/00
08/31/00
11/21/00
04/01/02
10/28/02
06/16/03
11/20/03
04/20/04
07/20/04
10/12/04
01/25/05
04/11/05
07/11/05
10/03/05
01/05/06
04/11/06
07/21/06
10/04/06
2/22/2007
4/19/2007
7/19/2007
10/22/2007
1/14/2008
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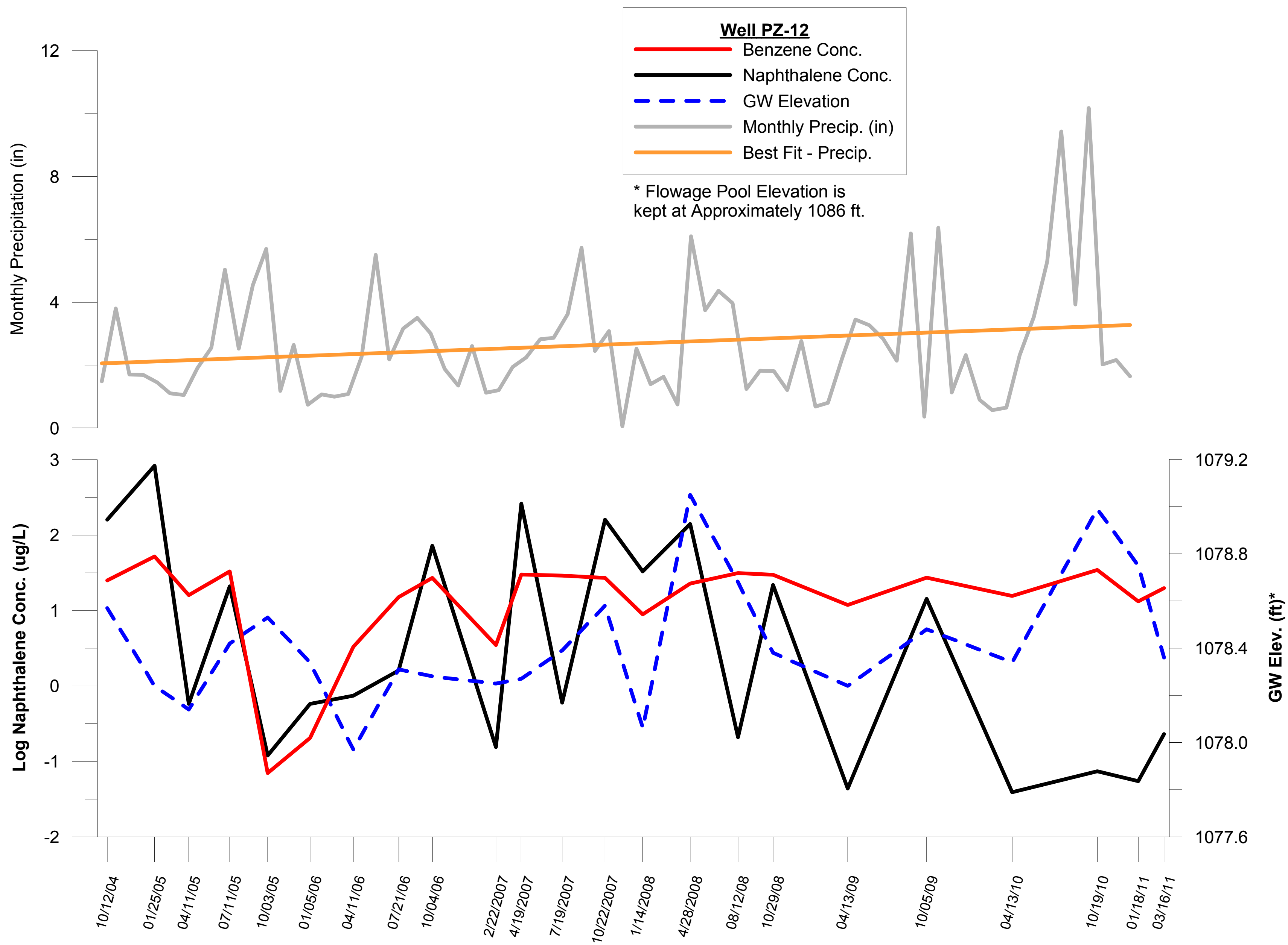
01/18/11
03/16/11



File:\1177_GW-Plots_Rev1.docx

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Kendall Statistical Test
Form 4400-215 (2/2001)

Notice: This form is the DNR supplied spreadsheet referenced in Appendices A of Comm 46 and NR 746, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

Instructions: Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name = WPSC - Steven Point Former MGP Site | BRRTS No. = 02-50-000079 | Well Number = Benzene

Event Number	Compound -> Sampling Date (most recent last)	OW-5R Concentration (leave blank if no data)	OW-6 Concentration (leave blank if no data)	OW-7A Concentration (leave blank if no data)	OW-9 Concentration (leave blank if no data)	OW-10 Concentration (leave blank if no data)	OW-14 Concentration (leave blank if no data)
1	1-Jan-08	10.00	4.40	13.00	190.00	51.00	
2	28-Apr-08	1.10	3.70	15.80	144.00	0.88	57.30
3	12-Aug-08	110.00	4.10	15.20	134.00	9.20	27.70
4	29-Oct-08	114.00	3.70	23.70	349.00	15.10	33.50
5	13-Apr-09	4.10	4.00	6.90	448.00	46.70	43.00
6	5-Oct-09	54.70	2.80	13.20	358.00	13.90	16.30
7	13-Apr-10	36.70	1.60	10.20	252.00	9.00	11.70
8	19-Oct-10	13.20	2.05	29.60	137.00	4.90	11.90
9	18-Jan-11	2.10	25.00	18.40	227.00	3.20	8.60
10	16-Mar-11	0.81	3.30	12.10	210.00	1.80	7.40
	Mann Kendall Statistic (S) =	-13.0	-14.0	1.0	1.0	-21.0	-28.0
	Number of Rounds (n) =	10	10	10	10	10	9
	Average =	34.67	5.47	15.81	244.90	15.57	24.16
	Standard Deviation =	44.362	6.923	6.657	107.291	18.207	17.476
	Coefficient of Variation(CV)=	1.280	1.267	0.421	0.438	1.170	0.723
Error Check, Blank if No Errors Detected							
Trend ≥ 80% Confidence Level		**DECREASING**	**DECREASING**	No Trend	No Trend	**DECREASING**	**DECREASING**
Trend ≥ 90% Confidence Level		No Trend	No Trend	No Trend	No Trend	**DECREASING**	**DECREASING**
Stability Test, If No Trend Exists at 80% Confidence Level		NA	NA	**CV <= 1 STABLE**	**CV <= 1 STABLE**	NA	NA

Data Entry By = EPK | Date = 20-May-11 | Checked By = JJW

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Kendall Statistical Test
Form 4400-215 (2/2001)

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Site Name = WPSC - Steven Point Former MGP Site | BRRTS No. = 02-50-000079 | Well Number = Naphthalene

Event Number	Compound -> / Sampling Date (most recent last)	OW-5R Concentration (leave blank if no data)	OW-6 Concentration (leave blank if no data)	OW-7A Concentration (leave blank if no data)	OW-9 Concentration (leave blank if no data)	OW-10 Concentration (leave blank if no data)	OW-14 Concentration (leave blank if no data)
1	1-Jan-08	120.00	41.00	130.00	4,500.00	970.00	
2	28-Apr-08	0.57	3,060.00	348.00	2,910.00	10.60	608.00
3	12-Aug-08	490.00	1,720.00	219.00	1,630.00	42.30	387.00
4	29-Oct-08	169.00	1,090.00	496.00	1,950.00	282.00	95.70
5	13-Apr-09	0.88	5.30	87.80	1,650.00	145.00	244.00
6	5-Oct-09	16.40	1,130.00	250.00	2,560.00	2,370.00	9.50
7	13-Apr-10	15.70	0.05	105.00	2,370.00	119.00	4.30
8	19-Oct-10	0.96	1,440.00	478.00	3,720.00	15.10	173.00
9	18-Jan-11	0.48	1,090.00	92.20	114.00	52.80	149.00
10	16-Mar-11	0.63	0.59	52.50	2,220.00	18.40	0.47
	Mann Kendall Statistic (S) =	-19.0	-14.0	-13.0	-9.0	-9.0	-22.0
	Number of Rounds (n) =	10	10	10	10	10	9
	Average =	81.46	957.69	225.85	2362.40	402.52	185.66
	Standard Deviation =	155.356	993.235	164.274	1203.742	749.633	203.141
	Coefficient of Variation(CV)=	1.907	1.037	0.727	0.510	1.862	1.094
Error Check, Blank if No Errors Detected							
Trend ≥ 80% Confidence Level		**DECREASING**	**DECREASING**	**DECREASING**	No Trend	No Trend	**DECREASING**
Trend ≥ 90% Confidence Level		**DECREASING**	No Trend	No Trend	No Trend	No Trend	**DECREASING**
Stability Test, If No Trend Exists at 80% Confidence Level		NA	NA	NA	**CV <= 1 STABLE**	**CV > 1 NON-STABLE**	NA

Data Entry By = EPK | Date = 20-May-11 | Checked By = JJW

State of Wisconsin
Department of Natural Resources
Remediation and Redevelopment Program

Mann-Kendall Statistical Test
Form 4400-215 (2/2001)

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Site Name = WPSC - Steven Point Former MGP Site	BRRTS No. = 02-50-000079	Well Number = Benz/Napth

Event Number	Compound -> Sampling Date (most recent last)	P-5B (Benz) Concentration (leave blank if no data)	P-5B (Naph) Concentration (leave blank if no data)	PZ-7B (Benz) Concentration (leave blank if no data)	PZ-7B (Naph) Concentration (leave blank if no data)	PZ-12B (Benz) Concentration (leave blank if no data)	PZ-12B (Naph) Concentration (leave blank if no data)
1	1-Jan-08	0.25	0.29	1.40	940.00	8.90	33.00
2	28-Apr-08	8.00	947.00	0.80	24.70	22.80	140.00
3	12-Aug-08	7.10	485.00	1.70	794.00	31.30	0.21
4	29-Oct-08	7.80	1,030.00	5.70	1,680.00	29.70	21.70
5	13-Apr-09	0.28	0.17	1.15	65.70	11.90	0.04
6	5-Oct-09	6.00	555.00	2.30	701.00	27.20	14.30
7	13-Apr-10	2.30	0.02	0.20	14.10	15.60	0.04
8	19-Oct-10	6.80	1,600.00	1.00	587.00	34.40	0.07
9	18-Jan-11	0.50	14.80	0.91	945.00	13.20	0.10
10	16-Mar-11	0.50	0.02	2.50	5.80	19.70	0.23
	Mann Kendall Statistic (S) =	-10.0	-7.0	-1.0	-11.0	3.0	-17.0
	Number of Rounds (n) =	10	10	10	10	10	10
	Average =	3.95	463.23	1.77	575.73	21.47	20.97
	Standard Deviation =	3.451	569.147	1.547	553.367	8.955	43.420
	Coefficient of Variation(CV)=	0.873	1.229	0.876	0.961	0.417	2.071
Error Check, Blank if No Errors Detected							
Trend ≥ 80% Confidence Level		No Trend	No Trend	No Trend	**DECREASING**	No Trend	**DECREASING**
Trend ≥ 90% Confidence Level		No Trend	No Trend	No Trend	No Trend	No Trend	**DECREASING**
Stability Test, If No Trend Exists at 80% Confidence Level		**CV <= 1 STABLE**	**CV > 1 NON-STABLE**	**CV <= 1 STABLE**	NA	**CV <= 1 STABLE**	NA

Data Entry By = EPK	Date = 20-May-11	Checked By = JJW

Table N-1: Contaminant Transport Velocity
WPSC - Stevens Point Former MGP

Groundwater Velocity (Vgw)		
	Vgw (ft/year)	Vgw (cm/sec)
Lower End	40	3.87E-05
Upper End	140	1.35E-04

Calculation of Contaminant Travel Distance (Xc)												
									60 year travel dist.		20 year travel dist.	
Parameter	K_{oc} (L/kg)	f_{oc} (-)	D_b (pcf)	D_b (g/cm^3)	n_e (-)	Rd (-)	Vc (cm/sec)	Vc (ft/yr)	t (yrs)	Xc (ft)	t (yrs)	Xc (ft)
Benzene (lower)	59	0.00028	111.2	1.78	0.30	1.10	3.52E-05	36	60	**2,186**	20	729
Benzene (upper)	59	0.00028	111.2	1.78	0.30	1.10	1.23E-04	127	60	**7,650**	20	2,550
Naphthalene (lower)	2,000	0.00028	111.2	1.78	0.30	4.32	8.94E-06	9	60	**555**	20	185
Naphthalene (upper)	2,000	0.00028	111.2	1.78	0.30	4.32	3.13E-05	32	60	**1,942**	20	647

Table Notes

Groundwater Velocity (Vgw) was reported in Section 4.2 of the Stevens Point RI report revision 1.

Organic carbon partition coefficients (K_{oc}) from WDNR Natural Attenuation Guidance (RR-614; 4/03)

Fraction organic carbon (f_{oc}) reported in Table 16.5.3 for Borden aquifer sand in the *Handbook of Hydrology* (1992, Maidment)

Bulk density (D_b) value was taken from 2011 geotechnical report of wet bulk density for native fine to coarse sand at SV7(11-12) and converted to g/cm3 (multiply pounds per cubic foot by 0.016018 to get grams per cubic centimeter)

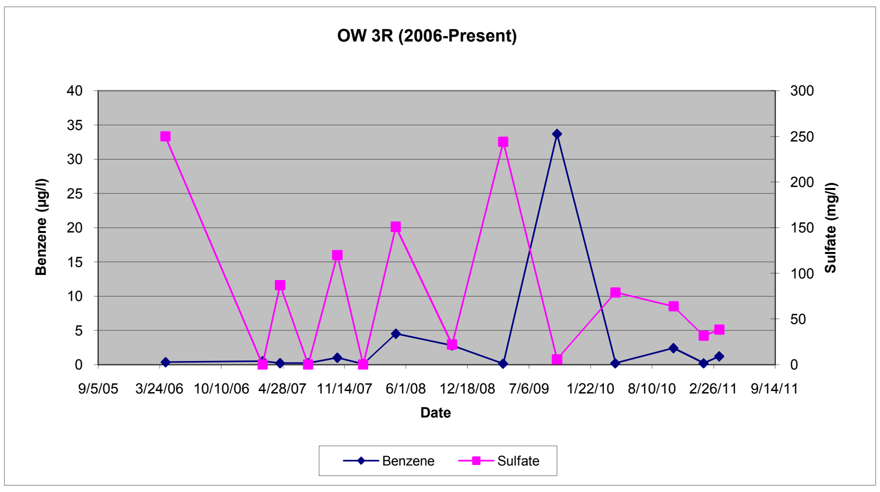
Retardation (Rd) = $1+(K_{oc}*f_{oc}*Db / n_e)$

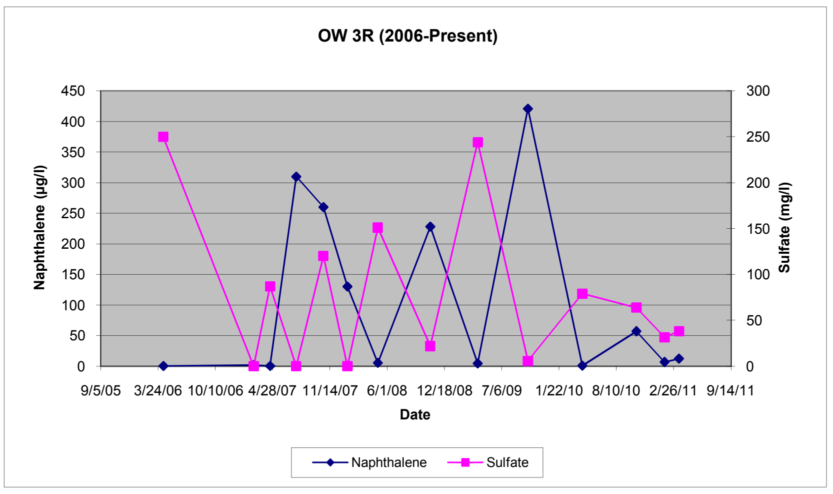
Effective porosity (n_e) was selected to be consistent with the flow model presented in the Stevens Point FS report revision 1.

Contaminant velocity (Vc) = Vgw / Rd

Travel time (t) = Approximately 60 years has passed since the closure of the former MGP facility.

Contaminant travel distance (Xc) = Vc * t


OW 3R (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
9/5/05 3/24/06 10/10/06 4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Benzene
Sulfate


OW 3R (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
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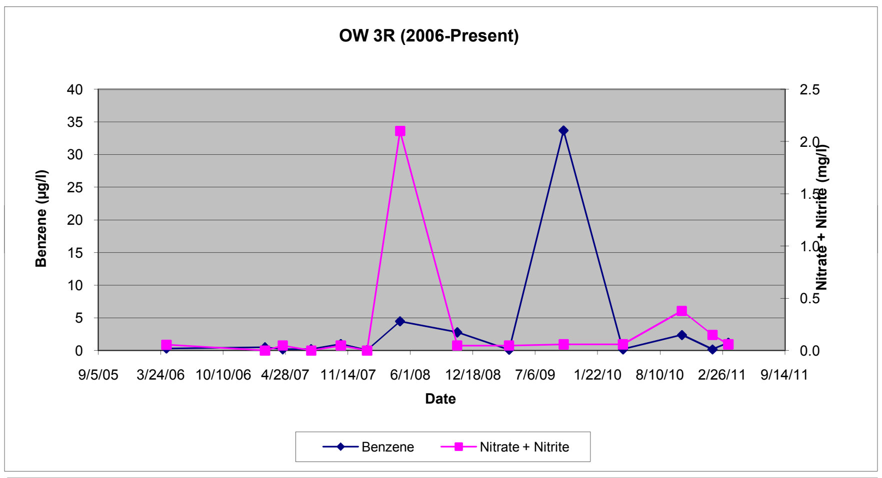
Naphthalene
Sulfate


OW 3R (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
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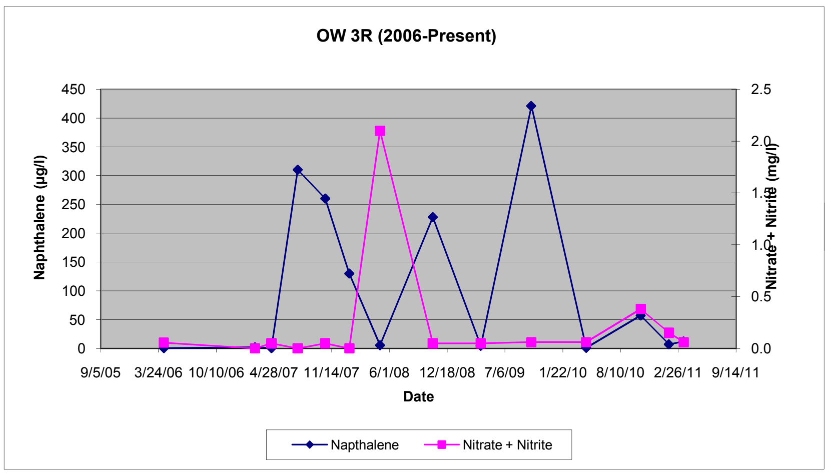
Benzene
Nitrate + Nitrite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Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
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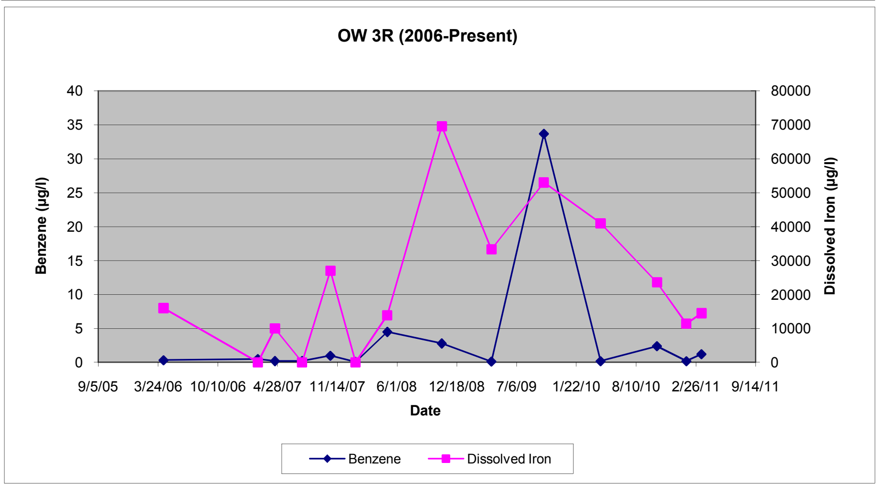
Napthalene
Nitrate + Nitrite


OW 3R (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
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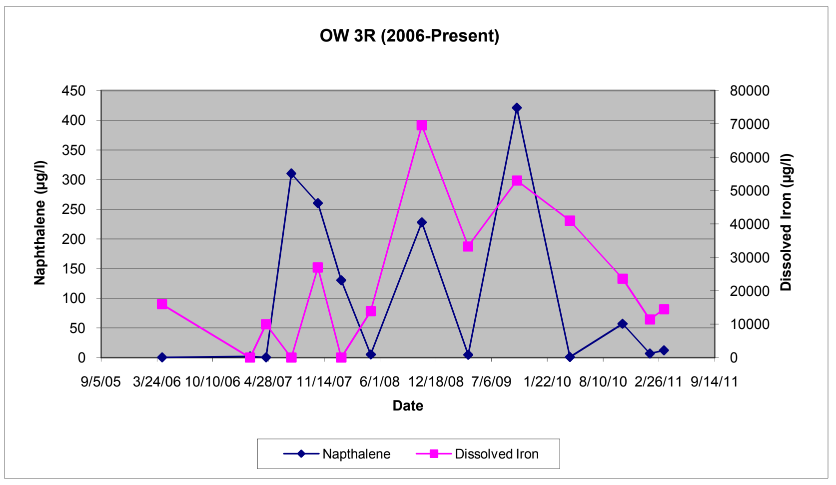
Benzene
Dissolved Iron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Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
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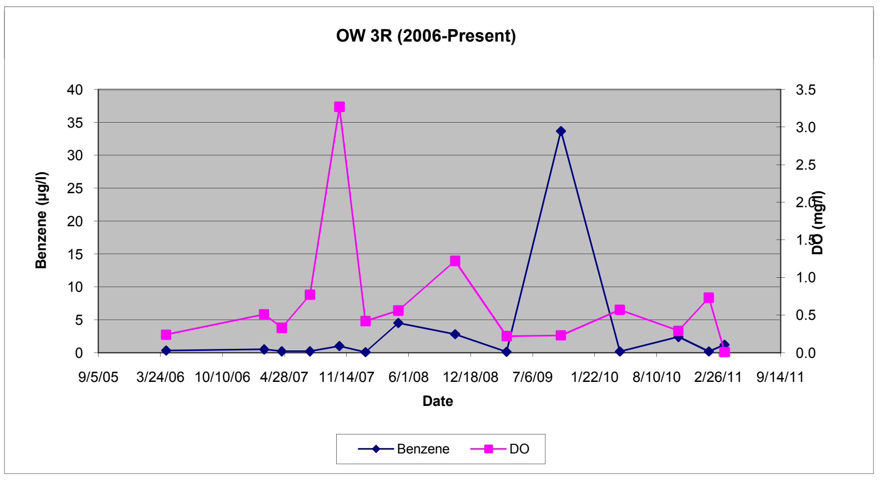
Napthalene
Dissolved Iron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Benzene (µg/l)
DO (mg/l)
Date
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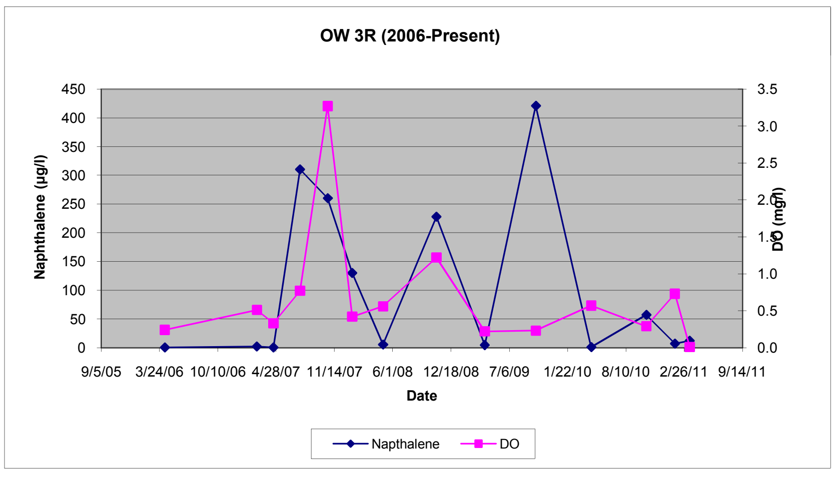
Benzene
DO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Naphthalene (µg/l)
DO (mg/l)
Date
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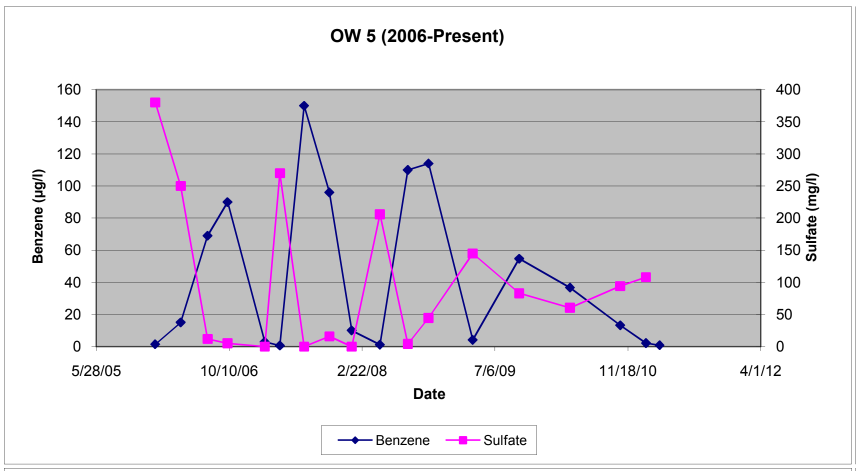
Napthalene
DO


OW 5 (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
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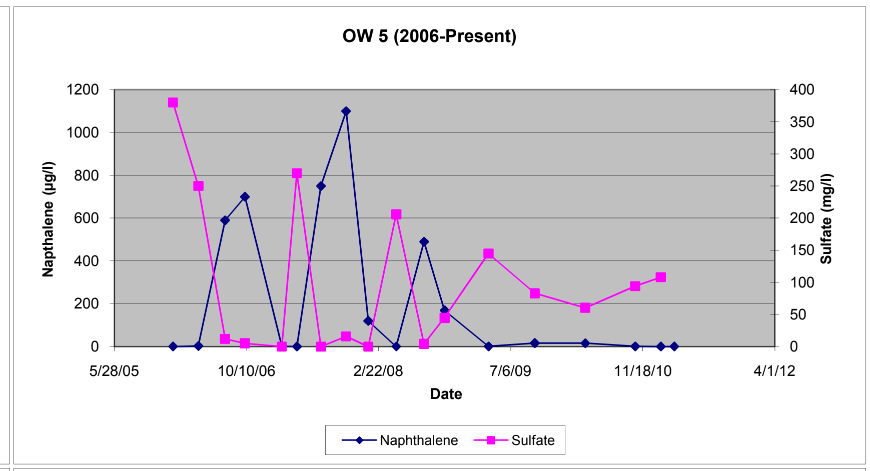
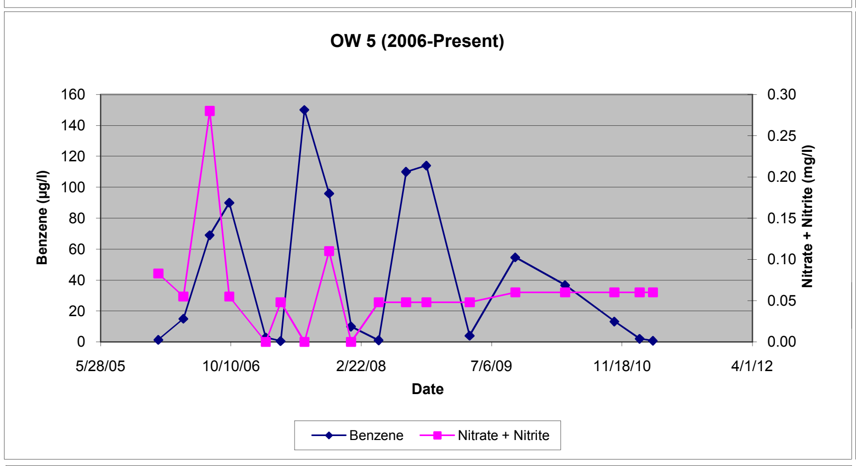
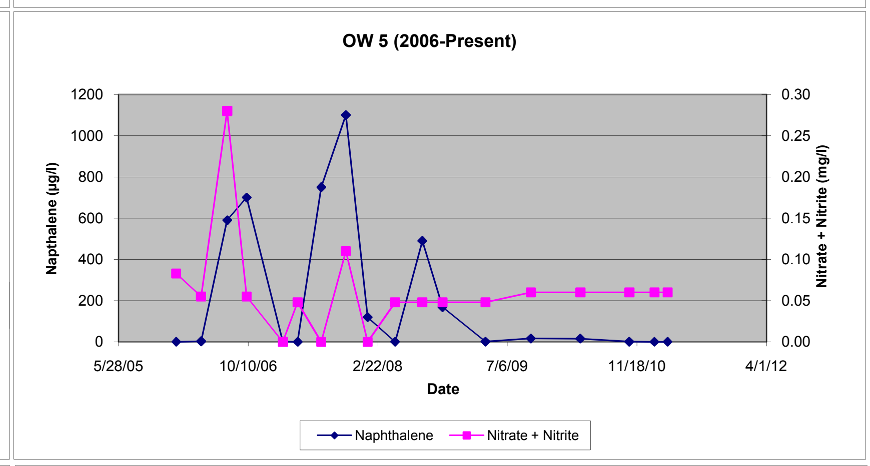
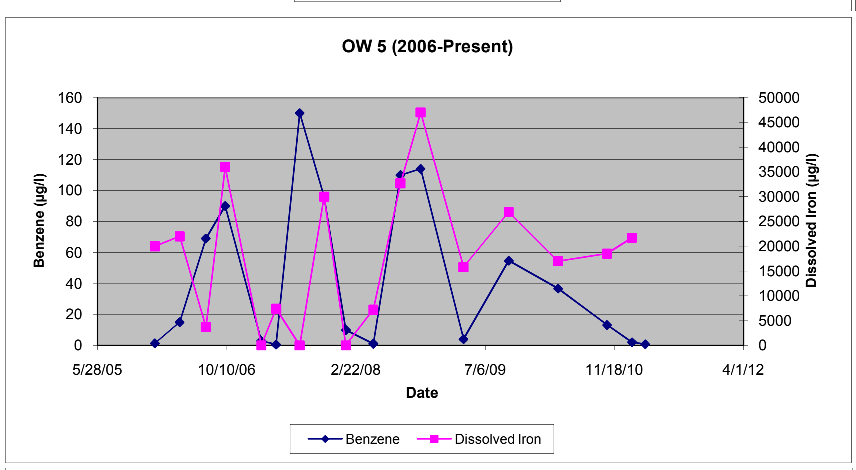
Benzene
Sulfate


OW 5 (2006-Present)
Napthalene (µg/l)
Sulfate (mg/l)
Date
5/28/05 10/10/06 2/22/08 7/6/09 11/18/10 4/1/12
Naphthalene
Sulfate


OW 5 (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05 10/10/06 2/22/08 7/6/09 11/18/10 4/1/12
Benzene
Nitrate + Nitrite


OW 5 (2006-Present)
Napthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05 10/10/06 2/22/08 7/6/09 11/18/10 4/1/12
Naphthalene
Nitrate + Nitrite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Benzene (µg/l)
Dissolved Iron (µg/l)
Date
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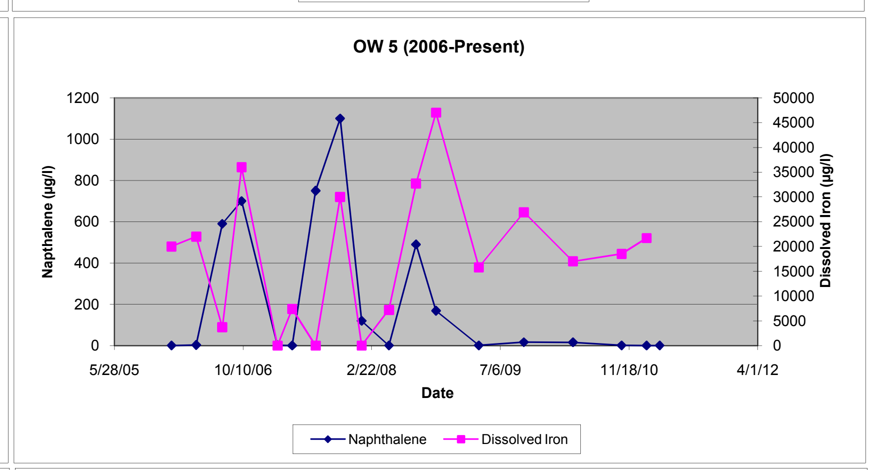
Benzene
Dissolved Iron


OW 5 (2006-Present)
Napthalene (µg/l)
Dissolved Iron (µg/l)
Date
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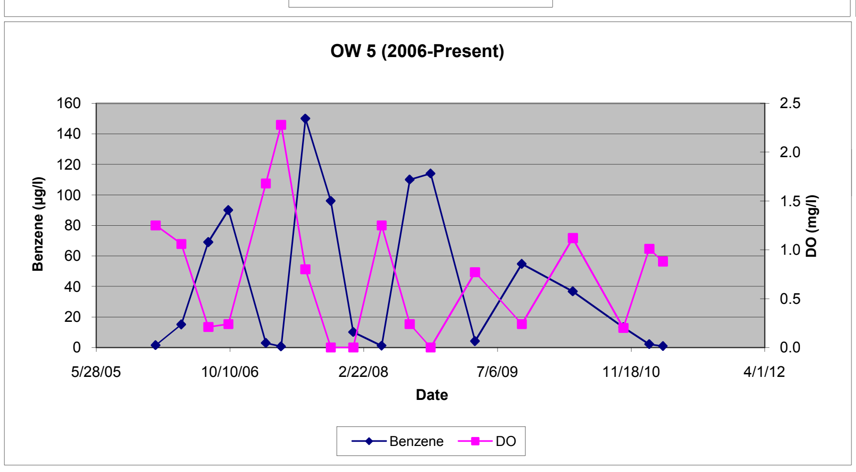
Naphthalene
Dissolved Iron


OW 5 (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
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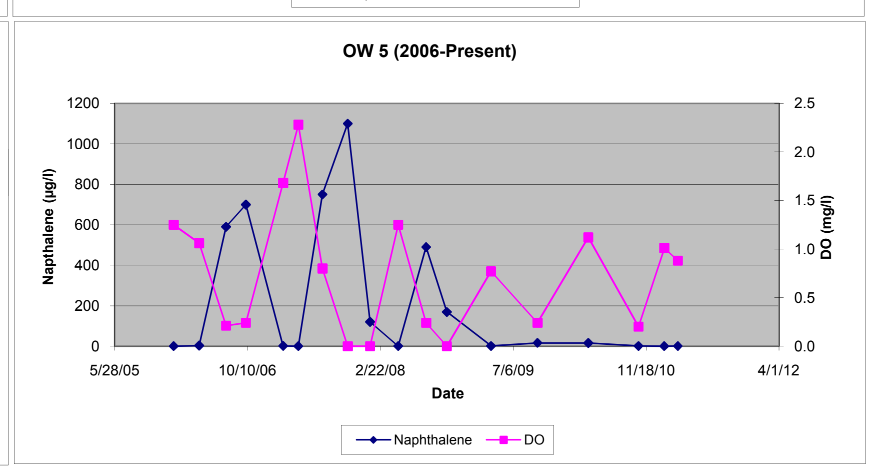
Benzene
DO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Napthalene (µg/l)
DO (mg/l)
Date
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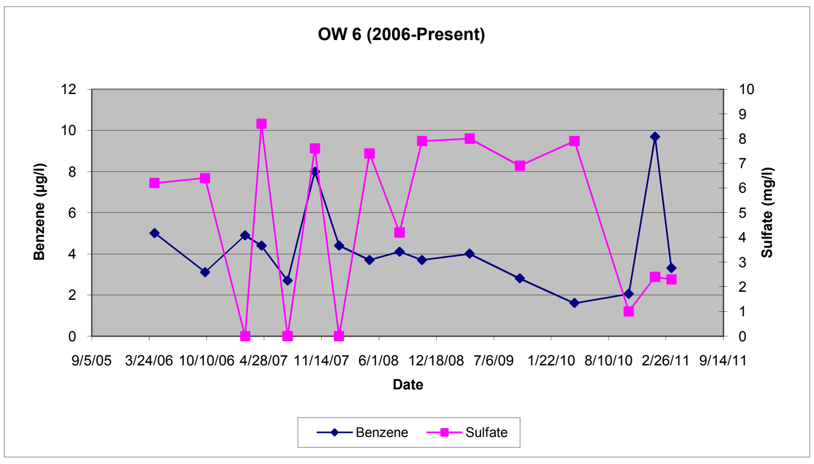
Naphthalene
DO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Benzene (µg/l)
Sulfate (mg/l)
Date
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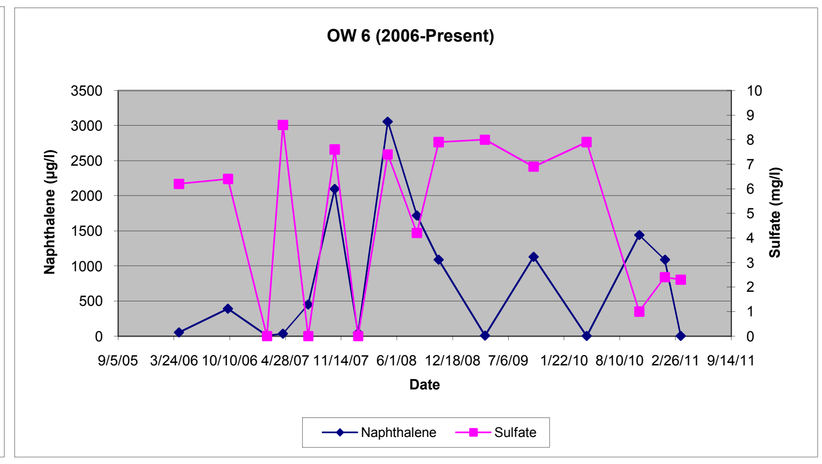
Benzene
Sulfate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Naphthalene (µg/l)
Sulfate (mg/l)
Date
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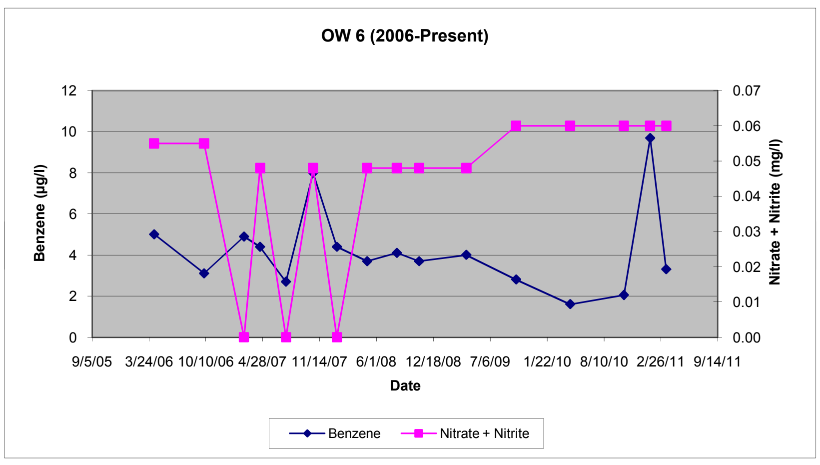
Naphthalene
Sulfate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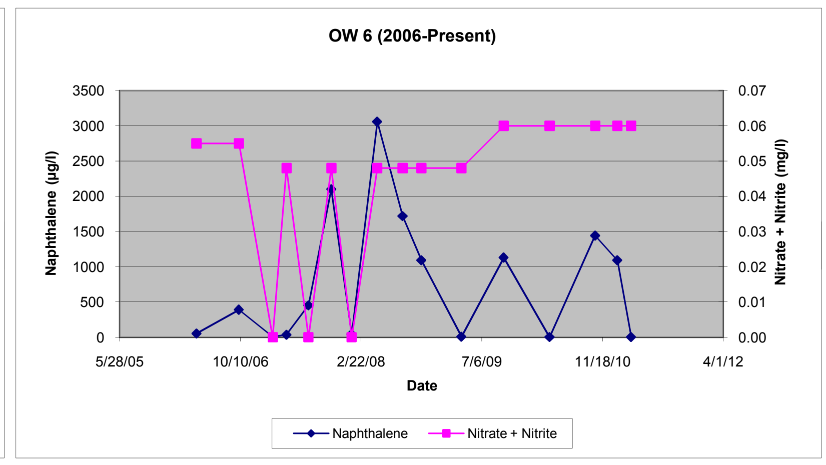
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
9/5/05 3/24/06 10/10/06 4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Benzene
Nitrate + Nitrite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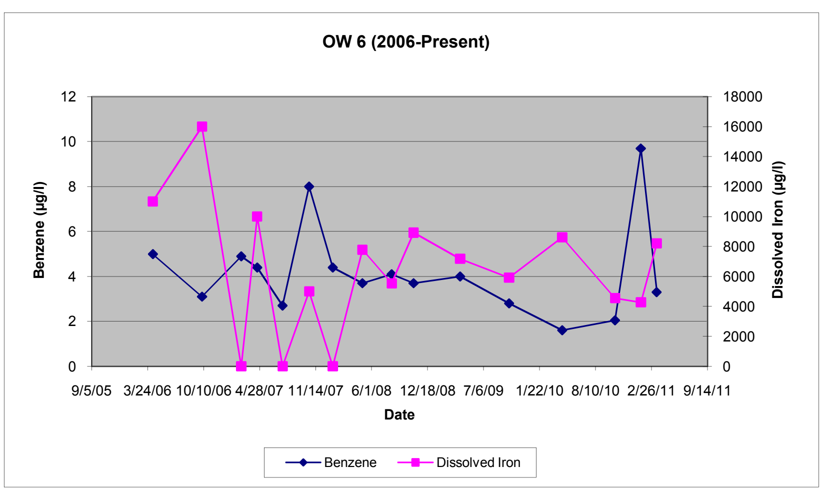
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05 10/10/06 2/22/08 7/6/09 11/18/10 4/1/12
Naphthalene
Nitrate + Nitrite


OW 6 (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
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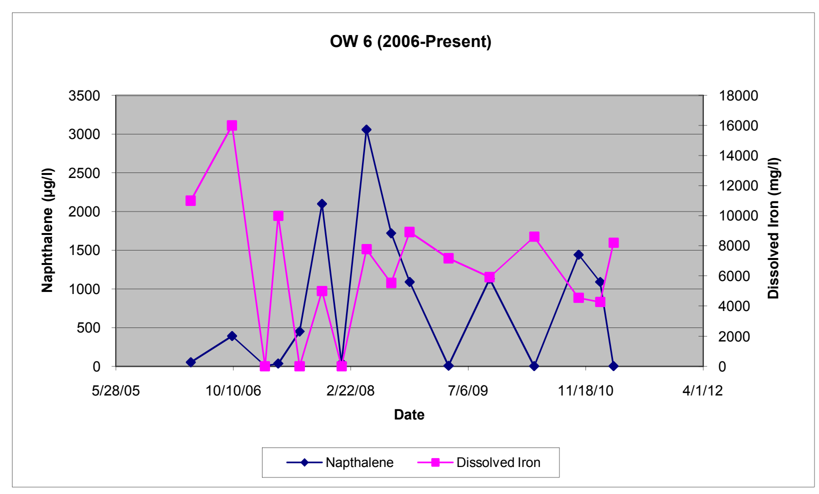
Benzene
Dissolved Iron


OW 6 (2006-Present)
Napthalene (µg/l)
Dissolved Iron (mg/l)
Date
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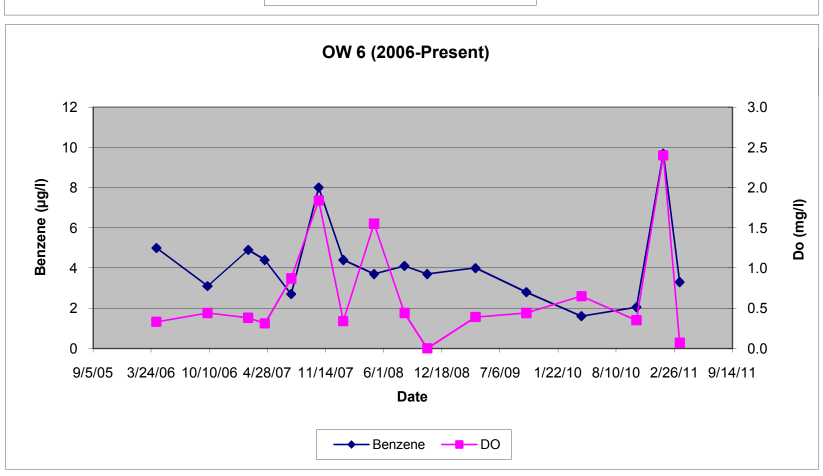
Napthalene
Dissolved Iron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Benzene (µg/l)
Do (mg/l)
Date
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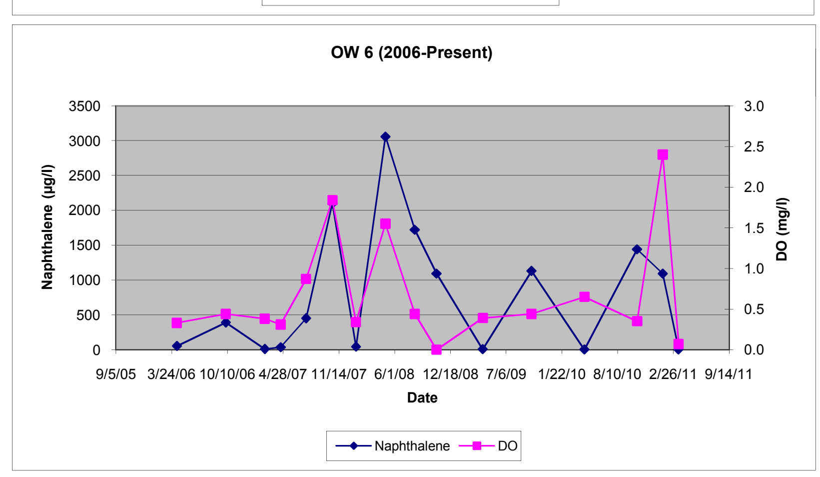
Benzene
DO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DO (mg/l)
Date
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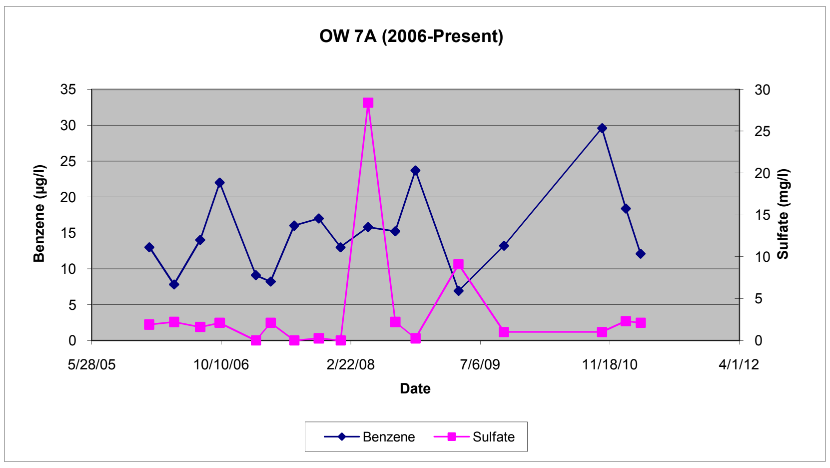
Naphthalene
DO


OW 7A (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
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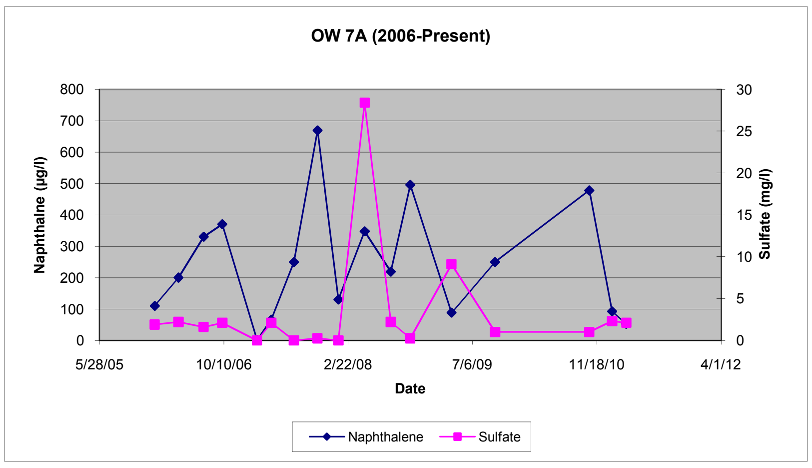
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Sulfate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Naphthalene (µg/l)
Sulfate (mg/l)
Date
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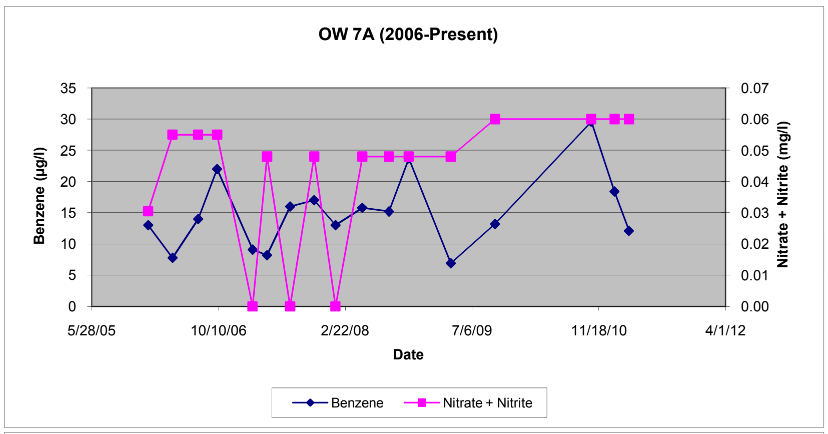
2/22/08
7/6/09
11/18/10
4/1/12
Naphthalene
Sulfate


OW 7A (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
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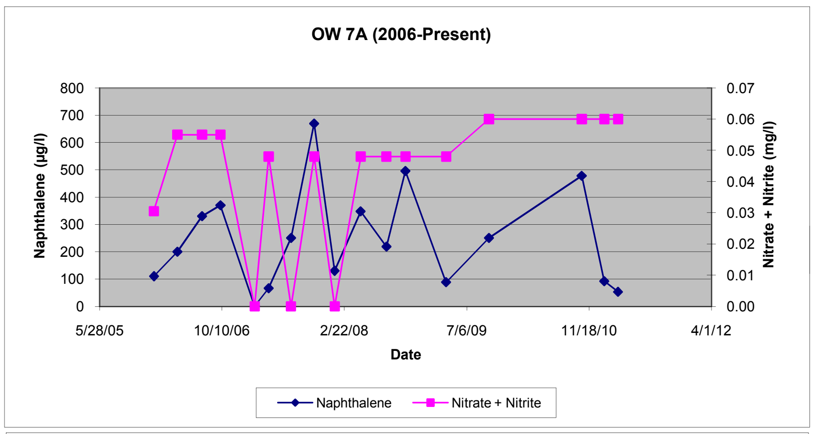
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Nitrate + Nitrite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Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
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10/10/06
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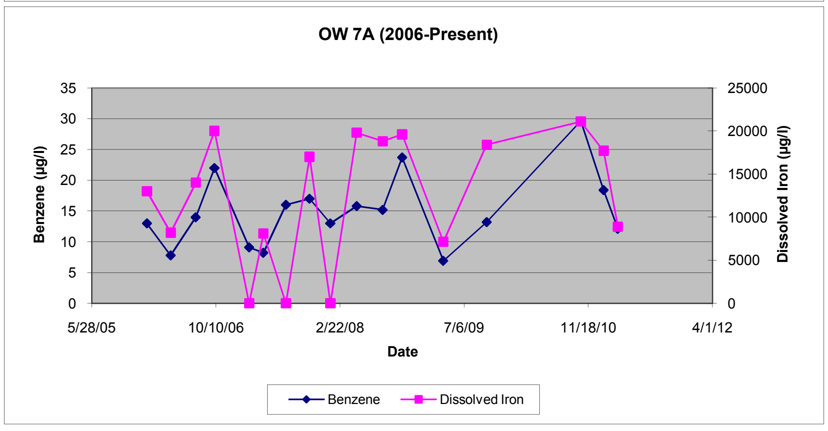
7/6/09
11/18/10
4/1/12
Naphthalene
Nitrate + Nitrite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Benzene (µg/l)
Dissolved Iron (µg/l)
Date
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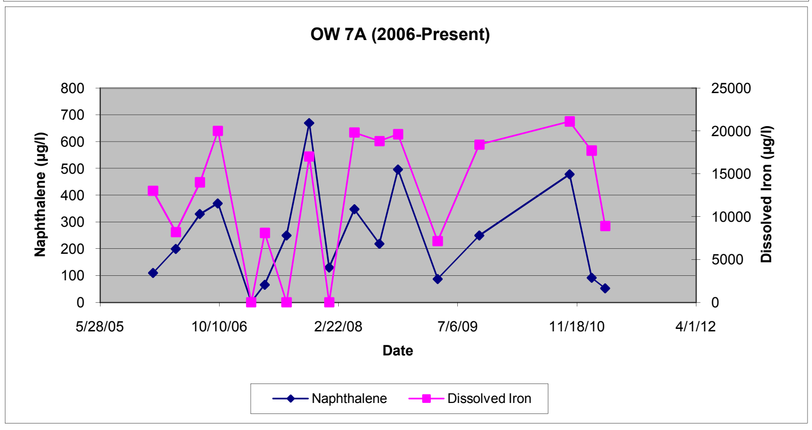
7/6/09
11/18/10
4/1/12
Benzene
Dissolved Iron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Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
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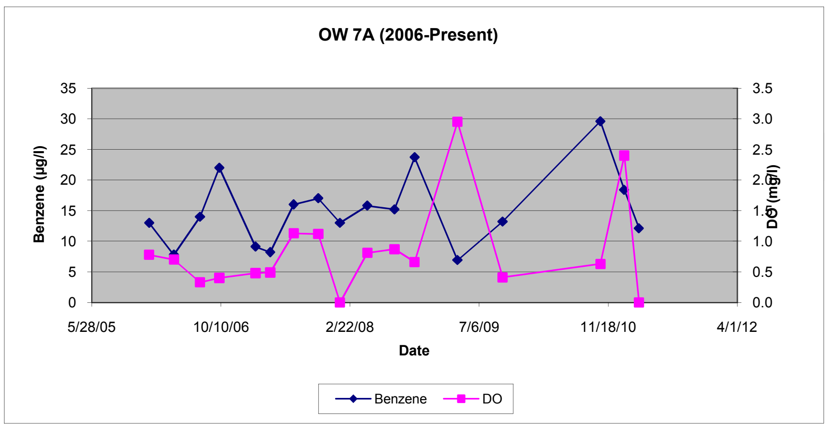
7/6/09
11/18/10
4/1/12
Naphthalene
Dissolved Iron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Benzene (µg/l)
DO (mg/l)
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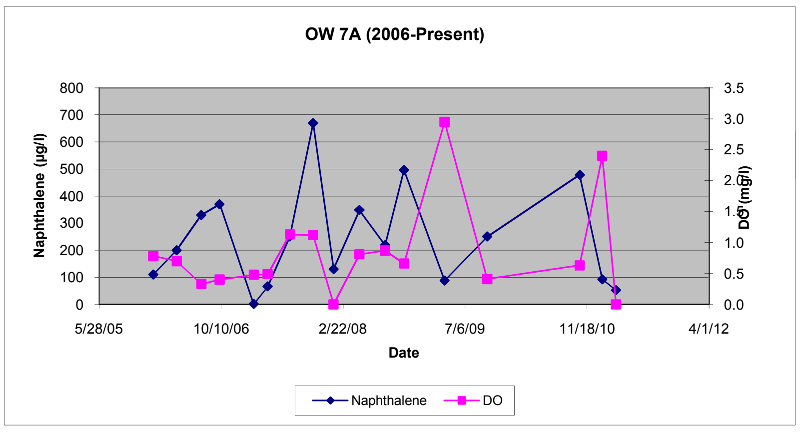
Benzene
DO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Naphthalene (µg/l)
DO (mg/l)
Date
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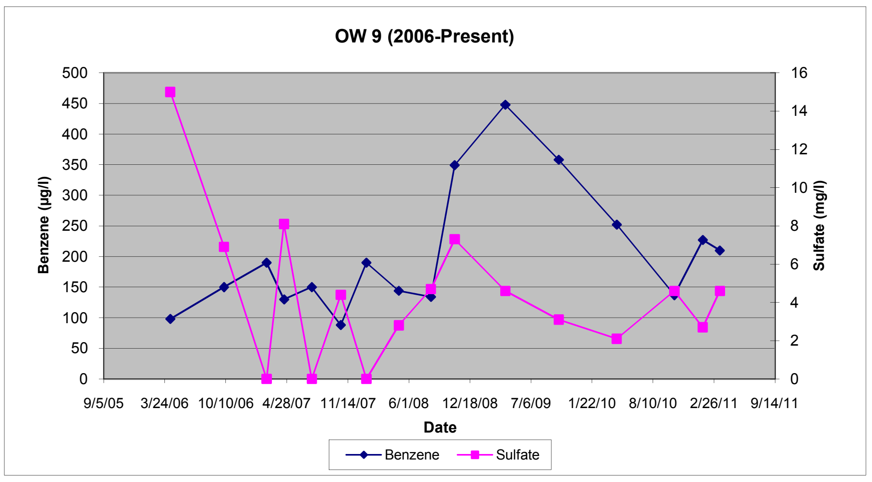
11/18/10
4/1/12
Naphthalene
DO


OW 9 (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
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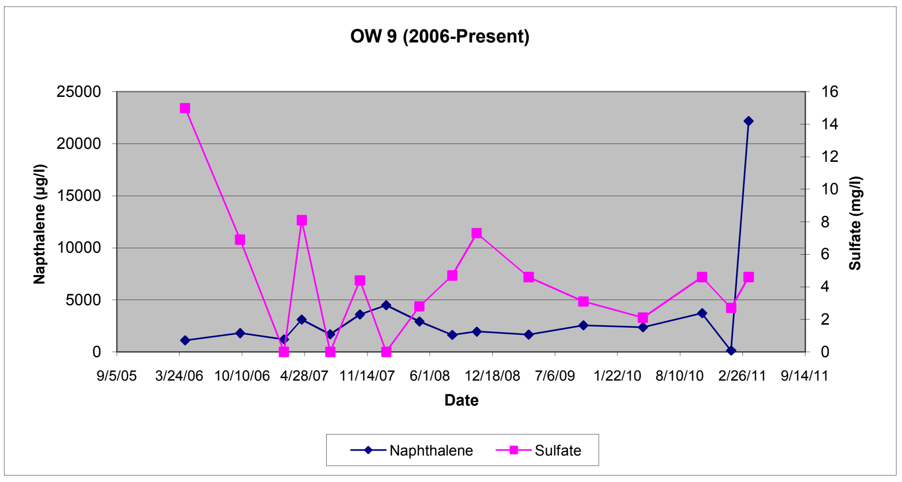
Benzene
Sulfate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Napthalene (µg/l)
Sulfate (mg/l)
Date
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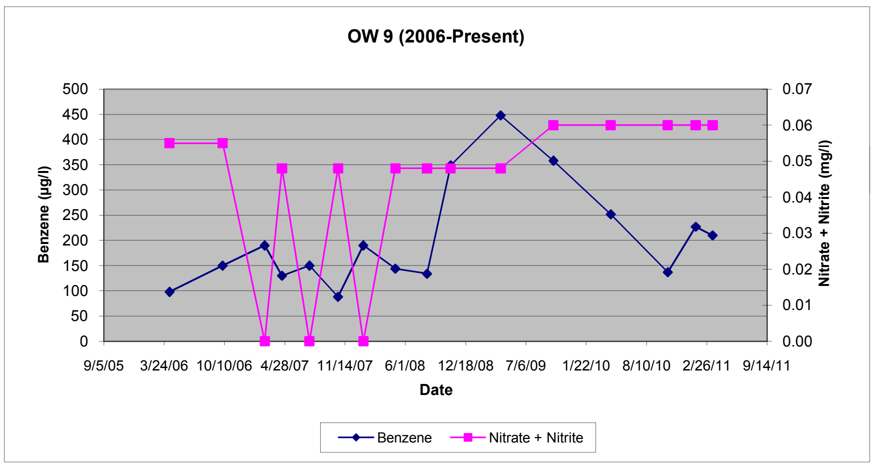
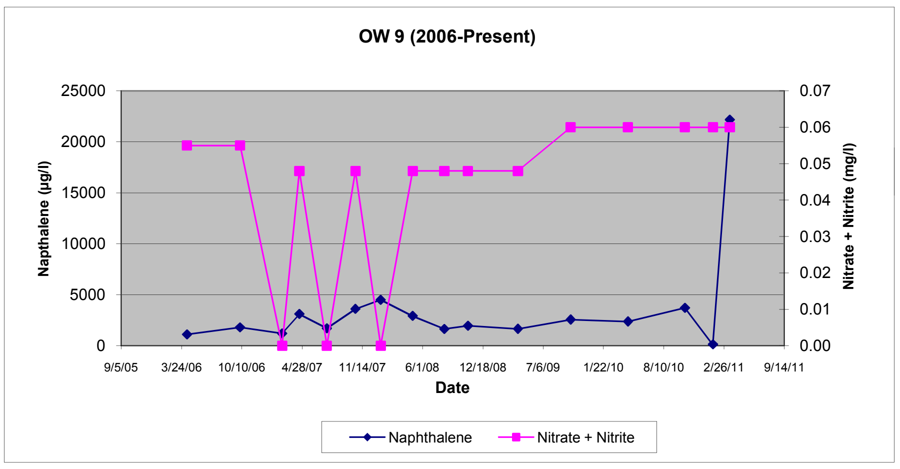
Naphthalene
Sulfate


OW 9 (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
9/5/05 3/24/06 10/10/06 4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Benzene
Nitrate + Nitrite


OW 9 (2006-Present)
Napthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
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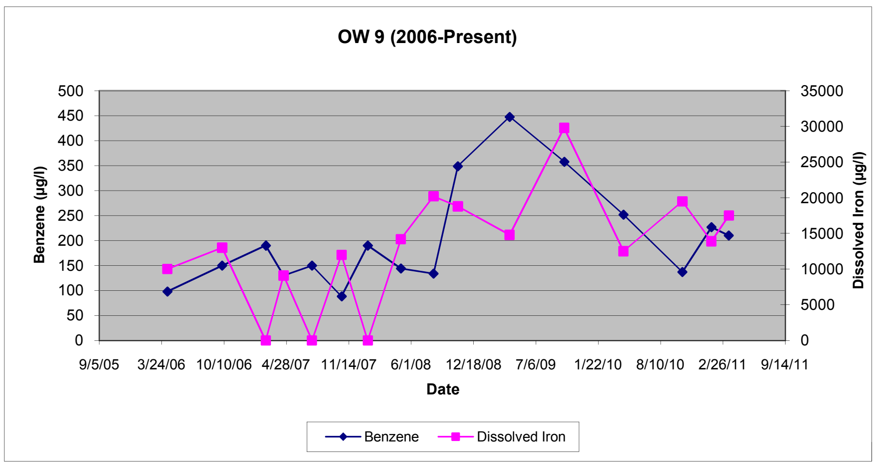
Naphthalene
Nitrate + Nitrite


OW 9 (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
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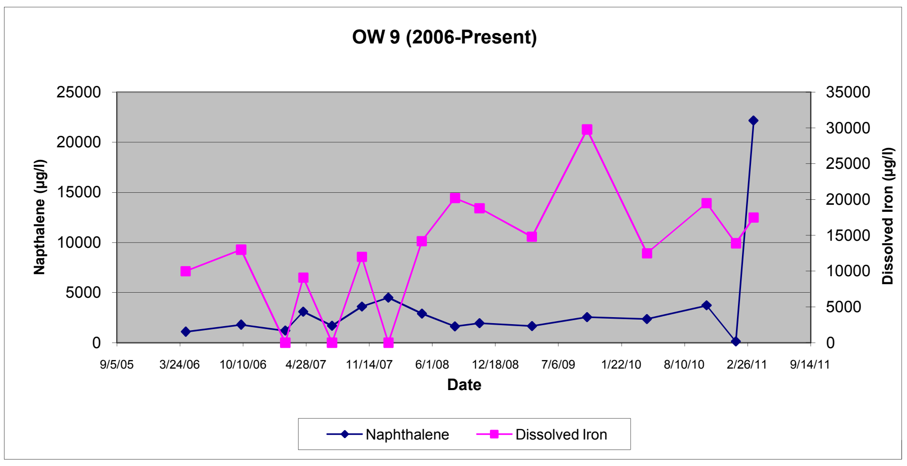
Benzene
Dissolved Iron


OW 9 (2006-Present)
Napthalene (µg/l)
Dissolved Iron (µg/l)
Date
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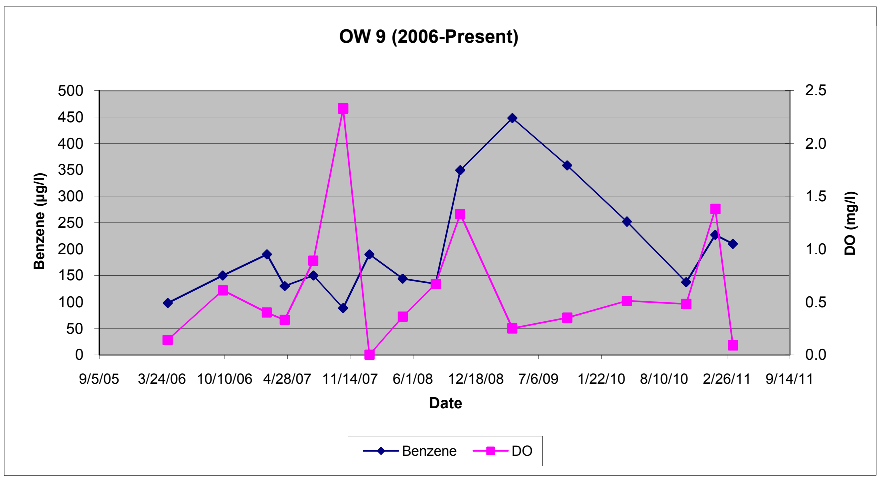
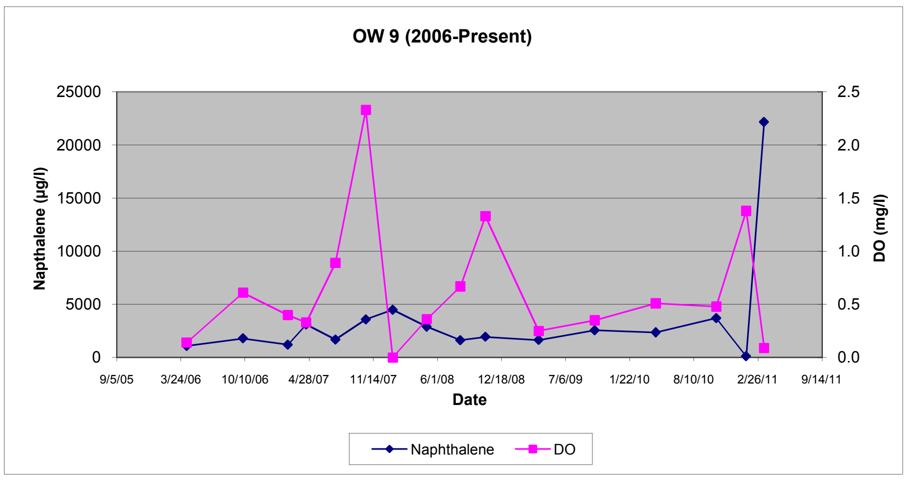
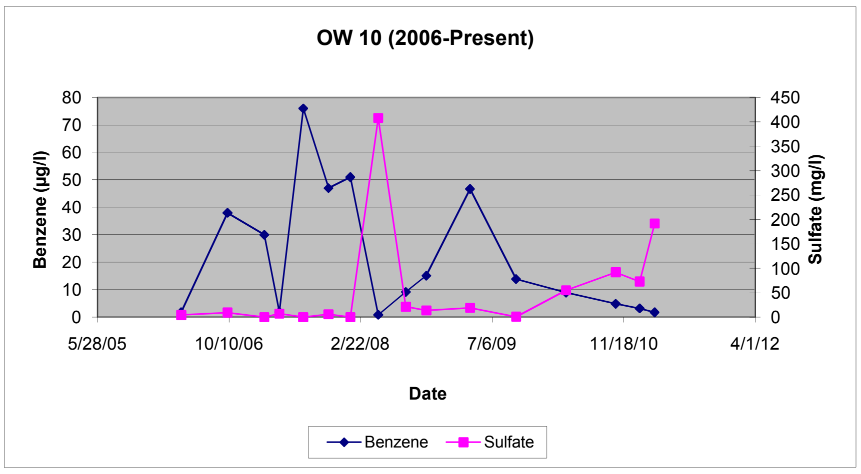
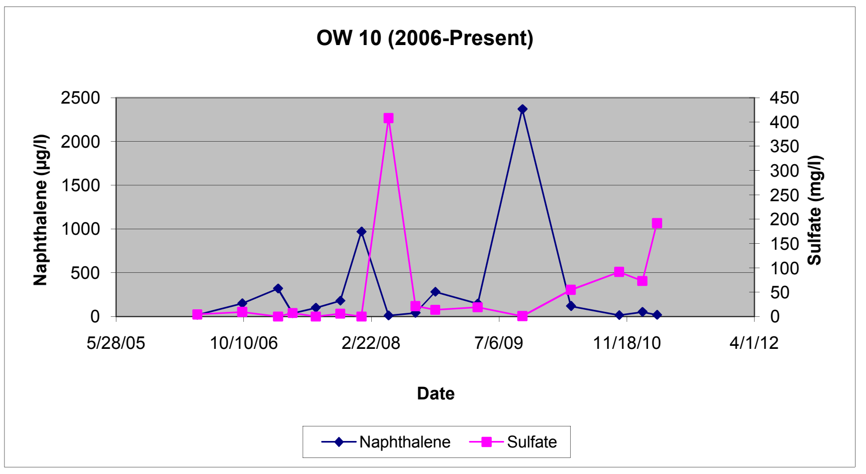
Naphthalene
Dissolved Iron


OW 9 (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
9/5/05 3/24/06 10/10/06 4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Benzene
DO

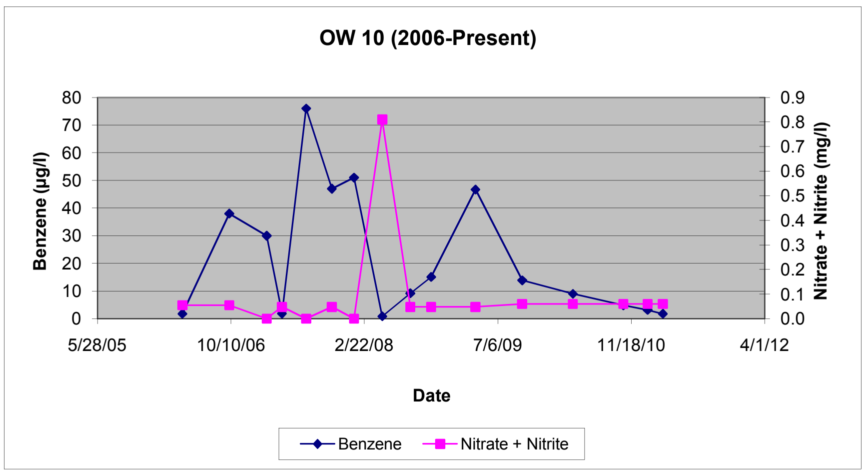

OW 9 (2006-Present)
Napthalene (µg/l)
DO (mg/l)
Date
9/5/05 3/24/06 10/10/06 4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Naphthalene
DO



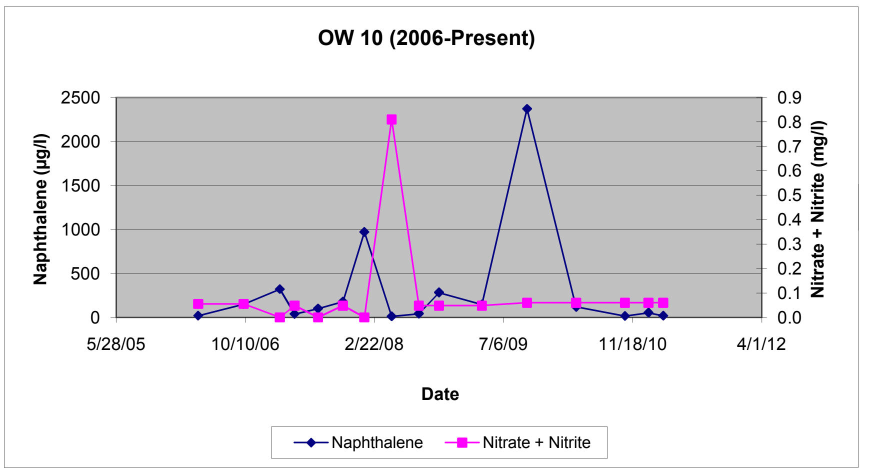
OW 10 (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
Benzene
Sulfate



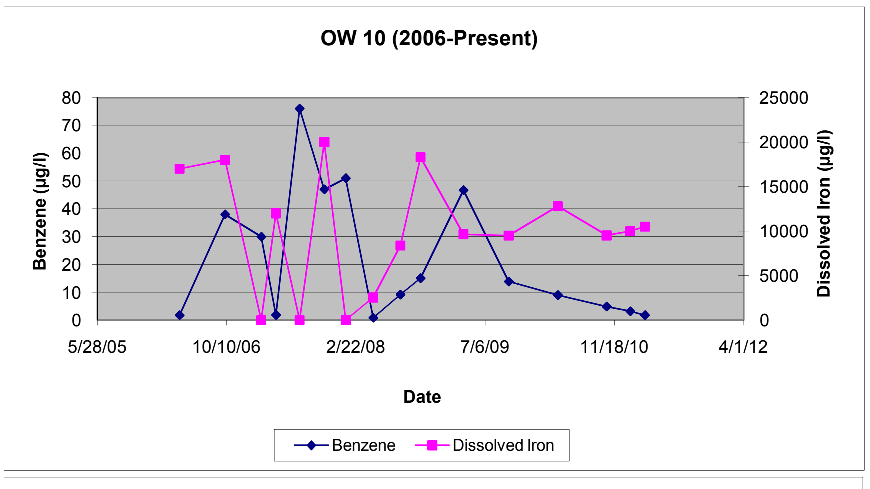
OW 10 (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate



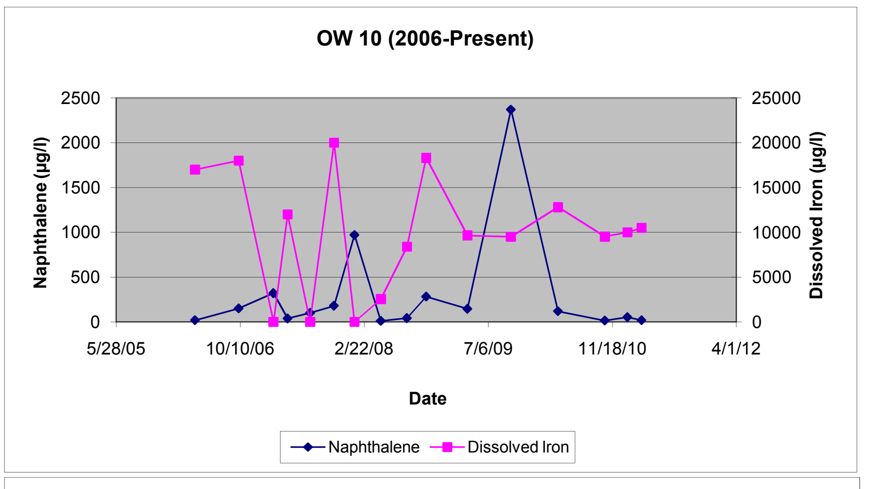
OW 10 (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite



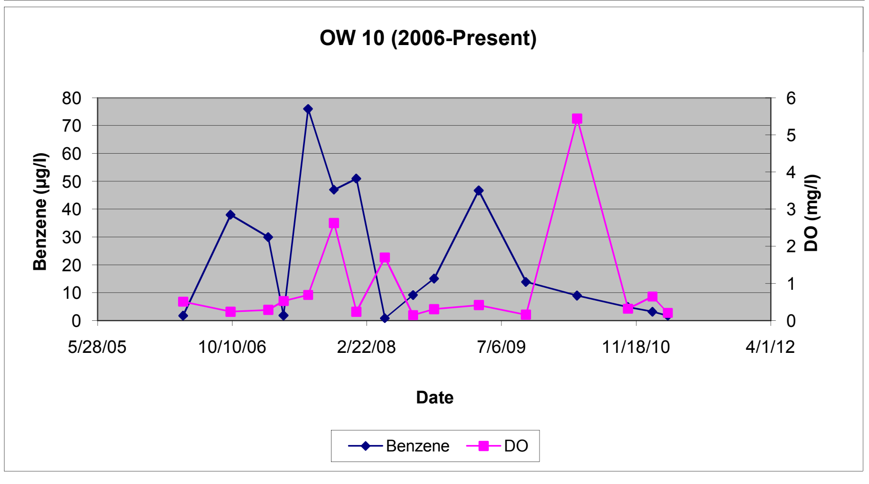
OW 10 (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite



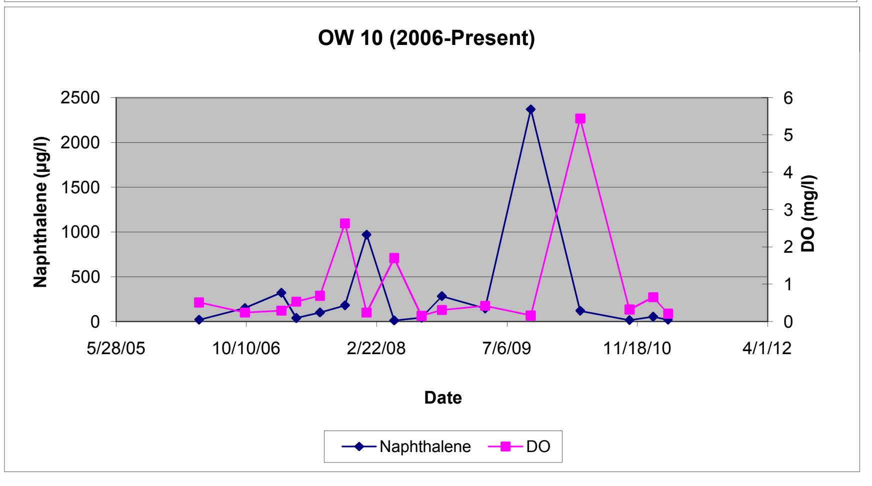
OW 10 (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron



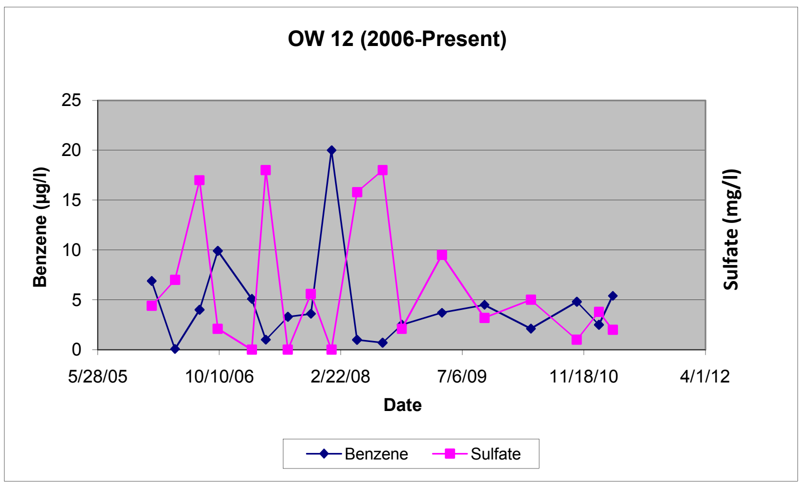
OW 10 (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron

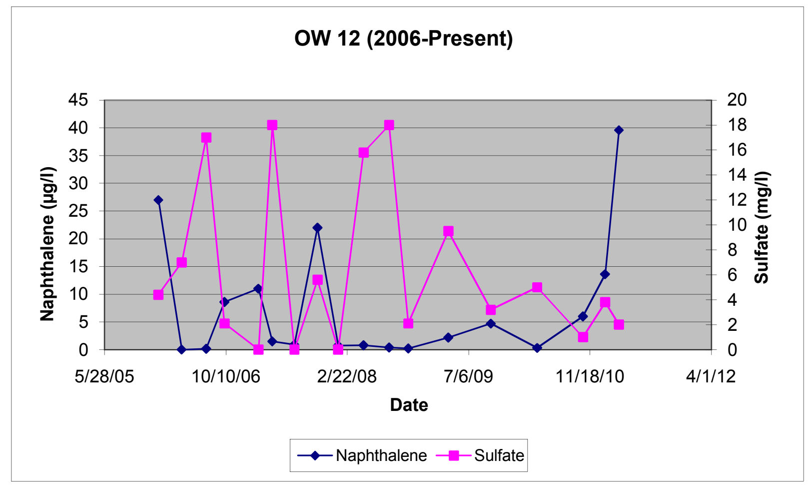


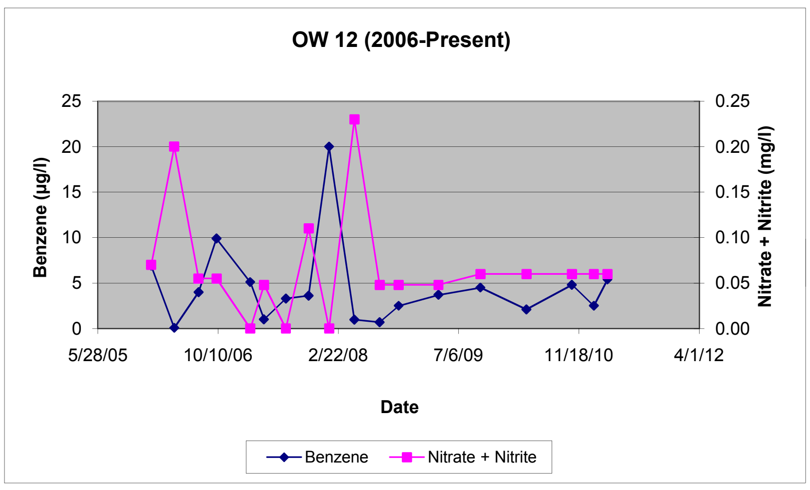
OW 10 (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

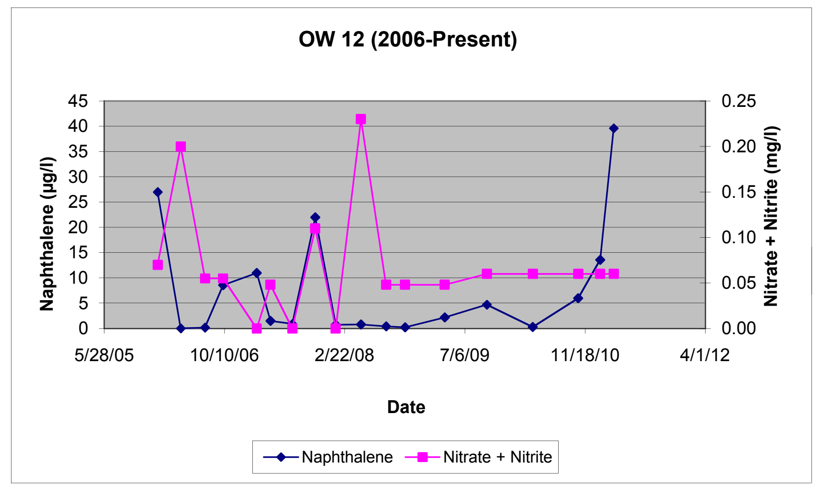


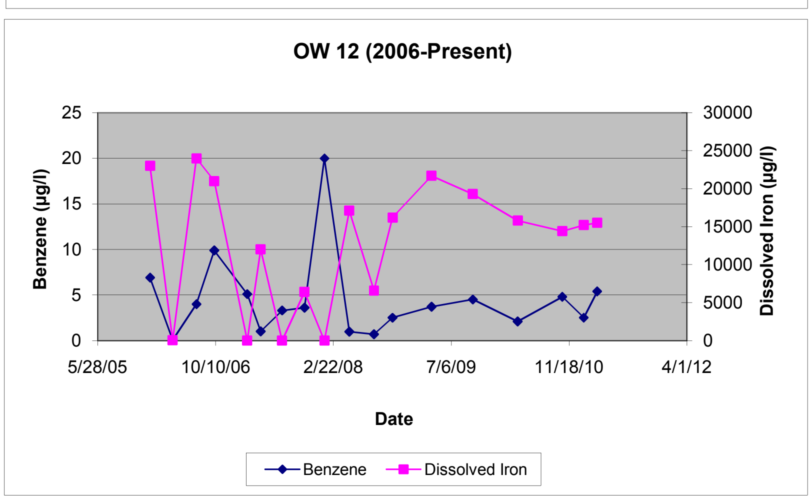
OW 10 (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

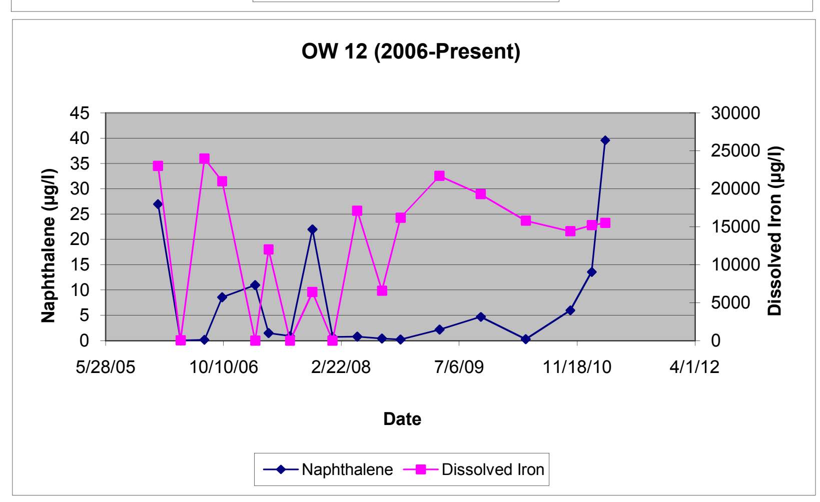

OW 12 (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
Benzene
Sulfate

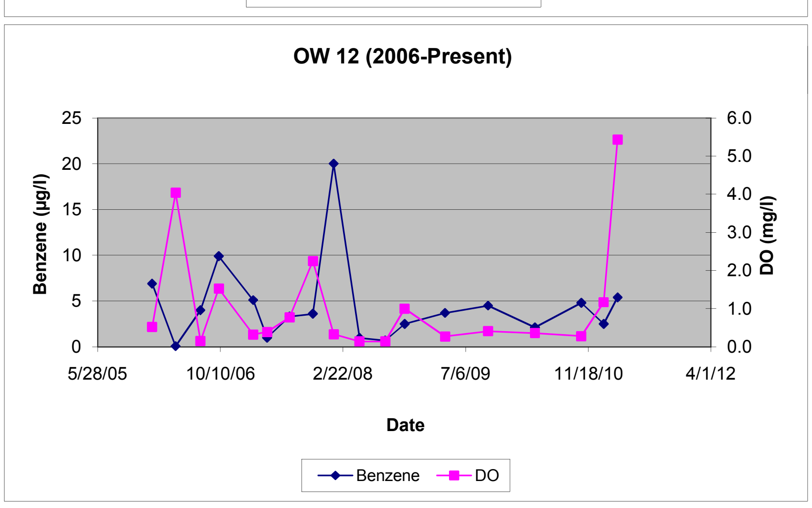

OW 12 (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate

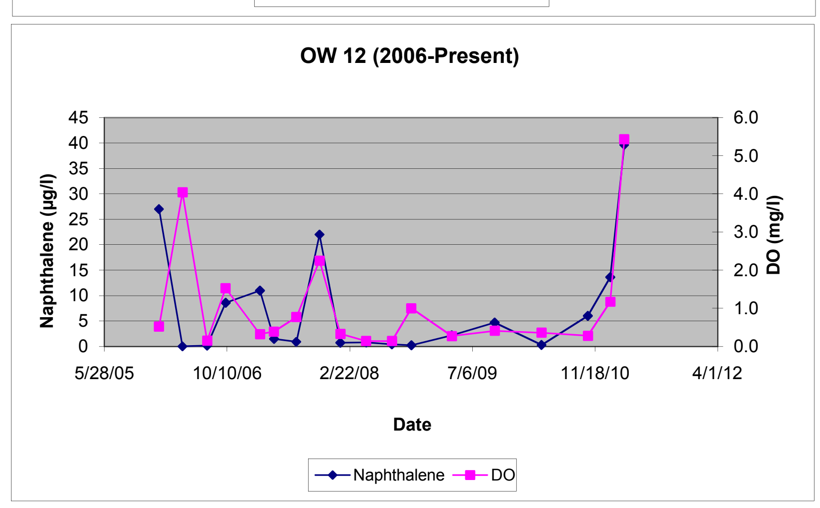

OW 12 (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite

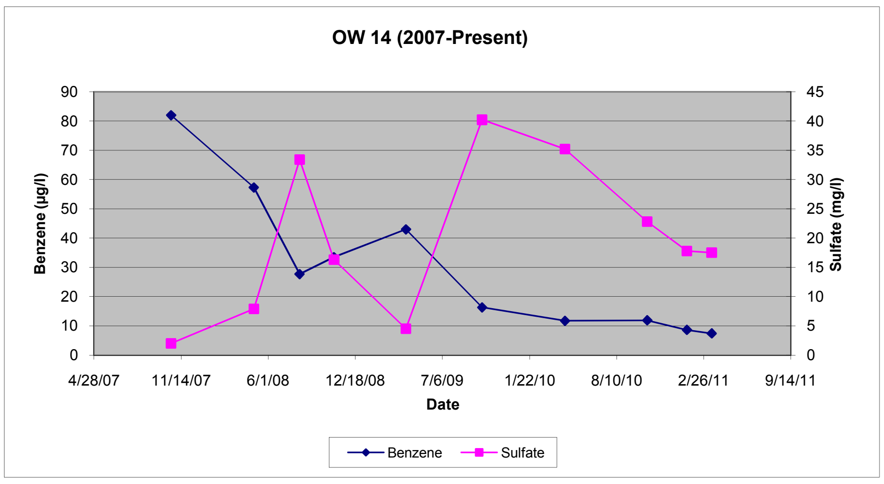

OW 12 (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite

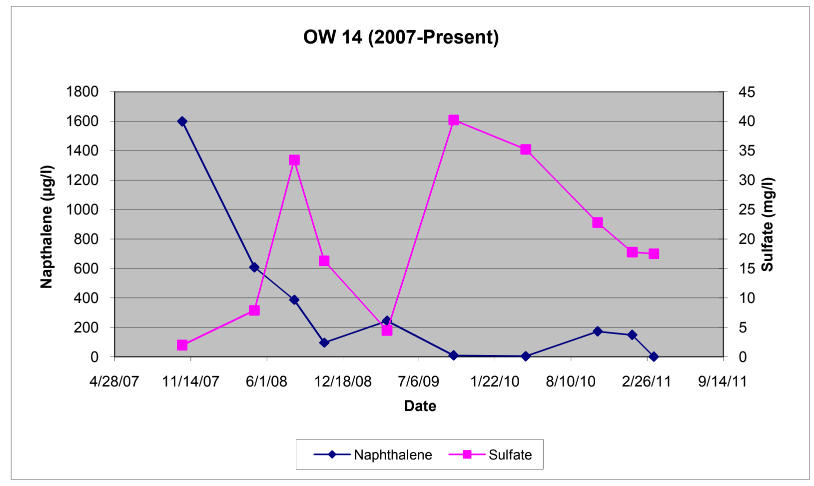

OW 12 (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron

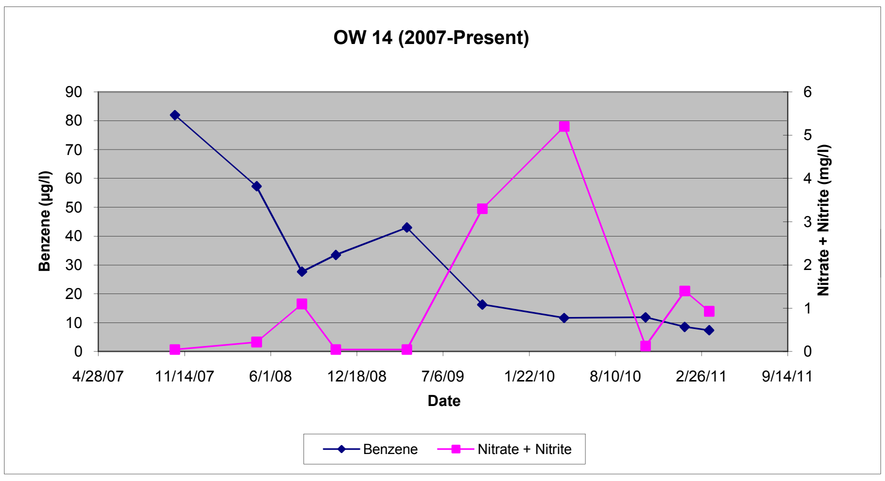

OW 12 (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron

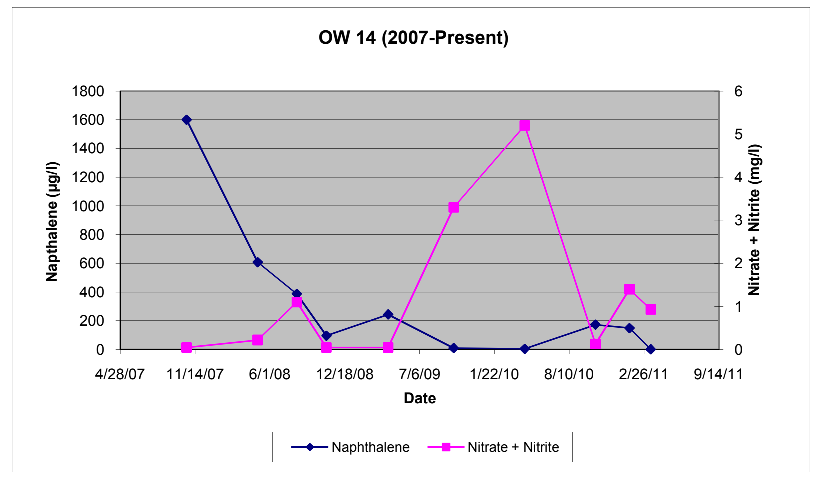

OW 12 (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

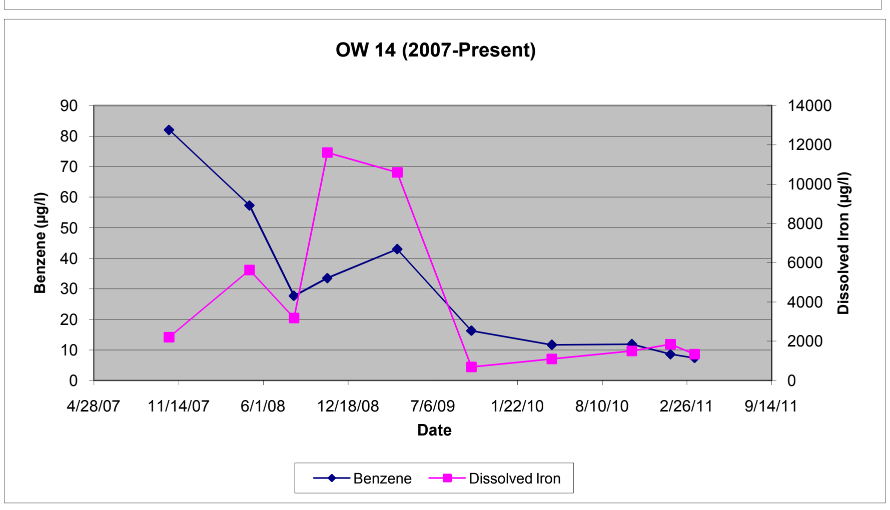

OW 12 (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

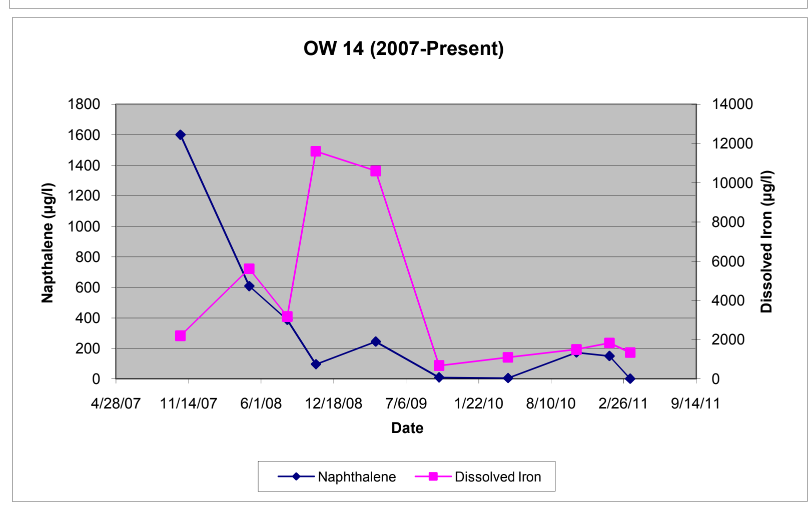

OW 14 (2007-Present)
Benzene (µg/l)
Sulfate (mg/l)
0 10 20 30 40 50 60 70 80 90
0 5 10 15 20 25 30 35 40 45
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Benzene
Sulfate

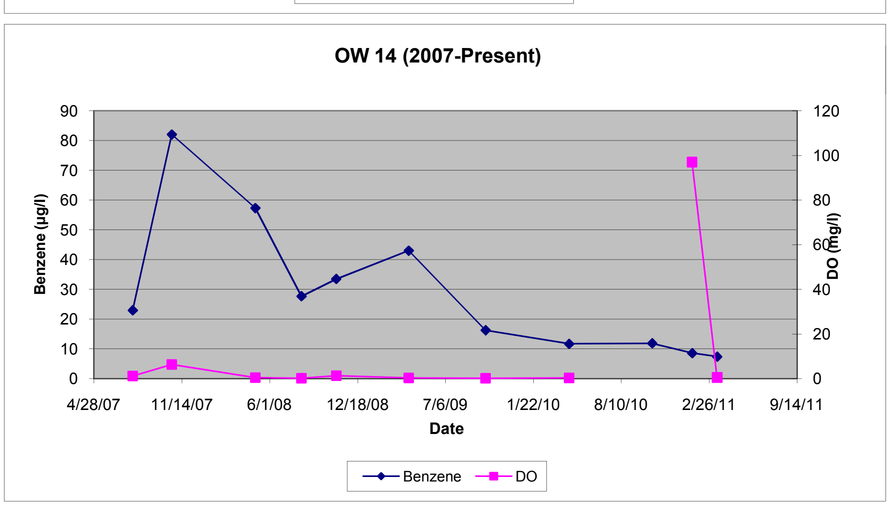

OW 14 (2007-Present)
Napthalene (µg/l)
Sulfate (mg/l)
0 200 400 600 800 1000 1200 1400 1600 1800
0 5 10 15 20 25 30 35 40 45
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Naphthalene
Sulfate

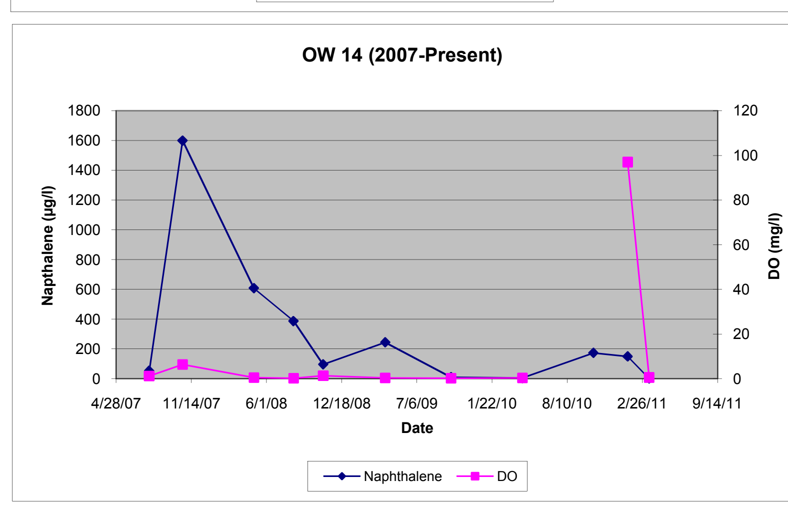

OW 14 (2007-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
0 10 20 30 40 50 60 70 80 90
0 1 2 3 4 5 6
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Benzene
Nitrate + Nitrite

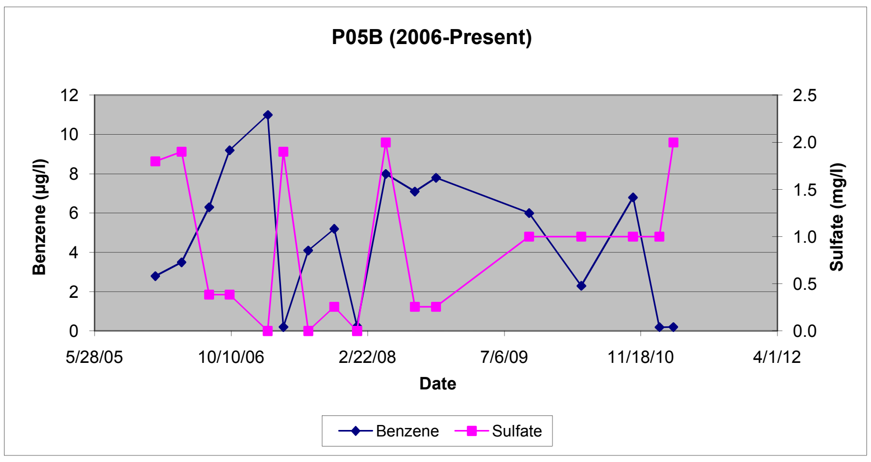

OW 14 (2007-Present)
Napthalene (µg/l)
Nitrate + Nitrite (mg/l)
0 200 400 600 800 1000 1200 1400 1600 1800
0 1 2 3 4 5 6
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Naphthalene
Nitrate + Nitrite

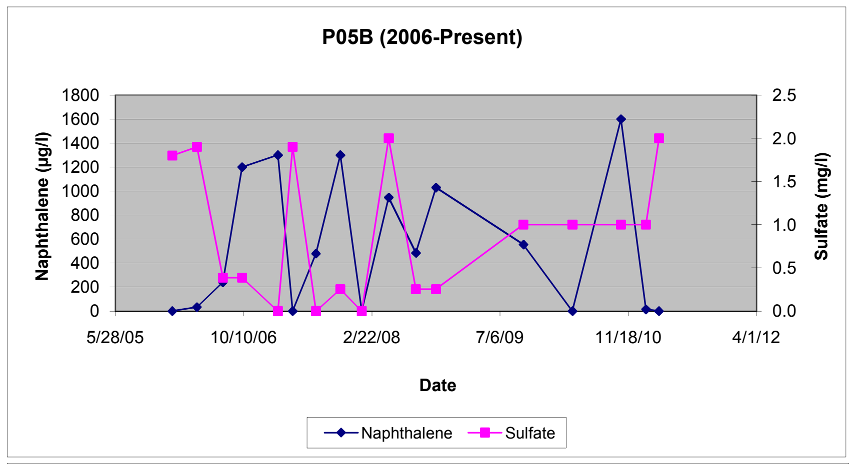

OW 14 (2007-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
0 10 20 30 40 50 60 70 80 90
0 2000 4000 6000 8000 10000 12000 14000
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Benzene
Dissolved Iron

