

Operation and Maintenance Report No. 47

**N.W. Mauthe Superfund Site
Appleton, Wisconsin**

June 4, 2013

Terracon Project No. 58117057

WDNR BRRTS No. 02-45-000127



Prepared for:

Wisconsin Department of Natural Resources
Oshkosh, Wisconsin

Prepared by:

Terracon Consultants, Inc.
Franklin, Wisconsin

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June 4, 2013



Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
625 East County Road Y, Suite 700
Oshkosh, Wisconsin 54901-9731

Attn: Ms. Jennifer Borski

Re: Operation and Maintenance Report No. 47
N.W. Mauthe Superfund Site
725 South Outagamie Street
Appleton, Wisconsin
WDNR BRRTS No. 02-45-000127
Terracon Project No. 58117057

Dear Ms. Borski:

Terracon Consultants, Inc. (Terracon) has prepared this Operation and Maintenance Report to summarize the activities that took place at the above-referenced site from October 1, 2012 through April 30, 2013. The reporting period was extended from March 31 to April 30, 2013, due to heavy snow cover, which delayed the scheduled March groundwater sampling event. The report documents system operations and site conditions through the reporting period and recommends continued system operation without change.

Sincerely,
Terracon Consultants, Inc.

Nicholas J. Heim
Staff Geologist

For

Scott A. Hodgson
Scott A. Hodgson, P.G.
Senior Project Manager

NJH/SAH/BRS/BP:njh/N:\Projects\2011\58117057\Working Files\DRAFTS (Proposal-Reports-Communications)\Semi Annual reports\O_M No. 47 April 2013\58117057#47.final.060413.docx

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OPERATION AND MAINTENANCE REPORT NO. 47

N.W. MAUTHE SUPERFUND SITE 725 SOUTH OUTAGAMIE STREET APPLETON, WISCONSIN

June 4, 2012

Terracon Project No. 58117057

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) was retained by the Wisconsin Department of Natural Resources (WDNR) to perform remedial system operation and maintenance services at the above-referenced site. The WDNR project contact is Ms. Jennifer Borski, Oshkosh Service Center.

2.0 BACKGROUND

2.1 Site Location

The N.W. Mauthe (Mauthe) property is located at 725 South Outagamie Street, Appleton, Wisconsin 54914-5072. The project is located in the NE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 34, T21N, R17E, Outagamie County (Figure 1 – Site Location Map, Appendix A).

2.2 Site History

The Mauthe site is a former electroplating facility. The facility consisted of a zinc building and a chromium building. Zinc, cadmium, copper, and possibly silver were electroplated in the zinc building from 1978 to 1987. Hard chromium plating was conducted in the chromium building from 1960 to 1976. In 1982, the WDNR received a report that yellowish-green water was observed south of the chromium building. Apparently, for several years plating solutions and waste solvents had leaked from holding vats and tanks, and sump pumps allegedly discharged plating tank solutions onto the ground outside the facility.

The WDNR began an investigation of the site in April 1982. A shallow groundwater collection system was installed parallel to the railroad tracks in May 1982, where groundwater and surface water were collected for two years. The Mauthe site was added to the National Priorities List in 1989.

From November 1991 to May 1992, CH2M HILL performed a Remedial Investigation (RI) for the WDNR. The RI showed the greatest concentrations of soil and groundwater contamination in the area around the zinc and chromium buildings. The chemicals most often detected above

background levels or state standards included total chromium, hexavalent chromium, zinc, cadmium, cyanide, trichloroethene, 1,1,1-trichloroethane, 1,1-dichloroethene, and toluene. Subsurface soil contamination was detected up to 25 feet deep near the former buildings. Groundwater contamination extended over most of the block bordered by Melvin, Outagamie, and Second Streets.

CH2M HILL conducted a feasibility study for the WDNR. A Record of Decision (ROD) was signed in March 1994. Remedial design/remedial action activities took place at the Mauthe site in a phased approach. Phase I, which took place in 1995, included the following:

- Demolition and removal of the buildings on the Mauthe property.
- Excavation and off-site treatment of soils with a total chromium concentration of greater than 500 milligrams per kilogram (mg/kg).
- Backfilling of the excavation with clean soils, capping the site with 2-feet of clay and topsoil, and the establishment of vegetative cover.
- Installation of groundwater collection trenches and construction and operation of a groundwater treatment facility to contain and/or control groundwater contamination with ultimate compliance with groundwater Applicable or Relevant and Appropriate Requirements (ARARs).
- Improvement or installation of foundation drain systems and cleaning, painting or sealing of basement walls and floors, as needed, for homes or businesses in the area of the site, to prevent seepage of contaminated water into the buildings.

Phase II, which took place in 1996, involved the construction of a groundwater treatment system, which began operation in February 1997.

Midwest Contract Operations, Inc. (MCO) began operating the groundwater treatment system in February 1997. CH2M Hill, the site engineer and project manager for the United States Environmental Protection Agency (EPA), retained responsibility for the overall site operations and the groundwater monitoring wells associated with the treatment system.

In October 1998, after the first year of operation and maintenance of the remediation system, the WDNR assumed the responsibility from the EPA for all operation and maintenance of the site. MCO was retained by the WDNR for the operation and maintenance of the groundwater treatment system, including the groundwater monitoring wells.

In January 2005, the WDNR requested OMNNI Associates, Inc. (OMNNI) provide an evaluation of the groundwater collection and treatment system at the Mauthe site. The installation of four piezometers (PZ-5, PZ-6, PZ-7, and PZ-8) was part of the evaluation to understand the extent of contaminants in the soil and groundwater. OMNNI installed five additional observation wells (MW-109 through MW-113) on May 24, 2006, to further understand the extent of contaminants in the soil and groundwater in the former source area.

The results of the additional investigation showed contamination remained in the soil above ch. NR 720 Wis. Adm. Code levels, in the groundwater above ch. NR 140 Wis. Adm. Code enforcement standards, and in the groundwater above the ARARs established for the Mauthe site. Groundwater did not appear to be impacted at depth based on the piezometer groundwater analysis.

Active treatment of collected groundwater ended on April 18, 2006, with approval for direct discharge by the City of Appleton. Collected groundwater is now discharged directly to the sanitary sewer system for treatment at the City of Appleton wastewater treatment facility.

On October 13, 2007, MCO discontinued operational responsibilities of the system. OMNI began operational responsibilities on October 14, 2007, and maintained responsibility through September 30, 2011. Terracon assumed system operation responsibilities on October 1, 2011.

2.3 Site Description

The site is located within the City of Appleton limits in an area of mixed commercial, light industrial, and residential properties. The property is approximately one acre in size and triangular in shape (Figure 2 – Site Detail Map, Appendix A). Melvin Street borders the site to the north, a parking lot owned by Miller Electric and Manufacturing Company is on the west, and railroad tracks are on the southeast. Private residences are located north of Melvin Street and south of the railroad tracks. The former zinc building was located on the northeast portion of the property. The former chromium building was located on the southwest portion of the property. Approximately half of the land immediately surrounding the site contains impervious structures or paved roads and parking areas.

2.4 Groundwater Collection System

The groundwater collection system consists of three trenches. The west trench crosses the Miller Electric property to the west of the site and is approximately 200 feet in length. The central trench runs south of the site parallel to the railroad and is approximately 280 feet in length. The southeast trench runs along Second Street and Outagamie Street and is approximately 600 feet in length (Figure 2 – Site Detail Map, Appendix A).

The groundwater treatment system was designed to capture groundwater containing contaminants at concentrations greater than 1992 Chapter NR 140, Wisconsin Administrative Code (WAC) preventive action limits (PALs) as approved in the ROD. The west trench and southeast trench were located outside the estimated extent of the groundwater contamination and are designed to prevent further migration of groundwater contamination. The central trench was designed to collect contaminated groundwater and prevent further migration of the groundwater contamination off-site.

Groundwater enters the trenches based on the head differential between the local water table and the level maintained in the trench. The trenches are backfilled with coarse sand. A 6-inch perforated high-density polyethylene collection pipe in the bottom of the trench drains water from the trench to manholes where the water is collected and pumped to the groundwater treatment facility.

Under normal operation, the water level in the trenches is maintained at or near the bottom of the trench. The trenches can provide storage and continue to act as a hydraulic barrier until the water in the trench rises to the level of the water table. This storage capacity allows the hydraulic barrier to continue even when the collection/treatment system needs to be shut down for repair or maintenance for a short period of time.

Three properties south and southeast of the facility have foundation drain systems that are connected to the groundwater collection system via gravity piping (801 S. Outagamie Street, 1410 W. Second Street, and 1414 W. Second Street). Additionally, the sump pump discharge at 1428 W. Second Street is connected to the collection system.

Groundwater collected in the west trench flows by gravity to Manhole 1 where the maximum depth of the manhole/trench extends approximately 32 feet below ground surface (fbgs). Groundwater in the central and southeast trenches flows by gravity to manhole 2, where the maximum depth of the manhole/trench extends approximately 31 fbgs. Groundwater from the manholes is piped to the treatment facility (Figure 2 – Site Detail Map, Appendix A).

2.5 Groundwater Treatment System

From February 1997 through April 18, 2006, the treatment system operated in a manual batch system mode. The groundwater treatment system was designed to be a fully automated batch treatment process designed for control of total chromium. Each batch operation was capable of treating 2,700 gallons of influent groundwater and took approximately six hours to complete a cycle (i.e., from the start of filling the reaction tank to finishing the discharge to the City of Appleton sanitary system). The system was capable of treating 10,800 gallons in a 24-hour period.

Pumps located in the two manholes convey groundwater from the collection trenches into the storage tank. Float switches control water levels in the manholes. The pumps have a pumping capacity of approximately 43 gallons per minute (gpm) each.

A storage tank stores water from the collection system to provide equalization of the groundwater. The storage tank has a 9,000-gallon capacity. A top-mounted, turbine type, constant speed mixer, for mixing the tank contents and keeping solids in suspension, is located on the tank. An ultrasonic level indicator monitors the water level in the tank. The water level of the storage tank is monitored by the programmable logic controller (PLC).

Prior to the start of direct discharge on April 18, 2006, the reaction tank feed pump transferred groundwater from the storage tank to the reaction tank. The reaction tank feed pump is an air-operated, double-diaphragm pump with an 86 gpm capacity. The reaction tank feed pump is sized to fill the reaction tank working volume (2,700 gallons) in approximately 30 minutes.

The reaction tank has a capacity of 6,100 gallons. The conical bottom of the tank allows for the collection and transfer of sludge. The volume of water treated during a batch process is approximately 2,700 gallons. Chemical and physical processes for the groundwater treatment occurred in the reaction tank. The water was treated by batch process in the reaction tank as follows: decant, fill, ferrous sulfate addition, caustic addition, aeration, flocculation, settling, and sludge withdrawal.

The above systems are the primary parts in the treatment process. However, there are several other components necessary for the successful treatment of contaminated groundwater. They include a reaction tank mixer, reaction tank level detector, reaction tank air diffuser, reaction tank pH monitor, air compressor, ferrous sulfate feed system, caustic feed system, sludge transfer pump, sludge tank, and tanker truck feed pump. These components were monitored and/or controlled by the PLC in the master control panel. Only the tanker transfer pump and the air compressor are locally controlled. The system was designed to provide continuous batch process treatment, if required.

The master control panel includes failure annunciators, pH strip chart recorder, data access module, auto dialer, PLC system, and uninterruptible power supply. The master control panel will also sound an audible alarm if an upset in the process or a failure is detected.

Although the system was designed to be a fully automated batch treatment process, the City of Appleton industrial user permit formerly required treated groundwater to be tested for hexavalent chromium using a Hach hexavalent chromium test kit before discharge to the sanitary sewer system. The existing treatment system (batch treatment and manual discharge) met discharge permit conditions, but was labor intensive.