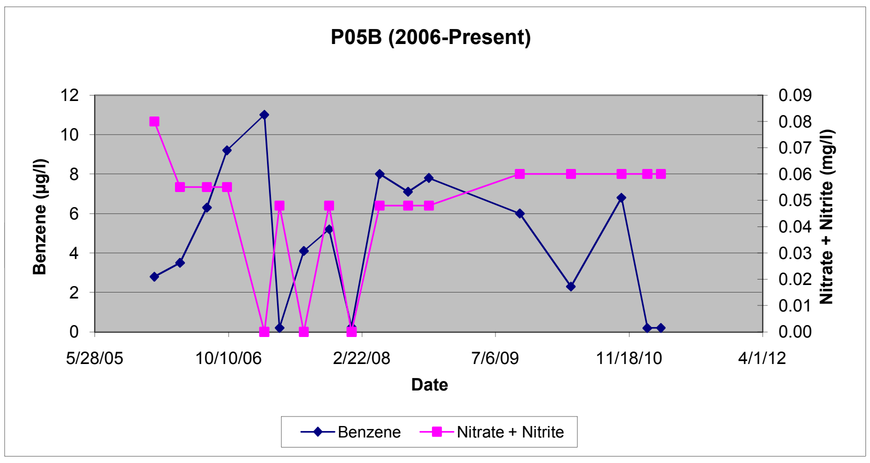

OW 14 (2007-Present)
Napthalene (µg/l)
Dissolved Iron (µg/l)
0 200 400 600 800 1000 1200 1400 1600 1800
0 2000 4000 6000 8000 10000 12000 14000
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Naphthalene
Dissolved Iron

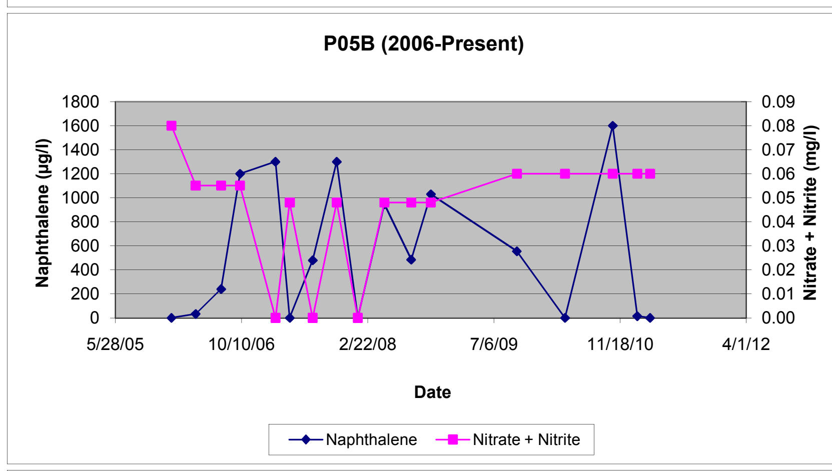

OW 14 (2007-Present)
Benzene (µg/l)
DO (mg/l)
0 10 20 30 40 50 60 70 80 90
0 20 40 60 80 100 120
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Benzene
DO

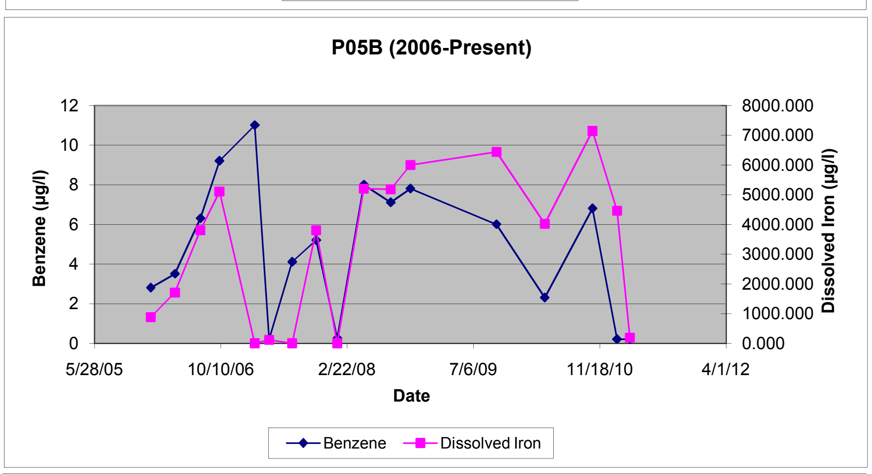

OW 14 (2007-Present)
Napthalene (µg/l)
DO (mg/l)
0 200 400 600 800 1000 1200 1400 1600 1800
0 20 40 60 80 100 120
4/28/07 11/14/07 6/1/08 12/18/08 7/6/09 1/22/10 8/10/10 2/26/11 9/14/11
Date
Naphthalene
DO

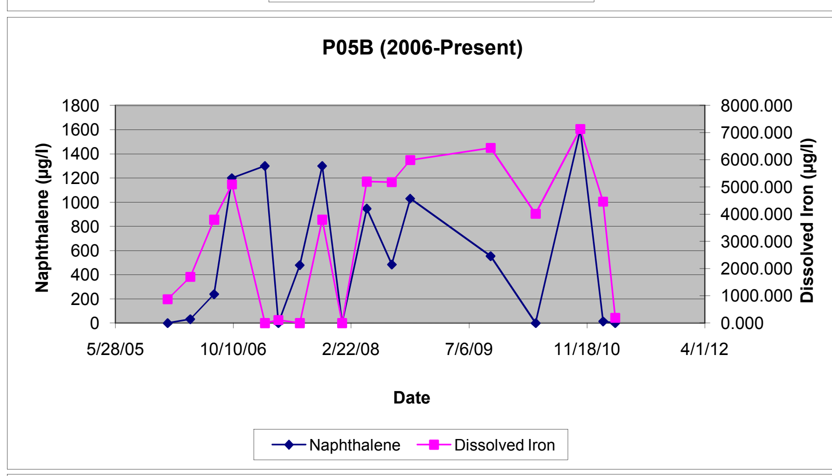

P05B (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Sulfate

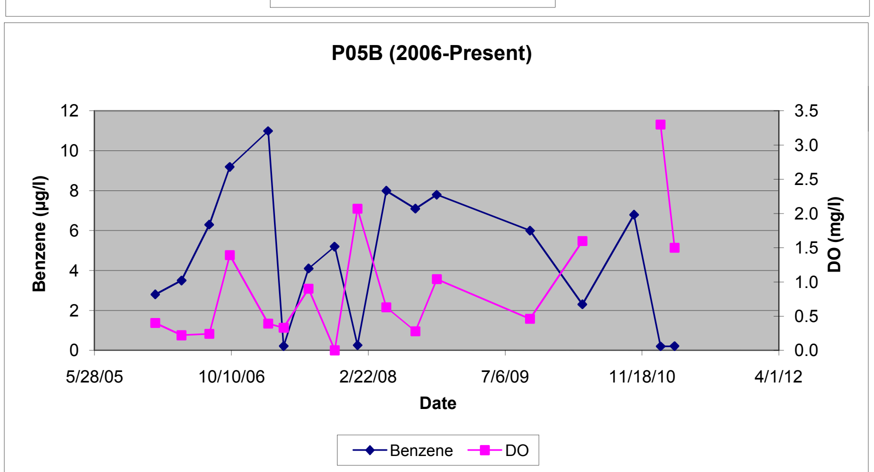

P05B (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Naphthalene
Sulfate

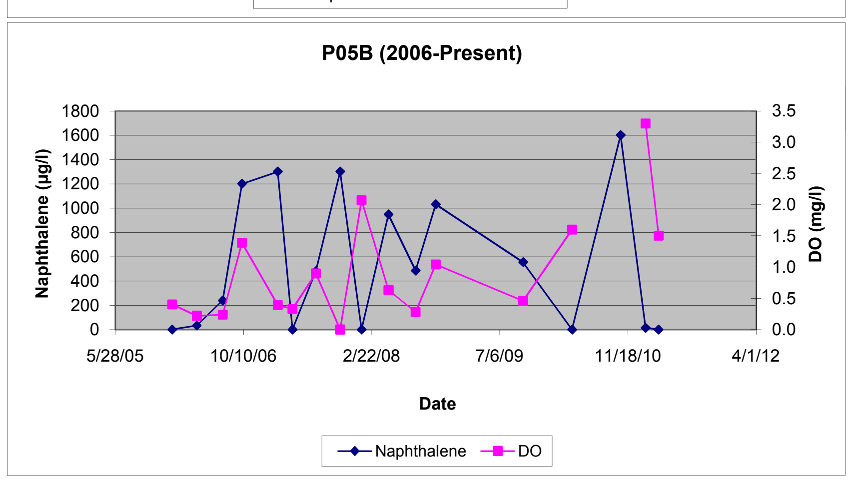

P05B (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Nitrate + Nitrite

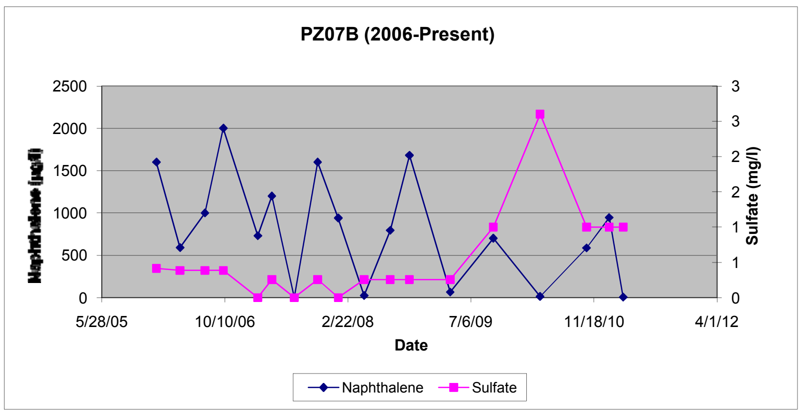
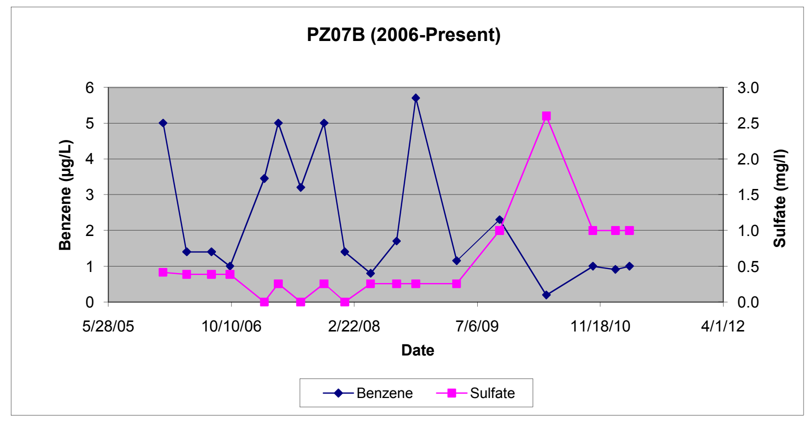
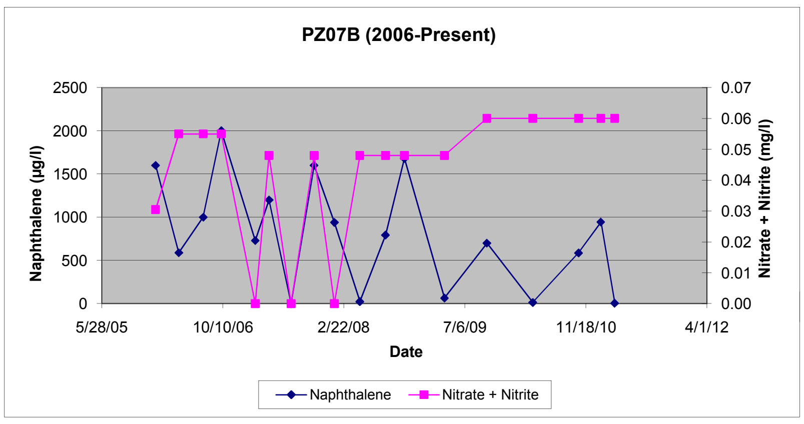
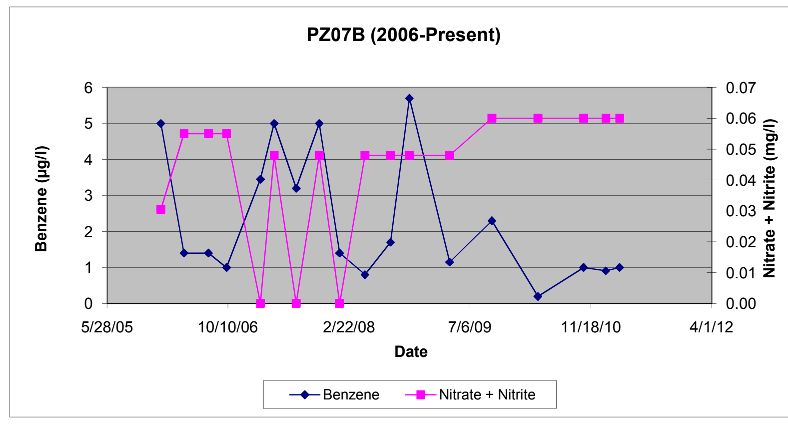
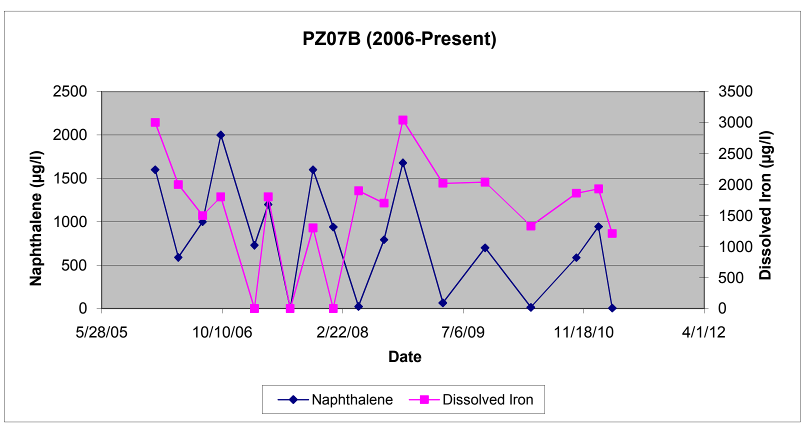
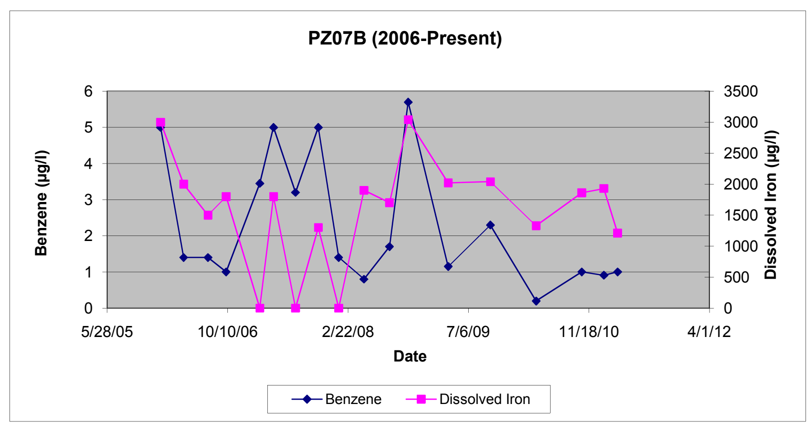
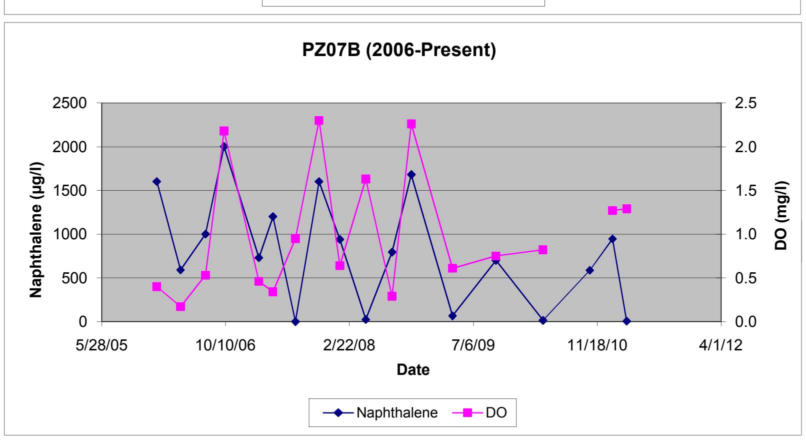
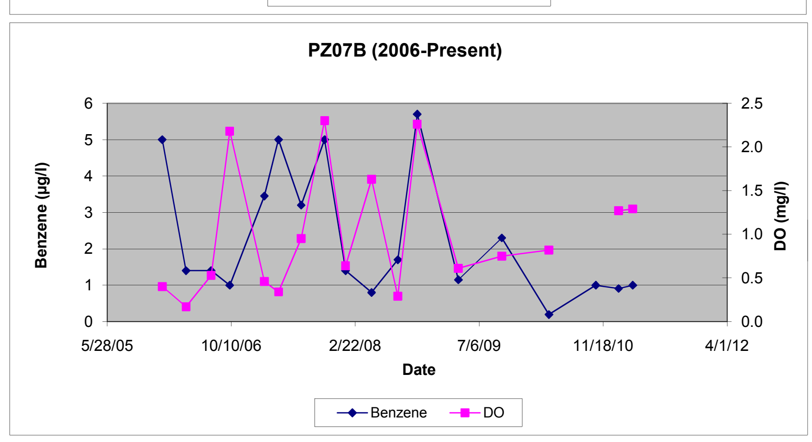

P05B (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Naphthalene
Nitrate + Nitrite

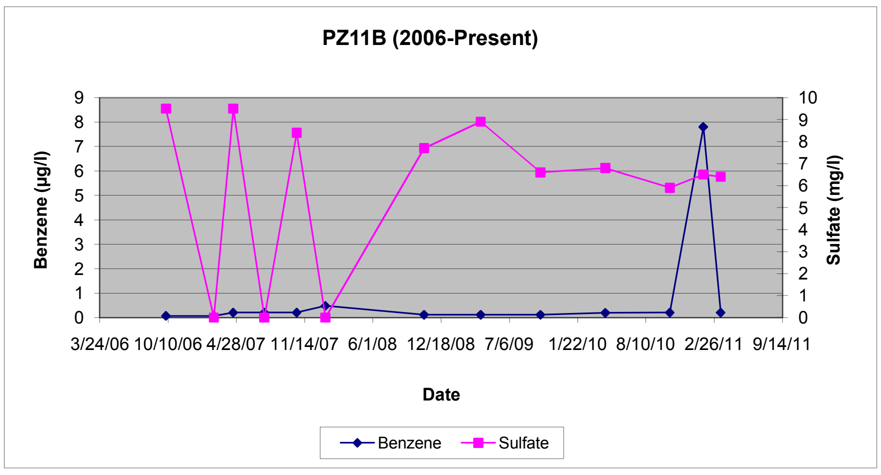

P05B (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Dissolved Iron

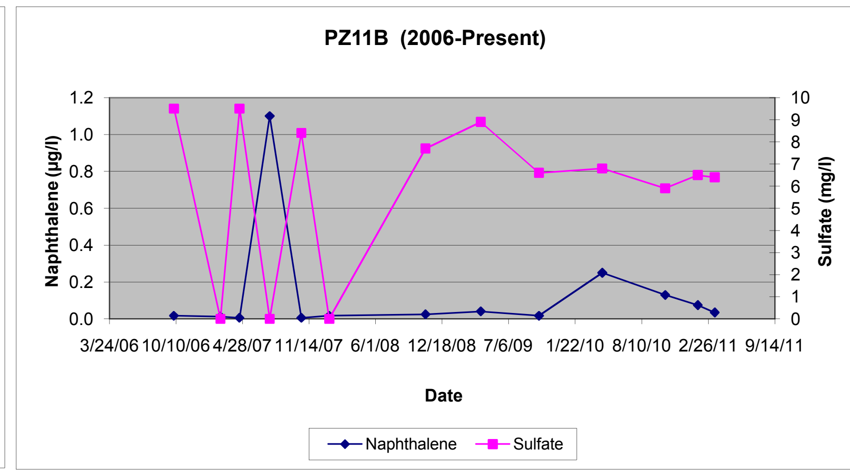

P05B (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Naphthalene
Dissolved Iron

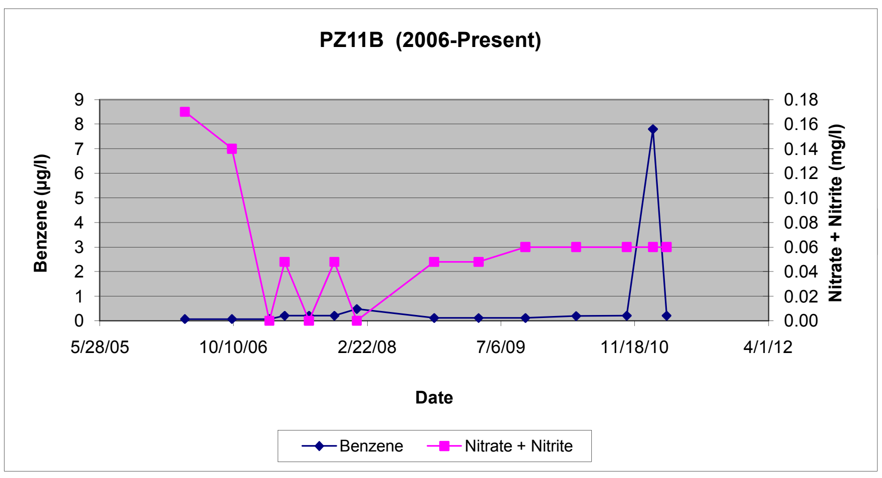

P05B (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
DO

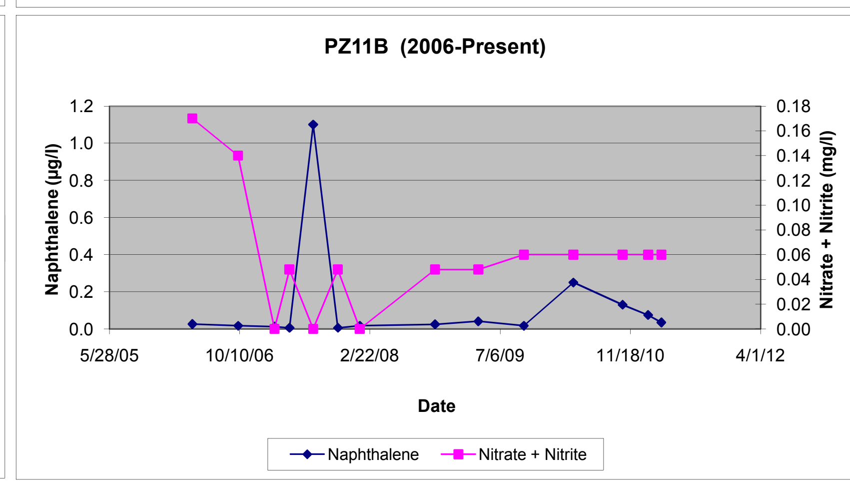

P05B (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Naphthalene
DO

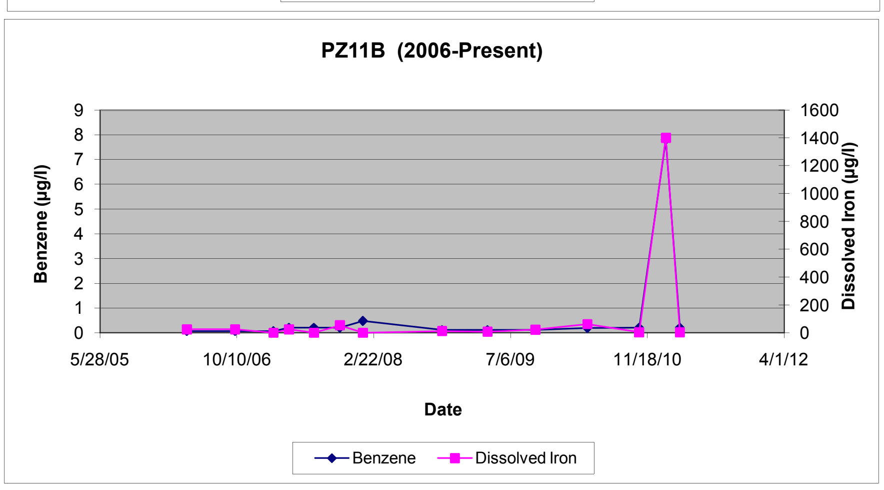

PZ07B (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate

PZ07B (2006-Present)
Benzene (µg/L)
Sulfate (mg/l)
Date
Benzene
Sulfate

PZ07B (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite

PZ07B (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite

PZ07B (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron

PZ07B (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron

PZ07B (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

PZ07B (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

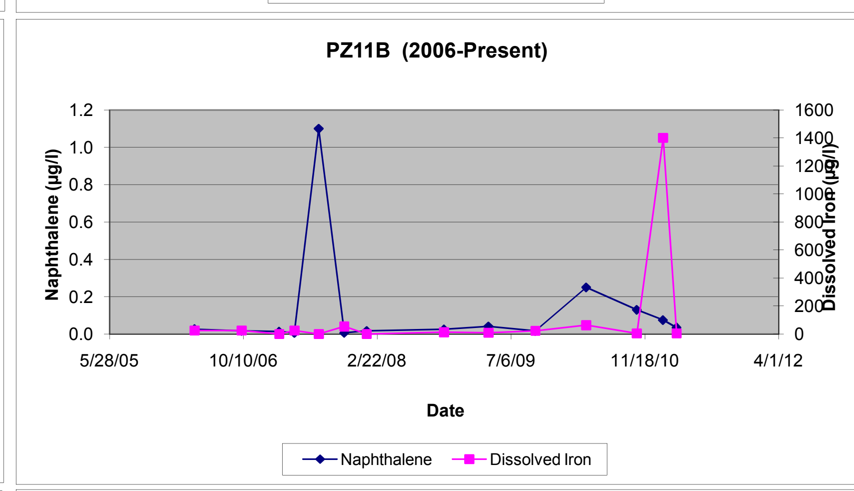

PZ11B (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
Benzene
Sulfate

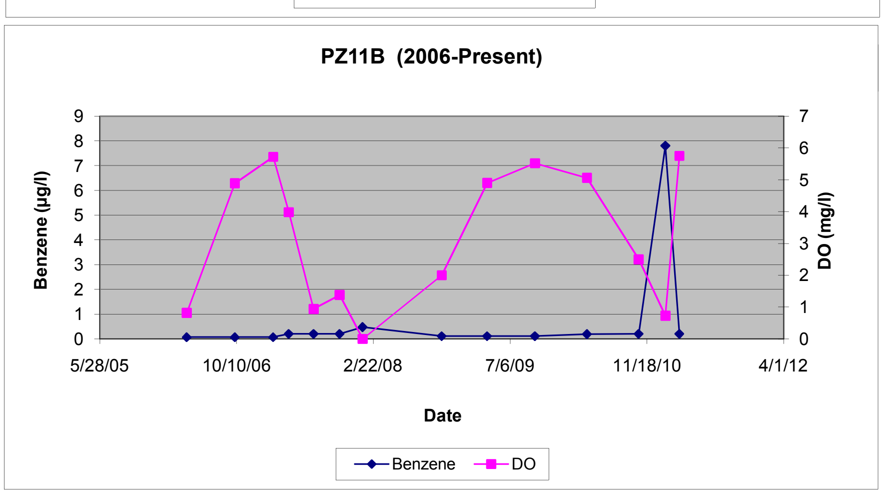

PZ11B (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate

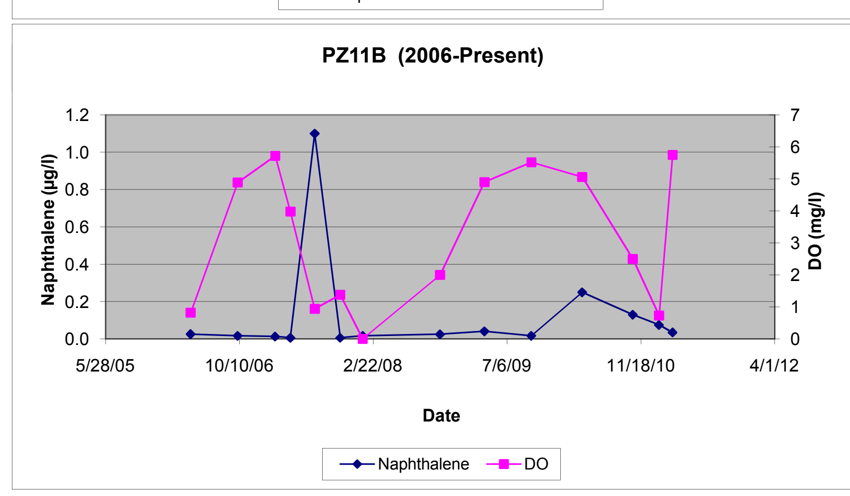

PZ11B (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite

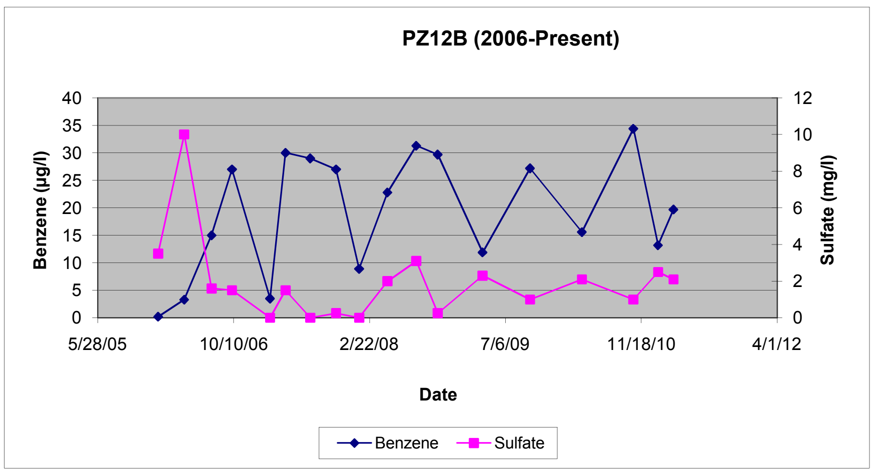

PZ11B (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite

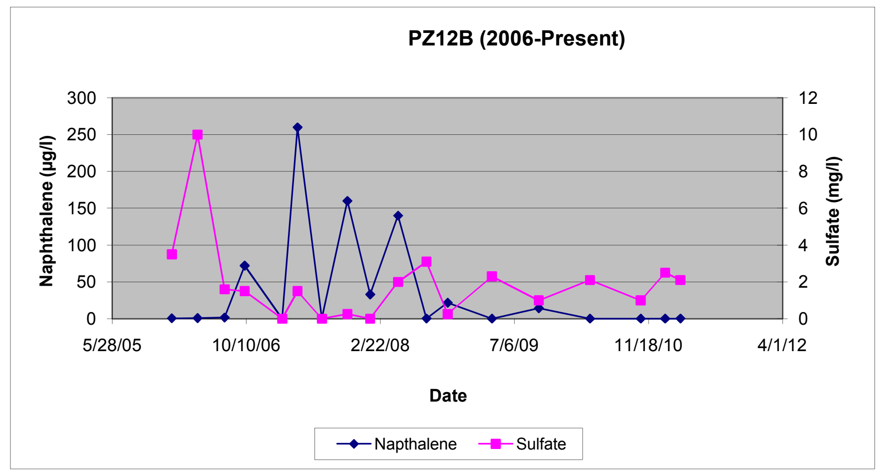

PZ11B (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron

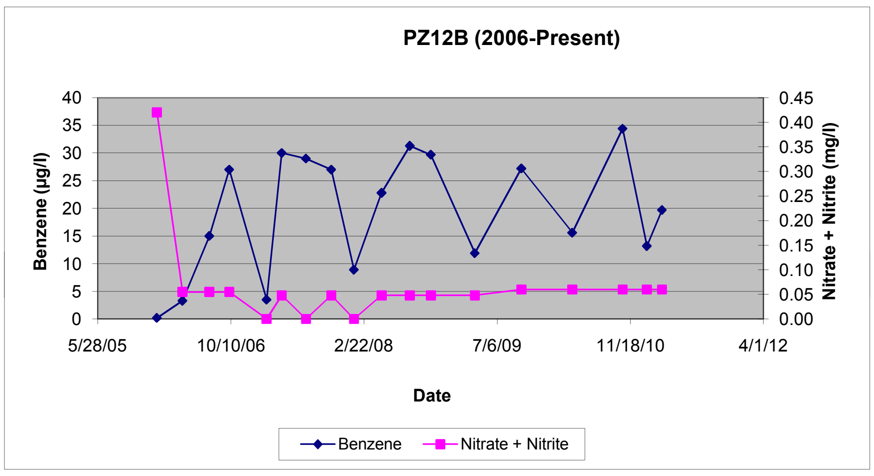

PZ11B (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron

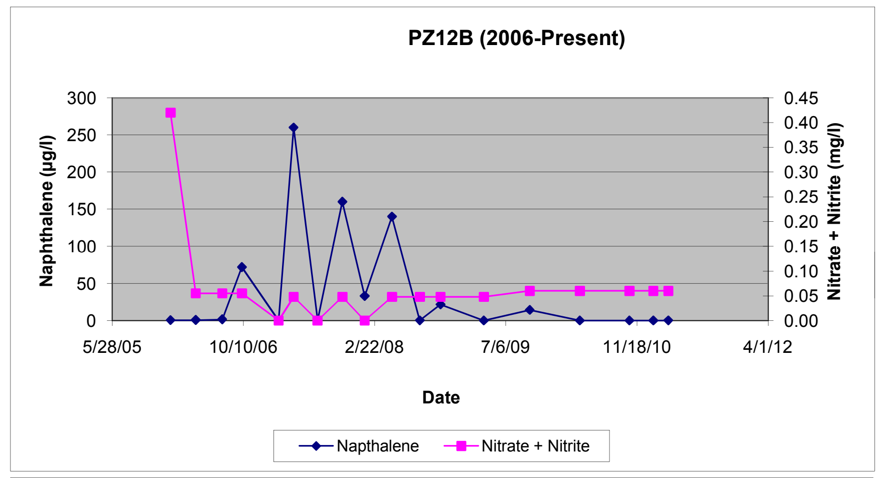

PZ11B (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

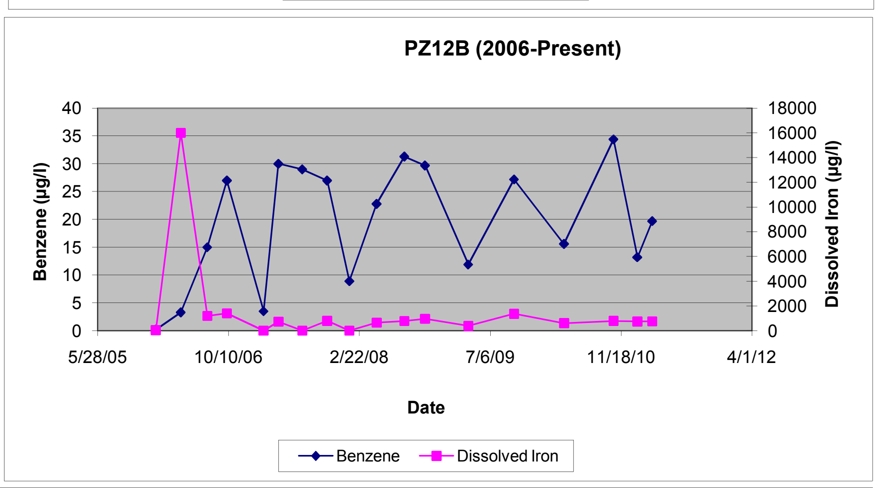

PZ11B (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

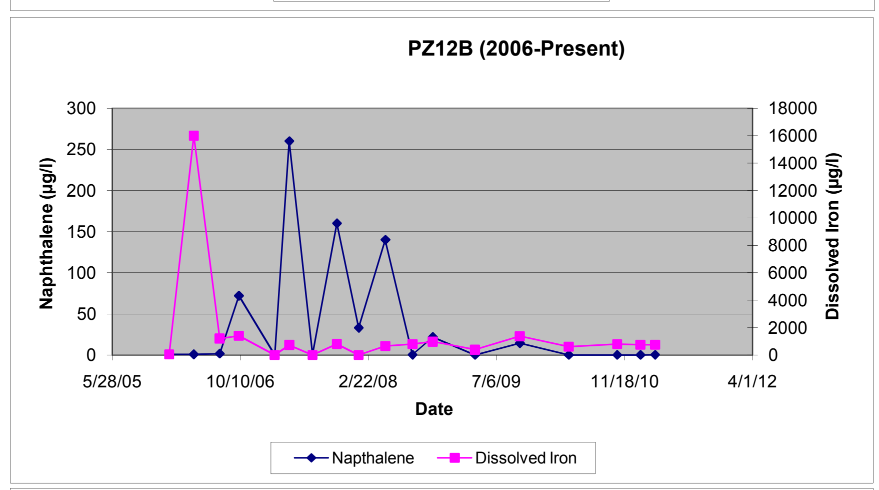

PZ12B (2006-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Sulfate

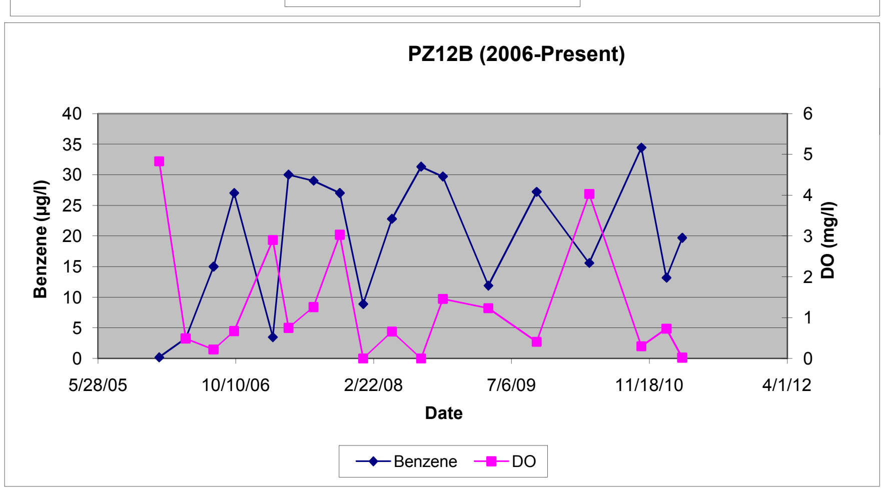

PZ12B (2006-Present)
Naphthalene (µg/l)
Sulfate (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Napthalene
Sulfate

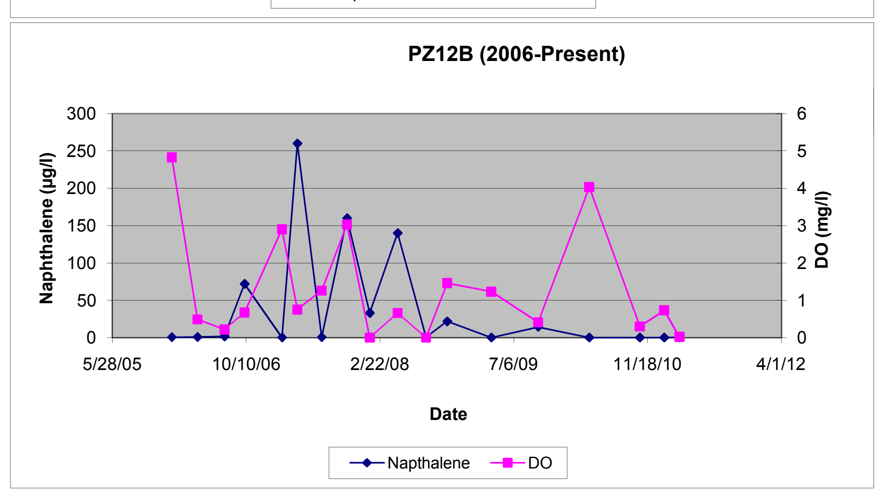

PZ12B (2006-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Nitrate + Nitrite

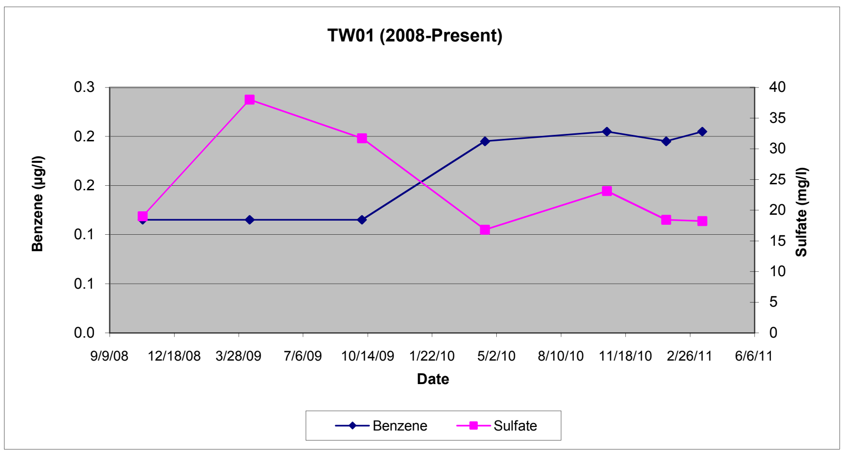

PZ12B (2006-Present)
Naphthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Napthalene
Nitrate + Nitrite

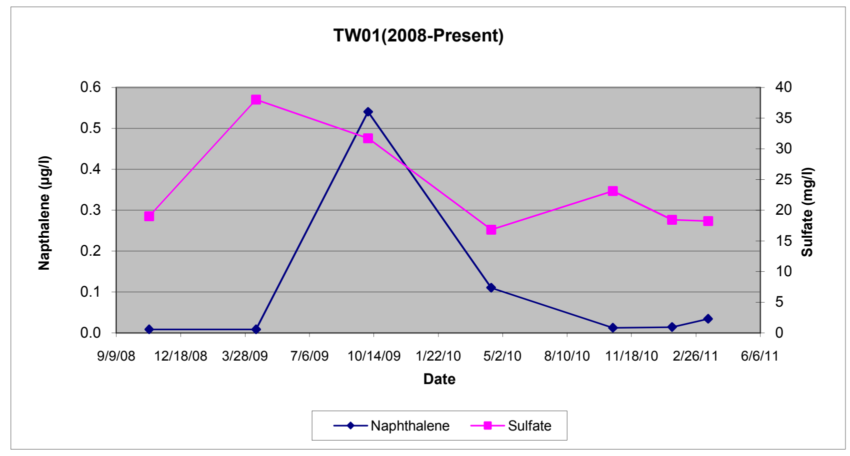

PZ12B (2006-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
Dissolved Iron

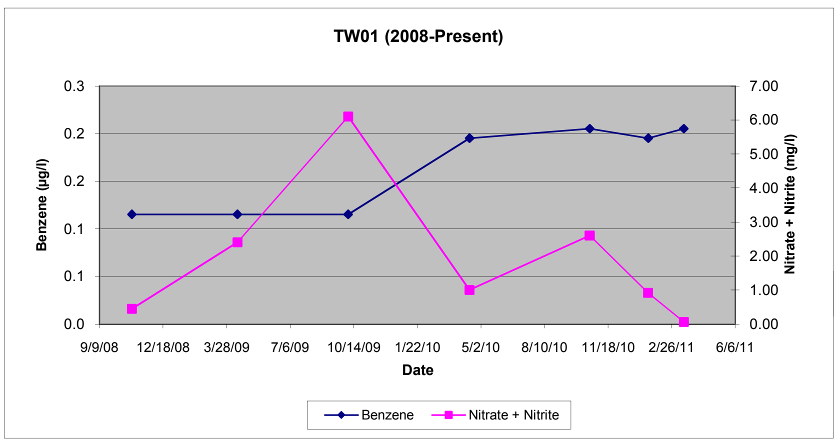

PZ12B (2006-Present)
Naphthalene (µg/l)
Dissolved Iron (µg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Napthalene
Dissolved Iron

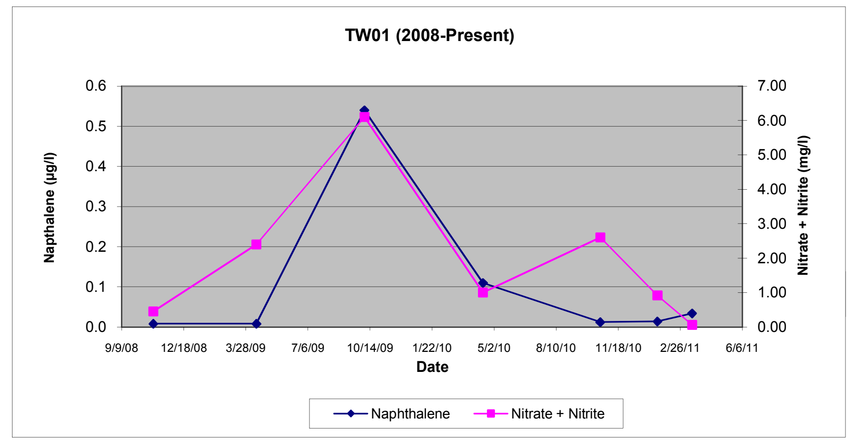

PZ12B (2006-Present)
Benzene (µg/l)
DO (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Benzene
DO

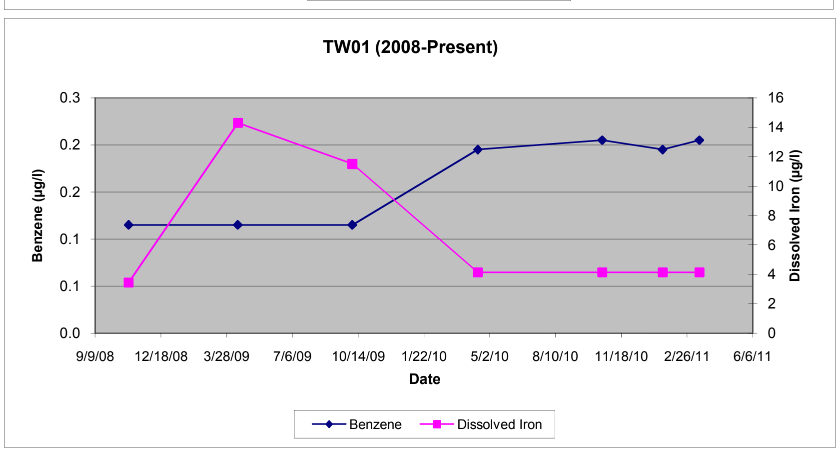

PZ12B (2006-Present)
Naphthalene (µg/l)
DO (mg/l)
Date
5/28/05
10/10/06
2/22/08
7/6/09
11/18/10
4/1/12
Napthalene
DO

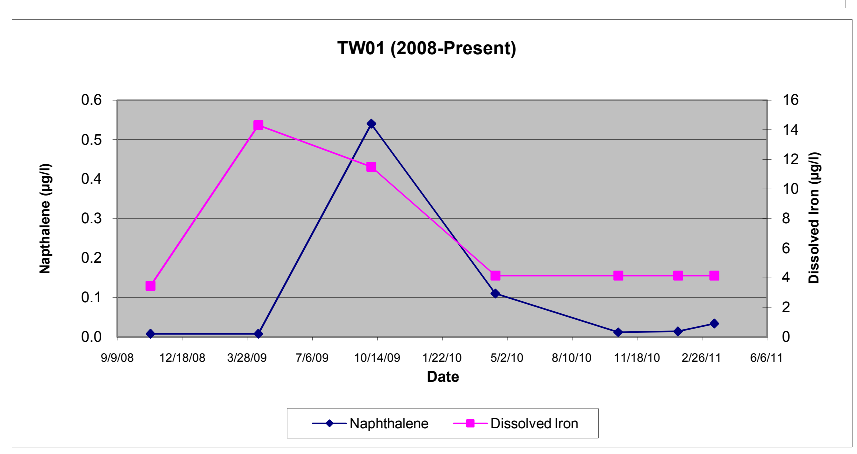

TW01 (2008-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
Benzene
Sulfate

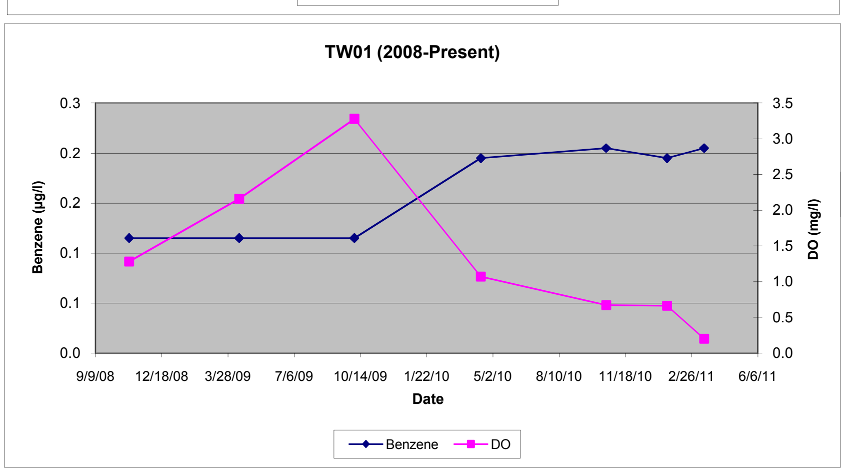

TW01(2008-Present)
Napthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate

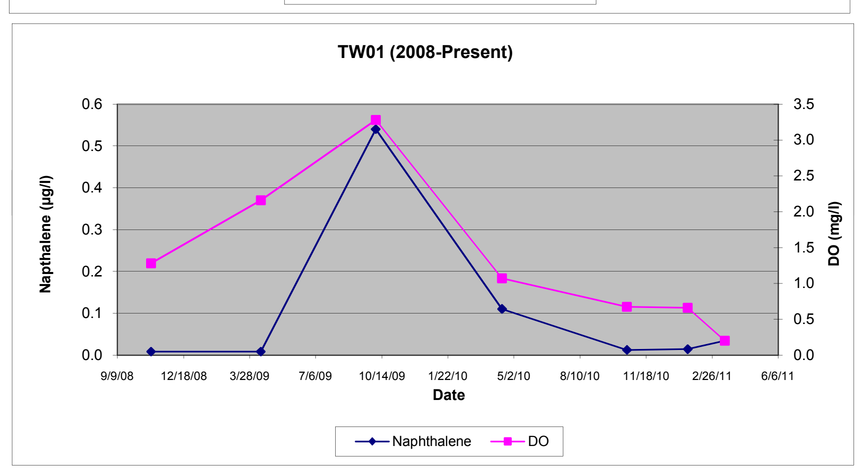

TW01 (2008-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite

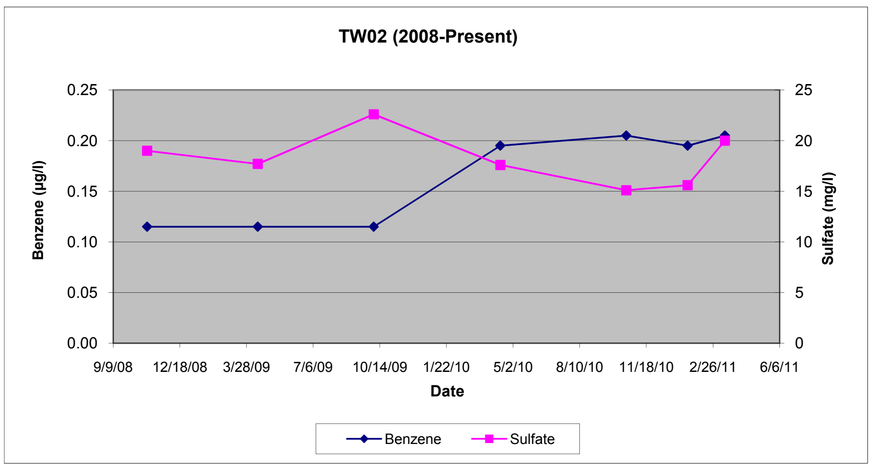

TW01 (2008-Present)
Napthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite

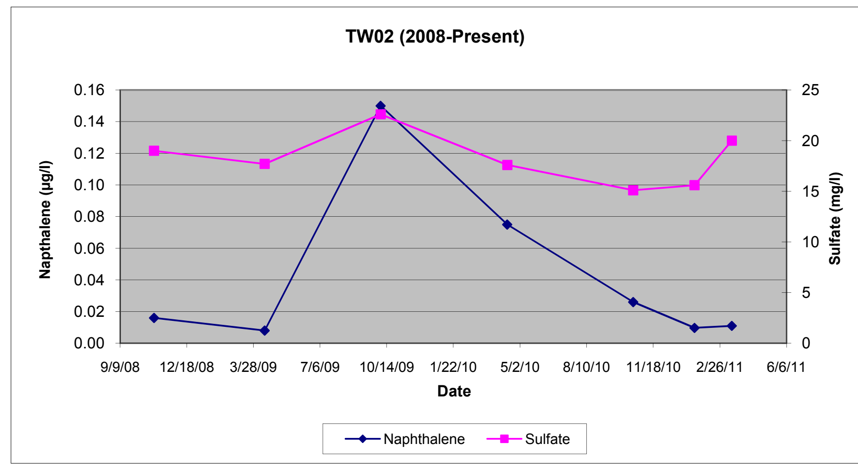

TW01 (2008-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron

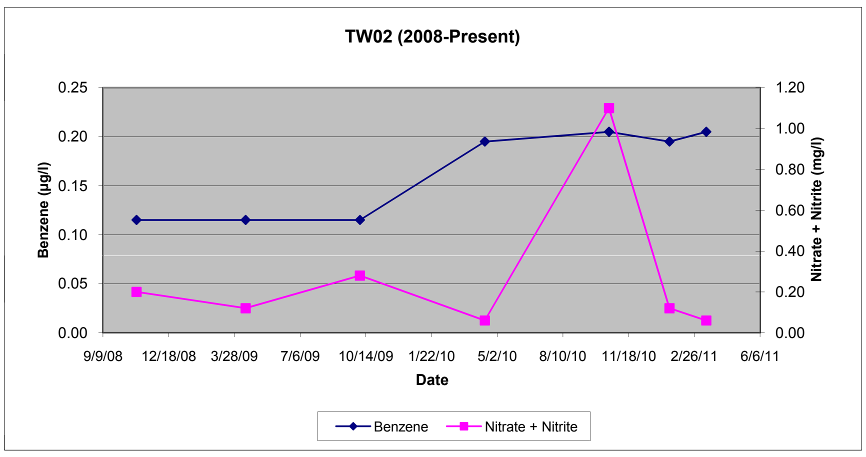

TW01 (2008-Present)
Napthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron

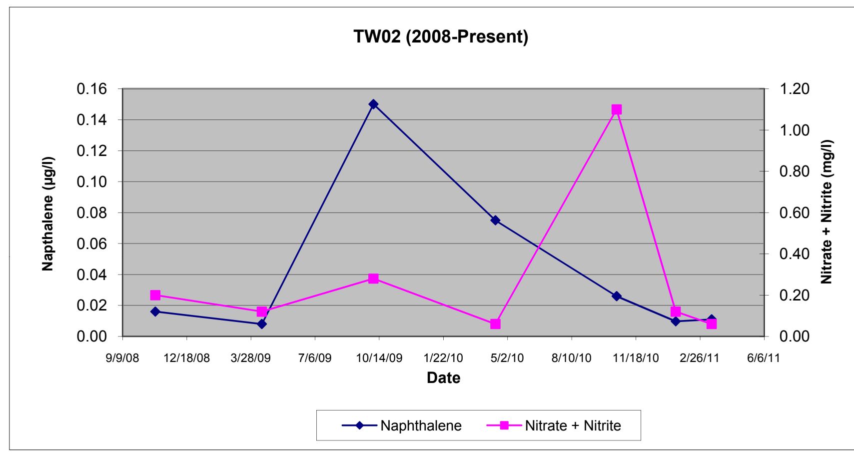

TW01 (2008-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

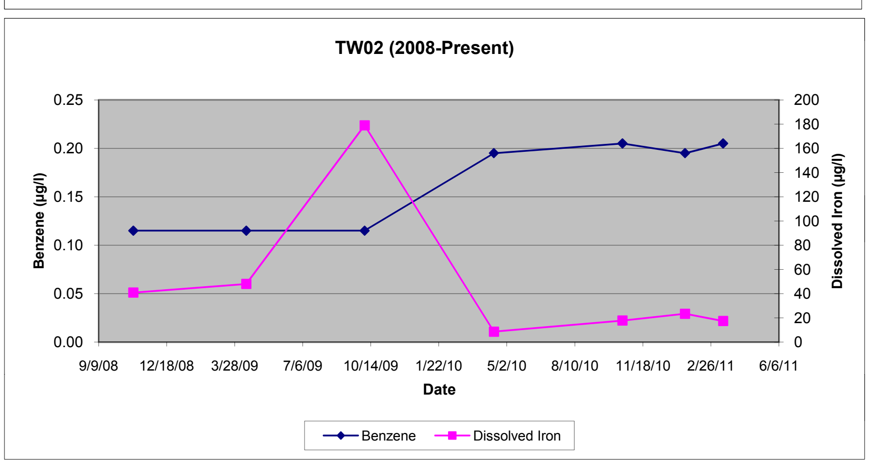

TW01 (2008-Present)
Napthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

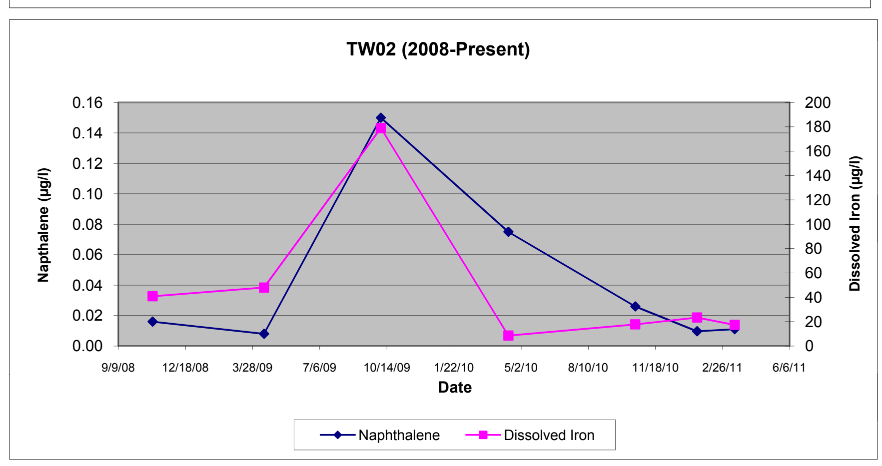

TW02 (2008-Present)
Benzene (µg/l)
Sulfate (mg/l)
Date
Benzene
Sulfate

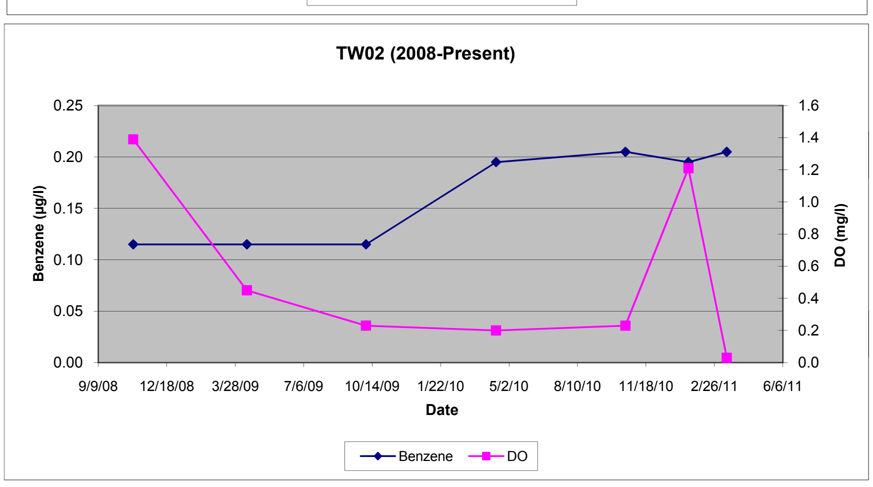

TW02 (2008-Present)
Napthalene (µg/l)
Sulfate (mg/l)
Date
Naphthalene
Sulfate


TW02 (2008-Present)
Benzene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Benzene
Nitrate + Nitrite


TW02 (2008-Present)
Napthalene (µg/l)
Nitrate + Nitrite (mg/l)
Date
Naphthalene
Nitrate + Nitrite


TW02 (2008-Present)
Benzene (µg/l)
Dissolved Iron (µg/l)
Date
Benzene
Dissolved Iron


TW02 (2008-Present)
Napthalene (µg/l)
Dissolved Iron (µg/l)
Date
Naphthalene
Dissolved Iron


TW02 (2008-Present)
Benzene (µg/l)
DO (mg/l)
Date
Benzene
DO

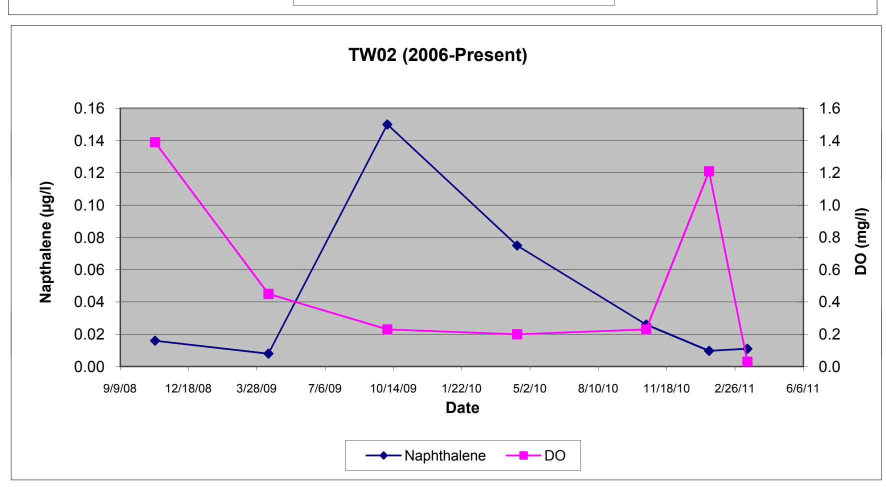

TW02 (2006-Present)
Napthalene (µg/l)
DO (mg/l)
Date
Naphthalene
DO

Table N1 - Confidence Limit Slope Calculations Calculation
Appendix N - Stevens Point RI Report - Revision 2

Well	_MODEL_	Calculated Statistic	Parameter	X = Date	X = GW Elev	Degrees of Freedom	Student T Value	Confidence Limit Slopes
OW3R	MODEL1	Slope	Benzene	2.10983E-05		22	2.07387307	2.29E-04
OW3R	MODEL1	Standard Error	Benzene	0.000100154		22	2.07387307	-1.87E-04
OW3R	MODEL2	Slope	Benzene		-0.127209116	22	2.07387307	1.14E+00
OW3R	MODEL2	Standard Error	Benzene		0.61206284	22	2.07387307	-1.40E+00
OW3R	MODEL3	Slope	Naphthalene	-0.000313822		22	2.07387307	4.95E-05
OW3R	MODEL3	Standard Error	Naphthalene	0.000175166		22	2.07387307	-6.77E-04
OW3R	MODEL4	Slope	Naphthalene		0.317439725	22	2.07387307	2.70E+00
OW3R	MODEL4	Standard Error	Naphthalene		1.147249865	22	2.07387307	-2.06E+00
OW5R	MODEL1	Slope	Benzene	-0.000196261		30	2.04227246	5.52E-05
OW5R	MODEL1	Standard Error	Benzene	0.00012313		30	2.04227246	-4.48E-04
OW5R	MODEL2	Slope	Benzene		-1.643556135	30	2.04227246	-8.33E-01
OW5R	MODEL2	Standard Error	Benzene		0.396646035	30	2.04227246	-2.45E+00
OW5R	MODEL3	Slope	Naphthalene	-0.000682729		30	2.04227246	-2.80E-04
OW5R	MODEL3	Standard Error	Naphthalene	0.000197199		30	2.04227246	-1.09E-03
OW5R	MODEL4	Slope	Naphthalene		-2.561104692	30	2.04227246	-9.68E-01
OW5R	MODEL4	Standard Error	Naphthalene		0.780179079	30	2.04227246	-4.15E+00
OW6	MODEL1	Slope	Benzene	-8.05196E-05		26	2.05552944	-7.11E-06
OW6	MODEL1	Standard Error	Benzene	3.57108E-05		26	2.05552944	-1.54E-04
OW6	MODEL2	Slope	Benzene		-0.491523876	26	2.05552944	8.11E-04
OW6	MODEL2	Standard Error	Benzene		0.23951721	26	2.05552944	-9.84E-01
OW6	MODEL3	Slope	Naphthalene	-0.000213857		26	2.05552944	1.74E-04
OW6	MODEL3	Standard Error	Naphthalene	0.000188764		26	2.05552944	-6.02E-04
OW6	MODEL4	Slope	Naphthalene		1.685326703	26	2.05552944	4.22E+00
OW6	MODEL4	Standard Error	Naphthalene		1.233983645	26	2.05552944	-8.51E-01
OW7	MODEL1	Slope	Benzene	-1.29169E-06		32	2.03693334	4.90E-05
OW7	MODEL1	Standard Error	Benzene	2.46763E-05		32	2.03693334	-5.16E-05
OW7	MODEL2	Slope	Benzene		-0.41943585	32	2.03693334	1.52E-01
OW7	MODEL2	Standard Error	Benzene		0.280734374	32	2.03693334	-9.91E-01
OW7	MODEL3	Slope	Naphthalene	-1.35367E-05		32	2.03693334	2.03E-04
OW7	MODEL3	Standard Error	Naphthalene	0.000106245		32	2.03693334	-2.30E-04
OW7	MODEL4	Slope	Naphthalene		-0.029634792	32	2.03693334	2.52E+00
OW7	MODEL4	Standard Error	Naphthalene		1.251734549	32	2.03693334	-2.58E+00
OW9	MODEL1	Slope	Benzene	0.000120636		26	2.05552944	2.46E-04
OW9	MODEL1	Standard Error	Benzene	6.07867E-05		26	2.05552944	-4.31E-06

Table N1 - Confidence Limit Slope Calculations Calculation
Appendix N - Stevens Point RI Report - Revision 2

Well	_MODEL_	Calculated Statistic	Parameter	X = Date	X = GW Elev	Degrees of Freedom	Student T Value	Confidence Limit Slopes
OW9	MODEL2	Slope	Benzene		-0.564851855	26	2.05552944	-3.68E-03
OW9	MODEL2	Standard Error	Benzene		0.273007049	26	2.05552944	-1.13E+00
OW9	MODEL3	Slope	Naphthalene	0.000151752		26	2.05552944	3.76E-04
OW9	MODEL3	Standard Error	Naphthalene	0.000109065		26	2.05552944	-7.24E-05
OW9	MODEL4	Slope	Naphthalene		-0.537630256	26	2.05552944	4.90E-01
OW9	MODEL4	Standard Error	Naphthalene		0.500013238	26	2.05552944	-1.57E+00
P5B	MODEL1	Slope	Benzene	-0.000263697		31	2.03951345	-1.02E-04
P5B	MODEL1	Standard Error	Benzene	7.92283E-05		31	2.03951345	-4.25E-04
P5B	MODEL2	Slope	Benzene		0.355839127	31	2.03951345	1.19E+00
P5B	MODEL2	Standard Error	Benzene		0.410560496	31	2.03951345	-4.82E-01
P5B	MODEL3	Slope	Naphthalene	-0.000343786		31	2.03951345	2.81E-04
P5B	MODEL3	Standard Error	Naphthalene	0.000306368		31	2.03951345	-9.69E-04
P5B	MODEL4	Slope	Naphthalene		1.686371819	31	2.03951345	4.48E+00
P5B	MODEL4	Standard Error	Naphthalene		1.367936214	31	2.03951345	-1.10E+00
PZ7	MODEL1	Slope	Benzene	-4.74939E-05		32	2.03693334	5.94E-05
PZ7	MODEL1	Standard Error	Benzene	5.24812E-05		32	2.03693334	-1.54E-04
PZ7	MODEL2	Slope	Benzene		-0.143533101	32	2.03693334	3.90E-01
PZ7	MODEL2	Standard Error	Benzene		0.262047894	32	2.03693334	-6.77E-01
PZ7	MODEL3	Slope	Naphthalene	-0.000193534		32	2.03693334	1.03E-04
PZ7	MODEL3	Standard Error	Naphthalene	0.000145765		32	2.03693334	-4.90E-04
PZ7	MODEL4	Slope	Naphthalene		-1.210122442	32	2.03693334	2.35E-01
PZ7	MODEL4	Standard Error	Naphthalene		0.709569376	32	2.03693334	-2.66E+00
OW10	MODEL1	Slope	Benzene	0.000391507		24	2.06389857	6.41E-04
OW10	MODEL1	Standard Error	Benzene	0.000120875		24	2.06389857	1.42E-04
OW10	MODEL2	Slope	Benzene		-0.705095287	24	2.06389857	3.33E-01
OW10	MODEL2	Standard Error	Benzene		0.503037304	24	2.06389857	-1.74E+00
OW10	MODEL3	Slope	Naphthalene	0.000495798		24	2.06389857	8.02E-04
OW10	MODEL3	Standard Error	Naphthalene	0.000148238		24	2.06389857	1.90E-04
OW10	MODEL4	Slope	Naphthalene		-1.683773843	24	2.06389857	-5.56E-01
OW10	MODEL4	Standard Error	Naphthalene		0.546265776	24	2.06389857	-2.81E+00
OW12	MODEL1	Slope	Benzene	-3.98105E-05		22	2.07387307	2.74E-04
OW12	MODEL1	Standard Error	Benzene	0.000151354		22	2.07387307	-3.54E-04
OW12	MODEL2	Slope	Benzene		-0.017473435	22	2.07387307	8.50E-01
OW12	MODEL2	Standard Error	Benzene		0.418177842	22	2.07387307	-8.85E-01

Table N1 - Confidence Limit Slope Calculations Calculation
Appendix N - Stevens Point RI Report - Revision 2

Well	_MODEL_	Calculated Statistic	Parameter	X = Date	X = GW Elev	Degrees of Freedom	Student T Value	Confidence Limit Slopes
OW12	MODEL3	Slope	Naphthalene	8.94917E-06		22	2.07387307	5.68E-04
OW12	MODEL3	Standard Error	Naphthalene	0.000269628		22	2.07387307	-5.50E-04
OW12	MODEL4	Slope	Naphthalene		0.512657425	22	2.07387307	2.04E+00
OW12	MODEL4	Standard Error	Naphthalene		0.735324831	22	2.07387307	-1.01E+00
OW14	MODEL1	Slope	Benzene	-0.000614554		10	2.22813885	-3.31E-04
OW14	MODEL1	Standard Error	Benzene	0.000127153		10	2.22813885	-8.98E-04
OW14	MODEL2	Slope	Benzene		0.074009756	10	2.22813885	9.02E-01
OW14	MODEL2	Standard Error	Benzene		0.37156086	10	2.22813885	-7.54E-01
OW14	MODEL3	Slope	Naphthalene	-0.001375129		10	2.22813885	3.83E-05
OW14	MODEL3	Standard Error	Naphthalene	0.000634351		10	2.22813885	-2.79E-03
OW14	MODEL4	Slope	Naphthalene		1.716562367	10	2.22813885	4.09E+00
OW14	MODEL4	Standard Error	Naphthalene		1.064735744	10	2.22813885	-6.56E-01
PZ11B	MODEL1	Slope	Benzene	-0.000588722		24	2.06389857	-3.40E-04
PZ11B	MODEL1	Standard Error	Benzene	0.000120514		24	2.06389857	-8.37E-04
PZ11B	MODEL2	Slope	Benzene		0.176811557	24	2.06389857	1.88E+00
PZ11B	MODEL2	Standard Error	Benzene		0.823737101	24	2.06389857	-1.52E+00
PZ11B	MODEL3	Slope	Naphthalene	-0.00077736		24	2.06389857	-3.69E-04
PZ11B	MODEL3	Standard Error	Naphthalene	0.000197899		24	2.06389857	-1.19E-03
PZ11B	MODEL4	Slope	Naphthalene		0.254591859	24	2.06389857	2.78E+00
PZ11B	MODEL4	Standard Error	Naphthalene		1.224994574	24	2.06389857	-2.27E+00
PZ12B	MODEL1	Slope	Benzene	0.000259975		22	2.07387307	6.82E-04
PZ12B	MODEL1	Standard Error	Benzene	0.000203478		22	2.07387307	-1.62E-04
PZ12B	MODEL2	Slope	Benzene		0.423384223	22	2.07387307	1.61E+00
PZ12B	MODEL2	Standard Error	Benzene		0.57091488	22	2.07387307	-7.61E-01
PZ12B	MODEL3	Slope	Naphthalene	-0.000863953		22	2.07387307	-7.13E-05
PZ12B	MODEL3	Standard Error	Naphthalene	0.000382201		22	2.07387307	-1.66E-03
PZ12B	MODEL4	Slope	Naphthalene		-0.196213092	22	2.07387307	2.22E+00
PZ12B	MODEL4	Standard Error	Naphthalene		1.16600873	22	2.07387307	-2.61E+00

Formula = Slope +/- (Student T value * Stand. Error)
http://danielsoper.com/statcalc3/calc.aspx?id=10

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW10

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	6.25418	6.25418	10.49	0.0036
Error	23	13.71170	0.59616		
Corrected Total	24	19.96588			

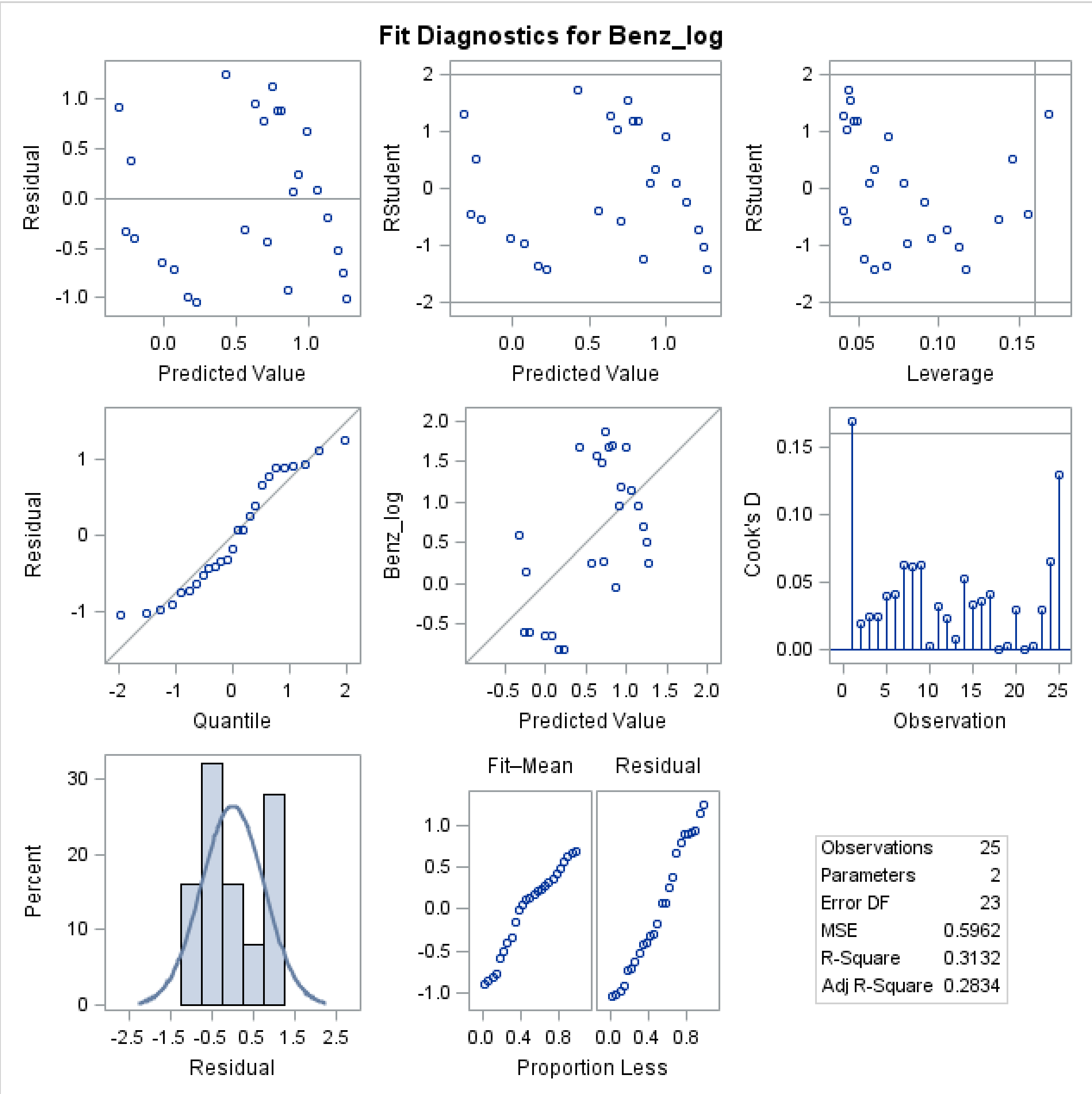
Root MSE	0.77211	R-Square	0.3132
Dependent Mean	0.57670	Adj R-Sq	0.2834
Coeff Var	133.88402		

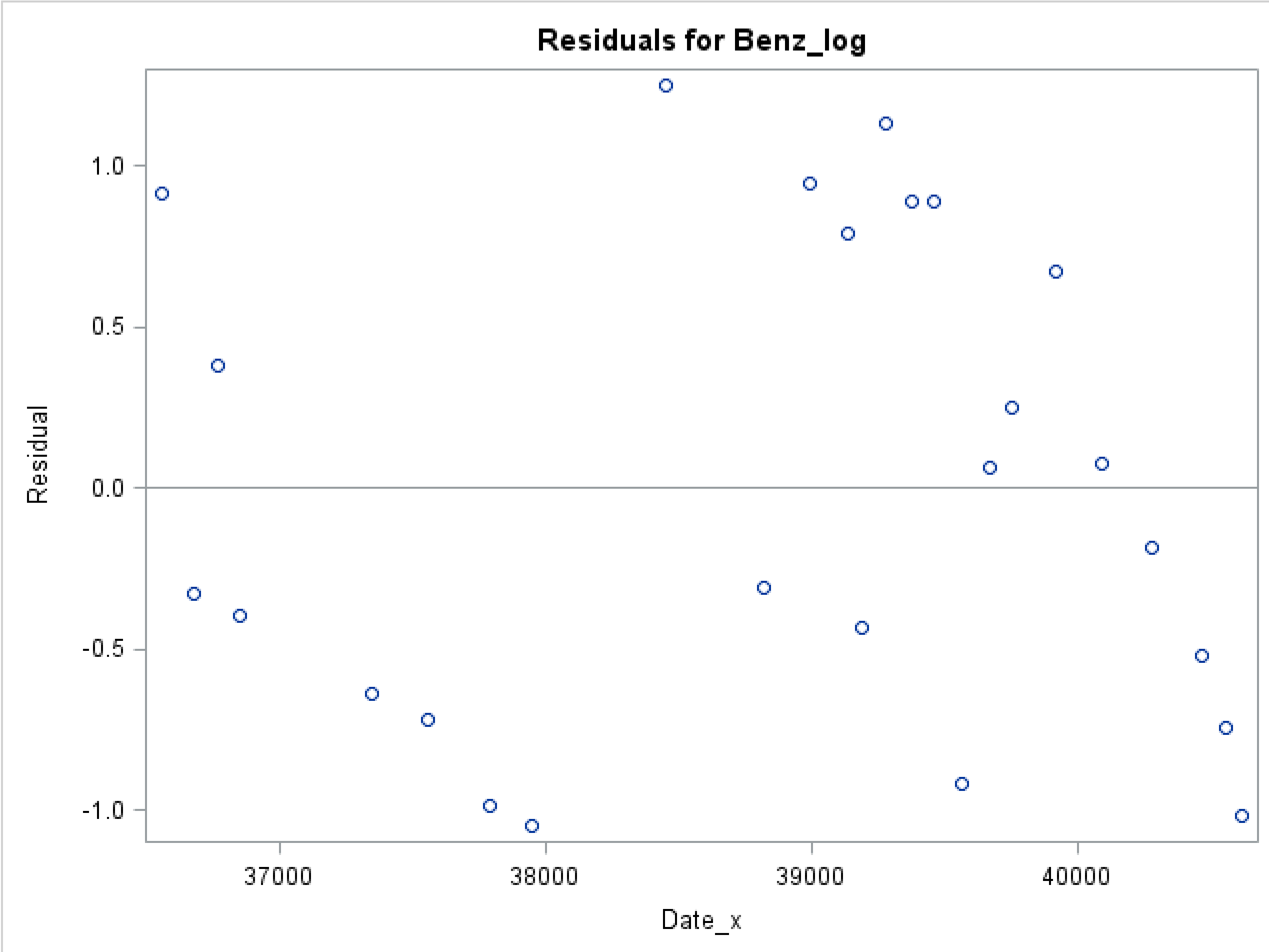
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-14.63142	4.69793	-3.11	0.0049
Date_x	1	0.00039151	0.00012087	3.24	0.0036

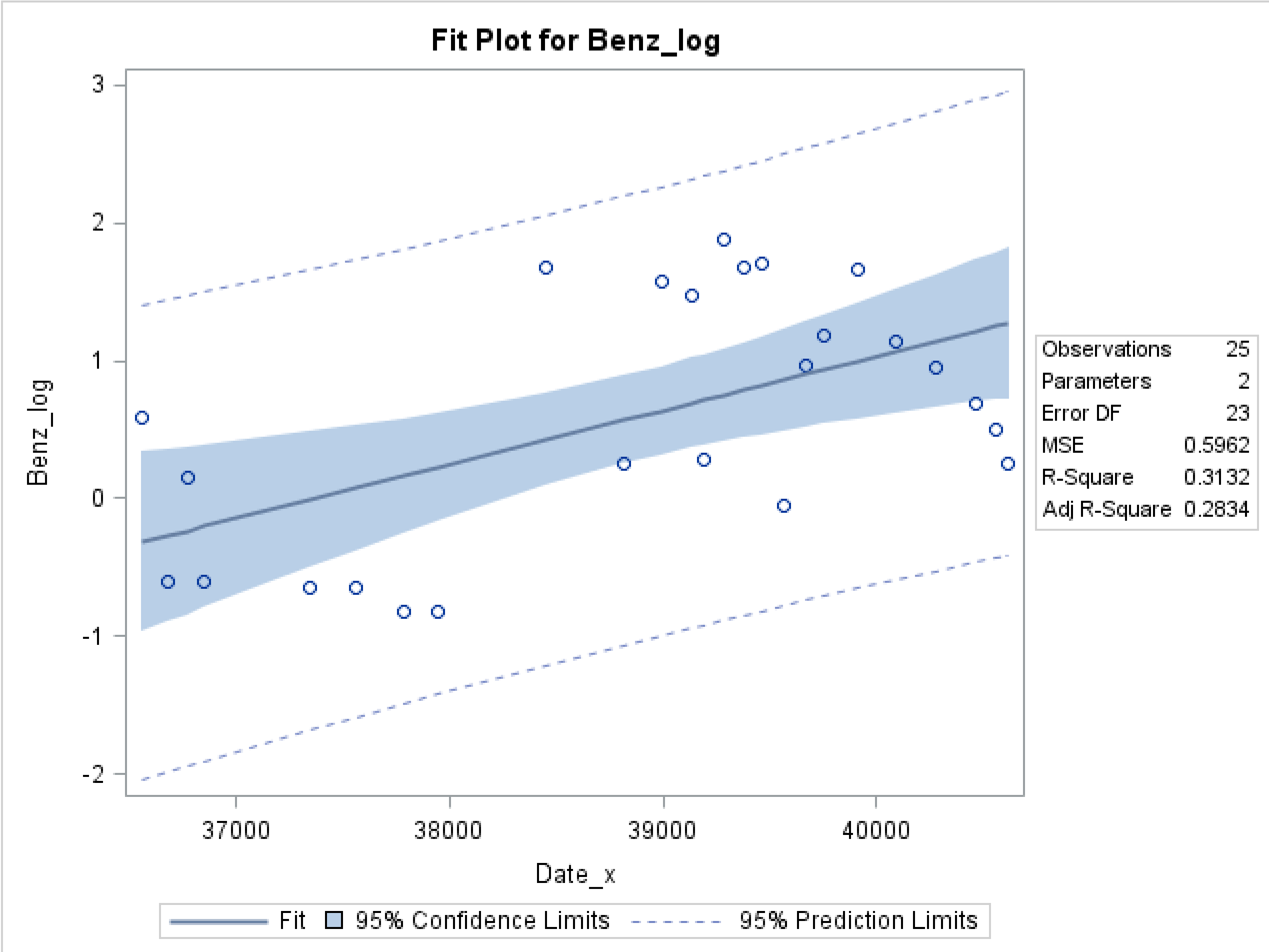
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW10




Residuals for Benz_log
Residual
1.0
0.5
0.0
-0.5
-1.0
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
Benz_log
Date_x
3
2
1
0
-1
-2
37000
38000
39000
40000
Observations 25
Parameters 2
Error DF 23
MSE 0.5962
R-Square 0.3132
Adj R-Square 0.2834
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW10

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.57129	1.57129	1.96	0.1744
Error	23	18.39459	0.79976		
Corrected Total	24	19.96588			

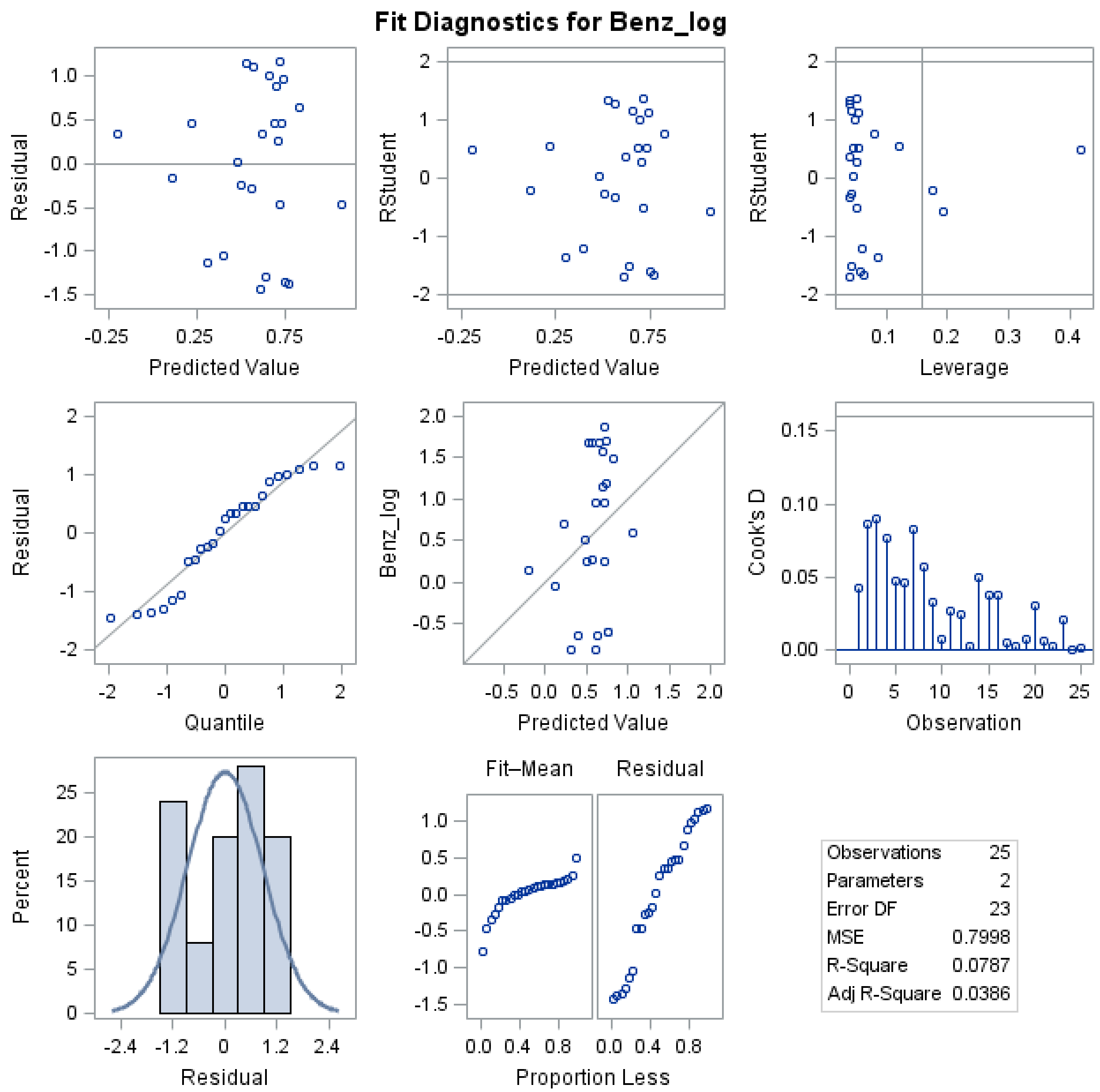
Root MSE	0.89430	R-Square	0.0787
Dependent Mean	0.57670	Adj R-Sq	0.0386
Coeff Var	155.07013		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	761.09022	542.57446	1.40	0.1740
GW_Elev_x	1	-0.70510	0.50304	-1.40	0.1744

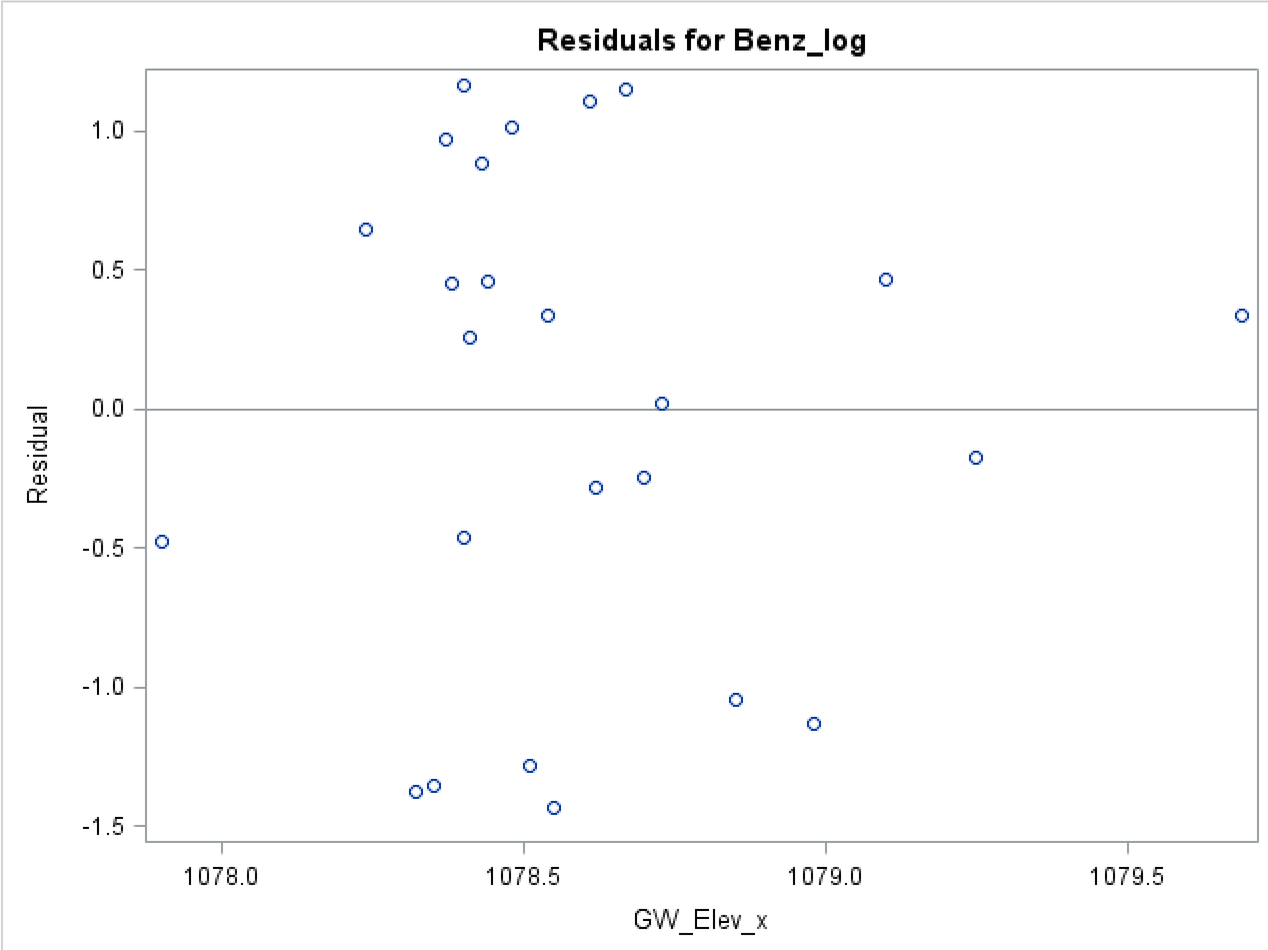
The SAS System

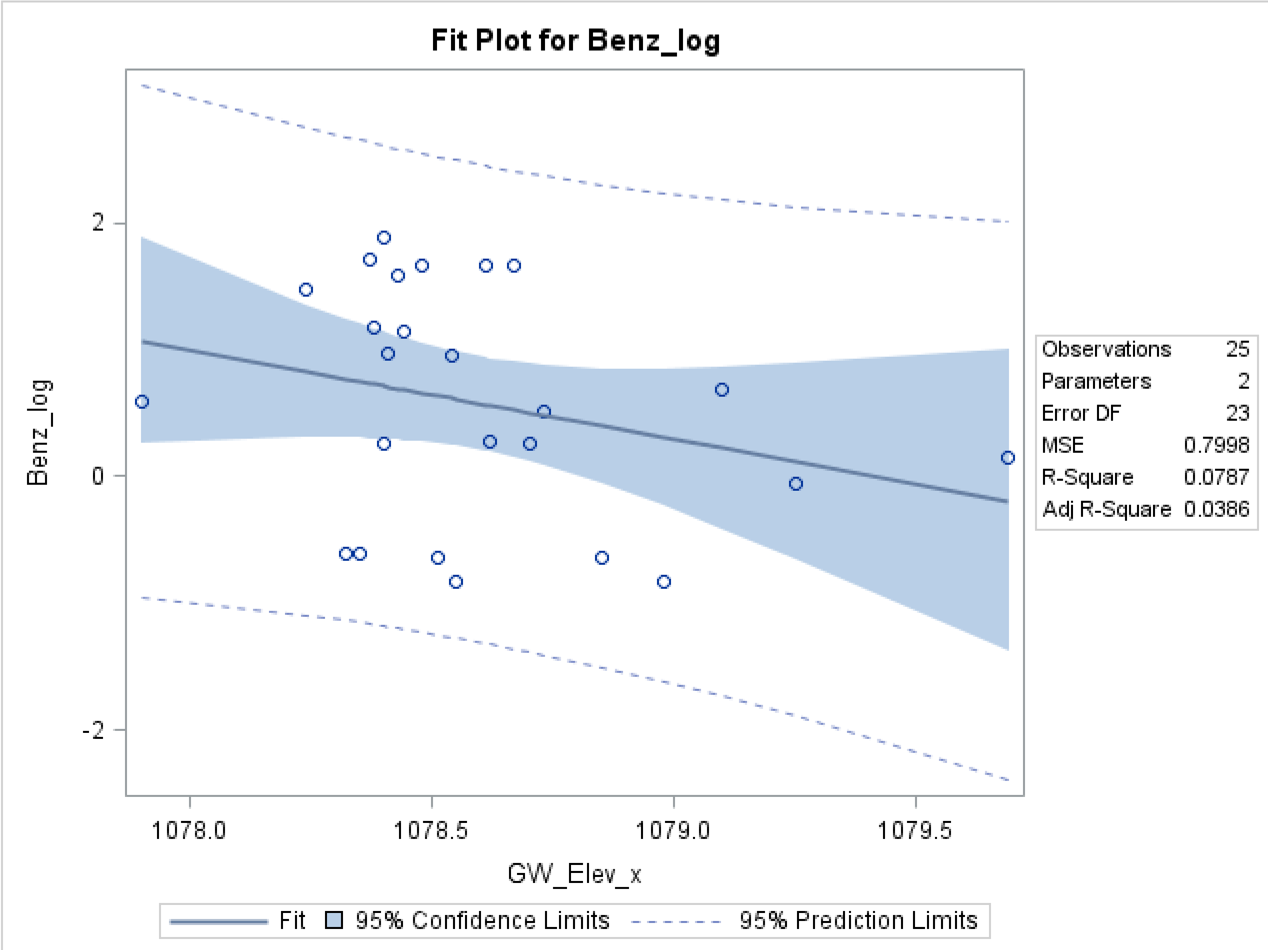
The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW10



Observations	25
Parameters	2
Error DF	23
MSE	0.7998
R-Square	0.0787
Adj R-Square	0.0386


Residuals for Benz_log
Residual
1.0
0.5
0.0
-0.5
-1.0
-1.5
1078.0
1078.5
1079.0
1079.5
GW_Elev_x


Fit Plot for Benz_log
Benz_log
2
0
-2
1078.0
1078.5
1079.0
1079.5
GW_Elev_x
Observations 25
Parameters 2
Error DF 23
MSE 0.7998
R-Square 0.0787
Adj R-Square 0.0386
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW10

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10.03000	10.03000	11.19	0.0028
Error	23	20.62234	0.89662		
Corrected Total	24	30.65234			

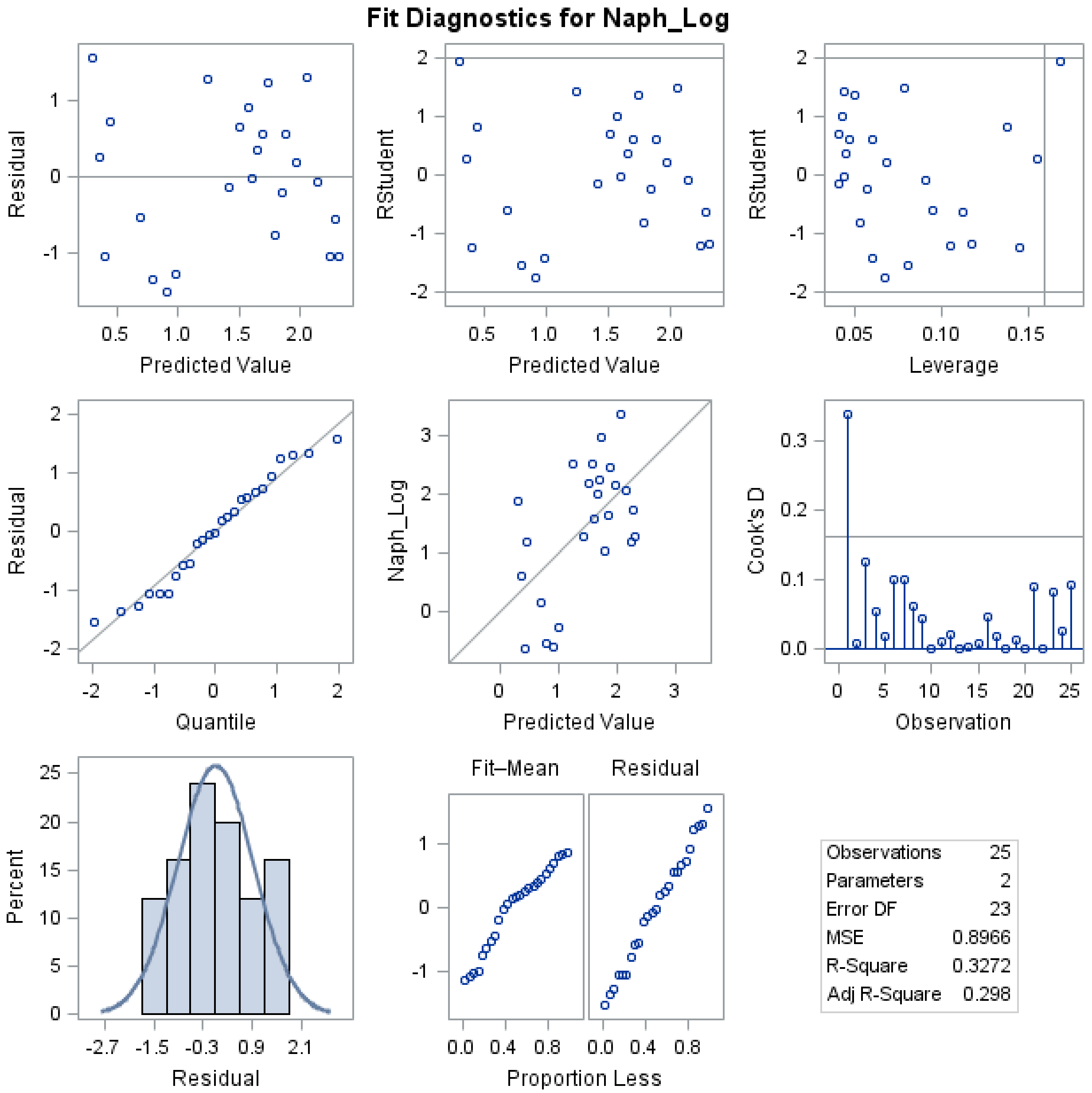
Root MSE	0.94690	R-Square	0.3272
Dependent Mean	1.43460	Adj R-Sq	0.2980
Coeff Var	66.00479		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-17.82471	5.76143	-3.09	0.0051
Date_x	1	0.00049580	0.00014824	3.34	0.0028

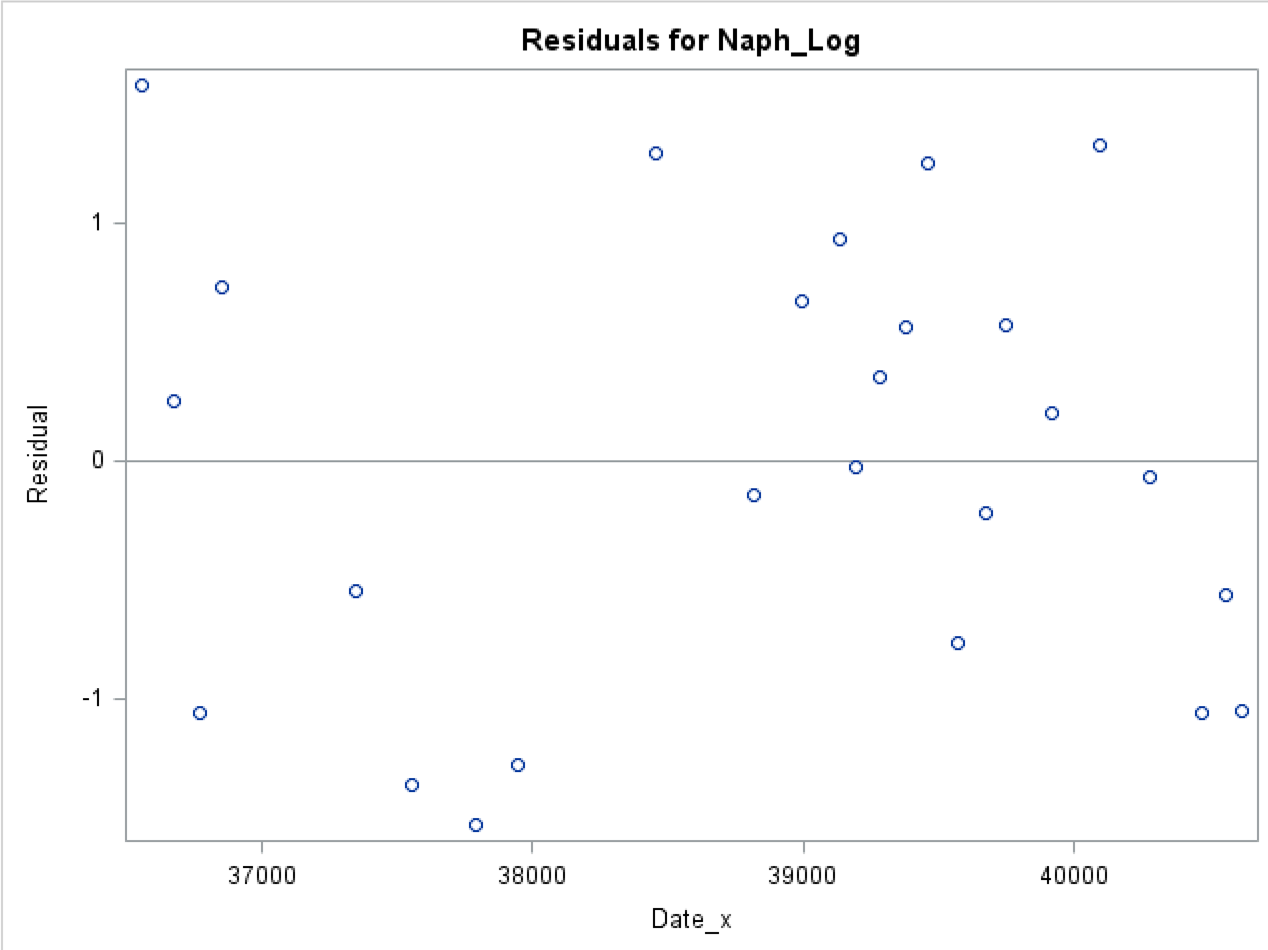
The SAS System

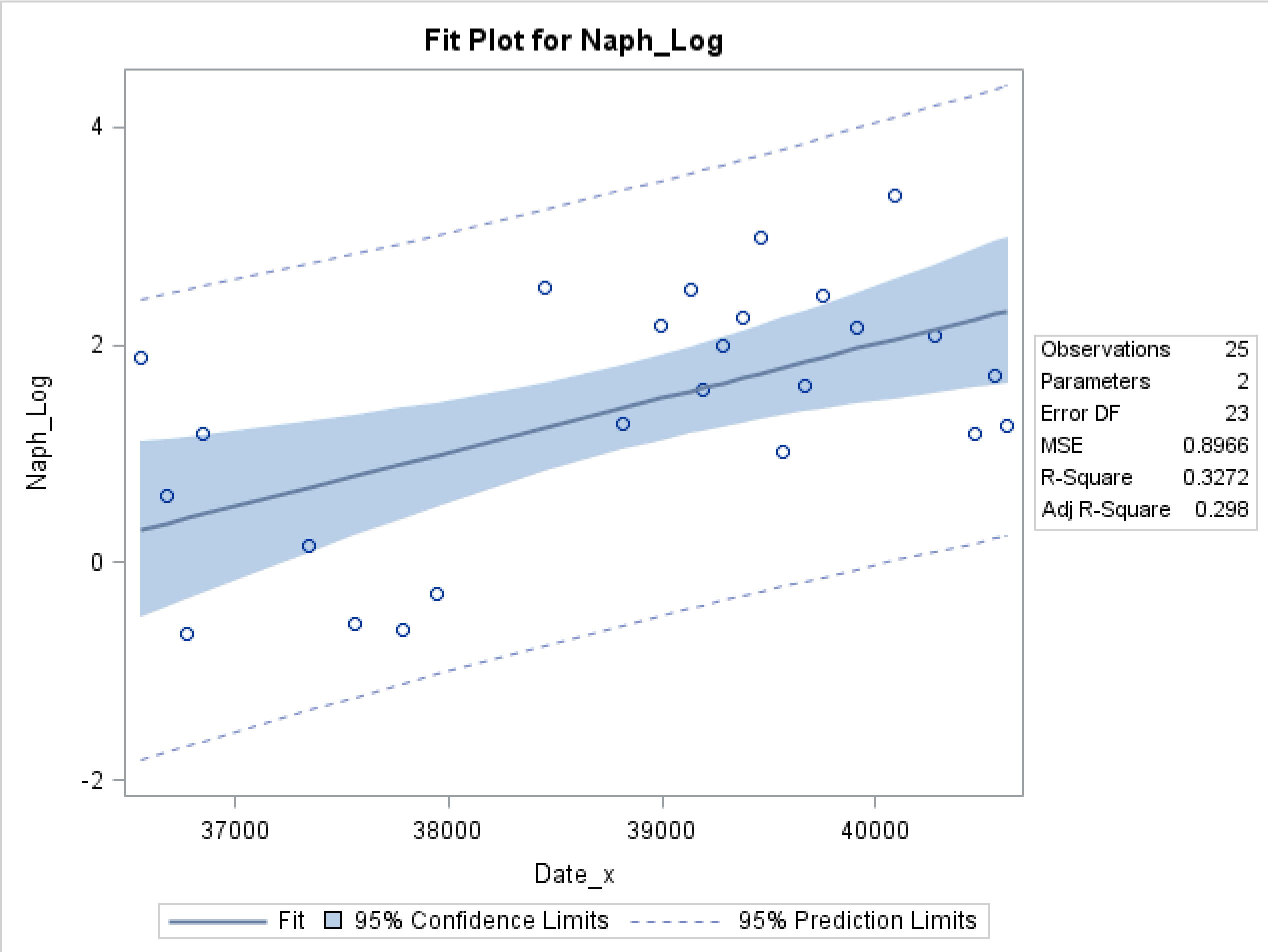
The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW10



Observations	25
Parameters	2
Error DF	23
MSE	0.8966
R-Square	0.3272
Adj R-Square	0.298


Residuals for Naph_Log
Residual
1
0
-1
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
4
2
0
-2
Naph_Log
37000
38000
39000
40000
Date_x
Observations 25
Parameters 2
Error DF 23
MSE 0.8966
R-Square 0.3272
Adj R-Square 0.298
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW10

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.96044	8.96044	9.50	0.0053
Error	23	21.69190	0.94313		
Corrected Total	24	30.65234			

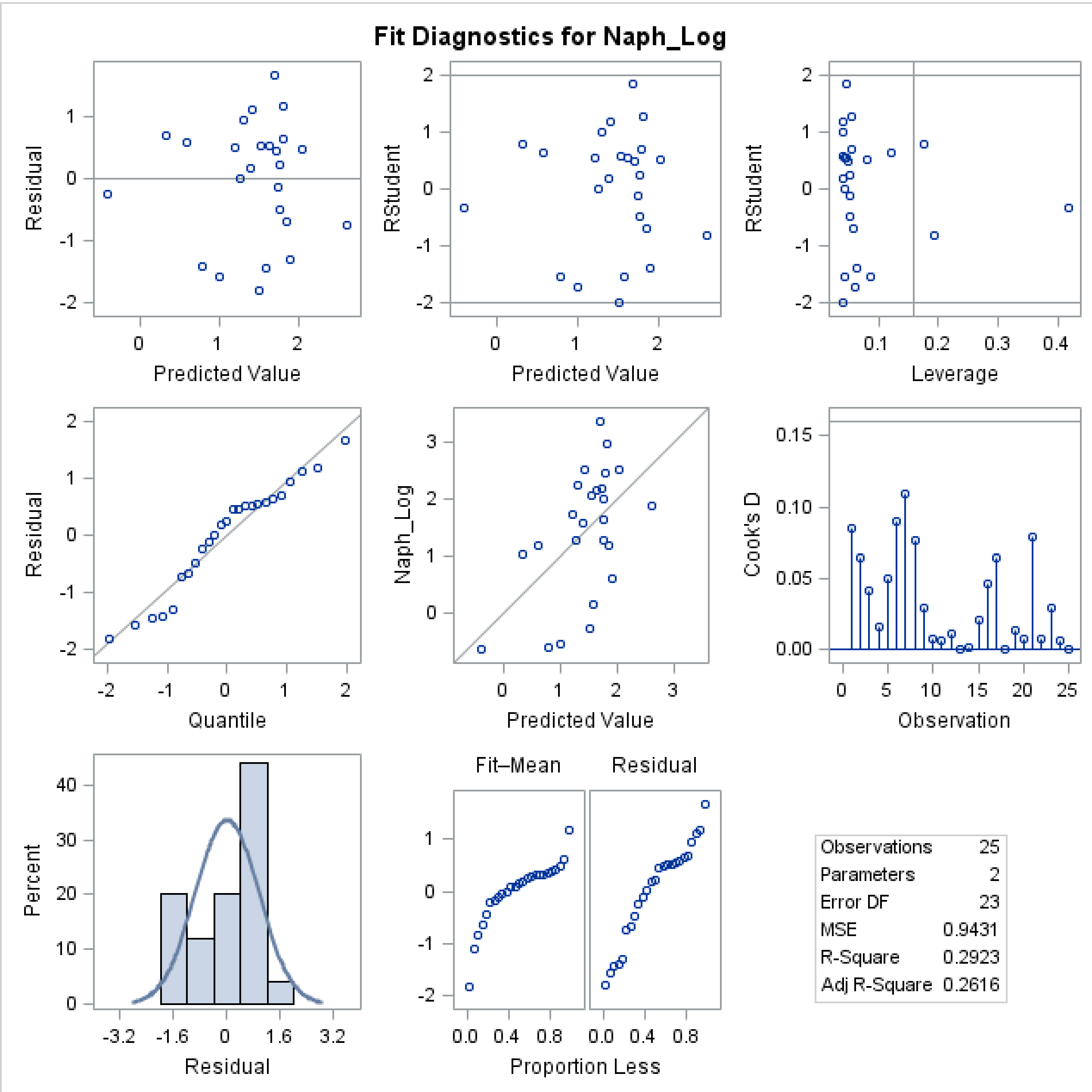
Root MSE	0.97115	R-Square	0.2923
Dependent Mean	1.43460	Adj R-Sq	0.2616
Coeff Var	67.69480		

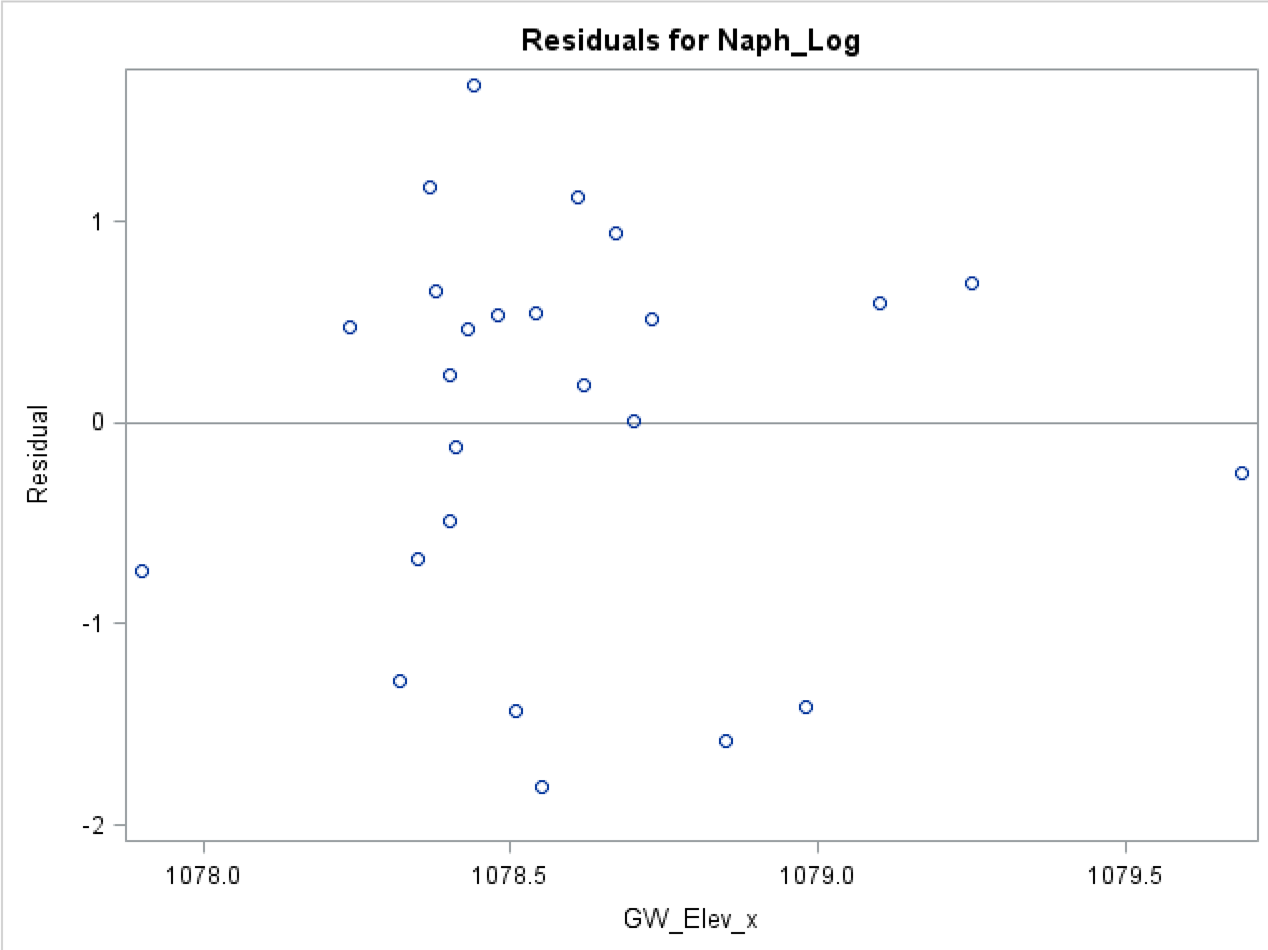
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1817.54767	589.20055	3.08	0.0052
GW_Elev_x	1	-1.68377	0.54627	-3.08	0.0053

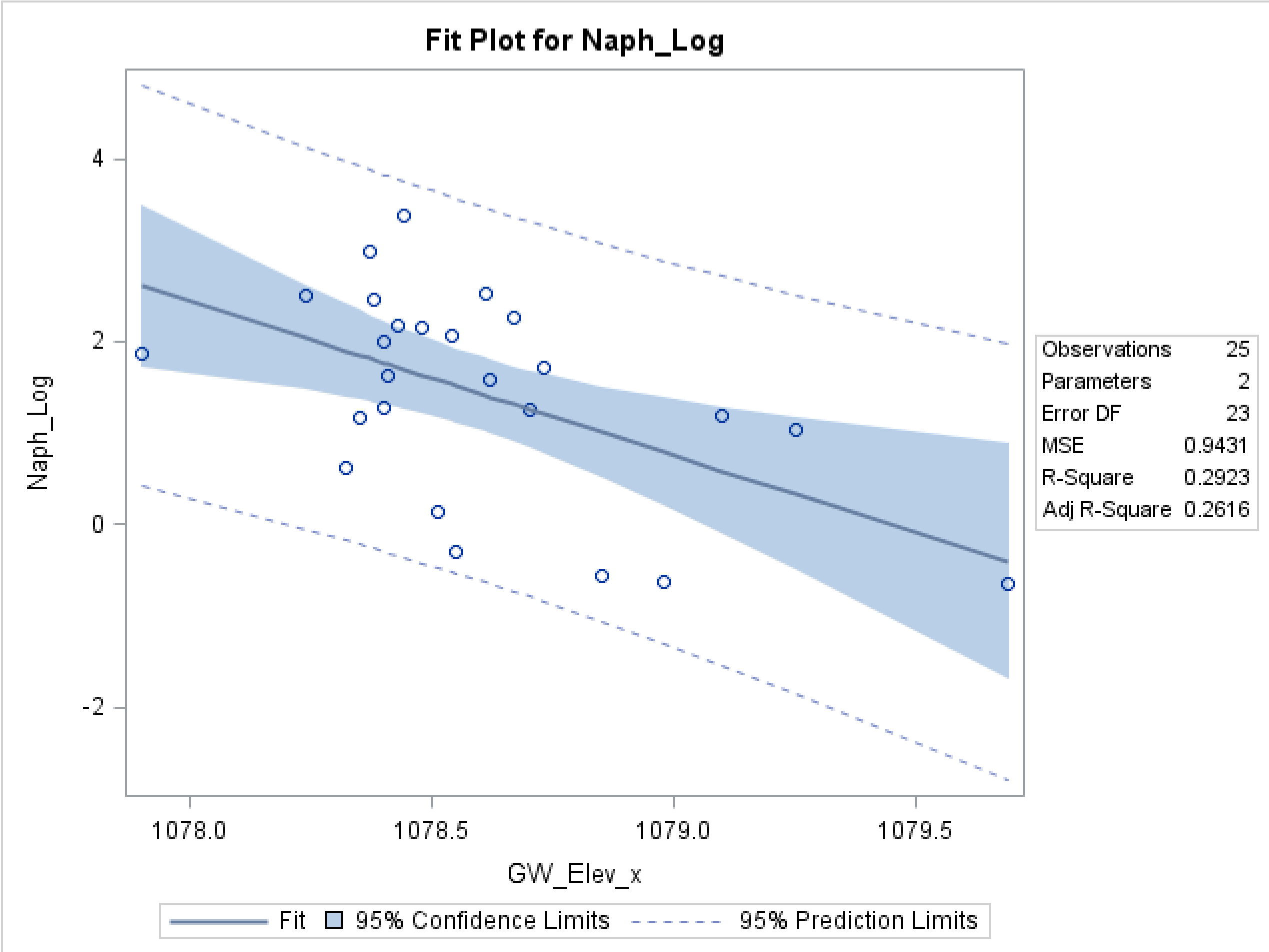
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW10




Residuals for Naph_Log
Residual
1
0
-1
-2
1078.0
1078.5
1079.0
1079.5
GW_Elev_x



Fit Plot for Naph_Log
Naph_Log
4
2
0
-2
1078.0
1078.5
1079.0
1079.5
GW_Elev_x
Observations 25
Parameters 2
Error DF 23
MSE 0.9431
R-Square 0.2923
Adj R-Square 0.2616
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.01829	0.01829	0.07	0.7951
Error	21	5.55086	0.26433		
Corrected Total	22	5.56915			

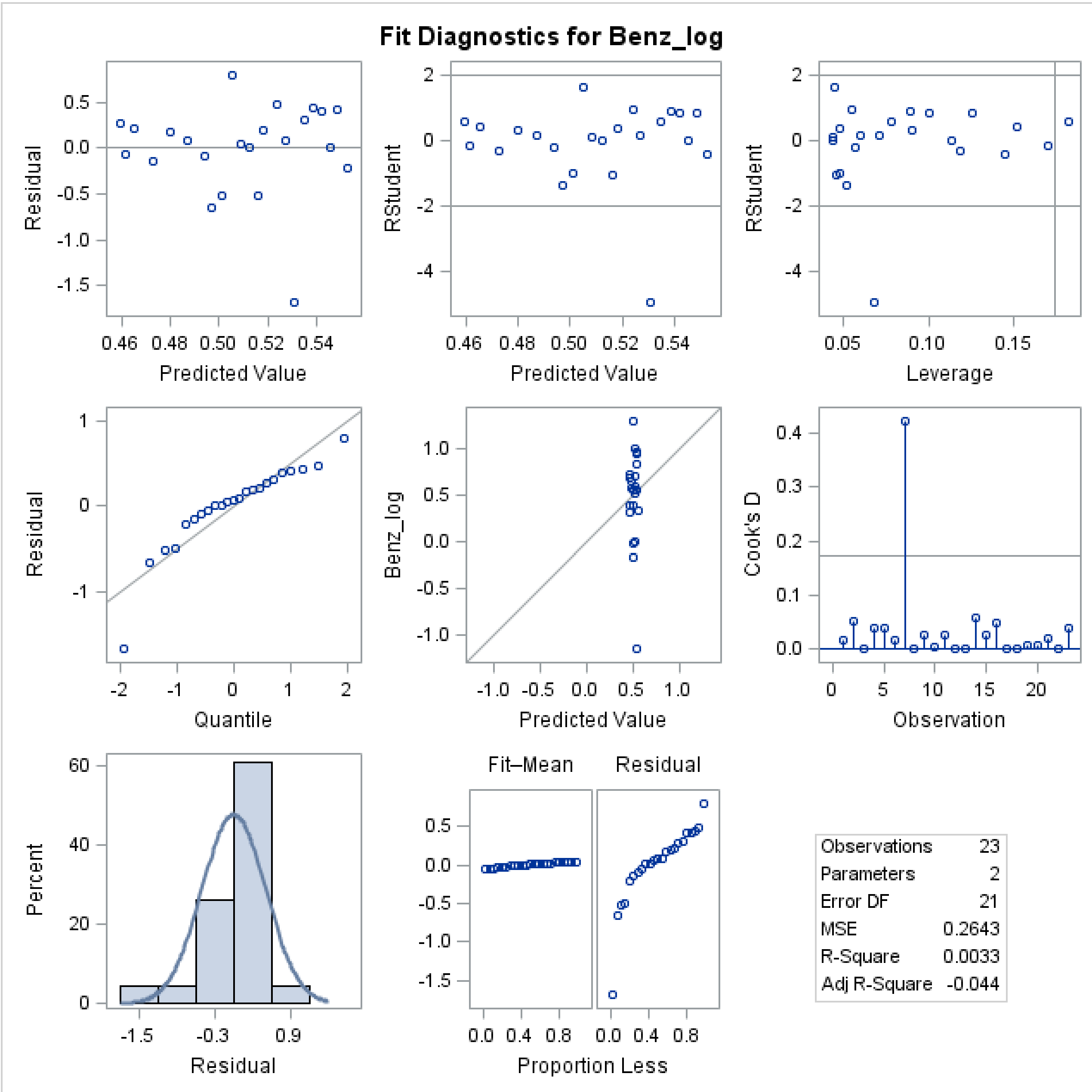
Root MSE	0.51413	**R-Square**	0.0033
Dependent Mean	0.50971	**Adj R-Sq**	-0.0442
Coeff Var	100.86685		

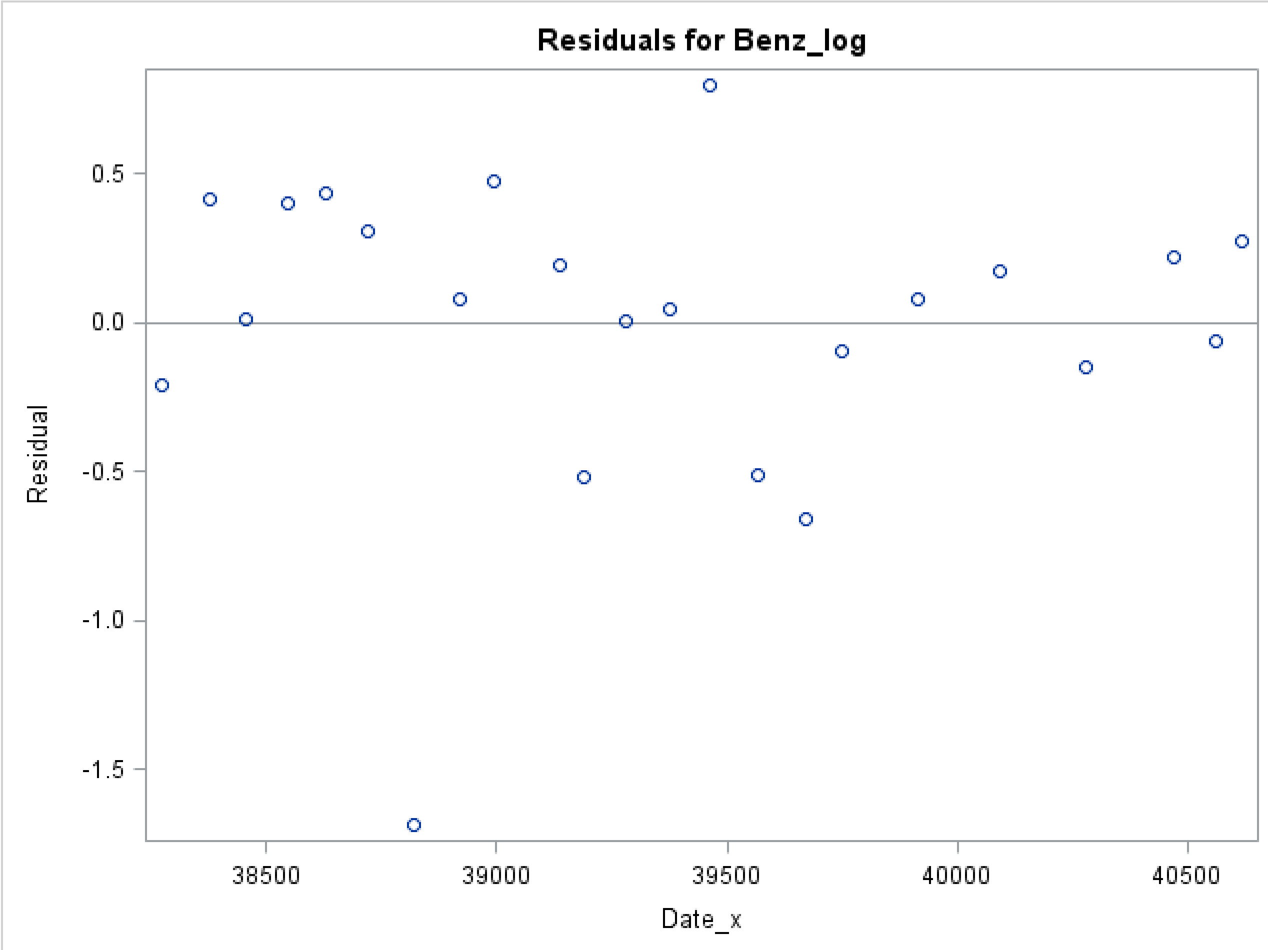
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	2.07634	5.95706	0.35	0.7309
Date_x	1	-0.00003981	0.00015135	-0.26	0.7951

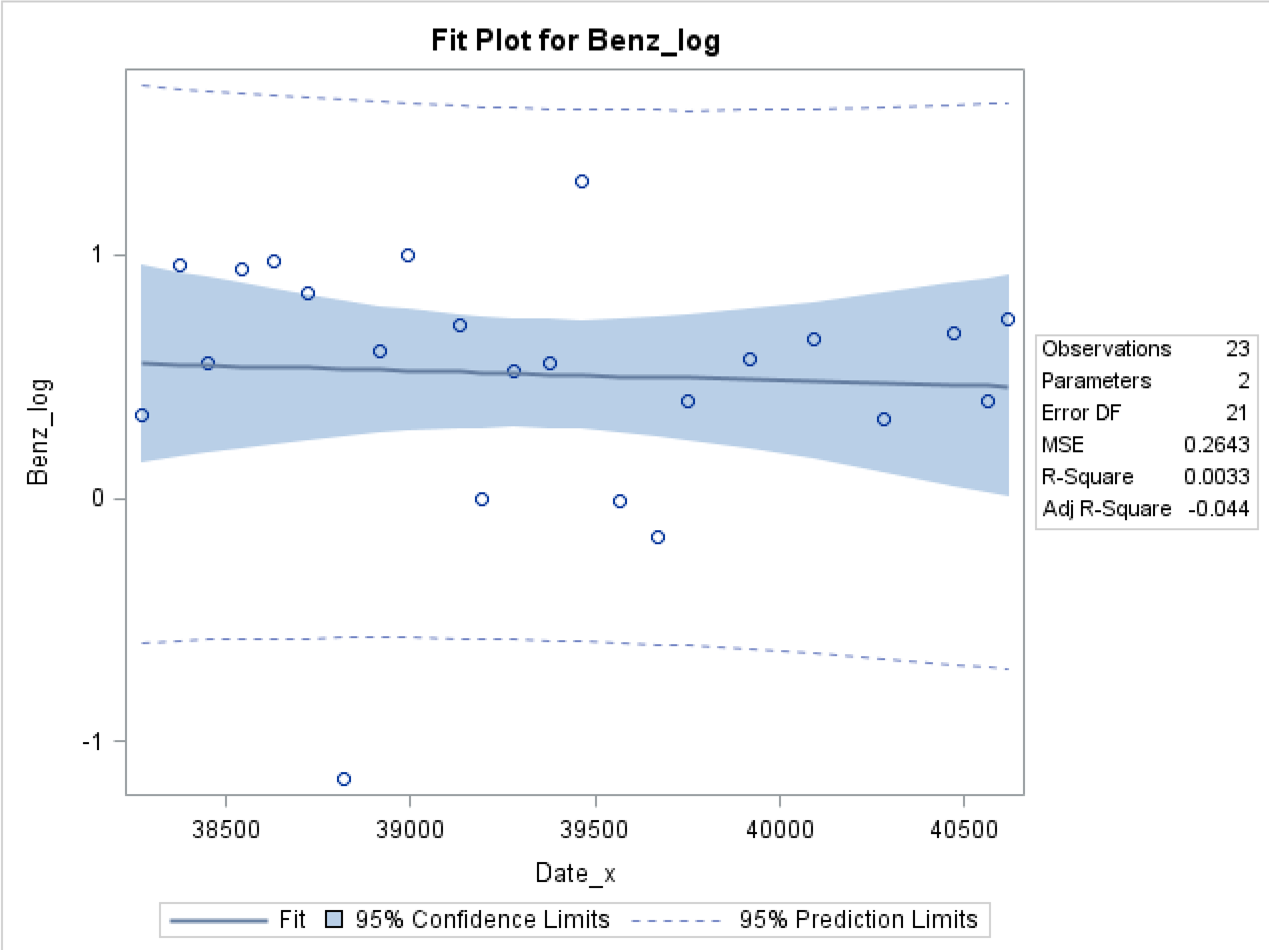
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW12




Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
-1.5
38500
39000
39500
40000
40500
Date_x


Fit Plot for Benz_log
Benz_log
Date_x
1
0
-1
38500
39000
39500
40000
40500
Observations 23
Parameters 2
Error DF 21
MSE 0.2643
R-Square 0.0033
Adj R-Square -0.044
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00046299	0.00046299	0.00	0.9671
Error	21	5.56868	0.26518		
Corrected Total	22	5.56915			

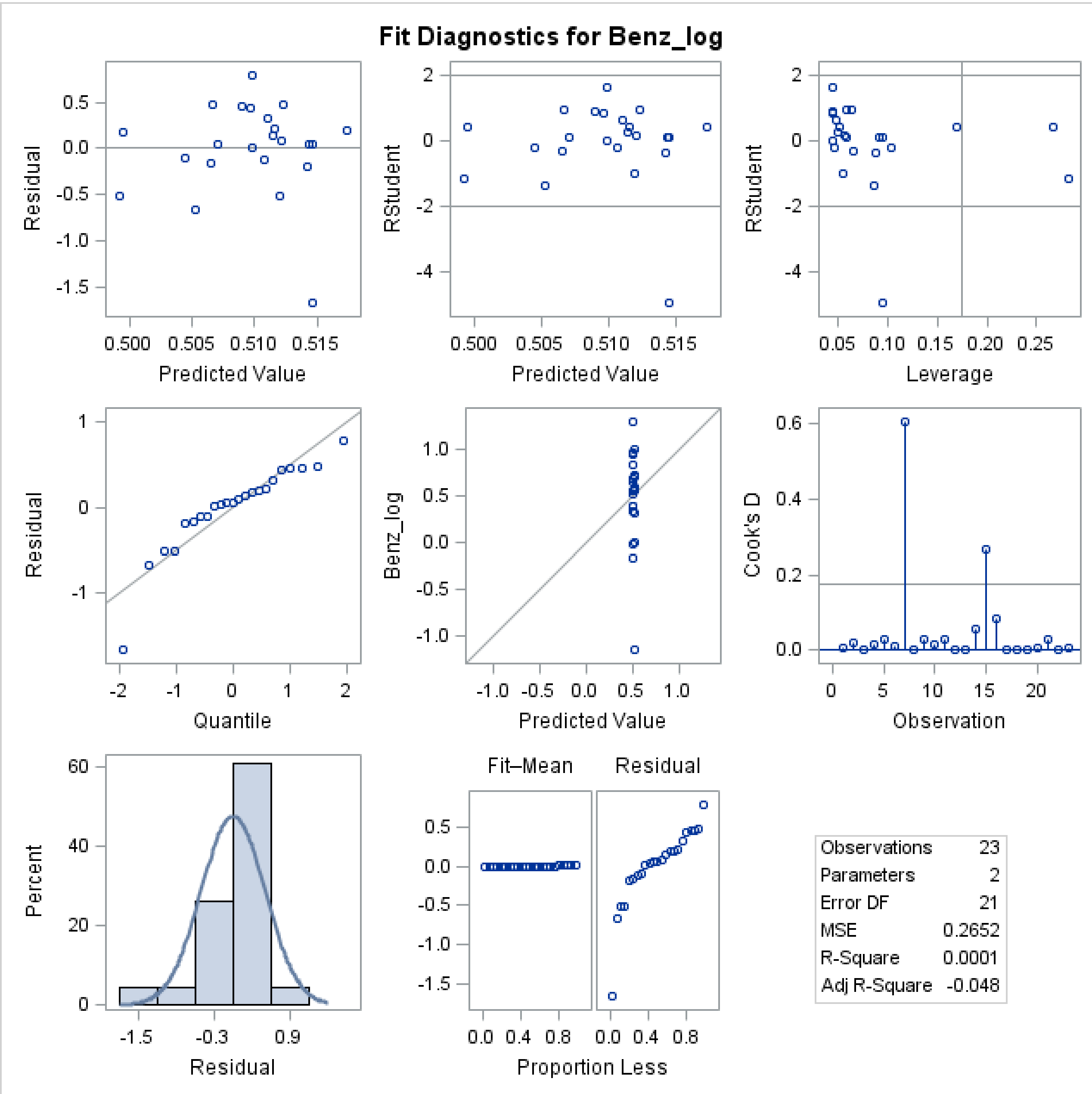
Root MSE	0.51495	R-Square	0.0001
Dependent Mean	0.50971	Adj R-Sq	-0.0475
Coeff Var	101.02867		

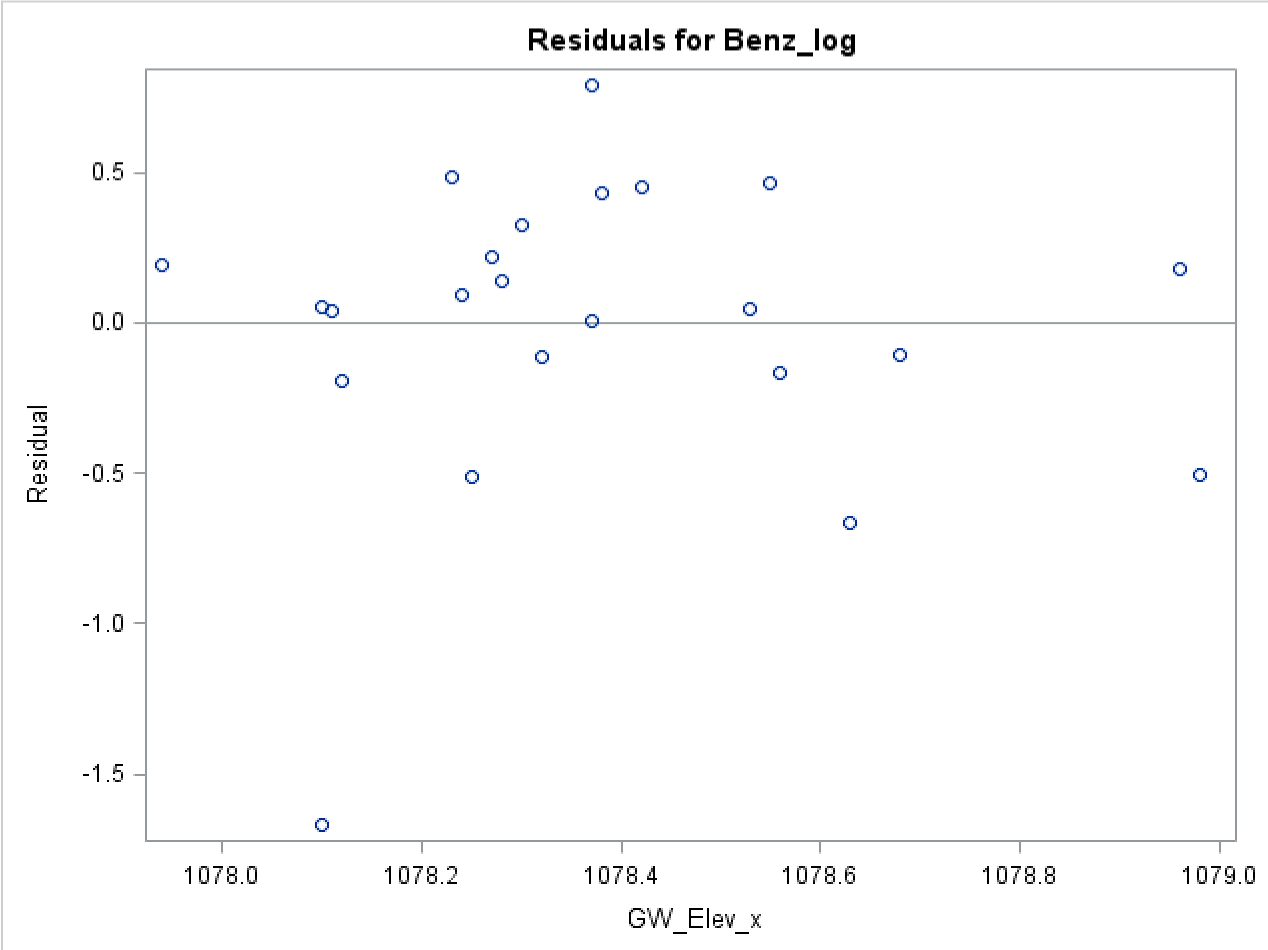
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	19.35267	450.95373	0.04	0.9662
GW_Elev_x	1	-0.01747	0.41818	-0.04	0.9671

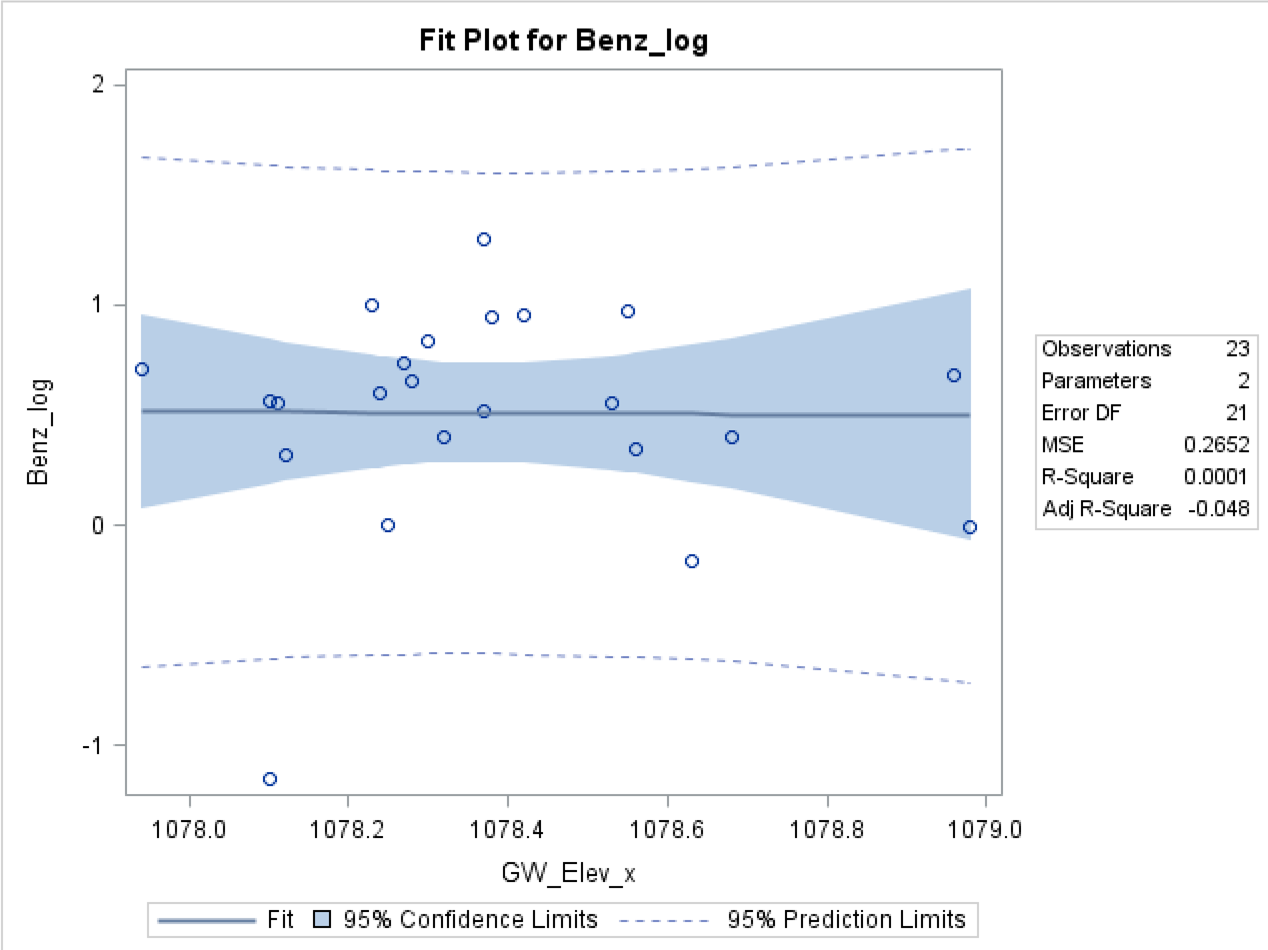
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW12




Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
-1.5
1078.0
1078.2
1078.4
1078.6
1078.8
1079.0
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
2
1
0
-1
1078.0
1078.2
1078.4
1078.6
1078.8
1079.0
Observations 23
Parameters 2
Error DF 21
MSE 0.2652
R-Square 0.0001
Adj R-Square -0.048
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00092410	0.00092410	0.00	0.9738
Error	21	17.61586	0.83885		
Corrected Total	22	17.61679			

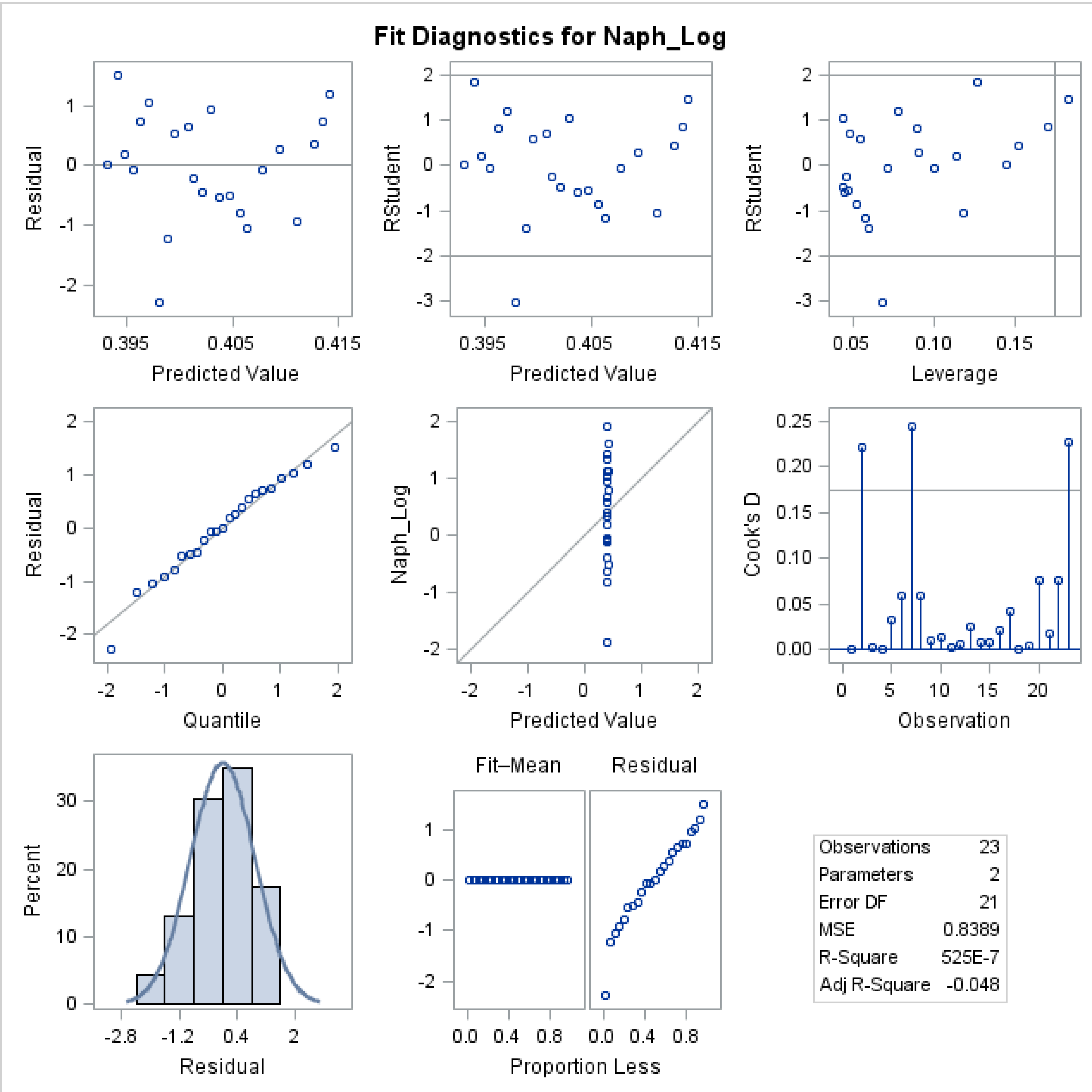
Root MSE	0.91589	R-Square	0.0001
Dependent Mean	0.40277	Adj R-Sq	-0.0476
Coeff Var	227.39994		

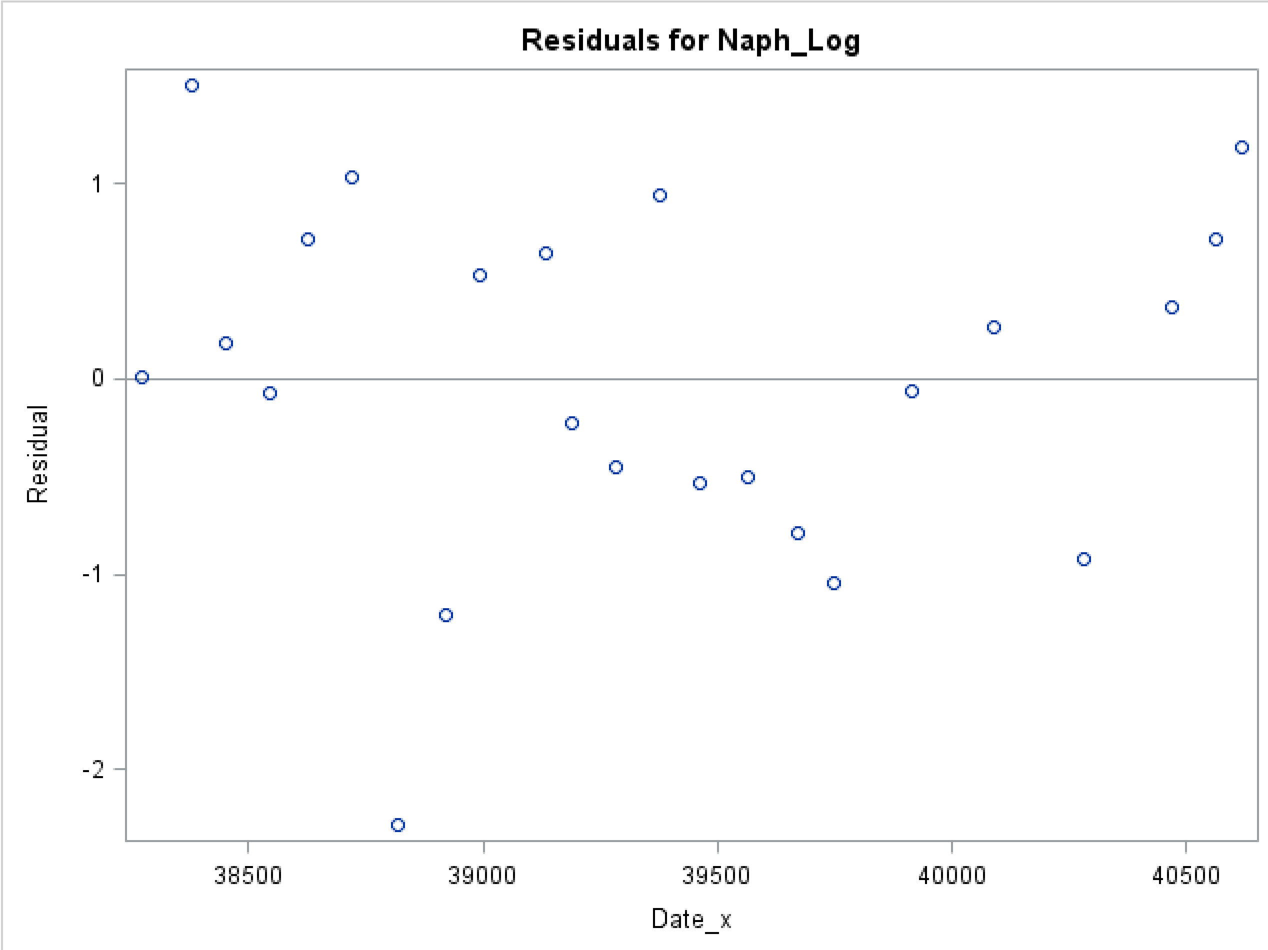
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	0.05060	10.61216	0.00	0.9962
Date_x	1	0.00000895	0.00026963	0.03	0.9738

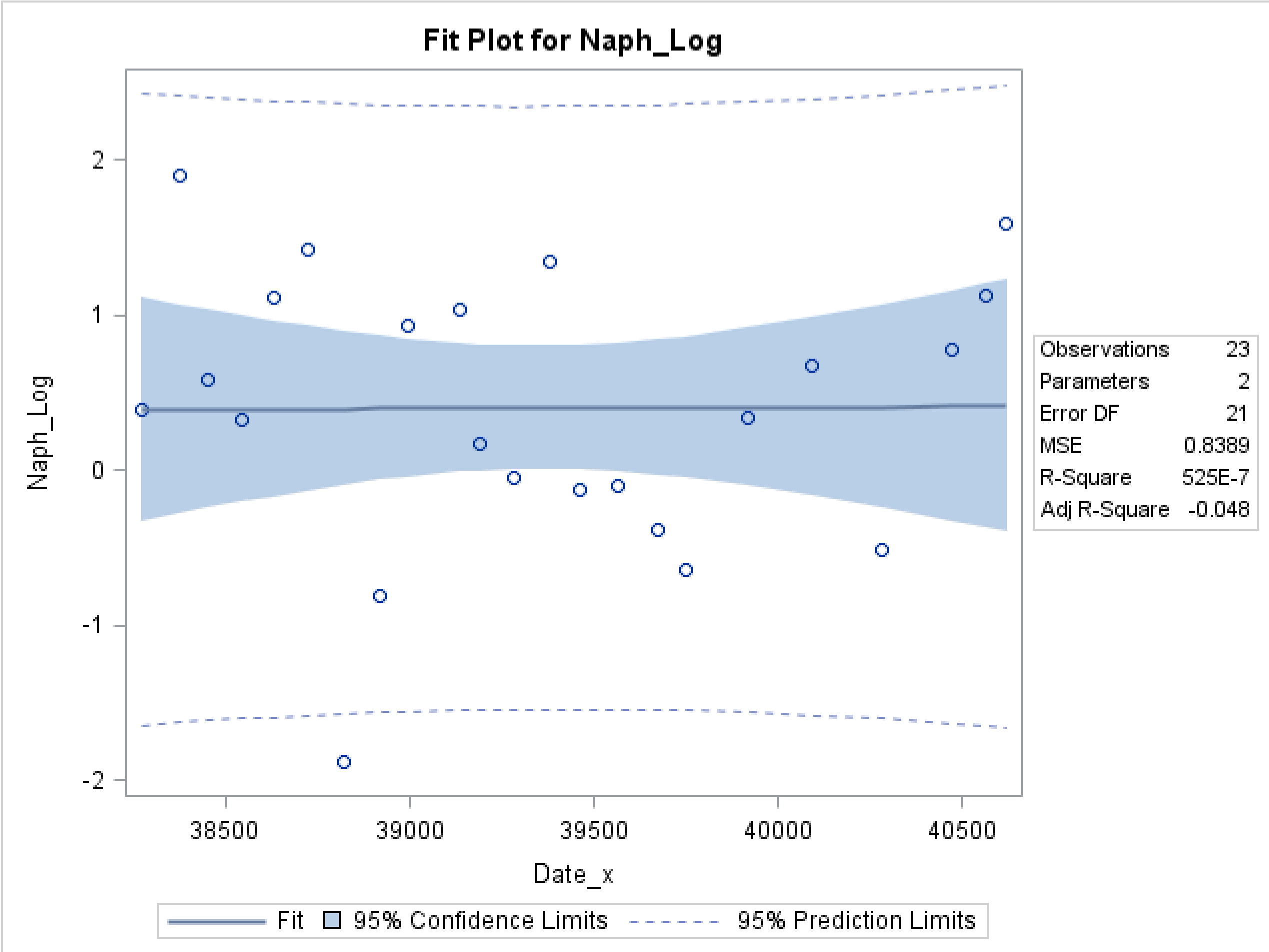
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW12




Residuals for Naph_Log
Residual
1
0
-1
-2
38500
39000
39500
40000
40500
Date_x


Fit Plot for Naph_Log
Naph_Log
Date_x
2
1
0
-1
-2
38500
39000
39500
40000
40500
Observations 23
Parameters 2
Error DF 21
MSE 0.8389
R-Square 525E-7
Adj R-Square -0.048
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.39853	0.39853	0.49	0.4933
Error	21	17.21825	0.81992		
Corrected Total	22	17.61679			

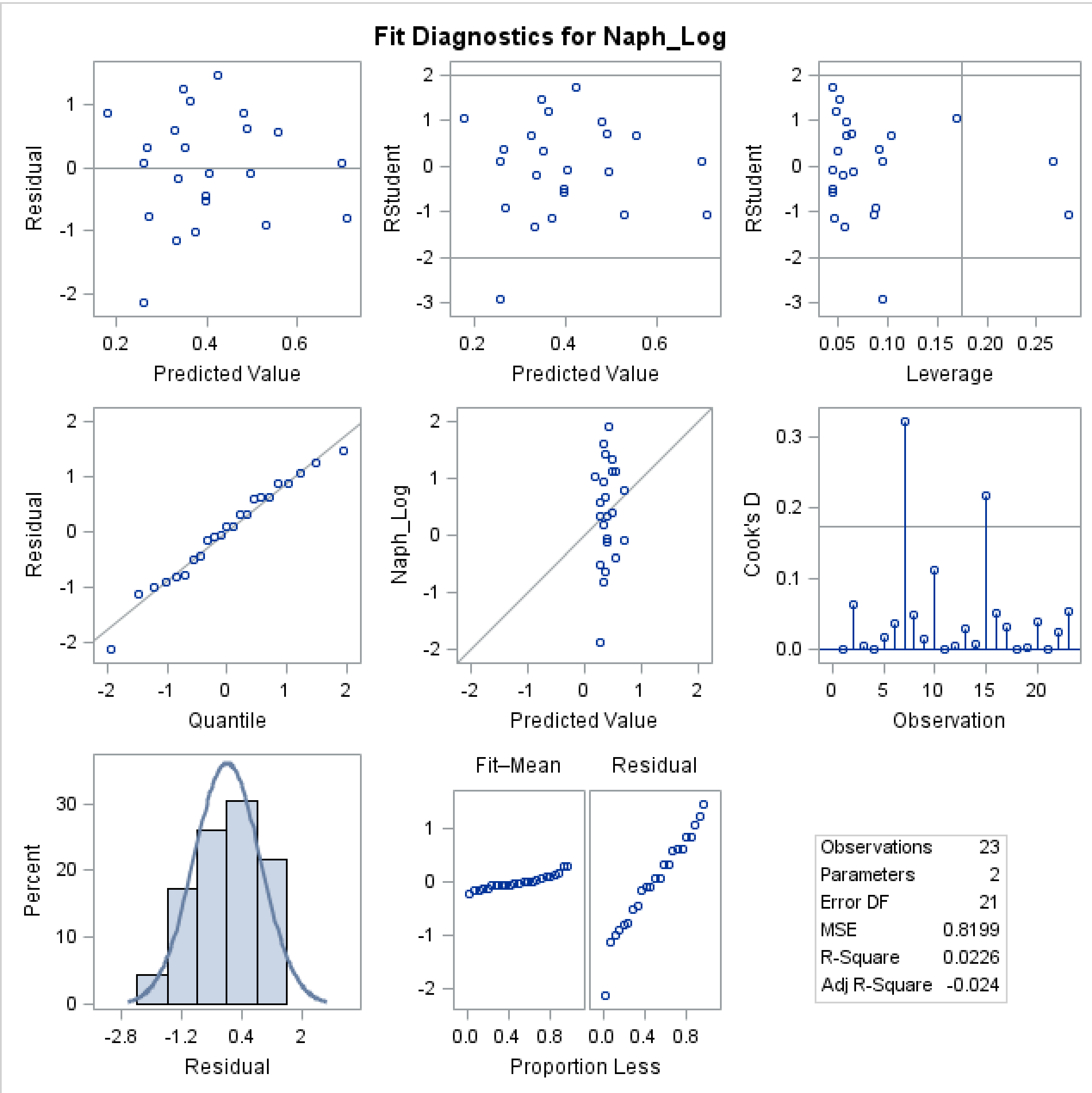
Root MSE	0.90549	**R-Square**	0.0226
Dependent Mean	0.40277	**Adj R-Sq**	-0.0239
Coeff Var	224.81895		

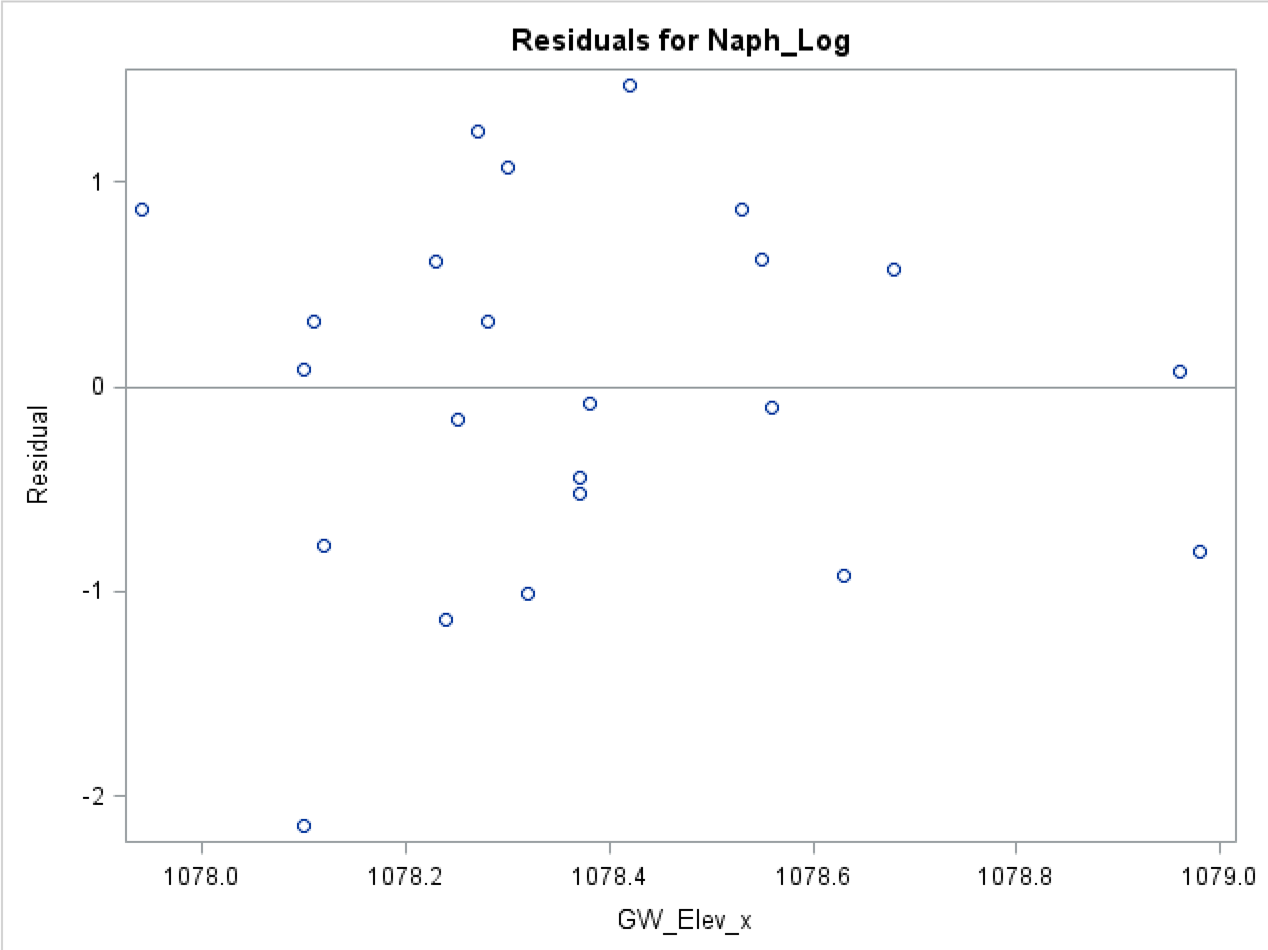
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	-552.43563	792.95802	-0.70	0.4936
GW_Elev_x	1	0.51266	0.73532	0.70	0.4933

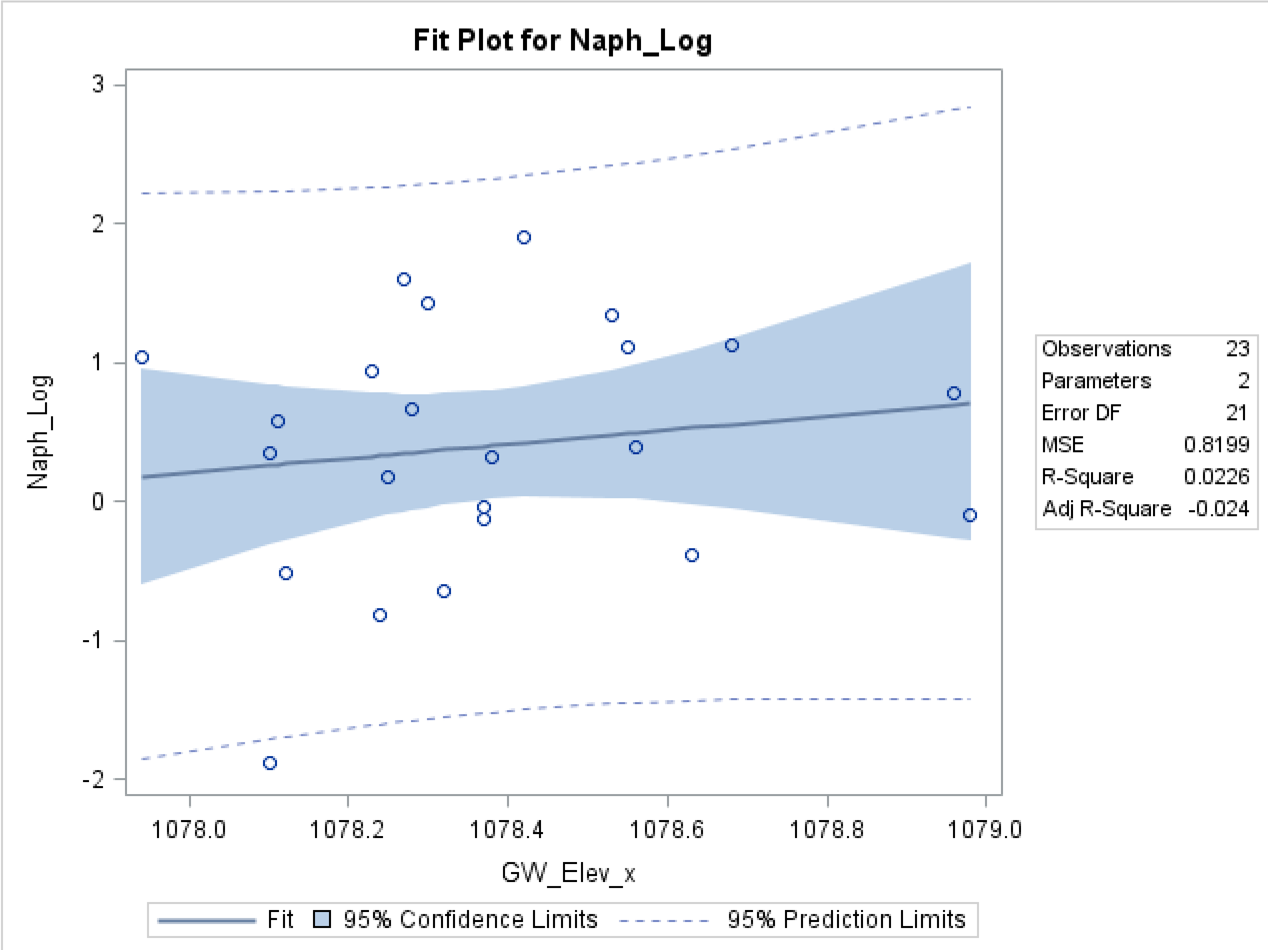
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW12




Residuals for Naph_Log
Residual
1
0
-1
-2
1078.0
1078.2
1078.4
1078.6
1078.8
1079.0
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
3
2
1
0
-1
-2
1078.0
1078.2
1078.4
1078.6
1078.8
1079.0
GW_Elev_x
Observations 23
Parameters 2
Error DF 21
MSE 0.8199
R-Square 0.0226
Adj R-Square -0.024
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW14

Number of Observations Read	11
Number of Observations Used	11

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.85287	0.85287	23.36	0.0009
Error	9	0.32859	0.03651		
Corrected Total	10	1.18147			

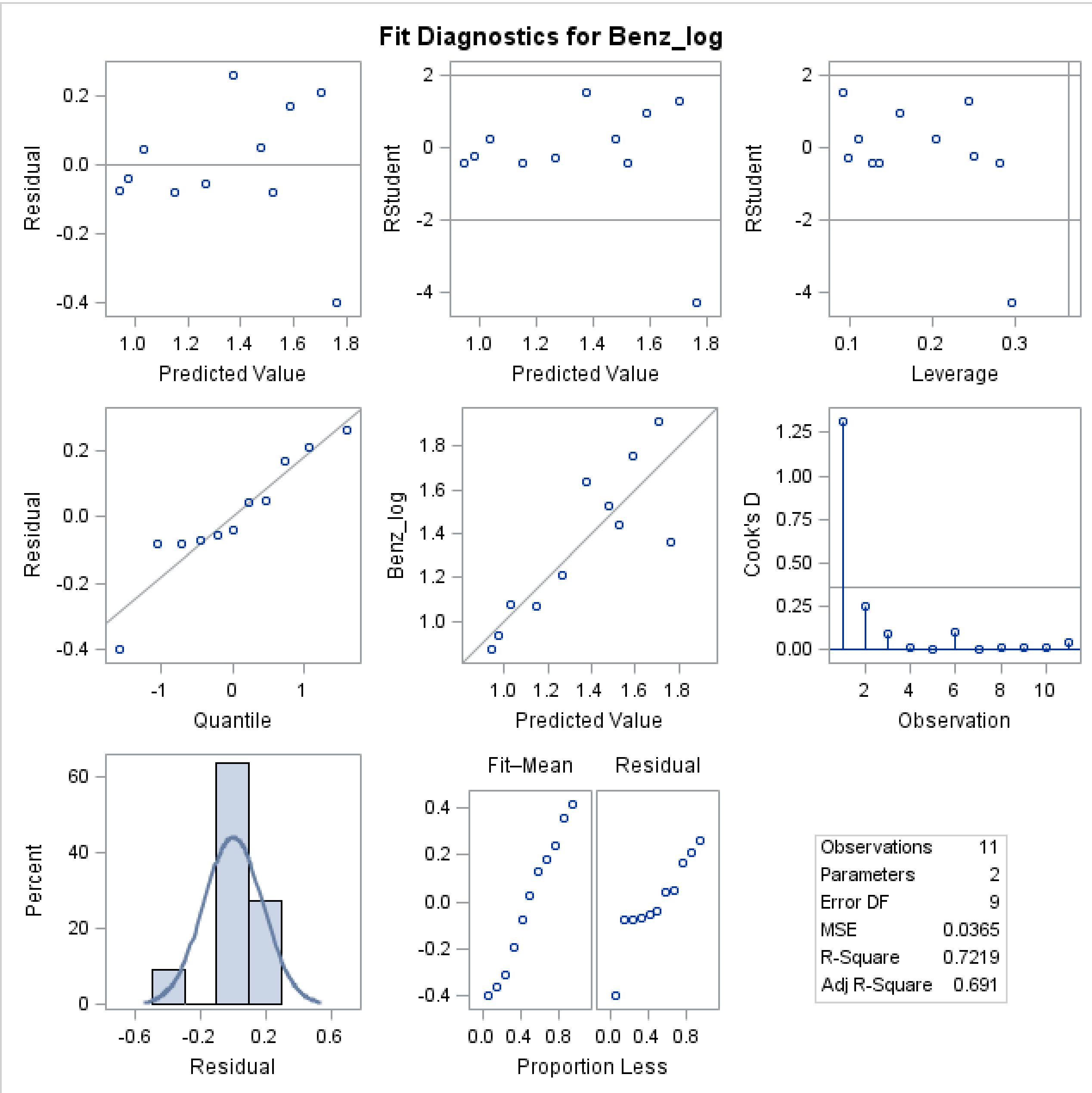
Root MSE	0.19108	R-Square	0.7219
Dependent Mean	1.34494	Adj R-Sq	0.6910
Coeff Var	14.20716		

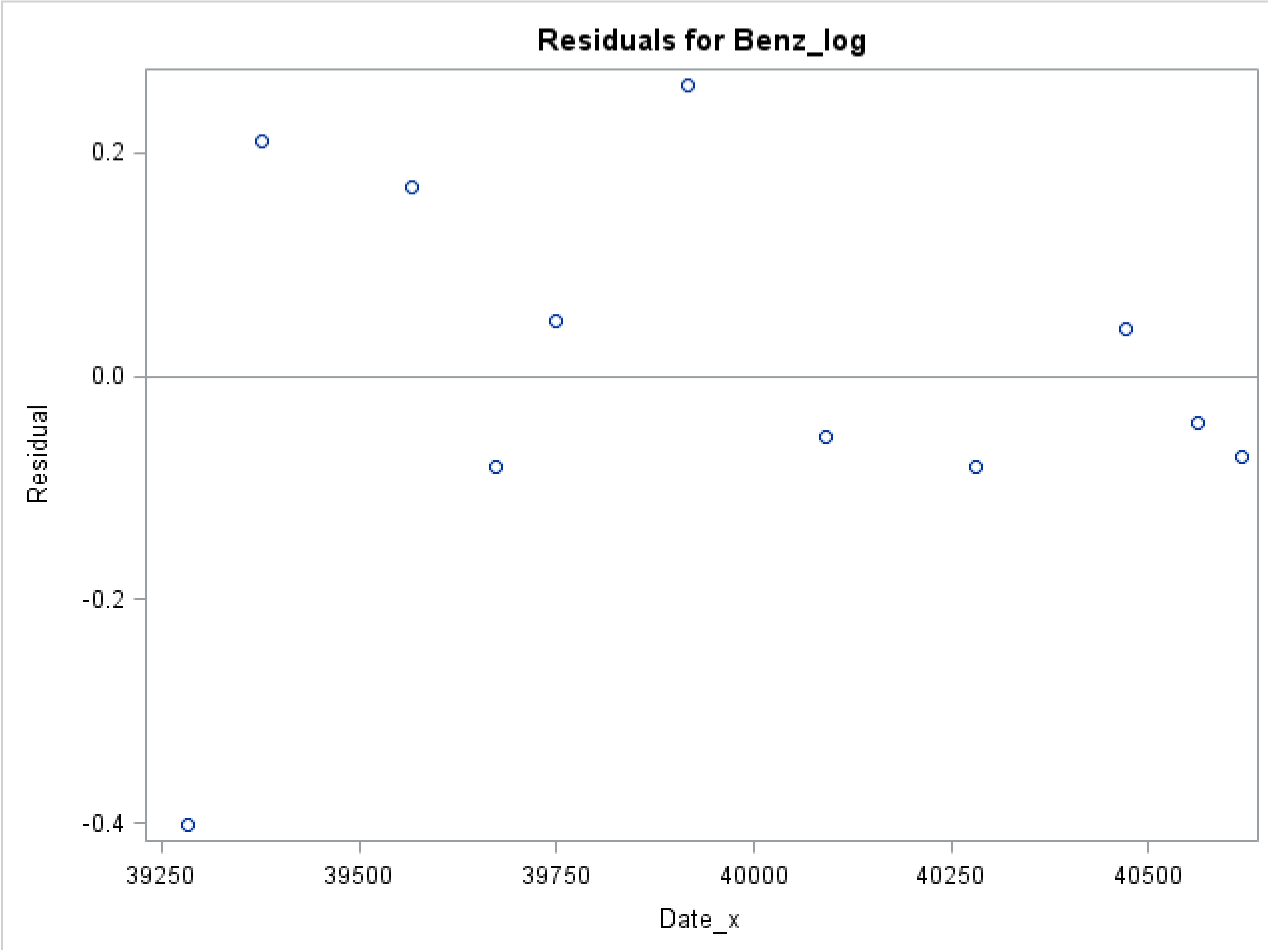
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	25.90385	5.08165	5.10	0.0006
Date_x	1	-0.00061455	0.00012715	-4.83	0.0009

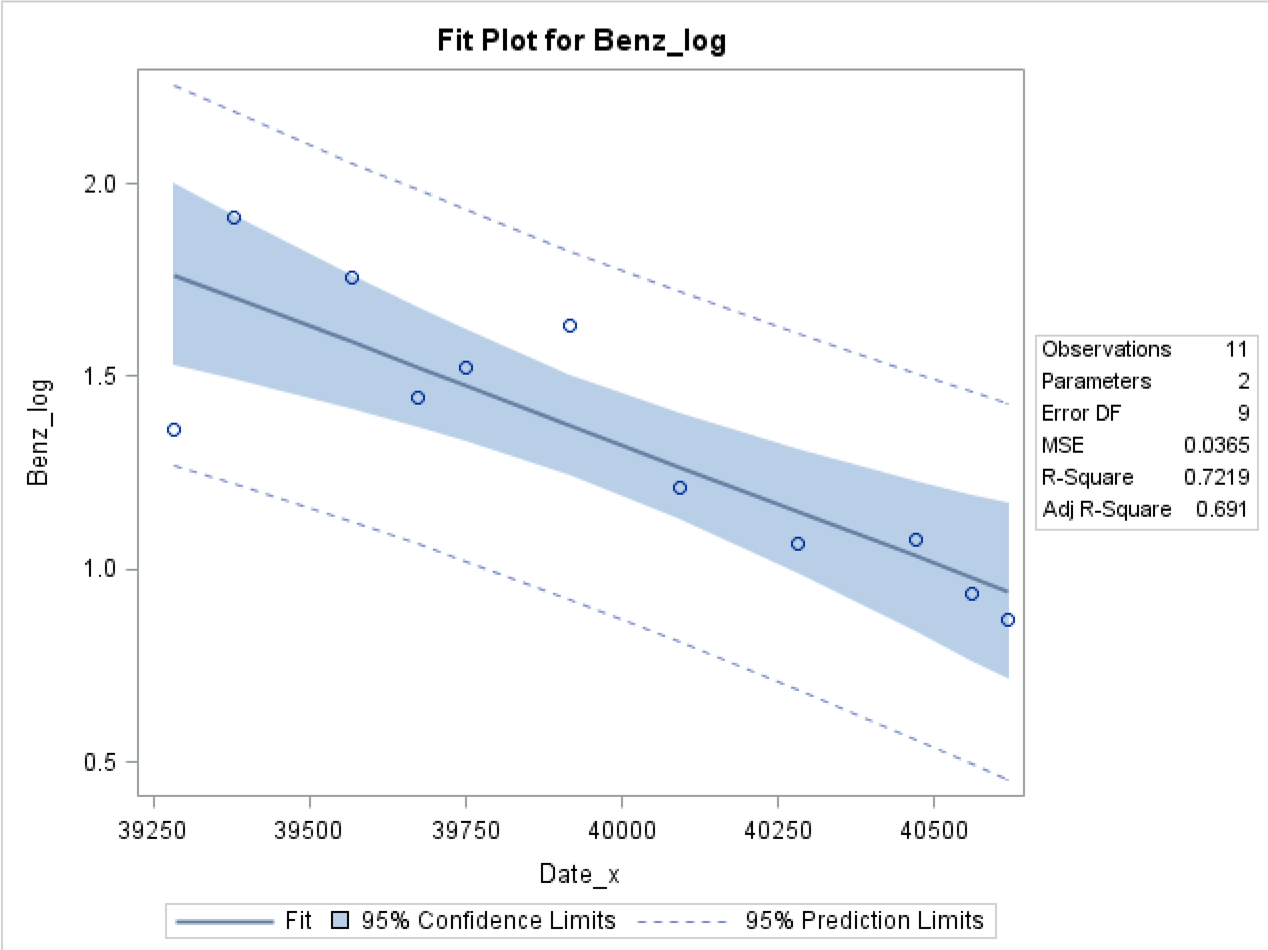
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW14




Residuals for Benz_log
Residual
Date_x
0.2
0.0
-0.2
-0.4
39250
39500
39750
40000
40250
40500


Fit Plot for Benz_log
Benz_log
2.0
1.5
1.0
0.5
39250
39500
39750
40000
40250
40500
Date_x
Observations 11
Parameters 2
Error DF 9
MSE 0.0365
R-Square 0.7219
Adj R-Square 0.691
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW14

Number of Observations Read	11
Number of Observations Used	11

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00519	0.00519	0.04	0.8465
Error	9	1.17628	0.13070		
Corrected Total	10	1.18147			

Root MSE	0.36152	R-Square	0.0044
Dependent Mean	1.34494	Adj R-Sq	-0.1062
Coeff Var	26.88019		

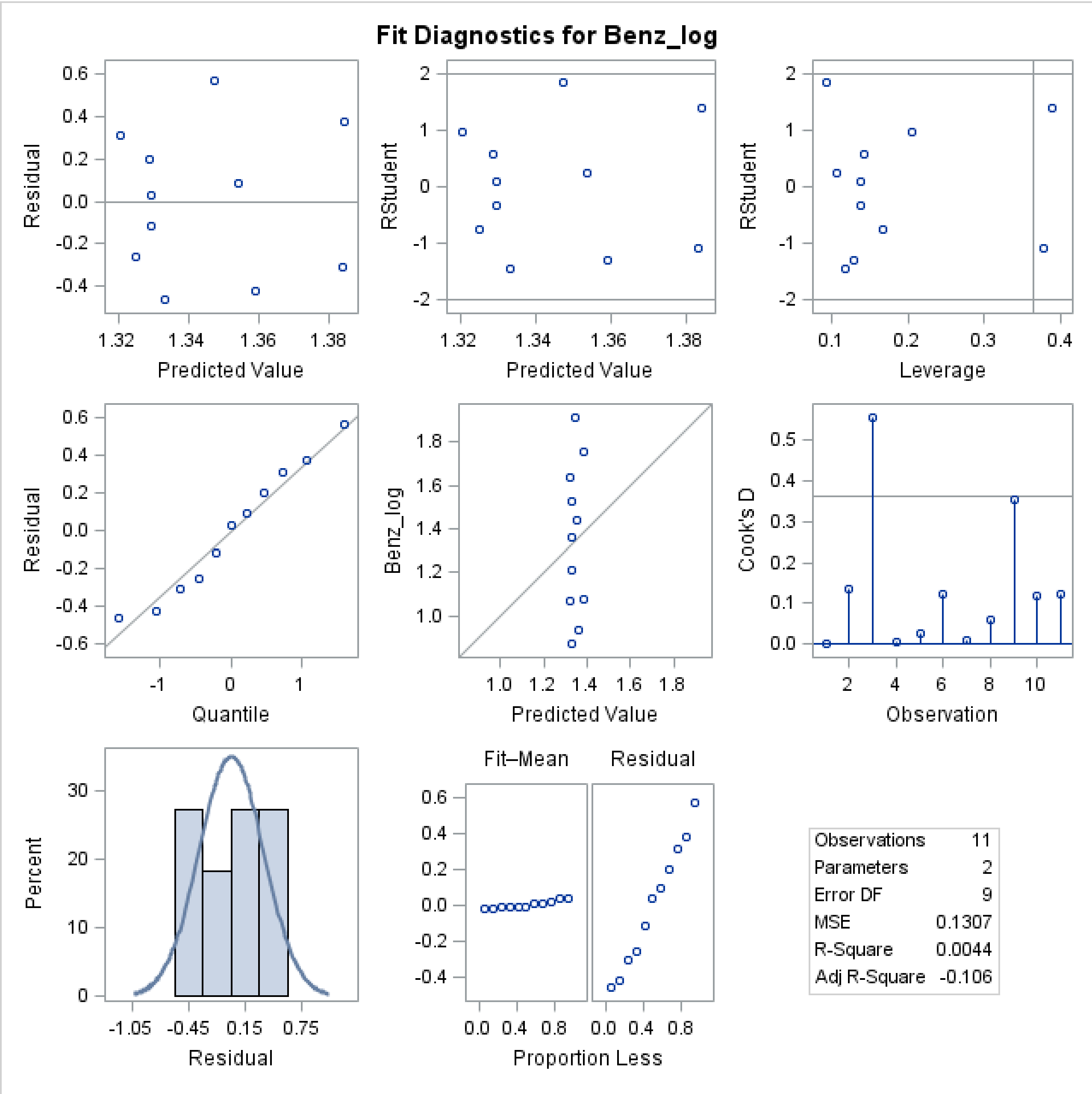
Parameter Estimates

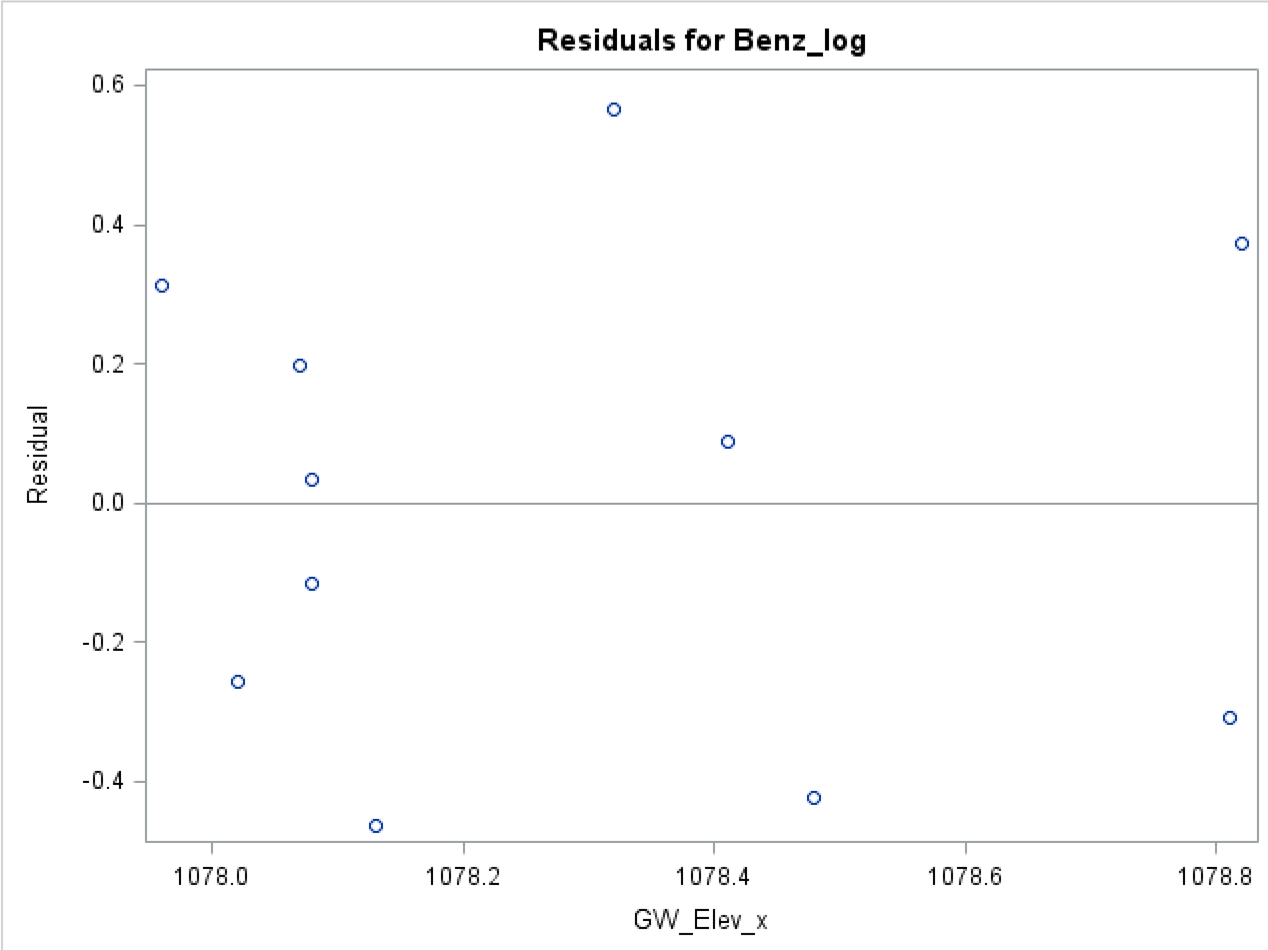
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-78.45898	400.65004	-0.20	0.8491
GW_Elev_x	1	0.07401	0.37156	0.20	0.8465

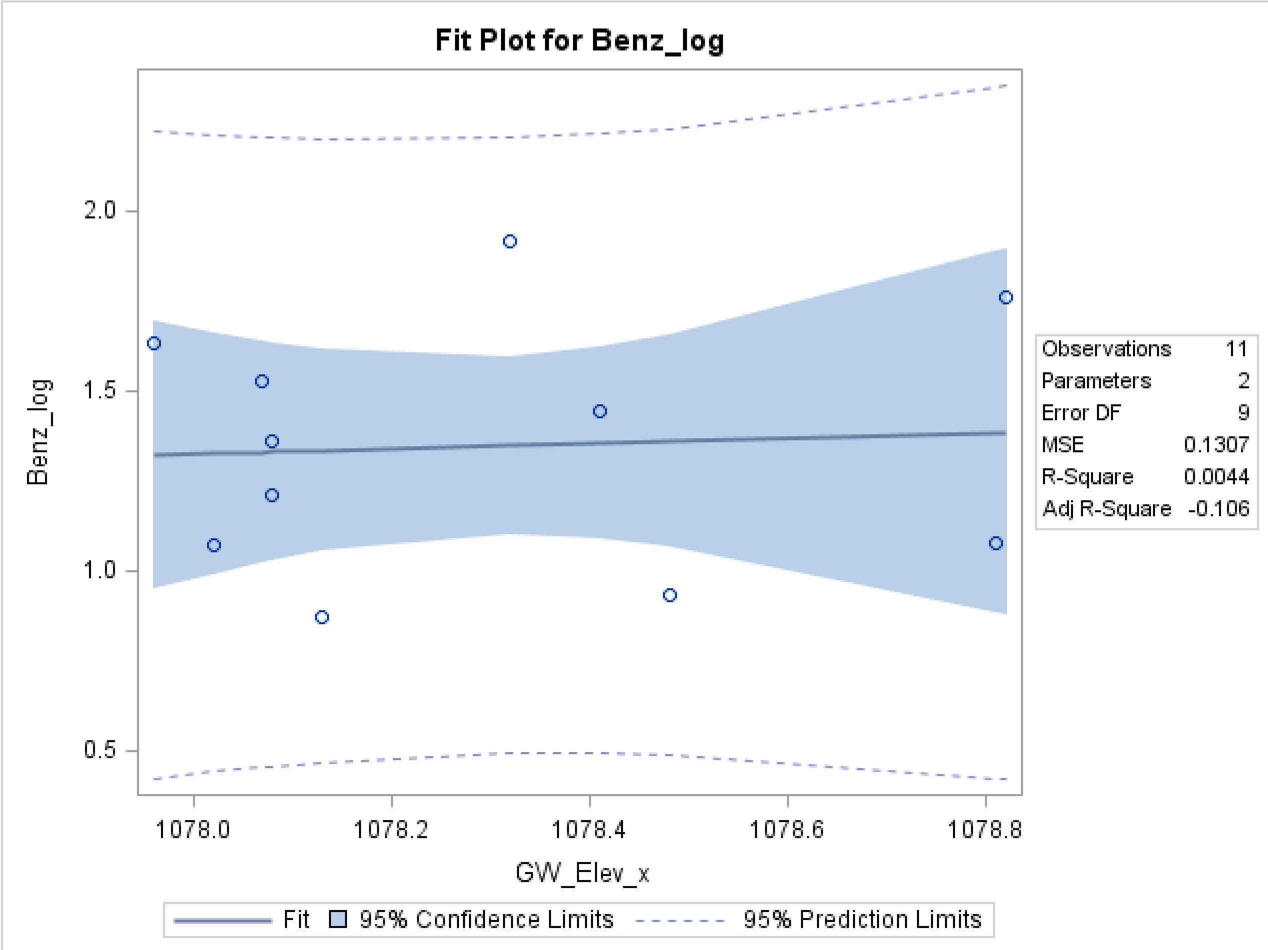
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW14




Residuals for Benz_log
Residual
0.6
0.4
0.2
0.0
-0.2
-0.4
1078.0
1078.2
1078.4
1078.6
1078.8
GW_Elev_x


Fit Plot for Benz_log
Benz_log
2.0
1.5
1.0
0.5
1078.0
1078.2
1078.4
1078.6
1078.8
GW_Elev_x
Observations 11
Parameters 2
Error DF 9
MSE 0.1307
R-Square 0.0044
Adj R-Square -0.106
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW14

Number of Observations Read	11
Number of Observations Used	11

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	4.27022	4.27022	4.70	0.0583
Error	9	8.17834	0.90870		
Corrected Total	10	12.44856			

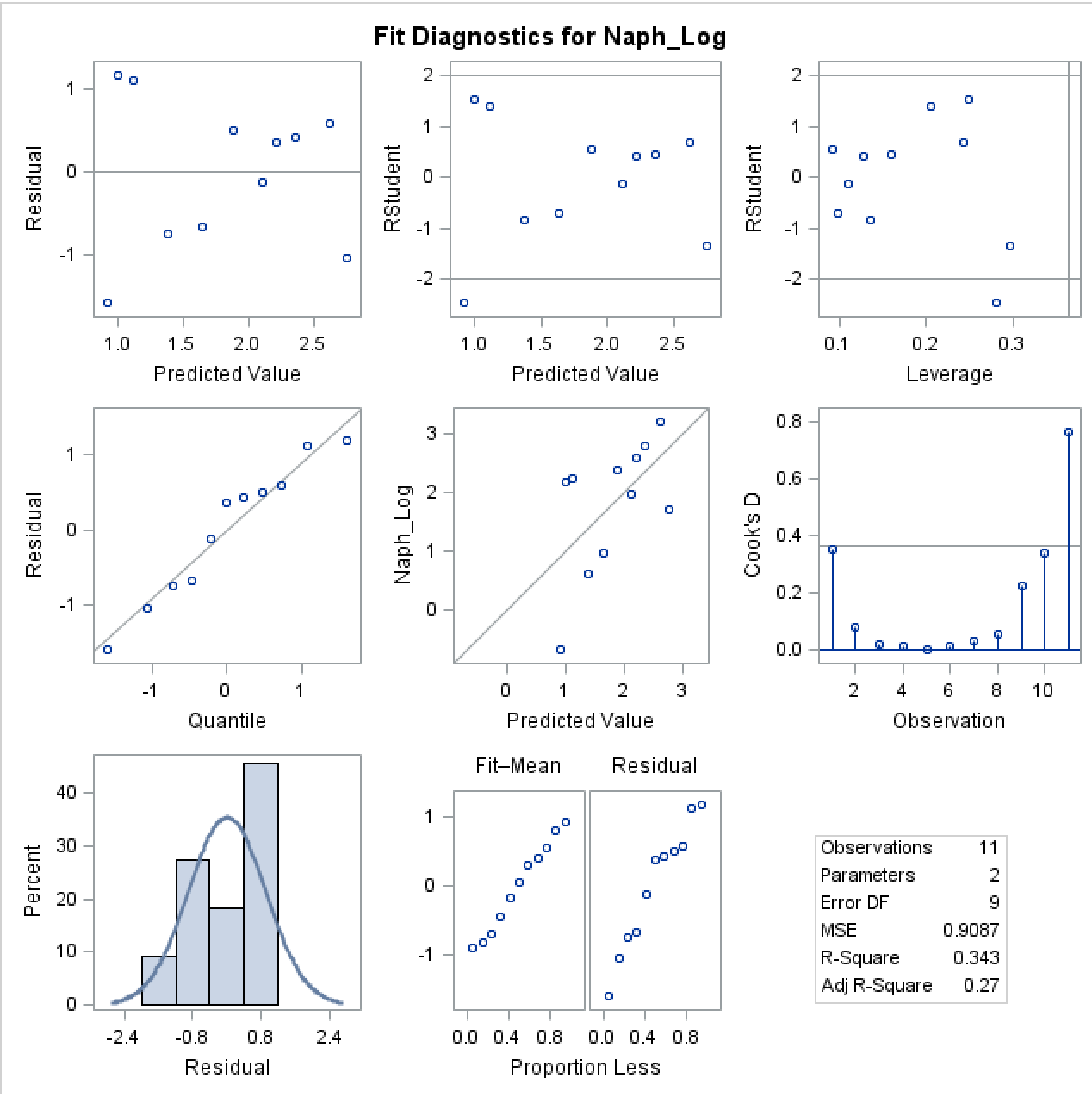
Root MSE	0.95326	**R-Square**	0.3430
Dependent Mean	1.81860	**Adj R-Sq**	0.2700
Coeff Var	52.41724		

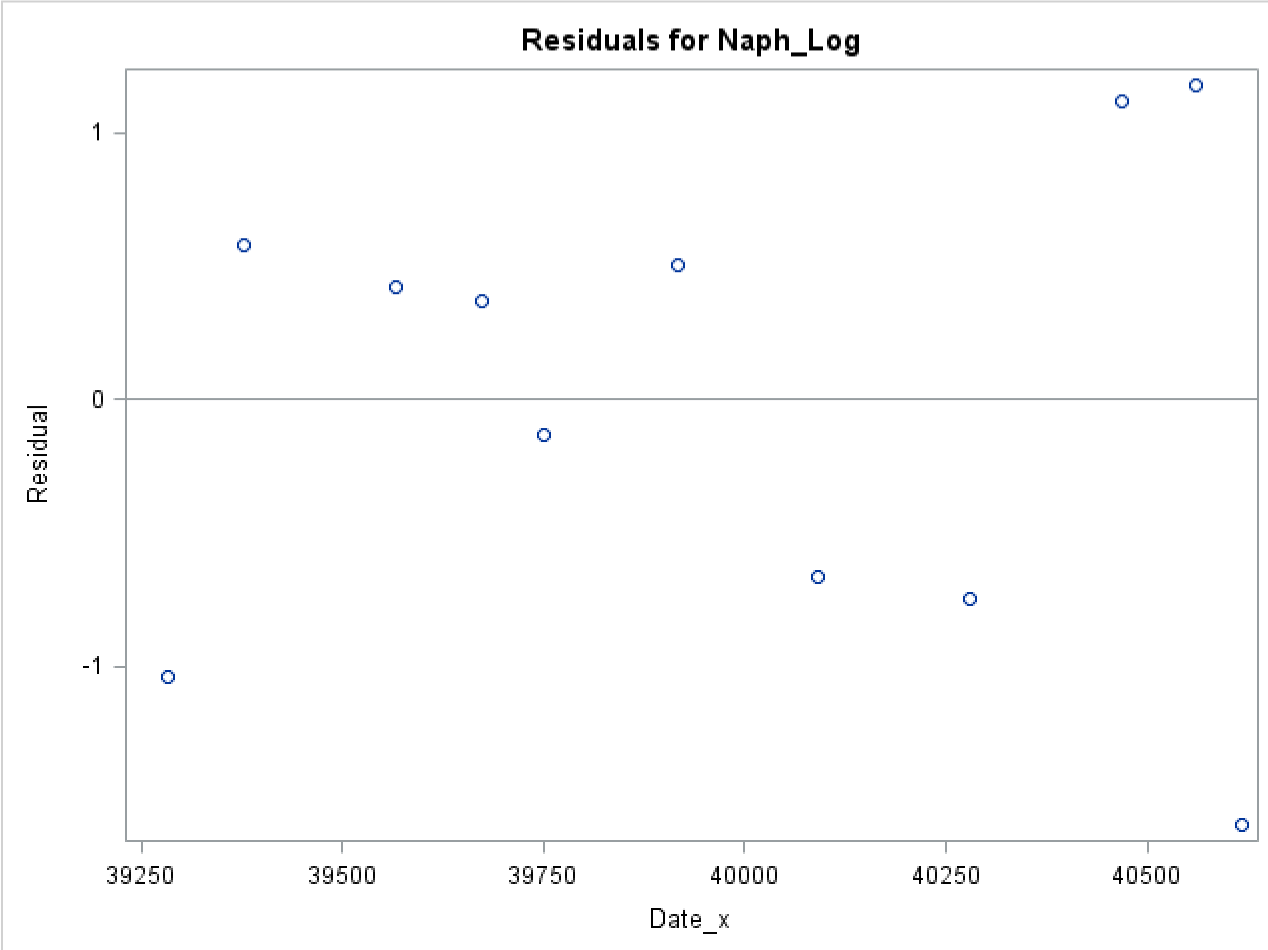
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	56.77174	25.35169	2.24	0.0519
Date_x	1	-0.00138	0.00063435	-2.17	0.0583

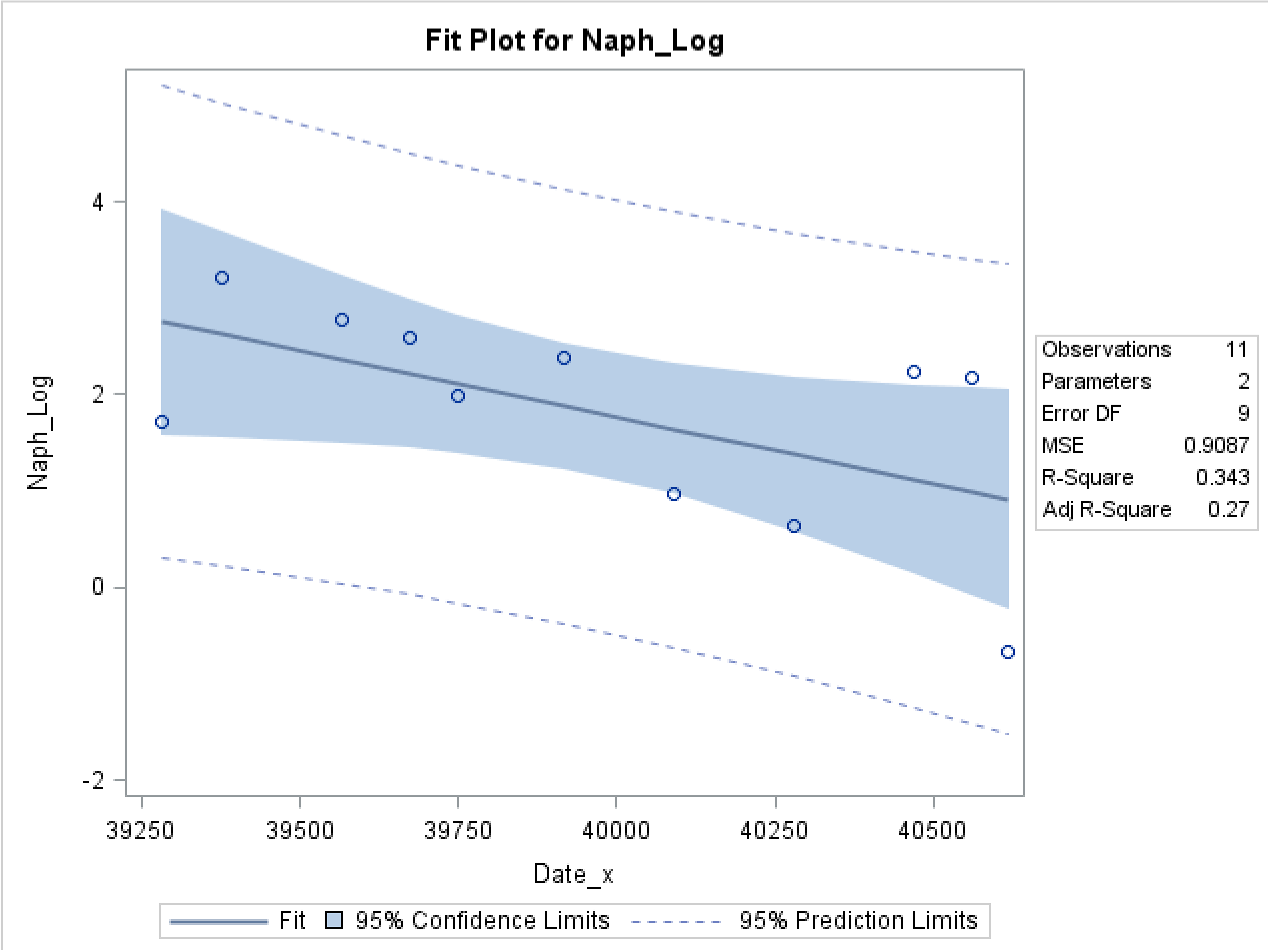
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW14




Residuals for Naph_Log
1
0
-1
Residual
39250
39500
39750
40000
40250
40500
Date_x


Fit Plot for Naph_Log
Naph_Log
4
2
0
-2
39250
39500
39750
40000
40250
40500
Date_x
Observations 11
Parameters 2
Error DF 9
MSE 0.9087
R-Square 0.343
Adj R-Square 0.27
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW14

Number of Observations Read	11
Number of Observations Used	11

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.78951	2.78951	2.60	0.1414
Error	9	9.65905	1.07323		
Corrected Total	10	12.44856			

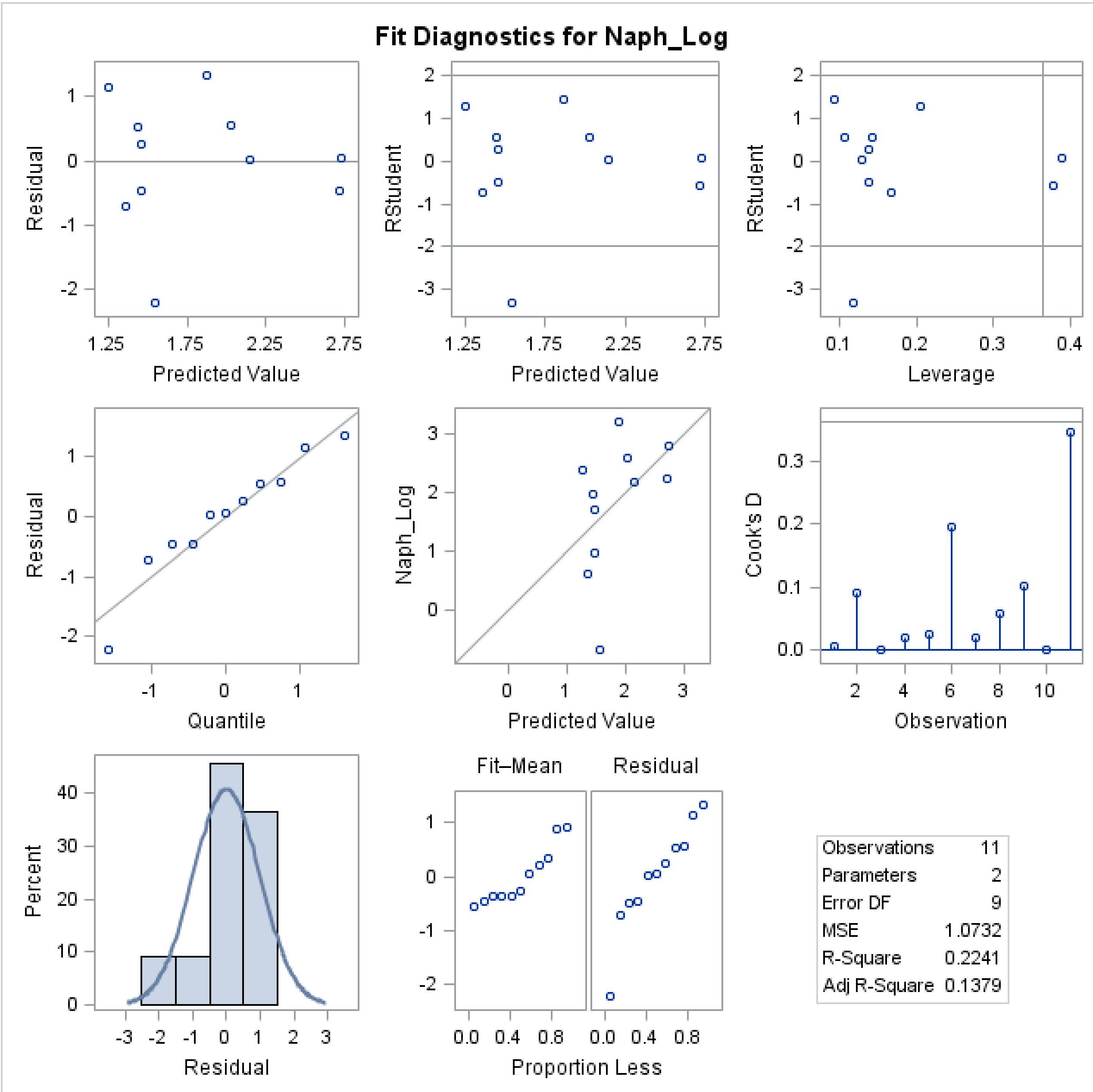
Root MSE	1.03597	R-Square	0.2241
Dependent Mean	1.81860	Adj R-Sq	0.1379
Coeff Var	56.96509		