Groundwater brought into the treatment facility has contaminant concentrations below City of Appleton industrial user permit discharge limits. The WDNR received approval from the City of Appleton to perform direct discharge of untreated, collected groundwater beginning April 18, 2006, when influent meets discharge limits listed in the Appleton Industrial User (Wastewater Discharge) Permit No. 06-21. Since April 18, 2006, collected groundwater has been directly discharged without treatment to the City of Appleton sanitary sewer system.

The Appleton Industrial User (Wastewater Discharge) was reissued on May 31, 2012 (Permit No. 12-21). The permit allows the continuation of groundwater direct discharge to the sanitary sewer as long as contaminant concentrations remain below discharge limits. Permit No. 12-21 will expire at midnight, May 31, 2015.

2.6 Groundwater Monitoring Network

The groundwater monitoring wells (water table observation wells and piezometers) were designed to provide information on containment of the groundwater plume and on water quality at the site and adjacent residential properties. The monitoring network is comprised of eleven observation wells constructed during the RI and the remedial action (RA) activities (W-2, W-8, W-15, and MW-101 through MW-108), five observation wells (MW-109 through MW-113) installed in May 2006, and four piezometers (PZ5 through PZ8) installed in May 2005 to evaluate the remaining source area (Figure 2 – Site Detail Map, Appendix A). The following descriptions are reflective of static groundwater conditions; however, due to pumping from the manholes/trenches static conditions are modified.

Observation wells W-2 and MW-108 are located up-gradient of the site to monitor background conditions.

Observation well MW-101, which is located west of the site, is used to monitor the effectiveness of the west trench.

Three down-gradient observation wells, MW-102, MW-103, and MW-104, are used to monitor changes in groundwater quality down-gradient of the central trench and to monitor hydraulic gradient control.

Four observation wells, W-8, W-15, MW-105, and MW-106, are used to monitor changes in groundwater quality outside of the southeast trench. Monitoring wells MW-106 and W-15 are also used to monitor hydraulic gradient control of the southeast trench.

Observation well MW-107 is used to provide source area groundwater quality data and hydraulic gradient information up-gradient of the central trench.

Five observation wells (MW-109 through MW-113) installed in May 2006 are located at former source areas identified during the RI. They are described as follows.

- MW-109 is located at the west edge of the former chromium building between two historical monitoring points (MW25R and MW26R) installed during the RI with significant concentrations of volatile organic compounds (VOCs) and chromium in groundwater.
- MW-110 is located on the north edge of the former chromium building adjacent to a nest of three historic monitoring points (MW17, MW18, and MW19) installed during the RI with significant concentrations of VOCs and chromium in groundwater.

- MW-111 is located near a historic monitoring point (MW13R) installed during the RI with significant concentrations of chromium in groundwater.
- MW-112 is located within the former zinc building at the edge of the former trough adjacent to an historic soil sample (SB3A) installed during the RI with significant concentrations of metals (cadmium, chromium, zinc, and cyanide) in soil.
- MW-113 is located on the southeast edge of the former chromium building adjacent to a nest of three historic monitoring points (MW14, MW15, and MW16) installed during the RI with significant concentrations of VOCs (MW14 only) and chromium in groundwater.

PZ5 and PZ6 are located on the north side of the central collection trench and PZ7 and PZ8 are located on the south side of the central collection trench to evaluate the vertical extent of groundwater contamination and verify vertical capture of the groundwater plume.

On May 10, 2004, four piezometers (PZ-01, PZ-02, PZ-03, and PZ-04) were abandoned. The bottoms of the piezometers were installed near the elevation of the collection trench piping and were within the trenches. The purpose of the piezometers was to determine whether the trenches were working properly. Since the trenches were functioning properly, the piezometers were abandoned.

3.0 INFLUENT/EFFLUENT MONITORING AND REPORTING

Prior to October 2012 effluent samples were collected at the Outfall 001¹ sample collection port. The discharge valve from the storage tank was closed, typically one to three days prior to sampling, depending on the anticipated groundwater infiltration into the collection system. The storage tank was allowed to accumulate pumped water until the sampling event, typically Thursday morning. The discharge valve was opened and water was allowed to discharge for approximately five minutes. The Outfall 001 sampling port was opened and approximately 10 gallons of water was allowed to discharge from the sampling port prior to collecting a sample.

On October 19, 2012, system plumbing changes were completed to improve the sampling method. Terracon contracted Ogden Plumbing to replumb the system effluent line so that a greater volume of water was retained within the equalization tank and to install a sampling port on the equalization tank Outfall 001 discharge pipe. Due to the improvement in the system plumbing, Terracon now collects a composite effluent sample from the sampling port on the equalization tank Outfall 001 discharge pipe. Samples are typically collected the first Thursday of the month.

¹ Outfall 001 is the point where the groundwater leaves the facility and enters the City of Appleton sanitary sewer system. There is currently only one outfall.

3.1 Monthly Monitoring and Reporting

During the monthly monitoring events, an unfiltered sample was collected from the equalization tank Outfall 001 sample port and analyzed for hexavalent chromium, and a filtered sample was collected from Outfall 001 and analyzed for total dissolved chromium. A pH value from the Outfall 001 sample was also determined on the samples collected by using an Oakton pHTestrs. Pace Analytical Services, Inc. (Pace) performed the laboratory analysis. Pace provided an electronic report of the analysis to Scott Hodgson, Terracon's project manager, and/or Nick Heim, Terracon staff geologist, who emailed the report to Jennifer Borski, WDNR project manager. A summary of the laboratory analysis can be found in Table 1 – Influent and Effluent Summary, Appendix B.

During the monthly monitoring events, an unfiltered sample was collected from the Manhole No. 1 influent sampling port and from the Manhole No. 2 influent sampling port. The presence of hexavalent chromium was measured in the Manhole No. 1 and No. 2 influent samples using a Hach test kit, model Pocket Colorimeter II, and pH values were determined using an Oakton pHTestrs.

Total flows from Outfall 001, from Manhole No. 1, and from Manhole No. 2 were recorded on an Operator Log Sheet during the monthly sample collection. Total flows from Outfall 001, from Manhole No. 1, and from Manhole No. 2 are also recorded periodically throughout the month (Table 1 – Influent and Effluent Summary, Appendix B). A monthly email message was sent to the City of Appleton Pretreatment and Biosolids Manager and the WDNR project manager with the total flow that was recorded from Outfall 001.

The WDNR project manager was provided with a monthly status report summarizing operation and maintenance at the site. The monthly status reports included Terracon's invoice for services from the previous 28-day period, a copy of subcontractor invoices paid during the month, a copy of the Operator Log Sheets, a copy of the Inspection Sheet, and a copy of Table 1 – Influent and Effluent Summary.

3.2 Quarterly Monitoring and Reporting

Quarterly compliance reports were submitted by email to the City of Appleton's Pretreatment and Biosolids Manager, Amanda Owens, and the WDNR project manager, Jennifer Borski, on October 12, 2012, January 17, 2013, and April 12, 2013. The quarterly compliance reports included total metered discharge readings, pH measurements, and laboratory analytic test reports.

3.3 Semi-Annual Monitoring and Reporting

The semi-annual reporting consists of this document, Semi-Annual Operation and Maintenance Report, which is prepared for the WDNR project manager after receiving the laboratory data from the semi-annual groundwater sampling event. The Semi-Annual Operation and Maintenance Report includes the Operation, Maintenance, Monitoring and Optimization Reporting of Soil and Groundwater Remediation Systems, Form 4400-194 (see Form 4400-194, Appendix D).

4.0 COMPLIANCE SAMPLING

Compliance sampling of the groundwater effluent is conducted twice per year by the City of Appleton at the sampling port for Outfall 001. The effluent is analyzed for the parameters listed in Table 2 – City of Appleton Compliance Limits, Outfall 001, Appendix B. City of Appleton wastewater staff collected compliance samples on October 4, 2012, and April 17, 2013. Terracon collected annual compliance monitoring samples on April 11, 2013.

A summary of the City of Appleton’s compliance sampling analysis and Terracon’s annual compliance sampling analysis can be found in Table 2 – City of Appleton Compliance Limits, Outfall 001, Appendix B.

In addition to the sampling events listed above, and as described in Section 3.0, total chromium and hexavalent chromium are currently analyzed monthly from a sample collected from the Outfall 001 sampling port on the equalizer tank (Table 1 – Influent and Effluent Summary, Appendix B).

5.0 GROUNDWATER SAMPLING

5.1 Groundwater Sampling Procedures

Two reductions to the original monitoring plan have been requested since 1997. On December 3, 1999, Jennifer Huffman with the WDNR requested a reduction to the monitoring plan, which included the following:

1. Elimination of quarterly sampling for copper, zinc, mercury, and cyanide at all site wells.
2. Reduction in VOC sampling frequency from quarterly to annual.
3. Elimination of weekly testing for total suspended solids on the treated effluent.

EPA approved the 1999 request on January 18, 2000, except for continued cyanide sampling in monitoring wells MW-110, MW-11, and MW-112 and semi-annual VOC sampling rather than annual VOC sampling as requested.

On March 24, 2003, Jennifer Borski with the WDNR requested a reduction to the monitoring plan, which included the following:

1. Elimination of quarterly cadmium sampling at all site wells.
2. Reduction in the frequency from quarterly to annual sampling of manganese at all site wells. Manganese detections did not appear to be related to contamination from the plating operations.
3. Reduction in the frequency from quarterly to annual sampling of total dissolved chromium at W-2, W-8, W-15, MW-101, MW-102, MW-105, MW-106, and MW-108.
4. Elimination of annual VOC sampling at W-2, W-8, W-15, MW-101, MW-102, MW-103, MW-104, MW-105, MW-106, and MW-108.

EPA approved the 2003 request on April 17, 2003.

There are 20 groundwater monitoring wells including 16 water table observation wells and four piezometers associated with the Mauthe remediation system (see Figure 2 – Site Detail Map, Appendix A).

Groundwater samples were collected during this reporting period on April 29-30, 2013. During the sampling event, groundwater elevations were measured in monitoring wells W-2, W-8, W-15, MW-101, MW-102, MW-103, MW-104, MW-105, MW-106, MW-107, MW-108, MW-109, MW-110, MW-111, MW-112, and MW-113 prior to sampling. Historical groundwater elevations for the site are summarized in Table 3 – Groundwater Elevations, Appendix B, and presented graphically on Figure 3 – Groundwater Hydrographs, Appendix A. The groundwater elevation data from the monitoring wells were used to develop a groundwater contour map (Figure 4 – Groundwater Table Contour Map—April 2013, Appendix A). Groundwater flow direction was in the general direction of the collection trenches. The gradient immediately adjacent to the trenches is very steep since the groundwater elevation in the trench in general is at the elevation of the sump high float level (approximately 25 feet below surface grade). As such, the complex flow pattern and steep gradient near the trenches is depicted generically on Figure 4.

Down-well tubing was installed in monitoring points to be sampled. A peristaltic pump was attached to the down-well tubing and the monitoring points were micro-purged using low-flow techniques before collecting the sample(s). The sampling process utilized a flow-through cell where probes measured temperature, conductivity, pH, dissolved oxygen, and oxidation/reduction potential in each well. Flow through the cell was maintained at approximately 200 milliliters per minute (ml/min), utilizing a resistor to control pump flow. Purging proceeded until parameters were stable to within 10 percent (%) for three consecutive readings taken a minimum of two minutes apart. Purged water from the monitoring points was collected, taken into the treatment building, dumped into the floor sump, and subsequently pumped into the equalizer tank to discharge to the Outfall 001 pipe leading to the City of Appleton sanitary sewer system.

Groundwater samples were collected for VOCs, total chromium, and cyanide in accordance with the site monitoring plan after the monitoring points were micro-purged as described above. Final temperature, conductivity, pH, dissolved oxygen, and oxidation/reduction potential were recorded just prior to sampling (see Table 4 – Groundwater Geochemical Parameters, Appendix B). The groundwater samples were collected in the order of VOC vials first (if applicable) and metal samples second. The chromium samples were field filtered with disposable 45-micron in-line filters. The cyanide samples were not filtered. The laboratory containers were supplied by Pace Analytical. The samples to be analyzed for VOCs were preserved with hydrochloric acid. The samples to be analyzed for (filtered) total chromium were preserved with nitric acid. The samples to be analyzed for total cyanide were preserved with sodium hydroxide. The samples were picked up by a courier from Pace.

The groundwater elevations, purged groundwater volume, field testing data, and sample collection time were recorded on a Groundwater Sampling Field Sheet (see Groundwater Sampling Field Sheets, Appendix C).

5.2 Groundwater Sampling Results

During the April 2013 sampling event, field measurements were taken on groundwater samples collected from monitoring wells MW-101 through MW-104, MW-107, and MW-109 through MW-113 for temperature, conductivity, pH, dissolved oxygen, and oxidation/reduction potential. A summary of the field measurements are contained in Table 4 – Groundwater Geochemical Parameters, Appendix B.

Groundwater from monitoring wells MW-101 through MW-104, MW-107, and MW-109 through MW-113 was analyzed for (filtered) total chromium. Groundwater from monitoring wells MW-107 and MW-109 through MW-113 was also analyzed for VOCs. Groundwater from monitoring wells MW-110, MW-111, and MW-112 was also analyzed for total cyanide.

The laboratory analytical results indicate that levels of (filtered) total chromium exceed the 1992 NR 140, WAC, groundwater PAL² in samples from monitoring wells MW-102 (130 micrograms per liter (µg/L)), MW-103 (24.8 µg/L), MW-107 (3,020 µg/L), MW-109 (986 µg/L), MW-110 (294 µg/L), MW-111 (478 µg/L), MW-112 (216 µg/L), and MW-113 (776 µg/L). The laboratory analytical results indicated that the estimated concentration of cyanide in samples from MW-110, MW-111, and MW-112 was above the limit of detection (LOD) and below the limit of quantitation (LOQ). (See Table 5 – Historical Groundwater Analytic Test Results -- Selected Metals, Appendix B and laboratory report and chain-of-custody record, Appendix C). An

² “Chemical-specific ARARs are laws and requirements that regulate the release to the environment of materials having certain chemical or physical characteristics or materials containing specific chemical compounds... Therefore, the applicable groundwater remedial action goals at this site are the PALs.” – Record of Decision Summary, N.W. Mauthe Site, March 1994, pages 36-37.

isoconcentration map for (filtered) total chromium concentrations is shown on Figure 5 – Groundwater Table Total Chromium Isoconcentration Map—April 2013, Appendix A.

The laboratory analytical results indicate that levels of VOCs (at least one of the following parameters: 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2,-dichloroethene, 1,1,1-trichloroethane, and trichloroethene) exceed the 1992 NR 140, WAC, PAL in samples from monitoring wells MW-107 and MW-109 through MW-113 (see Table 6 – Historical Groundwater Analytic Test Results—Volatile Organic Compounds, Appendix B and laboratory report and chain-of-custody record, Appendix C).

Groundwater hydrographs were prepared for monitoring wells MW-102, MW-103, MW-104, MW-107, MW-109, and MW-113 and are presented as Figure 3 – Groundwater Hydrographs, Appendix A. Chromium concentration trend graphs were prepared for monitoring wells MW-103, MW-104, MW-107, and MW-109 through MW-113 and are presented as Figures 6 through 13, Appendix A. Chlorinated volatile organic compound (CVOC) concentration trend graphs for monitoring wells MW-107, MW-110, and MW-113 are presented as Figures 14 through 16, Appendix A.

6.0 ROUTINE OPERATION AND MAINTENANCE ACTIVITIES

Completed Operator Log Sheets and Inspection Sheets are kept on file at the facility. Copies of these forms were also sent to the WDNR project manager with the monthly status reports.

6.1 Monthly Operation and Maintenance Activities

On a monthly basis, either during the monthly sampling event of Outfall 001 or another time, the grounds, truck bay, office area, bathroom, treatment process area, and sample preparation area were inspected. The Inspection Sheet contains a listing of items to be checked during the monthly inspection.

During the mid-month total flow recording, general inspection of the building, grounds, and treatment equipment was conducted.

6.2 Annual Operation and Maintenance Activities

The following annual operations and maintenance activities were performed during this reporting period.

- The annual heater inspection was performed by Ogden Plumbing on October 19, 2012. Ogden identified a problem with the fan switch on the middle heater in the garage and a problem with the igniter switch on the heater in the southeast corner of the process room. Ogden submitted quote #22486 for the repair of the

heaters, which was subsequently approved by the WDNR. The heaters were later repaired on Friday, November 9, 2012.

- The annual overhead door inspection was performed on December 10, 2012, by American Overhead Door (AOD). Several issues were identified that require repair including a frayed cable and several broken hinges. The full inspection (PMI) will be performed at the time of repair. AOD submitted quote #BJ 4975, which was approved by the WDNR in email correspondence dated May 20, 2013. Terracon will coordinate the repairs with AOD to be completed in June 2013.
- The annual cross-connection inspection was performed on March 31, 2013, by Ogden Plumbing. The backflow preventer and valve passed inspection. The annual fire extinguisher inspection was performed April 29, 2013. Each of the extinguishers passed inspection.

6.3 Periodic Operation and Maintenance Activities

The following operation and maintenance activities were performed on an as-needed basis during the reporting period.

1. The City of Appleton has taken over grounds maintenance at the N.W. Mauthe site through an intergovernmental agreement between the City of Appleton and WDNR. City staff provided lawn maintenance.
2. Outfall 001 flow meter/totalizer operation is checked during site visits. According to the factory representative, there are no operator performed calibration functions for the meter unless a hardware failure occurs.
3. General housekeeping activities included replacing cleaning supplies, bathroom supplies, and minor building components. General housekeeping activities also included keeping the facility and grounds clean and removing accumulated waste.

6.4 Significant Operation and Maintenance Activities

The following significant maintenance activity was performed during this reporting period:

- On October 5, 2012, the pumps in both manholes were replaced by Ogden Plumbing. The new pumps are sealed and thus will not require annual inspection and oil change. The check valve in Manhole 1 was also replaced. On October 19, Terracon contracted Ogden Plumbing to replumb the system effluent line so that

a greater volume of water is retained within the equalization tank and to install a sampling port on the equalization tank discharge pipe. Due to the improvement in the system plumbing, Terracon has collected the composite effluent sample directly from the tank effluent piping during the 2013 sampling events.

6.5 Emergency Operations and Shut Downs

There were no emergency operations or shut downs during this reporting period.

7.0 PUBLIC CONTACTS

On April 29, 2013, during the annual groundwater sampling event, Terracon was approached by the new homeowners of 1412 Second Street. The owners were unaware of the sampling procedures and requested that Terracon leave the premises. Reportedly the home owner, Erik Anderson, contacted the WDNR; however, at the issuance of this report Terracon has not received further information regarding access to the property.

8.0 FACILITY MEETINGS/REVIEWS

Jennifer Borski, WDNR project manager, has periodically communicated with the City of Appleton's Park and Recreation Department to confirm the Cooperative Agreement conditions are being followed and the arrangement is still satisfactory to both parties. The existing Cooperative Agreement was renewed in May 2012.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the laboratory analysis from the April 29-30, 2013, sampling event indicate that the groundwater continues to exceed the 1992 NR 140, WAC, PALs for chromium, and several VOCs.

The containment trenches appear to be operating as designed. The groundwater laboratory analysis and the groundwater elevations indicate that the groundwater plume is, in general, being controlled horizontally by the groundwater containment trenches. Monitoring well W-2 located to the north of Melvin Street has not had a PAL exceedance of chromium since 1998, even though seasonal groundwater mounding occurs in the remedial excavation.

Approximately 444,321 gallons of groundwater were extracted from the containment trenches from October 1, 2012, through April 30, 2013. The groundwater was discharged to the City of Appleton sanitary sewer system under the Industrial User (Wastewater Discharge) Permit Number 12-21. There were no exceedances of the compliance limits during this reporting period.

Based on the laboratory analysis from the April 2013 annual sampling event and the laboratory analysis from the Outfall 001 during the reporting period, Terracon recommends continued operation of the groundwater extraction system with direct discharge to the City of Appleton sanitary sewer system.

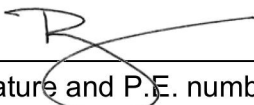
10.0 GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained from the system operation and maintenance activities and laboratory chemical analyses at the indicated locations or from other information discussed in this report. This report does not reflect variations in subsurface stratigraphy, hydrogeology, and contaminant distribution that may occur across the site. Actual subsurface conditions may vary and may not become evident without further assessment.

This report was prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted environmental engineering practices. No warranties, express or implied are intended or made. In the event any changes in the nature or location of suspected sources of contamination as outlined in this report are observed, the conclusions and recommendations contained in this report shall not be valid unless these changes are reviewed and the opinions of this report are modified or verified in writing by Terracon.

11.0 CERTIFICATIONS

I, Blaine R. Schroyer, P.E., hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

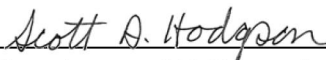


Signature and P.E. number E-31505

Project Engineer
Title



I, Scott A. Hodgson, P.G., hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