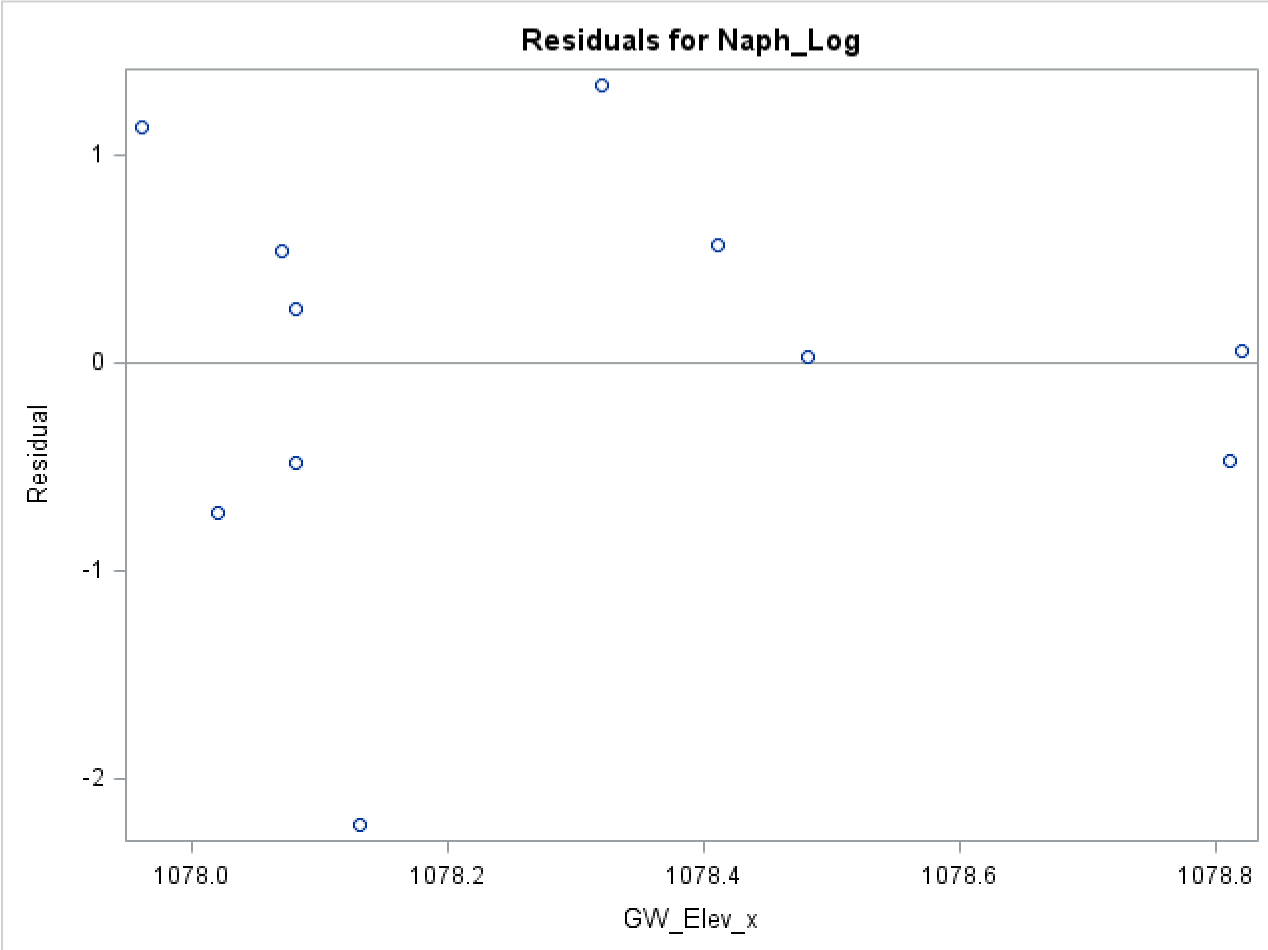
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-1849.13187	1148.09298	-1.61	0.1417
GW_Elev_x	1	1.71656	1.06474	1.61	0.1414

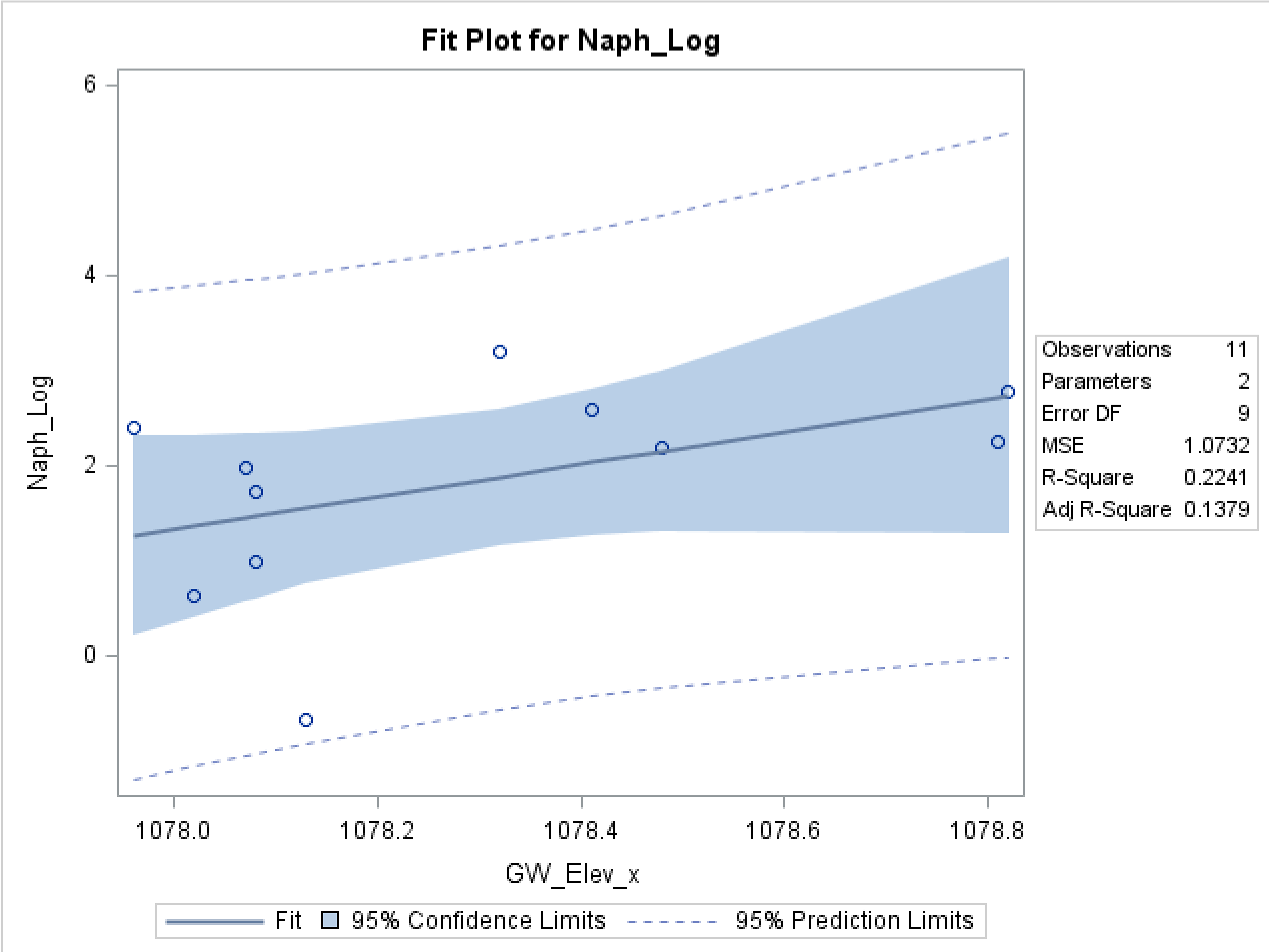
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW14




Residuals for Naph_Log
Residual
1
0
-1
-2
1078.0
1078.2
1078.4
1078.6
1078.8
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
6
4
2
0
1078.0
1078.2
1078.4
1078.6
1078.8
Observations 11
Parameters 2
Error DF 9
MSE 1.0732
R-Square 0.2241
Adj R-Square 0.1379
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW3

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.01783	0.01783	0.04	0.8352
Error	21	8.43764	0.40179		
Corrected Total	22	8.45547			

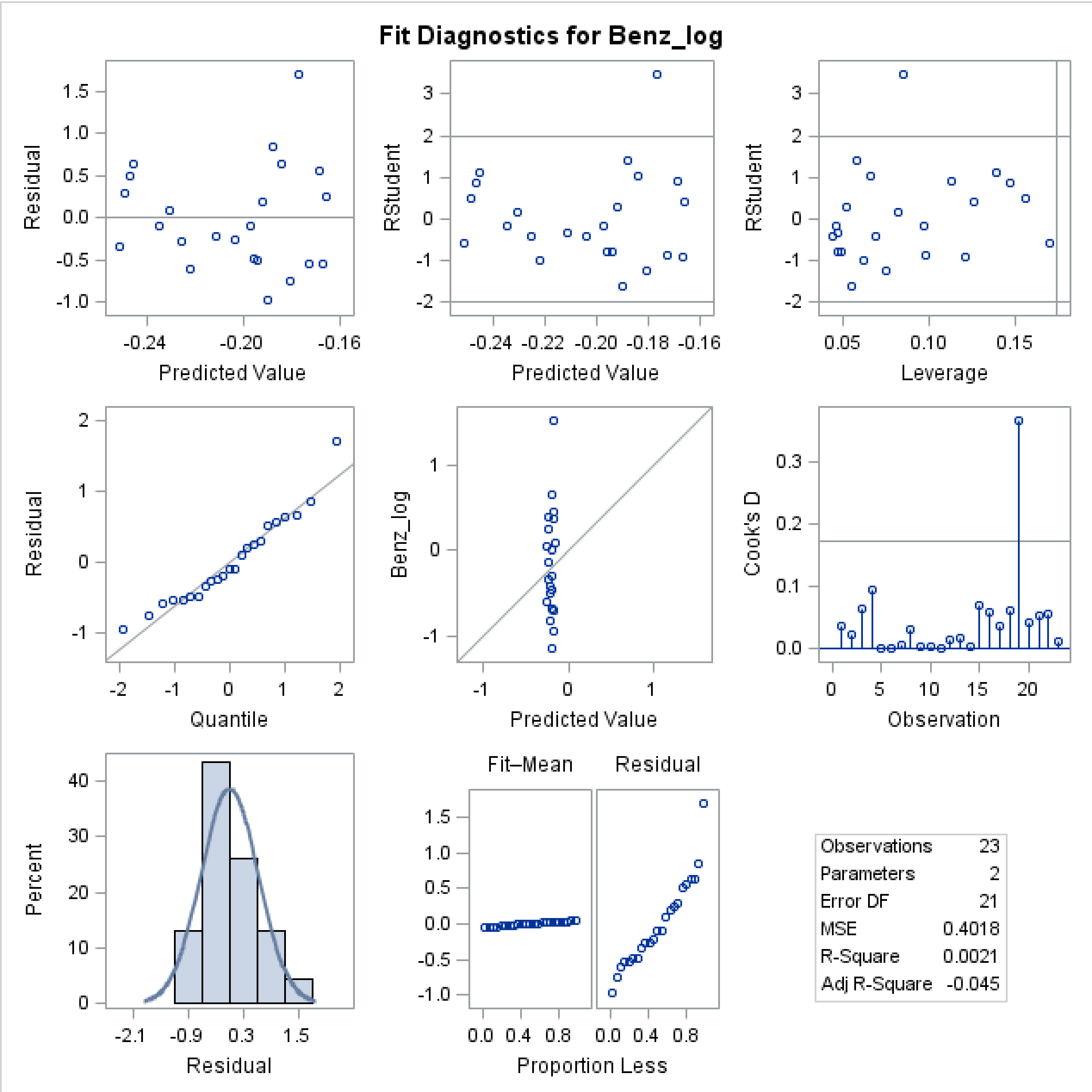
Root MSE	0.63387	R-Square	0.0021
Dependent Mean	-0.20405	Adj R-Sq	-0.0454
Coeff Var	-310.64831		

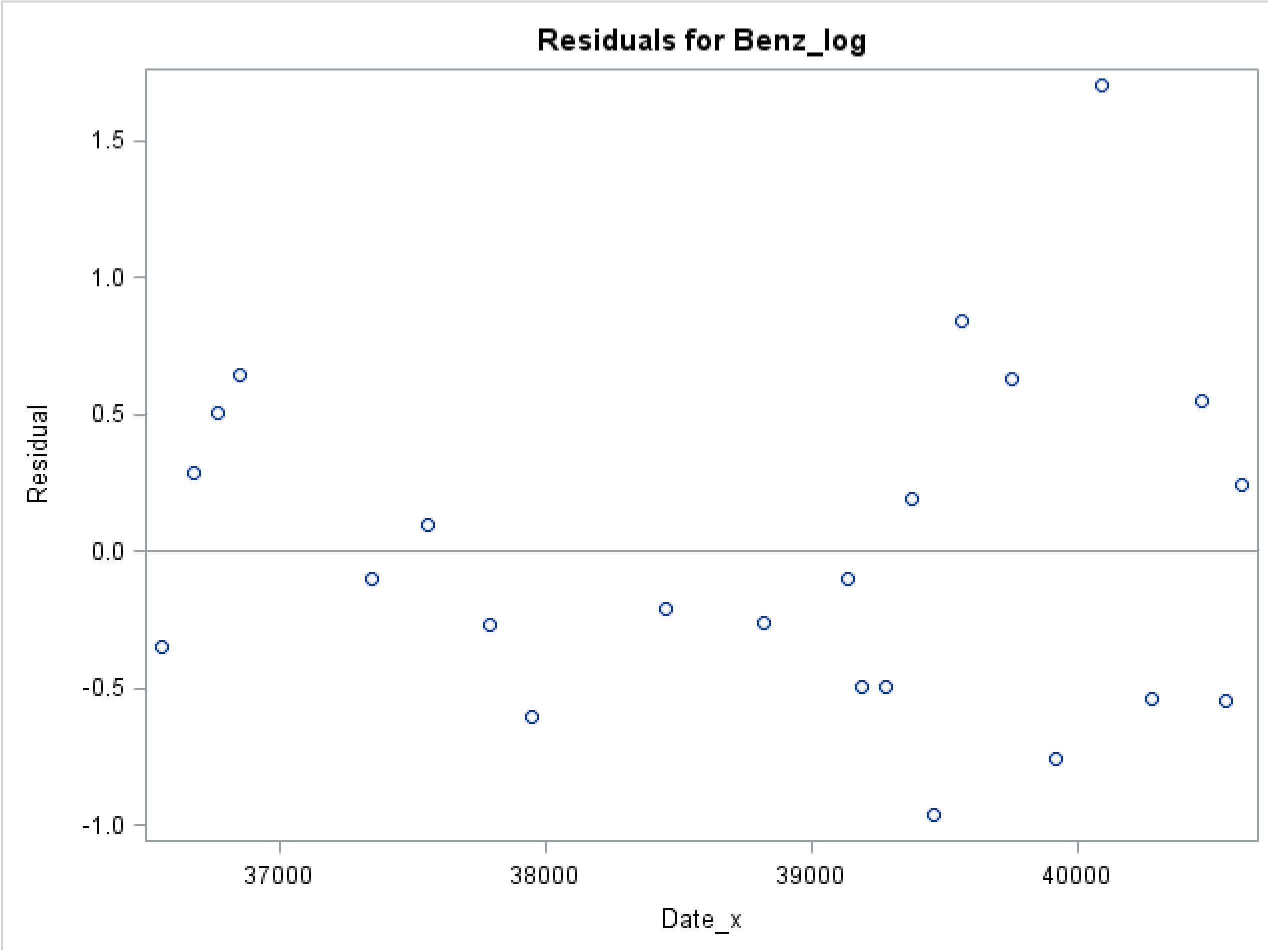
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-1.02272	3.88850	-0.26	0.7951
Date_x	1	0.00002110	0.00010015	0.21	0.8352

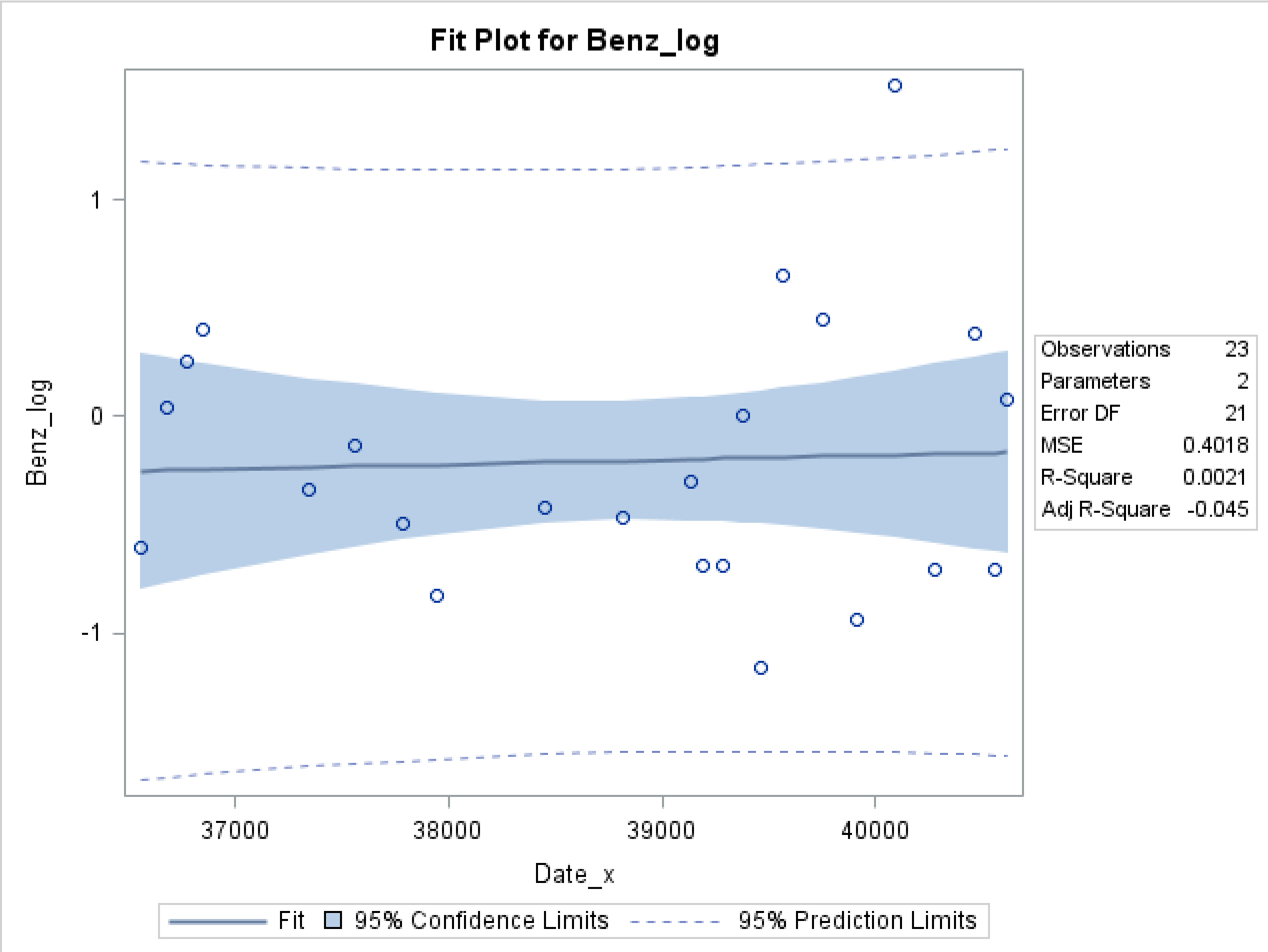
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW3




Residuals for Benz_log
Residual
1.5
1.0
0.5
0.0
-0.5
-1.0
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
Benz_log
Date_x
1
0
-1
37000
38000
39000
40000
Observations 23
Parameters 2
Error DF 21
MSE 0.4018
R-Square 0.0021
Adj R-Square -0.045
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW3

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.01736	0.01736	0.04	0.8374
Error	21	8.43812	0.40182		
Corrected Total	22	8.45547			

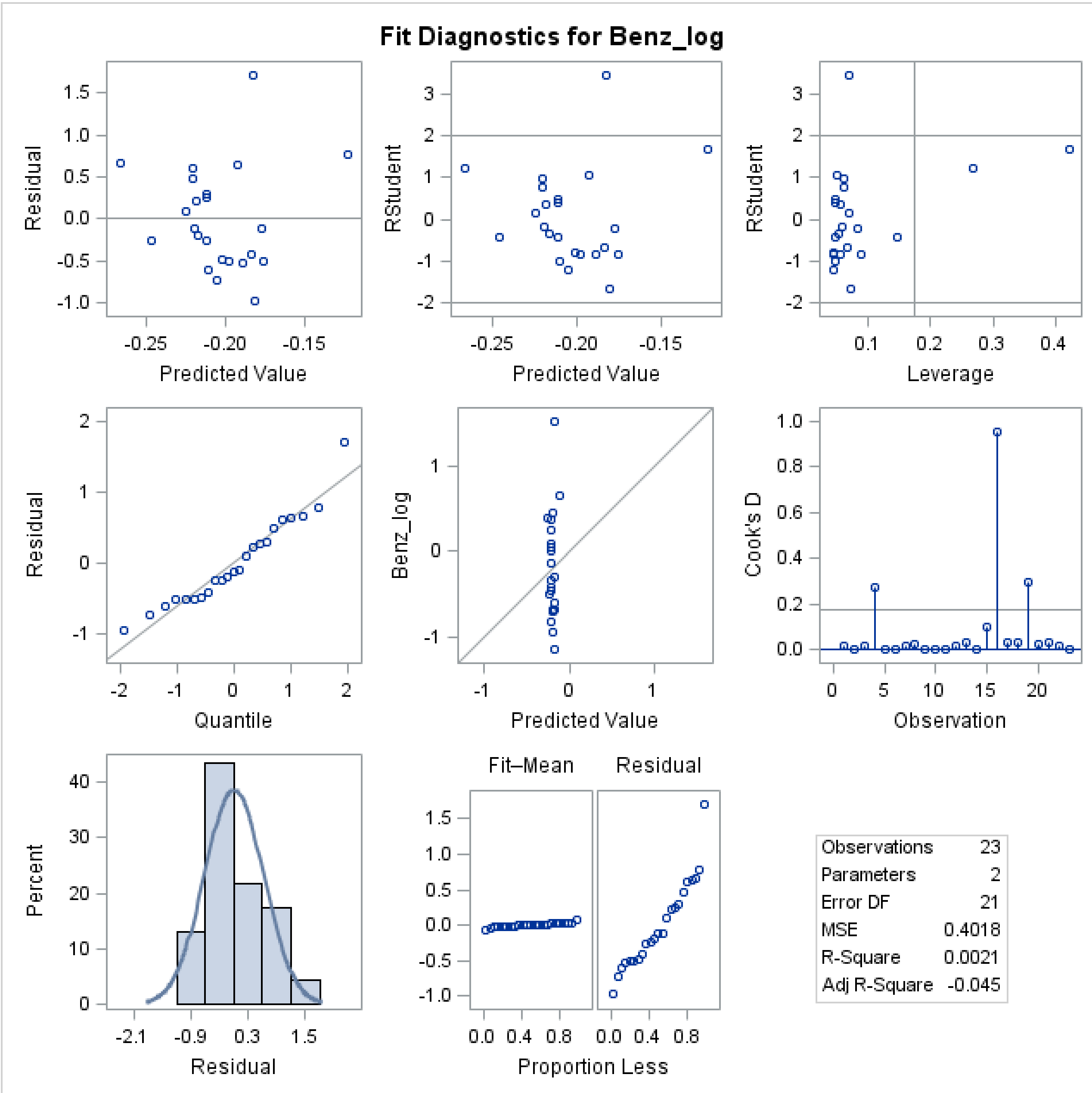
Root MSE	0.63389	R-Square	0.0021
Dependent Mean	-0.20405	Adj R-Sq	-0.0455
Coeff Var	-310.65702		

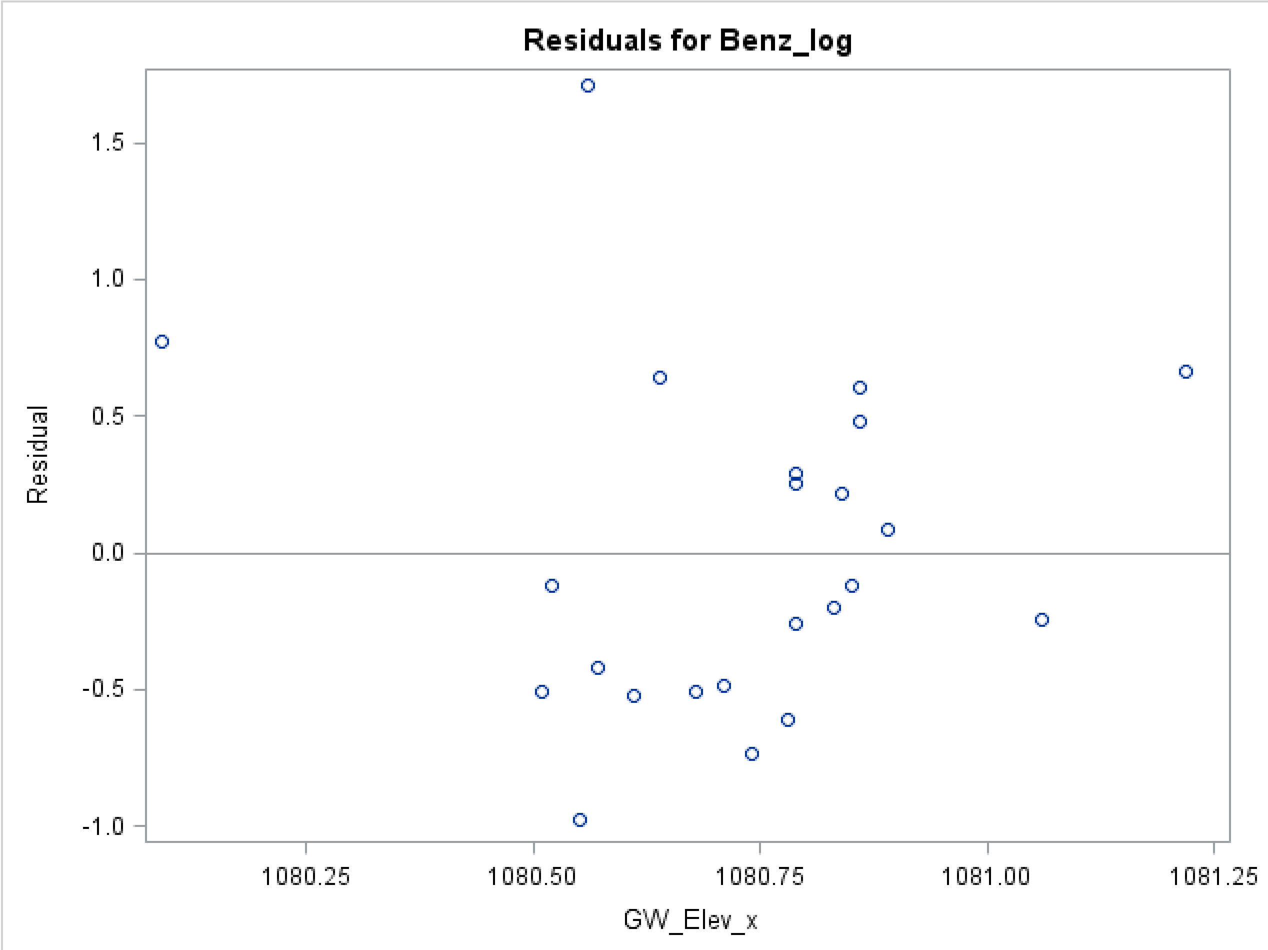
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	137.27438	661.47336	0.21	0.8376
GW_Elev_x	1	-0.12721	0.61206	-0.21	0.8374

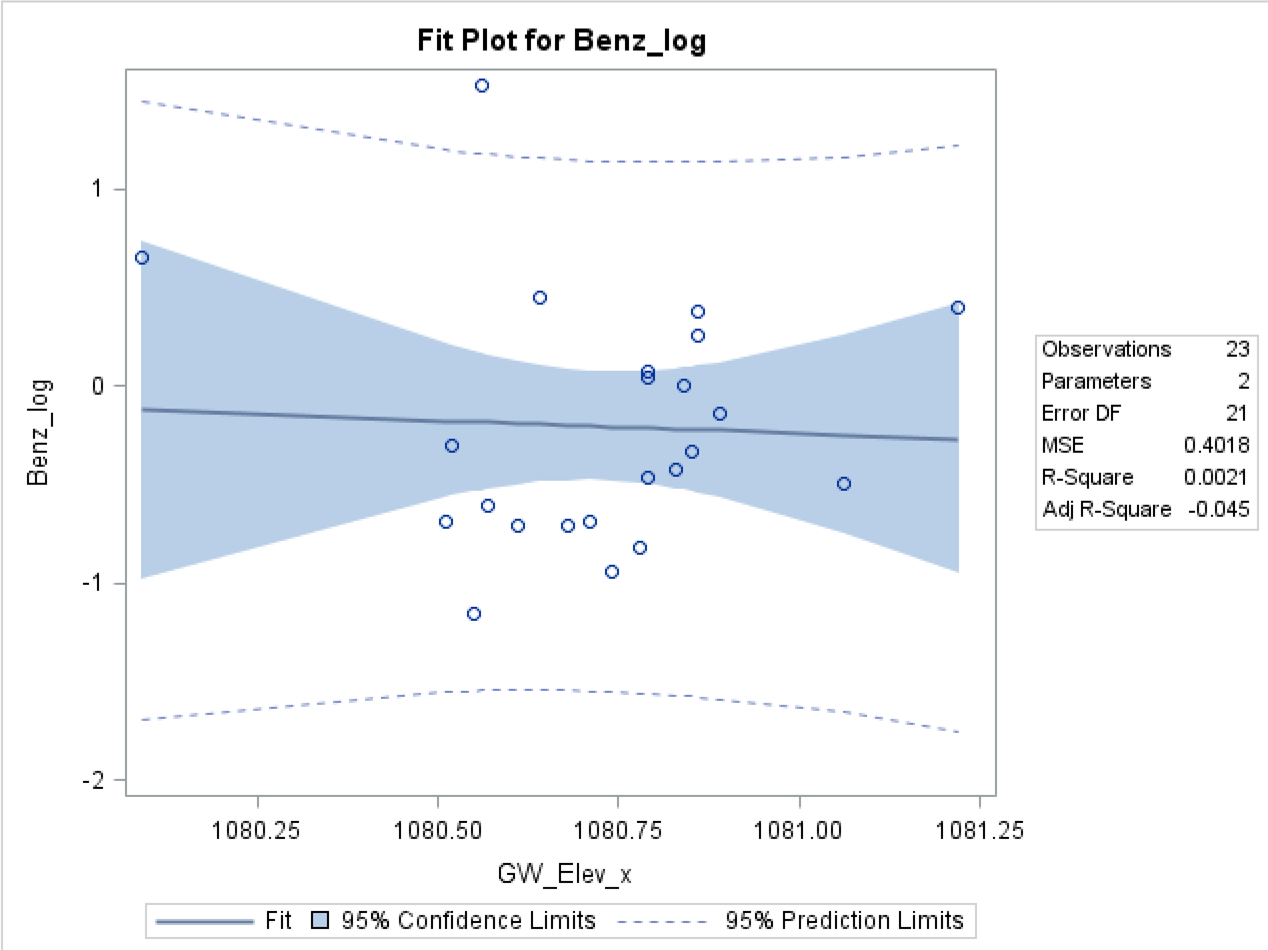
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW3




Residuals for Benz_log
Residual
GW_Elev_x
1.5
1.0
0.5
0.0
-0.5
-1.0
1080.25
1080.50
1080.75
1081.00
1081.25


Fit Plot for Benz_log
1
0
-1
-2
Benz_log
1080.25
1080.50
1080.75
1081.00
1081.25
GW_Elev_x
Observations 23
Parameters 2
Error DF 21
MSE 0.4018
R-Square 0.0021
Adj R-Square -0.045
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW3

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	3.94482	3.94482	3.21	0.0876
Error	21	25.80950	1.22902		
Corrected Total	22	29.75432			

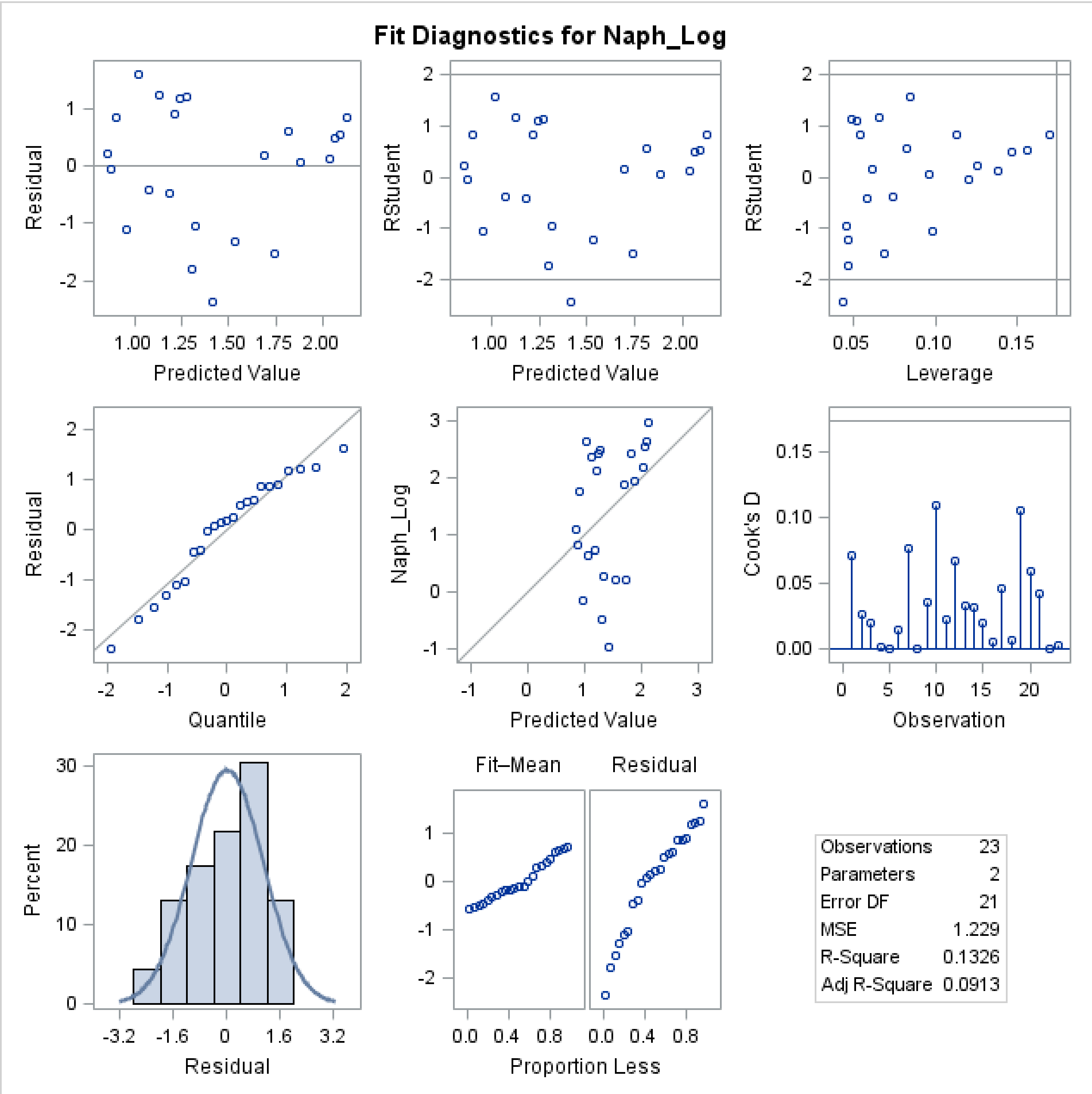
Root MSE	1.10861	R-Square	0.1326
Dependent Mean	1.42502	Adj R-Sq	0.0913
Coeff Var	77.79625		

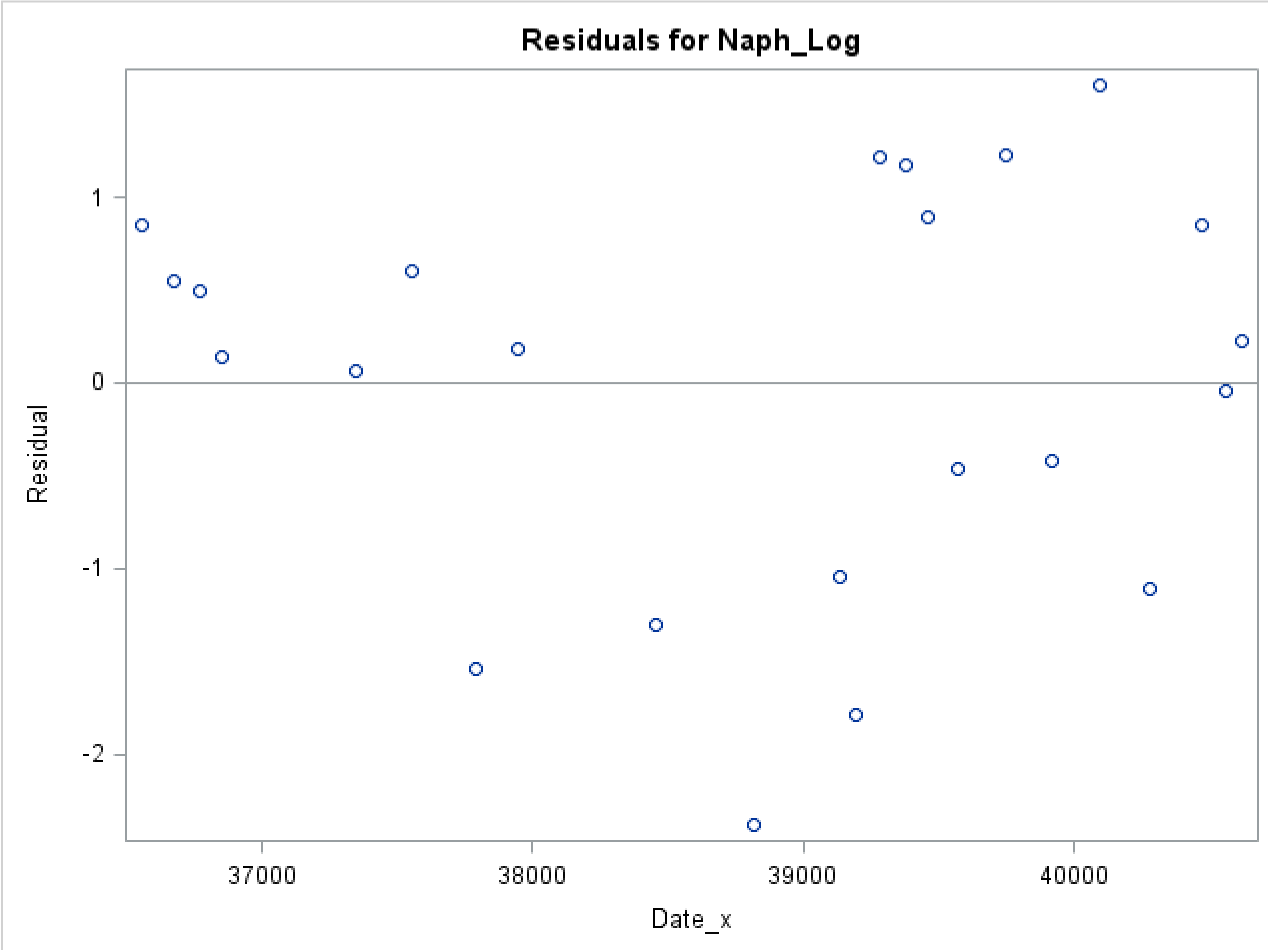
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	13.60213	6.80082	2.00	0.0586
Date_x	1	-0.00031382	0.00017517	-1.79	0.0876

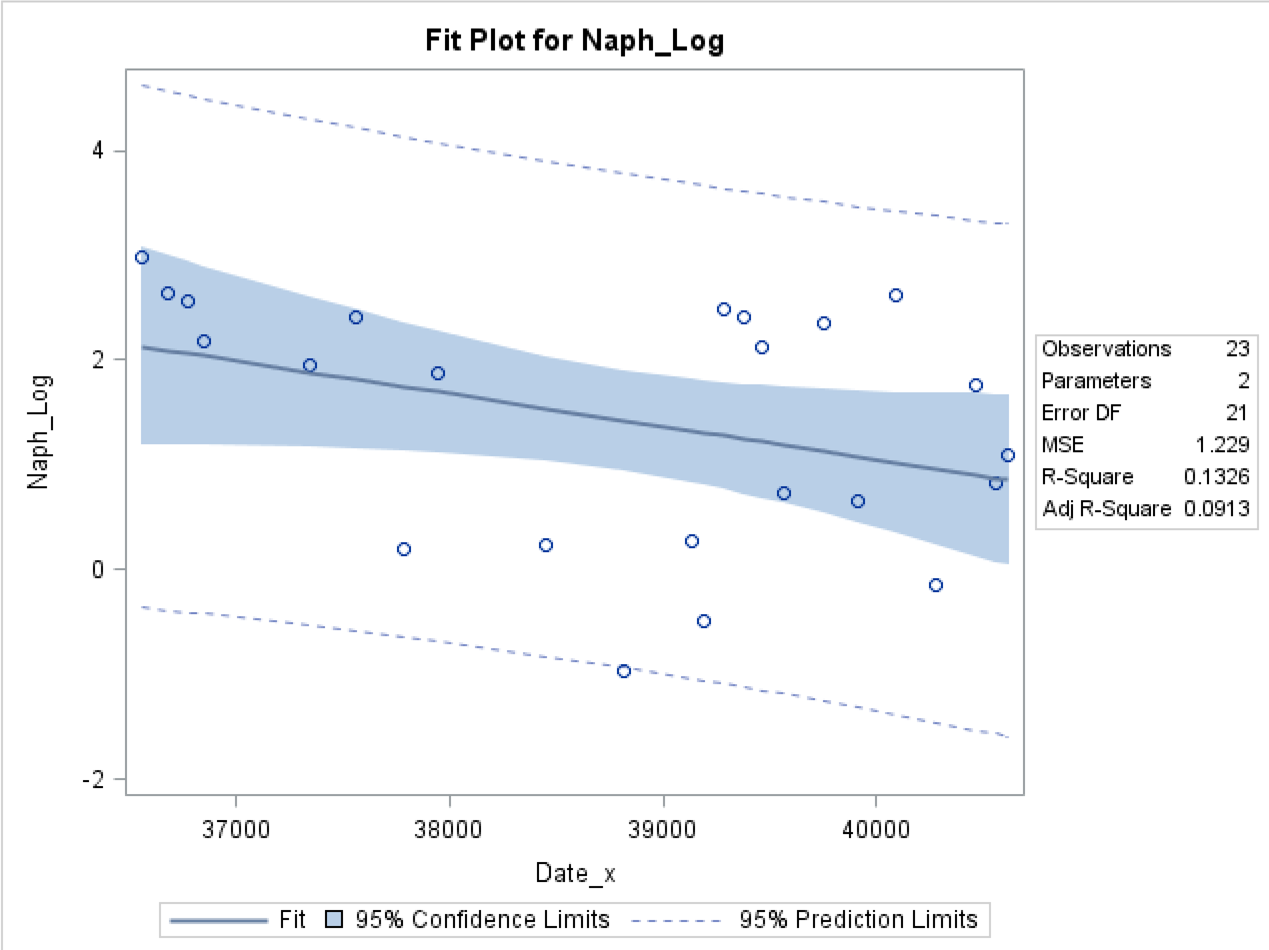
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW3




Residuals for Naph_Log
Residual
1
0
-1
-2
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
Date_x
4
2
0
-2
37000
38000
39000
40000
Observations 23
Parameters 2
Error DF 21
MSE 1.229
R-Square 0.1326
Adj R-Square 0.0913
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW3

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.10808	0.10808	0.08	0.7847
Error	21	29.64624	1.41173		
Corrected Total	22	29.75432			

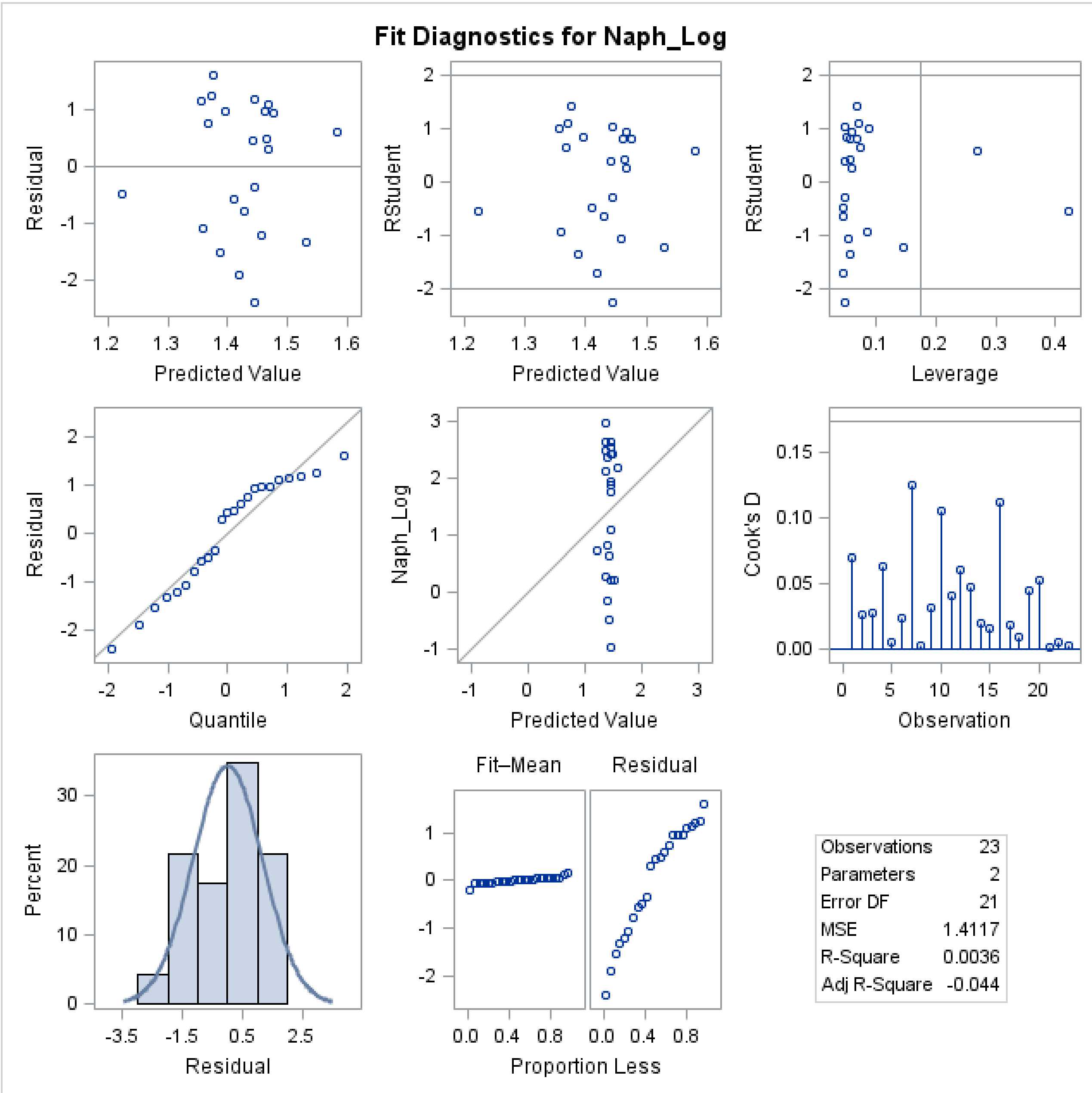
Root MSE	1.18816	R-Square	0.0036
Dependent Mean	1.42502	Adj R-Sq	-0.0438
Coeff Var	83.37842		

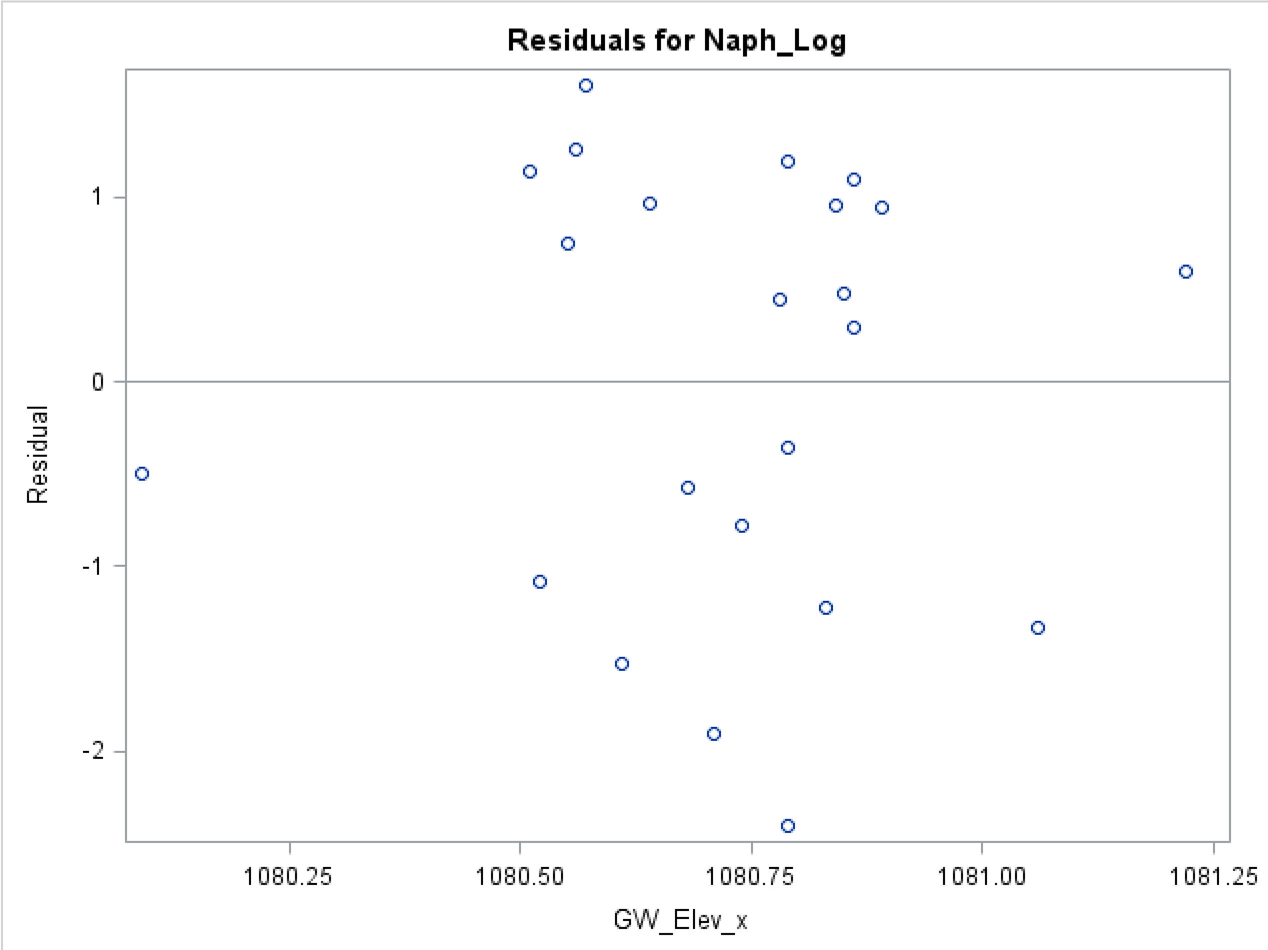
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-341.64092	1239.86488	-0.28	0.7856
GW_Elev_x	1	0.31744	1.14725	0.28	0.7847

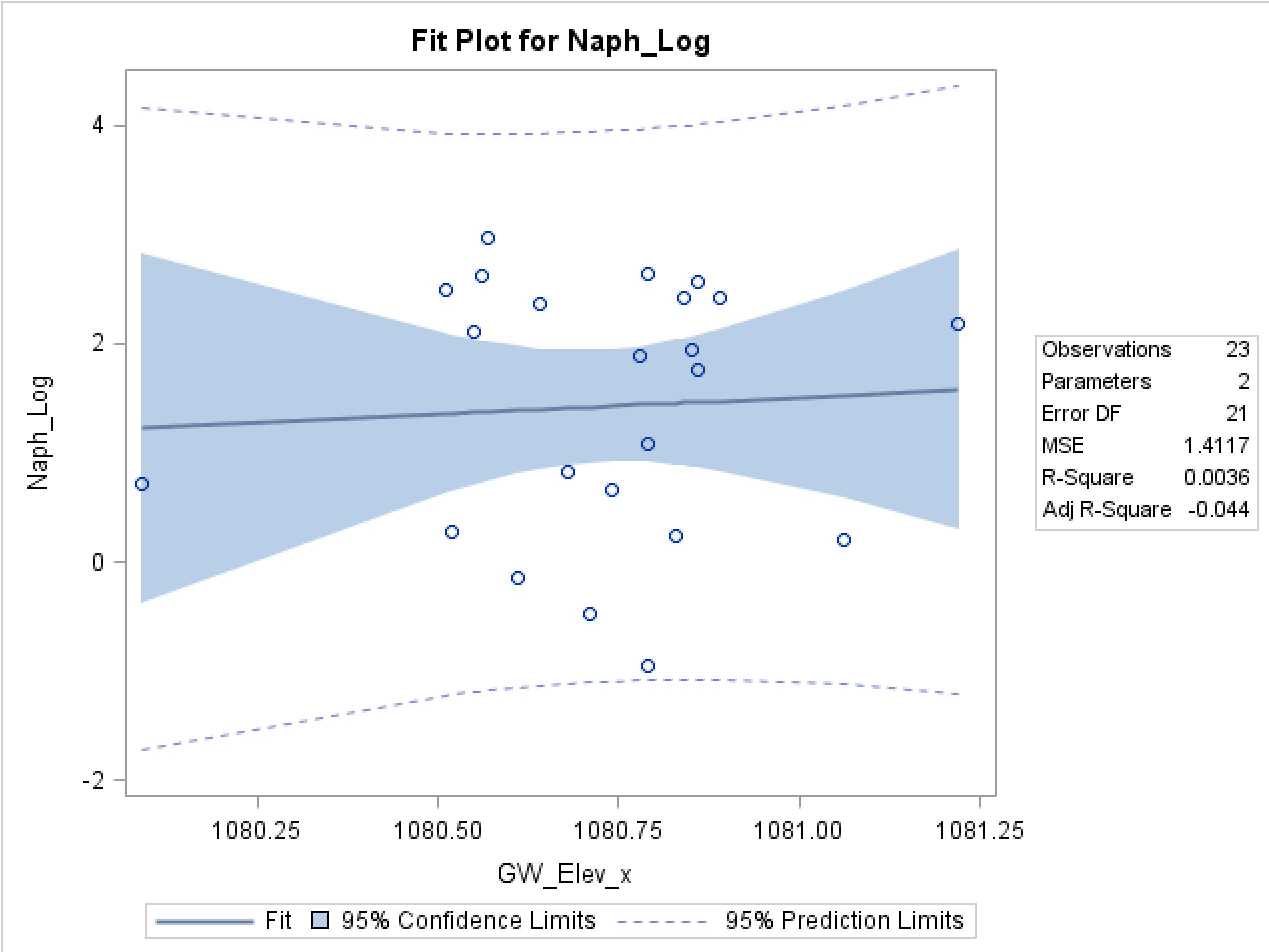
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW3




Residuals for Naph_Log
Residual
1
0
-1
-2
1080.25
1080.50
1080.75
1081.00
1081.25
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
4
2
0
-2
1080.25
1080.50
1080.75
1081.00
1081.25
Observations 23
Parameters 2
Error DF 21
MSE 1.4117
R-Square 0.0036
Adj R-Square -0.044
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW5

Number of Observations Read	33
Number of Observations Used	31
Number of Observations with Missing Values	2

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	1.59054	1.59054	2.54	0.1218
Error	29	18.15535	0.62605		
Corrected Total	30	19.74589			

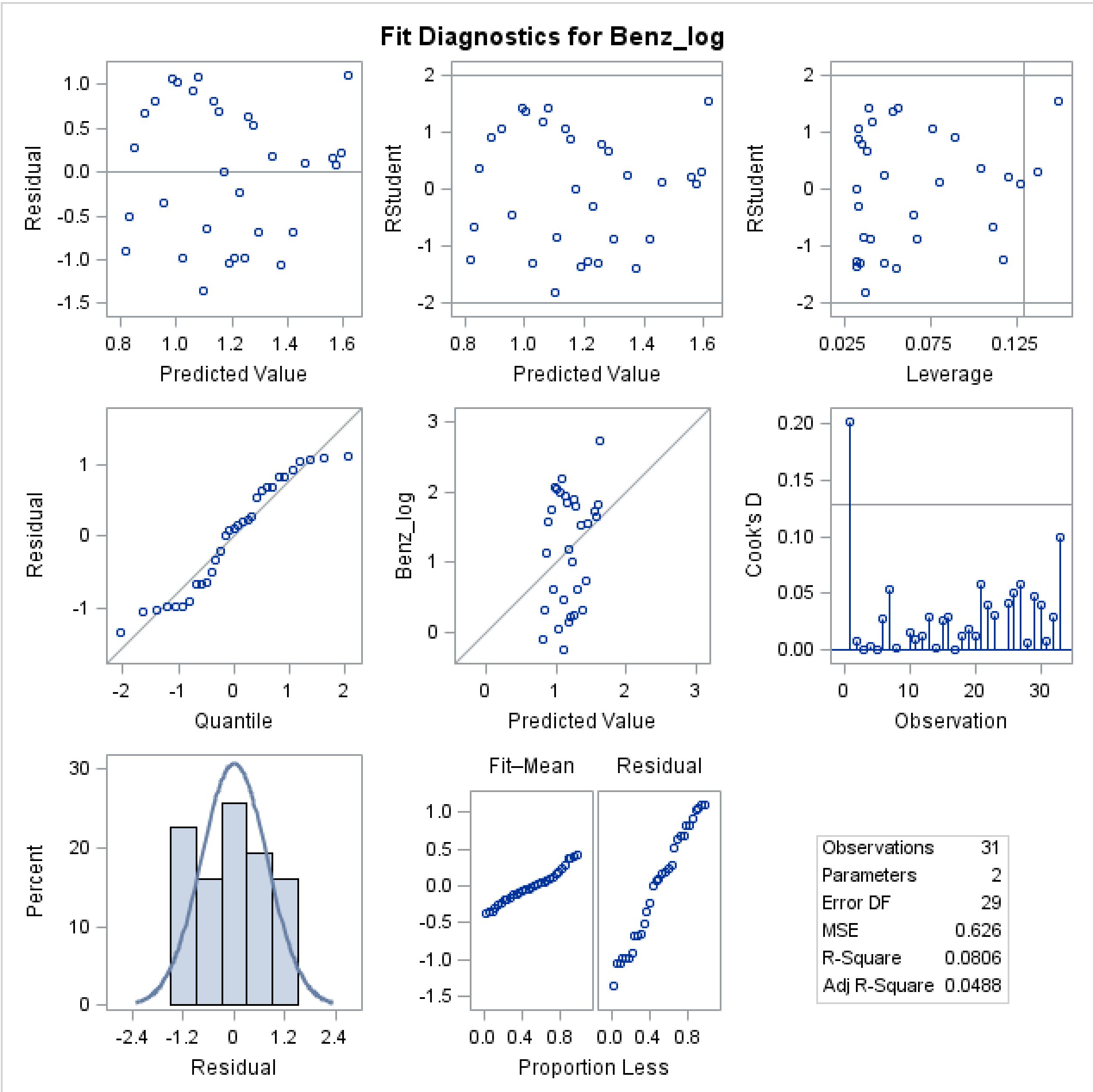
Root MSE	0.79123	**R-Square**	0.0806
Dependent Mean	1.18531	**Adj R-Sq**	0.0488
Coeff Var	66.75329		

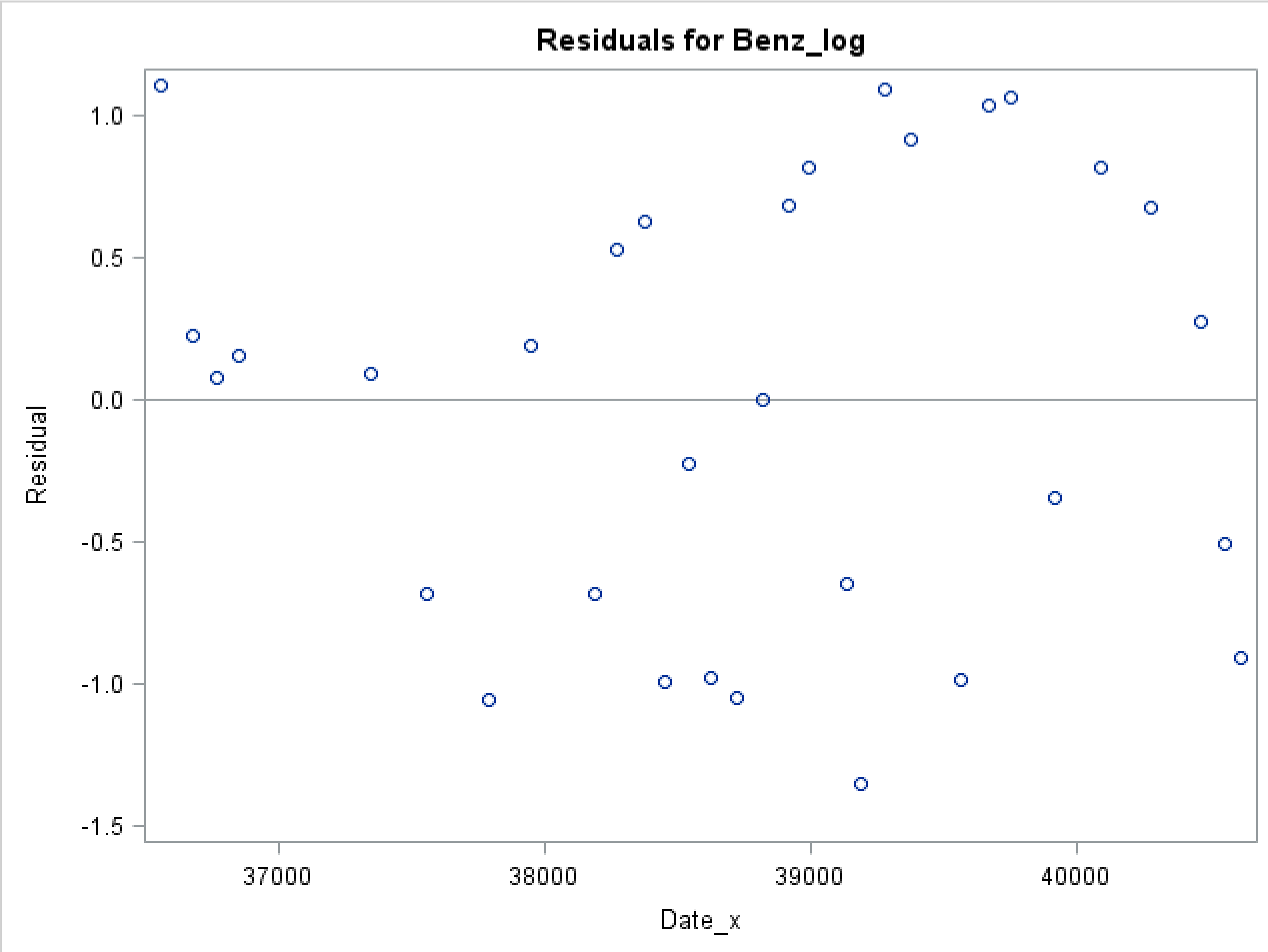
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	8.79081	4.77367	1.84	0.0758
Date_x	1	-0.00019626	0.00012313	-1.59	0.1218

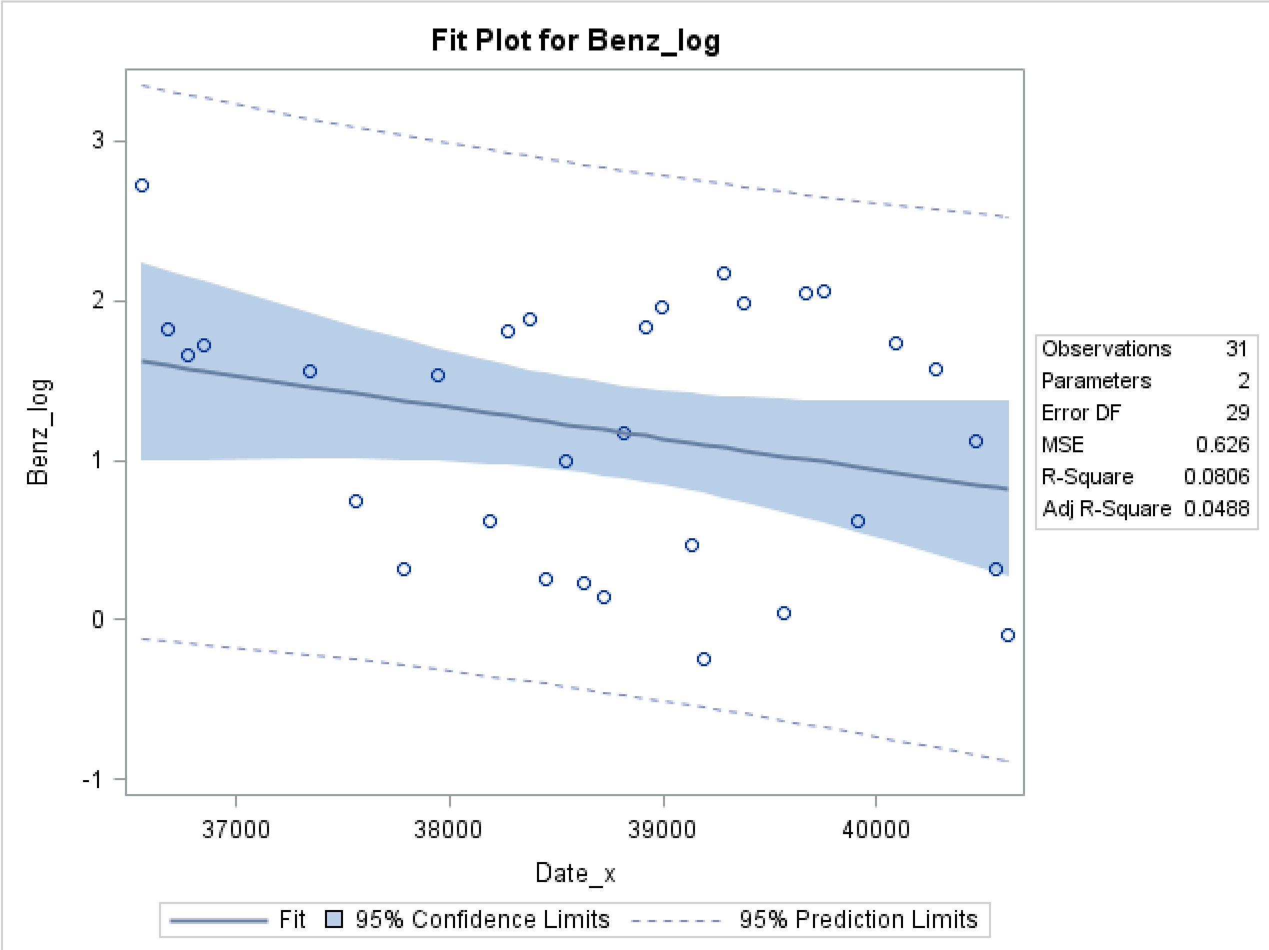
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW5




Residuals for Benz_log
1.0
0.5
0.0
-0.5
-1.0
-1.5
Residual
37000
38000
39000
40000
Date_x



Fit Plot for Benz_log
Benz_log
Date_x
37000
38000
39000
40000
-1
0
1
2
3
Observations 31
Parameters 2
Error DF 29
MSE 0.626
R-Square 0.0806
Adj R-Square 0.0488
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW5

Number of Observations Read	33
Number of Observations Used	31
Number of Observations with Missing Values	2

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	7.34315	7.34315	17.17	0.0003
Error	29	12.40274	0.42768		
Corrected Total	30	19.74589			

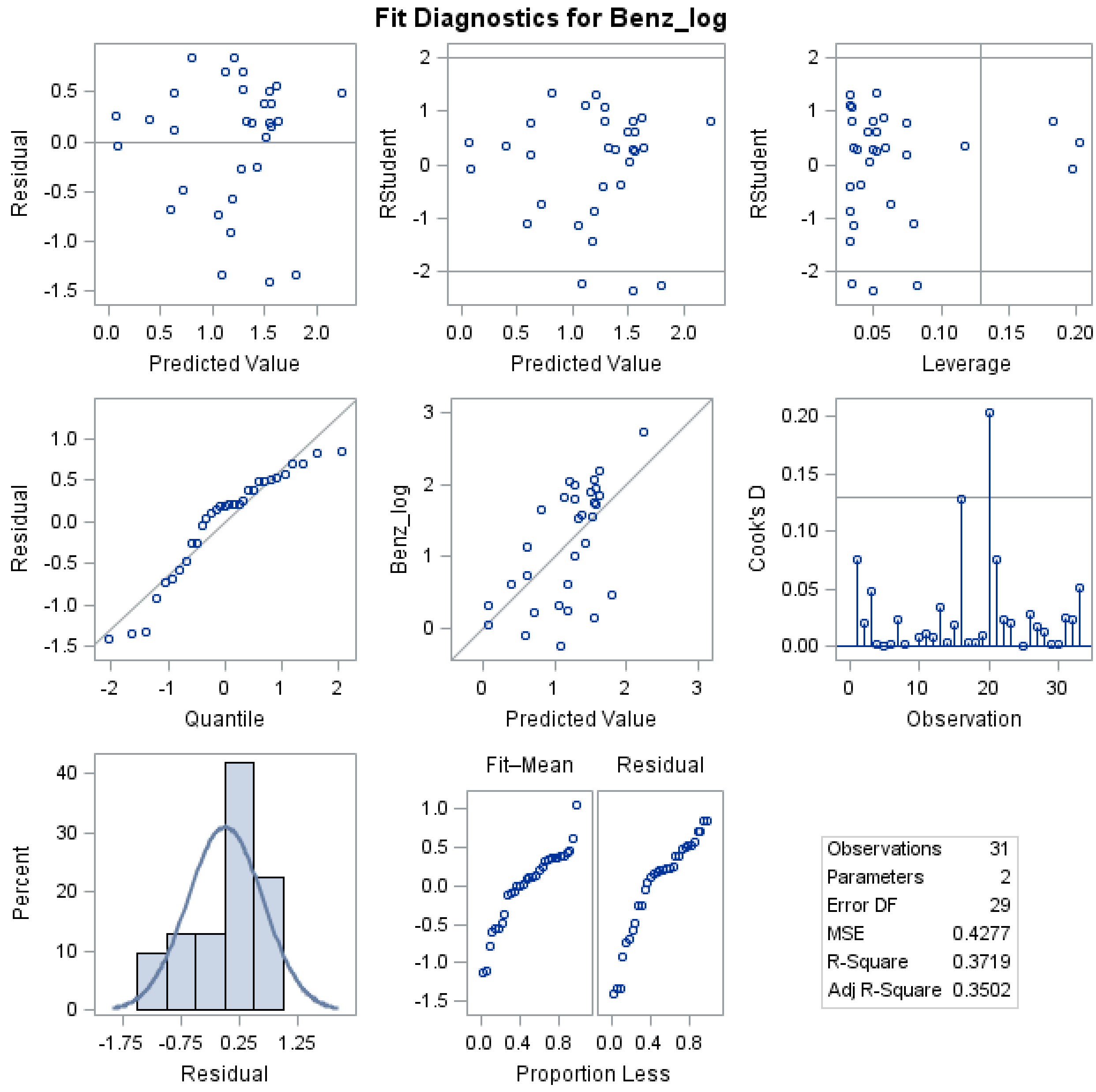
Root MSE	0.65397	R-Square	0.3719
Dependent Mean	1.18531	Adj R-Sq	0.3502
Coeff Var	55.17332		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1774.89465	428.05645	4.15	0.0003
GW_Elev_x	1	-1.64356	0.39665	-4.14	0.0003

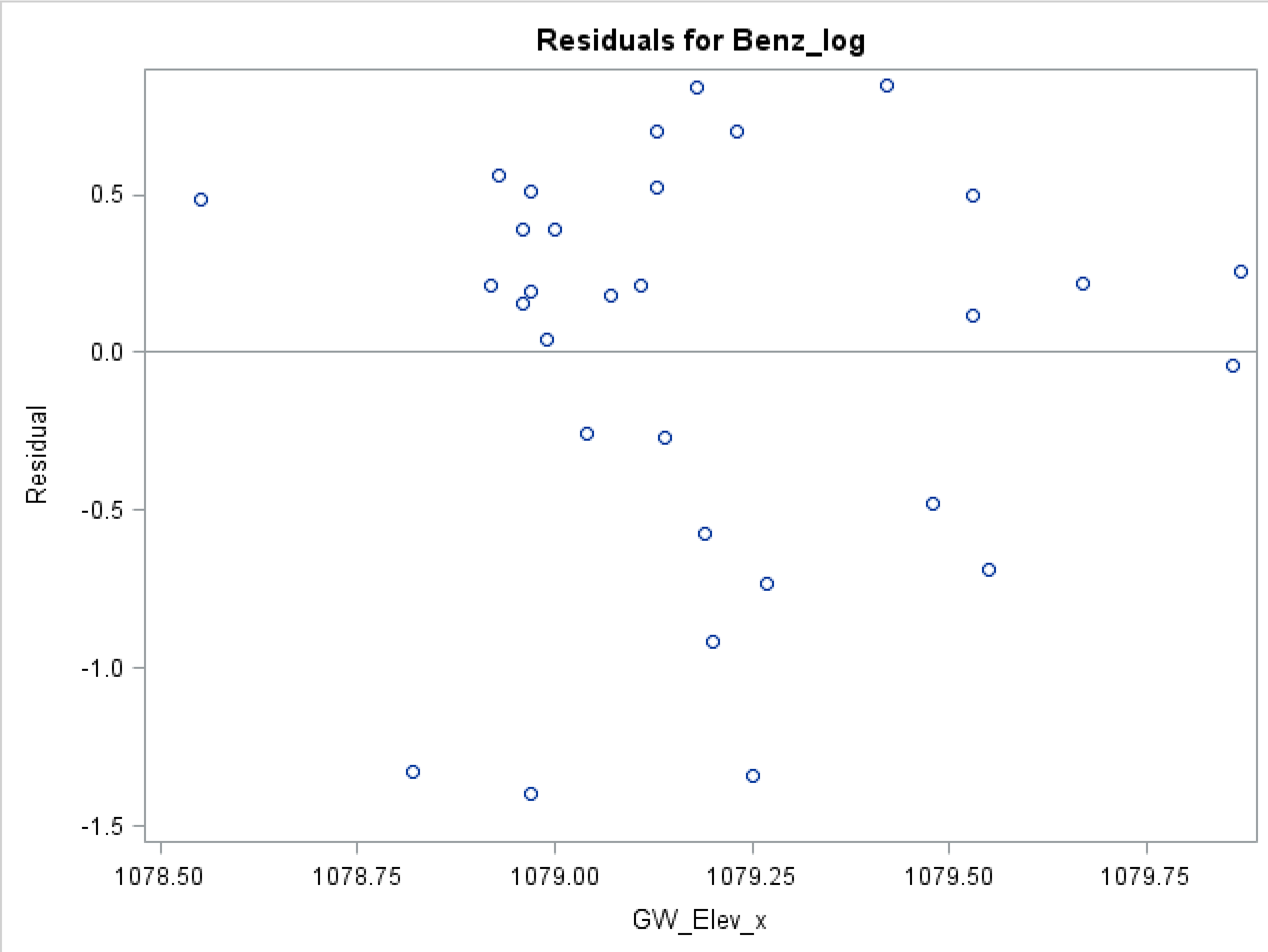
The SAS System

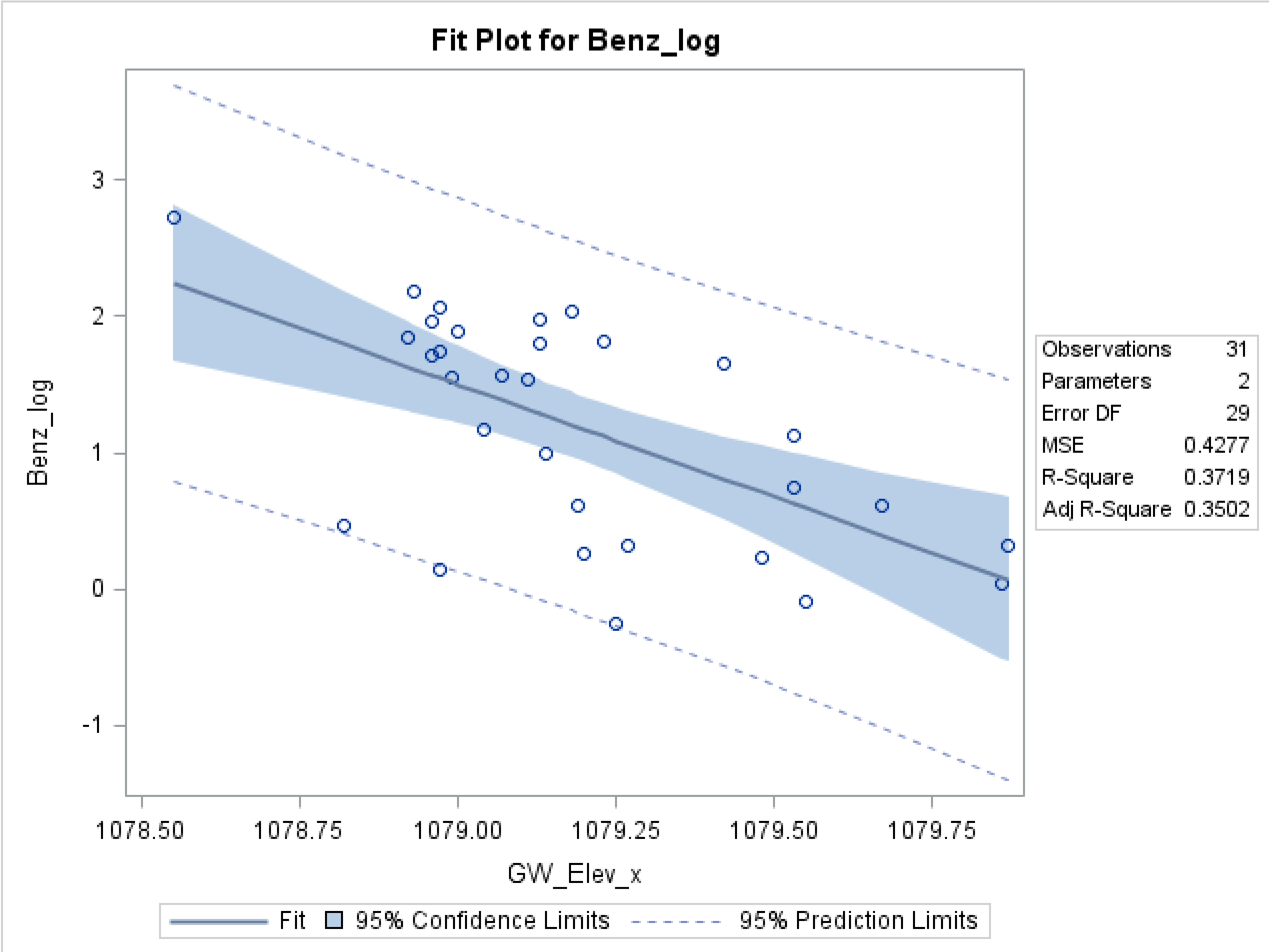
The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW5



Observations	31
Parameters	2
Error DF	29
MSE	0.4277
R-Square	0.3719
Adj R-Square	0.3502


Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
-1.5
1078.50
1078.75
1079.00
1079.25
1079.50
1079.75
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
3
2
1
0
-1
1078.50
1078.75
1079.00
1079.25
1079.50
1079.75
Observations 31
Parameters 2
Error DF 29
MSE 0.4277
R-Square 0.3719
Adj R-Square 0.3502
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW5

Number of Observations Read	33
Number of Observations Used	31
Number of Observations with Missing Values	2

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	19.24752	19.24752	11.99	0.0017
Error	29	46.56755	1.60578		
Corrected Total	30	65.81507			

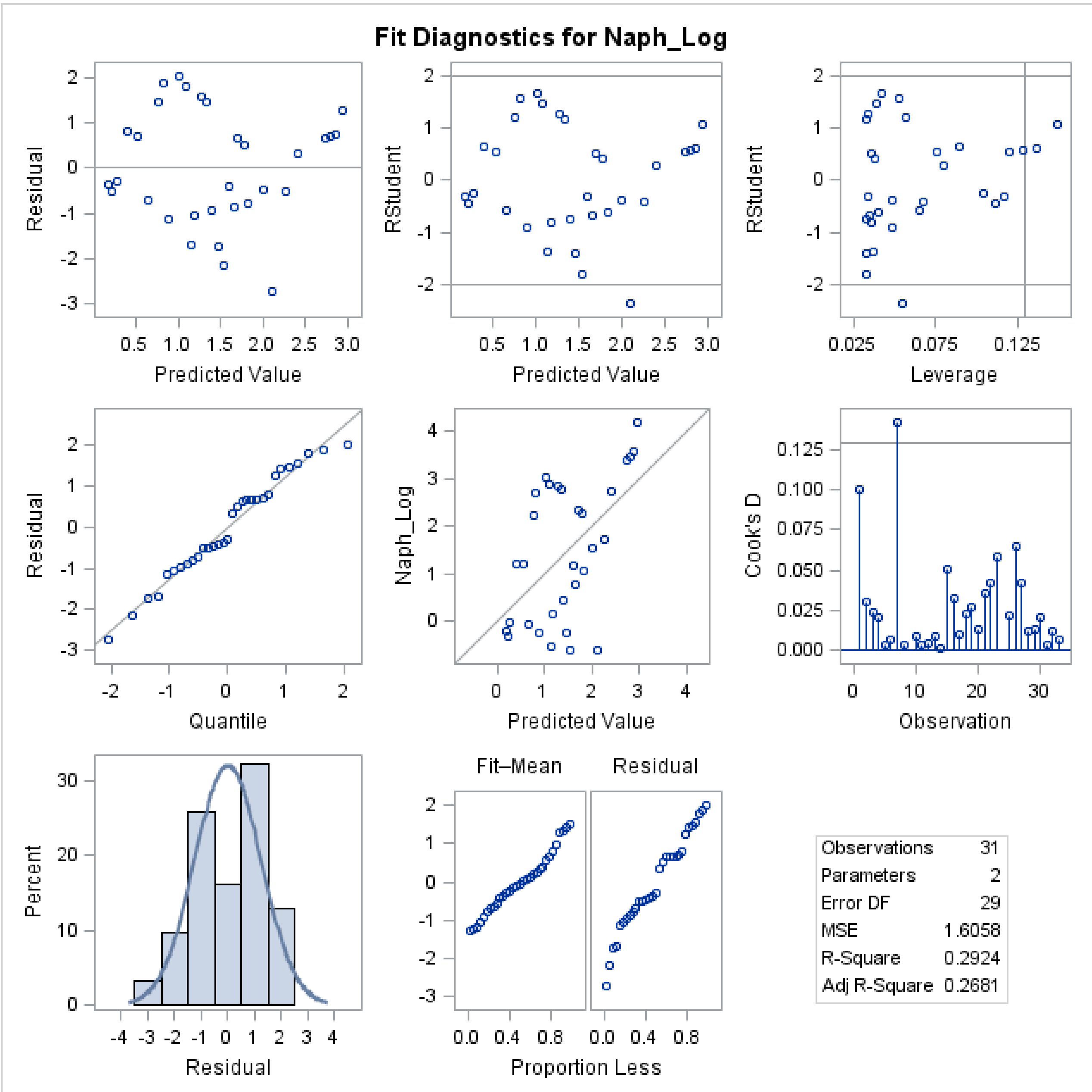
Root MSE	1.26719	R-Square	0.2924
Dependent Mean	1.44647	Adj R-Sq	0.2681
Coeff Var	87.60582		

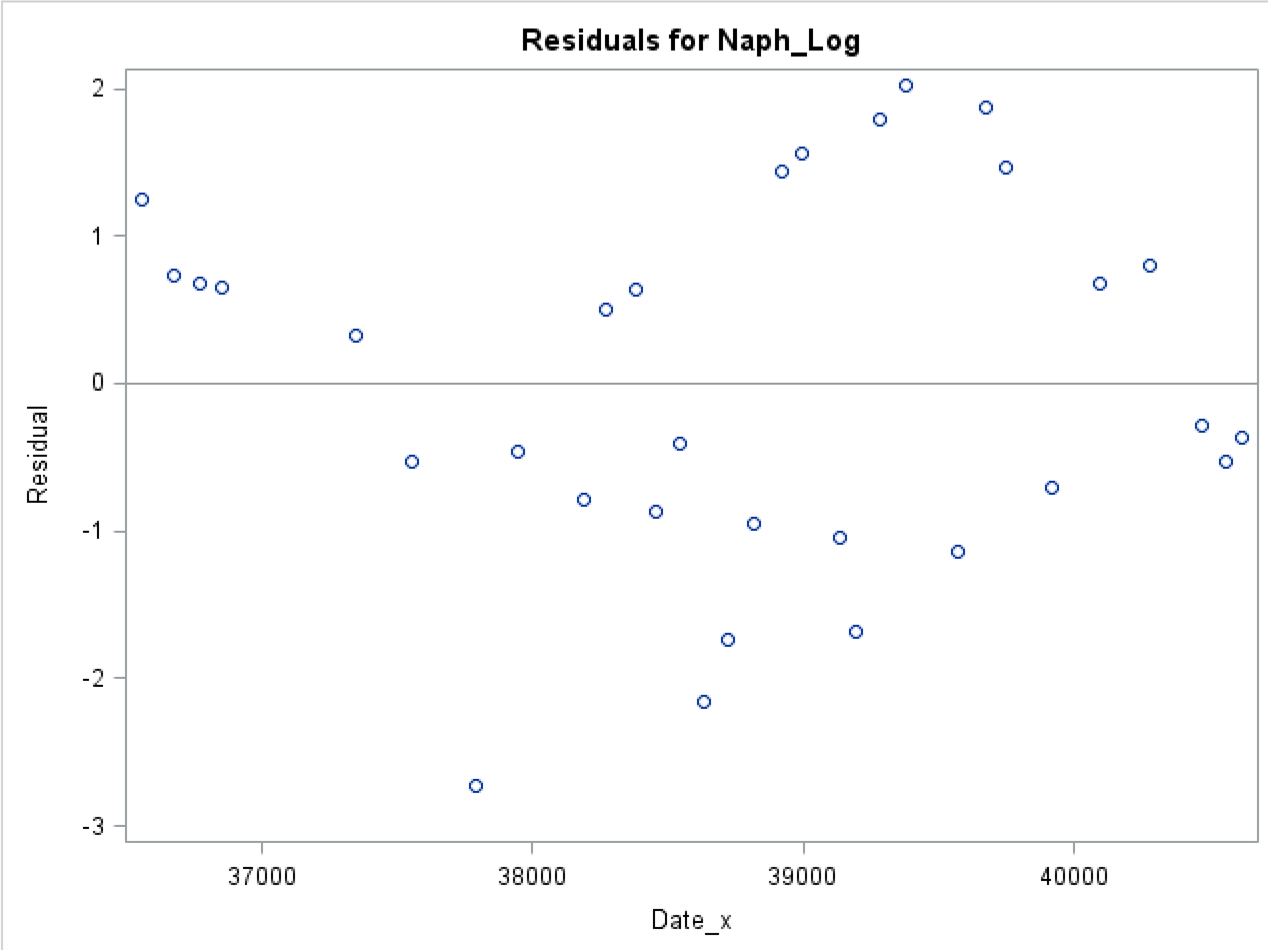
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	27.90365	7.64525	3.65	0.0010
Date_x	1	-0.00068273	0.00019720	-3.46	0.0017

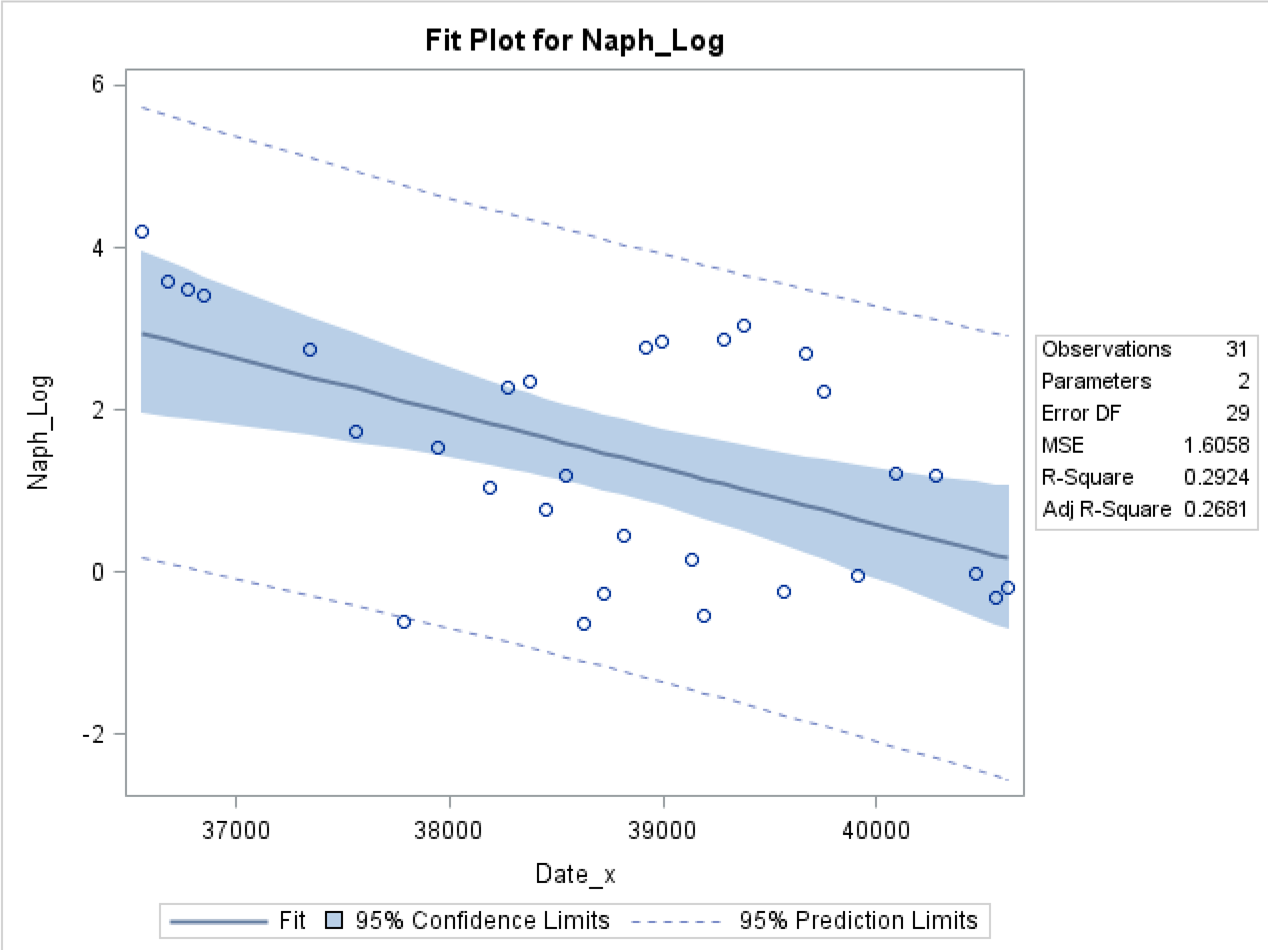
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW5




Residuals for Naph_Log
Residual
2
1
0
-1
-2
-3
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
6
4
2
0
-2
37000
38000
39000
40000
Date_x
Observations 31
Parameters 2
Error DF 29
MSE 1.6058
R-Square 0.2924
Adj R-Square 0.2681
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW5

Number of Observations Read	33
Number of Observations Used	31
Number of Observations with Missing Values	2

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	17.83068	17.83068	10.78	0.0027
Error	29	47.98439	1.65463		
Corrected Total	30	65.81507			

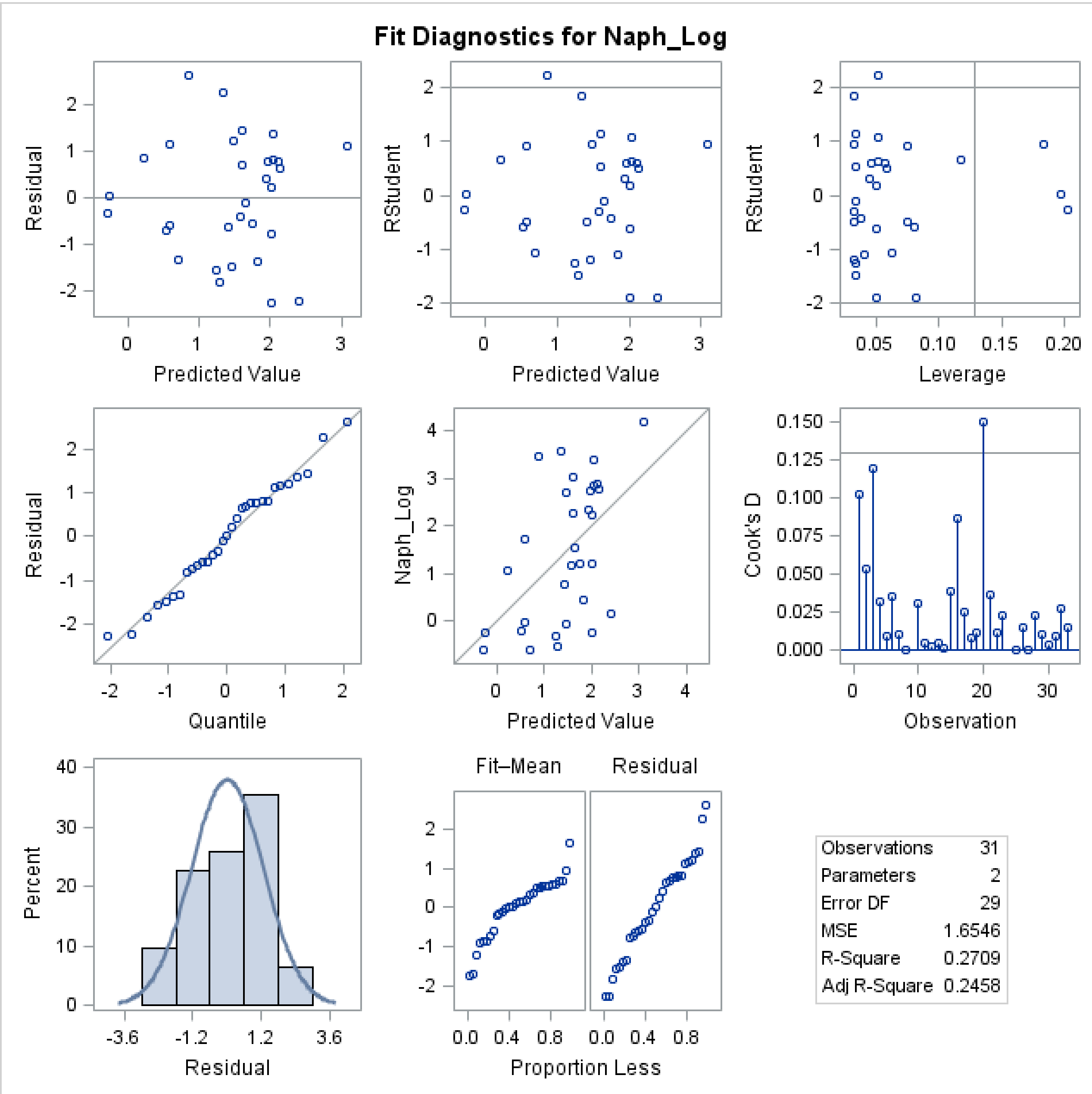
Root MSE	1.28633	R-Square	0.2709
Dependent Mean	1.44647	Adj R-Sq	0.2458
Coeff Var	88.92856		

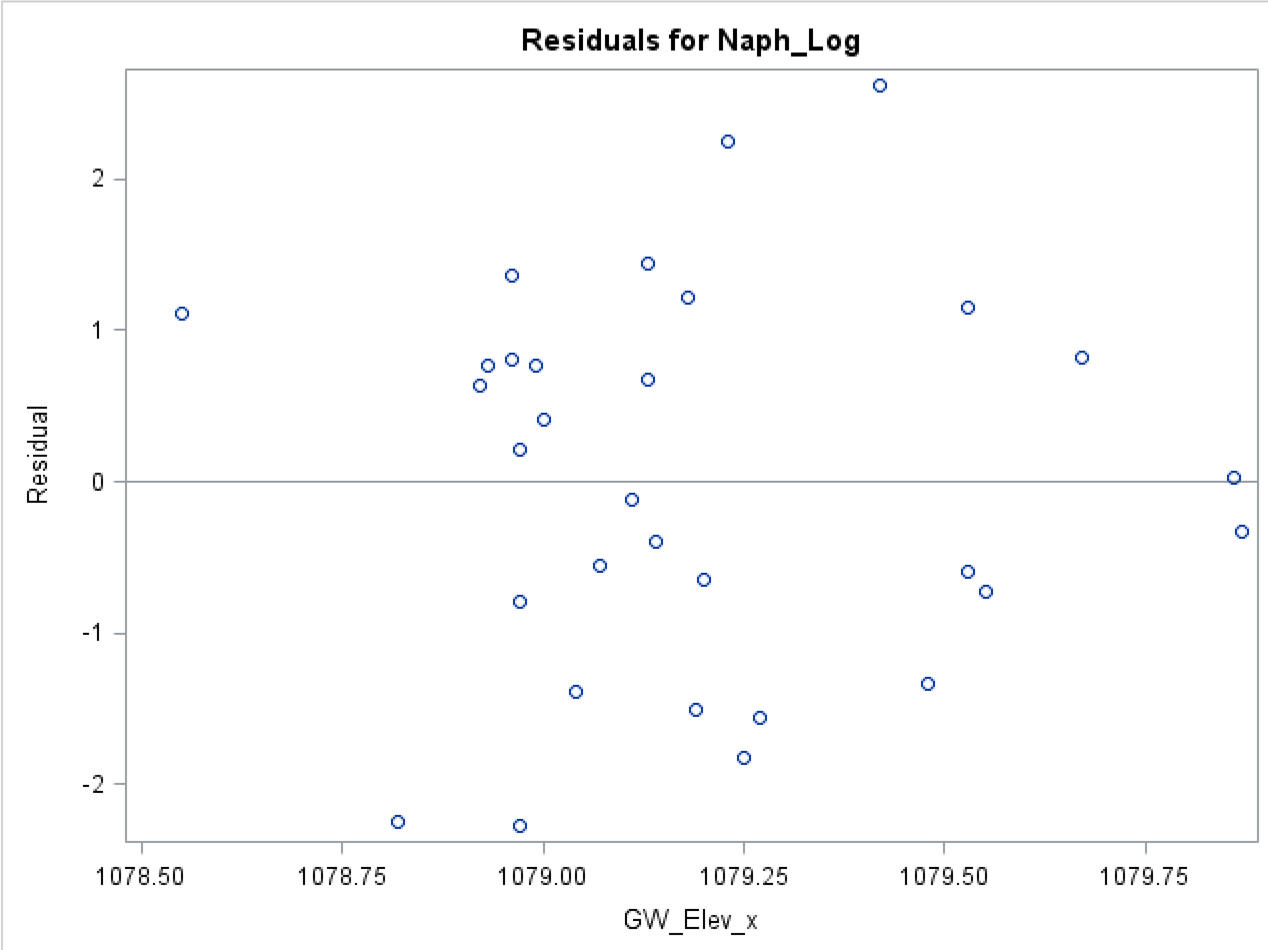
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	2765.36504	841.96149	3.28	0.0027
GW_Elev_x	1	-2.56110	0.78018	-3.28	0.0027

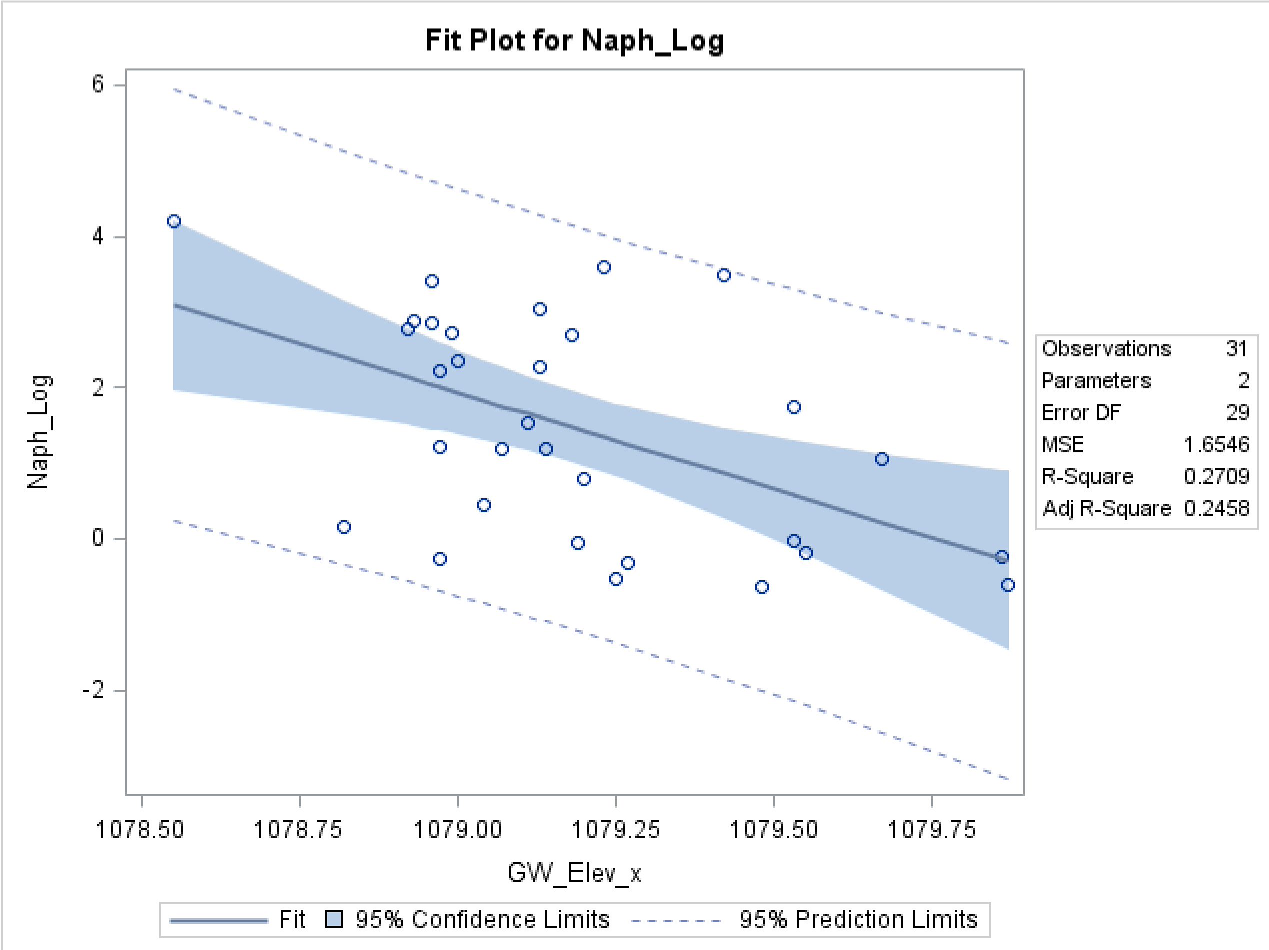
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW5




Residuals for Naph_Log
Residual
2
1
0
-1
-2
1078.50
1078.75
1079.00
1079.25
1079.50
1079.75
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
6
4
2
0
-2
1078.50
1078.75
1079.00
1079.25
1079.50
1079.75
Observations 31
Parameters 2
Error DF 29
MSE 1.6546
R-Square 0.2709
Adj R-Square 0.2458
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW6

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.26746	0.26746	5.08	0.0332
Error	25	1.31522	0.05261		
Corrected Total	26	1.58268			

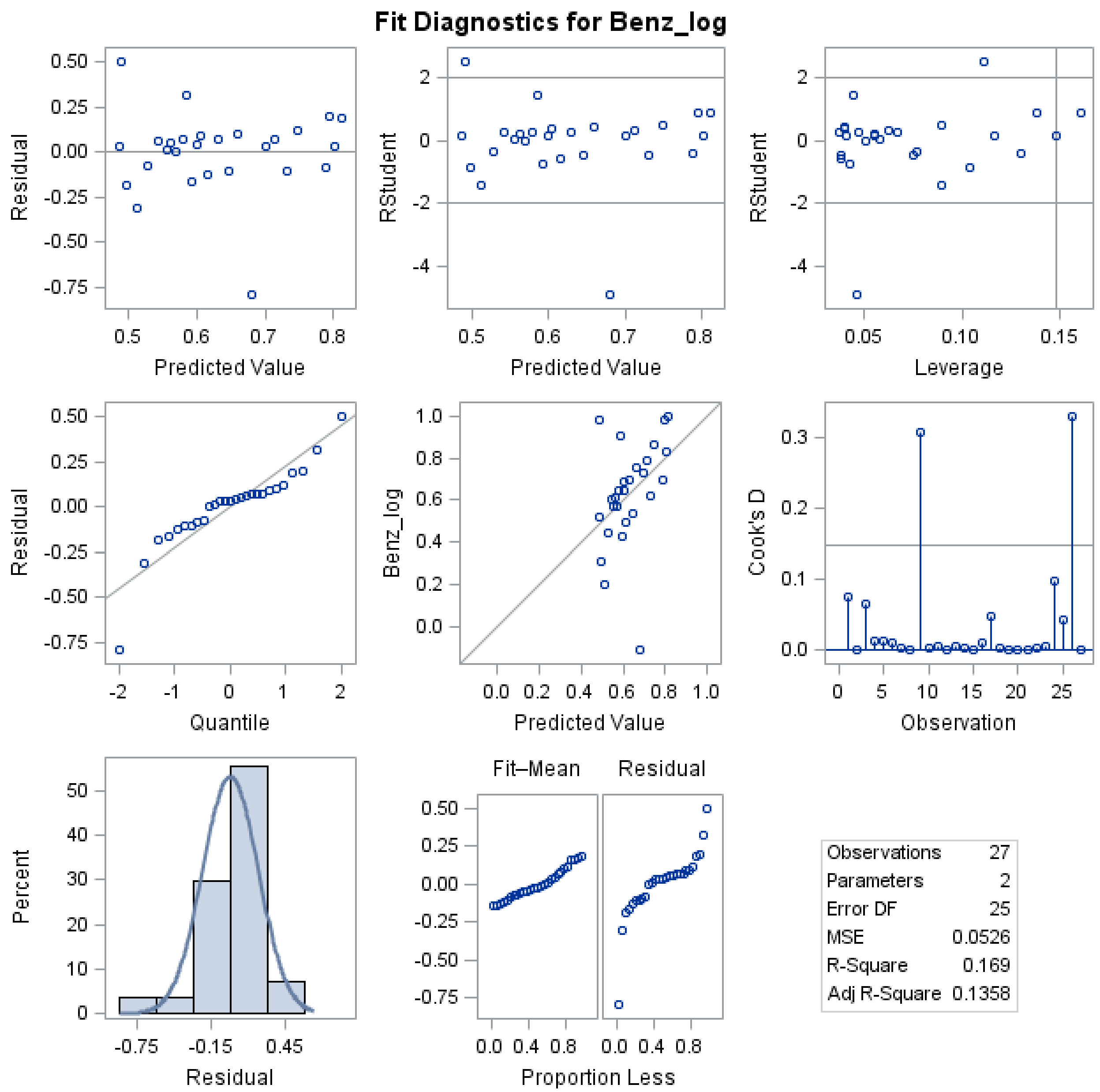
Root MSE	0.22937	**R-Square**	0.1690
Dependent Mean	0.63054	**Adj R-Sq**	0.1358
Coeff Var	36.37631		

Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	3.75572	1.38673	2.71	0.0120
Date_x	1	-0.00008052	0.00003571	-2.25	0.0332

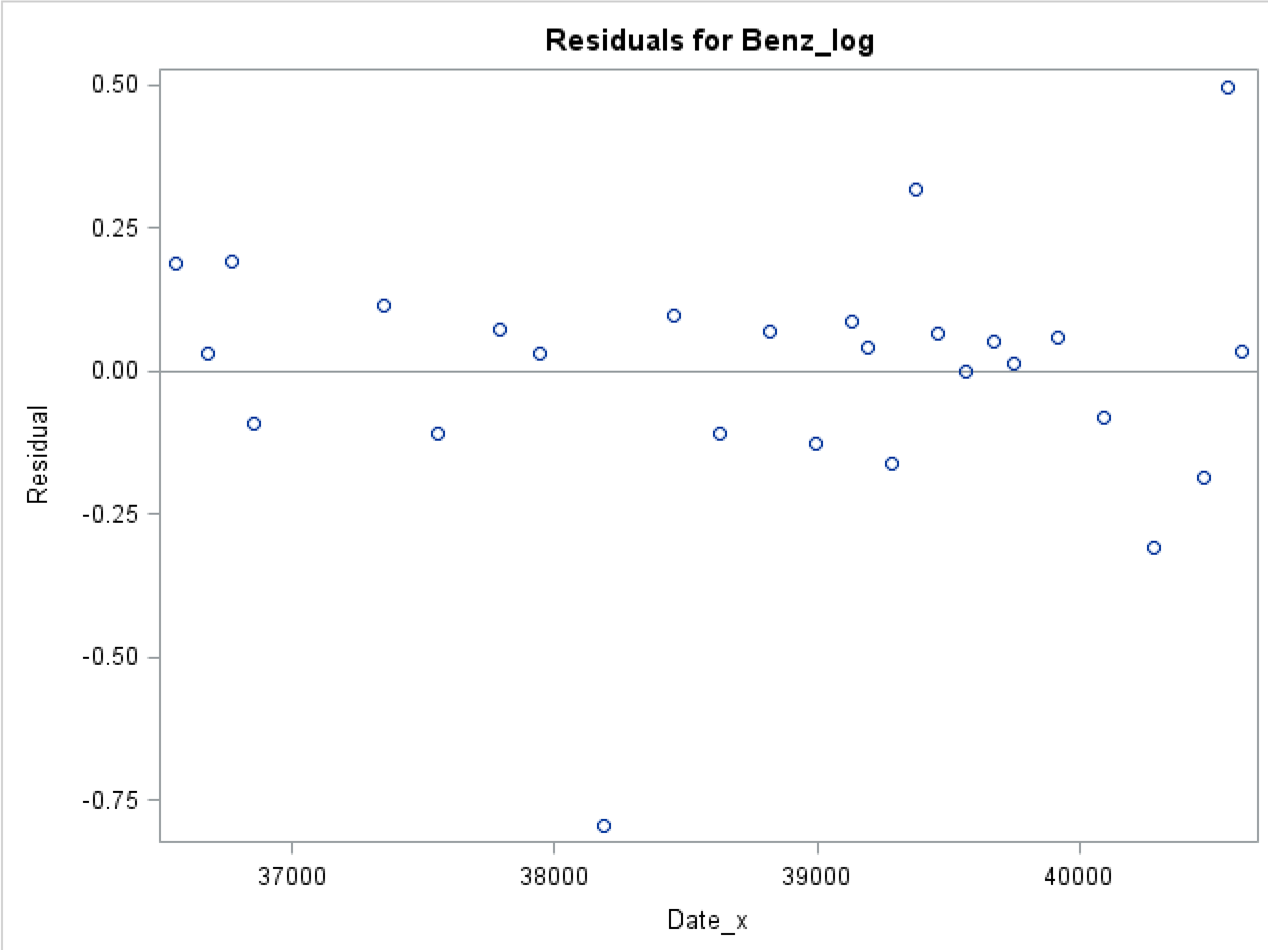
The SAS System

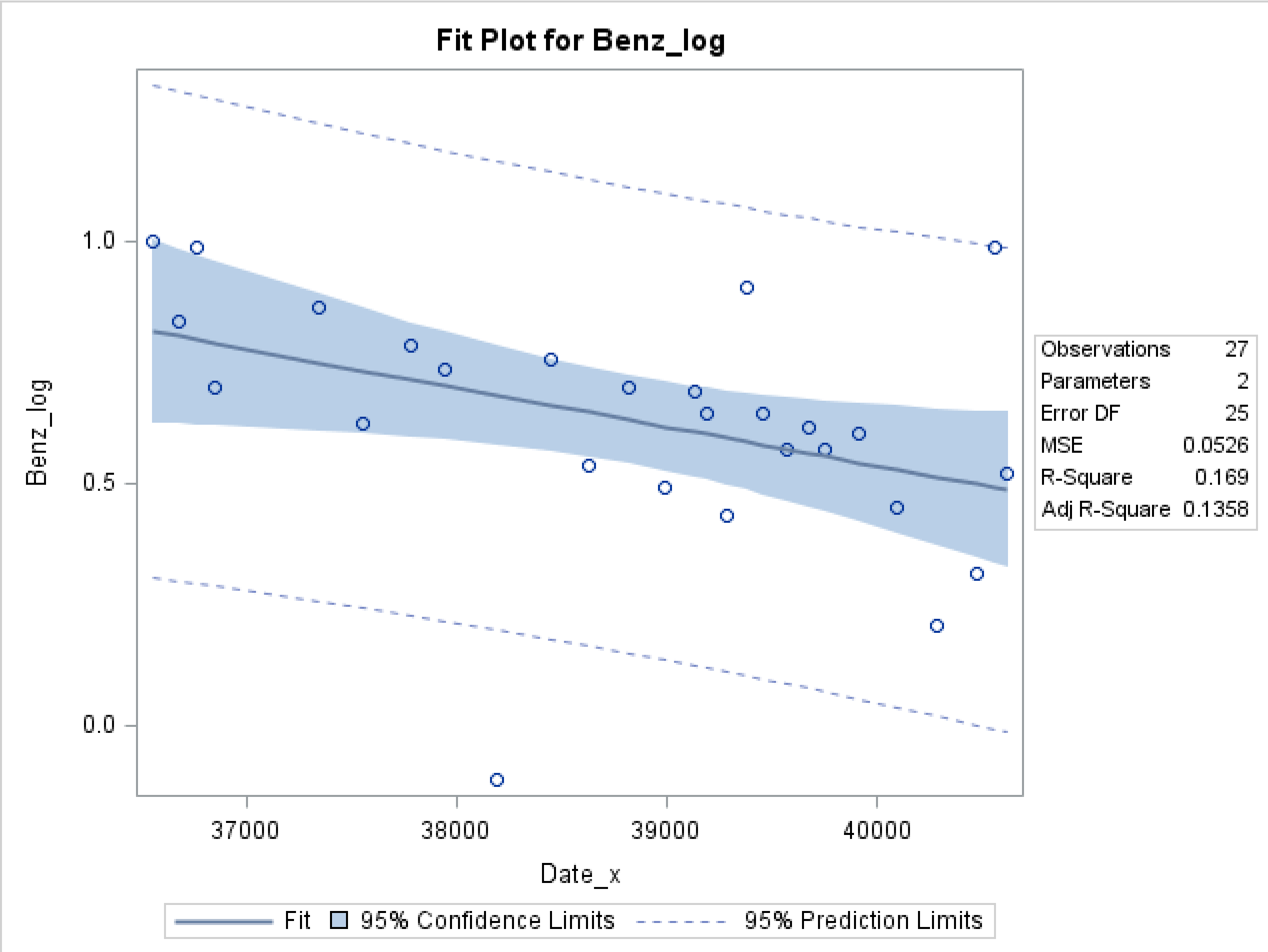
The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW6



Observations	27
Parameters	2
Error DF	25
MSE	0.0526
R-Square	0.169
Adj R-Square	0.1358


Residuals for Benz_log
0.50
0.25
0.00
-0.25
-0.50
-0.75
Residual
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
Benz_log
1.0
0.5
0.0
37000
38000
39000
40000
Date_x
Observations 27
Parameters 2
Error DF 25
MSE 0.0526
R-Square 0.169
Adj R-Square 0.1358
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW6

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.22817	0.22817	4.21	0.0508
Error	25	1.35451	0.05418		
Corrected Total	26	1.58268			

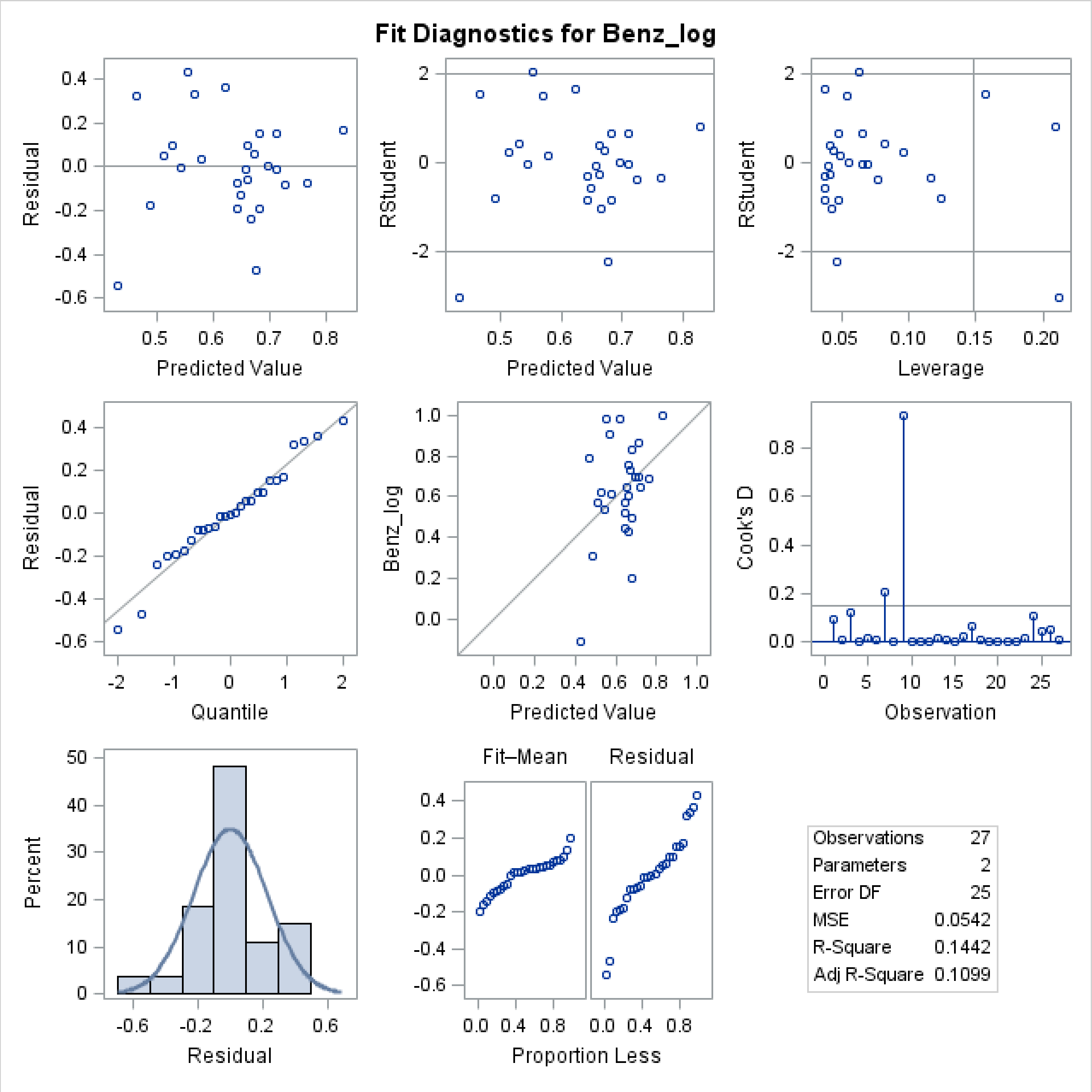
Root MSE	0.23277	R-Square	0.1442
Dependent Mean	0.63054	Adj R-Sq	0.1099
Coeff Var	36.91568		

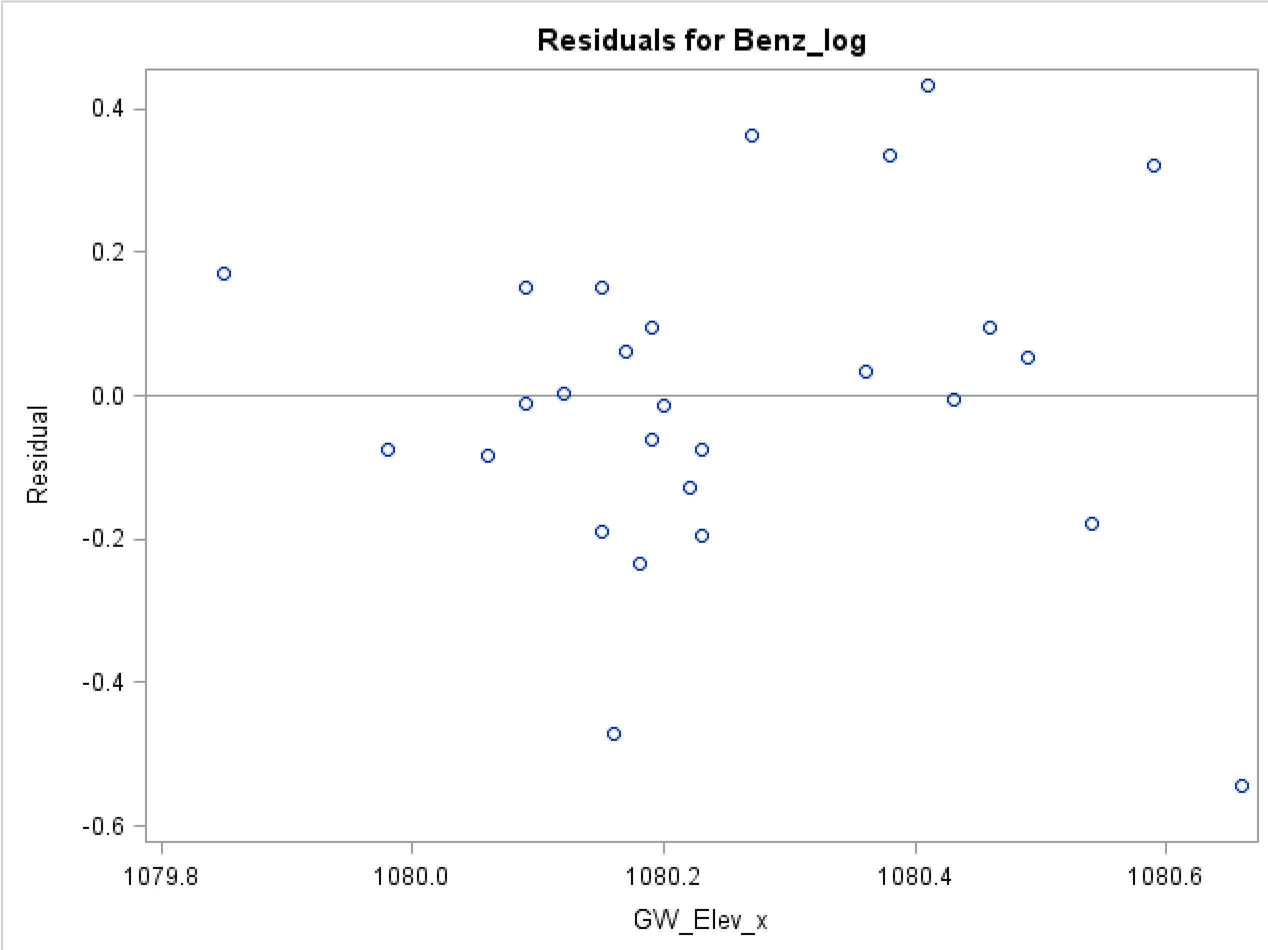
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	531.60102	258.73936	2.05	0.0505
GW_Elev_x	1	-0.49152	0.23952	-2.05	0.0508

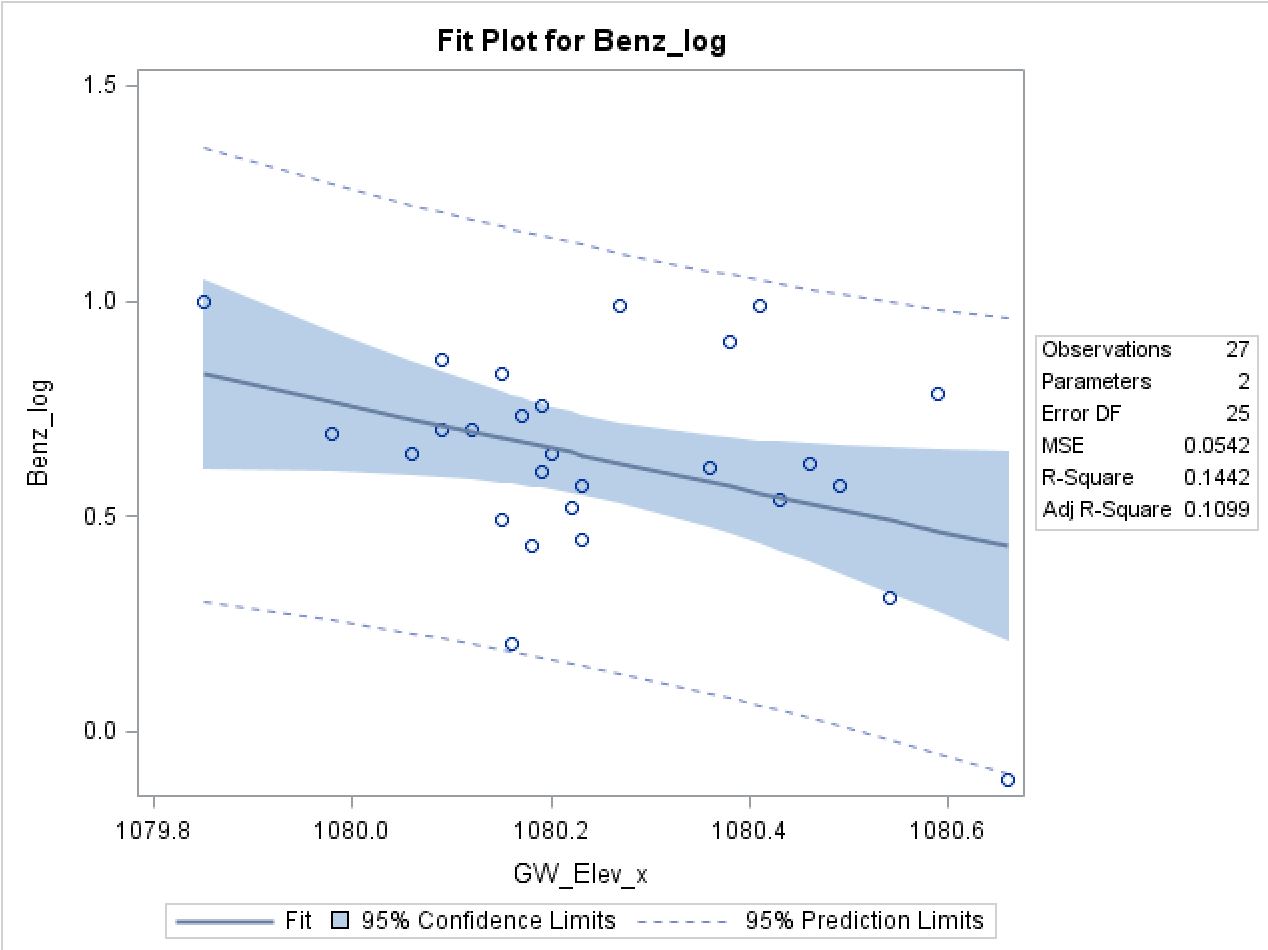
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW6




Residuals for Benz_log
Residual
0.4
0.2
0.0
-0.2
-0.4
-0.6
1079.8
1080.0
1080.2
1080.4
1080.6
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
1.5
1.0
0.5
0.0
1079.8
1080.0
1080.2
1080.4
1080.6
Observations 27
Parameters 2
Error DF 25
MSE 0.0542
R-Square 0.1442
Adj R-Square 0.1099
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW6

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.88672	1.88672	1.28	0.2680
Error	25	36.74821	1.46993		
Corrected Total	26	38.63493			

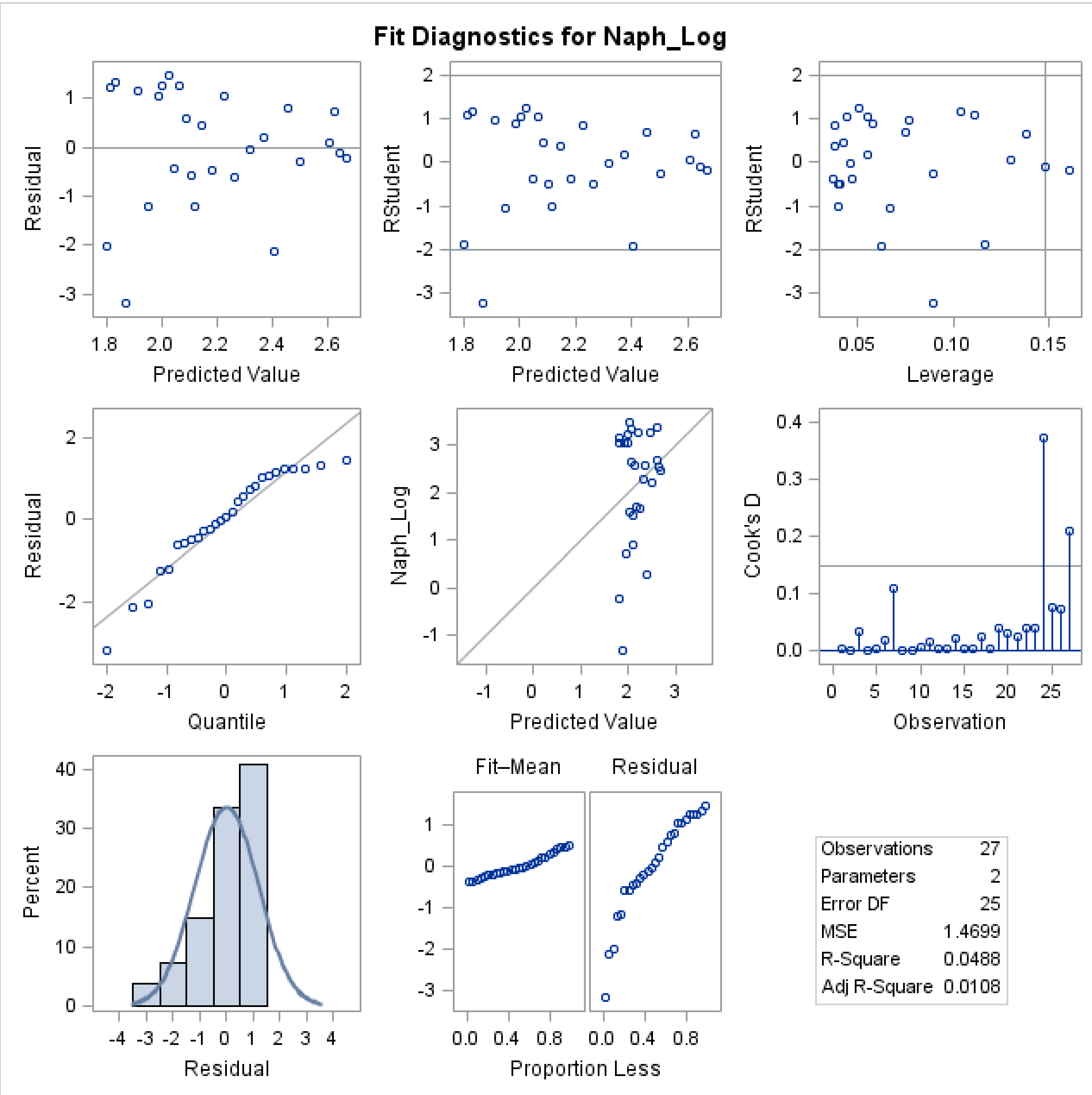
Root MSE	1.21241	R-Square	0.0488
Dependent Mean	2.18566	Adj R-Sq	0.0108
Coeff Var	55.47105		

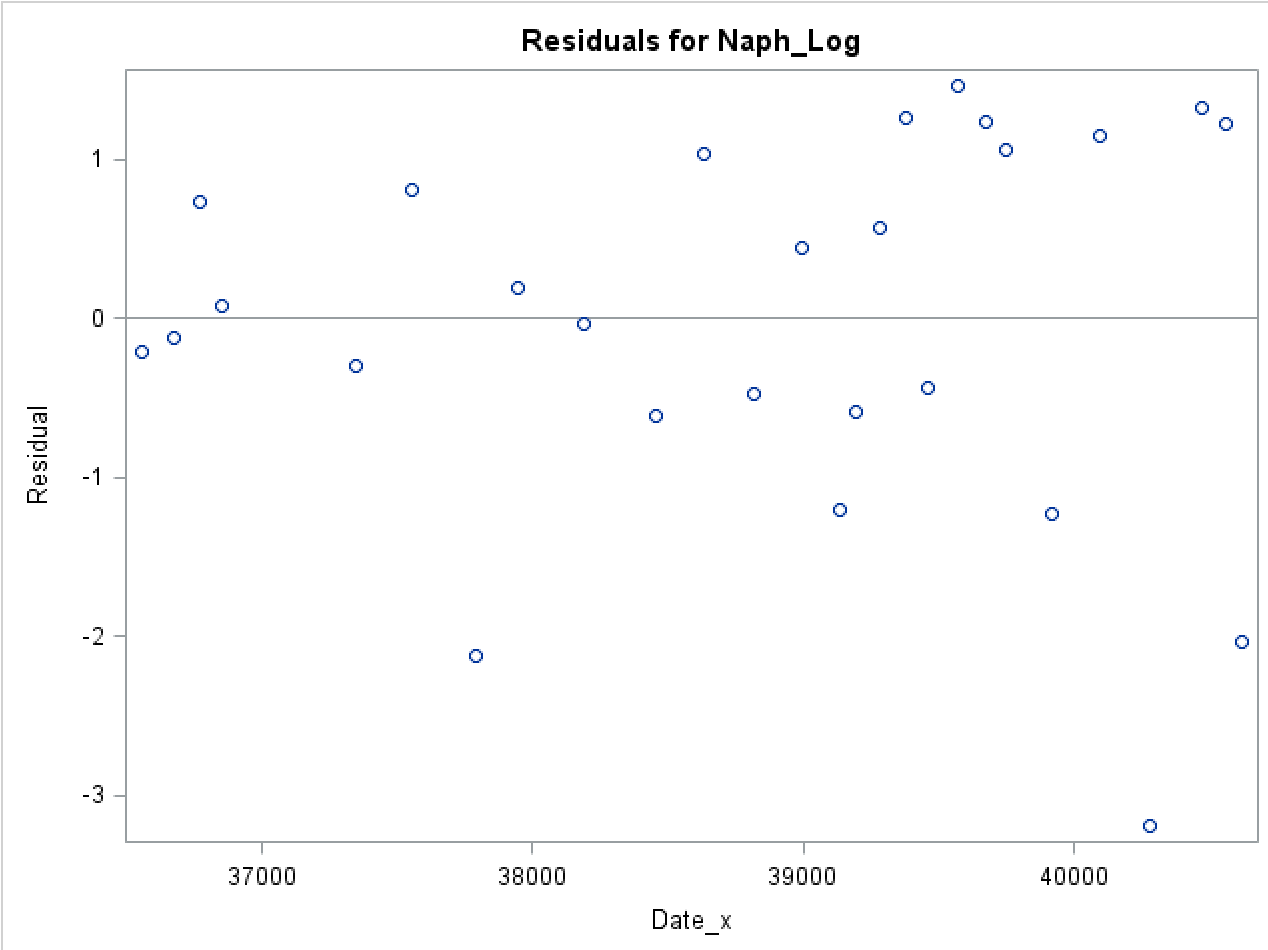
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	10.48602	7.33013	1.43	0.1649
Date_x	1	-0.00021386	0.00018876	-1.13	0.2680

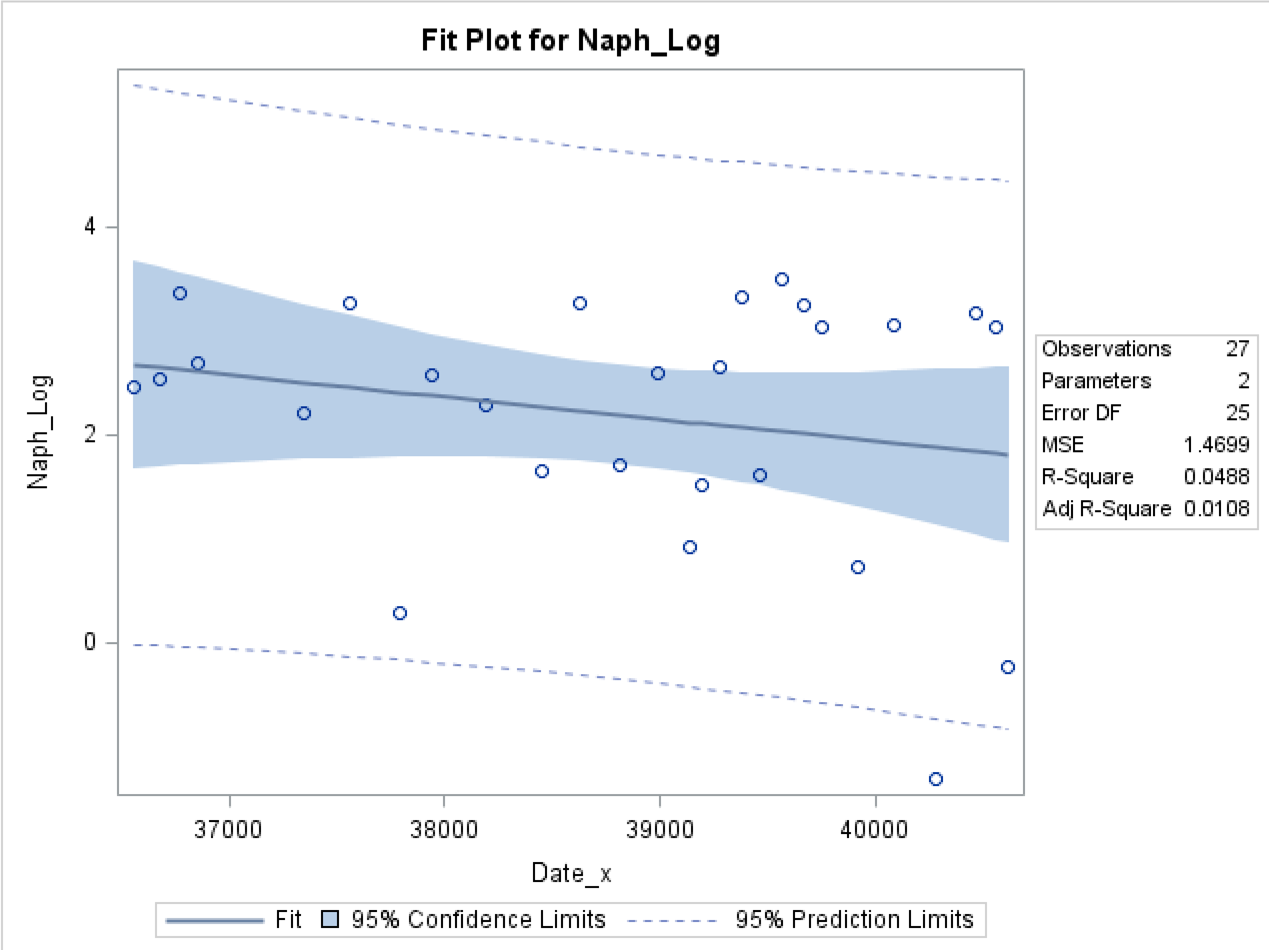
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW6




Residuals for Naph_Log
Residual
Date_x
1
0
-1
-2
-3
37000
38000
39000
40000


Fit Plot for Naph_Log
Naph_Log
Date_x
4
2
0
37000
38000
39000
40000
Observations 27
Parameters 2
Error DF 25
MSE 1.4699
R-Square 0.0488
Adj R-Square 0.0108
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW6

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	2.68249	2.68249	1.87	0.1842
Error	25	35.95244	1.43810		
Corrected Total	26	38.63493			

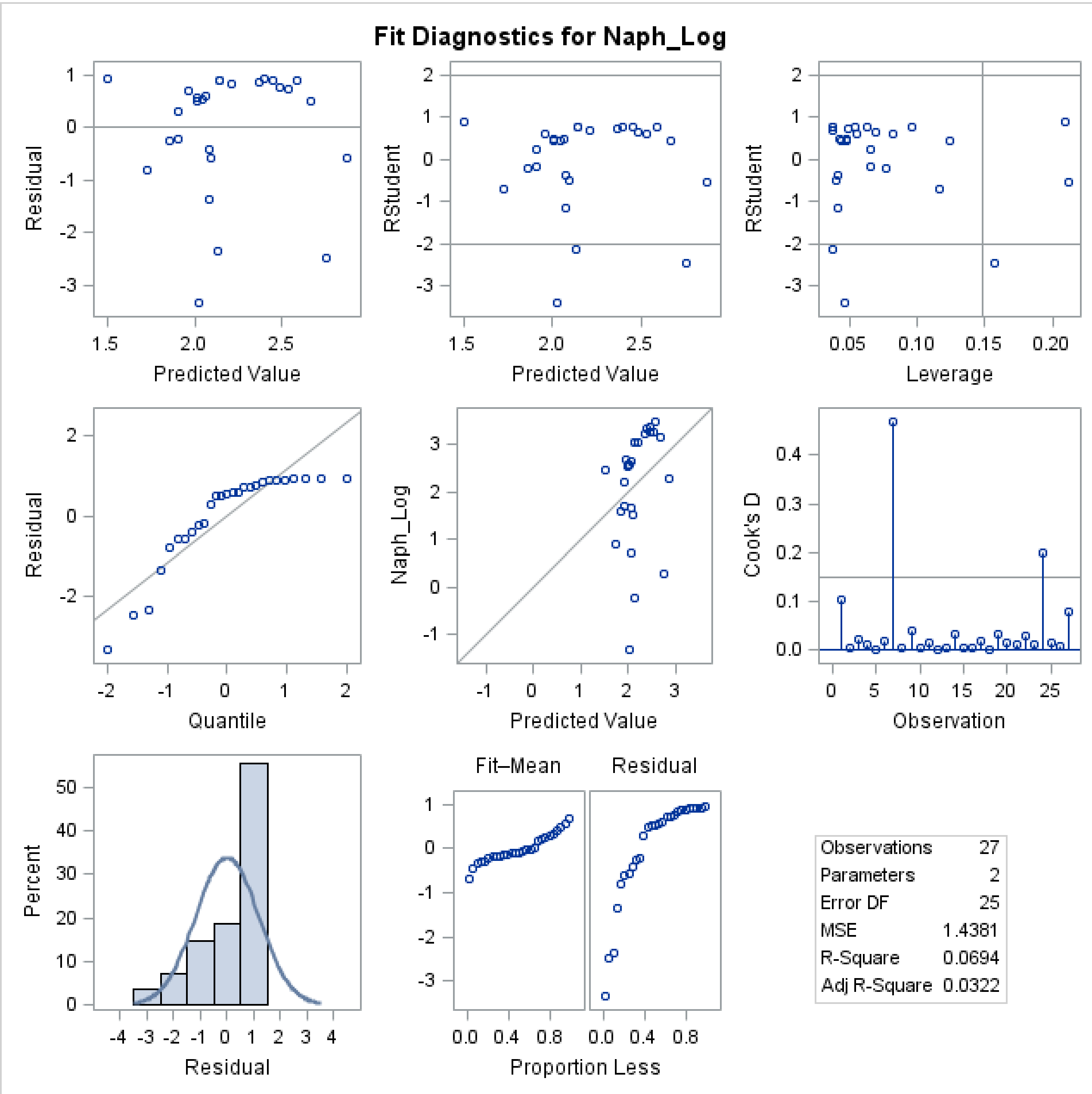
Root MSE	1.19921	**R-Square**	0.0694
Dependent Mean	2.18566	**Adj R-Sq**	0.0322
Coeff Var	54.86716		

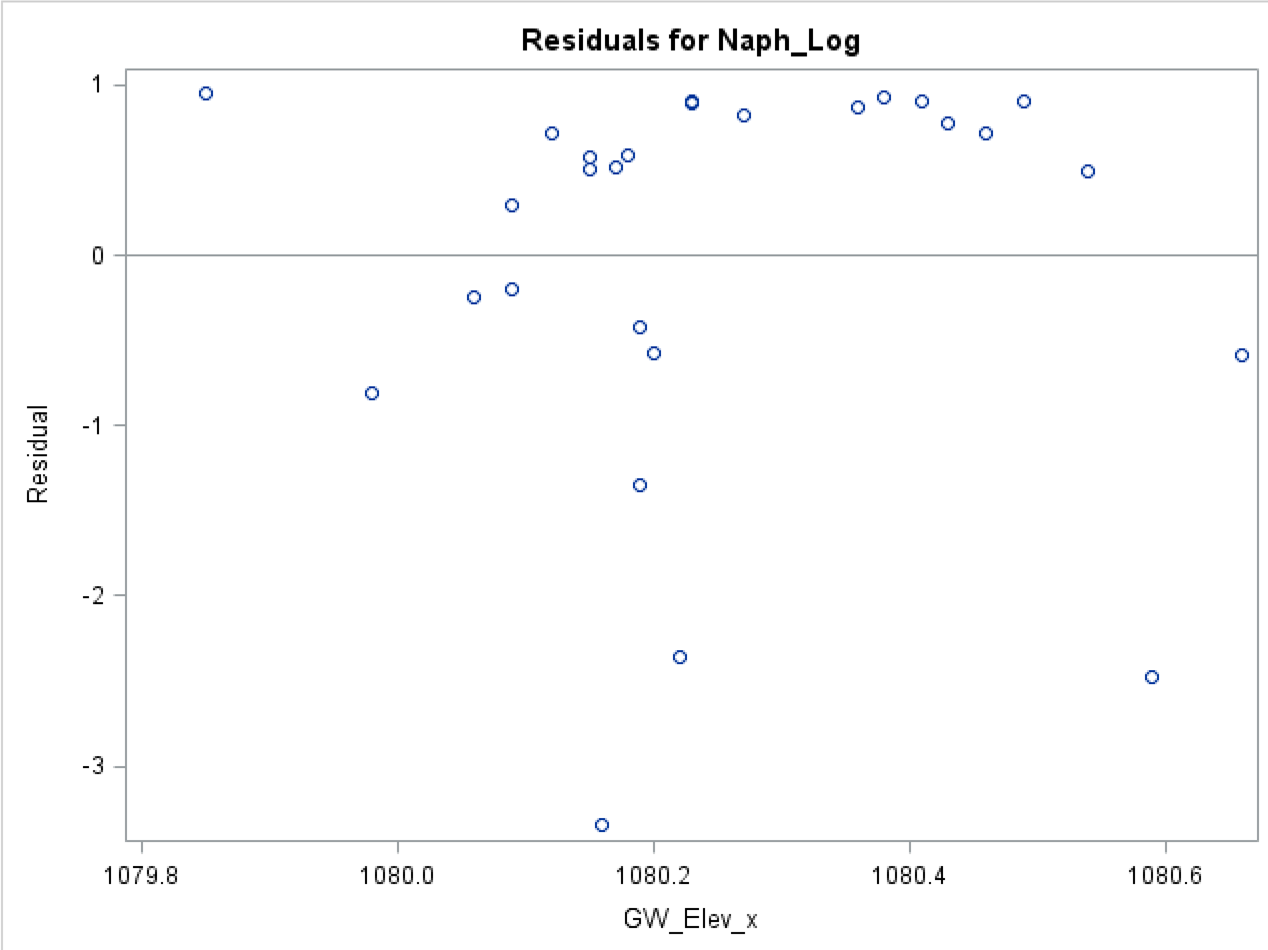
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	-1818.39476	1333.01542	-1.36	0.1847
GW_Elev_x	1	1.68533	1.23398	1.37	0.1842

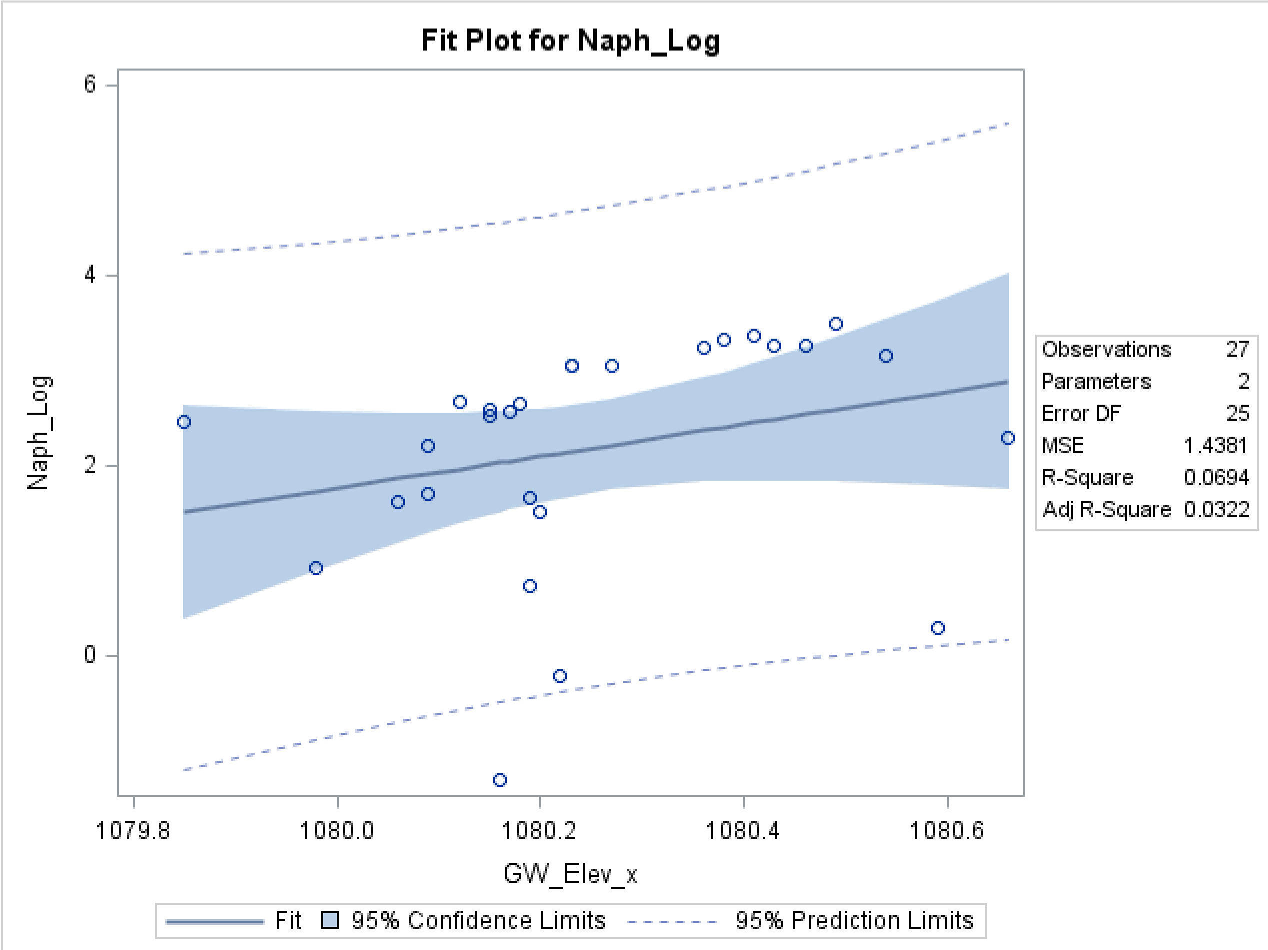
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW6




Residuals for Naph_Log
Residual
1
0
-1
-2
-3
1079.8
1080.0
1080.2
1080.4
1080.6
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
6
4
2
0
1079.8
1080.0
1080.2
1080.4
1080.6
GW_Elev_x
Observations 27
Parameters 2
Error DF 25
MSE 1.4381
R-Square 0.0694
Adj R-Square 0.0322
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW7

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00007045	0.00007045	0.00	0.9586
Error	31	0.79705	0.02571		
Corrected Total	32	0.79712			

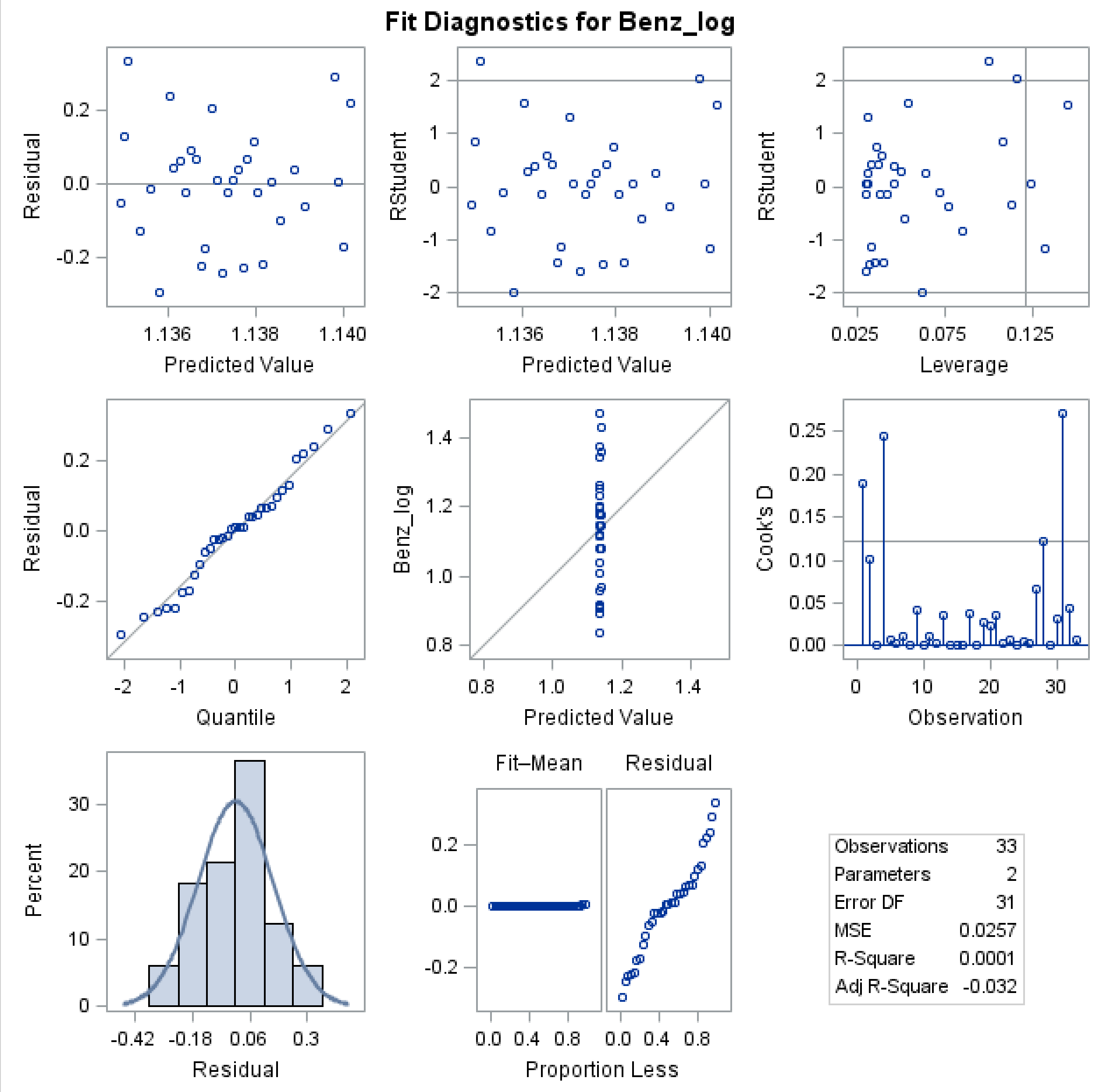
Root MSE	0.16035	R-Square	0.0001
Dependent Mean	1.13732	Adj R-Sq	-0.0322
Coeff Var	14.09880		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1.18737	0.95670	1.24	0.2239
Date_x	1	-0.00000129	0.00002468	-0.05	0.9586

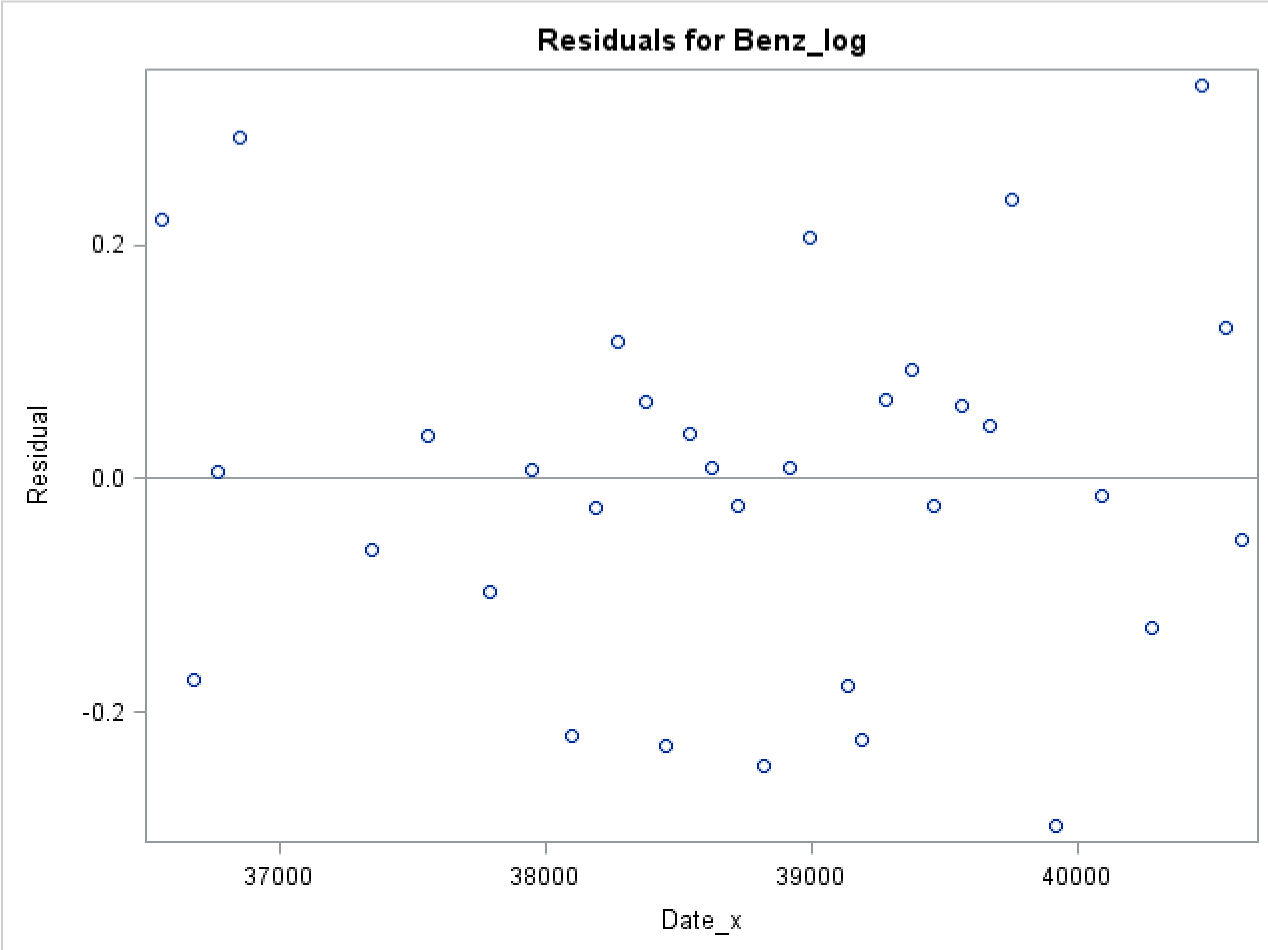
The SAS System

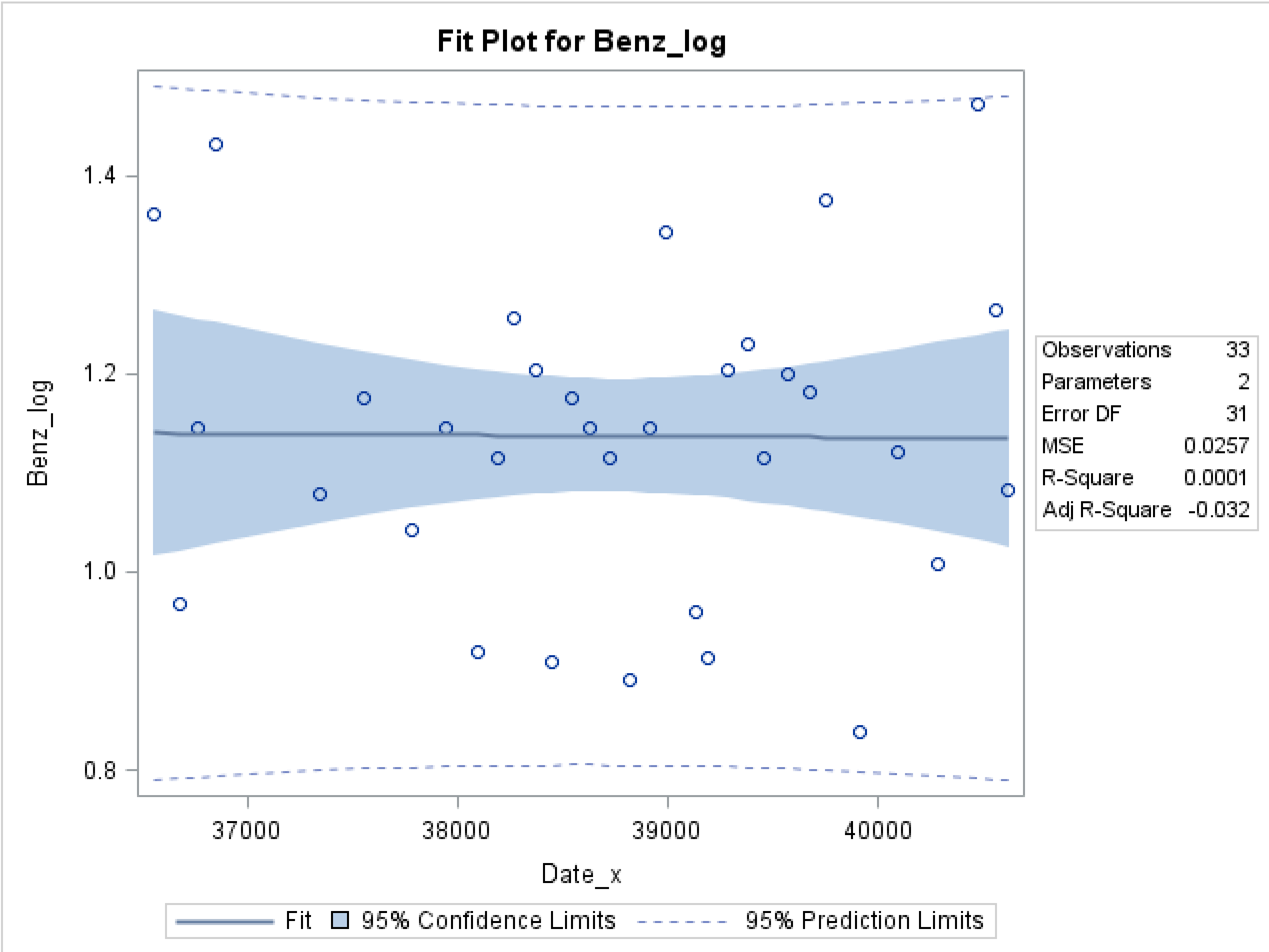
The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW7



Observations	33
Parameters	2
Error DF	31
MSE	0.0257
R-Square	0.0001
Adj R-Square	-0.032


Residuals for Benz_log
Residual
0.2
0.0
-0.2
37000
38000
39000
40000
Date_x



Fit Plot for Benz_log
1.4
1.2
1.0
0.8
Benz_log
37000
38000
39000
40000
Date_x
Observations 33
Parameters 2
Error DF 31
MSE 0.0257
R-Square 0.0001
Adj R-Square -0.032
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW7

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.05354	0.05354	2.23	0.1453
Error	31	0.74358	0.02399		
Corrected Total	32	0.79712			

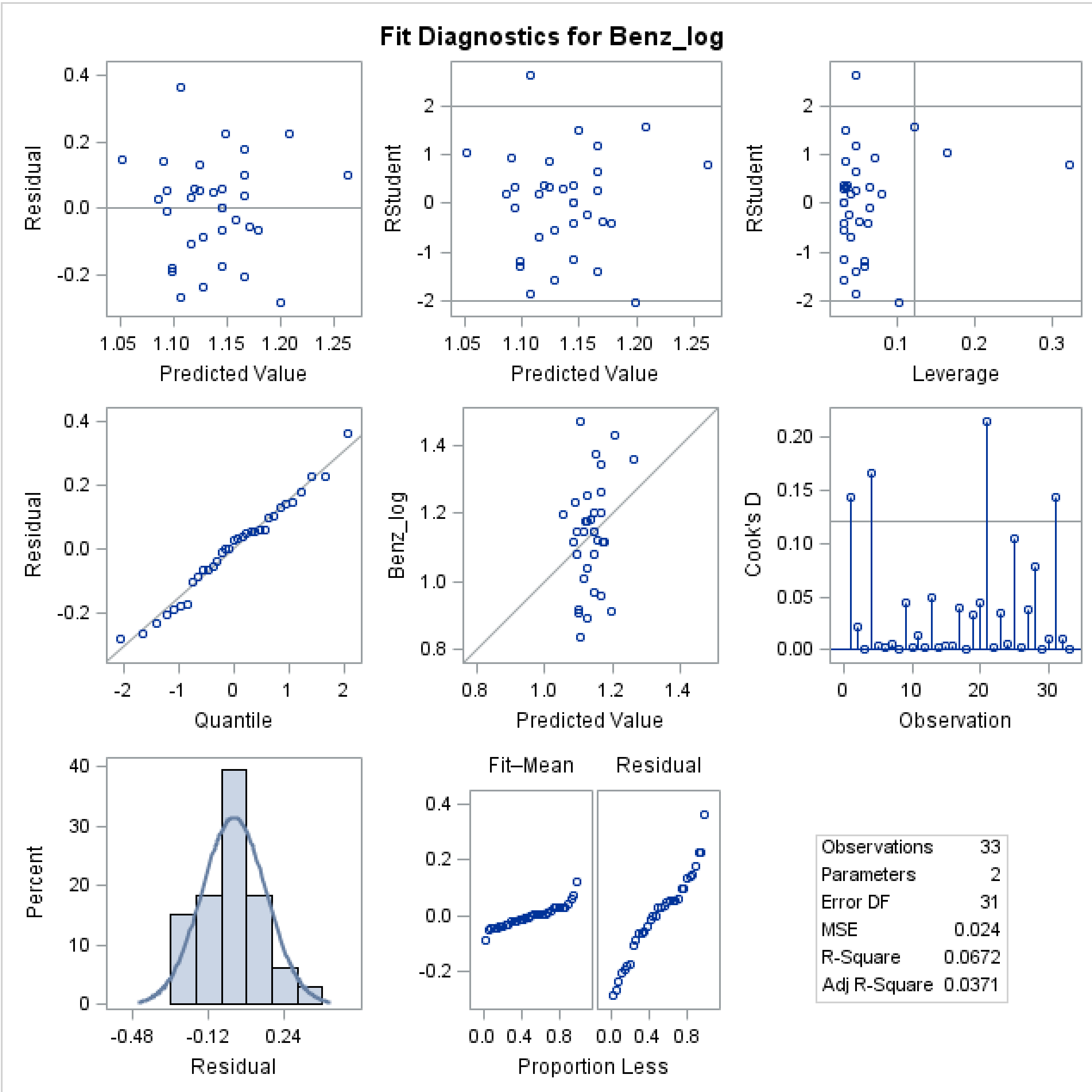
Root MSE	0.15488	R-Square	0.0672
Dependent Mean	1.13732	Adj R-Sq	0.0371
Coeff Var	13.61766		

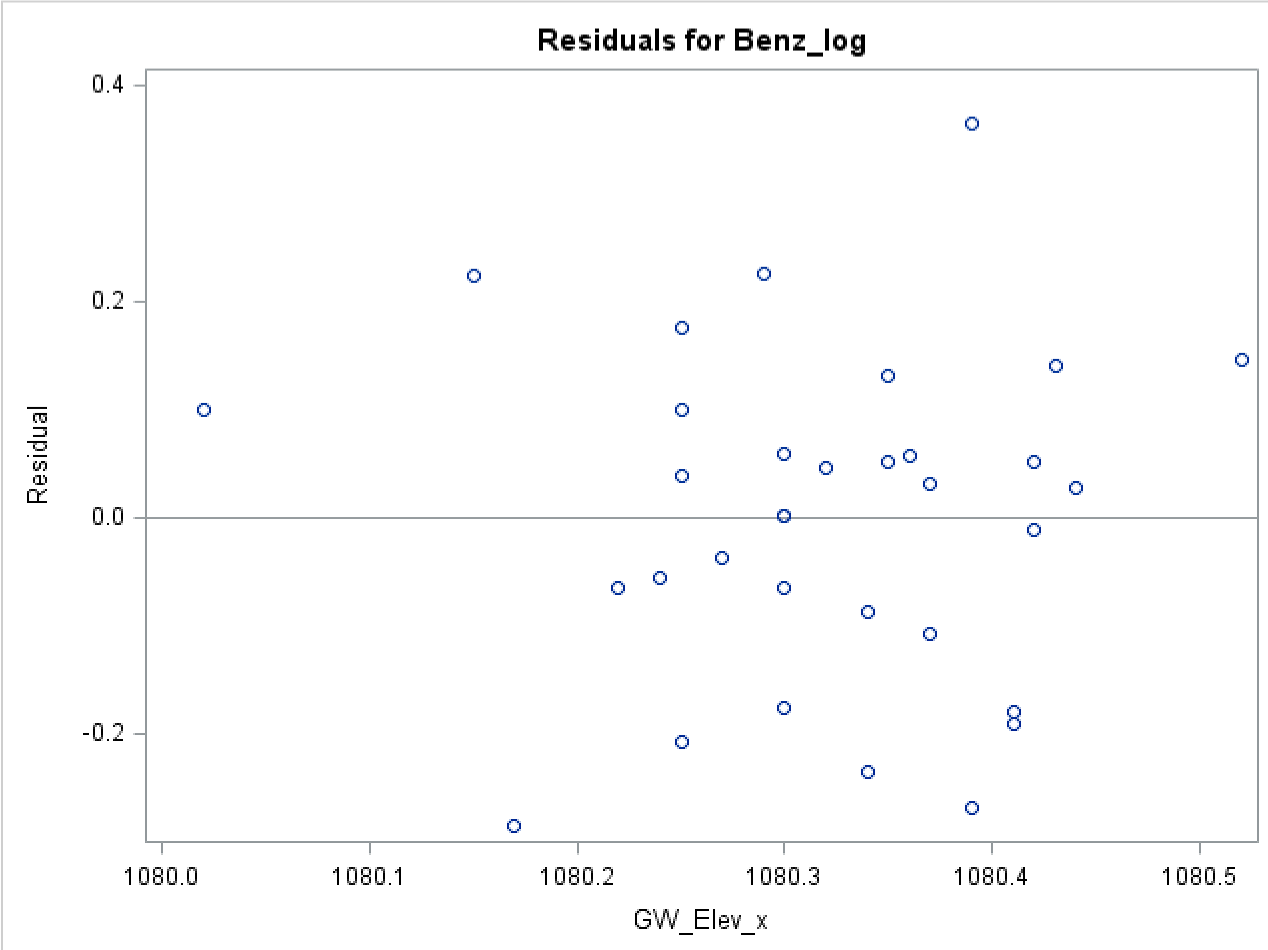
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	454.26136	303.28236	1.50	0.1443
GW_Elev_x	1	-0.41944	0.28073	-1.49	0.1453

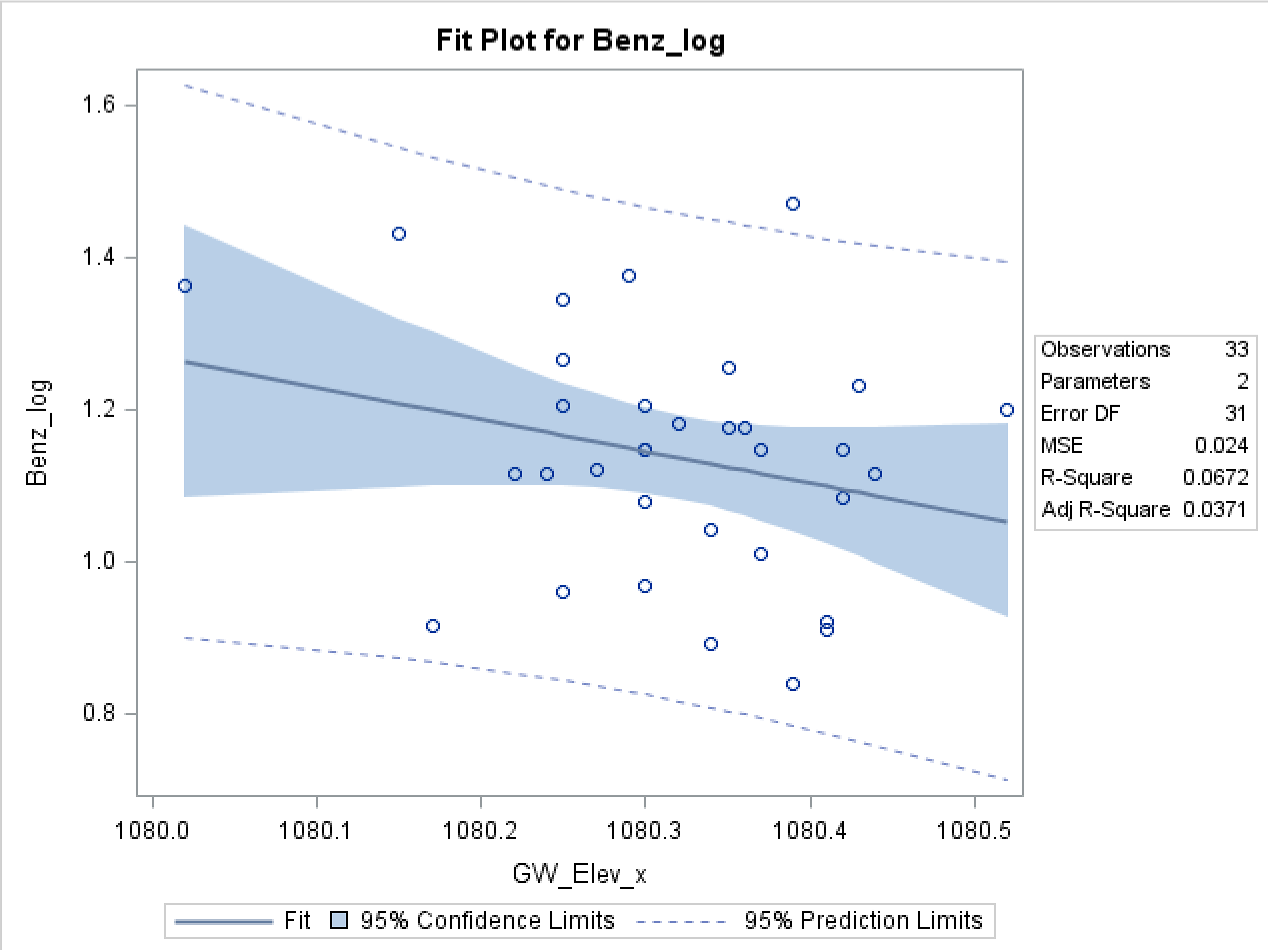
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW7




Residuals for Benz_log
0.4
0.2
0.0
-0.2
Residual
1080.0
1080.1
1080.2
1080.3
1080.4
1080.5
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
1.6
1.4
1.2
1.0
0.8
1080.0
1080.1
1080.2
1080.3
1080.4
1080.5
Observations 33
Parameters 2
Error DF 31
MSE 0.024
R-Square 0.0672
Adj R-Square 0.0371
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW7

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.00774	0.00774	0.02	0.8994
Error	31	14.77550	0.47663		
Corrected Total	32	14.78324			

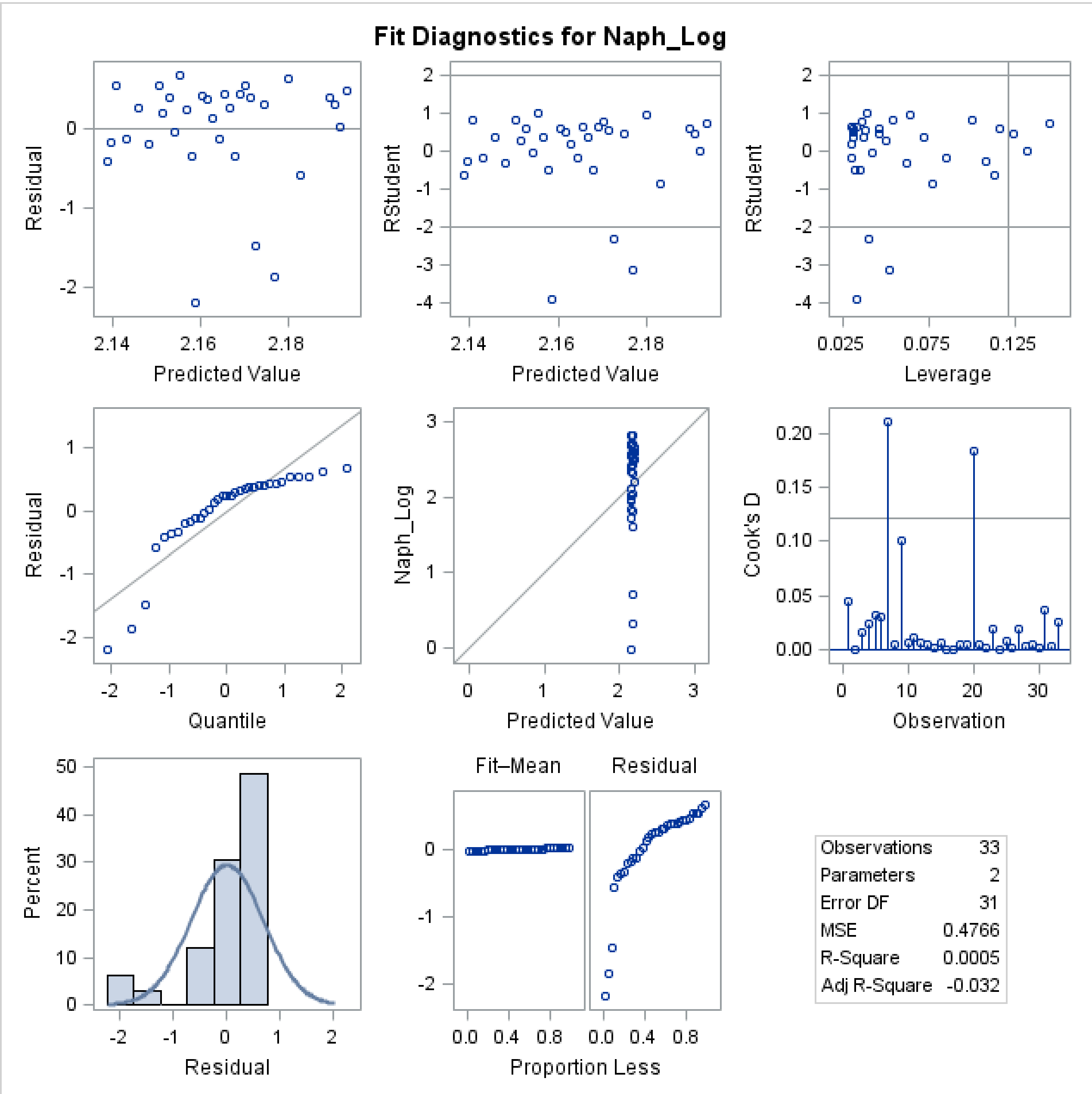
Root MSE	0.69038	R-Square	0.0005
Dependent Mean	2.16385	Adj R-Sq	-0.0317
Coeff Var	31.90530		

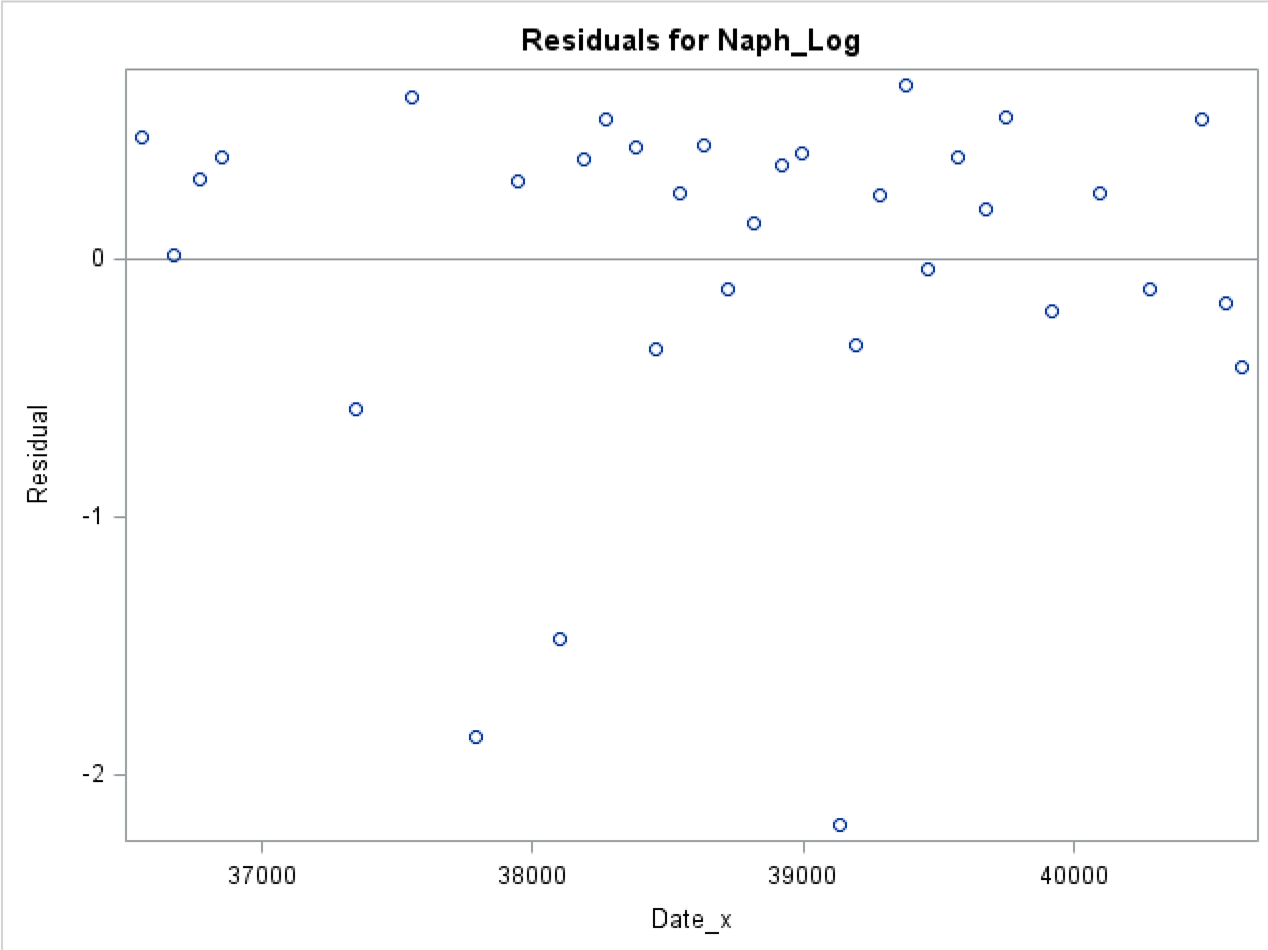
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	2.68845	4.11913	0.65	0.5188
Date_x	1	-0.00001354	0.00010624	-0.13	0.8994

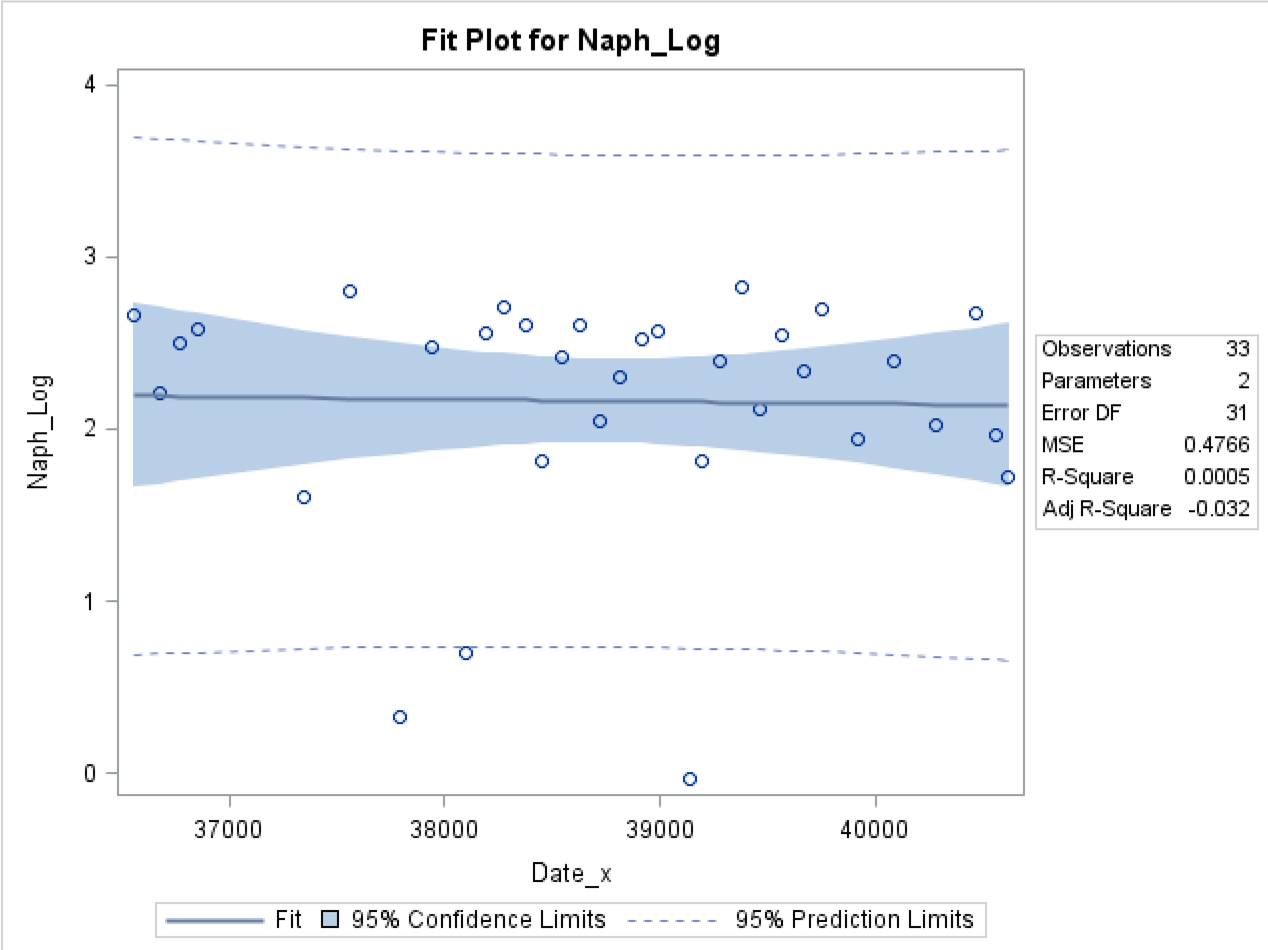
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW7




Residuals for Naph_Log
Residual
0
-1
-2
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
Date_x
0
1
2
3
4
37000
38000
39000
40000
Observations 33
Parameters 2
Error DF 31
MSE 0.4766
R-Square 0.0005
Adj R-Square -0.032
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW7

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.00026729	0.00026729	0.00	0.9813
Error	31	14.78297	0.47687		
Corrected Total	32	14.78324			

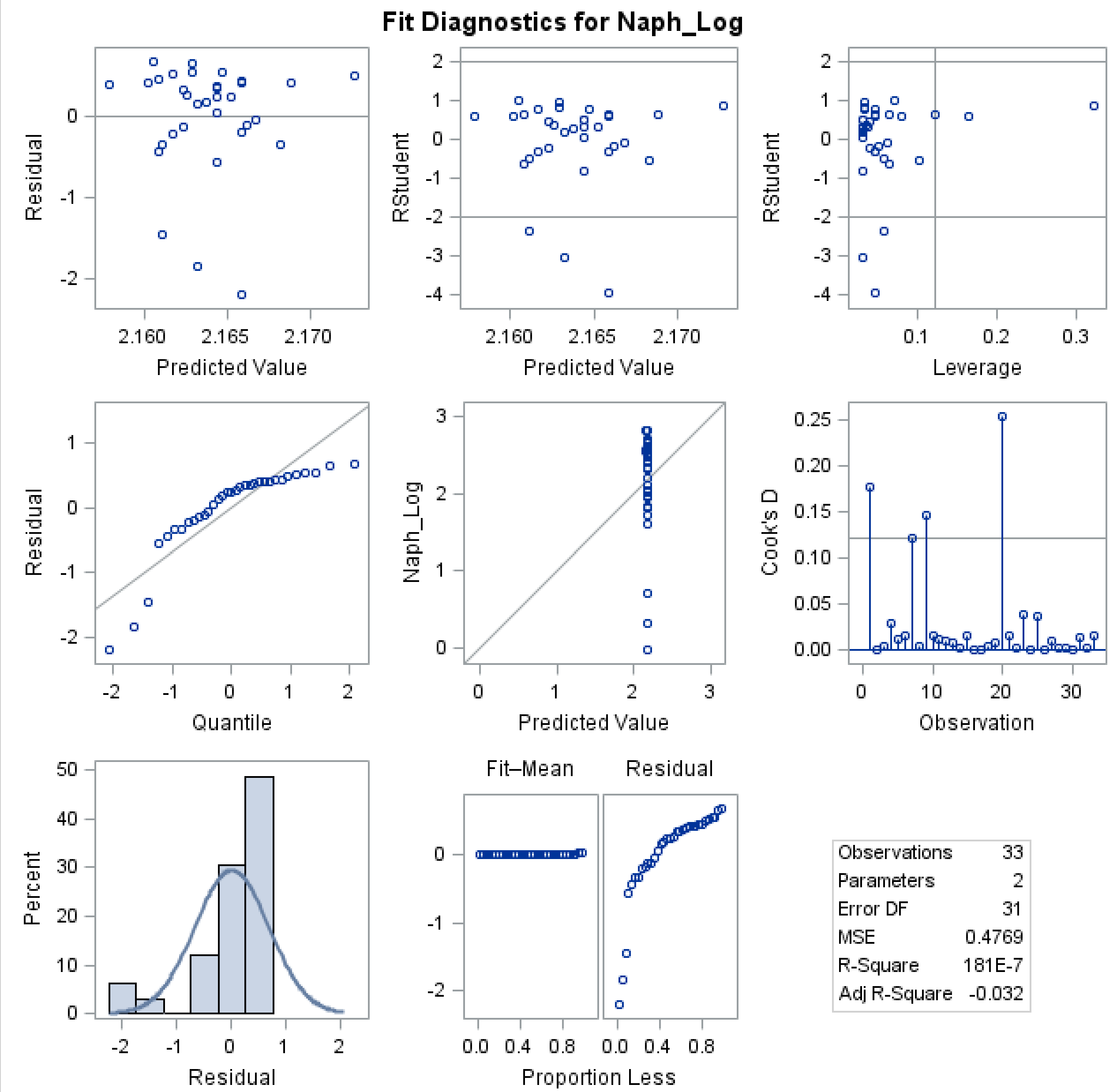
Root MSE	0.69056	**R-Square**	0.0000
Dependent Mean	2.16385	**Adj R-Sq**	-0.0322
Coeff Var	31.91336		

Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	34.17885	1352.27122	0.03	0.9800
GW_Elev_x	1	-0.02963	1.25173	-0.02	0.9813

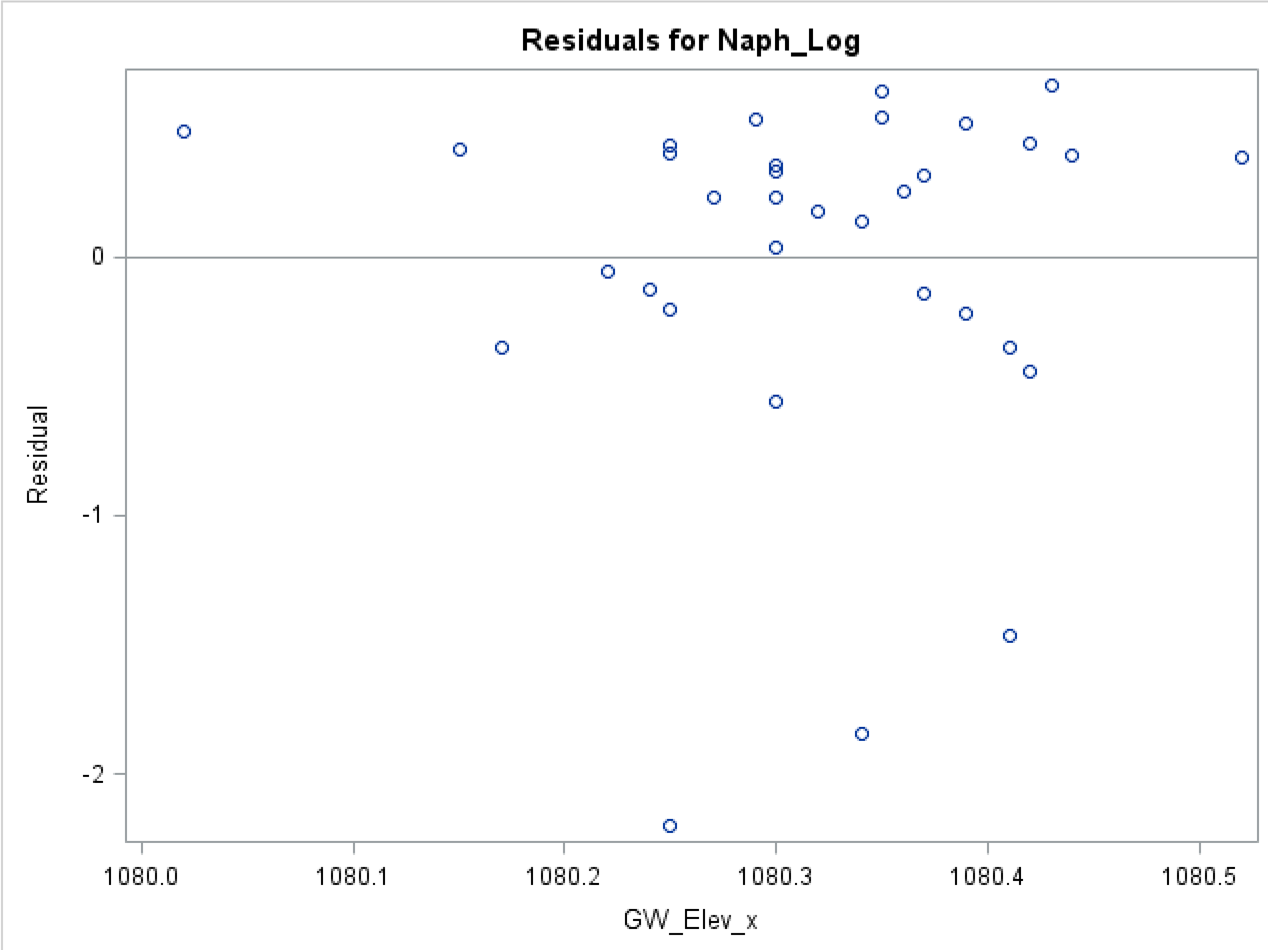
The SAS System

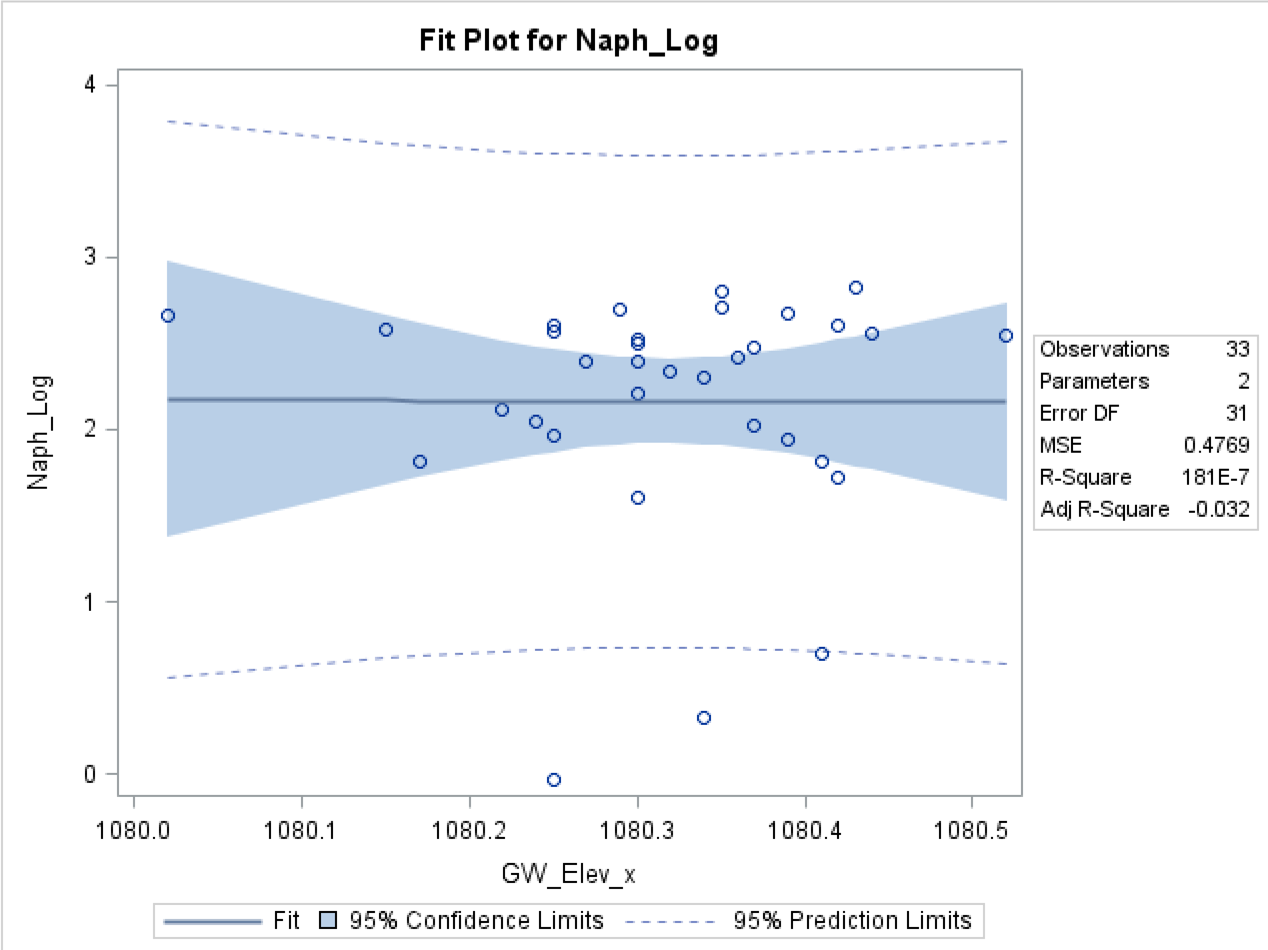
The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW7



Observations	33
Parameters	2
Error DF	31
MSE	0.4769
R-Square	181E-7
Adj R-Square	-0.032


Residuals for Naph_Log
Residual
0
-1
-2
1080.0
1080.1
1080.2
1080.3
1080.4
1080.5
GW_Elev_x



Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
4
3
2
1
0
1080.0
1080.1
1080.2
1080.3
1080.4
1080.5
Observations 33
Parameters 2
Error DF 31
MSE 0.4769
R-Square 181E-7
Adj R-Square -0.032
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW9

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.60036	0.60036	3.94	0.0583
Error	25	3.81081	0.15243		
Corrected Total	26	4.41117			

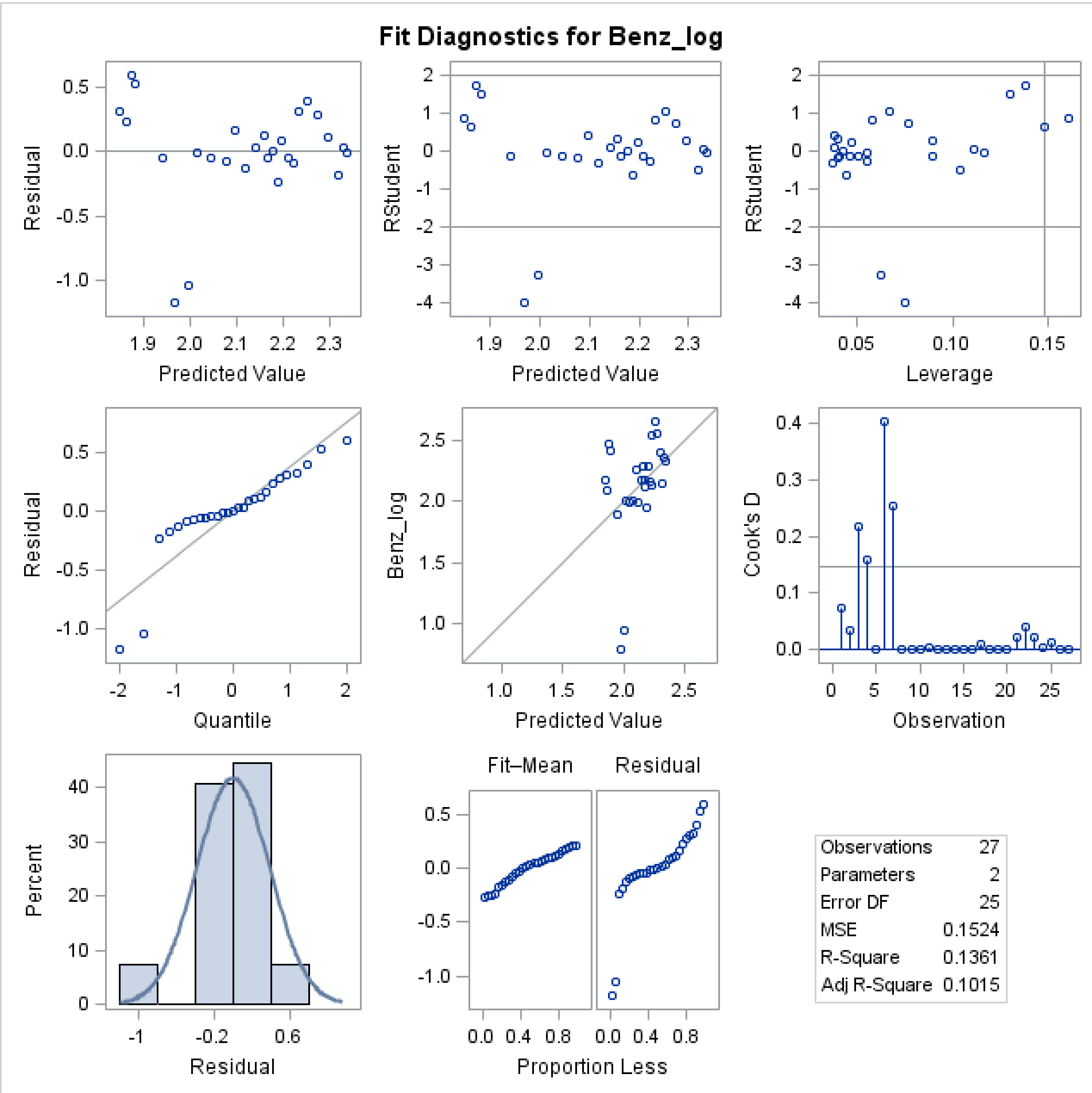
Root MSE	0.39043	R-Square	0.1361
Dependent Mean	2.11899	Adj R-Sq	0.1015
Coeff Var	18.42507		

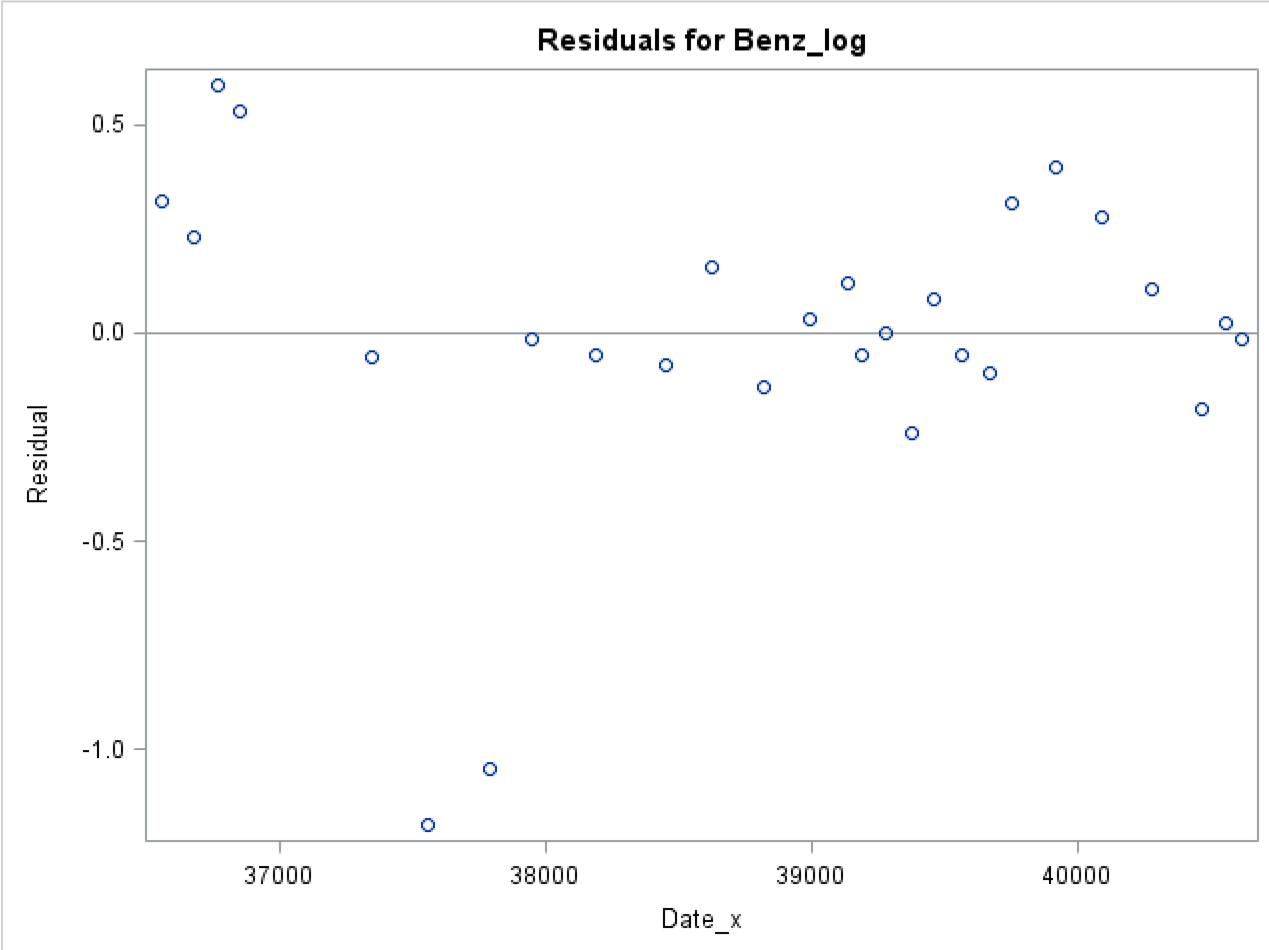
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-2.56321	2.36049	-1.09	0.2879
Date_x	1	0.00012064	0.00006079	1.98	0.0583

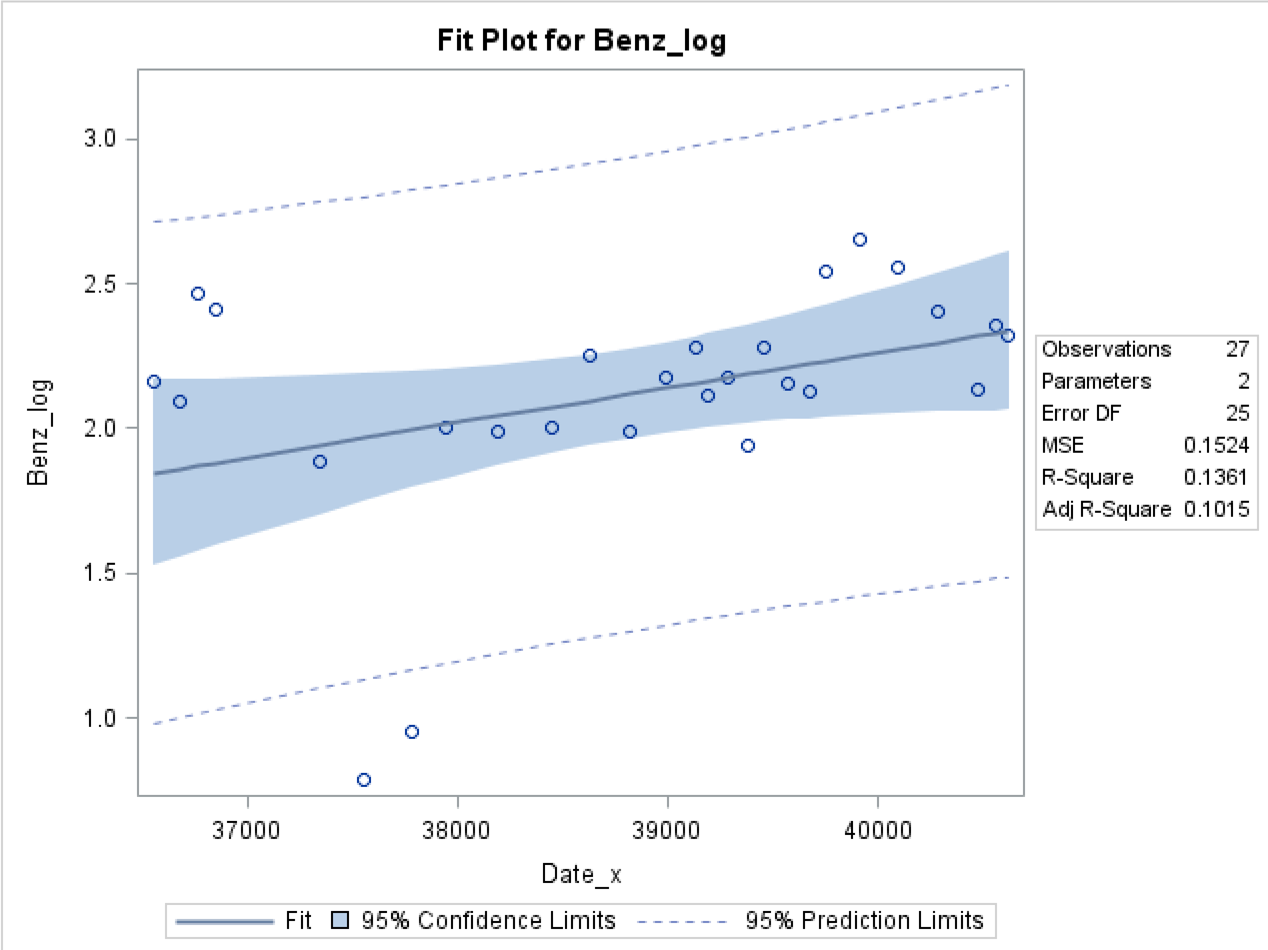
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=OW9