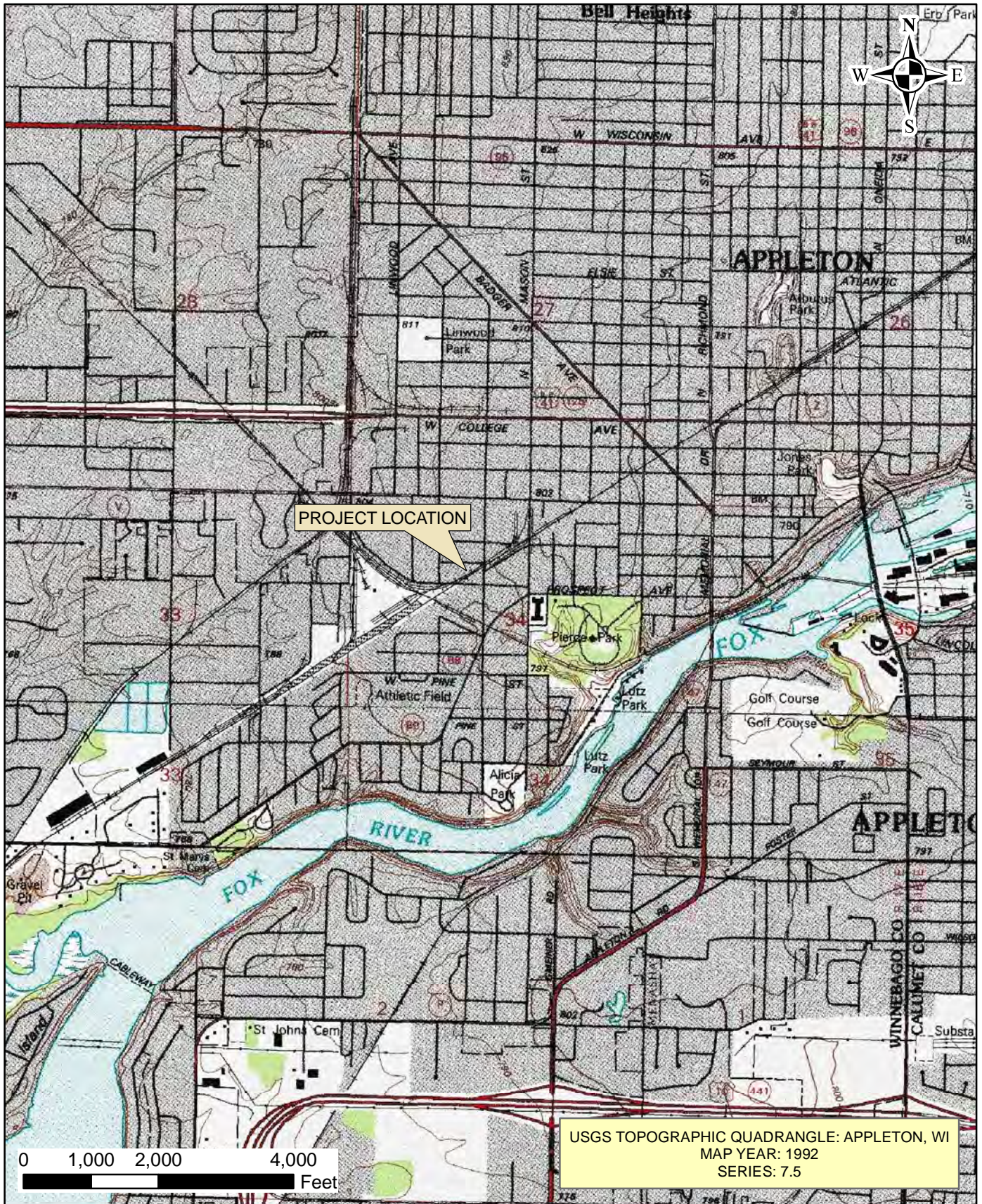


Signature and P.G. number PG-1229

Project Geologist
Title

Appendix A

Figures 1 to 16

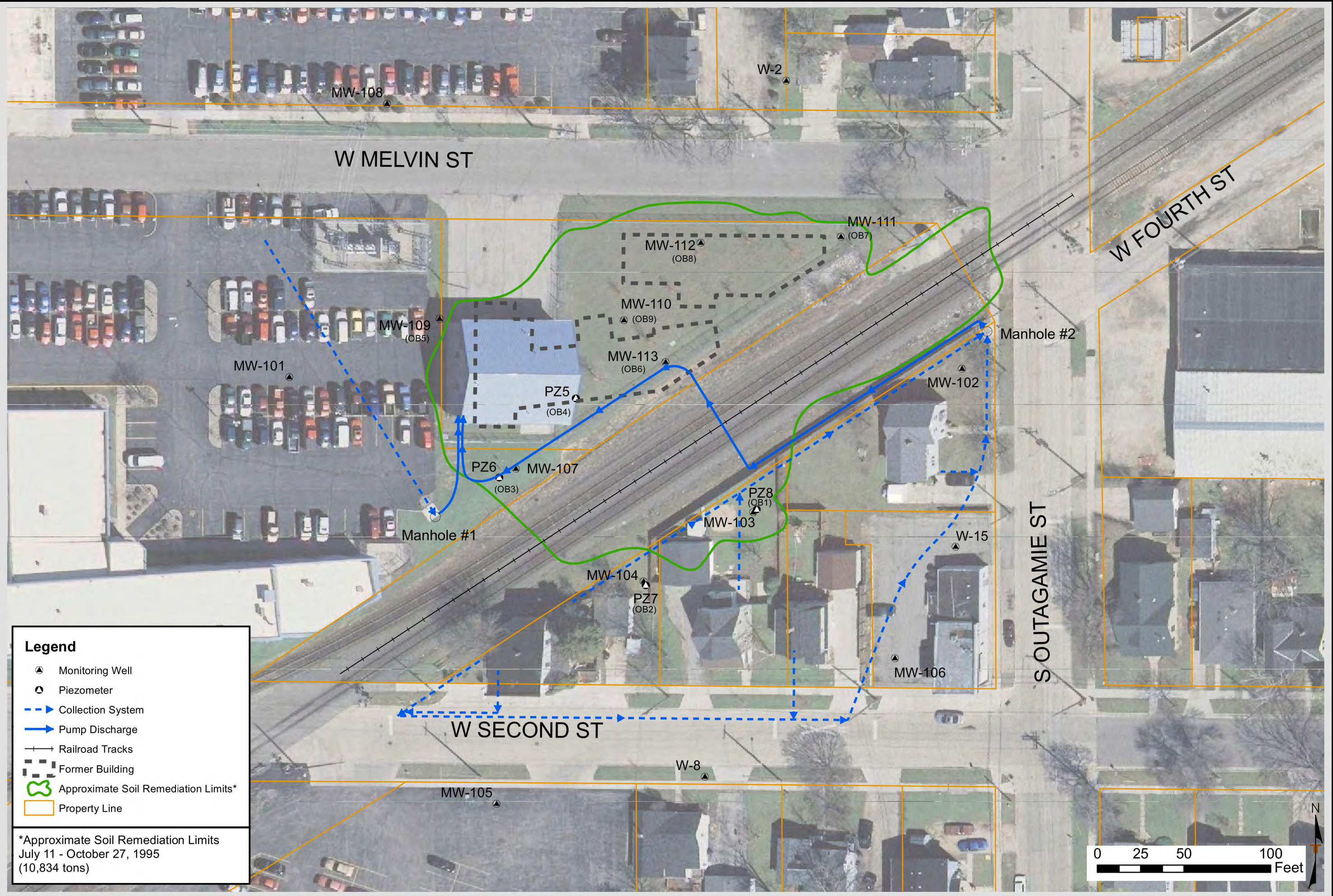


Project Mngr:	PAL
Drawn By:	LES
Checked By:	PAL
Project No:	58117057
Date:	03/21/2012

Terracon
 Consulting Engineers & Scientists
 9856 South 57th Street Franklin, WI 53132
 (414) 423 0255 (414) 423 0566

SITE LOCATION MAP
 N.W. MAUTHE SITE
 725 SOUTH OUTAGAMIE STREET
 APPLETON WISCONSIN

FIGURE
 1



Legend

- ▲ Monitoring Well
- Piezometer
- > Collection System
- Pump Discharge
- +— Railroad Tracks
- Former Building
- 🌿 Approximate Soil Remediation Limits*
- ▭ Property Line

*Approximate Soil Remediation Limits
July 11 - October 27, 1995
(10,834 tons)

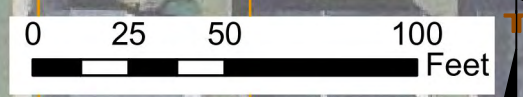


FIGURE 2

SITE DETAIL MAP

N.W. MAUTHE SITE
725 SOUTH OUTAGAMIE STREET
APPLETON, WISCONSIN

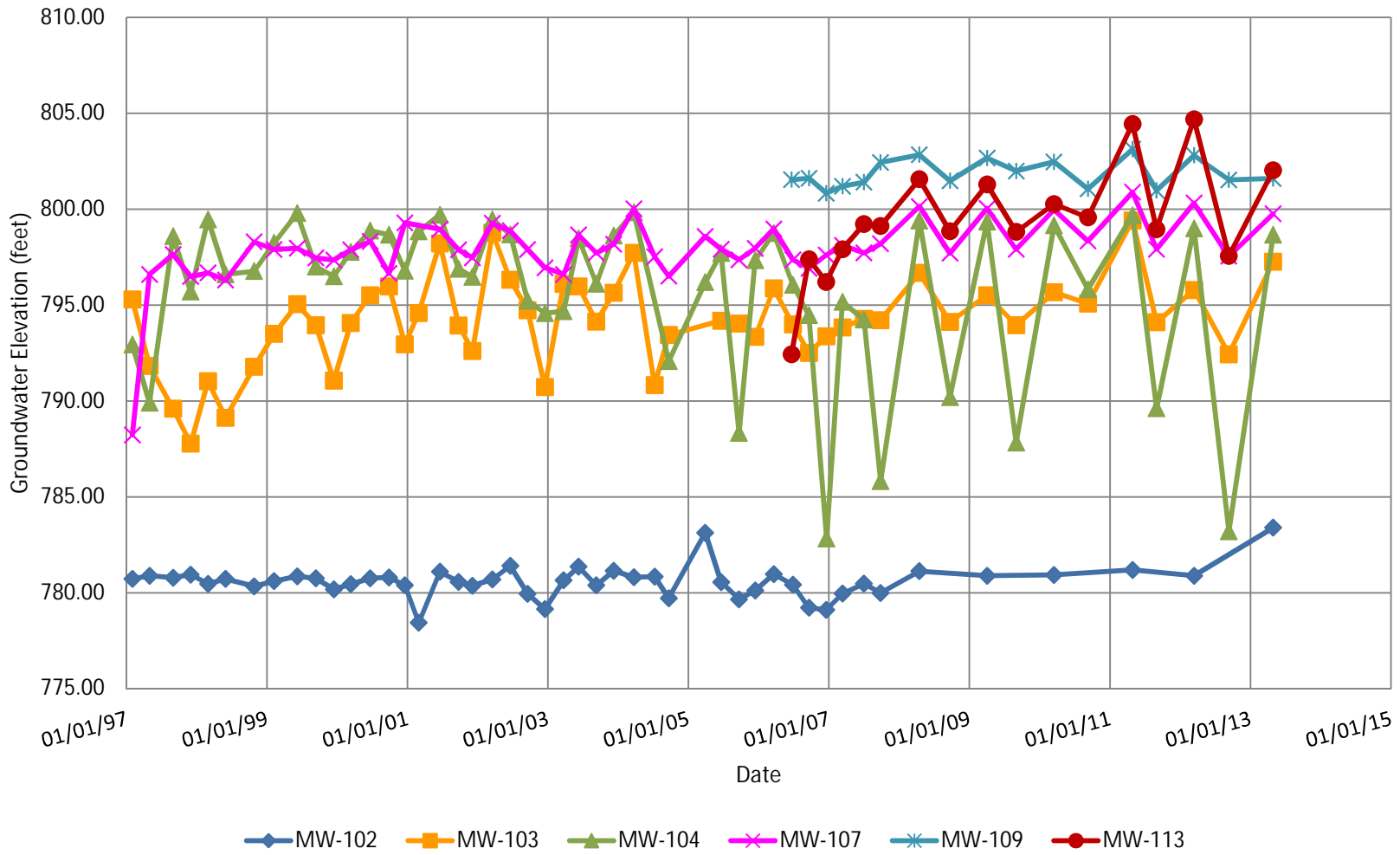
Terracon
Consulting Engineers and Scientists
9656 South 57th Street, Franklin, WI 53132
PH: (414) 423 0255 FAX: (414) 423 0566

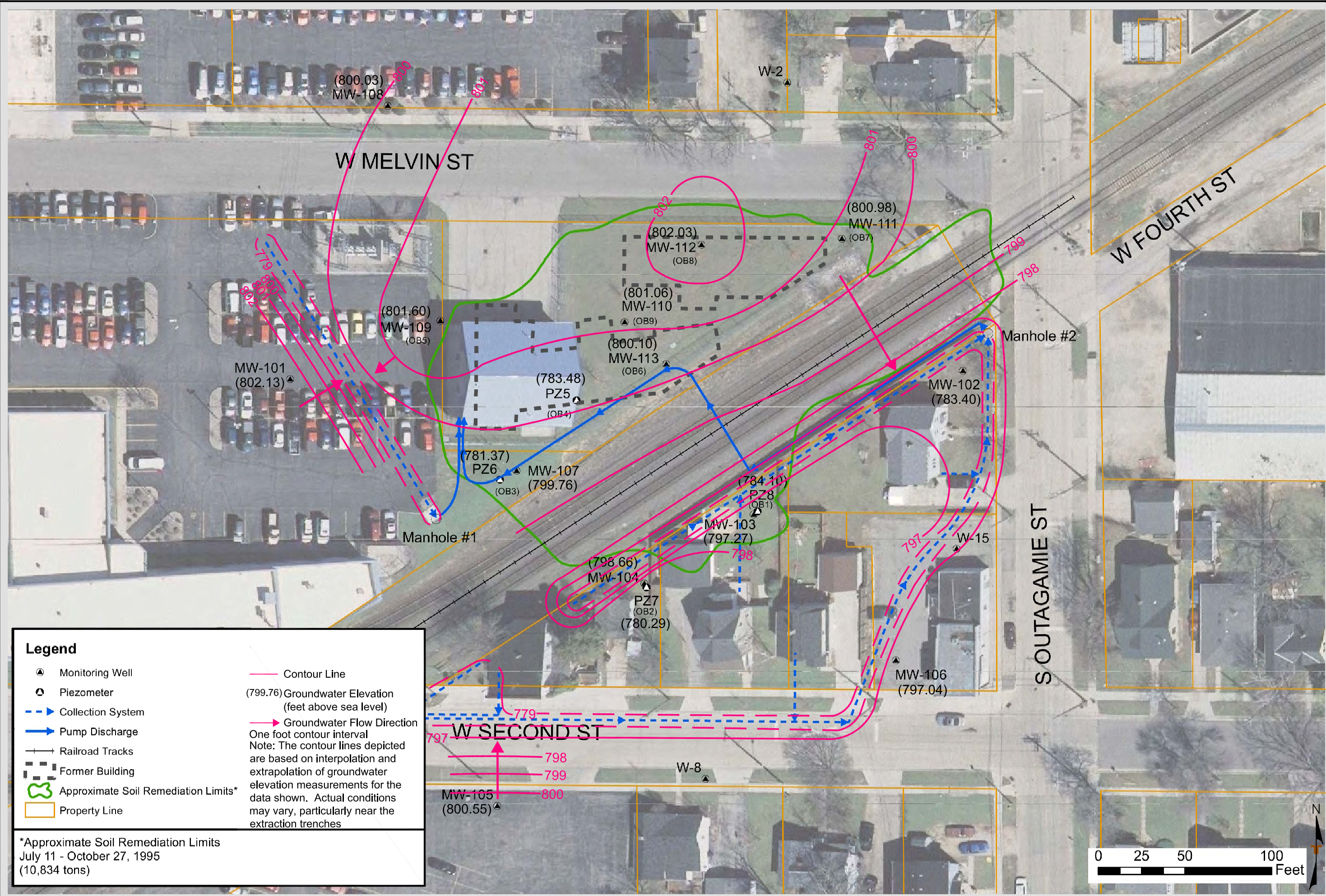
Project No.:	58117057
Scale:	As Shown
File No.:	58117057 MW Location Mapping
Date:	03/20/2012

Project Mgr.:	PAL
Drawn By:	LES
Checked By:	PAL
Approved By:	PAL

Note: Figure taken from Omni Site Detail Map, January 2011

FIGURE 3
Groundwater Hydrographs
N.W. Mauthe Superfund Site





Legend

- ▲ Monitoring Well
- Piezometer
- > Collection System
- Pump Discharge
- Railroad Tracks
- Former Building
- Approximate Soil Remediation Limits*
- Property Line

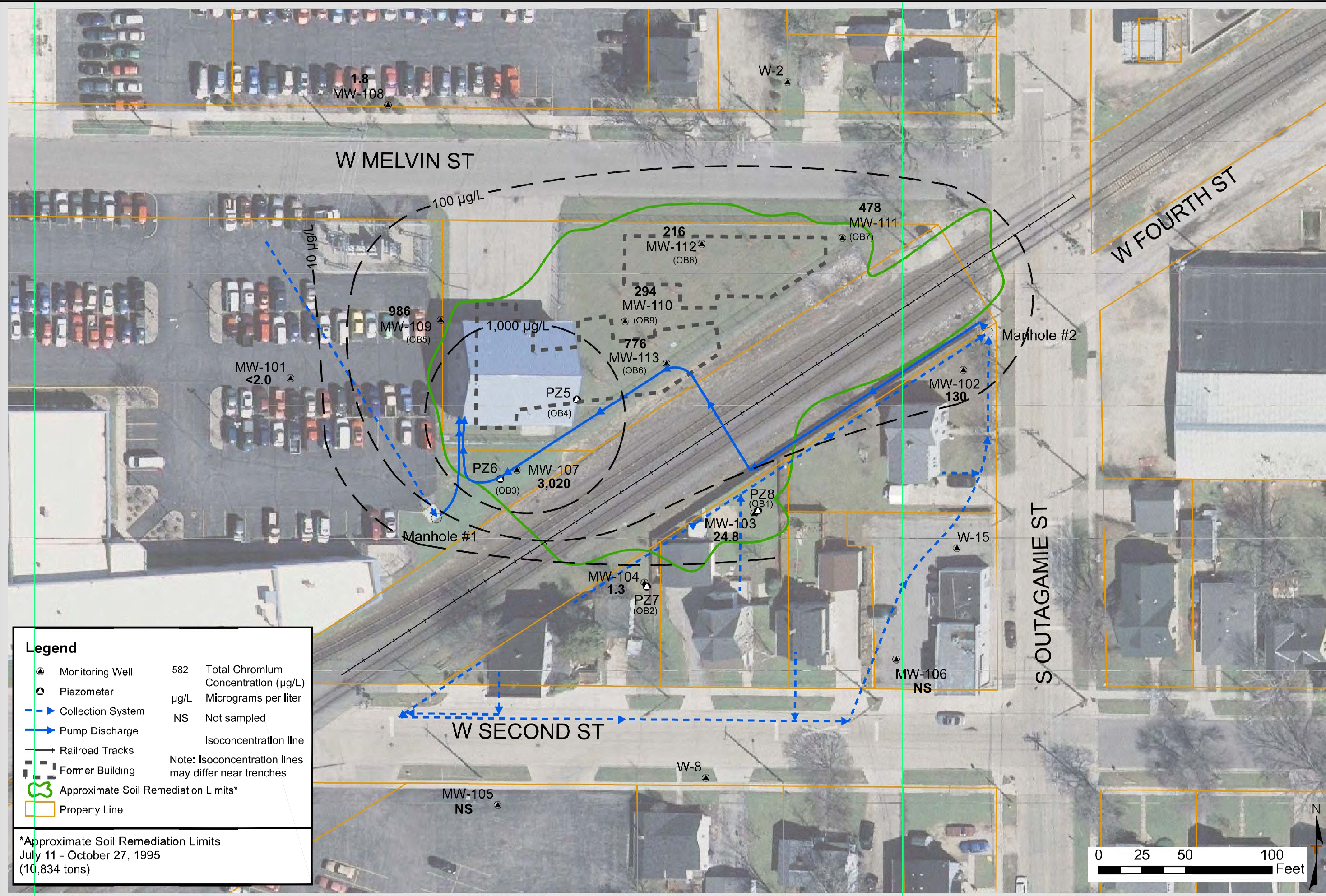
— Contour Line
 (799.76) Groundwater Elevation (feet above sea level)
 → Groundwater Flow Direction
 One foot contour interval
 Note: The contour lines depicted are based on interpolation and extrapolation of groundwater elevation measurements for the data shown. Actual conditions may vary, particularly near the extraction trenches

*Approximate Soil Remediation Limits
 July 11 - October 27, 1995
 (10,834 tons)

Project No.	58117057
Scale	As Shown
File No.	58117057 MW Location Mapping
Date	5/28/13

Project Mgr:	PAL
Drawn By:	AGC
Checked By:	PAL
Approved By:	PAL





- Legend**
- ▲ Monitoring Well
 - Piezometer
 - - - Collection System
 - Pump Discharge
 - Railroad Tracks
 - ▭ Former Building
 - Approximate Soil Remediation Limits*
 - ▭ Property Line
- | | |
|-----------------|--|
| 582 | Total Chromium Concentration ($\mu\text{g/L}$) |
| $\mu\text{g/L}$ | Micrograms per liter |
| NS | Not sampled |
| | Isoconcentration line |
- Note: Isoconcentration lines may differ near trenches

*Approximate Soil Remediation Limits
 July 11 - October 27, 1995
 (10,834 tons)

Project No.	58117057
Scale	As Shown
File No.	58117057 MW Location Mapping
Date	04/30/2012