Residuals for Benz_log
0.5
0.0
-0.5
-1.0
Residual
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
3.0
2.5
2.0
1.5
1.0
Benz_log
37000
38000
39000
40000
Date_x
Observations 27
Parameters 2
Error DF 25
MSE 0.1524
R-Square 0.1361
Adj R-Square 0.1015
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW9

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.64490	0.64490	4.28	0.0490
Error	25	3.76627	0.15065		
Corrected Total	26	4.41117			

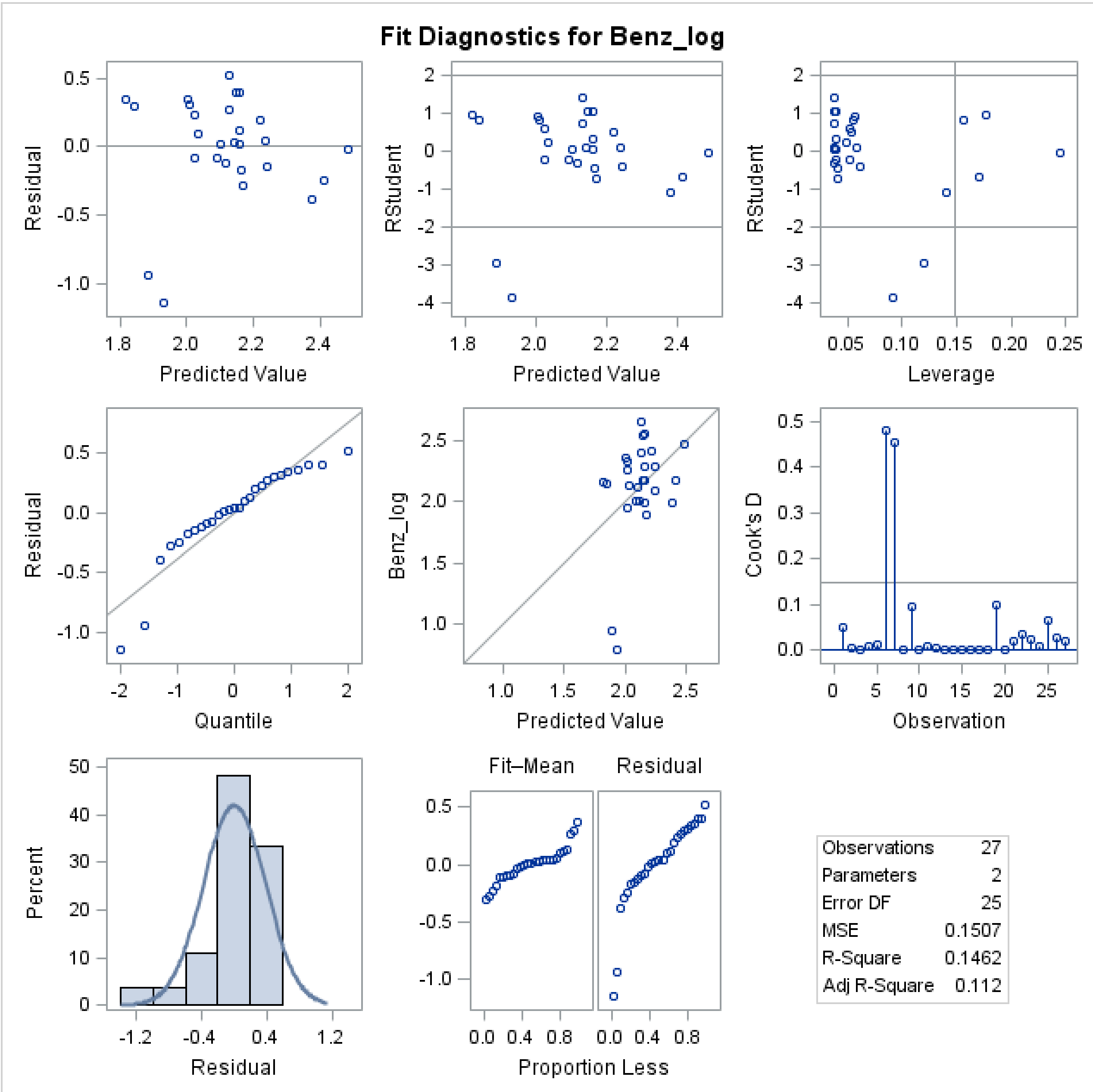
Root MSE	0.38814	R-Square	0.1462
Dependent Mean	2.11899	Adj R-Sq	0.1120
Coeff Var	18.31708		

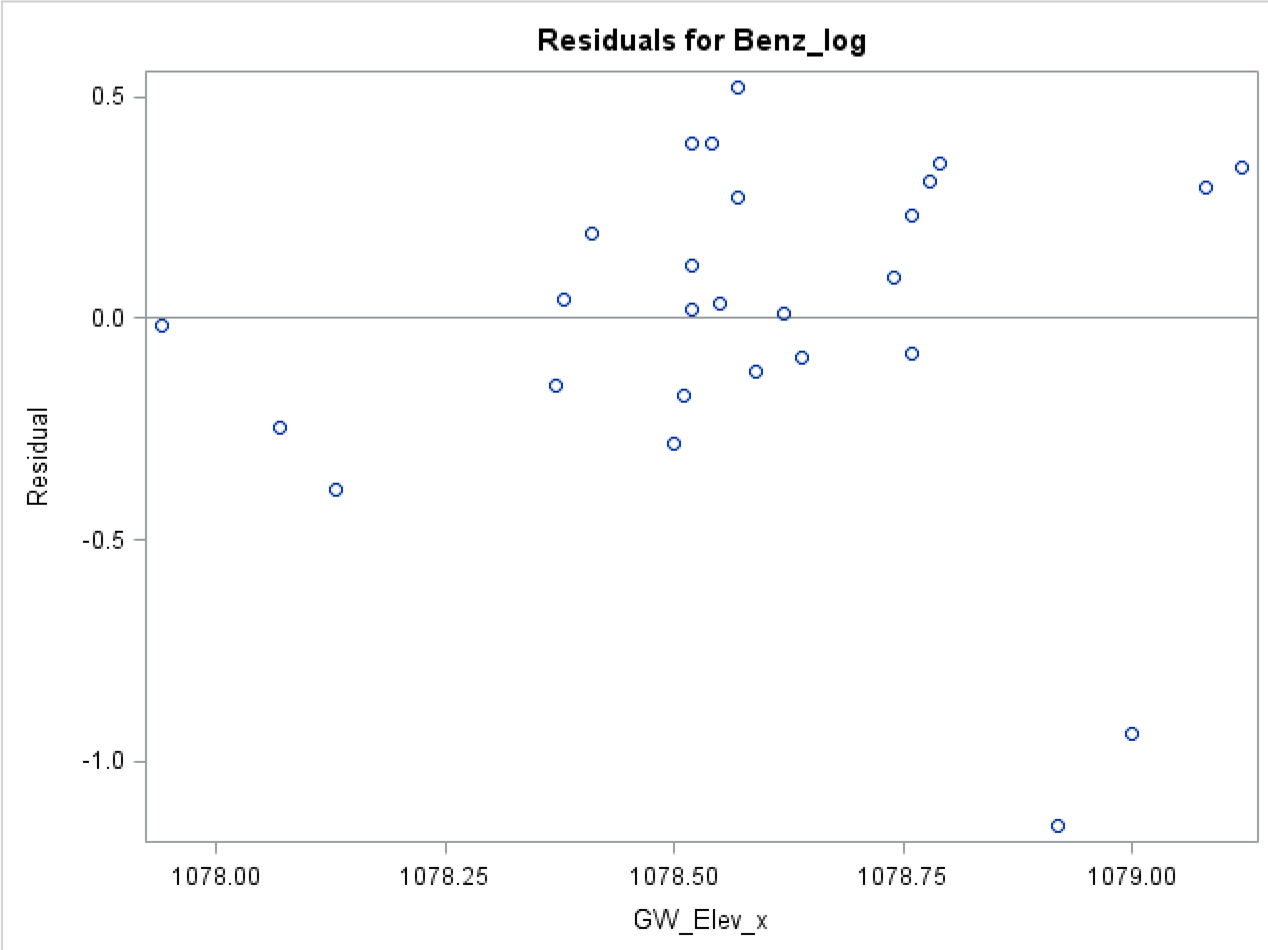
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	611.36193	294.46238	2.08	0.0483
GW_Elev_x	1	-0.56485	0.27301	-2.07	0.0490

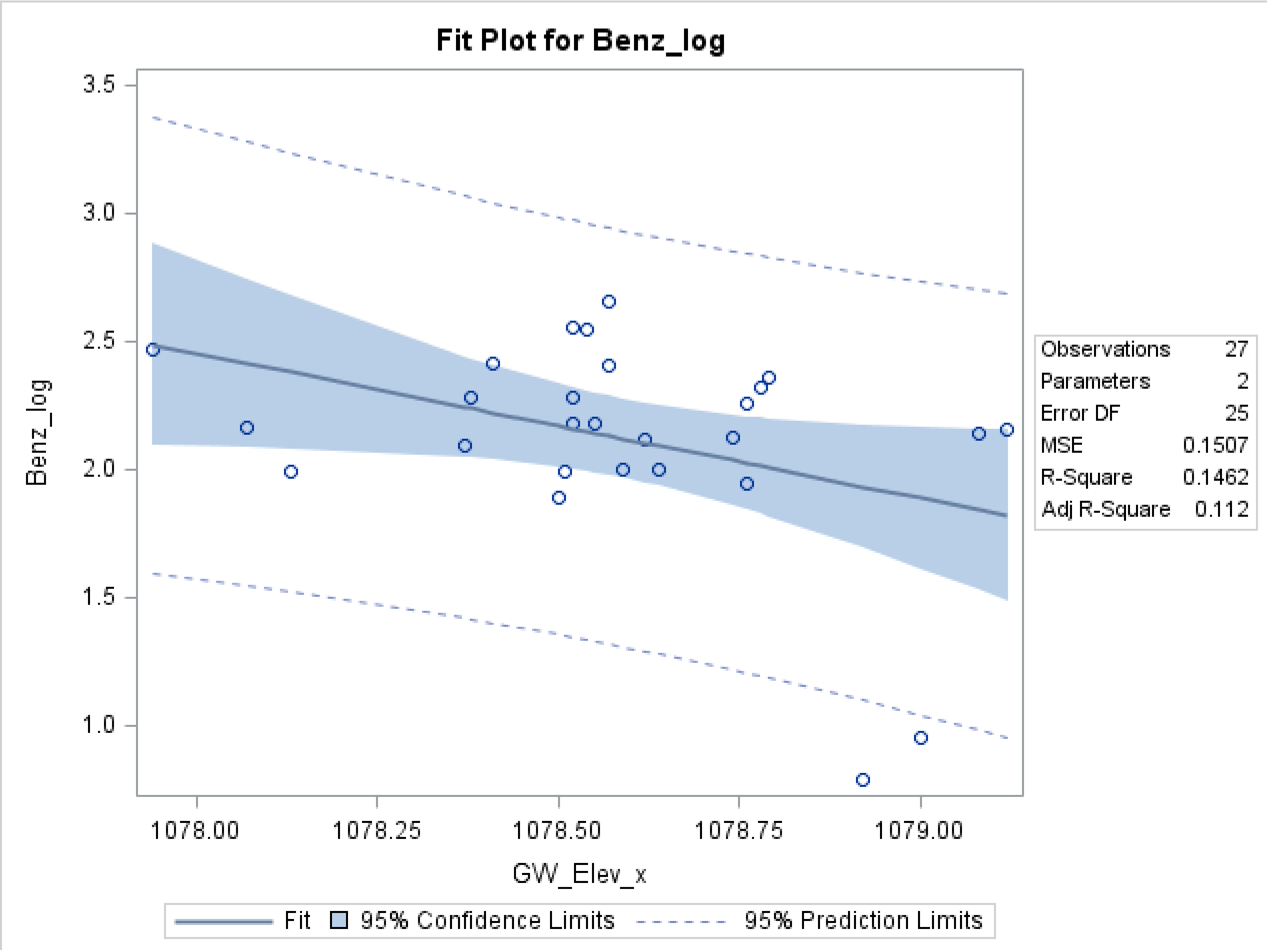
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=OW9




Residuals for Benz_log
0.5
0.0
-0.5
-1.0
Residual
1078.00
1078.25
1078.50
1078.75
1079.00
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
3.5
3.0
2.5
2.0
1.5
1.0
1078.00
1078.25
1078.50
1078.75
1079.00
Observations 27
Parameters 2
Error DF 25
MSE 0.1507
R-Square 0.1462
Adj R-Square 0.112
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW9

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.95001	0.95001	1.94	0.1764
Error	25	12.26781	0.49071		
Corrected Total	26	13.21783			

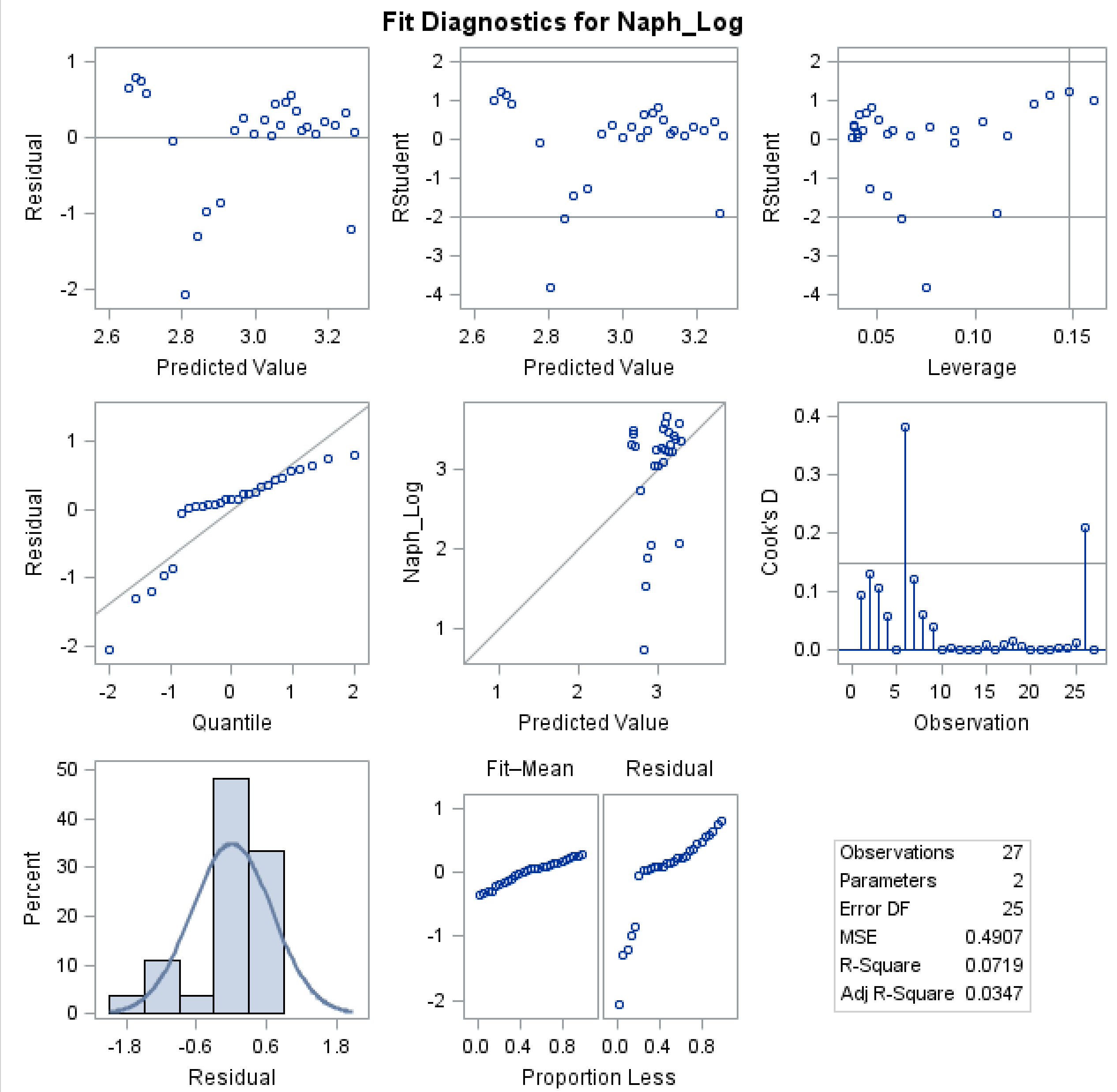
Root MSE	0.70051	R-Square	0.0719
Dependent Mean	2.99800	Adj R-Sq	0.0347
Coeff Var	23.36590		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-2.89190	4.23523	-0.68	0.5010
Date_x	1	0.00015175	0.00010906	1.39	0.1764

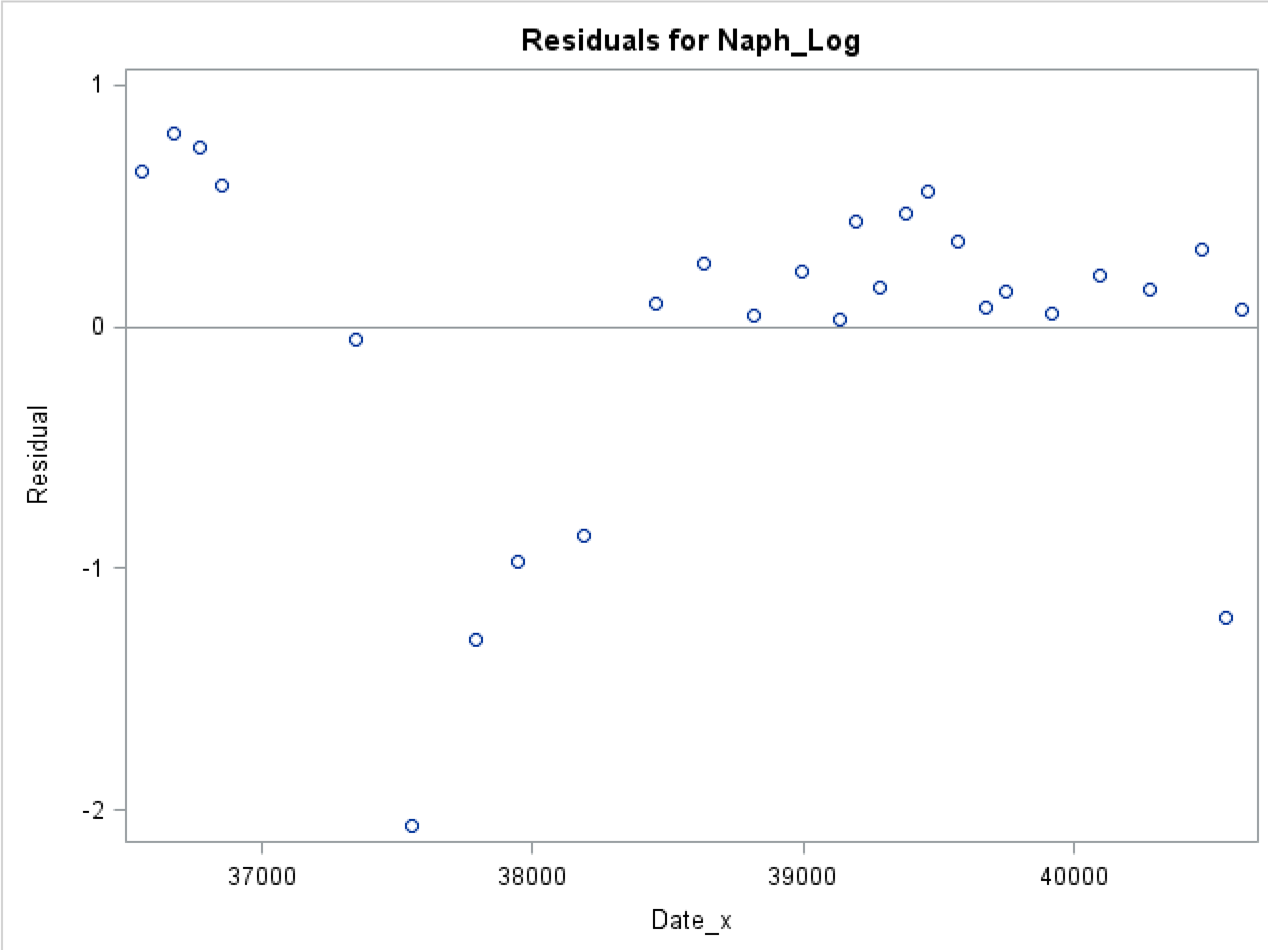
The SAS System

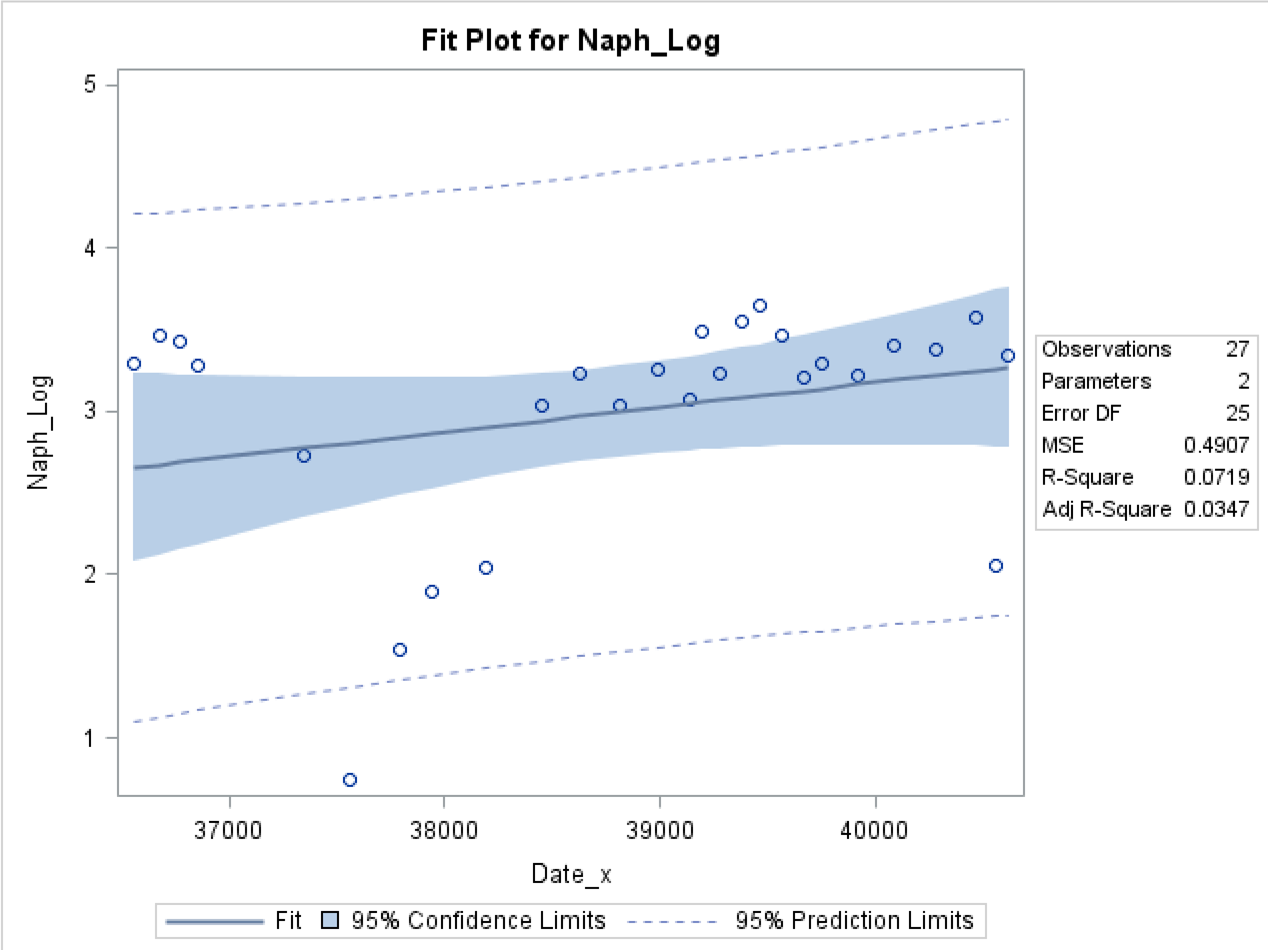
The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=OW9



Observations	27
Parameters	2
Error DF	25
MSE	0.4907
R-Square	0.0719
Adj R-Square	0.0347


Residuals for Naph_Log
1
0
-1
-2
Residual
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
5
4
3
2
1
37000
38000
39000
40000
Date_x
Observations 27
Parameters 2
Error DF 25
MSE 0.4907
R-Square 0.0719
Adj R-Square 0.0347
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW9

Number of Observations Read	27
Number of Observations Used	27

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.58424	0.58424	1.16	0.2925
Error	25	12.63359	0.50534		
Corrected Total	26	13.21783			

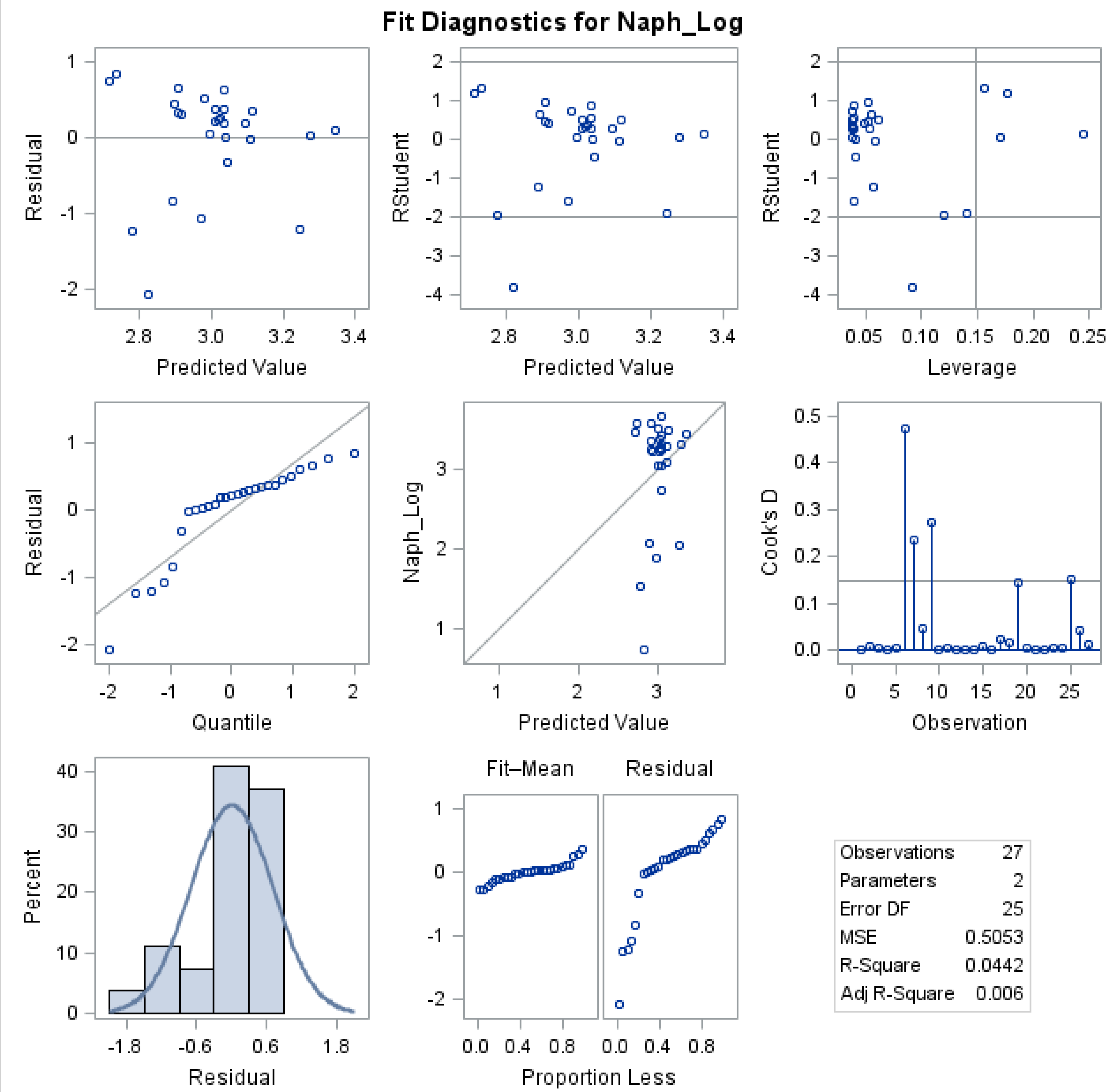
Root MSE	0.71088	**R-Square**	0.0442
Dependent Mean	2.99800	**Adj R-Sq**	0.0060
Coeff Var	23.71167		

Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	582.88002	539.30874	1.08	0.2901
GW_Elev_x	1	-0.53763	0.50001	-1.08	0.2925

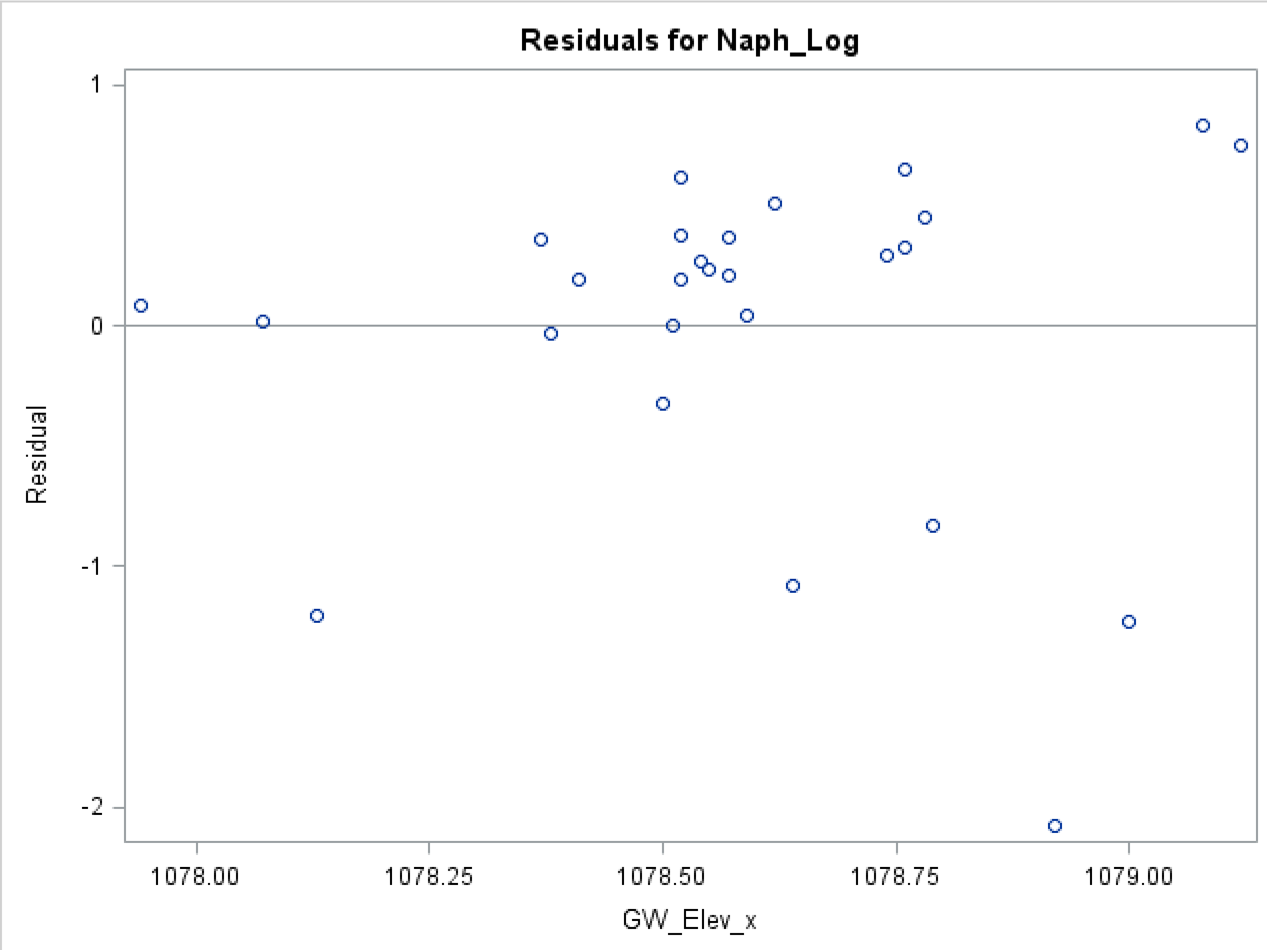
The SAS System

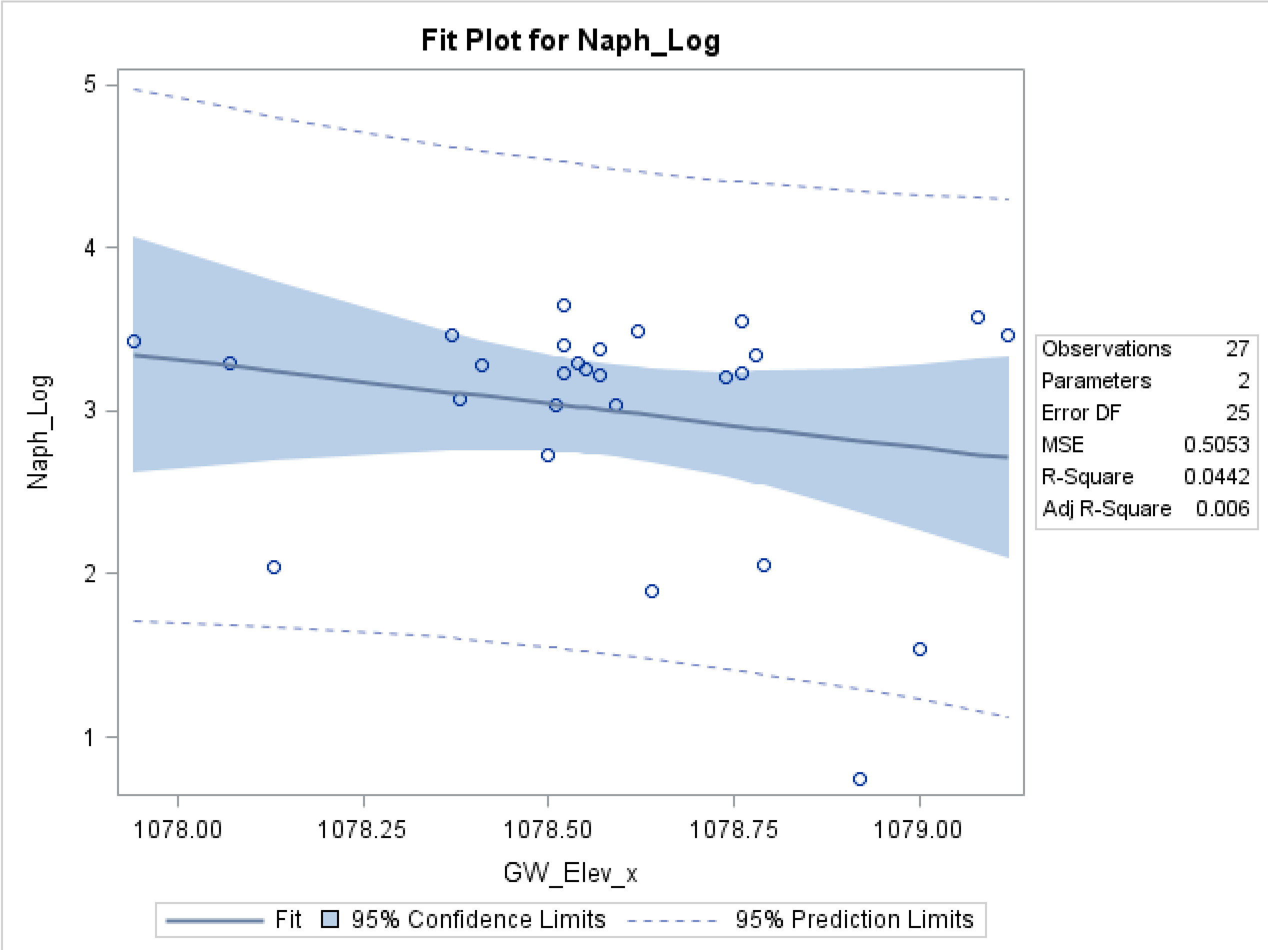
The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=OW9



Observations	27
Parameters	2
Error DF	25
MSE	0.5053
R-Square	0.0442
Adj R-Square	0.006


Residuals for Naph_Log
Residual
1
0
-1
-2
1078.00
1078.25
1078.50
1078.75
1079.00
GW_Elev_x



Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
5
4
3
2
1
1078.00
1078.25
1078.50
1078.75
1079.00
Observations 27
Parameters 2
Error DF 25
MSE 0.5053
R-Square 0.0442
Adj R-Square 0.006
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=P5B

Number of Observations Read	33
Number of Observations Used	32
Number of Observations with Missing Values	1

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	2.90522	2.90522	11.08	0.0023
Error	30	7.86774	0.26226		
Corrected Total	31	10.77296			

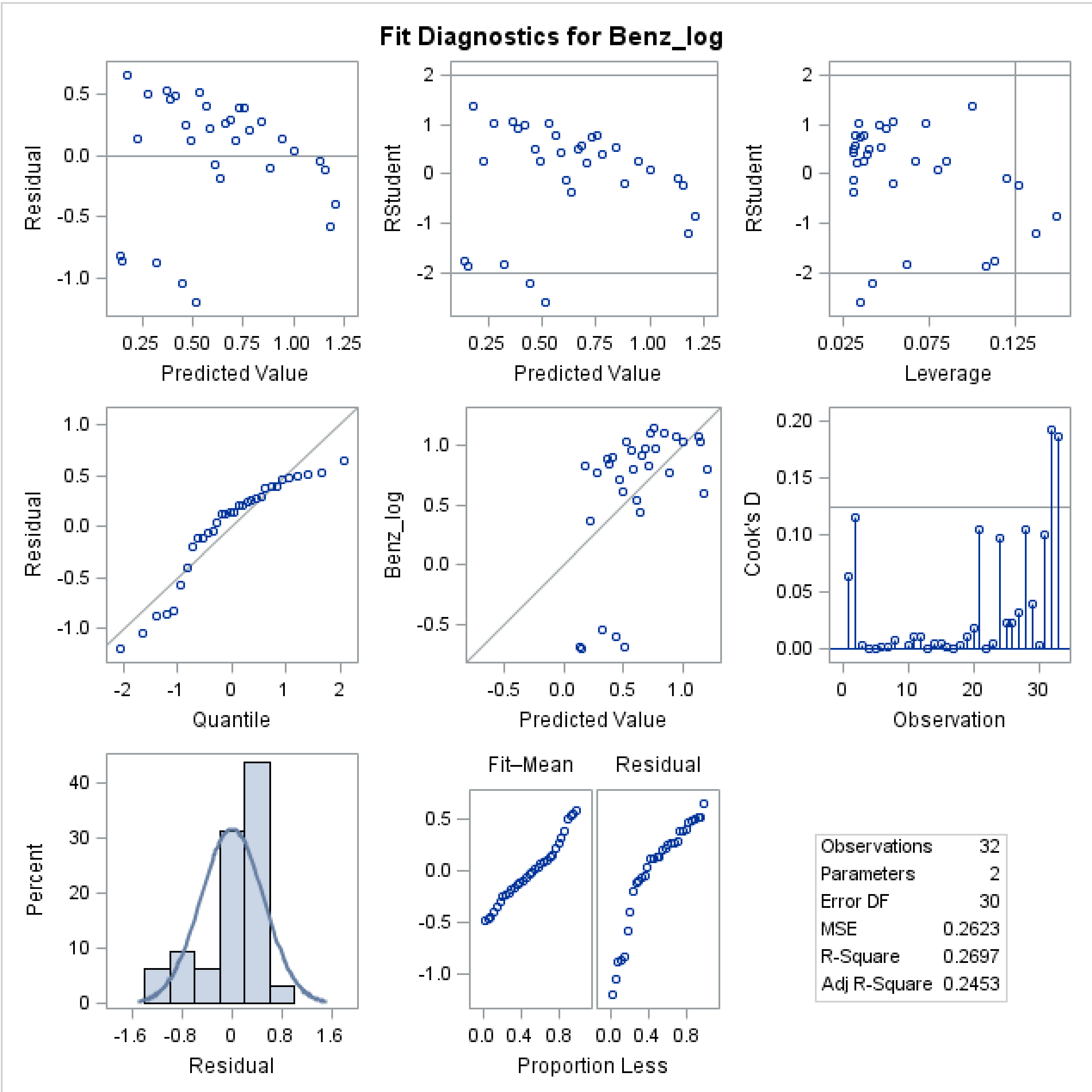
Root MSE	0.51211	**R-Square**	0.2697
Dependent Mean	0.62544	**Adj R-Sq**	0.2453
Coeff Var	81.87969		

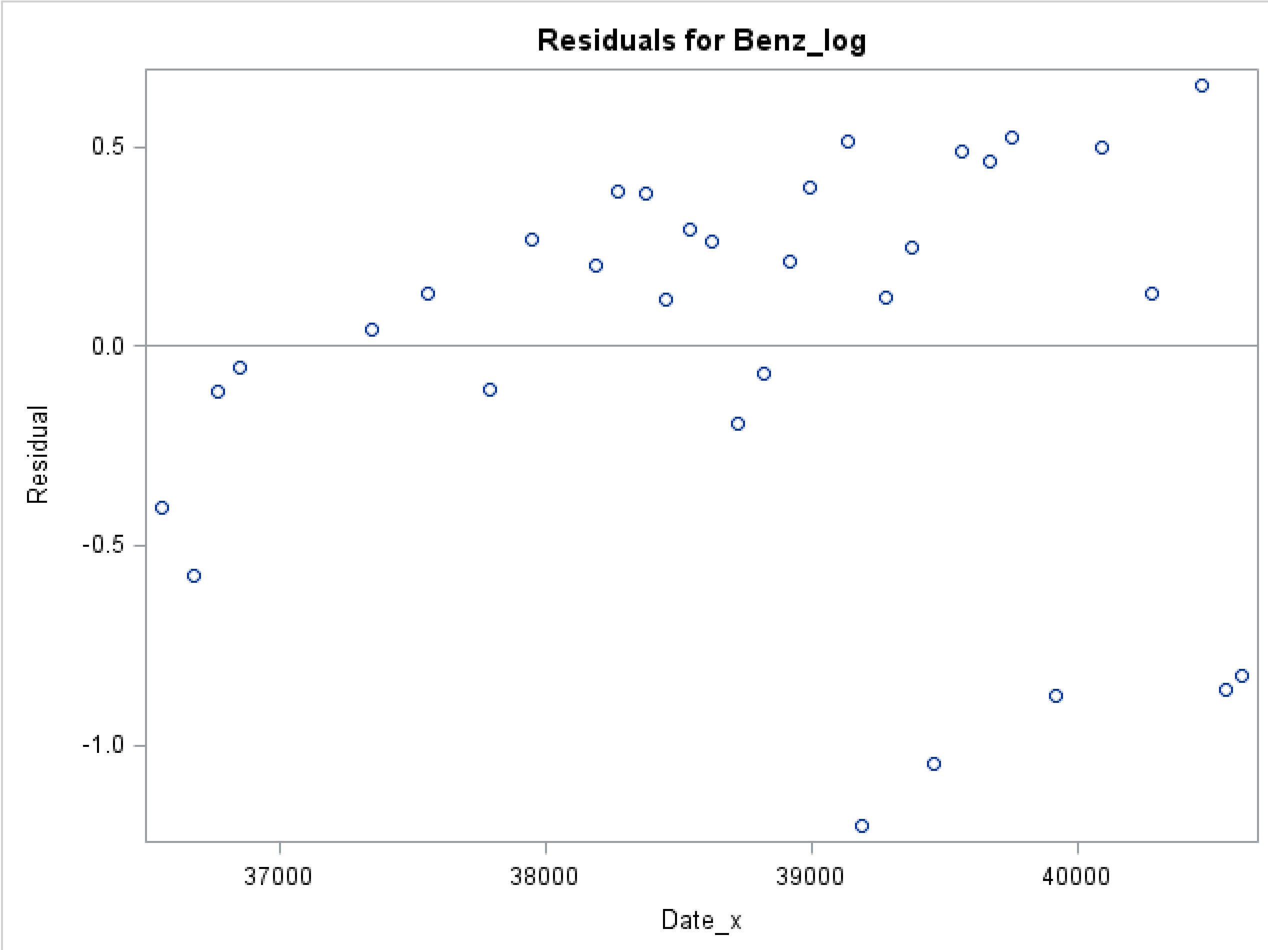
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	10.85010	3.07335	3.53	0.0014
Date_x	1	-0.00026370	0.00007923	-3.33	0.0023

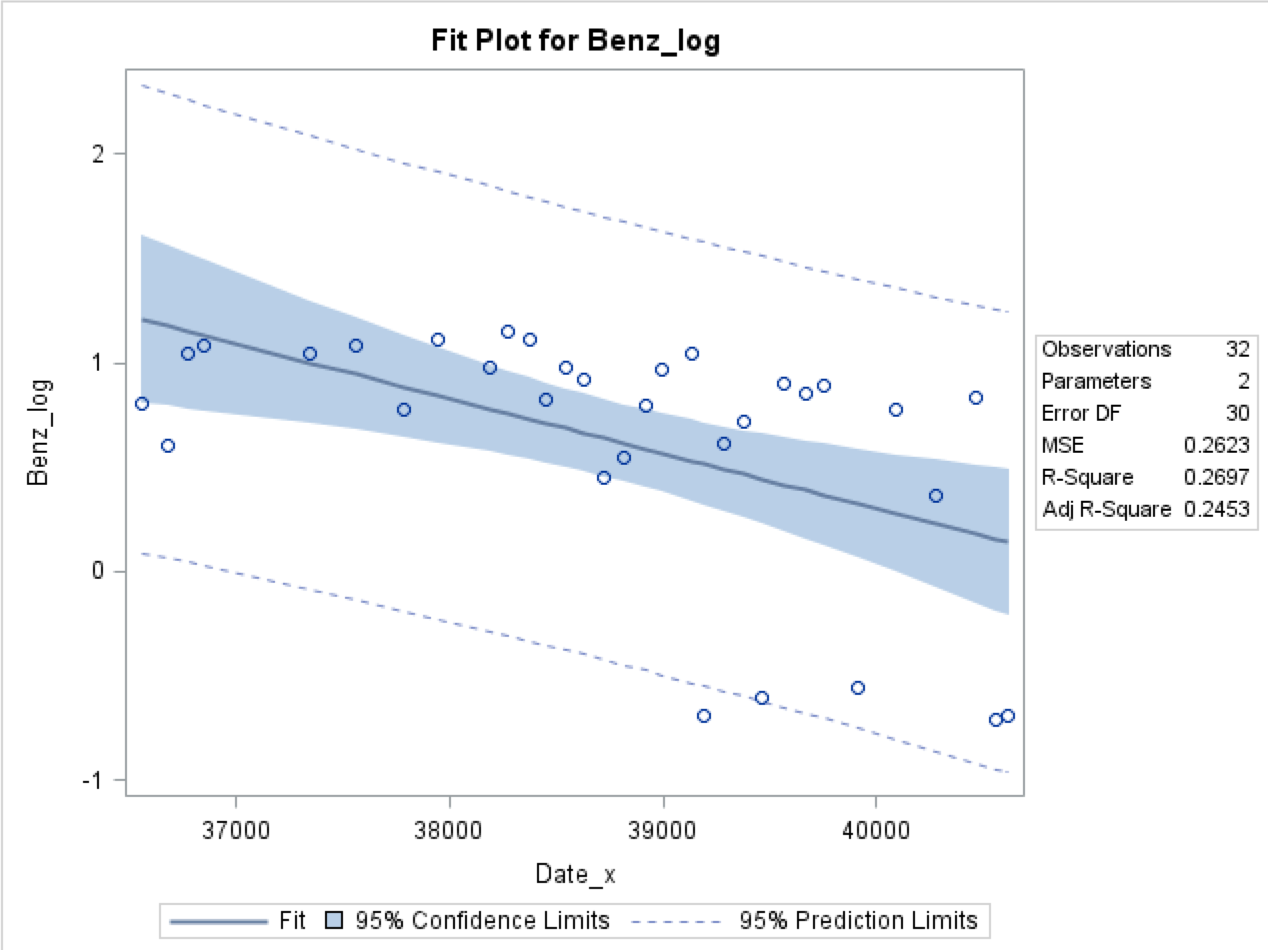
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=P5B




Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
Benz_log
Date_x
2
1
0
-1
37000
38000
39000
40000
Observations 32
Parameters 2
Error DF 30
MSE 0.2623
R-Square 0.2697
Adj R-Square 0.2453
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=P5B

Number of Observations Read	33
Number of Observations Used	32
Number of Observations with Missing Values	1

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.26316	0.26316	0.75	0.3930
Error	30	10.50980	0.35033		
Corrected Total	31	10.77296			

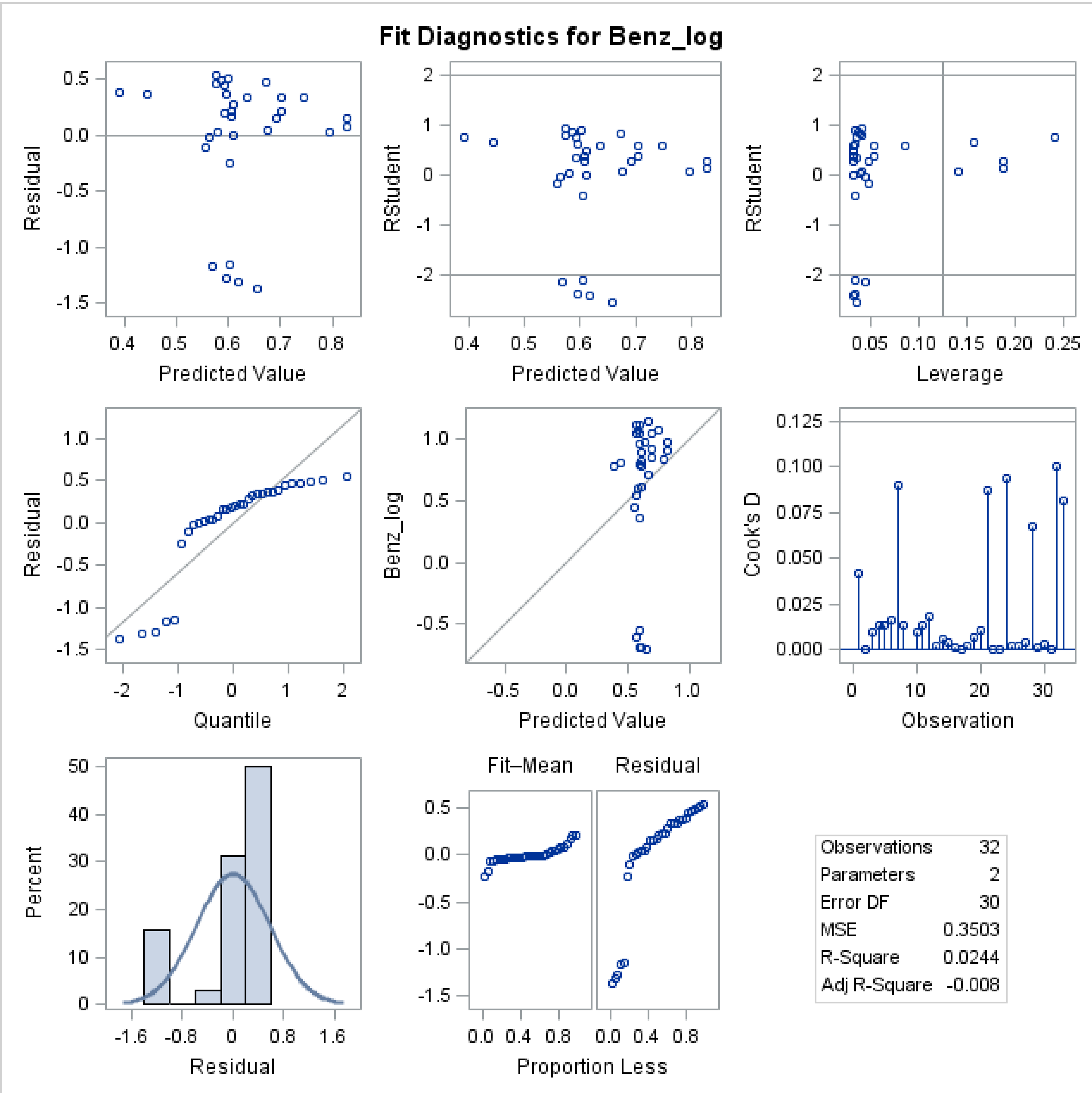
Root MSE	0.59188	R-Square	0.0244
Dependent Mean	0.62544	Adj R-Sq	-0.0081
Coeff Var	94.63423		

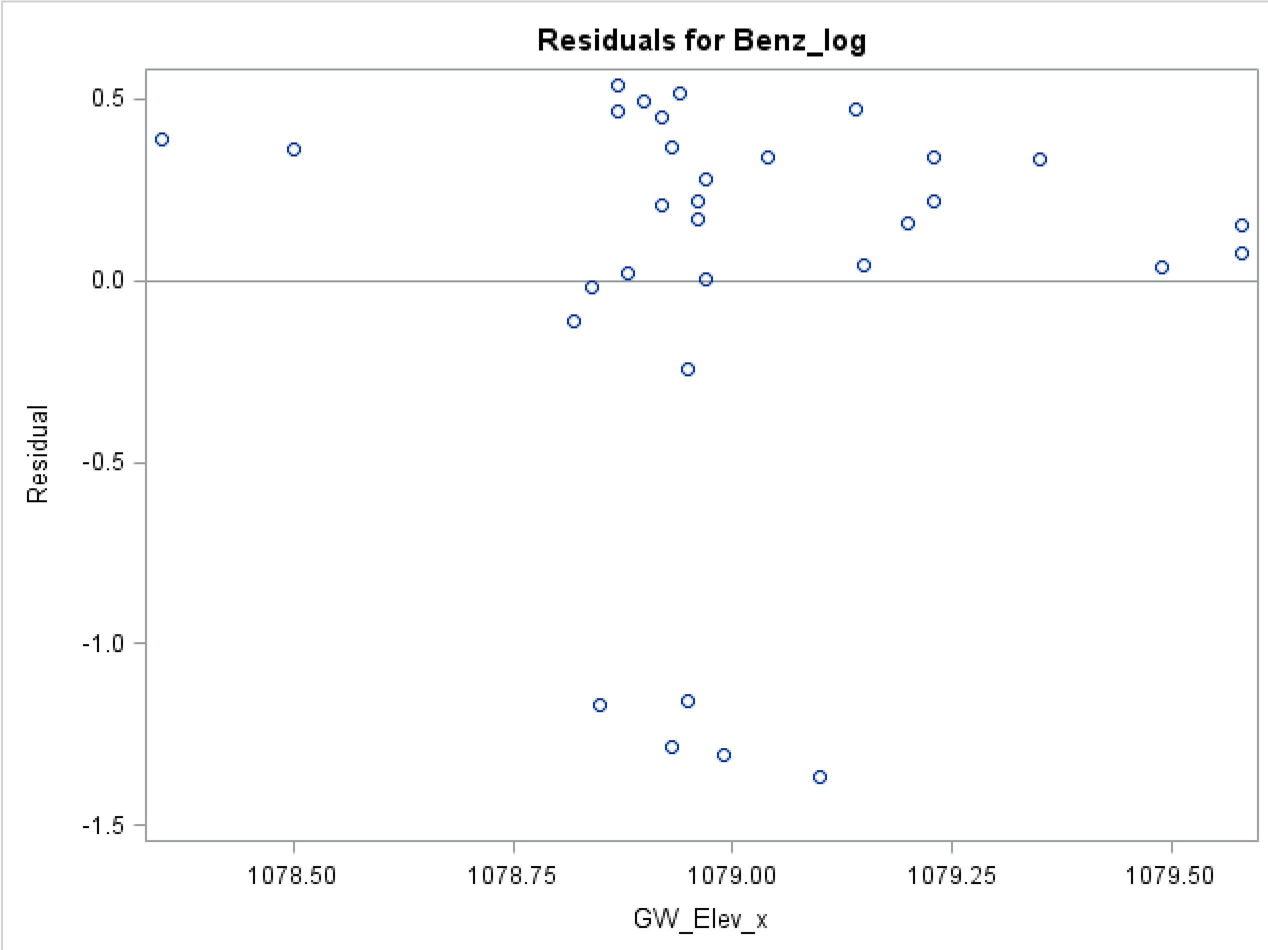
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-383.32898	442.99941	-0.87	0.3937
GW_Elev_x	1	0.35584	0.41056	0.87	0.3930

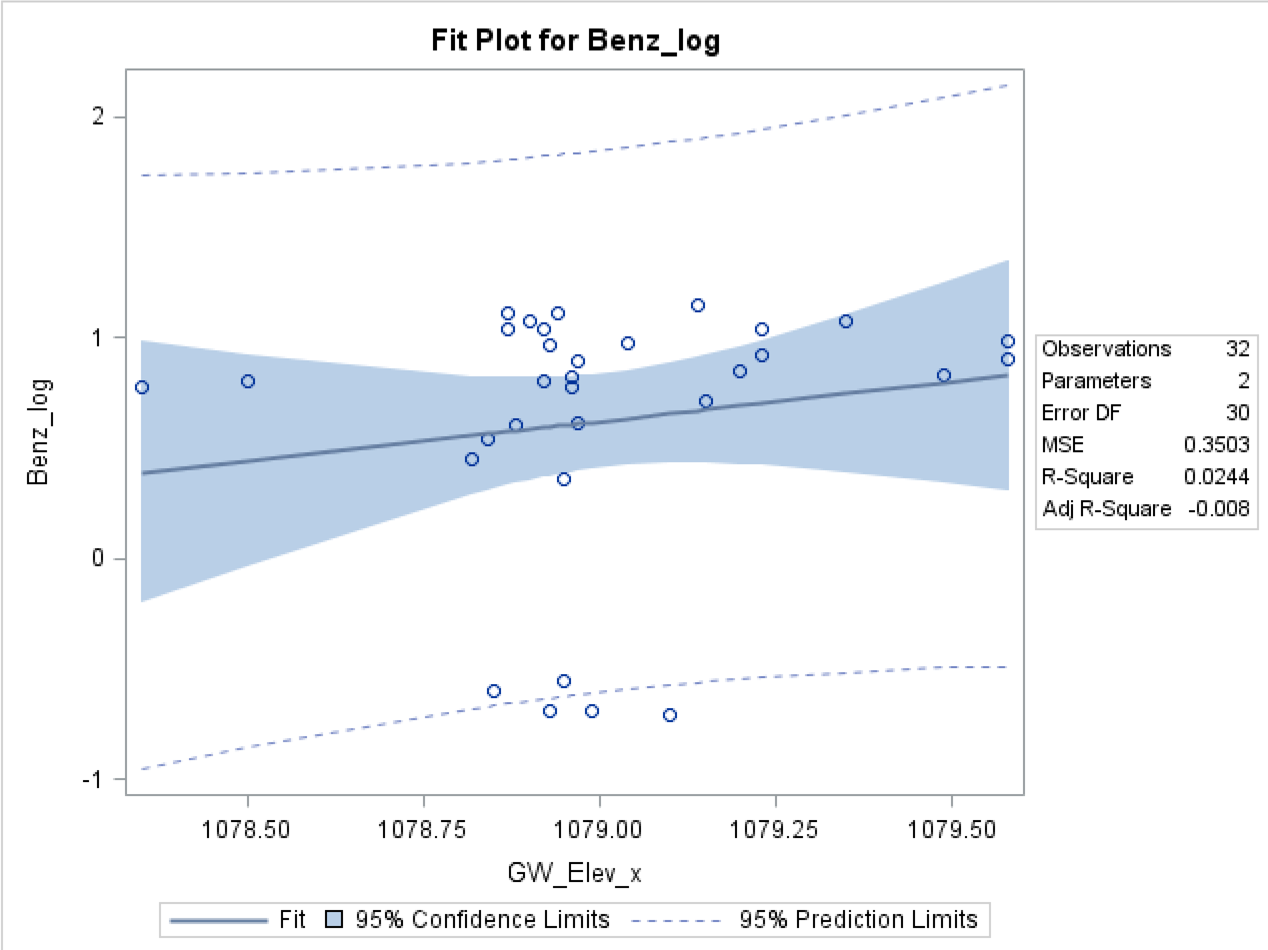
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=P5B




Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
-1.5
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
2
1
0
-1
1078.50
1078.75
1079.00
1079.25
1079.50
Observations 32
Parameters 2
Error DF 30
MSE 0.3503
R-Square 0.0244
Adj R-Square -0.008
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=P5B

Number of Observations Read	33
Number of Observations Used	32
Number of Observations with Missing Values	1

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	4.93792	4.93792	1.26	0.2707
Error	30	117.64593	3.92153		
Corrected Total	31	122.58386			

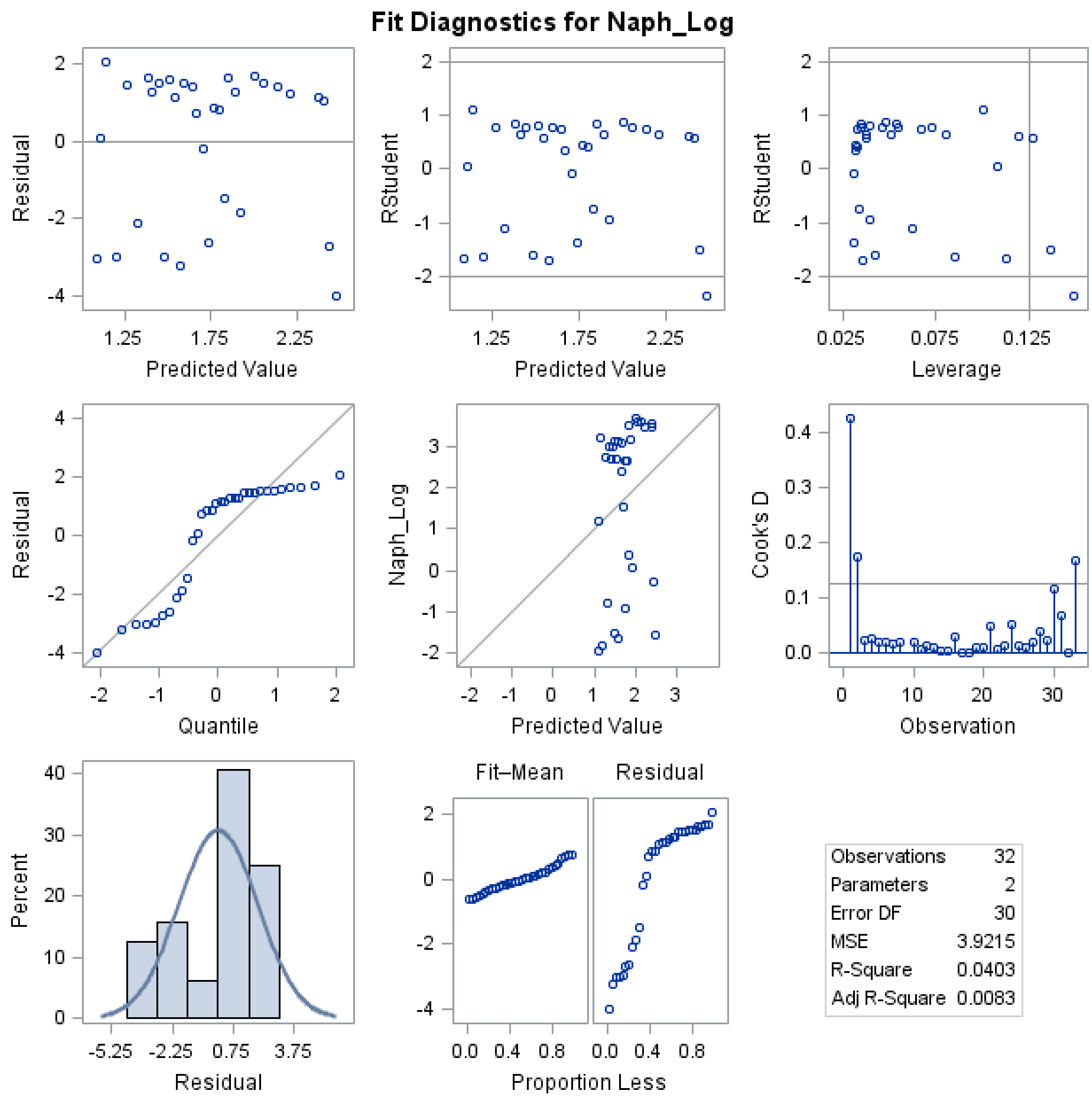
Root MSE	1.98029	R-Square	0.0403
Dependent Mean	1.71648	Adj R-Sq	0.0083
Coeff Var	115.36911		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	15.04652	11.88435	1.27	0.2152
Date_x	1	-0.00034379	0.00030637	-1.12	0.2707

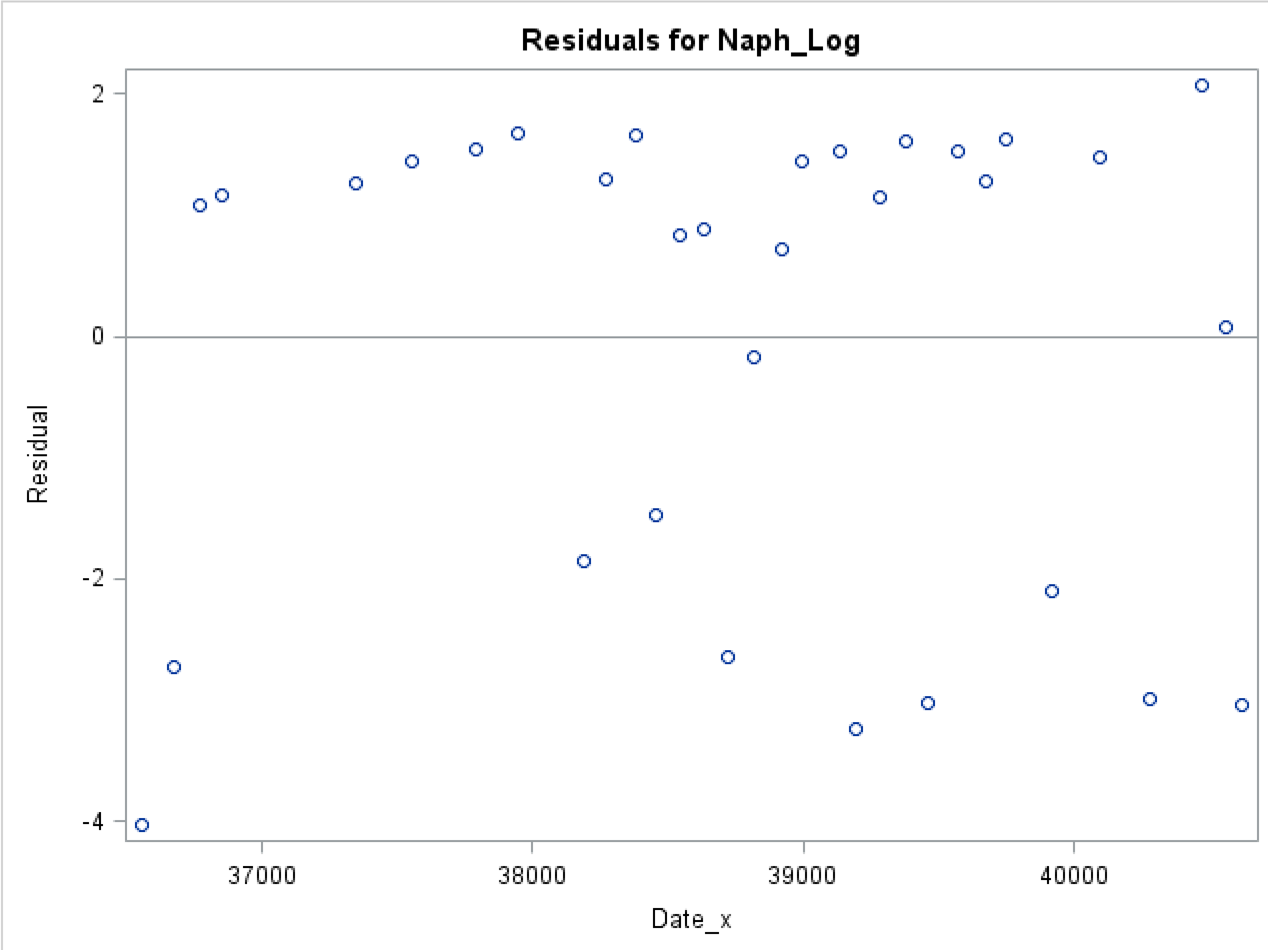
The SAS System

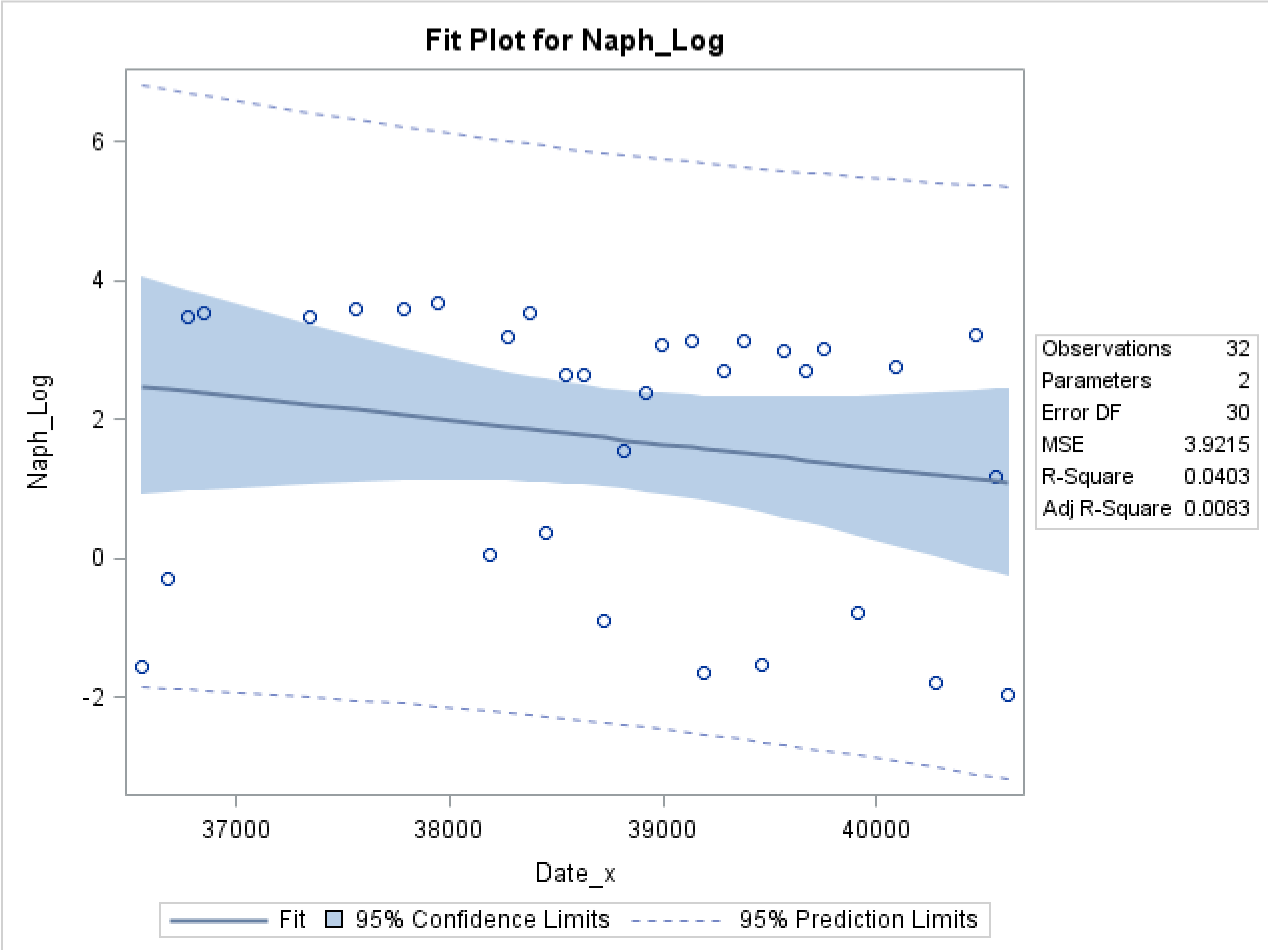
The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=P5B



Observations	32
Parameters	2
Error DF	30
MSE	3.9215
R-Square	0.0403
Adj R-Square	0.0083


Residuals for Naph_Log
Residual
2
0
-2
-4
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
6
4
2
0
-2
37000
38000
39000
40000
Date_x
Observations 32
Parameters 2
Error DF 30
MSE 3.9215
R-Square 0.0403
Adj R-Square 0.0083
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=P5B

Number of Observations Read	33
Number of Observations Used	32
Number of Observations with Missing Values	1

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	5.91052	5.91052	1.52	0.2272
Error	30	116.67334	3.88911		
Corrected Total	31	122.58386			

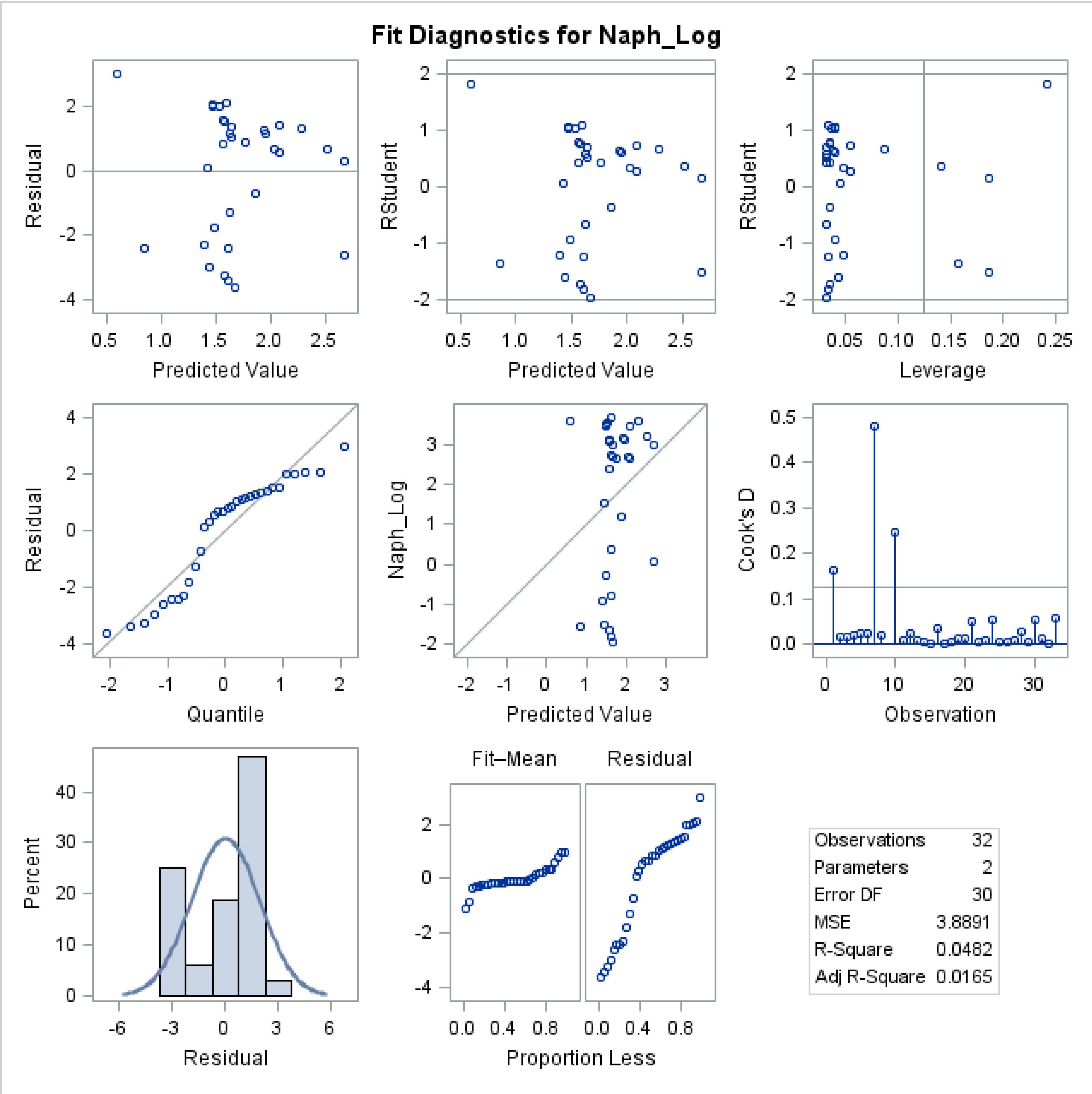
Root MSE	1.97208	**R-Square**	0.0482
Dependent Mean	1.71648	**Adj R-Sq**	0.0165
Coeff Var	114.89124		

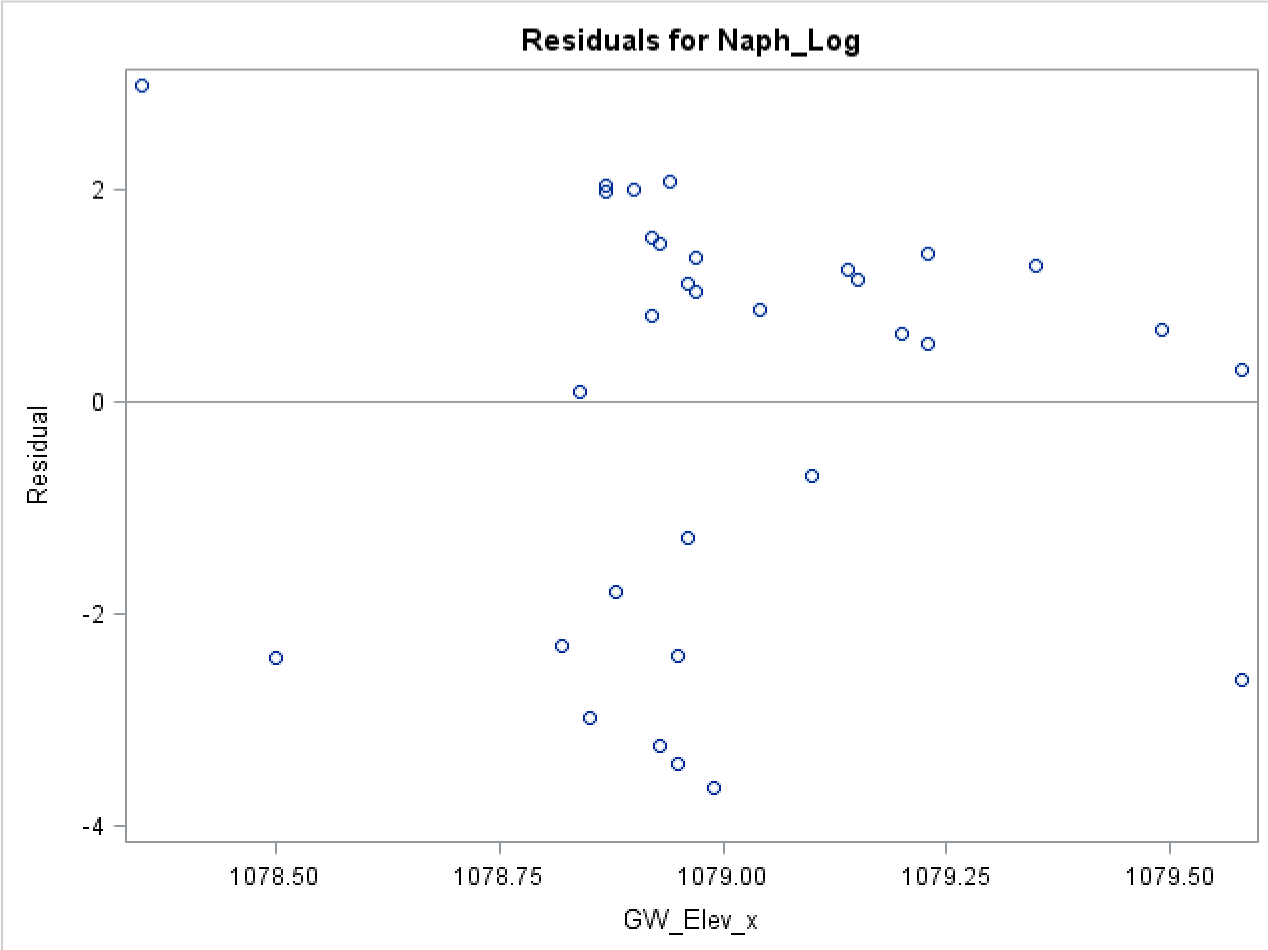
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	-1817.89769	1476.01861	-1.23	0.2277
GW_Elev_x	1	1.68637	1.36794	1.23	0.2272

The SAS System

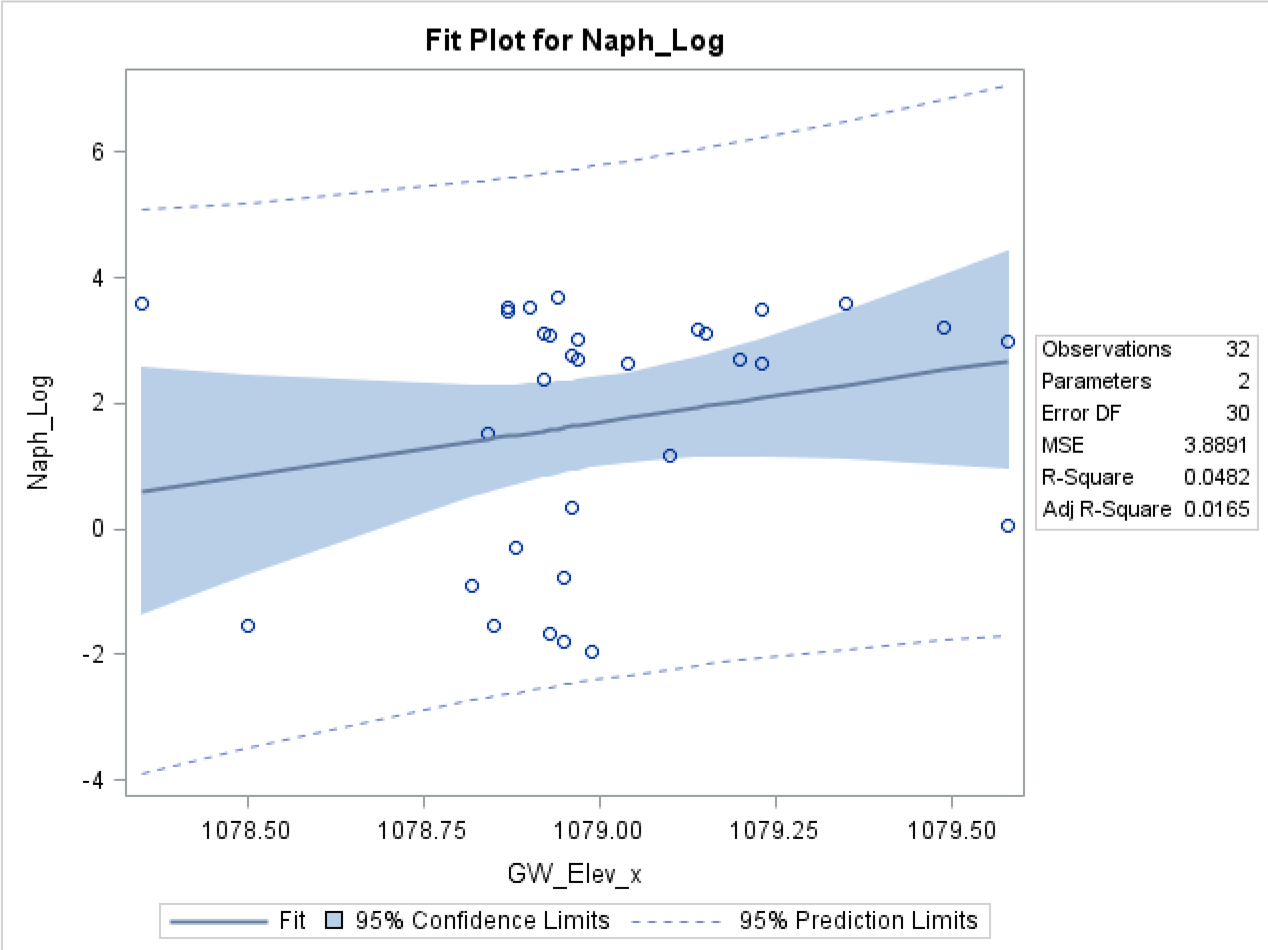
The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=P5B





Residuals for Naph_Log
Residual
2
0
-2
-4
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
6
4
2
0
-2
-4
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x
Observations 32
Parameters 2
Error DF 30
MSE 3.8891
R-Square 0.0482
Adj R-Square 0.0165
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ11B

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	13.80948	13.80948	23.86	<.0001
Error	23	13.30950	0.57867		
Corrected Total	24	27.11898			

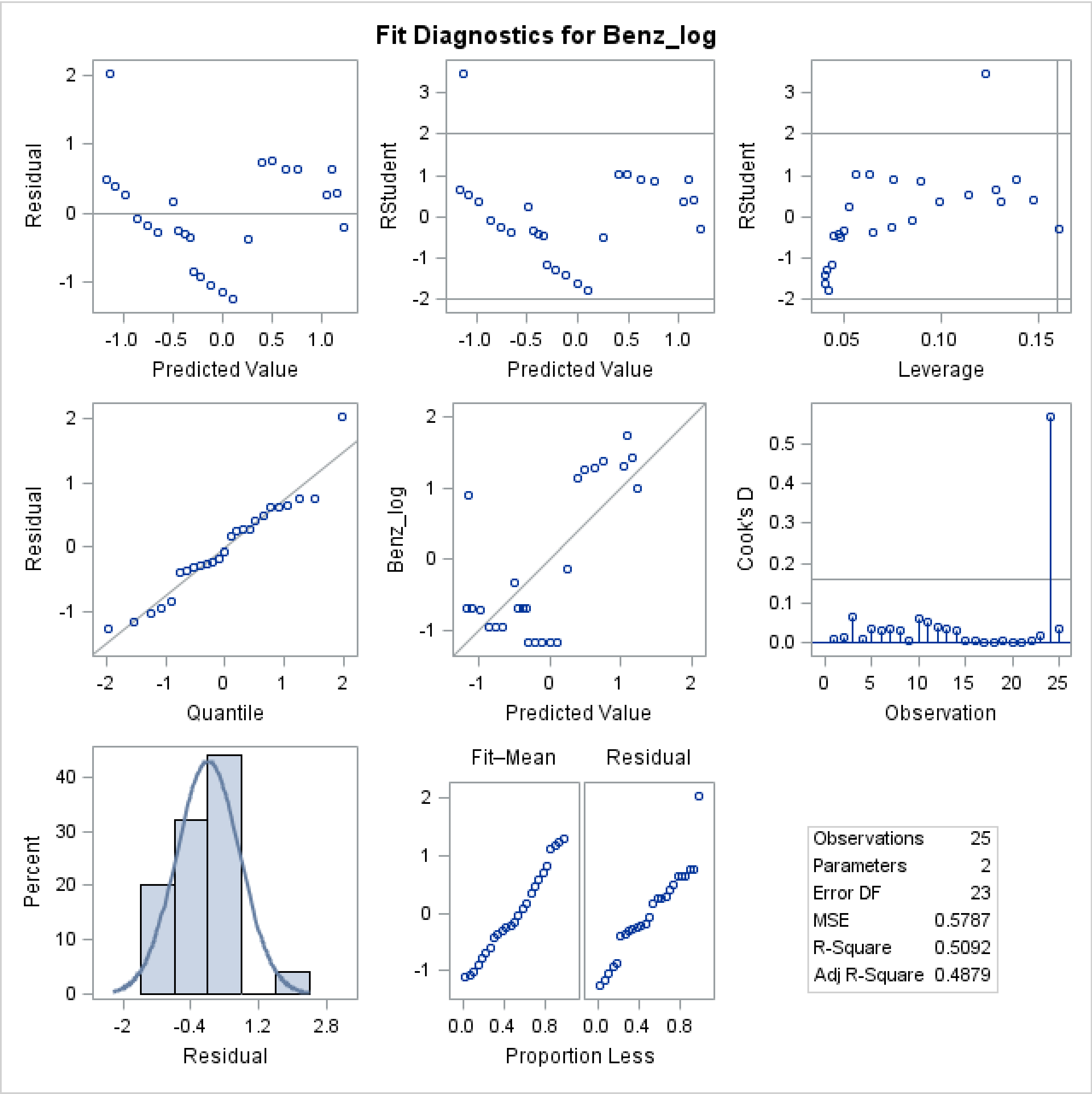
Root MSE	0.76071	**R-Square**	0.5092
Dependent Mean	-0.07112	**Adj R-Sq**	0.4879
Coeff Var	-1069.66939		

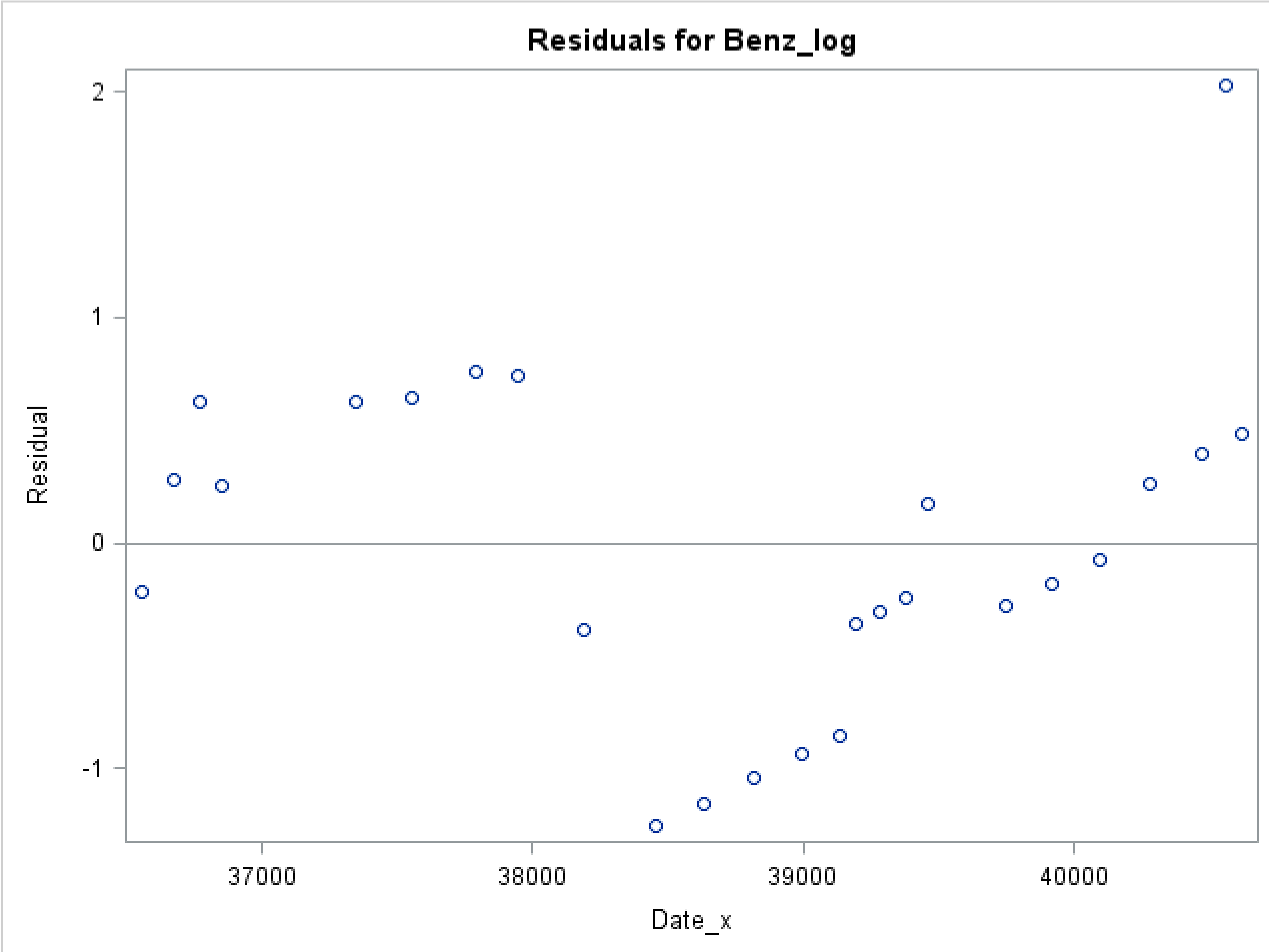
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	22.74080	4.67219	4.87	<.0001
Date_x	1	-0.00058872	0.00012051	-4.89	<.0001

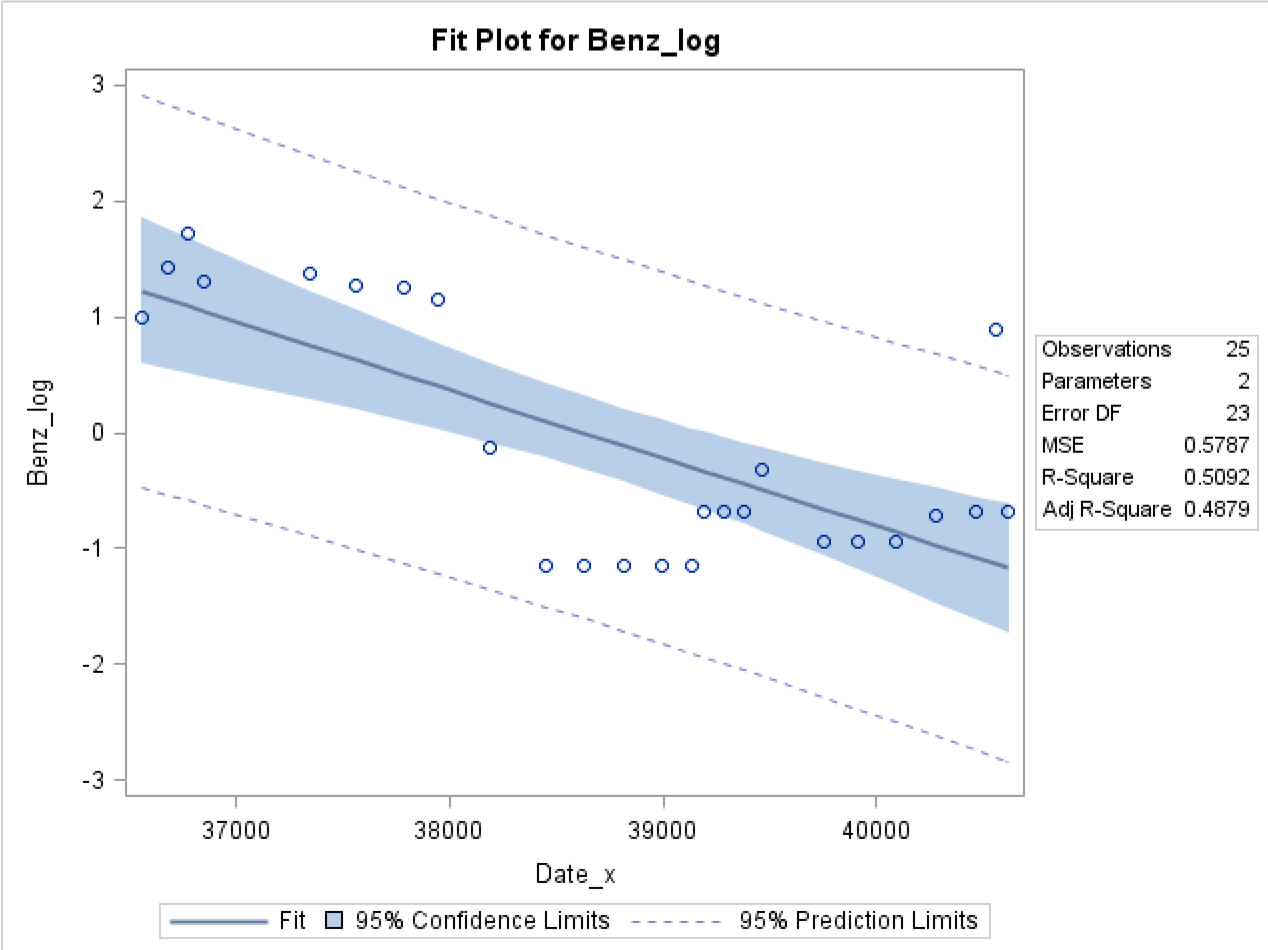
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ11B




Residuals for Benz_log
Residual
2
1
0
-1
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
Benz_log
Date_x
3
2
1
0
-1
-2
-3
37000
38000
39000
40000
Observations 25
Parameters 2
Error DF 23
MSE 0.5787
R-Square 0.5092
Adj R-Square 0.4879
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ11B

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.05422	0.05422	0.05	0.8319
Error	23	27.06477	1.17673		
Corrected Total	24	27.11898			

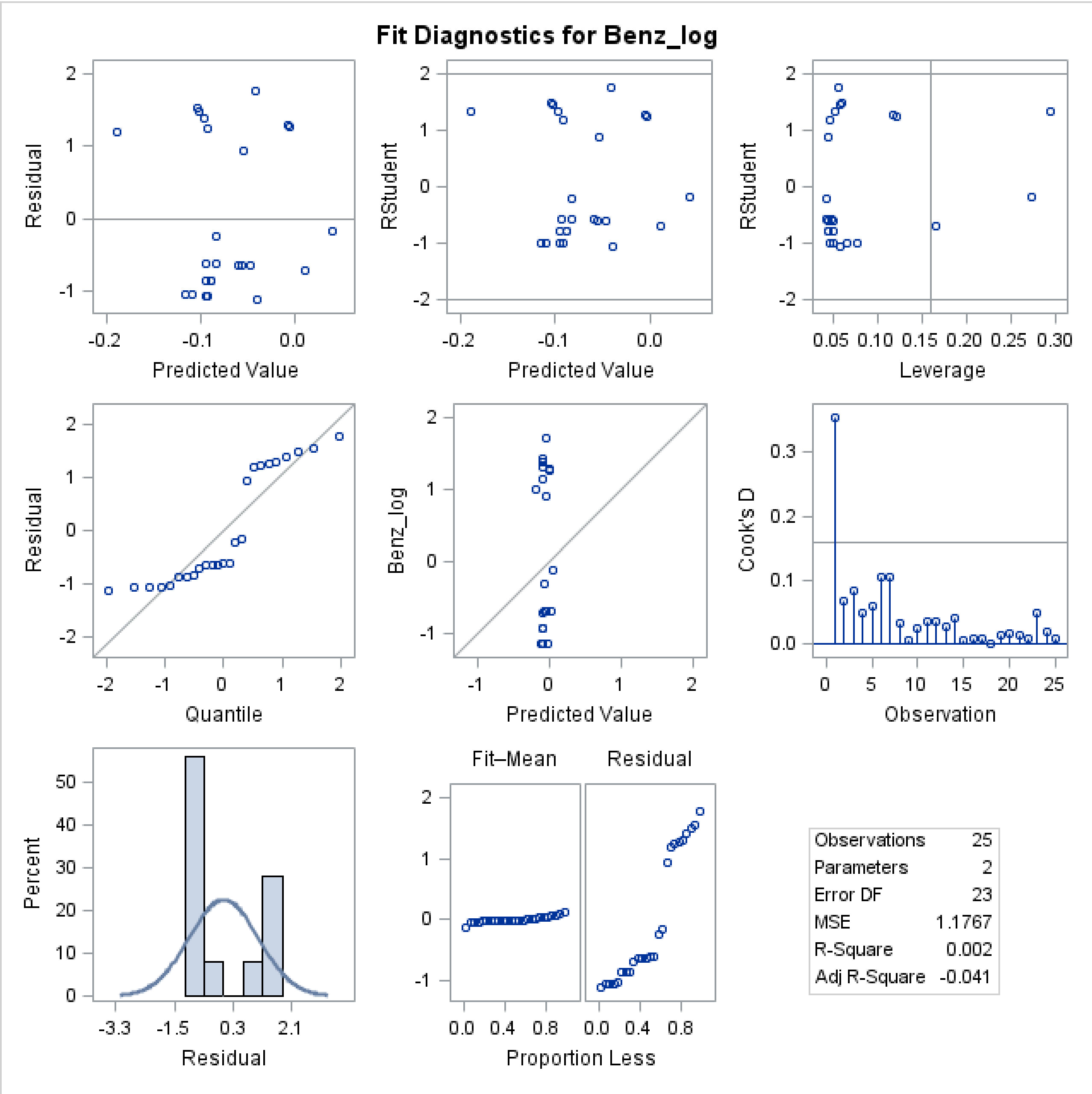
Root MSE	1.08477	R-Square	0.0020
Dependent Mean	-0.07112	Adj R-Sq	-0.0414
Coeff Var	-1525.35488		

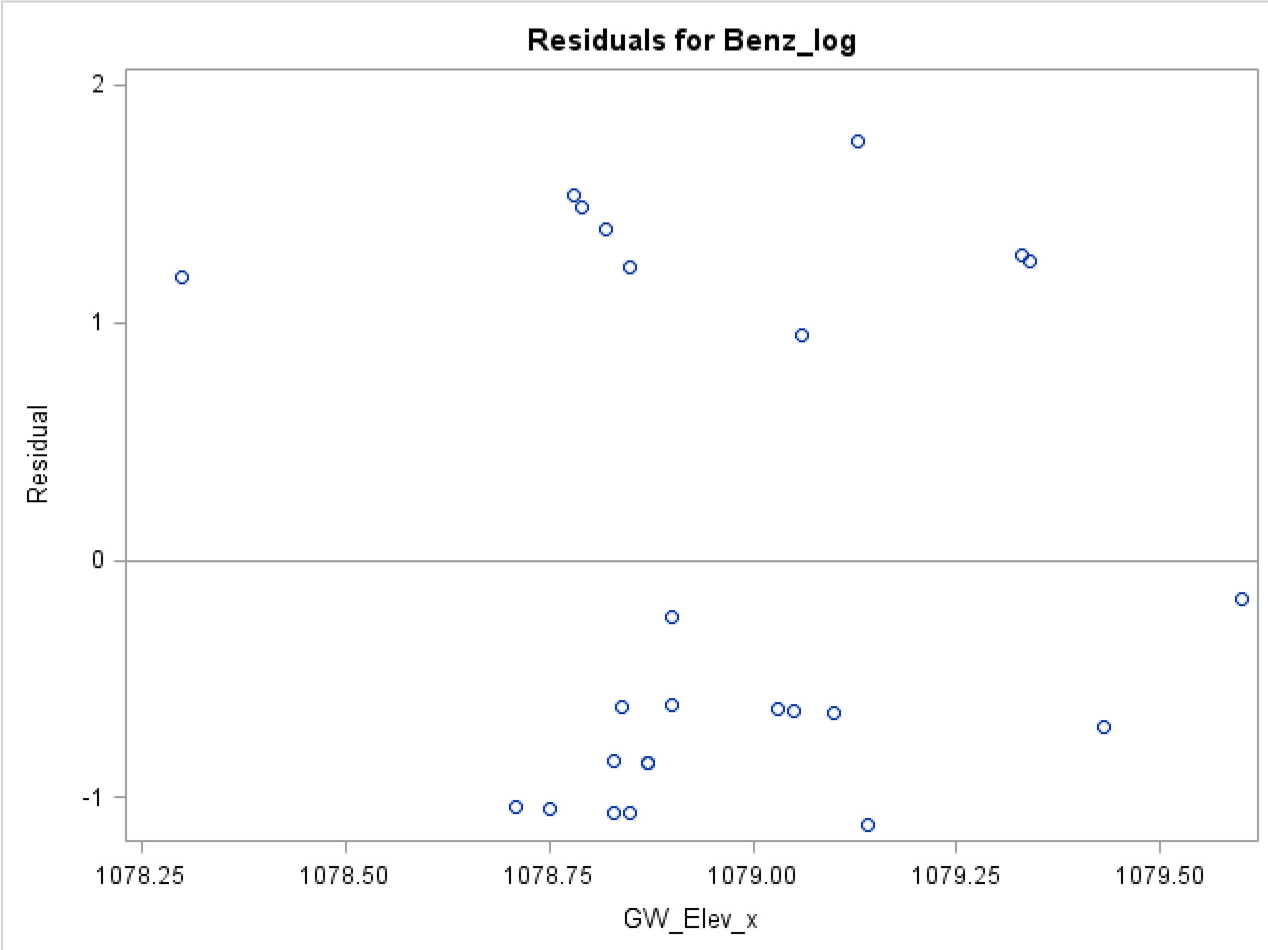
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-190.84442	888.78270	-0.21	0.8319
GW_Elev_x	1	0.17681	0.82374	0.21	0.8319