Project Mgr:	PAL
Drawn By:	LES
Checked By:	PAL
Approved By:	PAL

Note: Figure taken from Omni Site Detail Map, January 2011

FIGURE 6
MW-103 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

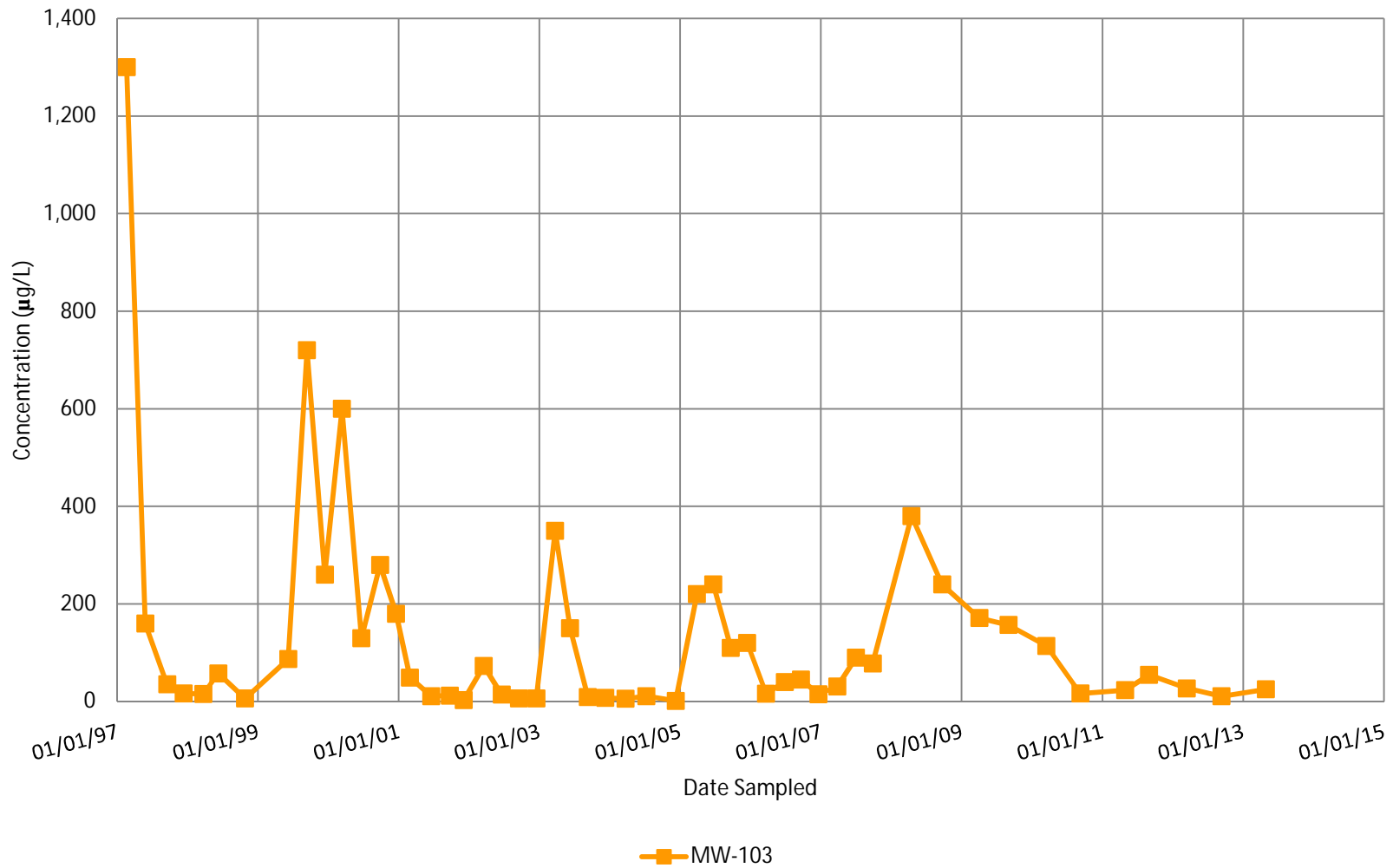


FIGURE 7
MW-104 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

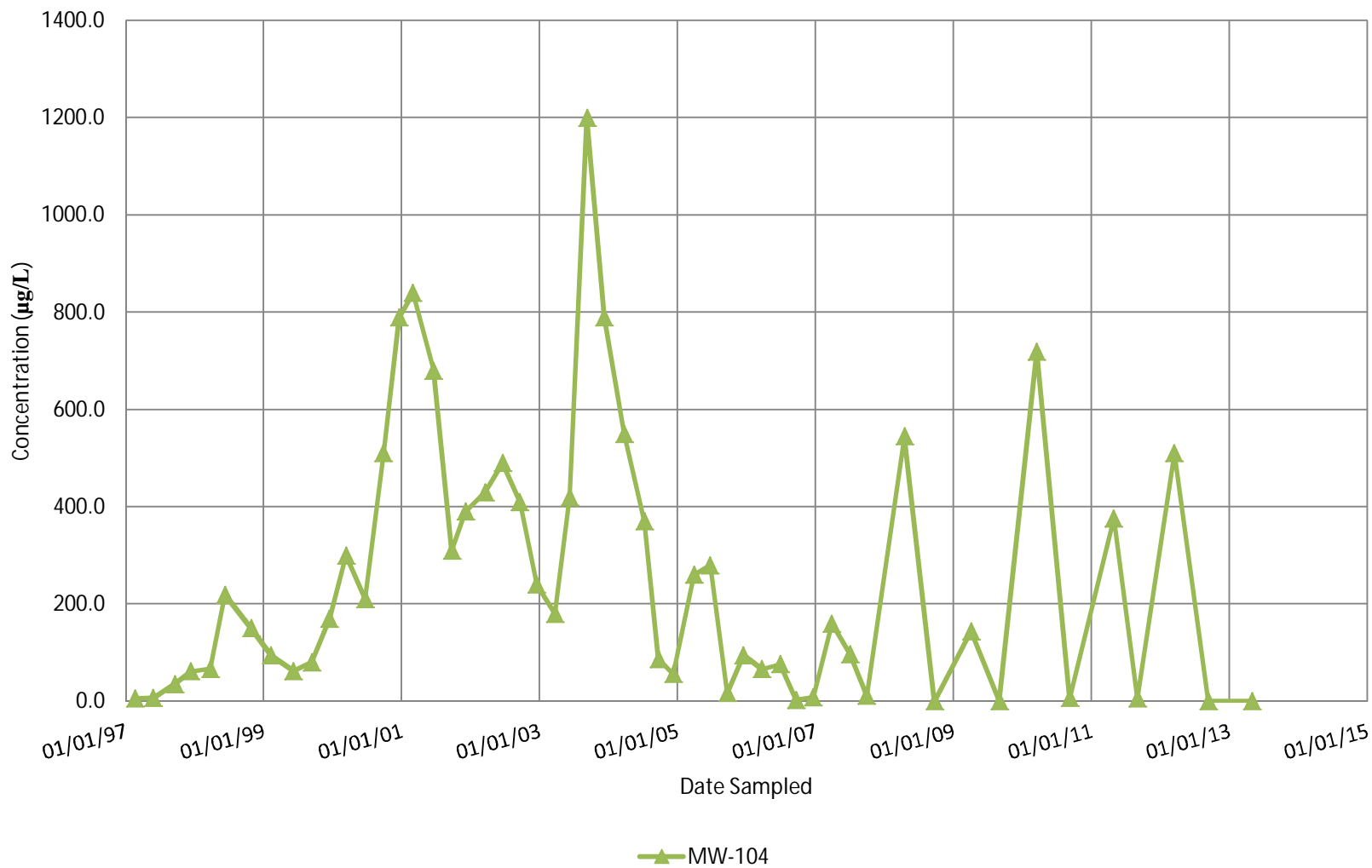


FIGURE 8
MW-107 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

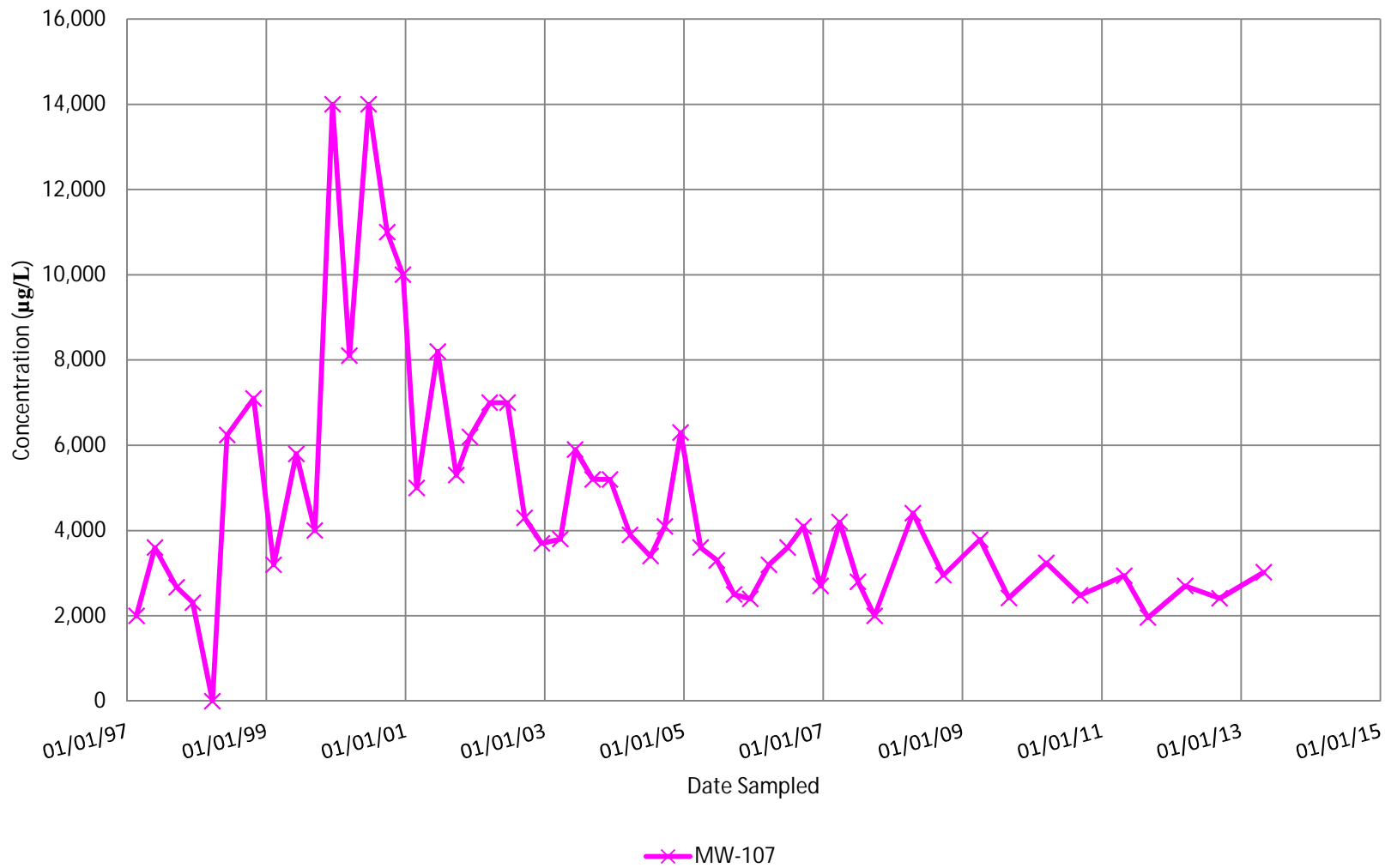


FIGURE 9
MW-109 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

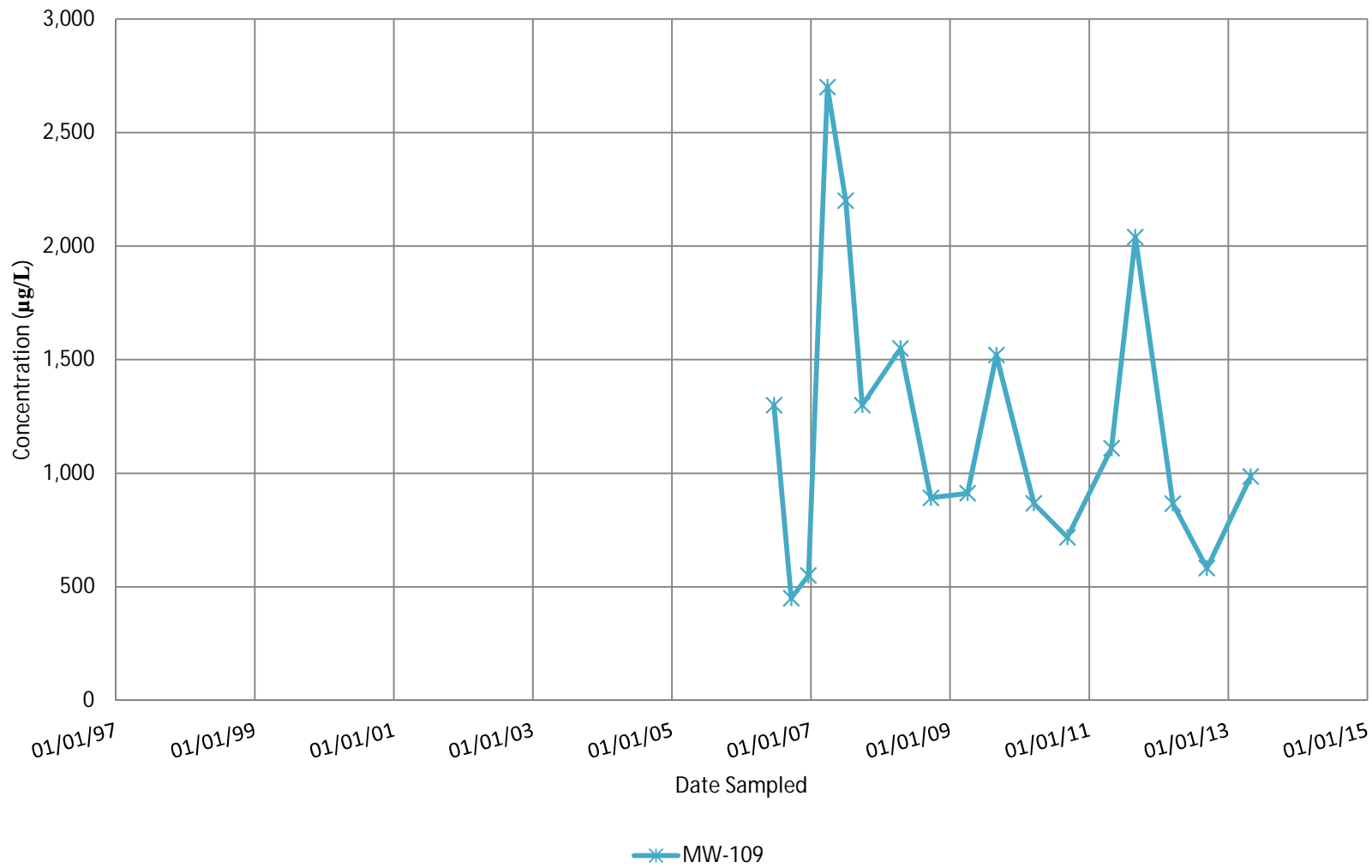


FIGURE 10
MW-110 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

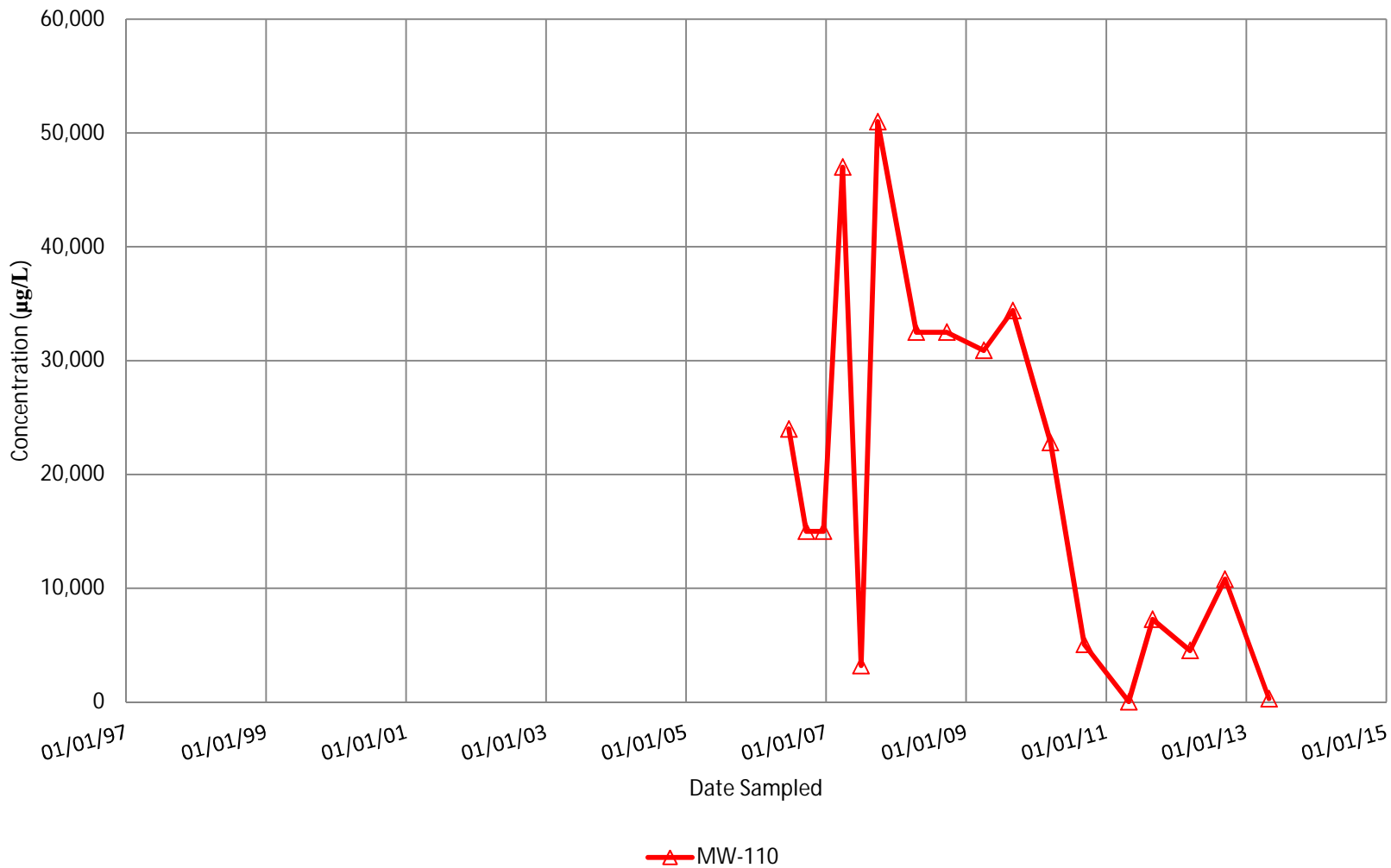


FIGURE 11
MW-111 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

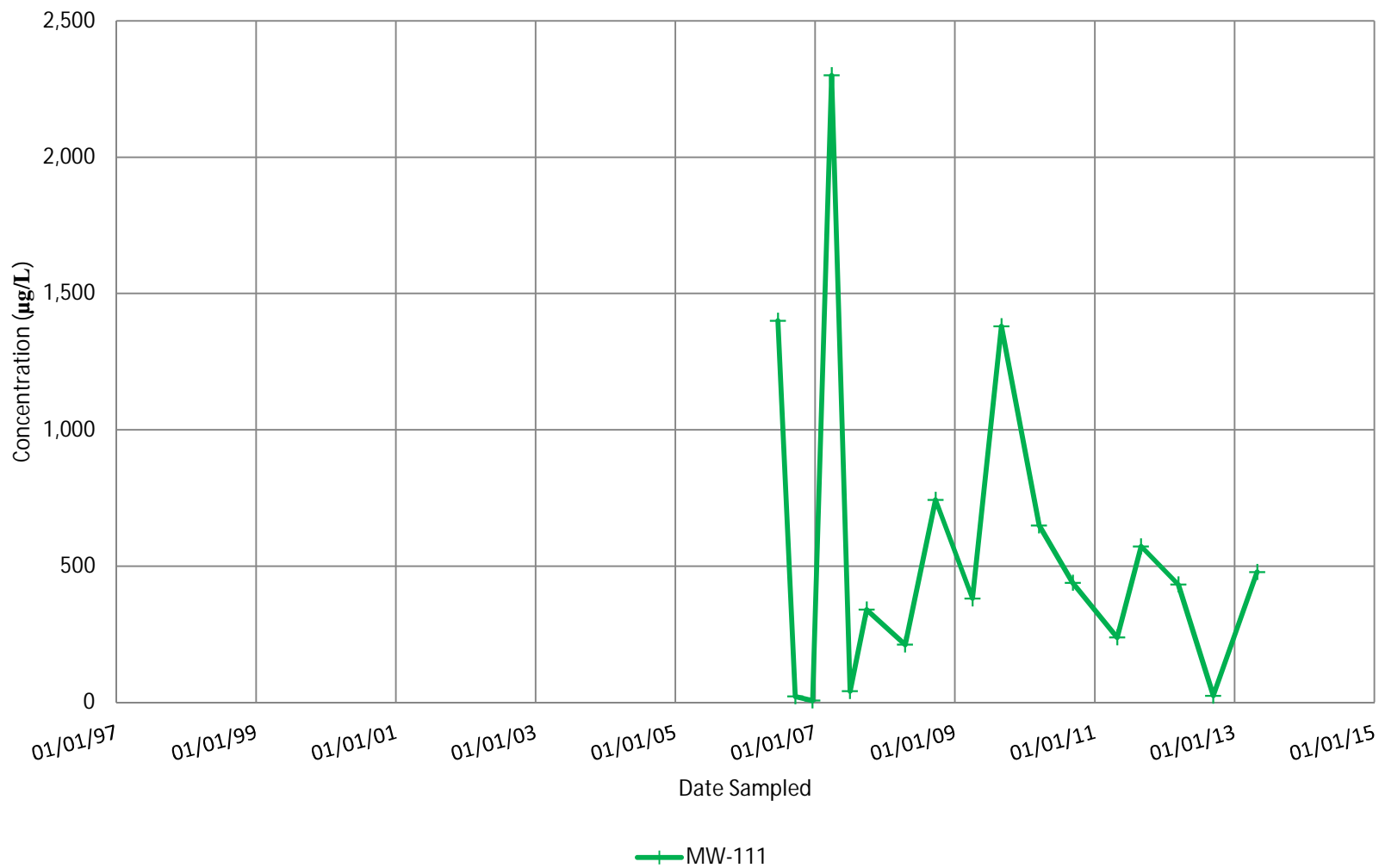


FIGURE 12
MW-112 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