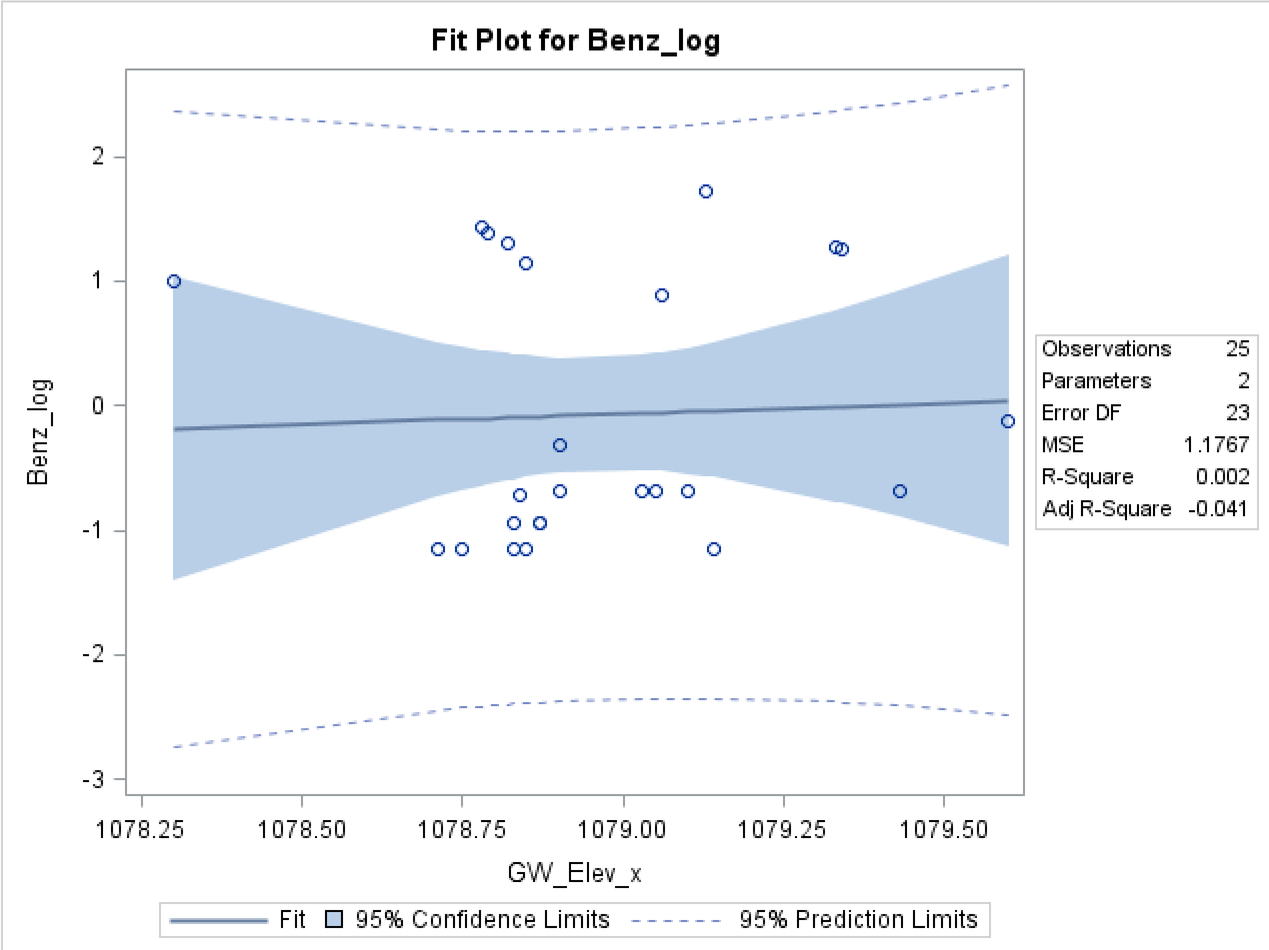
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ11B




Residuals for Benz_log
Residual
2
1
0
-1
1078.25
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x


Fit Plot for Benz_log
Benz_log
GW_Elev_x
2
1
0
-1
-2
-3
1078.25
1078.50
1078.75
1079.00
1079.25
1079.50
Observations 25
Parameters 2
Error DF 23
MSE 1.1767
R-Square 0.002
Adj R-Square -0.041
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ11B

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	24.07691	24.07691	15.43	0.0007
Error	23	35.88979	1.56043		
Corrected Total	24	59.96670			

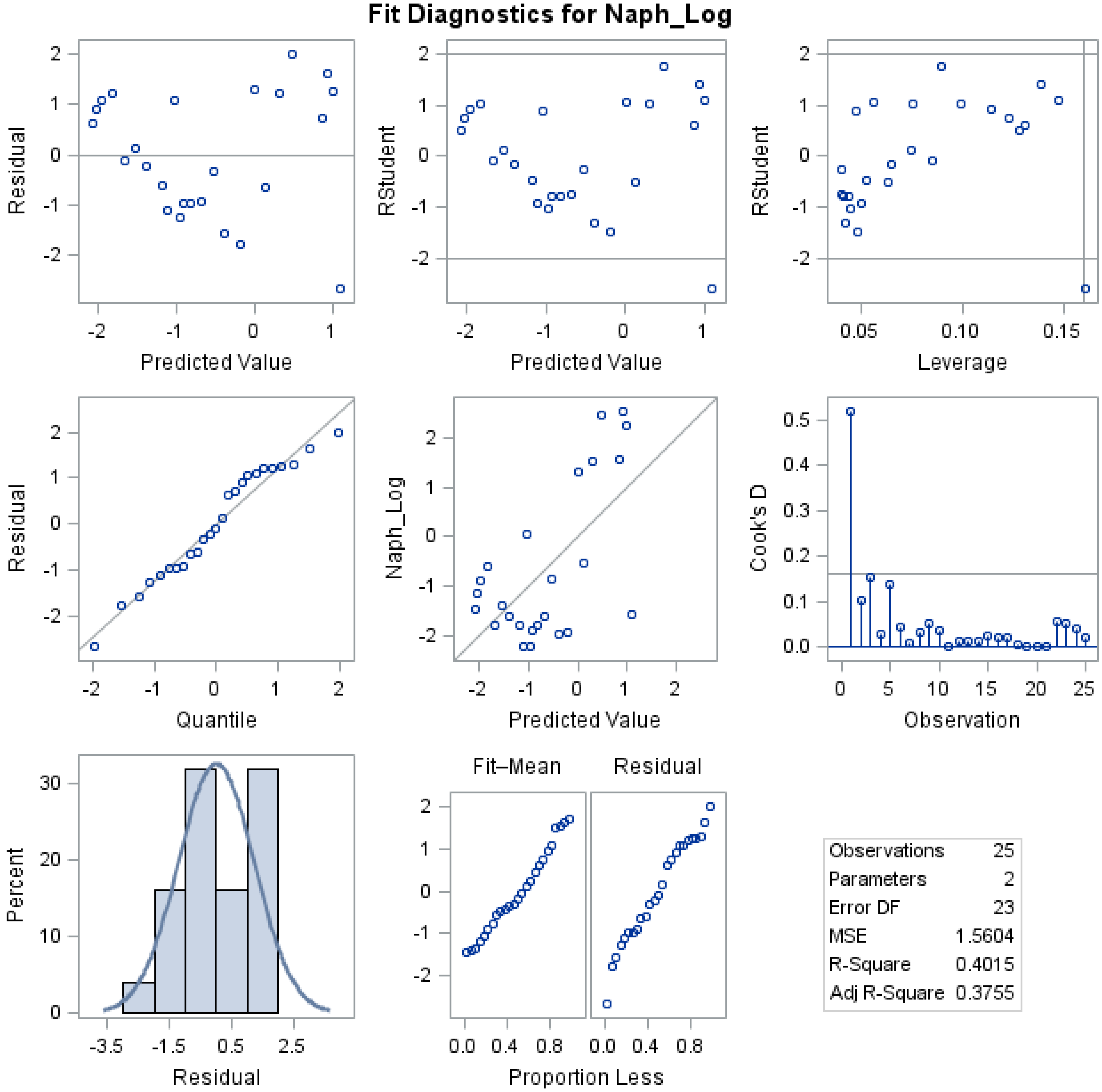
Root MSE	1.24917	R-Square	0.4015
Dependent Mean	-0.61703	Adj R-Sq	0.3755
Coeff Var	-202.44817		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	29.50424	7.67229	3.85	0.0008
Date_x	1	-0.00077736	0.00019790	-3.93	0.0007

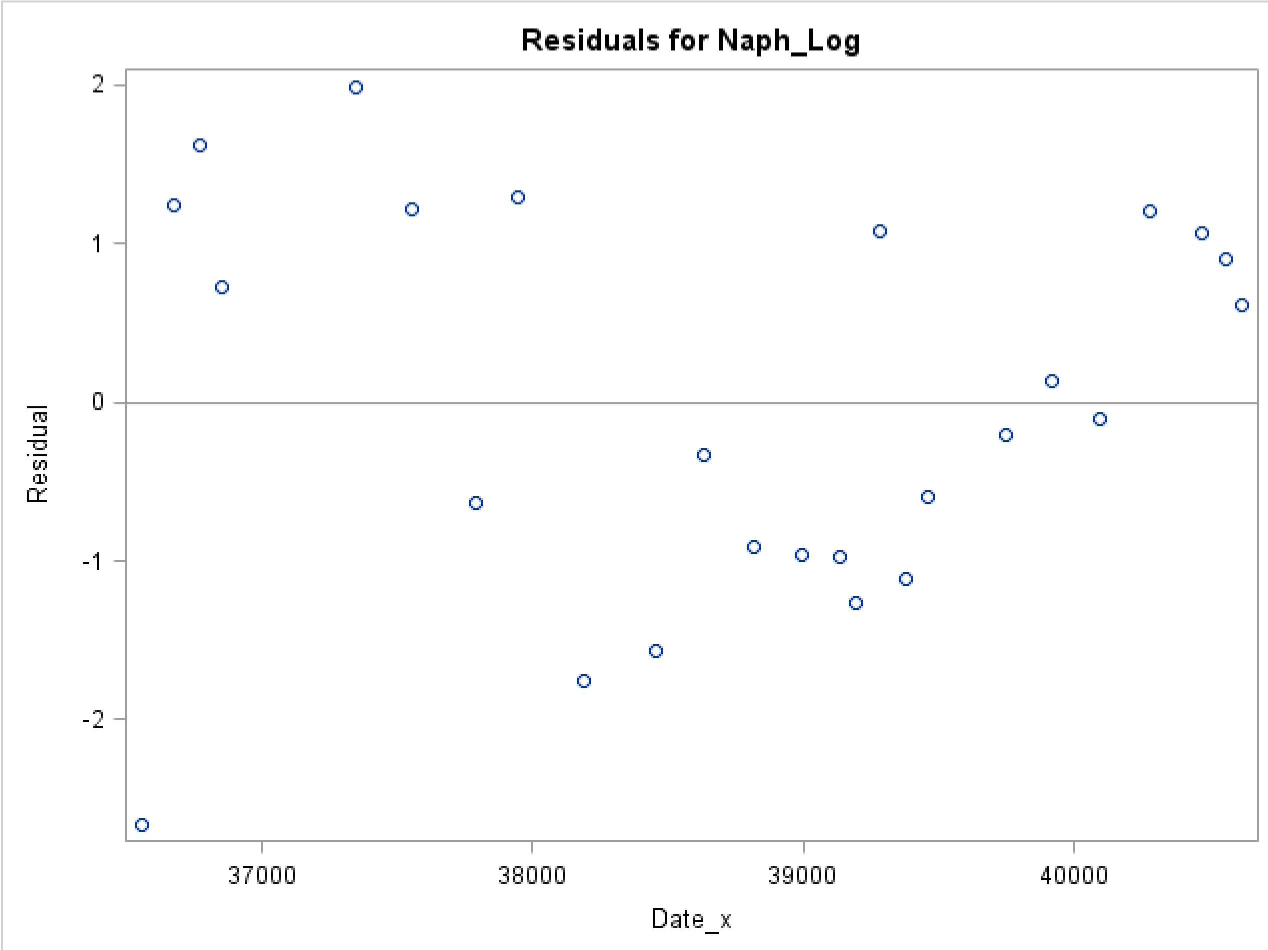
The SAS System

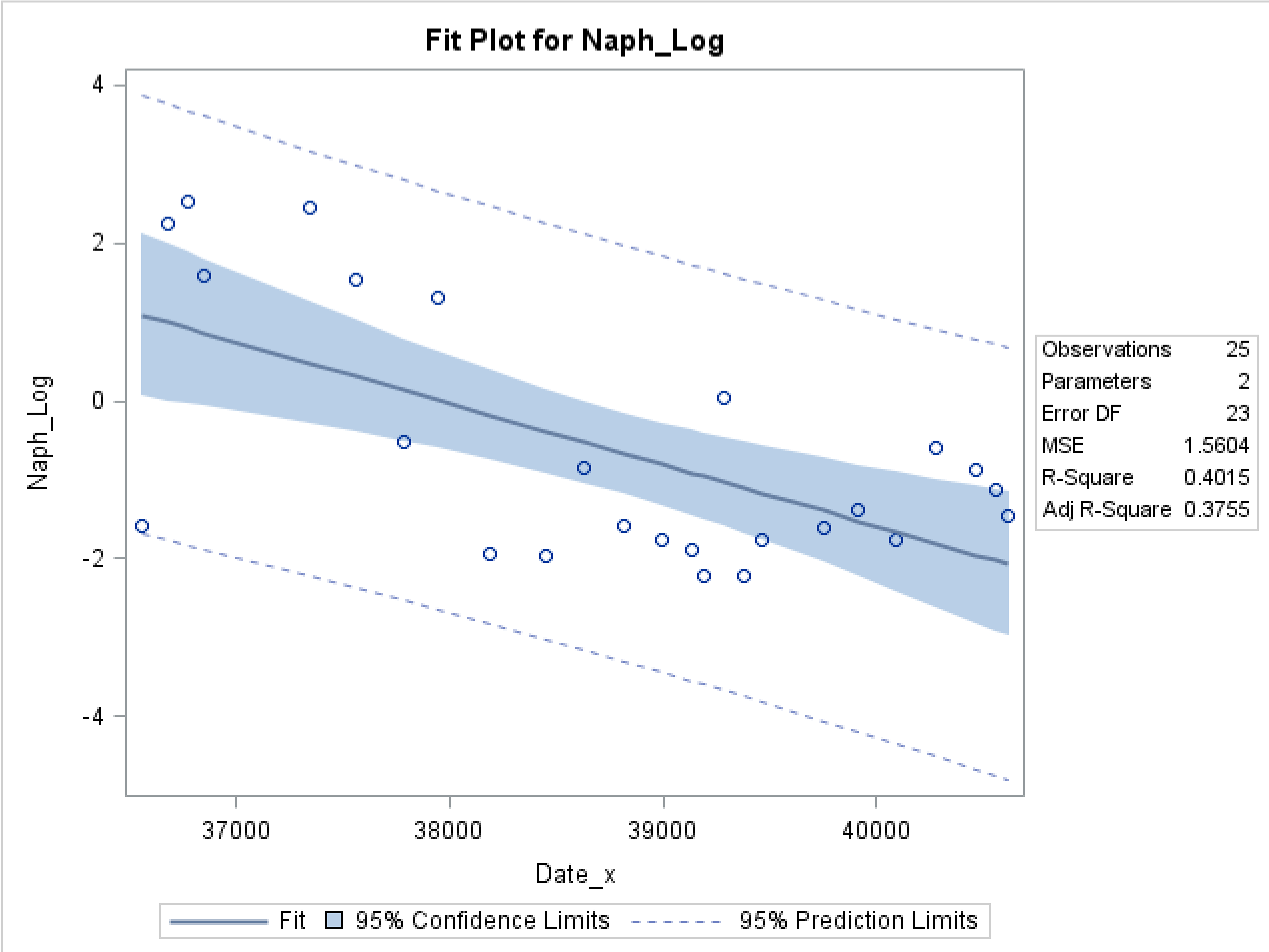
The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ11B



Observations	25
Parameters	2
Error DF	23
MSE	1.5604
R-Square	0.4015
Adj R-Square	0.3755


Residuals for Naph_Log
Residual
2
1
0
-1
-2
37000
38000
39000
40000
Date_x


Fit Plot for Naph_Log
Naph_Log
Date_x
4
2
0
-2
-4
37000
38000
39000
40000
Observations 25
Parameters 2
Error DF 23
MSE 1.5604
R-Square 0.4015
Adj R-Square 0.3755
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ11B

Number of Observations Read	25
Number of Observations Used	25

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.11241	0.11241	0.04	0.8372
Error	23	59.85430	2.60236		
Corrected Total	24	59.96670			

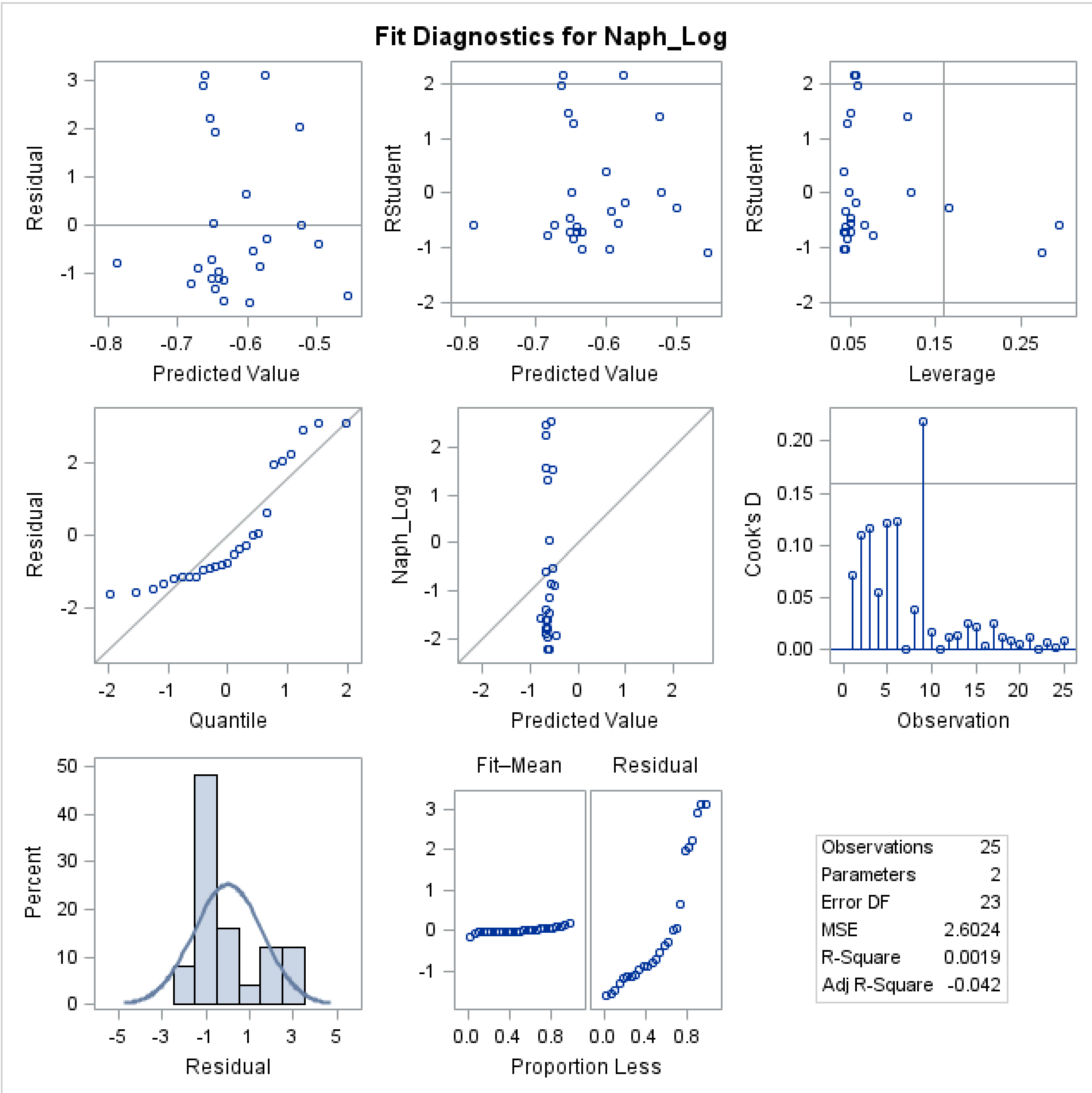
Root MSE	1.61318	**R-Square**	0.0019
Dependent Mean	-0.61703	**Adj R-Sq**	-0.0415
Coeff Var	-261.44243		

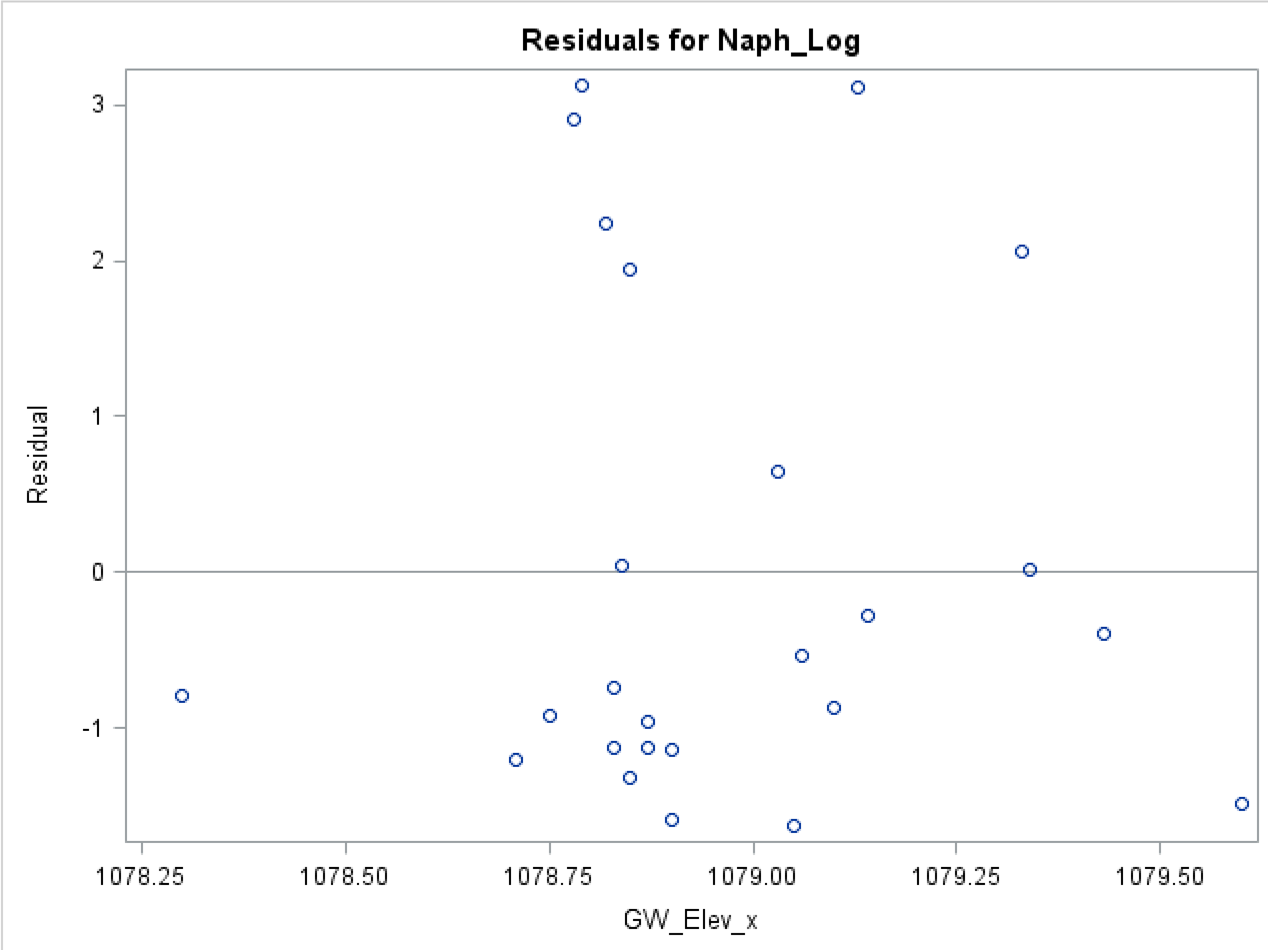
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	-275.31248	1321.72509	-0.21	0.8368
GW_Elev_x	1	0.25459	1.22499	0.21	0.8372

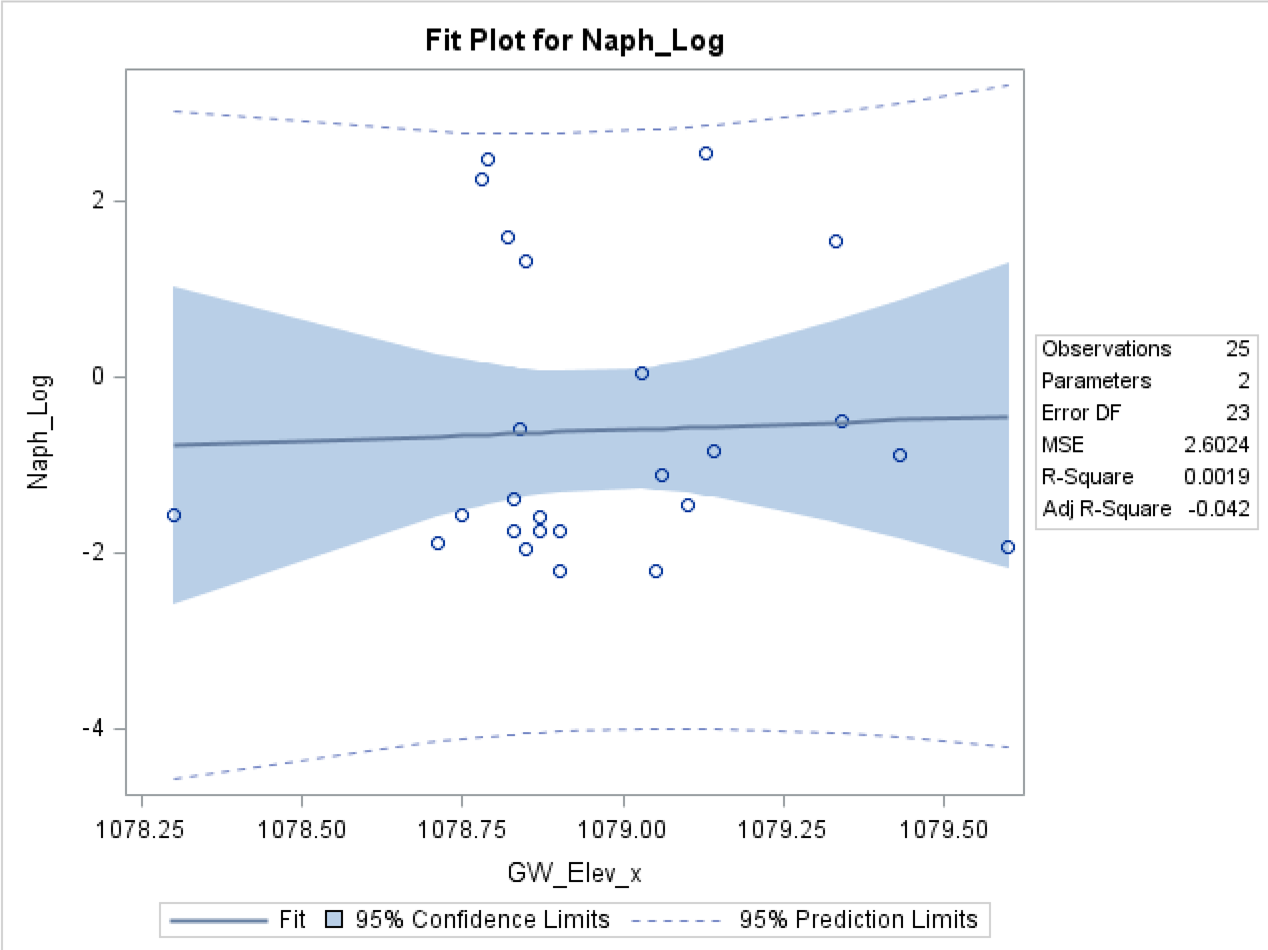
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ11B




Residuals for Naph_Log
Residual
3
2
1
0
-1
1078.25
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
2
0
-2
-4
1078.25
1078.50
1078.75
1079.00
1079.25
1079.50
GW_Elev_x
Observations 25
Parameters 2
Error DF 23
MSE 2.6024
R-Square 0.0019
Adj R-Square -0.042
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.77986	0.77986	1.63	0.2153
Error	21	10.03251	0.47774		
Corrected Total	22	10.81237			

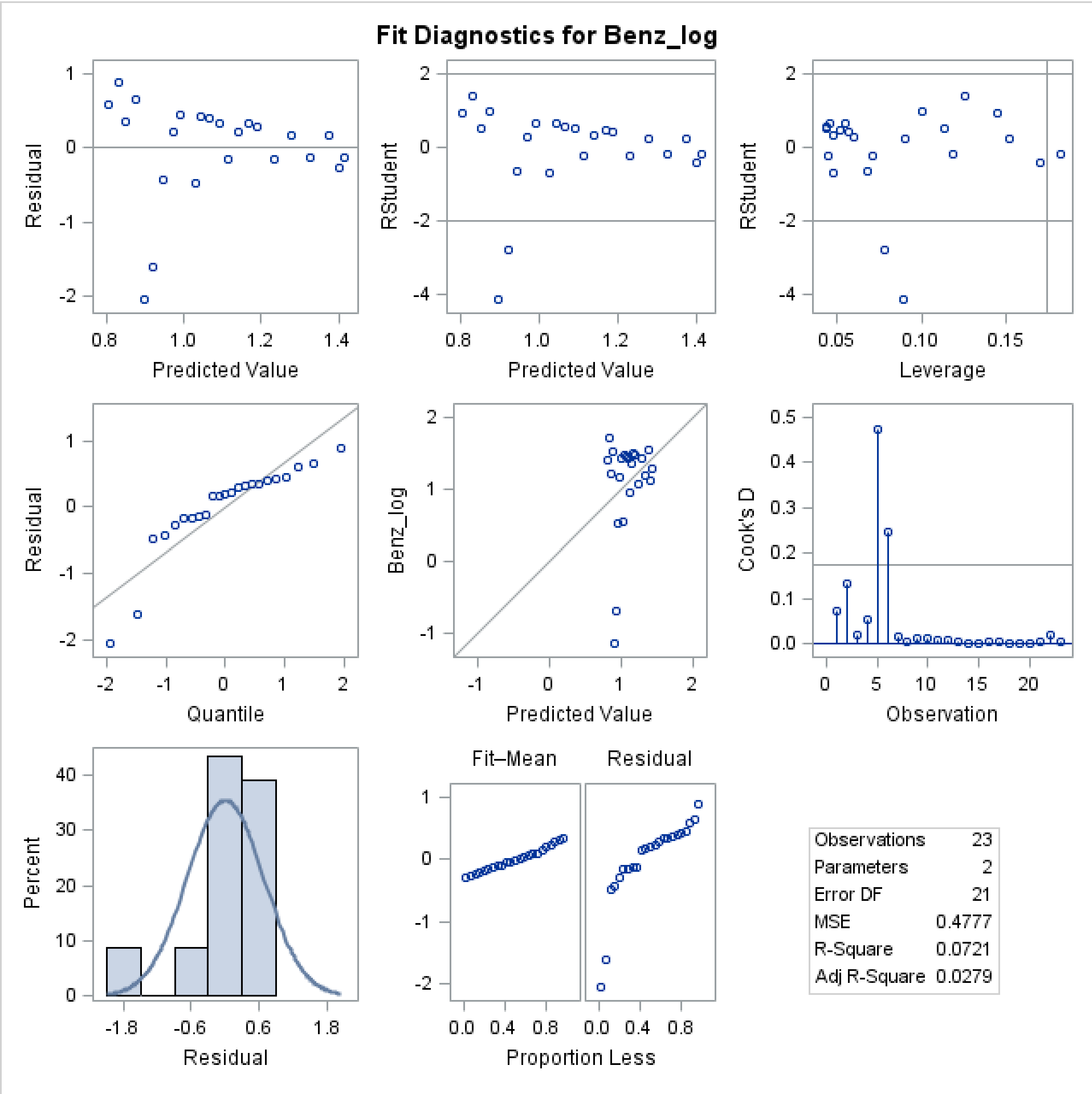
Root MSE	0.69119	R-Square	0.0721
Dependent Mean	1.08543	Adj R-Sq	0.0279
Coeff Var	63.67855		

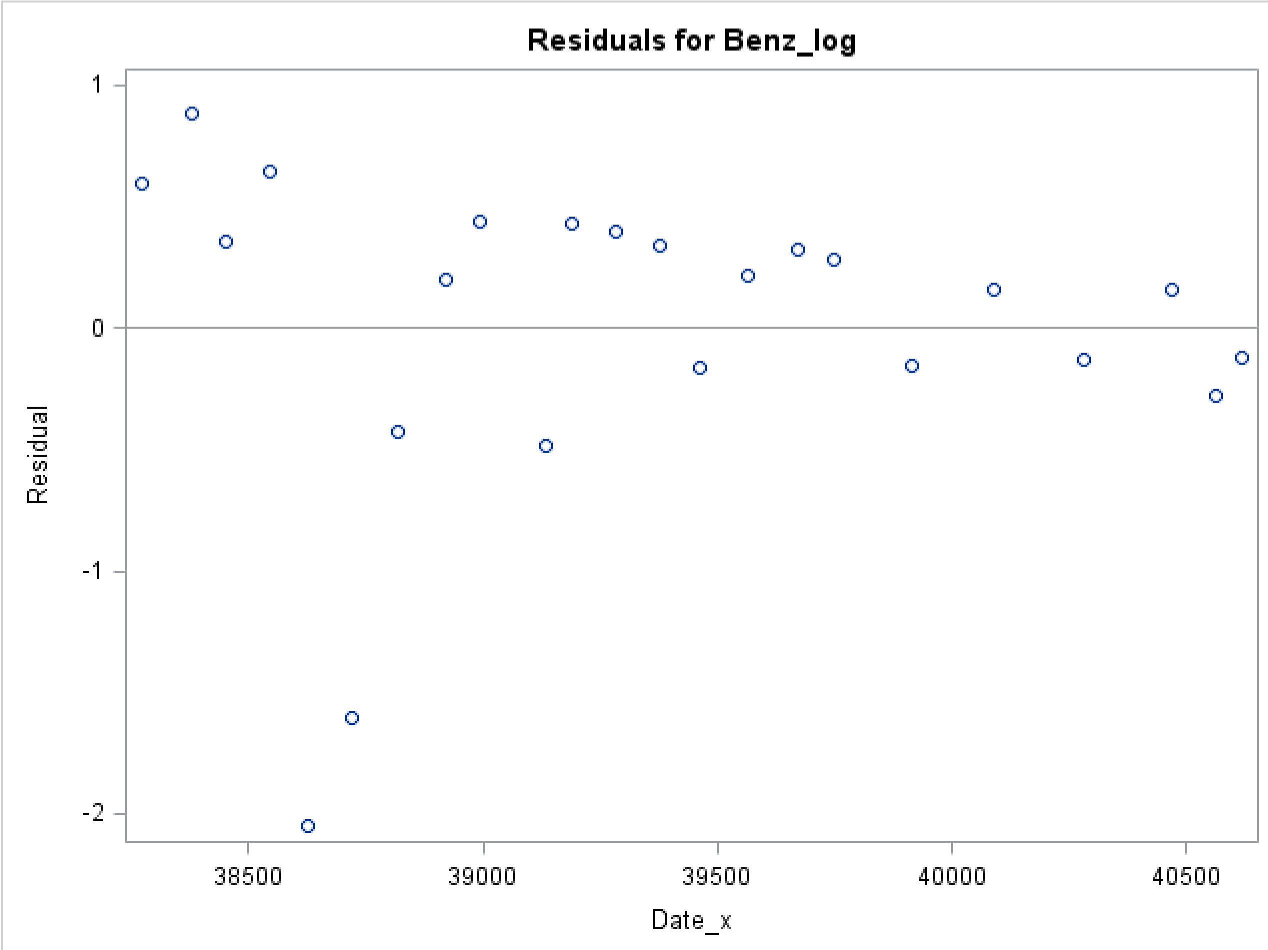
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-9.14513	8.00860	-1.14	0.2663
Date_x	1	0.00025998	0.00020348	1.28	0.2153

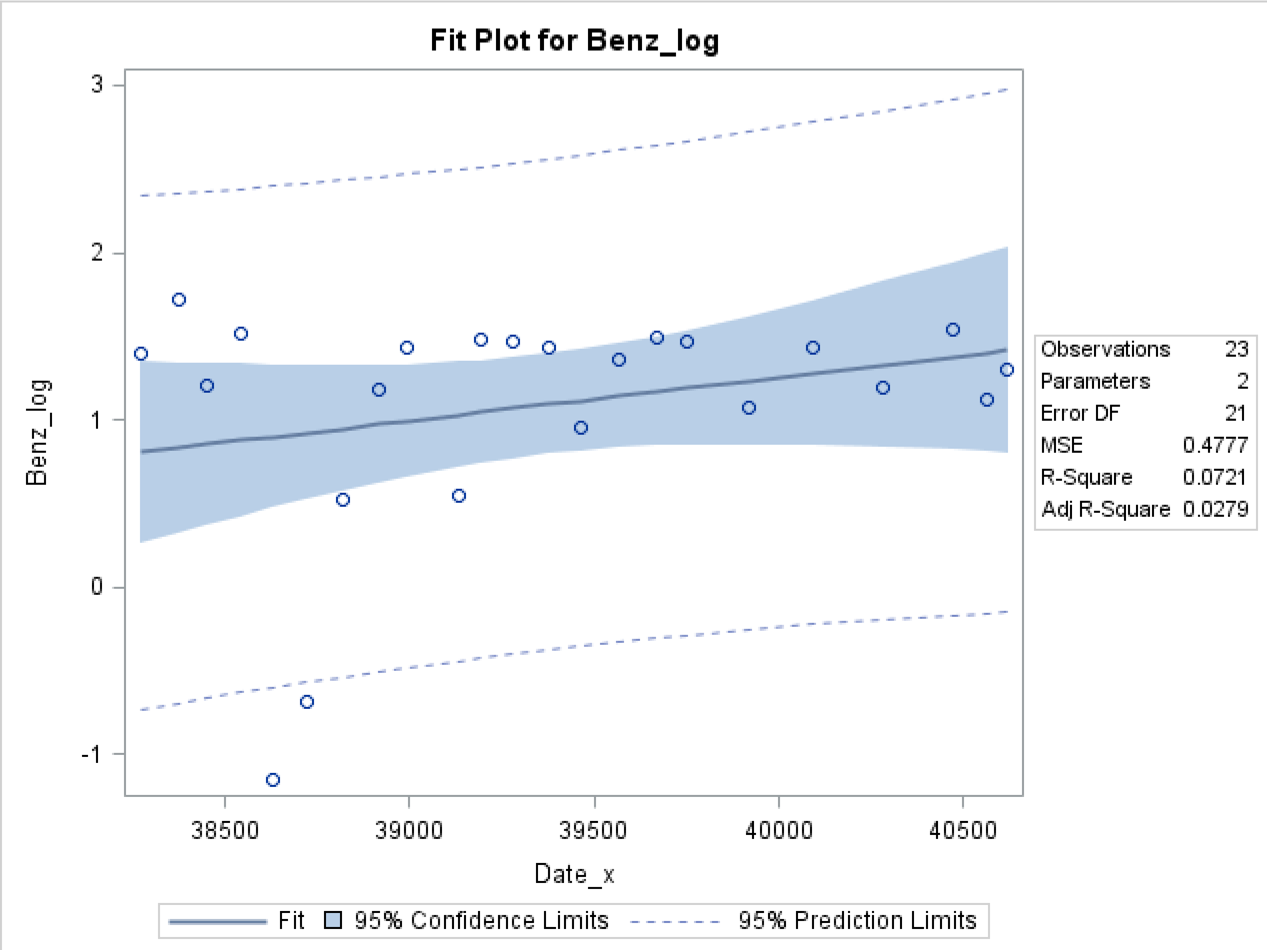
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ12




Residuals for Benz_log
Residual
Date_x
1
0
-1
-2
38500
39000
39500
40000
40500


Fit Plot for Benz_log
Benz_log
Date_x
3
2
1
0
-1
38500
39000
39500
40000
40500
Observations 23
Parameters 2
Error DF 21
MSE 0.4777
R-Square 0.0721
Adj R-Square 0.0279
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.27593	0.27593	0.55	0.4665
Error	21	10.53644	0.50174		
Corrected Total	22	10.81237			

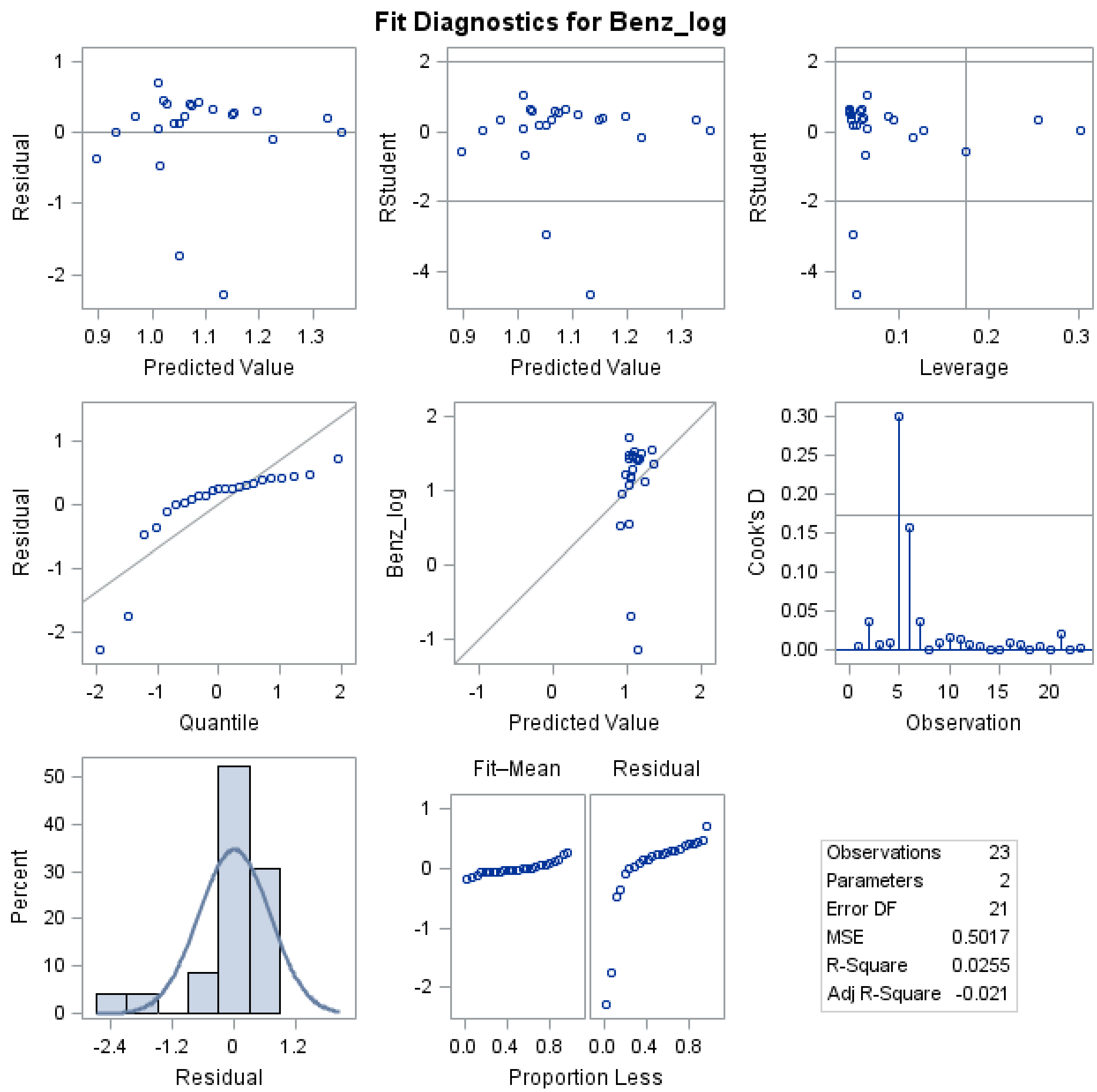
Root MSE	0.70833	R-Square	0.0255
Dependent Mean	1.08543	Adj R-Sq	-0.0209
Coeff Var	65.25823		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-455.49985	615.68505	-0.74	0.4676
GW_Elev_x	1	0.42338	0.57091	0.74	0.4665

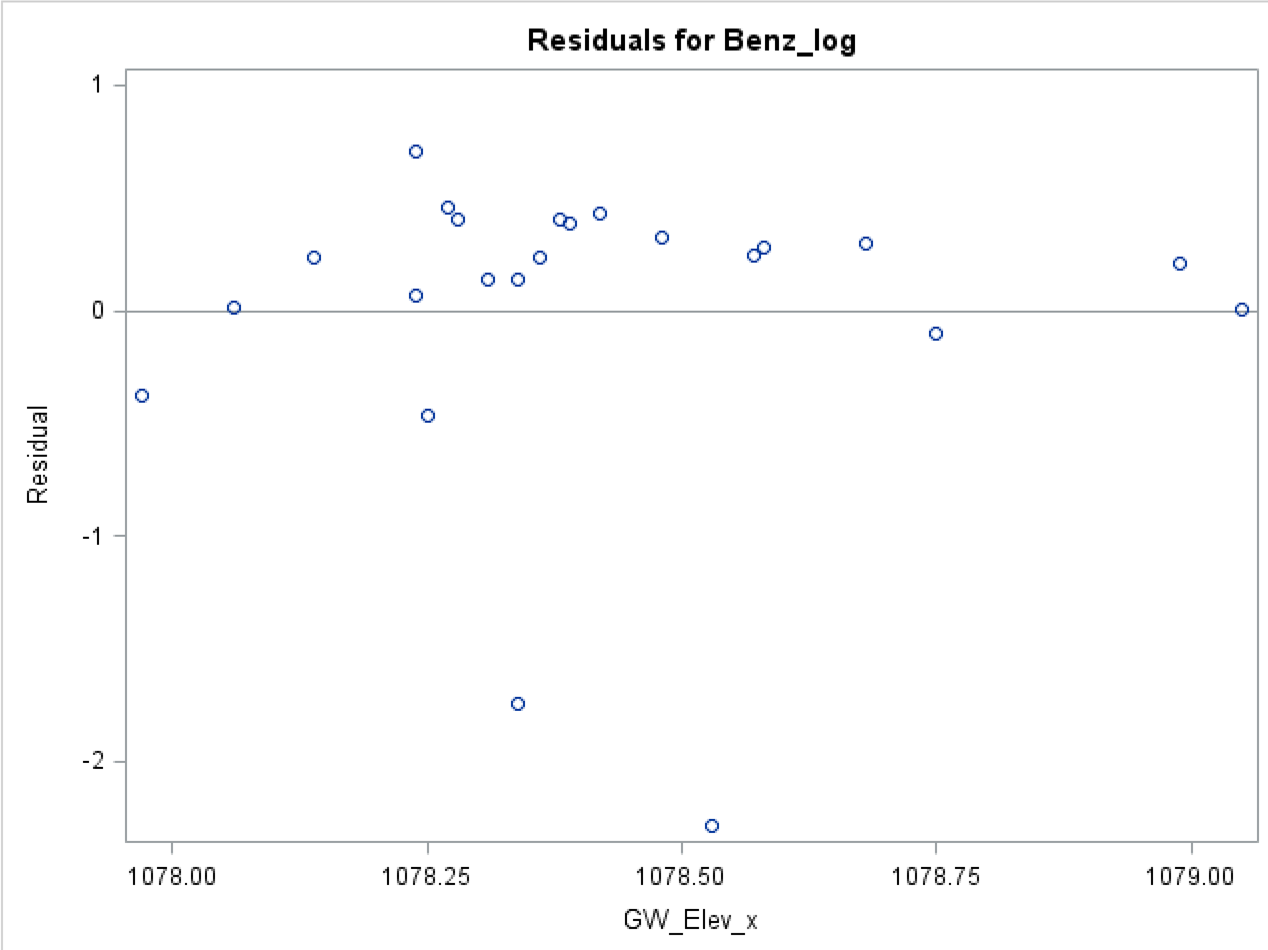
The SAS System

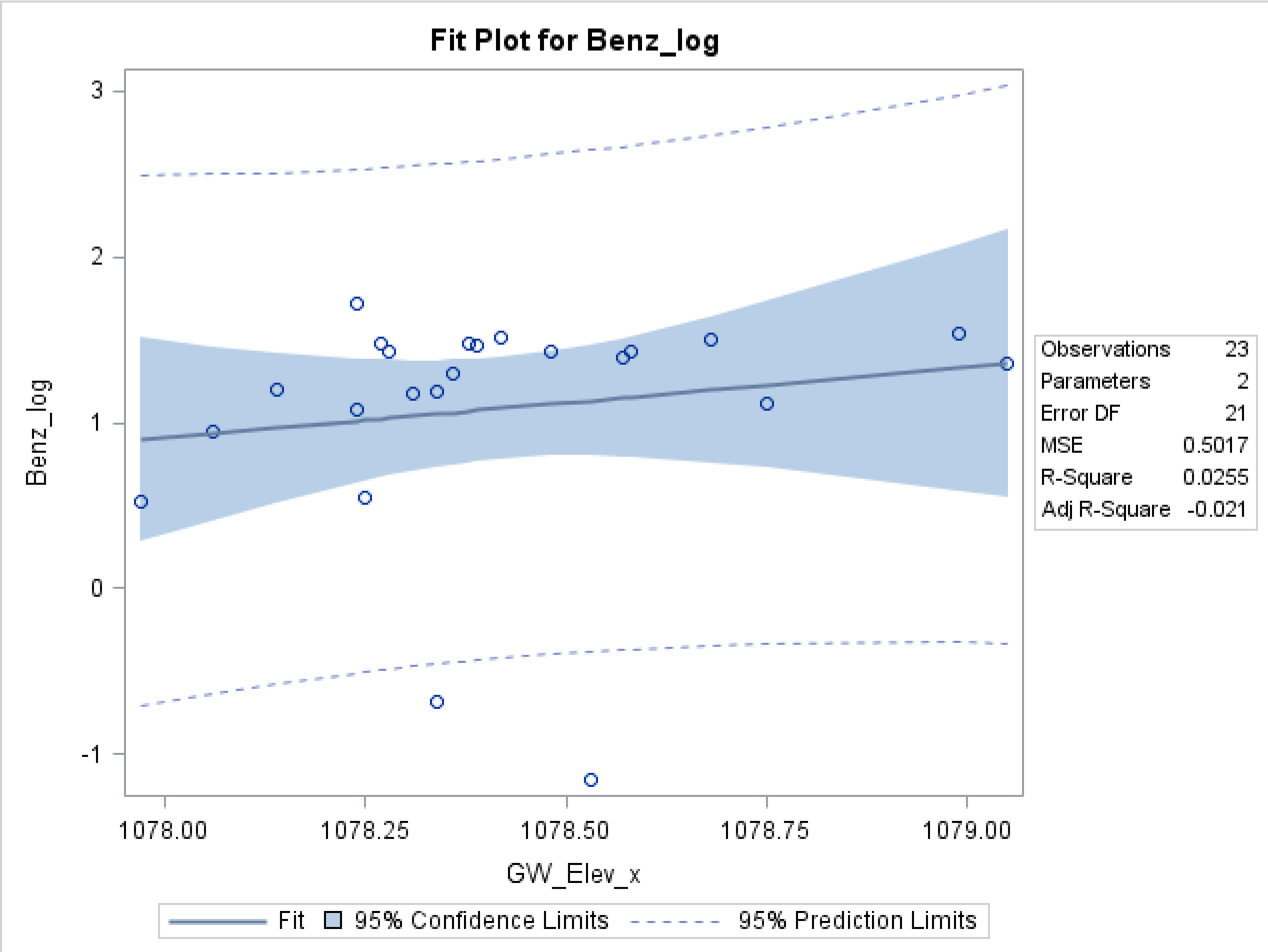
The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ12



Observations	23
Parameters	2
Error DF	21
MSE	0.5017
R-Square	0.0255
Adj R-Square	-0.021


Residuals for Benz_log
Residual
GW_Elev_x
1
0
-1
-2
1078.00
1078.25
1078.50
1078.75
1079.00


Fit Plot for Benz_log
3
2
1
0
-1
Benz_log
1078.00
1078.25
1078.50
1078.75
1079.00
GW_Elev_x
Observations 23
Parameters 2
Error DF 21
MSE 0.5017
R-Square 0.0255
Adj R-Square -0.021
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	8.61259	8.61259	5.11	0.0345
Error	21	35.39626	1.68554		
Corrected Total	22	44.00885			

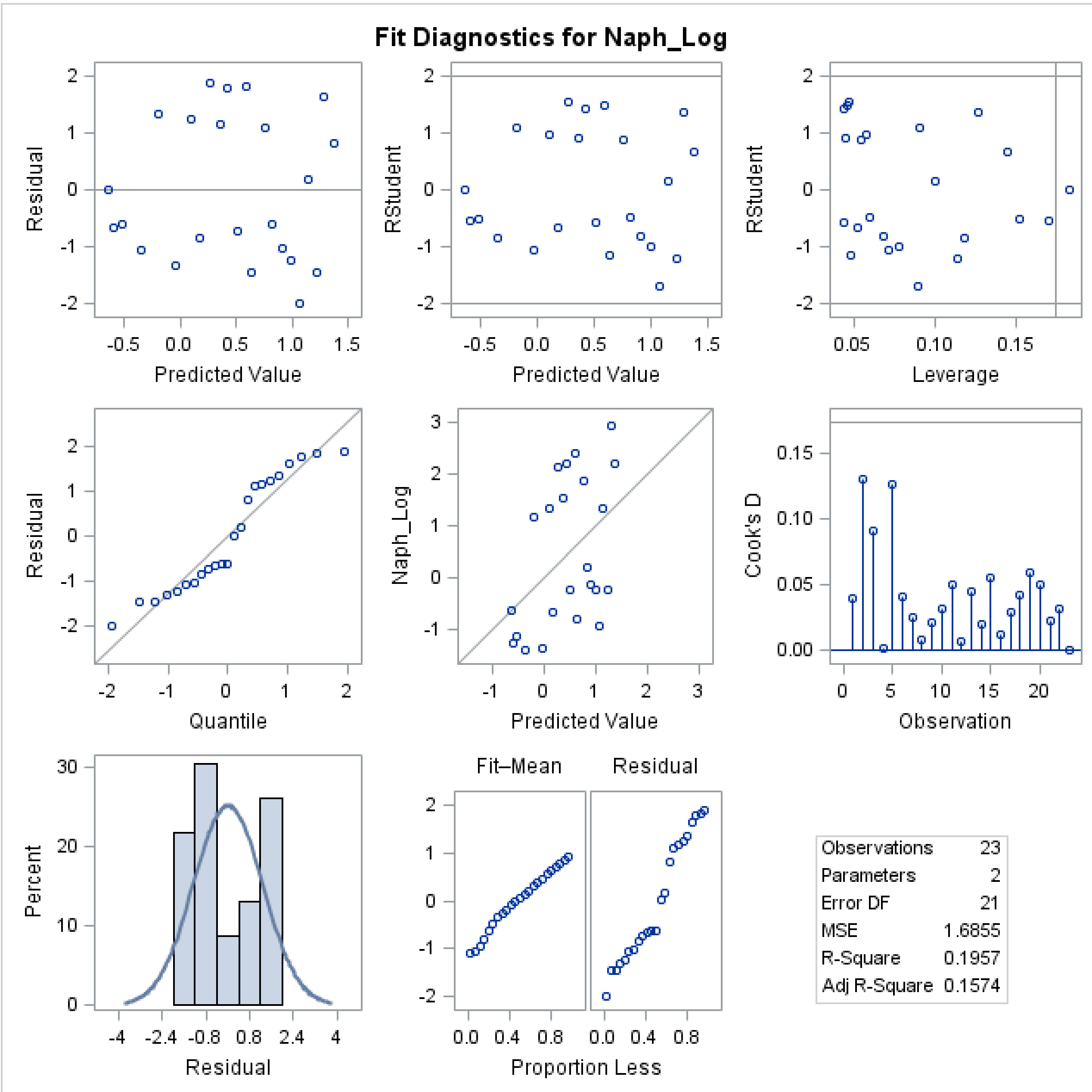
Root MSE	1.29828	R-Square	0.1957
Dependent Mean	0.44583	Adj R-Sq	0.1574
Coeff Var	291.20533		

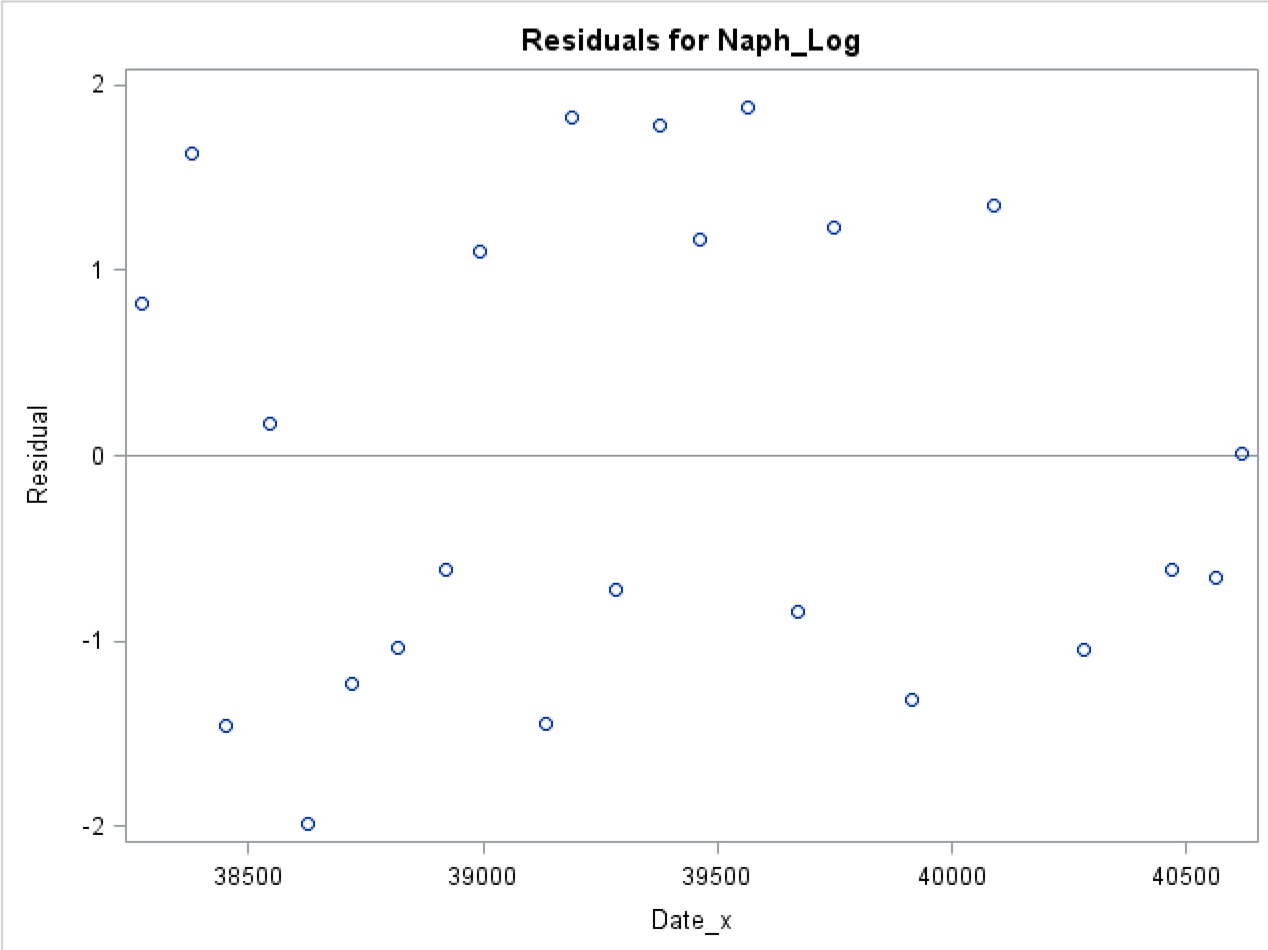
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	34.44418	15.04286	2.29	0.0325
Date_x	1	-0.00086395	0.00038220	-2.26	0.0345

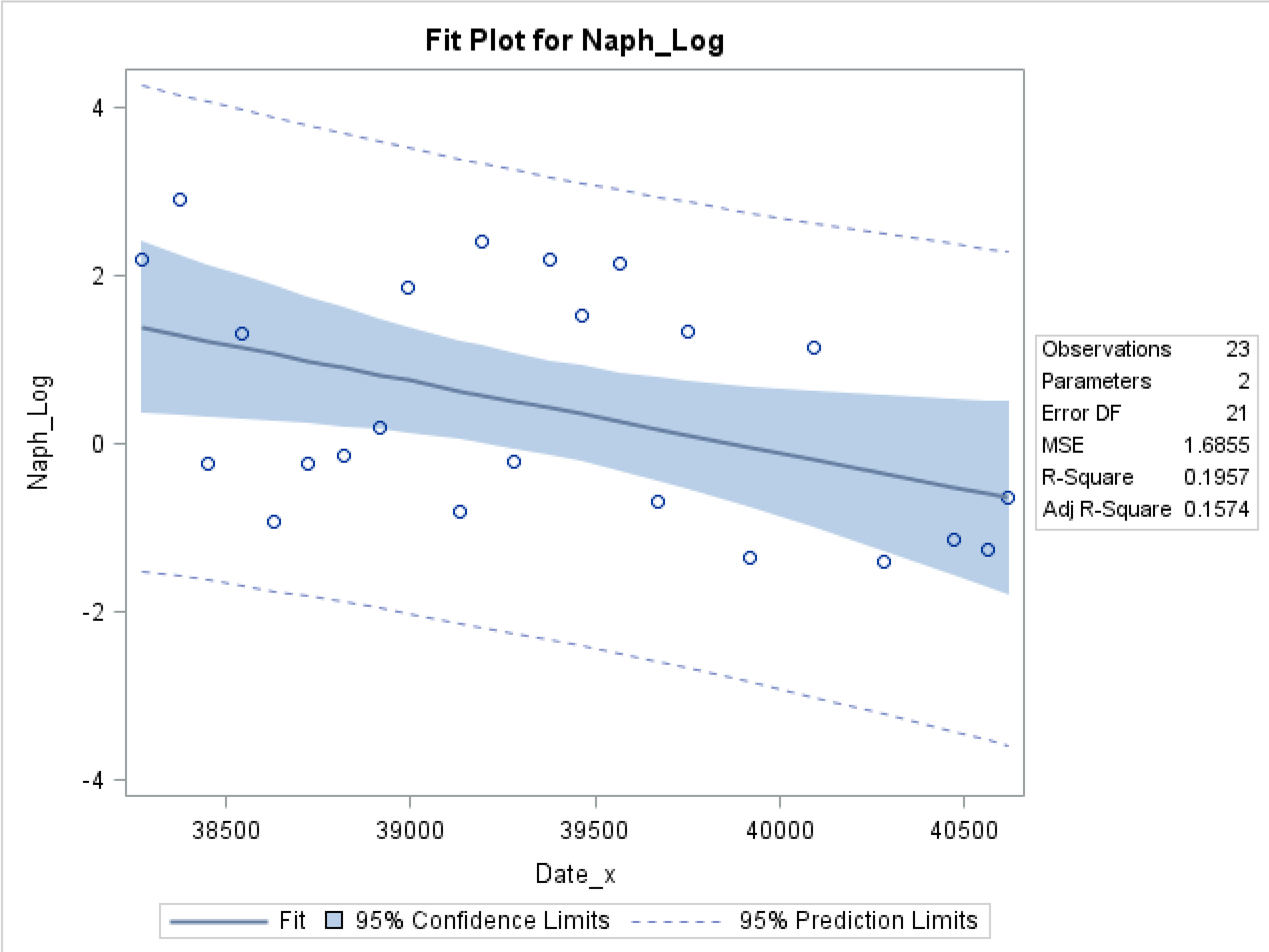
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ12




Residuals for Naph_Log
Residual
2
1
0
-1
-2
38500
39000
39500
40000
40500
Date_x


Fit Plot for Naph_Log
Naph_Log
4
2
0
-2
-4
38500
39000
39500
40000
40500
Date_x
Observations 23
Parameters 2
Error DF 21
MSE 1.6855
R-Square 0.1957
Adj R-Square 0.1574
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ12

Number of Observations Read	23
Number of Observations Used	23

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.05926	0.05926	0.03	0.8680
Error	21	43.94958	2.09284		
Corrected Total	22	44.00885			

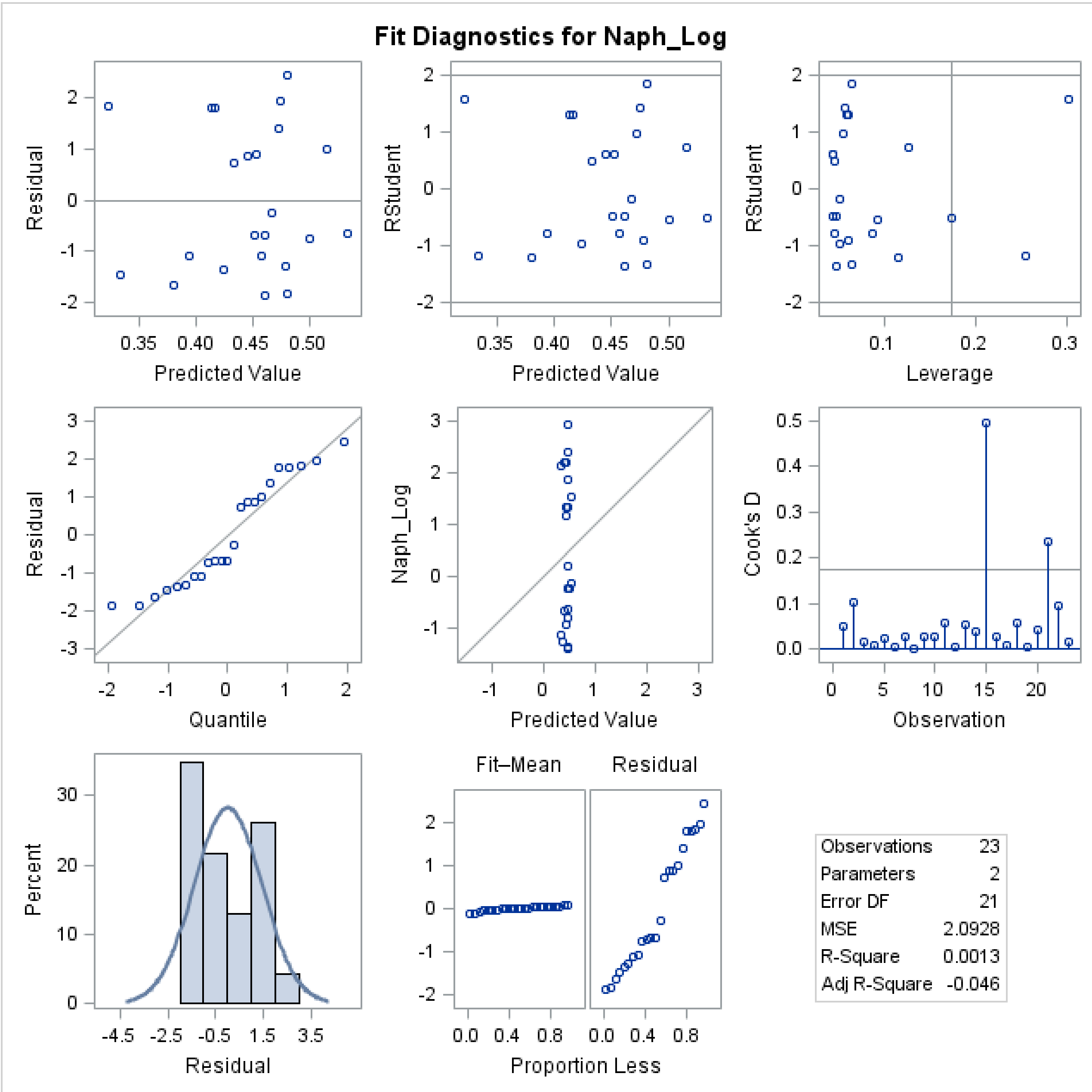
Root MSE	1.44666	**R-Square**	0.0013
Dependent Mean	0.44583	**Adj R-Sq**	-0.0462
Coeff Var	324.48753		

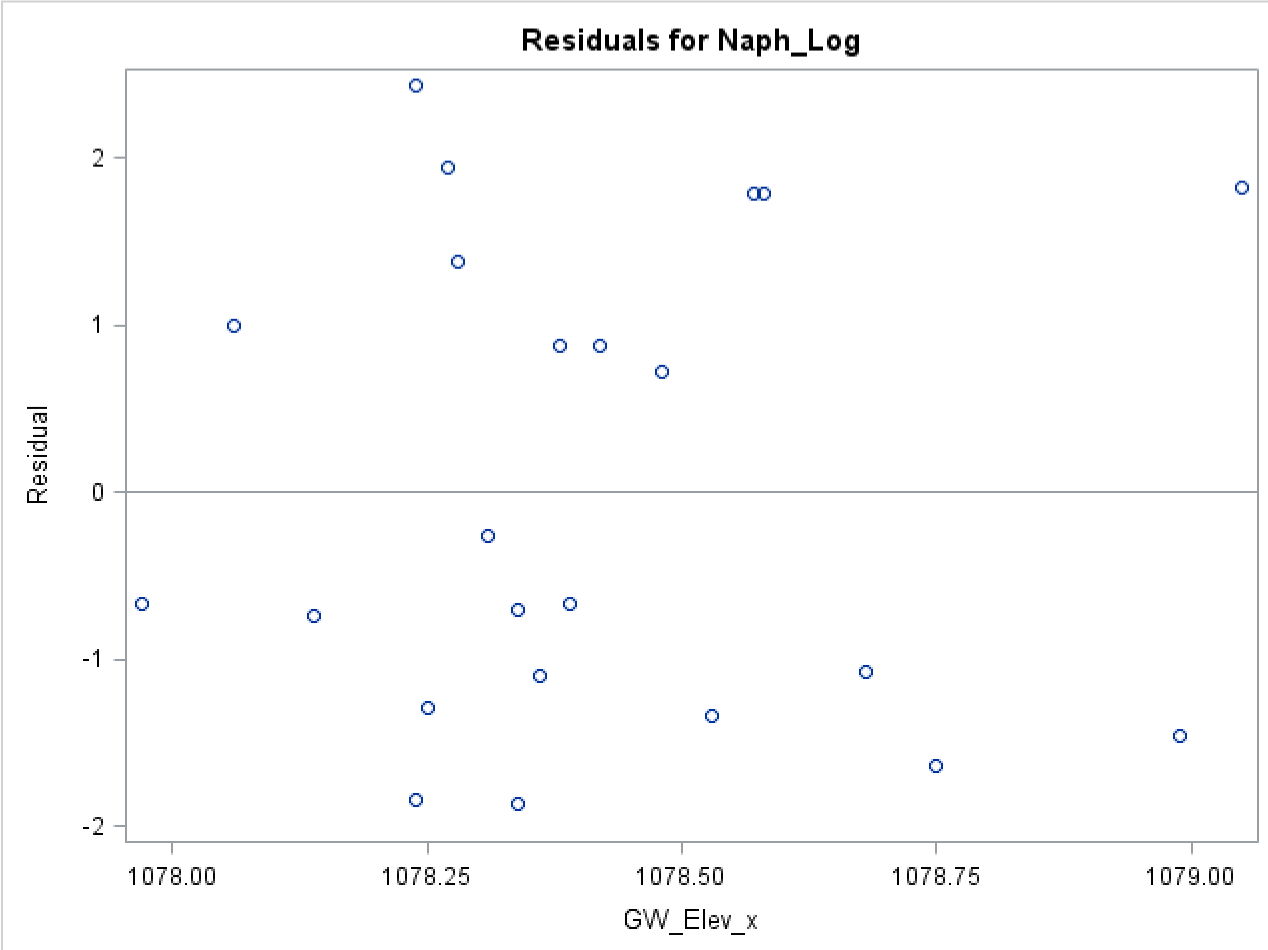
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	212.04561	1257.44514	0.17	0.8677
GW_Elev_x	1	-0.19621	1.16601	-0.17	0.8680

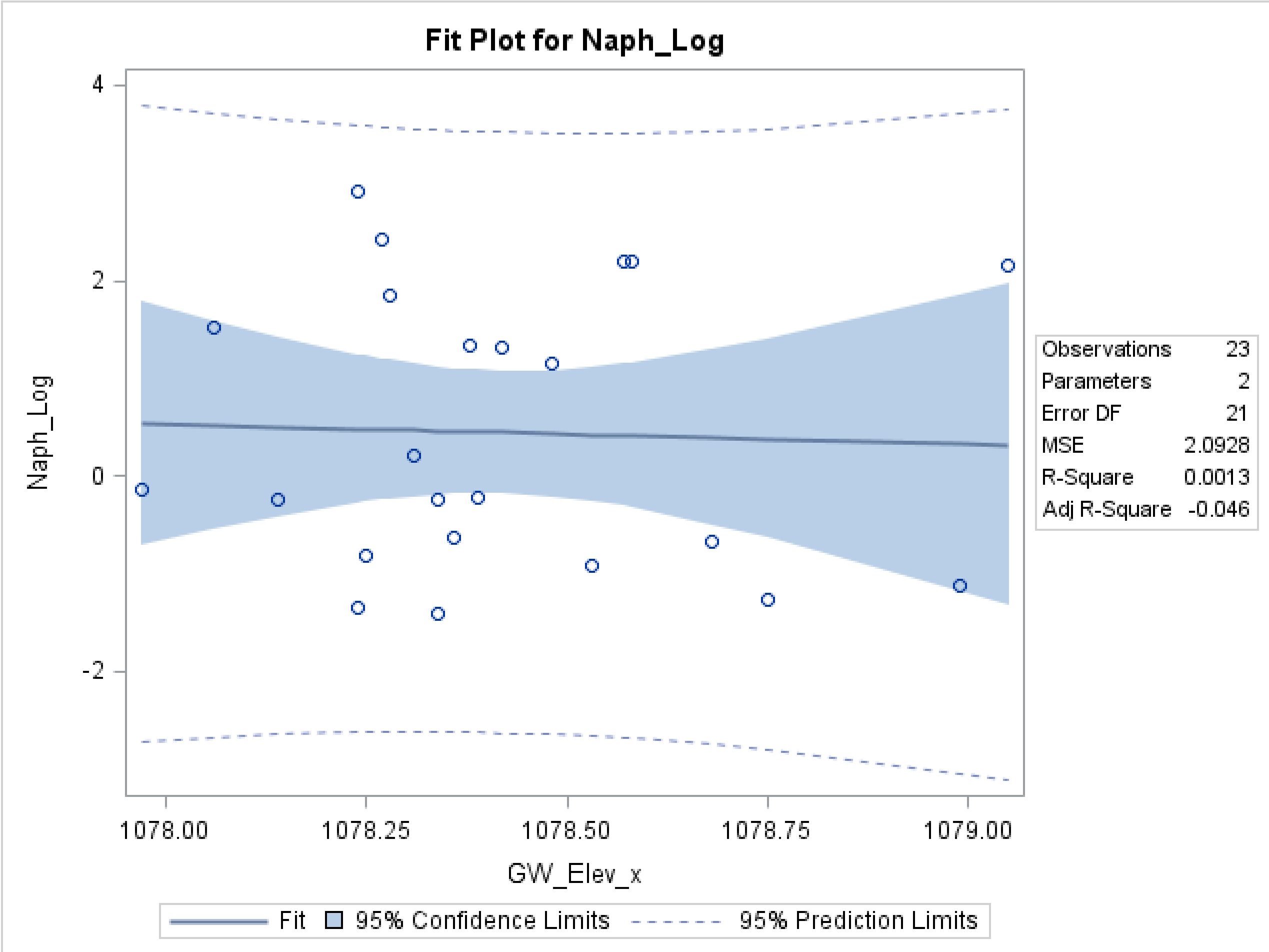
The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ12




Residuals for Naph_Log
Residual
2
1
0
-1
-2
1078.00
1078.25
1078.50
1078.75
1079.00
GW_Elev_x


Fit Plot for Naph_Log
Naph_Log
4
2
0
-2
1078.00
1078.25
1078.50
1078.75
1079.00
GW_Elev_x
Observations 23
Parameters 2
Error DF 21
MSE 2.0928
R-Square 0.0013
Adj R-Square -0.046
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ7B

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	1	0.09525	0.09525	0.82	0.3725
Error	31	3.60526	0.11630		
Corrected Total	32	3.70051			

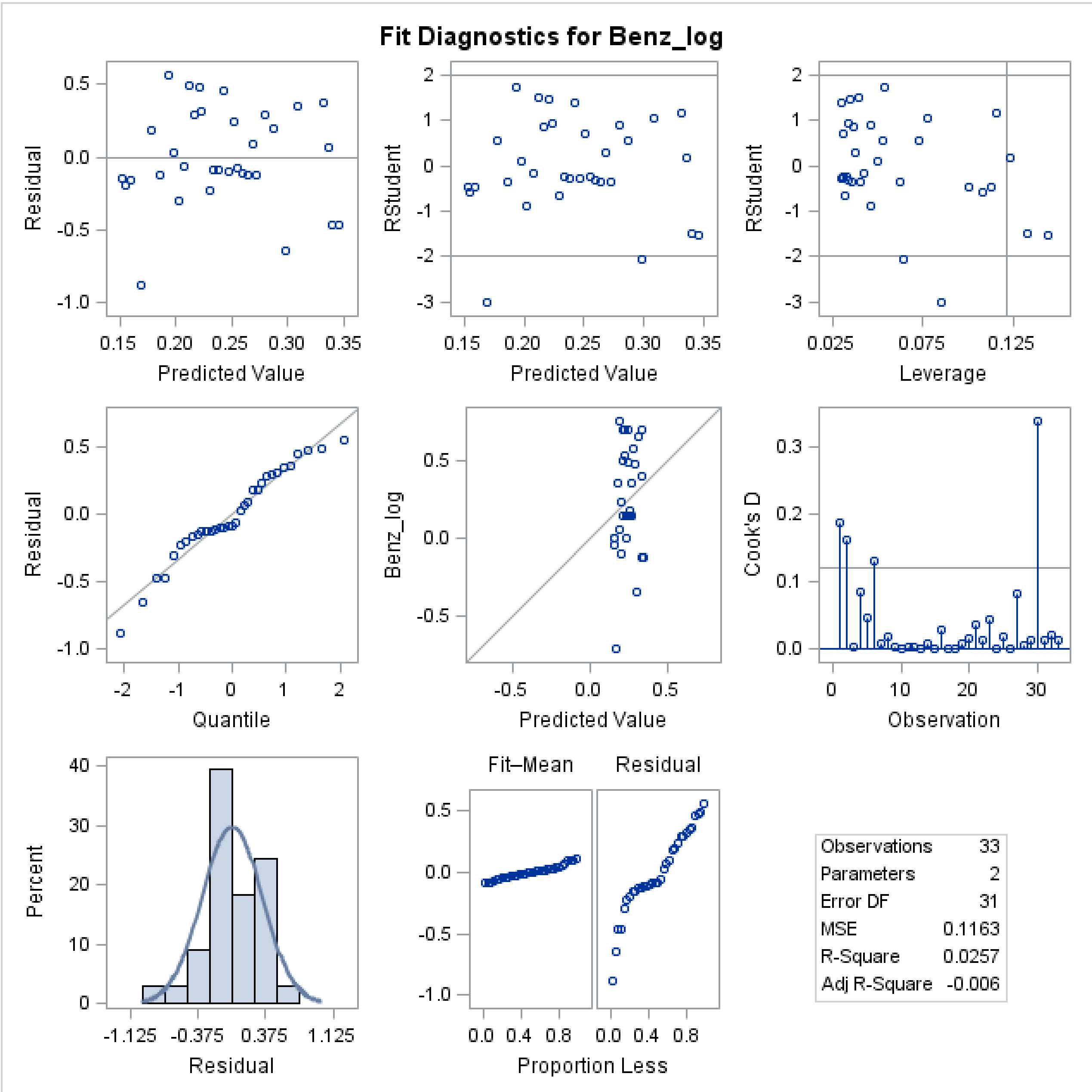
Root MSE	0.34103	**R-Square**	0.0257
Dependent Mean	0.24113	**Adj R-Sq**	-0.0057
Coeff Var	141.42987		

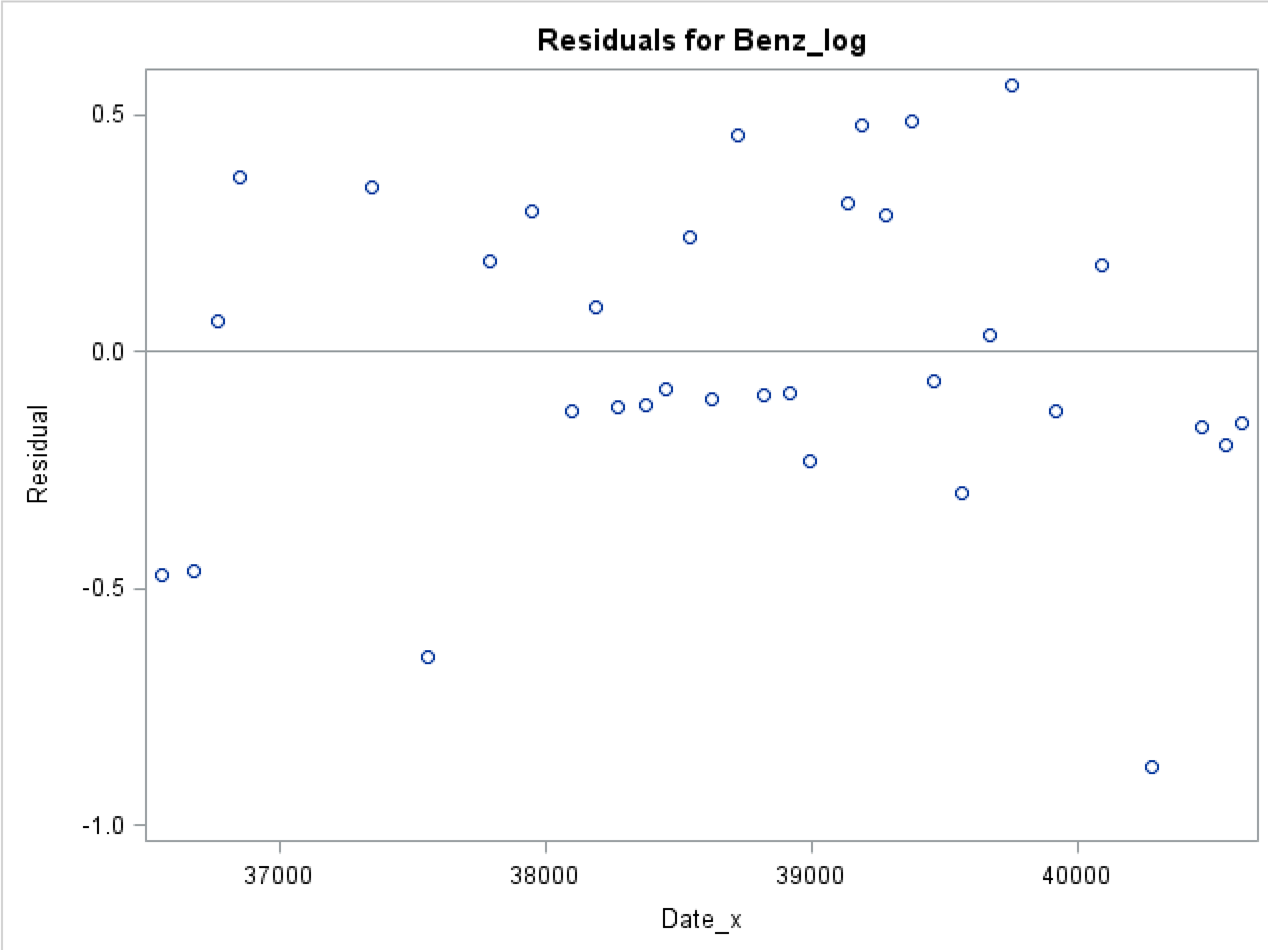
Parameter Estimates					
Variable	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**
Intercept	1	2.08169	2.03471	1.02	0.3142
Date_x	1	-0.00004749	0.00005248	-0.90	0.3725

The SAS System

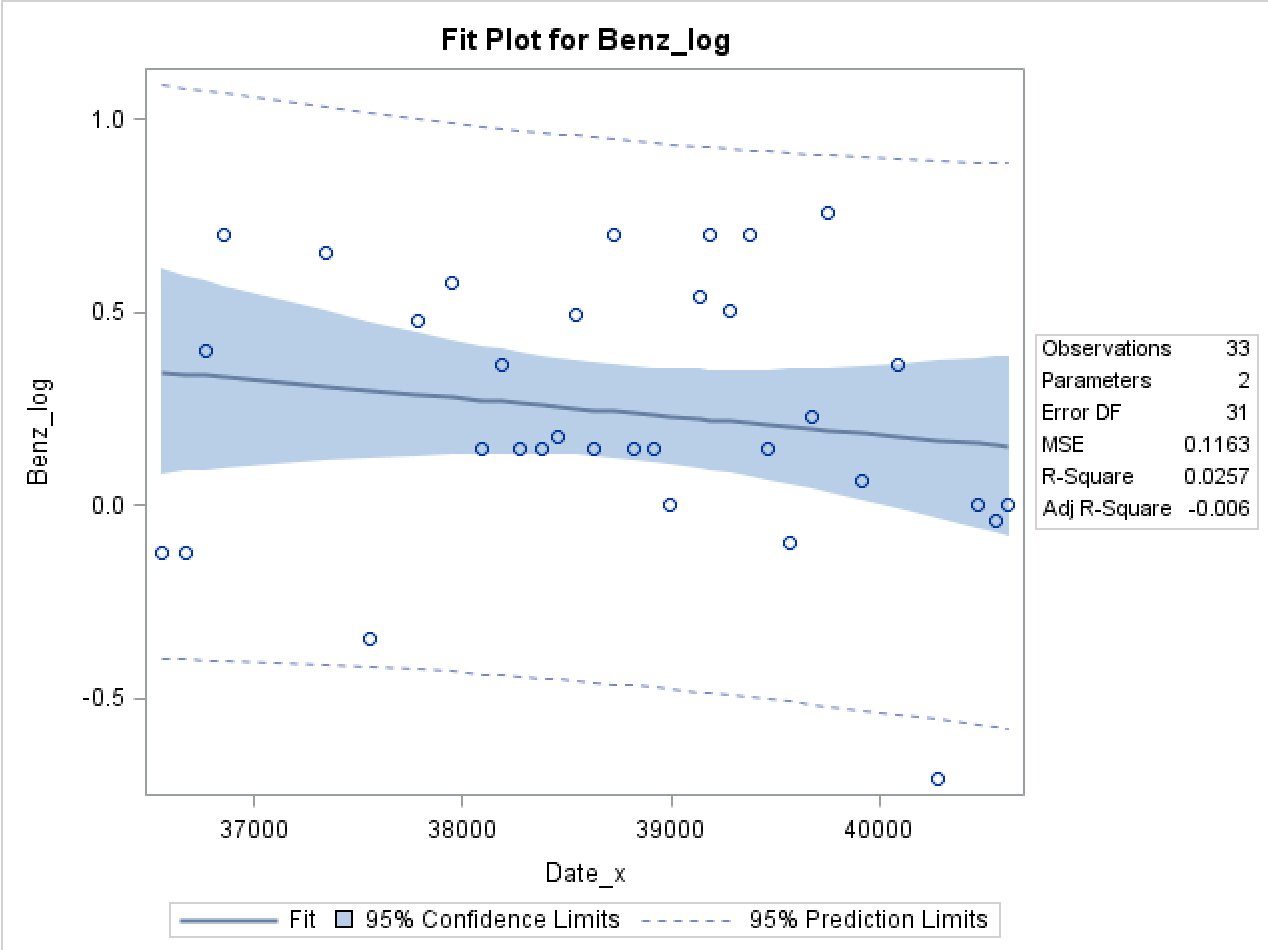
The REG Procedure
Model: MODEL1
Dependent Variable: Benz_log

Well=PZ7B





Residuals for Benz_log
0.5
0.0
-0.5
-1.0
Residual
37000
38000
39000
40000
Date_x


Fit Plot for Benz_log
1.0
0.5
0.0
-0.5
Benz_log
37000
38000
39000
40000
Date_x
Observations 33
Parameters 2
Error DF 31
MSE 0.1163
R-Square 0.0257
Adj R-Square -0.006
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ7B

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.03547	0.03547	0.30	0.5878
Error	31	3.66504	0.11823		
Corrected Total	32	3.70051			

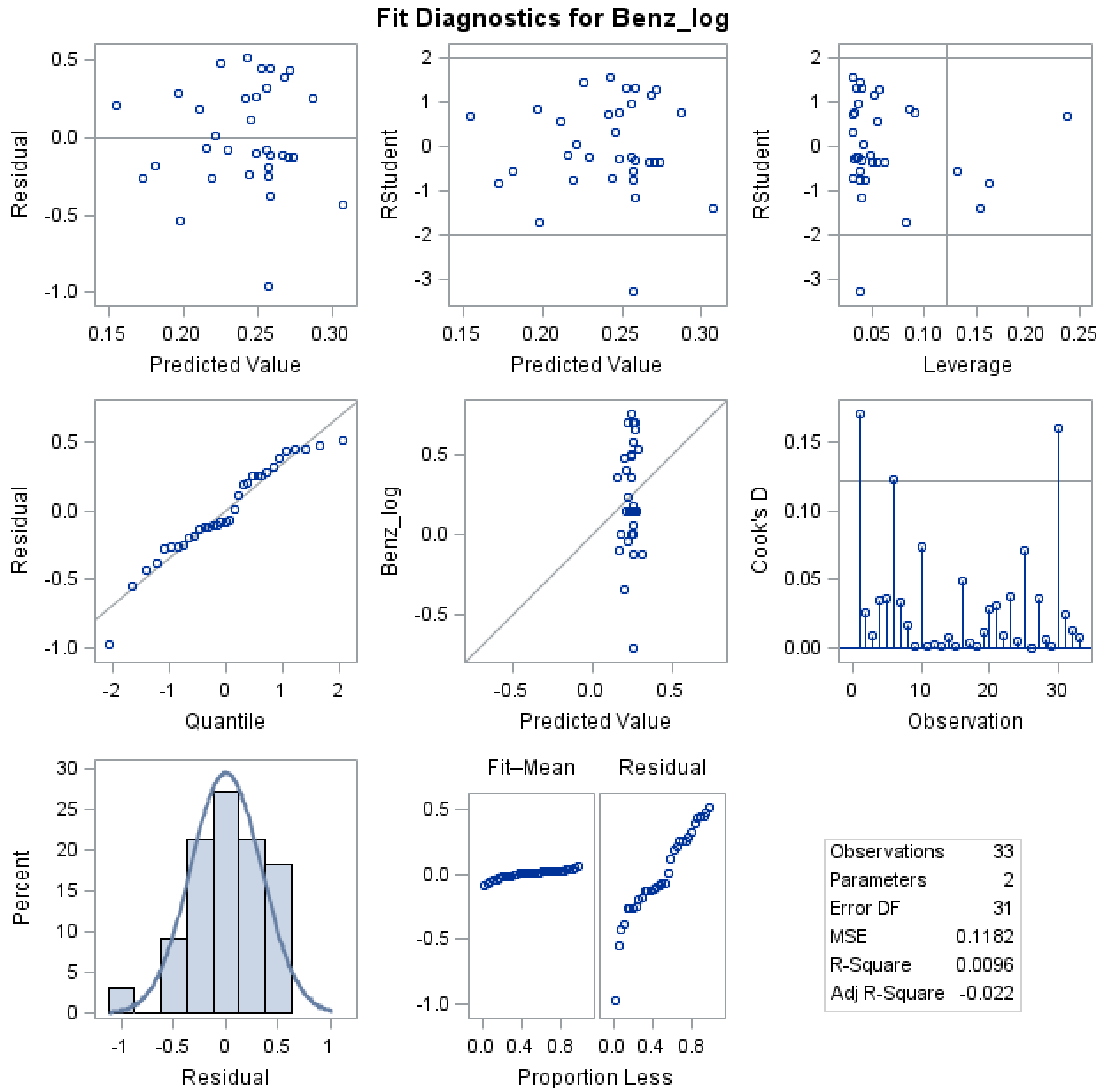
Root MSE	0.34384	R-Square	0.0096
Dependent Mean	0.24113	Adj R-Sq	-0.0224
Coeff Var	142.59751		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	155.17245	282.85760	0.55	0.5872
GW_Elev_x	1	-0.14353	0.26205	-0.55	0.5878

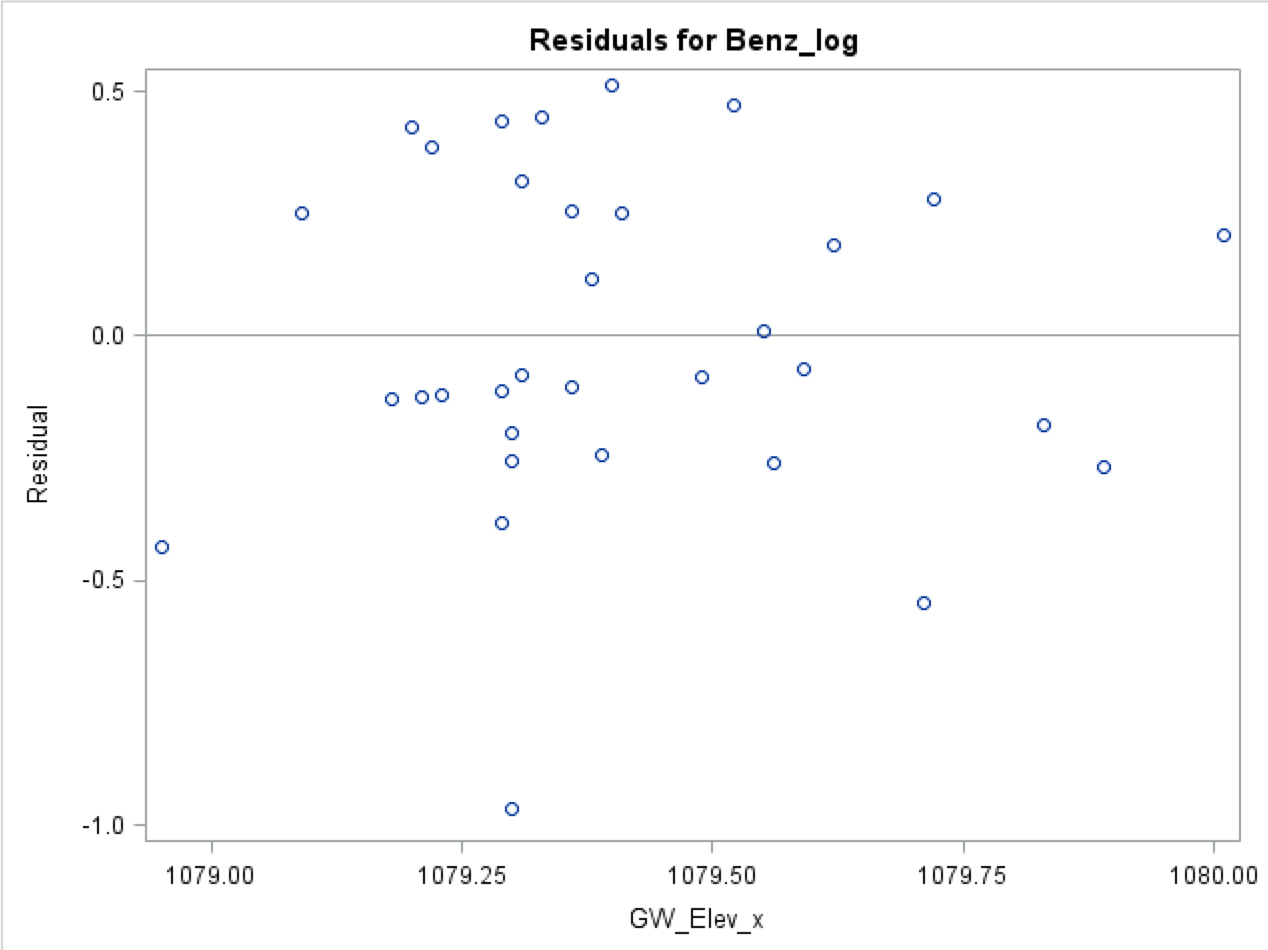
The SAS System

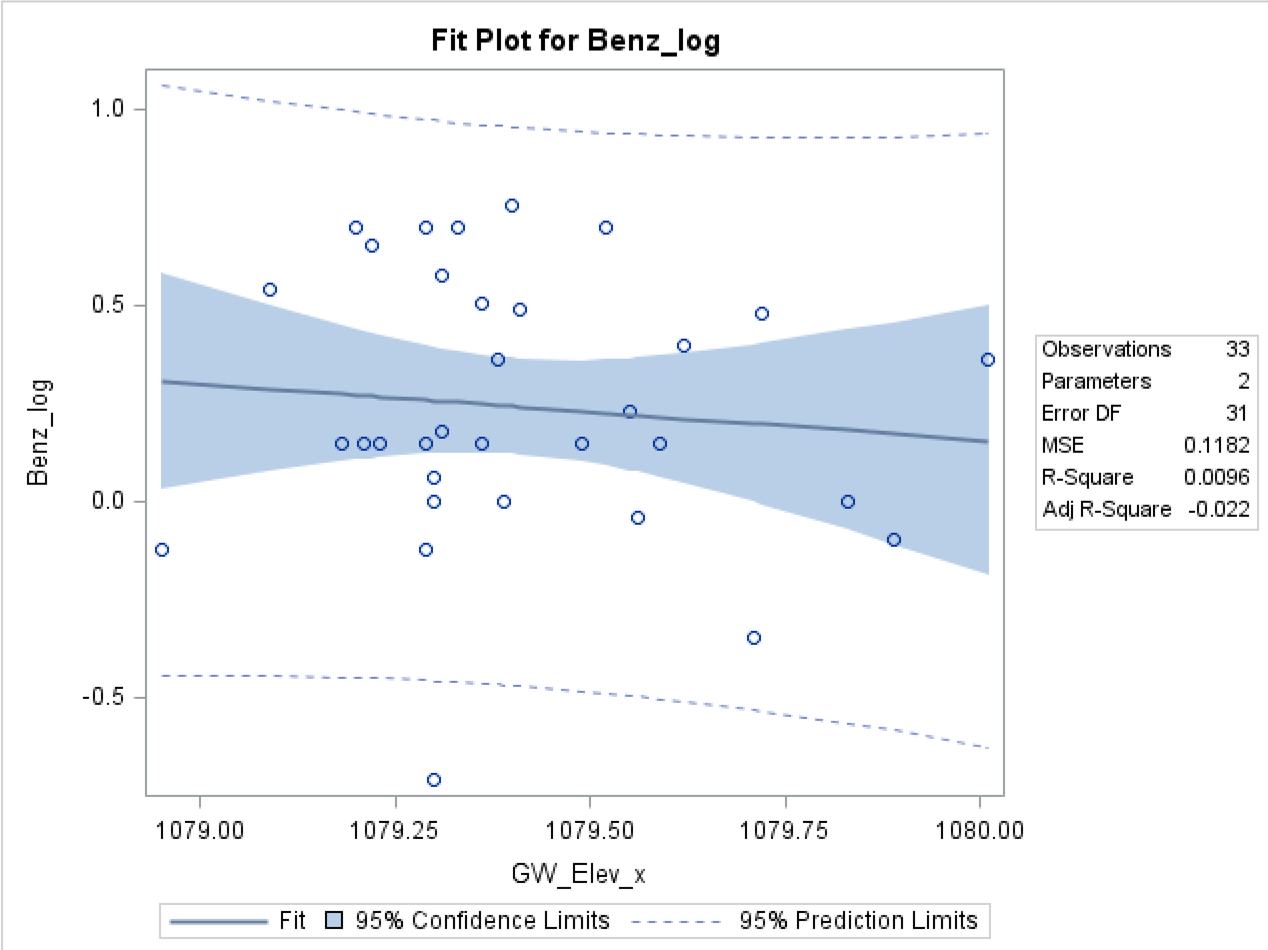
The REG Procedure
Model: MODEL2
Dependent Variable: Benz_log

Well=PZ7B



Observations	33
Parameters	2
Error DF	31
MSE	0.1182
R-Square	0.0096
Adj R-Square	-0.022


Residuals for Benz_log
Residual
0.5
0.0
-0.5
-1.0
1079.00
1079.25
1079.50
1079.75
1080.00
GW_Elev_x


Fit Plot for Benz_log
1.0
0.5
0.0
-0.5
Benz_log
1079.00
1079.25
1079.50
1079.75
1080.00
GW_Elev_x
Observations 33
Parameters 2
Error DF 31
MSE 0.1182
R-Square 0.0096
Adj R-Square -0.022
Fit
95% Confidence Limits
95% Prediction Limits

The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ7B

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	1.58155	1.58155	1.76	0.1940
Error	31	27.81210	0.89716		
Corrected Total	32	29.39365			

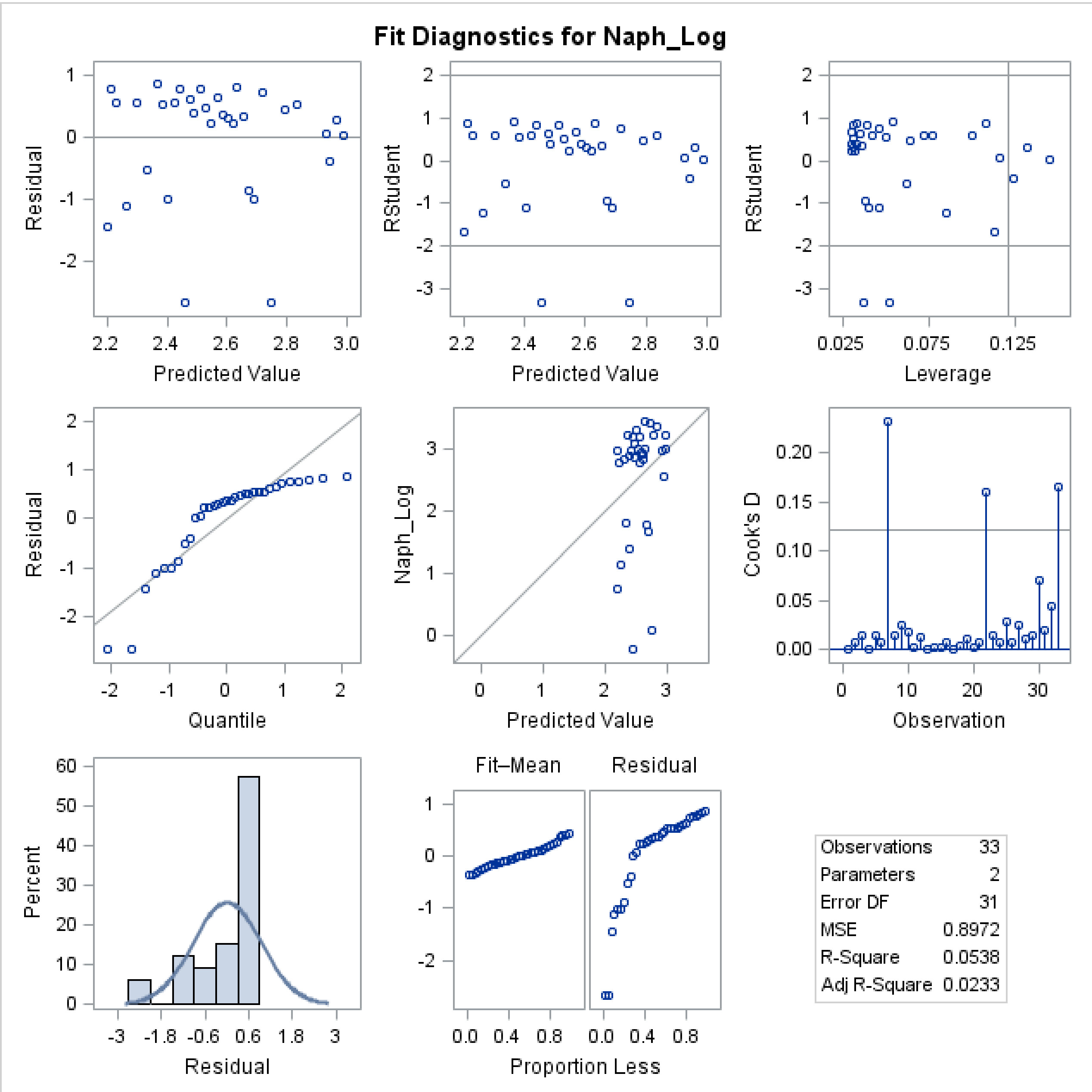
Root MSE	0.94719	R-Square	0.0538
Dependent Mean	2.56056	Adj R-Sq	0.0233
Coeff Var	36.99138		

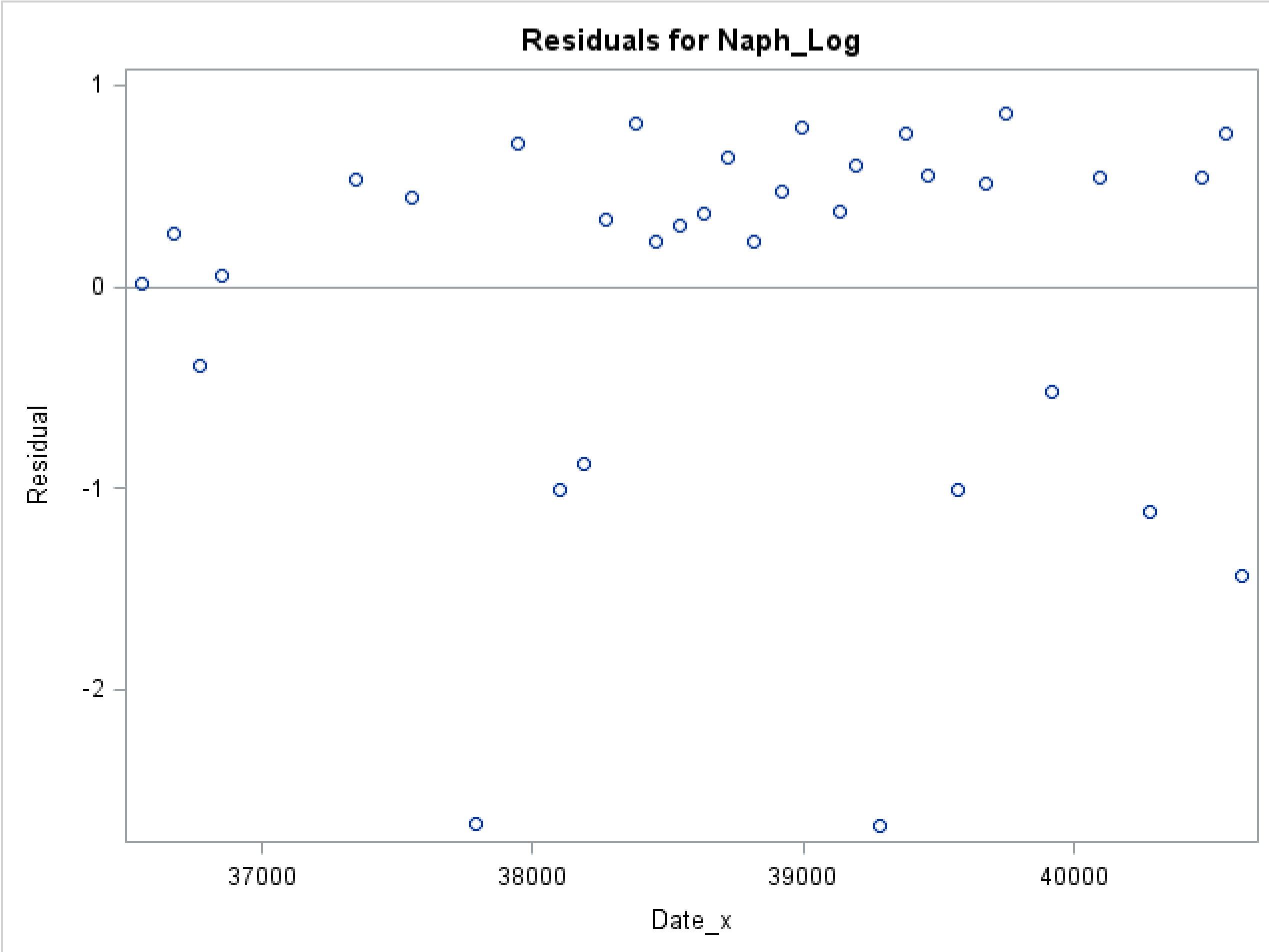
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	10.06073	5.65133	1.78	0.0848
Date_x	1	-0.00019353	0.00014576	-1.33	0.1940

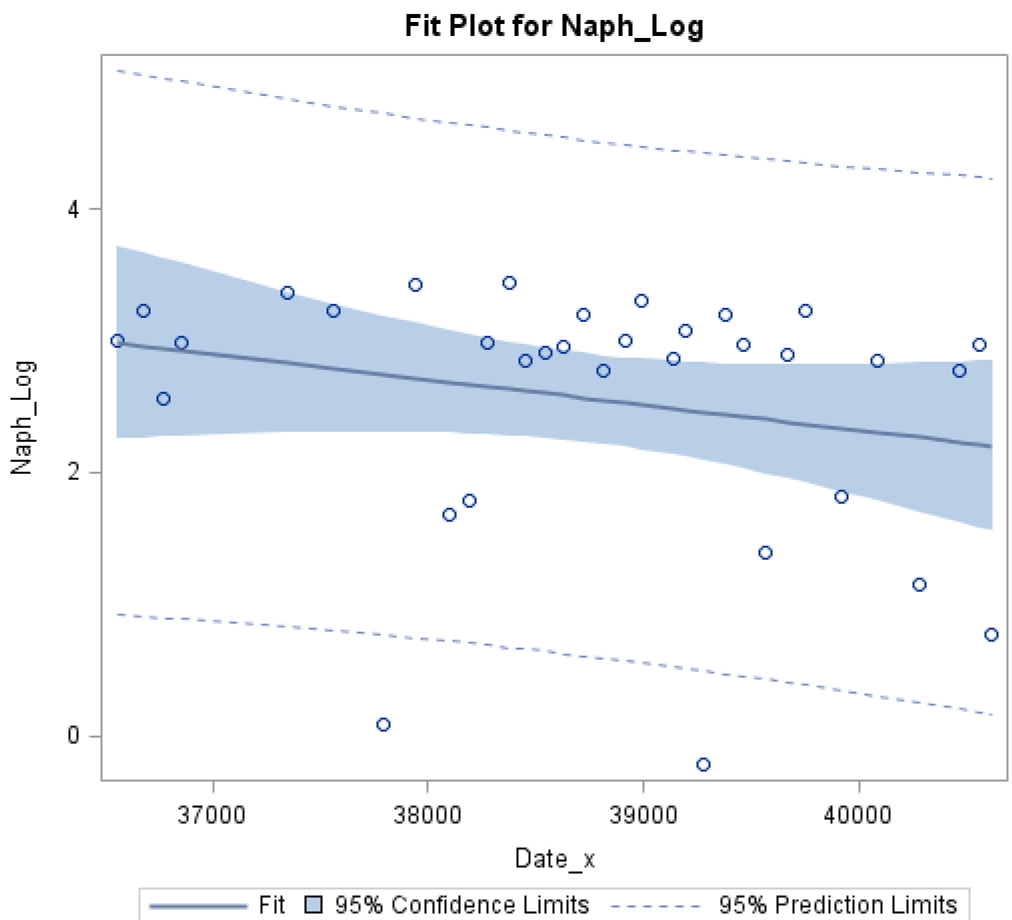
The SAS System

The REG Procedure
Model: MODEL3
Dependent Variable: Naph_Log

Well=PZ7B




Residuals for Naph_Log
Residual
1
0
-1
-2
37000
38000
39000
40000
Date_x



Observations	33
Parameters	2
Error DF	31
MSE	0.8972
R-Square	0.0538
Adj R-Square	0.0233

The SAS System

The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ7B

Number of Observations Read	33
Number of Observations Used	33

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.52124	2.52124	2.91	0.0981
Error	31	26.87241	0.86685		
Corrected Total	32	29.39365			

Root MSE	0.93105	R-Square	0.0858
Dependent Mean	2.56056	Adj R-Sq	0.0563
Coeff Var	36.36109		

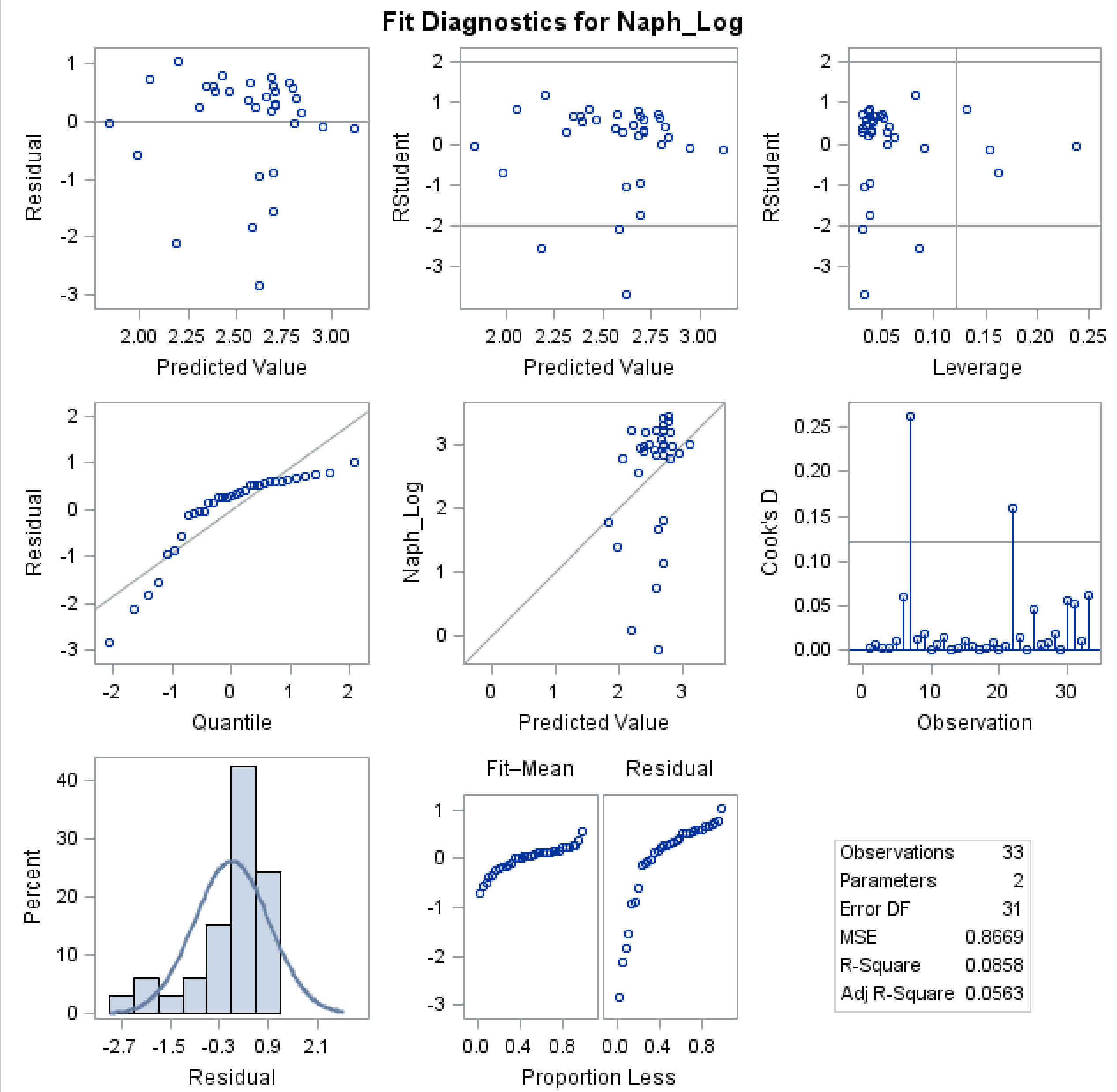
Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1308.78103	765.91759	1.71	0.0975
GW_Elev_x	1	-1.21012	0.70957	-1.71	0.0981

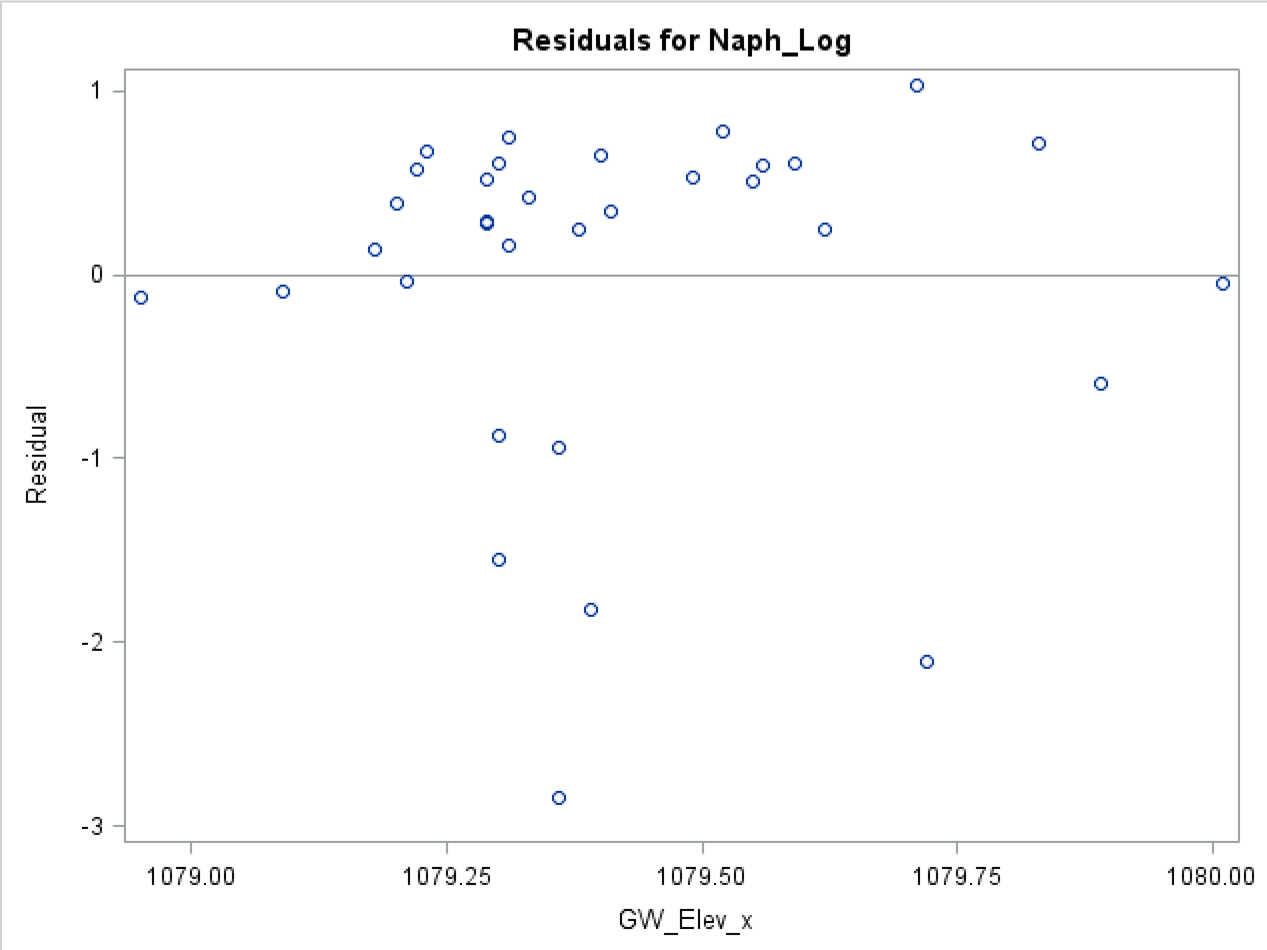
The SAS System

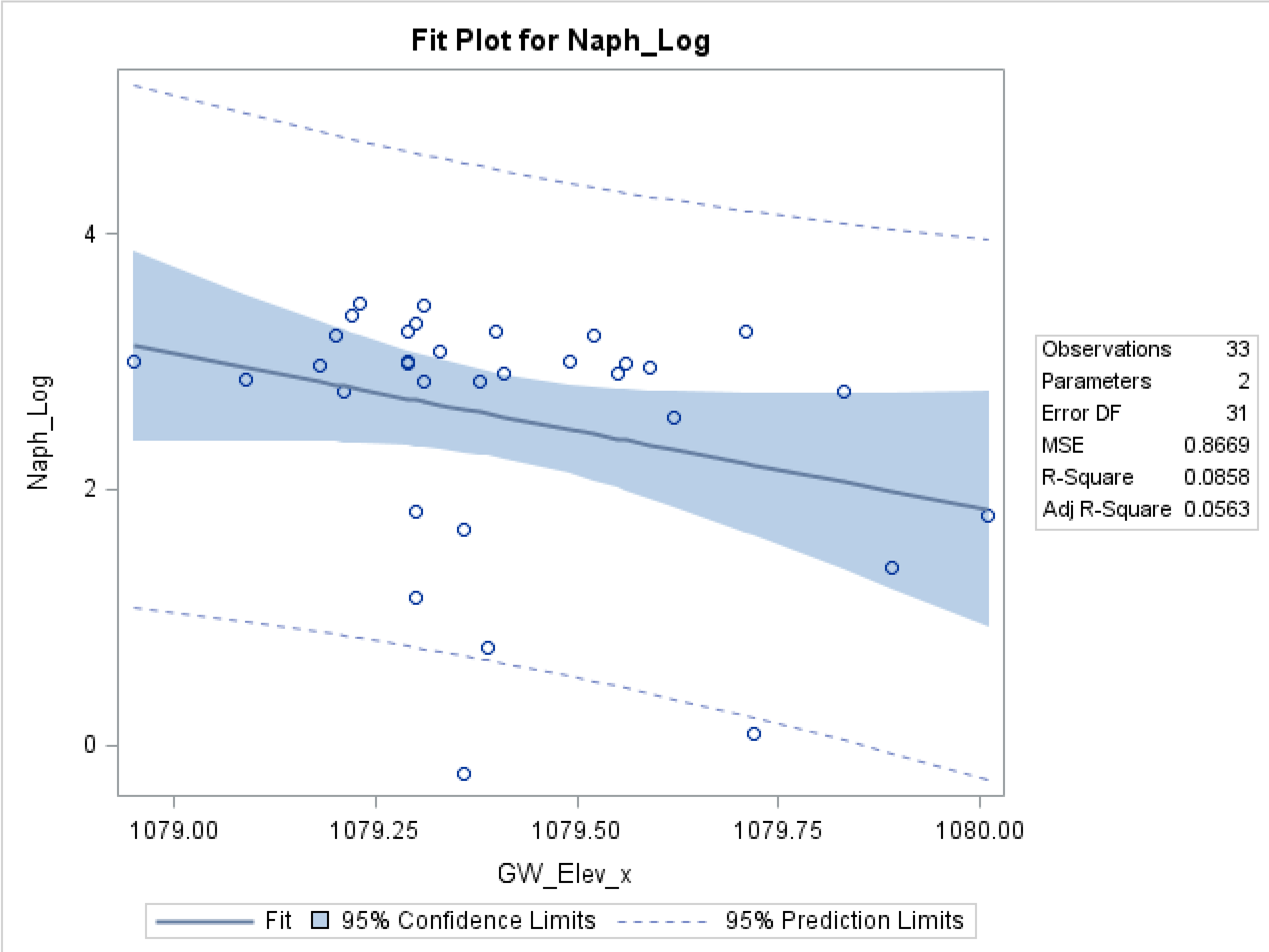
The REG Procedure
Model: MODEL4
Dependent Variable: Naph_Log

Well=PZ7B



Observations	33
Parameters	2
Error DF	31
MSE	0.8669
R-Square	0.0858
Adj R-Square	0.0563


Residuals for Naph_Log
Residual
1
0
-1
-2
-3
1079.00
1079.25
1079.50
1079.75
1080.00
GW_Elev_x



Fit Plot for Naph_Log
Naph_Log
GW_Elev_x
0
2
4
1079.00
1079.25
1079.50
1079.75
1080.00
Observations 33
Parameters 2
Error DF 31
MSE 0.8669
R-Square 0.0858
Adj R-Square 0.0563
Fit
95% Confidence Limits
95% Prediction Limits

APPENDIX C-2

MYGRT ANALYTICAL TRANSPORT MODEL

APPENDIX C-2: GROUNDWATER MODELING

Objectives

The objective of the groundwater modeling was to estimate the time over which monitored natural attenuation (MNA) would reduce concentrations of benzene and naphthalene to levels below the MCL.

Conceptual Model

For modeling purposes, it was assumed that coal tar was the sole source of benzene and naphthalene to groundwater, and that coal tar was first released from the site in 1890. This tar continued to be a source until remediation in 1998, when the source was substantially removed. Dissolved phase benzene and naphthalene migrated downgradient in the direction of groundwater flow with no sinks other than natural attenuation.

Model Software Description

Modeling was performed using the MYGRT analytical transport model. MYGRT Version 3.1 (EPRI, 2005) is a collection of 22 analytical models that calculate the transport of organic or inorganic constituents in groundwater for aquifers of finite or semi-infinite thickness, while accounting for the processes of advection, dispersion, retardation, and decay. All of these models are based on analytical solutions to the 1D, 2D, and 3D mass transport equations using the integral transform technique. The special cases of spatial averaging (i.e., well screen averages) and zero dispersion are also solved. The integral transform method starts with the partial differential equation, boundary conditions, and initial conditions of a transport problem, and proceeds to an exact solution.

Model input data include source chemical history, unsaturated layer characteristics, leachate/aquifer mixing properties, and aquifer layer characteristics. One chemical species is simulated in each run; therefore, chemical speciation and chemical-chemical interactions are not accounted for. Leachate concentration may be varied as a function of time, and the source infiltration rate may be varied at one point in time to simulate a significant change, such as addition of a cap. All other physical parameters are assumed to be constant over time and space. Other MYGRT assumptions:

- Groundwater flow is uniform and constant, and is not affected by leachate infiltration.
- Dispersion is represented by Fick's Law.
- Sorption is treated as linear, equilibrium partitioning process between the aqueous and solid phases.
- First-order kinetics adequately simulates solute transformation or decay. A single decay rate is used for both the dissolved and adsorbed phases.

Model Approach

Two rounds of modeling were performed. Initial modeling to compare relative MNA timeframes for benzene and naphthalene. Final modeling was performed to refine and evaluate the model sensitivity of naphthalene, which, as explained below, is predicted to degrade more slowly than benzene; final modeling was also used to evaluate MNA performance if a groundwater extraction system is installed to prevent residual migration from the source area.

MYGRT's three-dimensional, saturated zone analytical solution with a saturated source term was used for this modeling. The model was calibrated to match pre-remediation concentrations observed at OW5A and concentrations from initial samples collected at OW9 and OW14.[1] OW5A (replaced by OW5R) and OW14 are respectively the closest and farthest points from the source with observed concentrations higher than the MCL.

[1] The only pre-remediation sample collected at OW-9 had relatively low concentration, so the calibration target was developed by averaging the pre-remediation sample with the first sample following remediation, which had relatively high concentration for this well. OW-14 was not installed and sampled until 2007, and the calibration target was developed based on the three samples that had been collected when the

Two calibration criteria were used:

- First, the model had to predict concentrations for 1998 similar to the calibration targets.
- Second, the modeled concentration decrease from 1998 to 2008 for the initial model, and from 1998 to 2011 for the final model could not be greater than the observed concentration decrease.

The calibrated model was then used to estimate the time when future concentrations would degrade to levels lower than the MCL. Predictions of future concentration assumed:

1) That a low-level residual source term remained throughout the model period, for the scenario without groundwater extraction; and

2) That there was no residual migration from the source area for the scenario with groundwater extraction.

Input values were based on site-specific data, and published data when site-specific data were not available.

Initial Model

Initial Model Calibration

Calibration of the initial model was performed by varying the fraction of organic carbon (f_{oc}) and decay rate until both benzene and naphthalene concentrations matched the calibration targets (Table C2-1). Two calibrations were achieved, one using an f_{oc} value of 0.005 and another using an f_{oc} of 0.007. These values are higher[2] than typically assumed for a sand aquifer; however, f_{oc} proved to be a limiting value, because modeled benzene concentrations decreased more quickly than observed concentrations between

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original modeling was performed. Concentrations subsequently decreased in this monitoring well; therefore, the calibration target was not adjusted for the final modeling.

1998 and 2008 when f_{oc} was modeled at a value lower than 0.005. As demonstrated in the final modeling results, use of the high f_{oc} value was conservative in terms of predicting longer concentration recovery times, because increasing f_{oc} increased the retardation term, which reduced the modeled migration rate of benzene and naphthalene, and as a result the decay term had to be reduced in order for predicted concentrations to meet the calibration targets. If decay was not reduced, then the model under predicted concentration at the farthest calibration target from the source and predicted a greater decrease in concentration from 1998 to 2008 than observed.

Calibration was achieved at a groundwater velocity of 130 ft/yr, which is within the range estimated for this site (40 to 140 ft/yr; see remedial investigation report, rev 1, Section 4.2.1.2). Sensitivity testing using a range of groundwater velocity values was performed during the final modeling.

Initial Model Results

Model input and output files are on the attached CD. Initial model results exhibited good agreement with observed groundwater concentrations (Figure C2-1). The calibrated decay rates for benzene and naphthalene were low relative to published rates—for example the decay rates listed in Illinois TACO regulations are 0.33 and 0.99 yrs^{-1} for benzene and naphthalene, respectively, compared to the calibrated values of 0.18 to 0.23 and 0.008 to 0.019 yrs^{-1}. These low decay rates suggest that the initial model is conservative, particularly for naphthalene. Estimated times to achieve preliminary remediation goals (PRGs) downgradient from the source were less than 20 years for benzene, and 120 to 240 years for naphthalene.

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[2] For example, a f_{oc} value of 0.002 is recommended for soils at depth in the USEPA Soil Screening guidance.

Final Models

Final modeling was performed to explore the sensitivity of naphthalene to various model inputs, and to estimate the effect that groundwater extraction near the source would have on predicted times to achieve PRGs. Naphthalene degradation was simulated in the final modeling because the initial modeling demonstrated that it is the constituent with the longest predicted time to achieve its PRG.

Final Model Calibration

The final model was calibrated to match naphthalene concentrations in 1998 based on three groundwater velocities and two f_{oc} values per velocity, for a total of six different calibrations. Velocity was modeled at 50, 90, and 130 ft/yr; these values are at the low, middle, and high end of the range of estimated groundwater velocities for the site. Values modeled for f_{oc} were: 1) between 0.002 and 0.001, and 2) lower than 0.001. Calibration was achieved by varying source concentration, f_{oc}, and the decay term, with the limitation that decay could not be higher than 0.99 yrs^{-1}.

Two other inputs used in the final modeling differed from the initial modeling. First, the literature-based K_{ow} value used in the initial model resulted in a lower K_{oc} than commonly used for naphthalene, which—as explained previously—is non-conservative because the decay term would have to be increased to off-set the more rapid migration rates predicted with a relatively low K_{oc}. Therefore, the K_{ow} value entered into the final model was reverse-calculated to result in a K_{oc} value of 2000 mL/g. Second, the residual naphthalene concentration was changed to 750 ug/L to be more representative of concentrations recently observed in OW5R near the source area. The residual concentration was modeled for the entire duration of the MNA remediation scenario, and for the period from 1998 through 2011 for the MNA and groundwater extraction remediation scenario. The value of 750 ug/L is conservatively high because it is the second highest value observed at OW5R since 2002.

As with the initial model, the final model was calibrated so that predicted concentrations approximated the three calibration targets as of 1998, when source removal remediation was performed, and so that concentrations as of 2011 were not under predicted. Model inputs are listed in Tables C2-2 and C2-3.

Final Model Results

Model input and output files are on the attached CD.

MNA Remediation Scenario

All six final model MNA remediation model simulations showed good agreement with the calibration targets (Figure C2-2). Because the f_{oc} values used in the final modeling (0.0015 to 0.0005) were lower than in the initial model, modeled migration rates were higher, and decay values had to be higher to achieve calibration. The resulting decay values ranged from 0.10 to 0.02 yr^{-1}. These decay values are still considerably lower than published default decay values of up to 0.99 yr^{-1}.

Time series comparison of modeled concentrations to observed concentrations (Figures C2-3a through C2-3f) shows that all of the final model simulations over predict concentrations observed at OW14 through 2011—this is a conservative result because higher concentrations at OW14 translates to longer periods for decay to reduce concentrations to levels below the PRG. Furthermore, all of the simulations except N3aS and N4aS reasonably approximate observed concentrations in OW9 through 2011. Based on these results, predicted times to achieve the PRG based on simulations N3bS, N4bS, N5aS, and N5bS are conservative, and range from 38 to 114 years from 2011. Significant concentration decreases are predicted for three of the four simulations under this scenario over the next 30 years.

MNA and Groundwater Extraction Remediation Scenario

The simulations from the MNA remediation scenario were modified to evaluate the effects of a groundwater extraction system on migration from the source area by setting the residual concentration from the source area to zero beginning in 2012. This scenario assumed that a groundwater extraction system could completely prevent future migration from the source area. Because this change occurs after the calibration period, calibration results for the MNA and groundwater extraction remediation scenario are identical to the MNA remediation scenario.

Predicted time frames to achieve the PRG for the MNA and groundwater extraction system based on simulations N3bP, N4bP, N5aP, and N5bP[3] range from 36 to 96 years, compared to 38 to 114 years for the scenario without groundwater extraction to cut off residual migration from the source area. This change of 2 to 18 years falls within the uncertainty of the model.

Model Uncertainty

As with any model, there are a number of assumptions and simplifications needed to mathematically represent groundwater migration. In addition to the model assumptions described above, several site-specific assumptions were made and deviations from these assumptions affect model uncertainty. Key assumptions and their effect on results are listed below.

- The model assumes a uniform groundwater flow field. This assumption is rarely, if ever, achieved in nature and as a result, transport models are typically set-up and calibrated to be conservative. The possible range in hydraulic conductivity at this site was addressed during the final model sensitivity analysis. Fluctuations in flow caused by the converging flow systems were not addressed. These fluctuations cause lateral displacement of the plume, which has the net effect of increasing transverse dispersion. Default dispersion terms based on observation distance were used in this model, and since the default dispersion term does not account for a laterally fluctuating flow field, predicted downgradient concentrations (at 420 feet) were higher than indicated by observed data in OW14. Therefore, the model was conservative in this regard.

- The MNA and groundwater extraction scenario assumes that changes to the flow field caused by groundwater extraction—which could not be explicitly simulated with this analytical transport model—are negligible in the downgradient portion of the plume where remediation effects were evaluated.

- The model assumes that there is a long-term residual source resulting in groundwater concentrations beneath the former MGP site that are higher than the MCL. The modeled residual source concentration of 750 ug/L for naphthalene is much higher than recently observed concentrations at OW5R, which been lower than 500 ug/L, and usually lower than 100 ug/L, since 2008.

- Furthermore, over the 200 year time frame of this model, concentrations emanating from any residual source should decrease as the source material leaches out and decays. Therefore, use of a residual source term in the MNA remediation scenario at a constant concentration higher than observed concentrations adds another level of conservatism to the model.

Given these conservative approaches to this modeling, and the observation that downgradient naphthalene concentrations predicted using the final model are considerably higher than observed concentrations in downgradient well OW14, the predicted period of 38 to 114 years to achieve the PRG for the MNA remediation scenario and 36 to 96 years for the MNA and groundwater extraction remediation scenario are also reasonably conservative.

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[3] As explained in the previous section, simulations N3aP and N4aP over predict concentration decrease at OW-9 during the calibration period and results from those simulations are therefore not used in this tabulation.

Table C2-1. Initial Model Inputs and Results
Steven's Point Former MGP

Parameter	Unit	Benzene - Scenario 1 B4aS	Benzene - Scenario 2 B4bS	Naphthalene - Scenario 1 N1aS	Naphthalene - Scenario 2 N2aS	Notes
Model Setup						
Model		Saturated				
Source Location		Saturated Zone				
Dimensions		3				
Aquifer		Finite				
Concentration Compilation		Well Screen Average				
Source Properties						
Source Width	ft	70				
Top of Source	ft	0				
Bottom of Source	ft	7				
Source On	year	1890				Plant begins production.
Source Off	year	1998				Remediation completed.
Initial Concentration	ug/L	2184	2195	26356	24696	1890 to 1998
Residual Concentration	ug/L	60	60	1000	1000	1998 to end of model period
Saturated Zone Properties						
Aquifer Porosity		0.3				
Seepage Velocity	ft/yr	130				Site values range from 40 to 140 ft/yr
Thickness	ft	22				Average saturated thickness
Screen Top	ft	0				
Screen Bottom	ft	5				
Scale distance for Dispersion Calculation	ft	420				Distance from source to OW14
Dispersivity - Long	ft	42				model calculated based on GW velocity
Dispersivity - Trans	ft	4.2				model calculated based on GW velocity
Dispersivity - Vert	ft	0.42				model calculated based on GW velocity
Bulk Density	g/mL	1.8				
pH	SU	7				
Background Conc	ug/L	0				
Chemical Properties						
Octanol Water Partition Coeff. (Kow)	mL/g	126	126	2000	2000	from "Groundwater Chemicals Desk Reference" (3rd. Ed.), J.H. Montgomery
Fraction Organic Carbon		0.005	0.007	0.005	0.007	calibration parameter
Partition Coef. (Kp)	mL/g	0.397	0.556	6.3	8.82	model calculated based on Kow and FOC
Retardation factor, Rd		3.38	4.34	38.8	53.9	model calculated based on Kow and FOC
Decay Rate	1/yrs	0.23	0.18	0.019	0.008	calibration parameter
Max Concentration @ year 1998						
0 feet	ug/L	1125	1131	13678	12848	No calibration target
50 feet	ug/L	1300	1300	15700	15700	Calibration Target = 1300 Benzene, 15700 naphthalene
220 feet	ug/L	253	253	3126	3761	Calibration Target = 285 Benzene, 2900 naphthalene
420 feet	ug/L	56	55	598	570	Calibration Target = 57 Benzene, 600 naphthalene
Years until PRG achieved	Years	12	15	122	236	Years from 1998

Table C2-2. Final Model Inputs and Results - MNA Scenario
Steven's Point Former MGP

Parameter	Unit	Naphthalene N3aS	N3bS	N4aS	N4bS	N5aS	N5bS	Notes
Model Setup								
Model				Saturated				
Source Location				Saturated Zone				
Dimensions				3				
Aquifer				Finite				
Concentration Compilation				Well Screen Average				
Source Properties								
Source Width	ft			70				
Top of Source	ft			0				
Bottom of Source	ft			7				
Source On	year			1890				Plant begins production.
Source Off	year			1998				Remediation completed.
Initial Concentration	ug/L	25900	30000	31000	26800	27800	25500	1890 to 1998
Residual Concentration	ug/L			750				1998 to end of model period
Saturated Zone Properties								
Aquifer Porosity				0.3				
Seepage Velocity	ft/yr	130	130	90	90	50	50	Site values range from 40 to 140 ft/yr
Thickness	ft			22				Average saturated thickness
Screen Top	ft			0				
Screen Bottom	ft			5				
Scale distance for Dispersion Calculation	ft			420				Distance from source to OW14
Dispersivity - Long	ft			42				model calculated based on GW velocity
Dispersivity - Trans	ft			4.2				model calculated based on GW velocity
Dispersivity - Vert	ft			0.42				model calculated based on GW velocity
Bulk Density	g/mL			1.8				
pH	SU			7				
Background Conc	ug/L			0				
Chemical Properties								
Octanol Water Partition Coeff. (Kow)	mL/g			3175				Reverse-calculated from Koc of 2000 mL/g
Soil Water Partition Coefficient (Koc)	mL/g			2000				
Fraction Organic Carbon		0.0006	0.0014	0.0005	0.0015	0.0006	0.0011	calibration parameter
Partition Coef. (Kp)	mL/g	1.2	2.8	1	3	1.2	2.2	model calculated based on Kow and FOC
Retardation factor, Rd		8.2	17.8	7	19	8.2	14.2	model calculated based on Kow and FOC
Decay Rate	1/yrs	0.1	0.05	0.09	0.03	0.04	0.02	calibration parameter
Max Concentration @ year 1998								
0 feet	ug/L	25900	30000	31000	26800	27800	25500	Equals pre-remediation source concentration
50 feet	ug/L	15167	17318	17823	15683	16170	15187	Calibration Target = 15700
220 feet	ug/L	2859	3089	3130	2945	2969	3030	Calibration target =- 2900
420 feet	ug/L	600	603	599	601	601	600	Calibration Target = 600
Modeled Conc. at OW14 in 2011	ug/L	424	601	513	610	602	640	Target = higher than 200
Predicted Conc. at OW14 in 2041	ug/L	19	160	21	440	271	632	30 years in the future
PRG achieved in	Year	2023	2049	2027	2080	2060	2125	
Years until PRG achieved	Years	12	38	16	69	49	114	Years from 2011

Table C2-3. Final Model Inputs and Results - MNA and Groundwater Extraction Scenario
Steven's Point Former MGP

Parameter	Unit	Naphthalene N3aP	N3bP	N4aP	N4bP	N5aP	N5bP	Notes
Model Setup								
Model		Saturated						
Source Location		Saturated Zone						
Dimensions		3						
Aquifer		Finite						
Concentration Compilation		Well Screen Average						
Source Properties								
Source Width	ft	70						
Top of Source	ft	0						
Bottom of Source	ft	7						
Source On	year	1890						Plant begins production.
Source Off	year	1998						Remediation completed.
Initial Concentration	ug/L	25900	30000	31000	26800	27800	25500	1890 to 1998
Residual Concentration	ug/L	750						1998 to 2011
Residual Concentration = 0 ug/L		2012						Assumes implementation of GW extraction
Saturated Zone Properties								
Aquifer Porosity		0.3						
Seepage Velocity	ft/yr	130	130	90	90	50	50	Site values range from 40 to 140 ft/yr
Thickness	ft	22						Average saturated thickness
Screen Top	ft	0						
Screen Bottom	ft	5						
Scale distance for Dispersion Calculation	ft	420						Distance from source to OW14
Dispersivity - Long	ft	42						model calculated based on GW velocity
Dispersivity - Trans	ft	4.2						model calculated based on GW velocity
Dispersivity - Vert	ft	0.42						model calculated based on GW velocity
Bulk Density	g/mL	1.8						
pH	SU	7						
Background Conc	ug/L	0						
Chemical Properties								
Octanol Water Partition Coeff. (Kow)	mL/g	3175						Reverse-calculated from Koc of 2000 mL/g
Soil Water Partition Coefficient (Koc)	mL/g	2000						
Fraction Organic Carbon		0.0006	0.0014	0.0005	0.0015	0.0006	0.0011	calibration parameter
Partition Coef. (Kp)	mL/g	1.2	2.8	1	3	1.2	2.2	model calculated based on Kow and FOC
Retardation factor, Rd		8.2	17.8	7	19	8.2	14.2	model calculated based on Kow and FOC
Decay Rate	1/yrs	0.1	0.05	0.09	0.03	0.04	0.02	calibration parameter
Max Concentration @ year 1998								
0 feet	ug/L	25900	30000	31000	26800	27800	25500	Equals pre-remediation source concentration
50 feet	ug/L	15167	17318	17823	15683	16170	15187	Calibration Target = 15700
220 feet	ug/L	2859	3089	3130	2945	2969	3030	Calibration target =- 2900
420 feet	ug/L	600	603	599	601	601	600	Calibration Target = 600
Modeled Conc. at OW14 in 2011	ug/L	424	601	513	610	602	640	Target = higher than 200
Predicted Conc. at OW14 in 2041	ug/L	2.5	155	8.7	440	268	631	30 years in the future
PRG achieved in	Year	2022	2047	2026	2075	2057	2107	
Years until PRG achieved	Years	11	36	15	64	46	96	Years from 2011

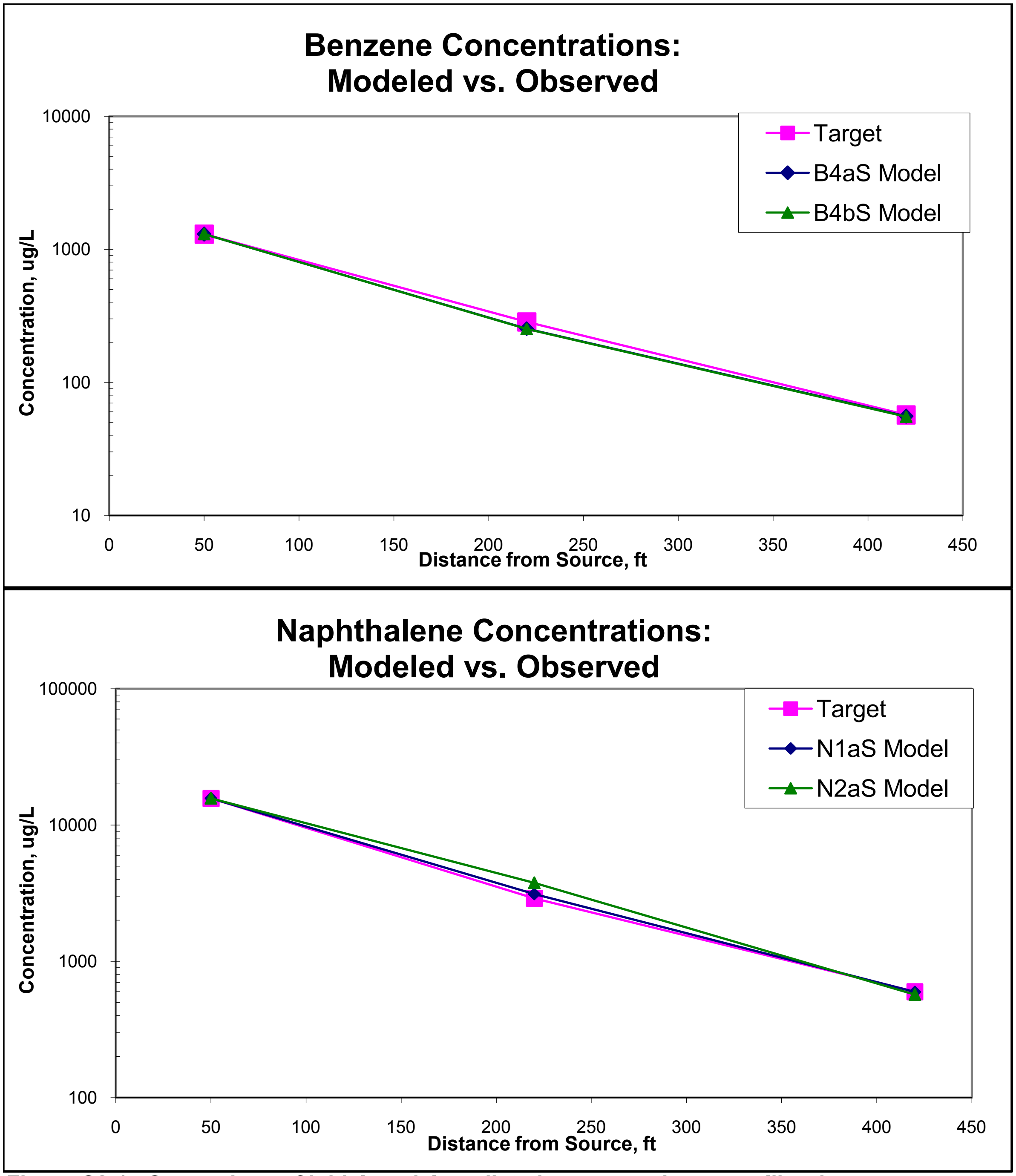

Figure C2-1. Comparison of initial model predicted concentrations to calibration targets in model year 1998.

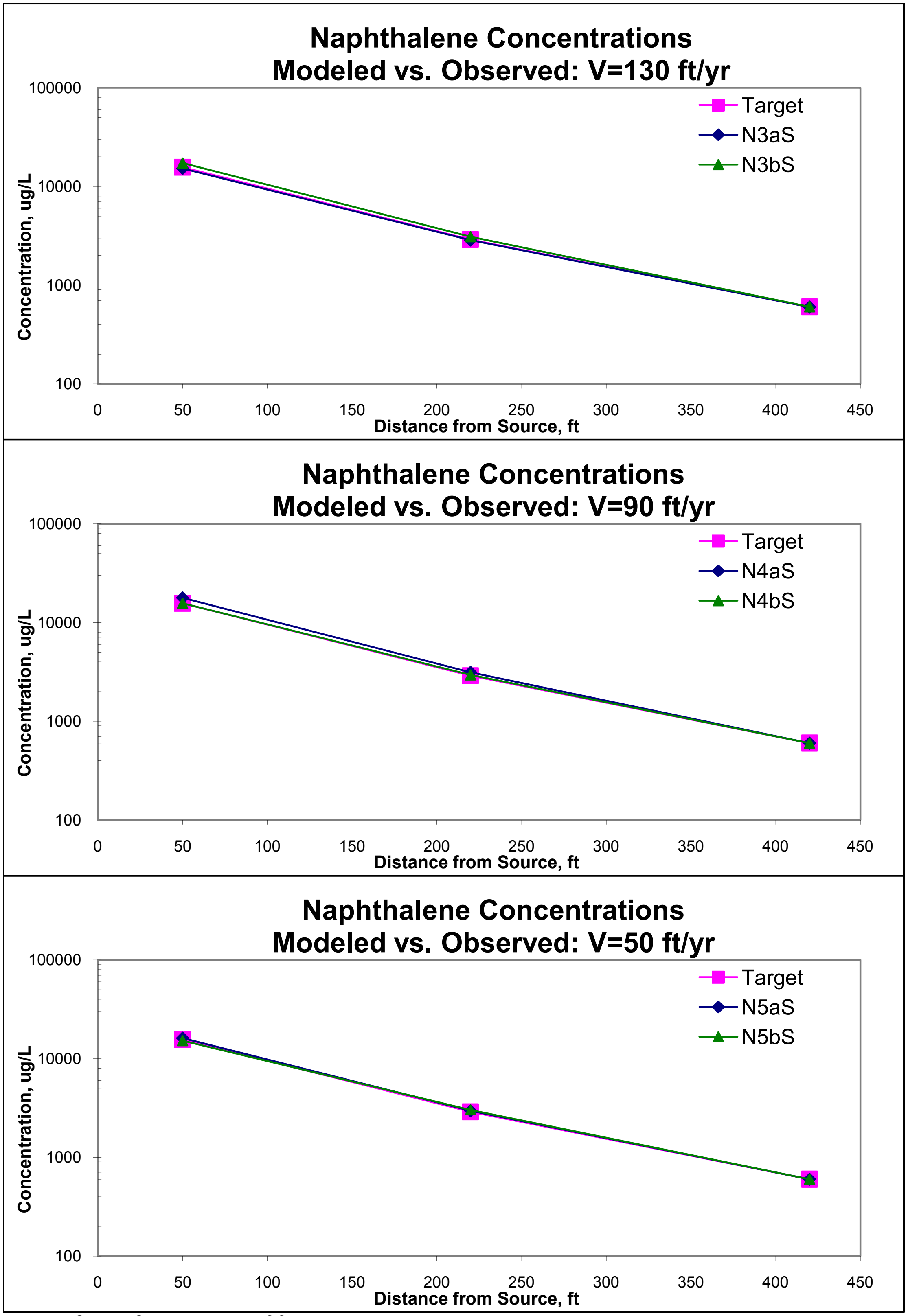

Figure C2-2. Comparison of final model predicted concentrations to calibration targets in model year 1998.

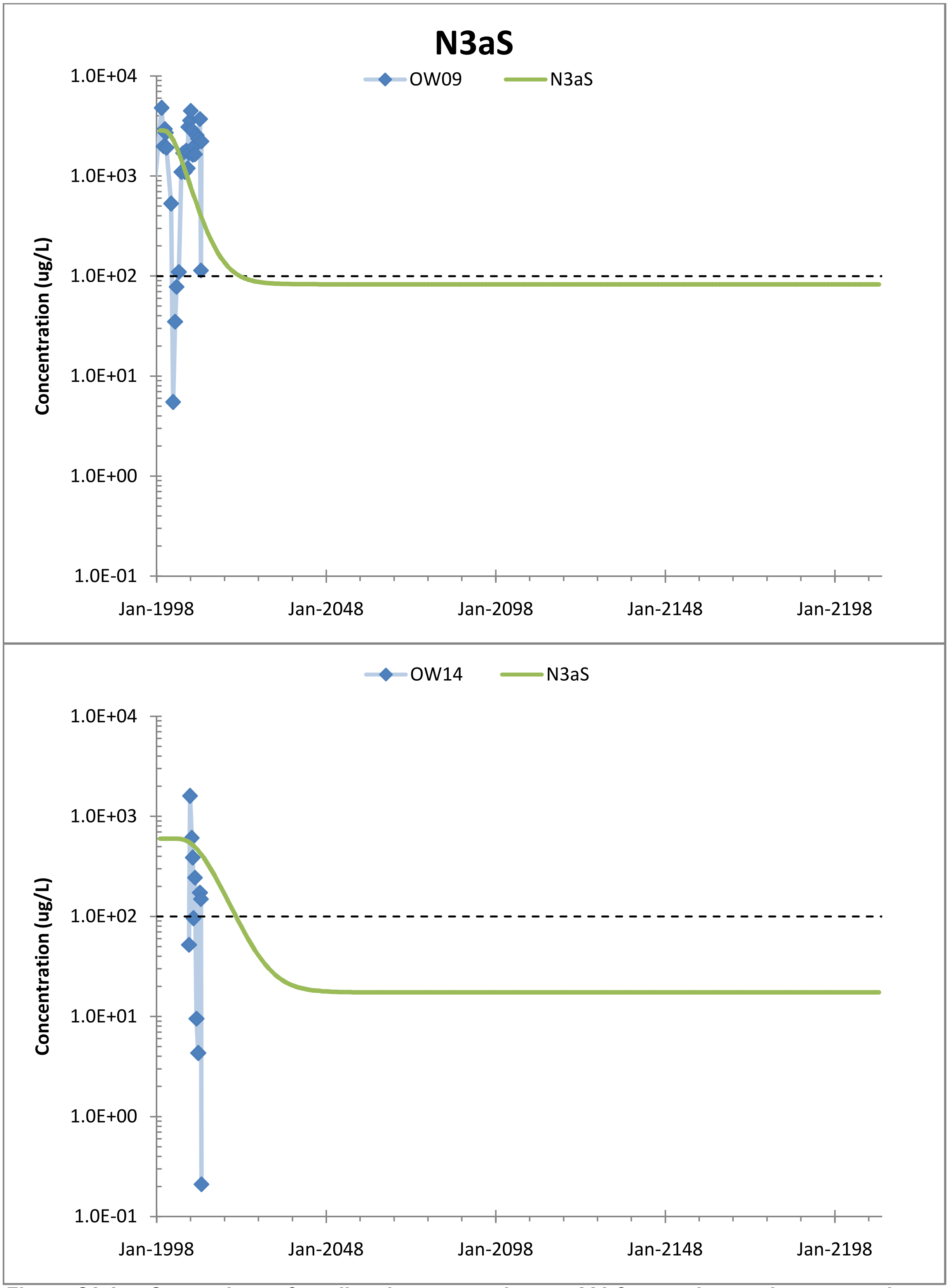

Figure C2-3a. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N3aS

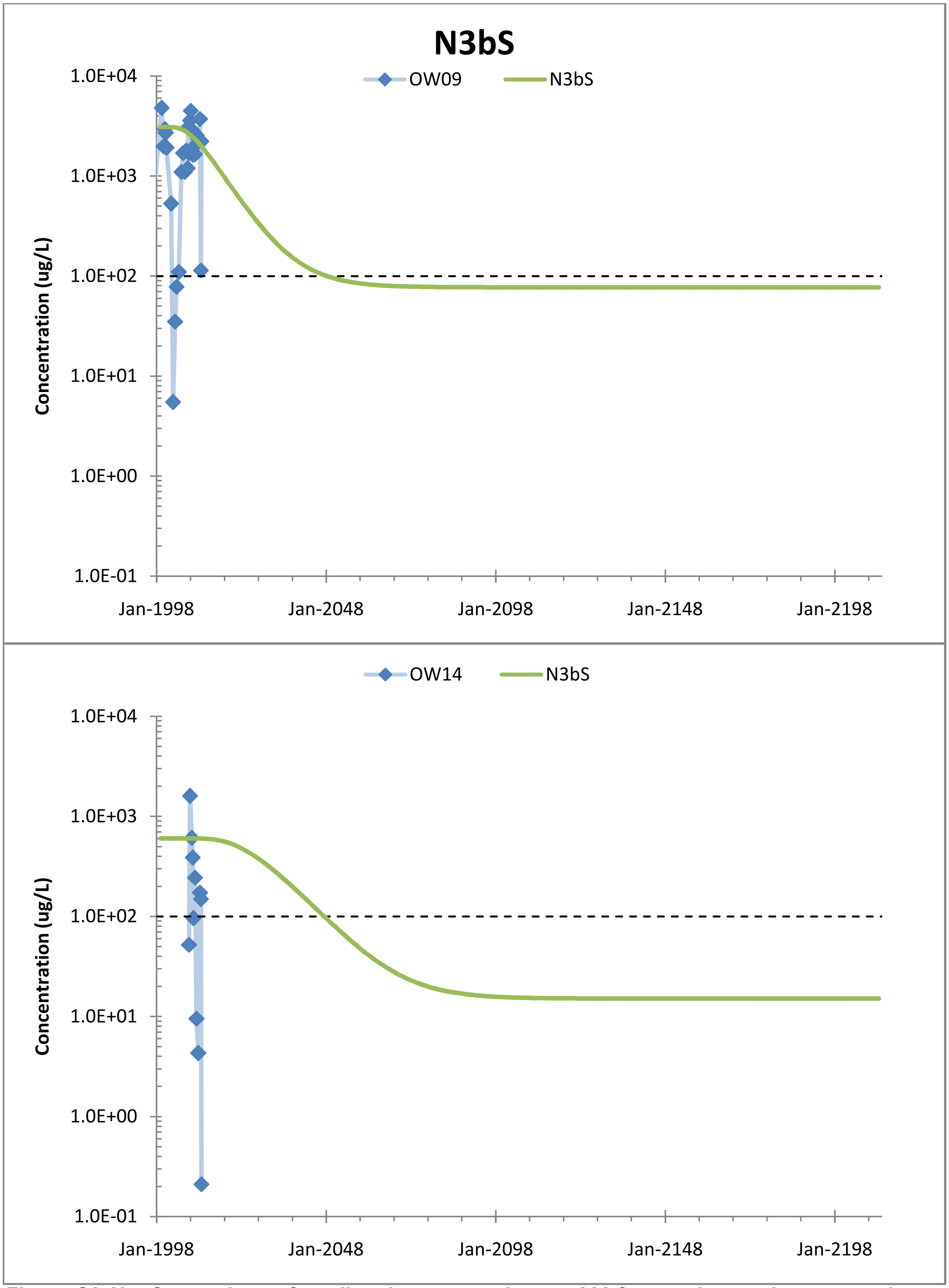

Figure C2-3b. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N3bS

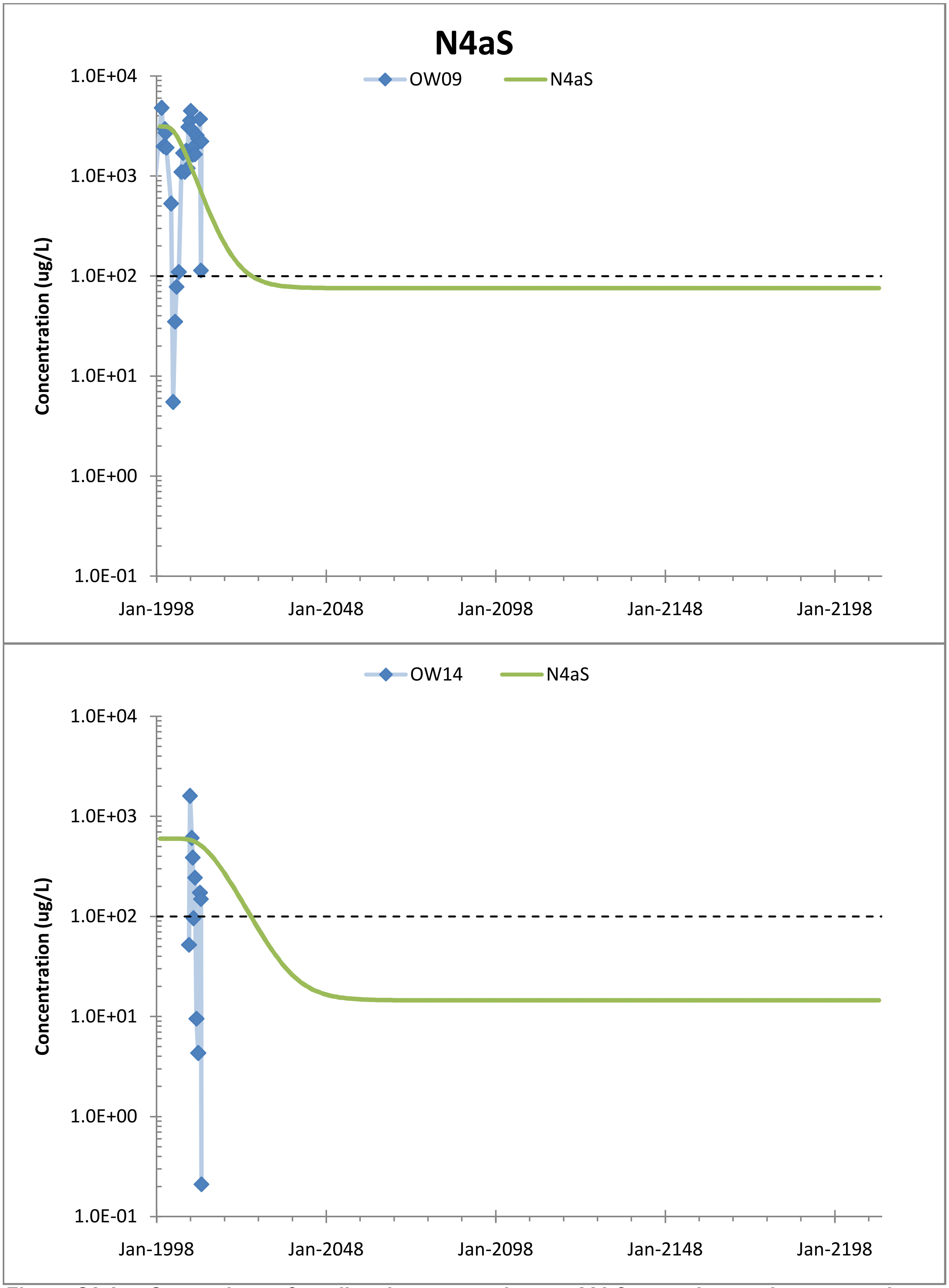

Figure C2-3c. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N4aS

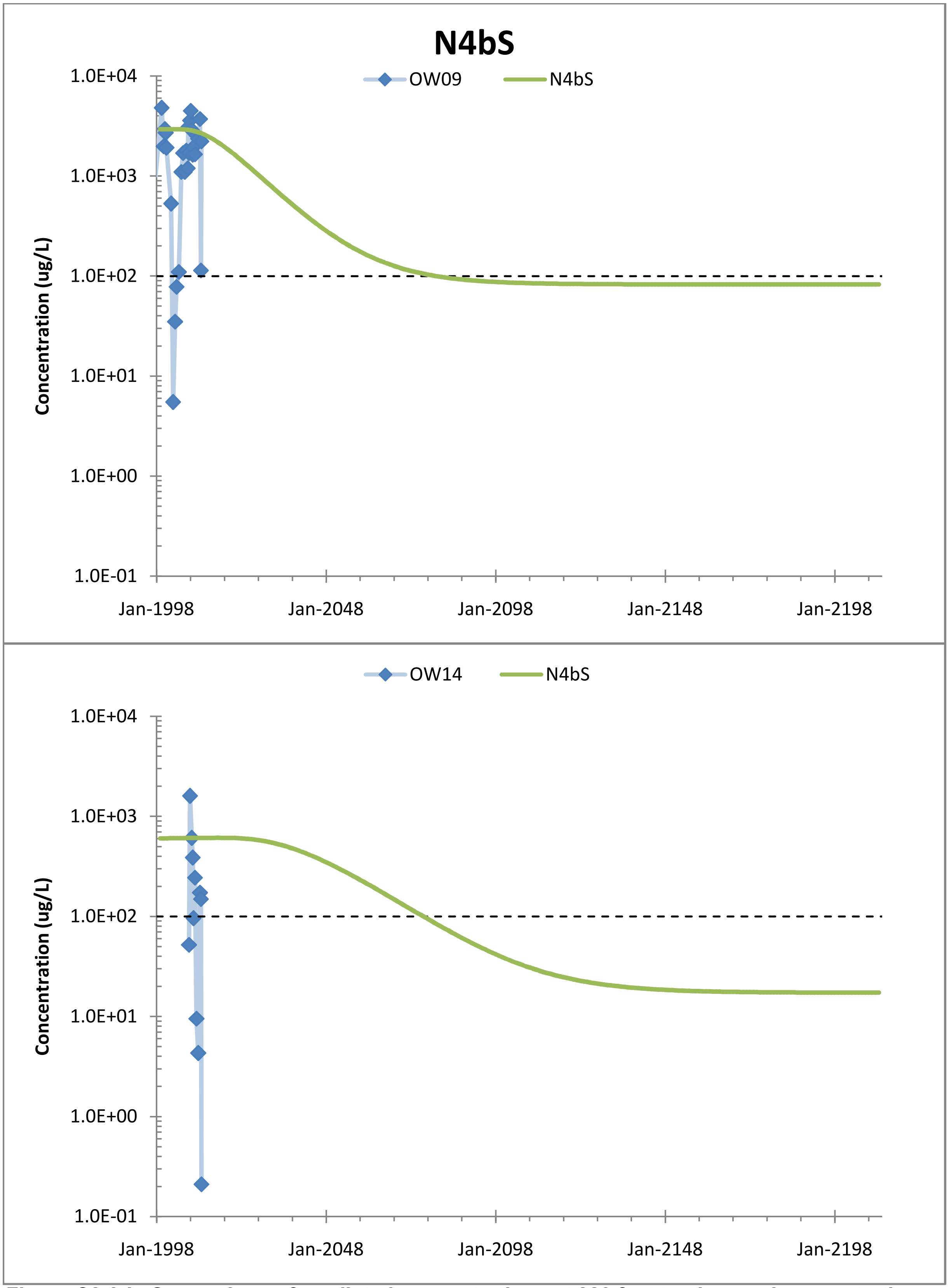

Figure C2-3d. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N4bS

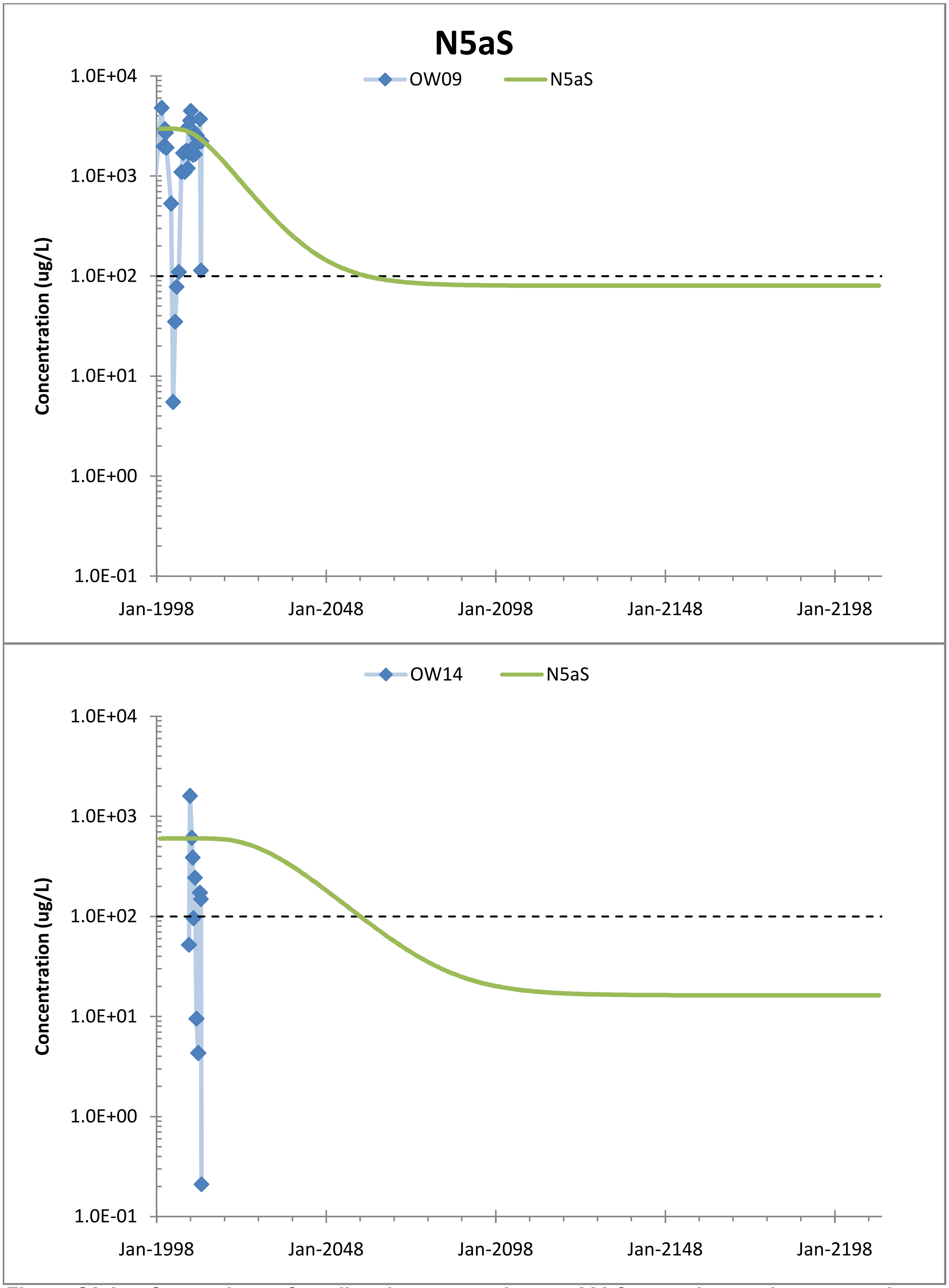

Figure C2-3e. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N5aS

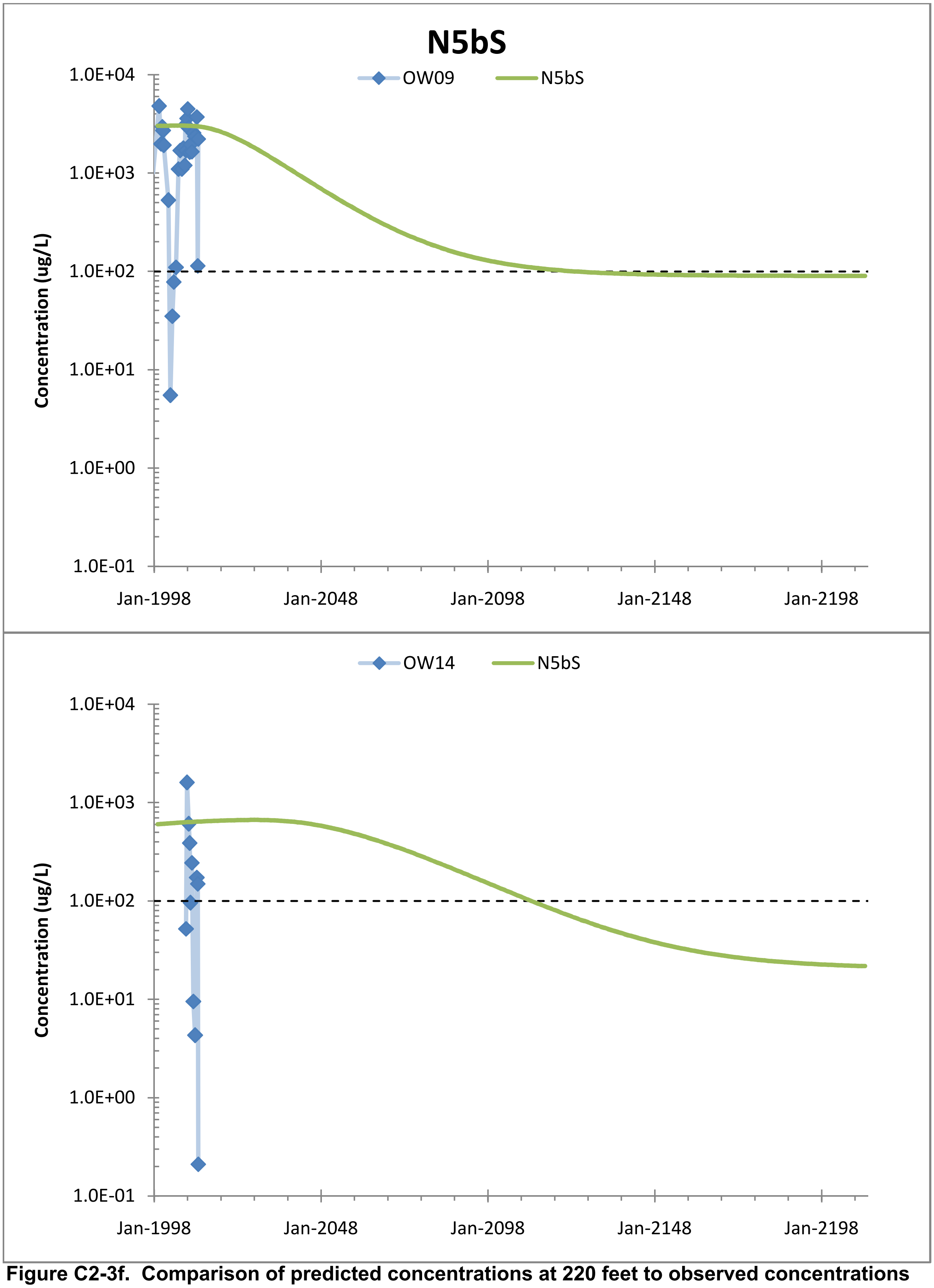

Figure C2-3f. Comparison of predicted concentrations at 220 feet to observed concentrations at OW9 (top) and OW14 (bottom) for final model scenario N5bS

APPENDIX D

TECHNOLOGY COST SHEETS

SOIL REMEDIAL OPTION S2 - Institutional Controls
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: JMK
DATE: 12/20/11

CONSTRUCTION AND CONSULTING CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-SUB-TOTAL
Construction and Consulting Capital Costs					$23,000
GIS Registry with WDNR (includes Soil Maintenance Plan	1	LS	$18,000	$18,000	
Legal Description	1	LS	$5,000	$5,000	
SUBTOTAL, CAPITAL COSTS					$23,000
25% Estimating Contingency					$5,800
TOTAL CAPITAL COSTS					**$28,800**
ANNUAL COSTS					$7,748
Engineered Barrier Maintenance and Monitoring (Asphalt)	76813	SF	0.06	$4,609	
Engineered Barrier Maintenance and Monitoring (Earthen)	156941	SF	0.02	$3,139	
SUBTOTAL, ANNUAL COSTS					$7,748
25% O&M Estimating Contingency					$1,900
TOTAL, ANNUAL COSTS					**$9,600**
Present Worth of Annual Costs over 30 Years, 5% Rate of Return					**$98,627**

ASSUMPTIONS
1. Above is a preliminary estimate and is subject to change.

SOIL REMEDIAL OPTION S3 - Excavation and Landfilling Former Slough
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: JMK
DATE: 12/20/11

CONSULTING CAPITAL COSTS					SUB-TOTAL
Consulting					
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation					$213,200
SUBTOTAL, CONSULTING CAPITAL COSTS					$213,200
25% Estimating Contingency					$53,300
TOTAL, CONSULTING CAPITAL COSTS					$266,500

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob.	1	LS	$50,000	$50,000	$50,000
Air Monitoring	9	Weeks	$6,250	$56,300	$56,300
Environmental Controls	1	LS	$20,000	$20,000	$20,000
Relocate Utilities					$62,000
Remove and Reroute Storm Sewer (includes management of storm water	1	LS	$62,000	$62,000	
Site Preparation					$48,200
Installation of Chain Link Fence	900	LF	$10.00	$9,000	
Erosion Controls/Tracking Pads	1	LS	$10,000	$10,000	
Material Management and Decon Pad	1	LS	$20,000	$20,000	
Demolition, Removal and Recycling of Asphalt Pavement	18,300	SF	$0.5	$9,200	
Temporary Shoring					$872,000
Shoring (680 LF x 32', for 16' deep excav, installation)	21,800	SF	$40	$872,000	
Excavation and Processing					$623,500
Excavate Soil & Debris	18,000	TONS	$6.00	$108,000	
Loading and Hauling Soil/Debris to Stockpile On-site for Reuse	10,100	TONS	$2.00	$20,200	
Loading and Hauling Soil/Debris to Landfill	7,900	TONS	$28.00	$221,200	
Landfill Disposal of Debris and Soil	7,900	TONS	$25.00	$197,500	
MGP Contact Water Management	1	LS	$40,000	$40,000	
Water treatment trailer (bag filter and granular activated carbon)	1	LS	$30,000	$30,000	
Water Disposal at POTW	2,200,000	GALS	$0.003	$6,600	
Backfilling					$242,500
Backfill, Place and Compact Stockpile Material	10,100	TONS	$5.00	$50,500	
Imported General Backfill, Place and Compact	12,800	TONS	$15.00	$192,000	
Restoration					$147,100
Installation of Storm Sewer	250	LF	$60.00	$15,000	
Import, place & compact base course (6-in. layer)	500	TON	$20.00	$10,000	
Topsoil and Seeding (4-in layer)	24	CY	$25.00	$600	
Concrete Curb Reconstruction	90	CY	$350.00	$31,500	
Asphalt Pavement Reconstruction	18,000	SF	$5.00	$90,000	
Construction Quality Control					$10,000
Compaction Testing	1	LS	$5,000	$5,000	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$2,131,600
25% Estimating Contingency					$532,900
TOTAL, CONSTRUCTION CAPITAL COSTS					$2,664,500

TOTAL CAPITAL COSTS	**$2,931,000**

ASSUMPTIONS
1. Assumes 10,850 yd^3 (18,300 SF x 16 ft deep) excavation at 1.65 tons : 1 yd^3 ~ 18,000 Tons
2. Assumes no foundations or large debris will require removal prior to installation of sheet piles or required demolition prior to disposal.
3. Assumes the storm sewer can be removed temporarily.
4. Shoring at perimeter of excavation limit ~ 680 LF of steel sheet piles.
5. Assumes 6,100 yd3 (18,300SF x top 9 ft deep) to be reused as backfill at 1.65 tons : 1y3 ~ 10,100 Tons
6. Asphalt pavement will be demolished and restored following construction.
8. Assume wastewater to be treated with bag filter and granular activated carbon.
9. Earthwork quantities are approximate and need to be verified during design.
10. Source of estimated costs: local contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
11. Above is a preliminary estimate only and will be revised during final design

GROUNDWATER REMEDIAL OPTION G2 - Institutional Controls
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: JMK
DATE: 12/20/11

CONSTRUCTION AND CONSULTING CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-SUB-TOTAL
Construction and Consulting Capital Costs					$28,000
GIS Registry with WDNR	1	LS	$23,000	$23,000	
Legal Description	1	LS	$5,000	$5,000	
SUBTOTAL, CAPITAL COSTS					$28,000
25% Estimating Contingency					$7,000
TOTAL CAPITAL COSTS					**$35,000**
ANNUAL COSTS					$0
SUBTOTAL, ANNUAL COSTS					$0
25% O&M Estimating Contingency					$0
TOTAL, ANNUAL COSTS					**$0**
Present Worth of Annual Costs over 30 Years, 5% Rate of Return					**$0**

ASSUMPTIONS
1. Above is a preliminary estimate and is subject to change.

GROUNDWATER REMEDIAL OPTION G3 - Monitoring Natural Attenuation (MNA)
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: JMK
DATE: 5/12/11

CONSTRUCTION AND CONSULTING CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-SUB-SUB-TOTAL
Groundwater Monitoring Plan for MNA	1	LS	$30,000	$30,000	$30,000
SUBTOTAL, CAPITAL COSTS					$30,000
25% Estimating Contingency					$7,500
TOTAL CAPITAL COSTS					**$37,500**
ANNUAL COSTS					$45,600
Project O&M Labor, Travel, Equipment	1	LS	$35,000	$35,000	
Analytical Costs - Spring	1	Rounds	$3,700	$3,700	
(33 wells in network plus 3 duplicate and one matrix spike/matrix spike duplicate; semi-annually)					
Analytical Costs - Fall					
(33 wells in network plus 3 duplicate and one matrix spike/matrix spike duplicate; semi-annually)	1	Rounds	$6,900	$6,900	
SUBTOTAL, ANNUAL COSTS					$45,600
25% O&M Estimating Contingency					$11,400
TOTAL, ANNUAL COSTS					**$57,000**
Present Worth of Annual Costs over 30 Years, 5% Rate of Return					**$876,230**

ASSUMPTIONS

1. Assumes 33 wells in monitoring network.
2. Assumes damaged wells can be repaired without replacement.
3. Does not include any well abandonment.
4. Assumes Spring laboratory analysis of benzene and PAH.
5. Assumes Fall laboratory analysis of benzene, PAH, alkalinity, nitrate and nitrite, methane, dissolved manganese, sulfate and
6. Field measured parameters include temperature, conductivity, turbidity, pH, ORP, and DO.
7. Above is a preliminary estimate and may be revised during final design.

GROUNDWATER REMEDIAL OPTION G4 - Extraction and Ex-Situ Treatment of Groundwater					
Feasibility Study Report			NRT PROJECT NO.: 1177		
Wisconsin Public Service			BY: HMS		CHKD BY: JMK
Former Manufactured Gas Plant Site - Stevens Point, WI			DATE: 12/20/11		

CONSULTING CAPITAL COSTS					SUB-TOTAL
Consulting					
Engineering Design, System Installation Oversight, Final System Documentation					$90,575
SUBTOTAL, CONSULTING CAPITAL COSTS					$90,600
25% Estimating Contingency					$22,700
TOTAL, CONSULTING CAPITAL COSTS					$113,300

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					$362,300
Mob./Demob.	1	LS	$35,000	$35,000	
Design/Testing	1	LS	$20,000	$20,000	
Extraction well installation	60	LF	$310	$18,600	
Trenching for GW transport piping	200	LF	$45	$9,000	
Horizontal directional boring for piping under road	200	LF	$331	$66,200	
System Enclosure	1	LS	$40,000	$40,000	
PLC Control System and Electrical	1	LS	$75,000	$75,000	
Groundwater Extraction Pumps	2	EACH	$14,000	$28,000	
Treatment System Components and Installation	1	LS	$35,000	$35,000	
Trenching and Piping for Discharge Sewer	100	LF	$50	$5,000	
Sewer connection fee	1	LS	$2,500	$2,500	
Install 3-phase Electrical Service	1	LS	$15,000	$15,000	
Startup/testing	1	LS	$5,000	$5,000	
Documentation Surveying	1	LS	$3,000	$3,000	
Restoration of Disturbed Areas	500	SY	$10	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$362,300
25% Construction Estimating Contingency					$90,600
TOTAL, CONSTRUCTION CAPITAL COSTS					$452,900
TOTAL CAPITAL COSTS					**$566,200**

ANNUAL COSTS					$172,100
Project O&M Labor, Travel, Equipment	1	LS	$31,000	$31,000	
O&M of Treatment System	1	LS	$6,000	$6,000	
Discharge Sampling Analytical (influent and effluent quarterly)	1	LS	$1,200	$1,200	
Discharge to Sanitary Sewer	26,300,000	GAL	$0.004	$105,200	
Electric / Heating / Light	1	LS	$25,000	$25,000	
Annual Analytical Costs (33 wells in network plus 3 duplicate and one matrix spike/matrix spike duplicate; Annually)	1	LS	$3,700	$3,700	
SUBTOTAL, ANNUAL COSTS					$172,100
25% O&M Estimating Contingency					$43,000
TOTAL, ANNUAL COSTS					**$215,100**
Present Worth of Annual Costs over 30 Years, 5% Rate of Return					**$3,306,614**

ASSUMPTIONS

1. Groundwater modeling will be required during design to verify well quantity, well depth, and pumping rates to achieve an acceptable drawdown and radius of influence.
2. Installation of two groundwater extraction wells to an average depth of 30 bgs.
3. Total pump rate of 50 gpm.
4. Groundwater to be treated using bag filter unit(s) and activated carbon or air stripper to meet City of Stevens Point sanitary discharge requirements.
5. Annual groundwater monitoring of 33 groundwater monitoring wells for benzene and PAHs
6. Trenching and restoration quantities are approximate and need to be verified during design.
7. Sources of estimated costs: local contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
8. Above is a preliminary estimate only and will be revised during final design.

River Sediment Remedial Option R2a - Sand Cover (Concentration > PEC)	
Feasibility Study Report	NRT PROJECT NO.: 1177
Wisconsin Public Service	BY: HMS CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, WI	DATE: 4/11/12

CONSULTING CAPITAL COSTS					SUB-TOTAL
Consulting					
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation					$80,000
SUBTOTAL, CONSULTING CAPITAL COSTS					$80,000
25% Estimating Contingency					$20,000
TOTAL, CONSULTING CAPITAL COSTS					$100,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$147,900	$147,900	$147,900
Site Preparation					$42,300
Access Roads (Install/Remove)	250	LF	$25	$6,300	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$30,000	$30,000	
Cover					$64,700
Spread/Place Cover Material - including verification of cap thickness	6	DAYS	$8,900	$53,400	
Six inch sand cover - sand, material and delivery	1,380	TONS	$8.20	$11,300	
Restoration					$9,900
Regrade existing topsoil, till, seed and mulch	2	ACRE	$6,600	$9,900	
Construction Quality Control					$5,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$270,400
25% Estimating Contingency					$67,600
TOTAL, CONSTRUCTION CAPITAL COSTS					$338,000

TOTAL CAPITAL COSTS	**$438,000**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

ASSUMPTIONS
1. Area to be capped is river area with contaminant concentrations greater than Probable Effect Concentration (PEC). Area is approximately 17,780 SF, or 0.4 acre.
2. Assume accessible boat launch is located near site.
3. Assume potable water is available near the site.
4. Assume no overhead or underground utilities in work area will obstruct work.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Cap quantity is approximate and needs to be verified during design.
7. Assume sand cover density 1.65 tons/CY.
8. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 0.46 acre area = 560 CY.
9. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
10. Above is a preliminary estimate only and will be revised during final design.

PEC = Probable Effects Concentration

River Sediment Remedial Option R2b - Sand Cover (Concentration > TEC)		
Feasibility Study Report	NRT PROJECT NO.: 1177	
Wisconsin Public Service	BY: HMS	CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, WI	DATE: 4/11/12	

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$80,000
SUBTOTAL, CONSULTING CAPITAL COSTS	$80,000
25% Estimating Contingency	$20,000
TOTAL, CONSULTING CAPITAL COSTS	$100,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$192,000	$192,000	$192,000
Site Preparation					$68,500
Access Roads (Install/Remove)	500	LF	$25	$12,500	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$50,000	$50,000	
Cover					$192,200
Spread/Place Cover Material - including verification of cap thickness	18	DAYS	$8,900	$160,200	
Six inch sand cover - sand, material and delivery	3,900	TONS	$8.20	$32,000	
Restoration					$16,500
Regrade existing topsoil, till, seed and mulch	2.5	ACRE	$6,600	$16,500	
Construction Quality Control					$7,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$7,000	$7,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$476,800
25% Estimating Contingency					$119,200
TOTAL, CONSTRUCTION CAPITAL COSTS					$596,000

TOTAL CAPITAL COSTS	**$696,000**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

ASSUMPTIONS

1. Area to be capped is river area with contaminant concentrations greater than Threshold Effects Concentration (TEC). Area is approximately 56,890 SF, or 1.3 acre.
2. Assume accessible boat launch is located near site.
3. Assume potable water is available near the site.
4. Assume no overhead or underground utilities in work area will obstruct work.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Cap quantity is approximate and needs to be verified during design.
7. Assume sand cover density 1.65 tons/CY.
8. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 56,890 SF or 1.3 acre area = 1,580 CY at 1.65 tons/CY.
9. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
10. Above is a preliminary estimate only and will be revised during final design.

TEC = Threshold Effects Concentration

River Sediment Remedial Option R3a - Sand Cover with 6-inch Armor (Concentration > PEC)					
Feasibility Study Report			NRT PROJECT NO.: 1177		
Wisconsin Public Service			BY: HMS	CHKD BY: KJB	
Former Manufactured Gas Plant Site - Stevens Point, WI			DATE: 4/11/12		

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$80,000
SUBTOTAL, CONSULTING CAPITAL COSTS	$80,000
25% Estimating Contingency	$20,000
TOTAL, CONSULTING CAPITAL COSTS	$100,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$147,900	$147,900	$147,900
Site Preparation					$42,300
Access Roads (Install/Remove)	250	LF	$25	$6,300	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$30,000	$30,000	
Cover					$95,800
Spread/Place Cover Material - including verification of cap thickness	6	DAYS	$8,900	$53,400	
Six inch sand cover - sand, material and delivery	1,380	TONS	$8.20	$11,300	
Armor 6-inches thick (material, delivery and placement)	17,780	SF	$1.75	$31,100	
Restoration					$9,900
Regrade existing topsoil, till, seed and mulch	2	ACRE	$6,600	$9,900	
Construction Quality Control					$5,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$301,500
25% Estimating Contingency					$75,400
TOTAL, CONSTRUCTION CAPITAL COSTS					$376,900

TOTAL CAPITAL COSTS	**$476,900**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

ASSUMPTIONS

1. Area to be capped is river area with contaminant concentrations greater than Probable Effect Concentration (PEC). Area is approximately 17,780 SF, or 0.4 acre.
2. Assume accessible boat launch is located near site.
3. Assume potable water is available near the site.
4. Assume no overhead or underground utilities in work area will obstruct work.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Cap quantity is approximate and needs to be verified during design.
7. Assume sand cover density 1.65 tons/CY.
8. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 0.46 acre area = 560 CY.
9. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
10. Above is a preliminary estimate only and will be revised during final design.

PEC = Probable Effects Concentration

River Sediment Remedial Option R3b - Sand Cover with 6-inch Armor (Concentration > TEC)					
Feasibility Study Report			NRT PROJECT NO.: 1177		
Wisconsin Public Service			BY: HMS		CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, WI			DATE: 4/11/12		

CONSULTING CAPITAL COSTS					SUB-TOTAL
Consulting					
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation					$80,000
SUBTOTAL, CONSULTING CAPITAL COSTS					$80,000
25% Estimating Contingency					$20,000
TOTAL, CONSULTING CAPITAL COSTS					$100,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$192,000	$192,000	$192,000
Site Preparation					$68,500
Access Roads (Install/Remove)	500	LF	$25	$12,500	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$50,000	$50,000	
Cover					$291,800
Spread/Place Cover Material - including verification of cap thickness	18	DAYS	$8,900	$160,200	
Six inch sand cover - sand, material and delivery	3,900	TONS	$8.20	$32,000	
Armor 6-inches thick (material, delivery and placement)	56,890	SF	$1.75	$99,600	
Restoration					$16,500
Regrade existing topsoil, till, seed and mulch	2.5	ACRE	$6,600	$16,500	
Construction Quality Control					$7,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$7,000	$7,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$576,400
25% Estimating Contingency					$144,100
TOTAL, CONSTRUCTION CAPITAL COSTS					$720,500

TOTAL CAPITAL COSTS	**$820,500**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

ASSUMPTIONS

1. Area to be capped is river area with contaminant concentrations greater than Threshold Effect Concentration (TEC). Area is approximately 56,890 SF, or 1.3 acre.
2. Assume accessible boat launch is located near site.
3. Assume potable water is available near the site.
4. Assume no overhead or underground utilities in work area will obstruct work.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Cap quantity is approximate and needs to be verified during design.
7. Assume sand cover density 1.65 tons/CY.
8. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 56,890 SF or 1.3 acre area = 1,580 CY at 1.65 tons/CY.
9. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
10. Above is a preliminary estimate only and will be revised during final design.

TEC = Threshold Effects Concentration

River Sediment Remedial Option R4a - Dredge (Concentration > PEC) and Sand Cover (Concentration > TEC)	
Feasibility Study Report	NRT PROJECT NO.: 1177
Wisconsin Public Service	BY: HMS CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, WI	DATE: 4/11/12

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$160,000
SUBTOTAL, CONSULTING CAPITAL COSTS	$160,000
25% Estimating Contingency	$40,000
TOTAL, CONSULTING CAPITAL COSTS	$200,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, etc.	1	LS	$300,000	$300,000	$300,000
Site Preparation					$127,600
Access Roads (Install/Remove)	500	LF	$25.00	$12,500	
Erosion Controls/Fencing	1	LS	$10,000	$10,000	
Tracking pads for park	1	LS	$5,000	$5,000	
Water treatment system (mob/demob, setup, maintain)	1	LS	$18,500	$18,500	
Drainage pad - (install/remove, maintenance)	1	LS	$21,000	$21,000	
Wastewater discharge piping to River (install/remove	150	LF	$4	$600	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$50,000	$50,000	
Treatability Study for amending dredged material for drying	1	LS	$10,000	$10,000	
Dredging					$283,400
Dredging	2,080	TONS	$56.00	$116,500	
Dewatering and water treatment	143,000	GALLONS	$0.05	$7,200	
Lime Kiln Dust (LKD) for stabilization, including delivery	210	TONS	$180.00	$37,800	
Transportation to landfill	2,300	TONS	$28.00	$64,400	
Disposal of dredge spoils	2,300	TONS	$25.00	$57,500	
Cover					$192,200
Spread/Place Cover Material - including verification of cap thickness	18	DAYS	$8,900	$160,200	
Six inch sand cover - sand, material and delivery	3,900	TONS	$8.20	$32,000	
Restoration					$16,500
Regrade existing topsoil, till, seed and mulch	2.5	ACRE	$6,600	$16,500	
Construction Quality Control					$89,400
Disposal sample for landfill acceptance	1	LS	$1,100	$1,100	
Borrow pit sample for cap sand	1	LS	$550	$600	
Wastewater sampling	7	SAMPLE	$550	$3,900	
Monitoring and controls at drainage pad and load-out area	2	WEEK	$20,000	$40,000	
Air Monitoring	5	WEEK	$6,750	$33,800	
Documentation Survey	1	LS	$10,000	$10,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$1,009,100
25% Estimating Contingency					$252,300
TOTAL, CONSTRUCTION CAPITAL COSTS					$1,261,400

TOTAL CAPITAL COSTS	**$1,461,400**

Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

River Sediment Remedial Option R4a - Dredge (Concentration > PEC) and Sand Cover (Concentration > TEC)		
Feasibility Study Report	NRT PROJECT NO.: 1177	
Wisconsin Public Service	BY: HMS	CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, W	DATE: 4/11/12	

ASSUMPTIONS

1. Area to be dredged with contaminant concentrations greater than Probable Effect Concentration (PEC). Area is divided into three subareas (A, B and C). Area A dredge is approximately 3,250 SF and 5 feet deep, Area B dredge is approximately 2,440 SF and 3 feet deep, and Area C is approximately 10,480 SF and 1 ft deep (Total 16,170 SF or 0.4 acre); volume to be dredged is approximately 1,260 CY at 1.65 tons/CY = 2,080 tons
2. Assume 1,260 CY of sand (wet) dredged at 1.65 tons/CY for disposal (including dewatering and amendment) = 2,300 Tons
3. Assume sediments are 50% water, which will be collected on drainage pad. Approximately 130,000 gallons.
4. 10% contingency (for rain, etc) added to total wastewater volume for treatment and disposal.
5. Assume accessible boat launch is located near site.
6. Assume potable water is available near the site.
7. Assume no overhead or underground utilities in work area will obstruct work.
8. Drainage pad to be constructed of 30-mil liner, geotextile fabric, 6-inches crushed stone, and earthen berm.
9. Access roads to be constructed of geotextile fabric and 6-8 inches crushed stone.
10. Sediment quantities are approximate and need to be verified during design.
11. Dredge spoils can be sufficiently conditioned for disposal with 10% Lime Kiln Dust (10% x 2,080 tons = 210 tons LKD).
12. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads, support zone and drainage pad).
13. Sand cover quantity is approximate and needs to be verified during design.
14. Assume sand cover density 1.65 tons/CY.
15. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 56,890 SF or 1.3 acre area = 1,580 CY at 1.65 tons/CY.
16. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
17. Above is a preliminary estimate only and will be revised during final design.

PEC = Probable Effects Concentration
TEC = Threshold Effects Concentration

River Sediment Remedial Option R4b - Dredge and Sand Cover (Concentration > TEC)	
Feasibility Study Report	NRT PROJECT NO.: 1177
Wisconsin Public Service	BY: HMS CHKD BY: KJB
Former Manufactured Gas Plant Site - Stevens Point, WI	DATE: 4/11/12

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$160,000
SUBTOTAL, CONSULTING CAPITAL COSTS	$160,000
25% Estimating Contingency	$40,000
TOTAL, CONSULTING CAPITAL COSTS	$200,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including barge-mounted excavator for spreading, support equipment, construction of river-bank work platform, H&S, work plan, utility clearance, etc.	1	LS	$400,000	$400,000	$400,000
Site Preparation					$143,100
Access Roads (Install/Remove)	500	LF	$25.00	$12,500	
Erosion Controls/Fencing	1	LS	$10,000	$10,000	
Tracking pads for park	1	LS	$5,000	$5,000	
Water treatment system (mob/demob, setup, maintain)	1	LS	$34,000	$34,000	
Drainage pad - (install/remove, maintenance)	1	LS	$21,000	$21,000	
Wastewater discharge piping to River (install/remove)	150	LF	$4	$600	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$50,000	$50,000	
Treatability Study for amending dredged material for drying	1	LS	$10,000	$10,000	
Dredging					$774,200
Dredging	5,710	TONS	$56.00	$319,800	
Dewatering and water treatment	380,000	GALLONS	$0.05	$19,000	
Lime Kiln Dust (LKD) for stabilization, including delivery	570	TONS	$180.00	$102,600	
Transportation to landfill	6,280	TONS	$28.00	$175,800	
Disposal of dredge spoils	6,280	TONS	$25.00	$157,000	
Cover					$192,200
Spread/Place Cover Material - including verification of cap thickness	18	DAYS	$8,900	$160,200	
Six inch sand cover - sand, material and delivery	3,900	TONS	$8.20	$32,000	
Restoration					$16,500
Regrade existing topsoil, till, seed and mulch	2.5	ACRE	$6,600	$16,500	
Construction Quality Control					$149,500
Disposal sample for landfill acceptance	1	LS	$1,100	$1,100	
Borrow pit sample for cap sand	1	LS	$550	$600	
Wastewater sampling	19	SAMPLE	$550	$10,500	
Monitoring and controls at drainage pad and load-out area	4	WEEK	$20,000	$80,000	
Air Monitoring	7	WEEK	$6,750	$47,300	
Documentation Survey	1	LS	$10,000	$10,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$1,675,500
25% Estimating Contingency					$418,900
TOTAL, CONSTRUCTION CAPITAL COSTS					$2,094,400

TOTAL CAPITAL COSTS	**$2,294,400**

Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return	**$0**

River Sediment Remedial Option R4b - Dredge and Sand Cover (Concentration > TEC)
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: KJB
DATE: 4/11/12

ASSUMPTIONS

1. Area to be dredged with contaminant concentrations greater than Probable Effect Concentration (PEC). Area is divided into three subareas (A, B and C). Area A dredge is approximately 3,250 SF and 6 feet deep, Area B dredge is approximately 2,440 SF and 5 feet deep, Area C is approximately 10,480 SF and 2 ft deep, Area outside PEC area is 40,720sf (1.3ac-0.4ac=0.9ac) and 1 ft deep (Total 56,890 SF or 1.3 acre); volume to be dredged is approximately 3,460 CY at 1.65 tons/CY = 5,710 tons.
2. Assume 3,460 CY of sand (wet) dredged at 1.65 tons/CY for disposal (including dewatering and amendment) = 6,280 Tons
3. Assume sediments are 50% water, which will be collected on drainage pad. Approximately 350,000 gallons.
4. 10% contingency (for rain, etc) added to total wastewater volume for treatment and disposal.
5. Assume accessible boat launch is located near site.
6. Assume potable water is available near the site.
7. Assume no overhead or underground utilities in work area will obstruct work.
8. Drainage pad to be constructed of 30-mil liner, geotextile fabric, 6-inches crushed stone, and earthen berm.
9. Access roads to be constructed of geotextile fabric and 6-8 inches crushed stone.
10. Sediment quantities are approximate and need to be verified during design.
11. Dredge spoils can be sufficiently conditioned for disposal with 10% Lime Kiln Dust (10% x 5,710 tons = 570 tons LKD).
12. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads, support zone and drainage pad).
13. Sand cover quantity is approximate and needs to be verified during design.
14. Assume sand cover density 1.65 tons/CY.
15. Total volume of sand based on 9 inches (6 inch minimum with 3 inch overplacement) over 56,890 SF or 1.3 acre area = 1,580 CY at 1.65 tons/CY.
16. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
17. Above is a preliminary estimate only and will be revised during final design.

PEC = Probable Effects Concentration
TEC = Threshold Effects Concentration

Pond Sediment Remedial Option 2 - Capping (6-inch Sand Layer)
Feasibility Study Report
Wisconsin Public Service
Former Manufactured Gas Plant Site - Stevens Point, WI

NRT PROJECT NO.: 1177
BY: HMS CHKD BY: JMK
DATE: 12/20/11

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$60,000
SUBTOTAL, CONSULTING CAPITAL COSTS	$60,000
25% Estimating Contingency	$15,000
TOTAL, CONSULTING CAPITAL COSTS	$75,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including long-stick excavator for spreading, support equipment, power supply, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$34,000	$34,000	$34,000
Site Preparation					$19,900
Access Roads (Install/Remove)	250	LF	$25.00	$6,300	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Tracking pads for park	1	LS	$5,000	$5,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$2,600	$2,600	
Cover					$20,100
Spread/Place Cover Material - sand	2	DAYS	$7,600.00	$15,200	
Six inch sand cover - sand, material and delivery	600	TONS	$8.20	$4,900	
Restoration					$6,200
Regrade existing topsoil, till, seed and mulch	2	ACRE	$4,100.00	$6,200	
Construction Quality Control					$5,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$85,800
25% Estimating Contingency					$21,500
TOTAL, CONSTRUCTION CAPITAL COSTS					$107,300
TOTAL CAPITAL COSTS					**$182,300**
EVENT COSTS (First 3 Years and Every 5 Years thereafter)					$5,500
Cap Monitoring: Labor, Reporting, Travel, Equipment	1	EVENT	$5,500	$5,500	
SUBTOTAL, EVENT COSTS					$5,500
25% O&M Estimating Contingency					$1,400
TOTAL, ANNUAL COSTS					**$6,900**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return					**$33,994**

ASSUMPTIONS
1. Above is a preliminary estimate only and will be revised during final design.
2. Assume potable water is available near the site.
3. Assume no overhead or underground utilities in work area will obstruct work.
4. Access roads to be constructed of geotextile fabric and 6-8 inches crushed stone.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Due to inability to grade pond bottom, enough sand for 9-inch layer, will be deployed to ensure adequate cover.
7. Cap quantity is approximate and needs to be verified during design.
8. Assume 9-inch sand cover over 0.2 acre pond = 240 CY.
9. Assume sand cover density 1.65 tons/CY.
10. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.

Pond Sediment Remedial Option 3 - Capping (6-inch Sand Layer Amended with Activated Carbon)					
Feasibility Study Report				NRT PROJECT NO.: 1177	
Wisconsin Public Service				BY: HMS	CHKD BY: JMK
Former Manufactured Gas Plant Site - Stevens Point, WI				DATE: 12/20/11	

CONSULTING CAPITAL COSTS					SUB-TOTAL
Consulting					
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation					$60,000
SUBTOTAL, CONSULTING CAPITAL COSTS					$60,000
25% Estimating Contingency					$15,000
TOTAL, CONSULTING CAPITAL COSTS					$75,000

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including long-stick excavator for spreading, support equipment, power supply, H&S, work plan, utility clearance, contractor bond, etc	1	LS	$34,000	$34,000	$34,000
Site Preparation					$19,900
Access Roads (Install/Remove)	250	LF	$25.00	$6,300	
Erosion Controls/Tracking Pads	1	LS	$6,000	$6,000	
Tracking pads for park	1	LS	$5,000	$5,000	
Turbidity Curtain (Install, Remove and Maintain)	1	LS	$2,600	$2,600	
Cover					$32,300
Spread/Place Cover Material - sand	2	DAYS	$7,600	$15,200	
Six inch sand cover - sand, material and delivery	600	TONS	$8.20	$4,900	
Activated Carbon (material, delivery, and placement)	8,710	SF	$1.40	$12,200	
Restoration					$6,200
Regrade existing topsoil, till, seed and mulch	2	ACRE	$4,100.00	$6,200	
Construction Quality Control					$5,600
Borrow pit sample for cap sand	1	LS	$550	$600	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$98,000
25% Estimating Contingency					$24,500
TOTAL, CONSTRUCTION CAPITAL COSTS					$122,500
TOTAL CAPITAL COSTS					**$197,500**
EVENT COSTS (First 3 Years and Every 5 Years thereafter)					$5,500
Cap Monitoring: Labor, Reporting, Travel, Equipment	1	EVENT	$5,500	$5,500	
SUBTOTAL, EVENT COSTS					$5,500
25% O&M Estimating Contingency					$1,400
TOTAL, ANNUAL COSTS					**$6,900**
Present Worth of Event Costs over 30 Years (8 Events), 5% Rate of Return					**$33,994**

ASSUMPTIONS

1. Above is a preliminary estimate only and will be revised during final design.
2. Assume potable water is available near the site.
3. Assume no overhead or underground utilities in work area will obstruct work.
4. Access roads to be constructed of geotextile fabric and 6-8 inches crushed stone.
5. Some cost savings could be realized if river work is performed in conjunction with pond work (use same haul roads and support zone).
6. Due to inability to grade pond bottom, enough sand for 9-inch layer, will be deployed to ensure adequate cover.
7. Cap quantity is approximate and needs to be verified during design.
8. Assume 9-inch sand cover with 6 lbs/sy of activated carbon over 0.2 acre pond = 240 CY.
9. Assume sand cover density 1.65 tons/CY.
10. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.

Pond Sediment Remedial Option 4 - Dredging and Landfill Disposal and 6-inch Sand Cover	
Feasibility Study Report	NRT PROJECT NO.: 1177
Wisconsin Public Service	BY: HMS CHKD BY: JMK
Former Manufactured Gas Plant Site - Stevens Point, WI	DATE: 12/20/11

CONSULTING CAPITAL COSTS	SUB-TOTAL
Consulting	
Engineering Design/Permitting, Plans& Specifications, Bid Procurement, Construction Oversight & Documentation	$105,800
SUBTOTAL, CONSULTING CAPITAL COSTS	$105,800
25% Estimating Contingency	$26,500
TOTAL, CONSULTING CAPITAL COSTS	$132,300

CONSTRUCTION CAPITAL COSTS	QUANTITY	UNIT	UNIT COST	ITEM COST	SUB-TOTAL
Construction					
Mob./Demob., including long-stick excavator and water treatment system with	1	LS	$50,000	$50,000	$50,000
Site Preparation					$70,000
Access Roads (Install/Remove)	250	LF	$25.00	$6,300	
Erosion Controls/Fencing	1	LS	$6,000	$6,000	
Tracking pads for park	1	LS	$5,000	$5,000	
Water treatment system (mob/demob, setup, maintain)	1	LS	$18,500	$18,500	
Drainage pad - (install/remove, maintenance)	1	LS	$21,000	$21,000	
Wastewater discharge piping to River (install/remove)	150	LF	$4	$600	
Turbidity curtain to block pond/river conduit (install/remove, maintain)	1	LS	$2,600	$2,600	
Treatability Study for amending dredged material for drying	1	LS	$10,000	$10,000	
Dredging					$200,000
Dredging	7	DAYS	$6,500.00	$45,500	
Dewatering and water treatment	231,000	GALLONS	$0.05	$11,600	
Lime Kiln Dust (LKD) for stabilization, including delivery	190	TONS	$180.00	$34,200	
Transportation to landfill	2,050	TONS	$28.00	$57,400	
Disposal of dredge spoils	2,050	TONS	$25.00	$51,300	
Cover					$20,100
Spread/Place Cover Material - sand	2	DAYS	$7,600.00	$15,200	
Six inch sand layer - sand, material and delivery	600	TONS	$8.20	$4,900	
Restoration					$6,200
Regrade existing topsoil, till, seed and mulch	2	ACRE	$4,100.00	$6,200	
Construction Quality Control					$77,000
Disposal sample for landfill acceptance	1	LS	$1,100	$1,100	
Borrow pit sample for cap sand	1	LS	$550	$600	
Wastewater sampling	6	SAMPLE	$550	$3,300	
Monitoring and controls at drainage pad and load-out area	2	WEEK	$20,000	$40,000	
Air Monitoring	4	WEEK	$6,750	$27,000	
Documentation Survey	1	LS	$5,000	$5,000	
SUBTOTAL, CONSTRUCTION CAPITAL COSTS					$423,300
25% Estimating Contingency					$105,800
TOTAL, CONSTRUCTION CAPITAL COSTS					$529,100

TOTAL CAPITAL COSTS	**$661,400**

ASSUMPTIONS

1. Pond is to be dredged to a depth of approximately 3.5 feet. Pond area is 0.2 acre; volume to be dredged is approximately 1,130 CY.
2. Assume 1,130 CY of silty clay dredged at 1.65 tons/CY for disposal (including dewatering and amendment) = 2,050 tons.
3. Assume 30% of pond water volume will be removed during wet, mechanical excavation. Approximately 60,000 gallons.
4. Assume sediments are 65% water, which will be collected on drainage pad. Approximately 150,000 gallons.
5. 10% contingency (for rain, etc) added to total wastewater volume for treatment and disposal.
6. Drainage pad to be constructed of 30-mil liner, geotextile fabric, 6 inches crushed stone, and earthen berm.
7. Access roads to be constructed of geotextile fabric and 6-8 inches crushed stone.
8. Assume wastewater to be treated with bag filter and granular activated carbon. No carbon change out expected.
9. Assume treated wastewater to discharged to river.
10. Sediment quantities are approximate and need to be verified during design.
11. Dredge spoils can be sufficiently conditioned for disposal with 10% Lime Kiln Dust (10% x 1,860 tons = 190 tons LKD).
12. Assume use of type II Siltmaster turbidity curtain.
13. Due to inability to grade pond bottom, enough sand for 9-inch layer, will be deployed to ensure adequate cover.
14. Assume 9-inch sand cover over 0.2 acre pond = 240 CY.
15. Assume sand cover density 1.65 tons/CY.
16. Source of estimated costs: contractor estimates, previous MGP site construction, and RS Means Site Work & Landscape Cost Data.
17. Above is a preliminary estimate only and will be revised during final design.