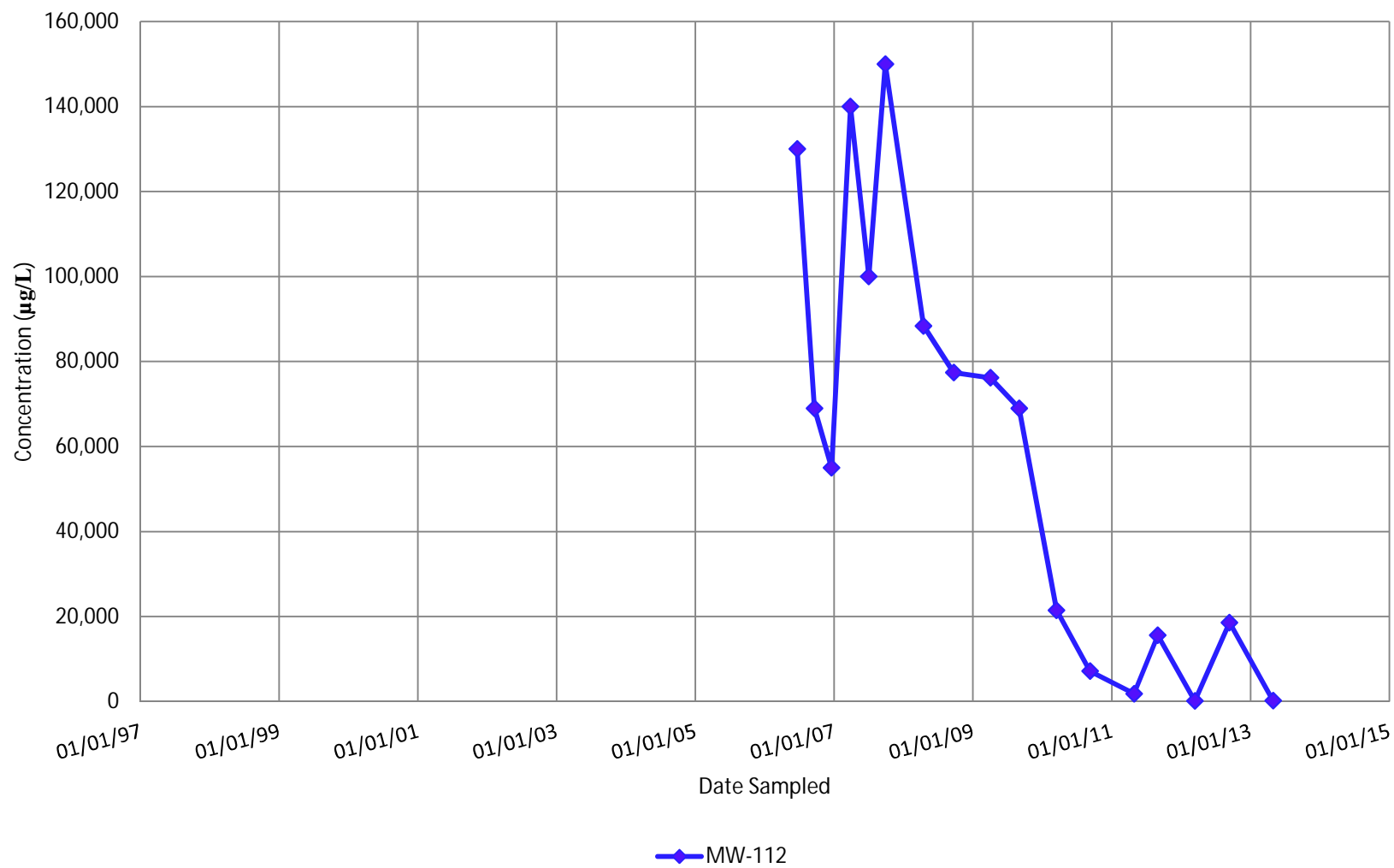


FIGURE 13
MW-113 Total Chromium Concentration Trends
N.W. Mauthe Superfund Site

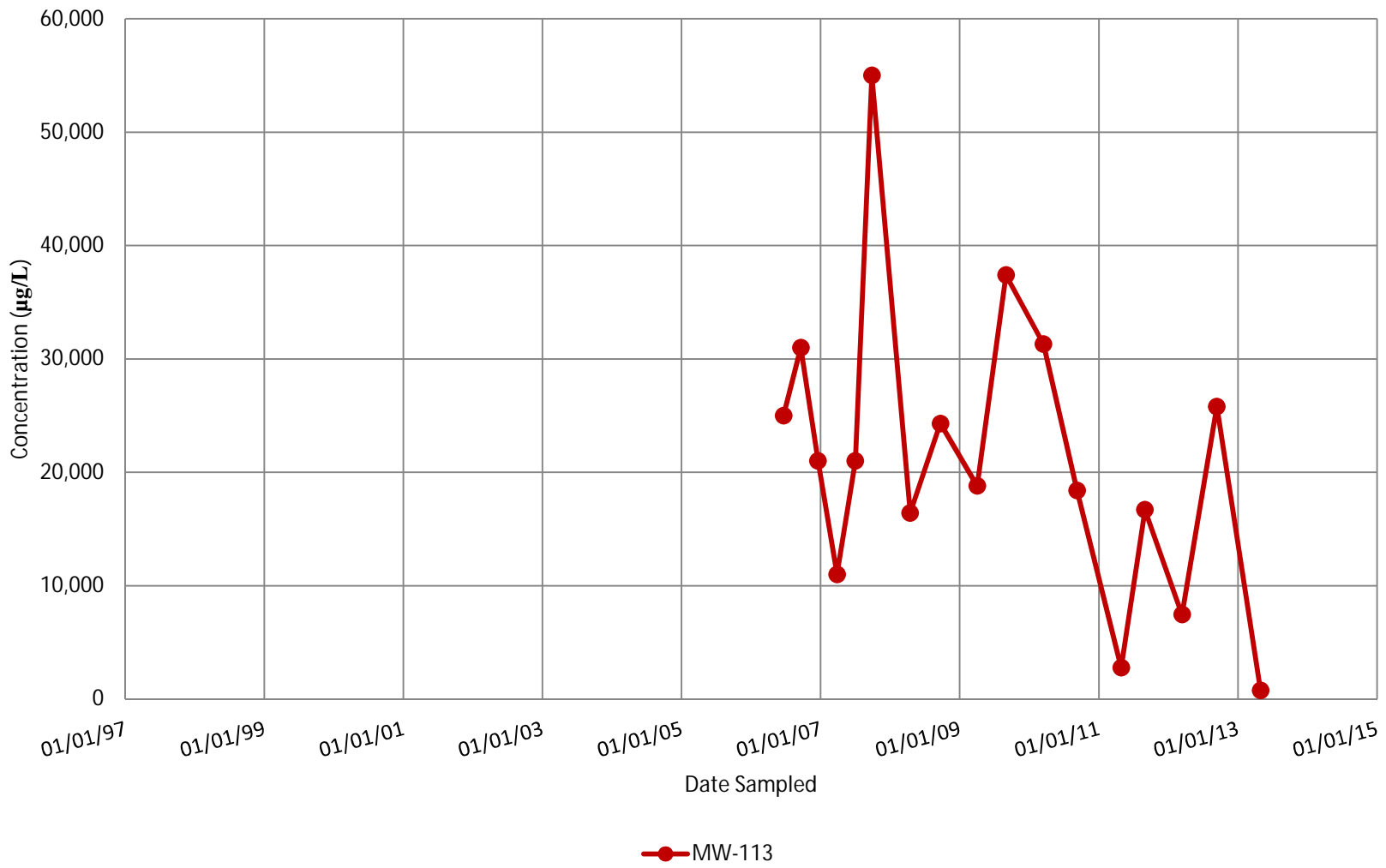


FIGURE 14
 MW-107 CVOC Concentration Trends
 N.W. Mauthe Superfund Site

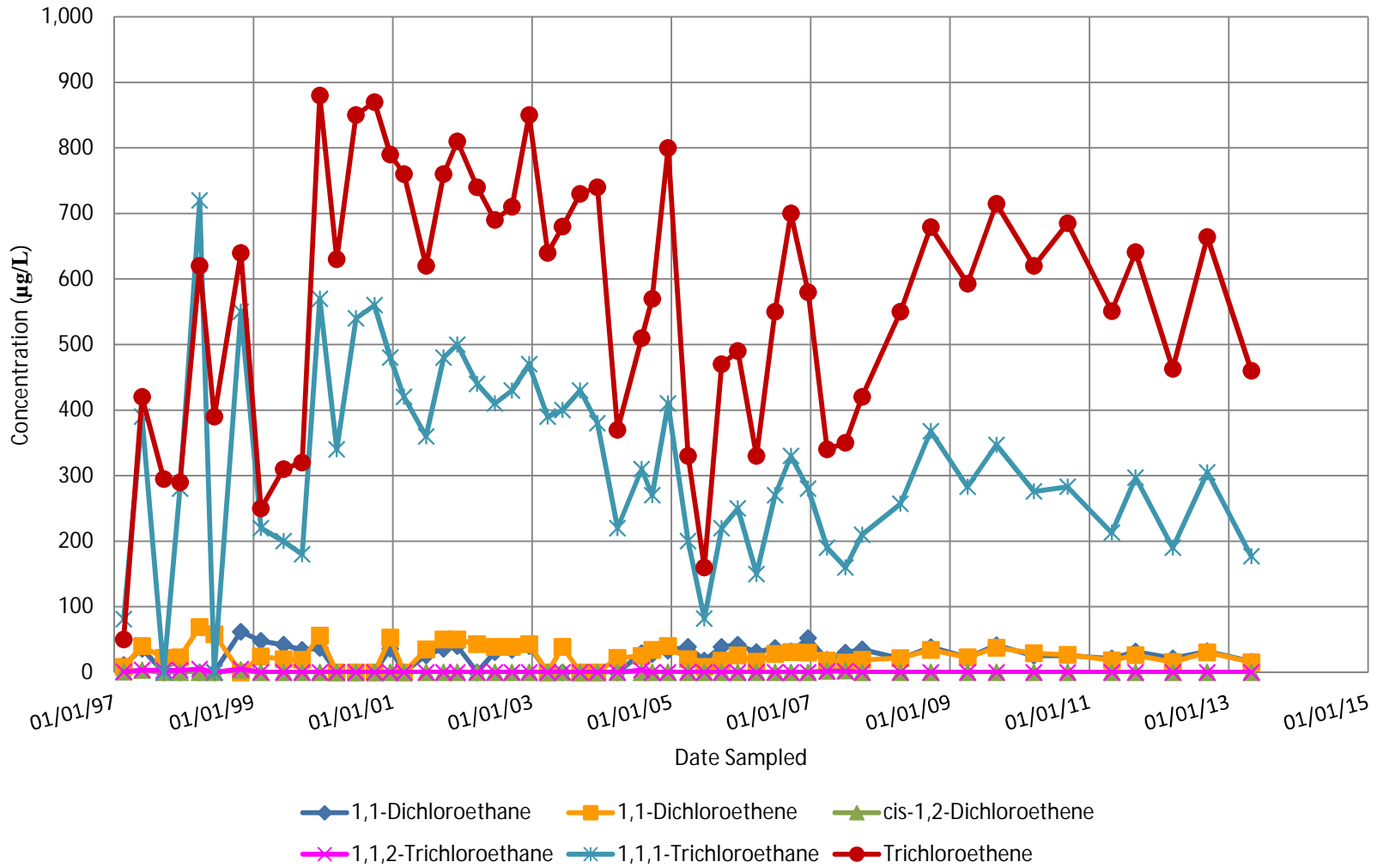


FIGURE 15
 MW-110 CVOC Concentration Trends
 N.W. Mauthe Superfund Site

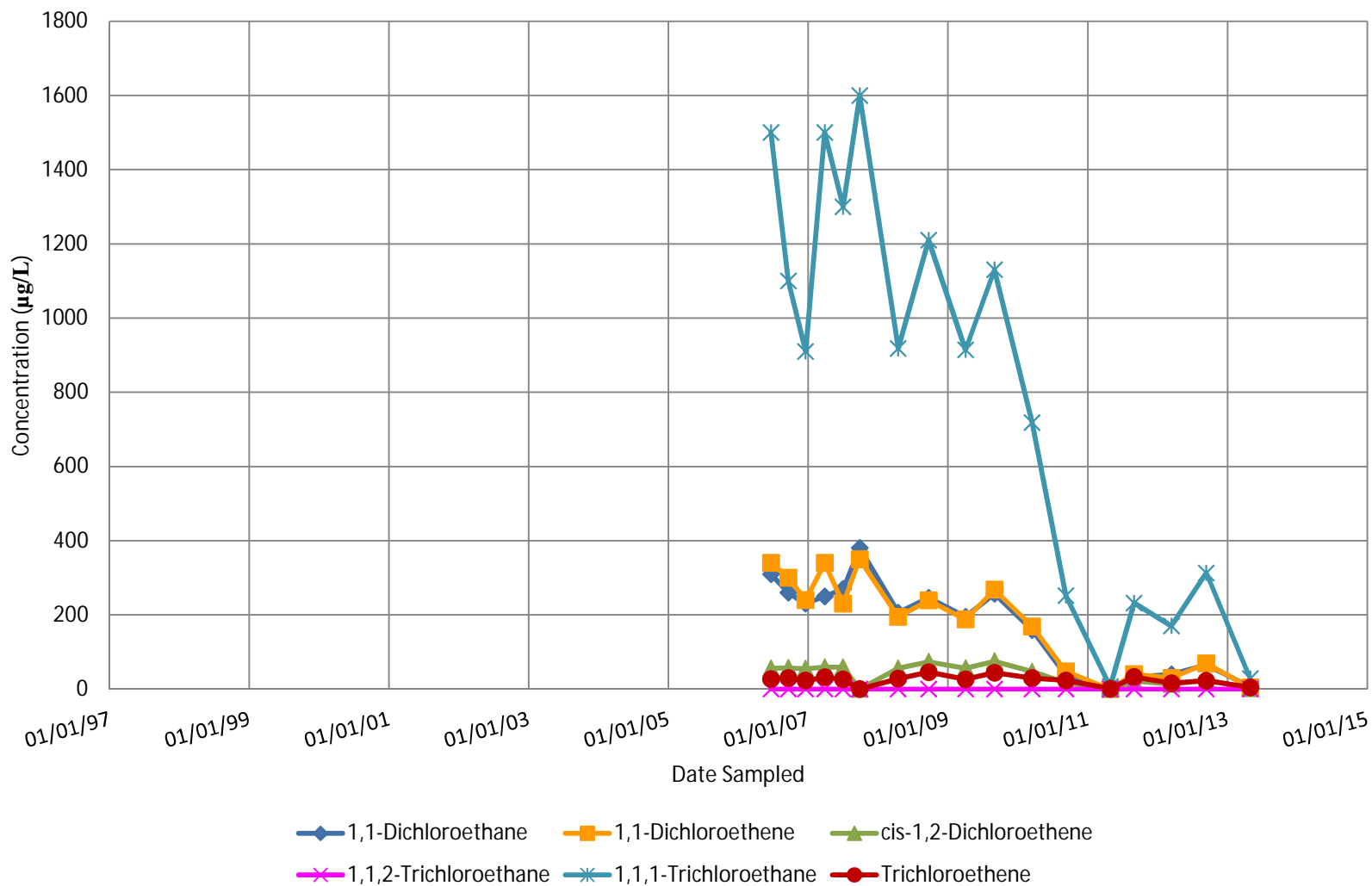
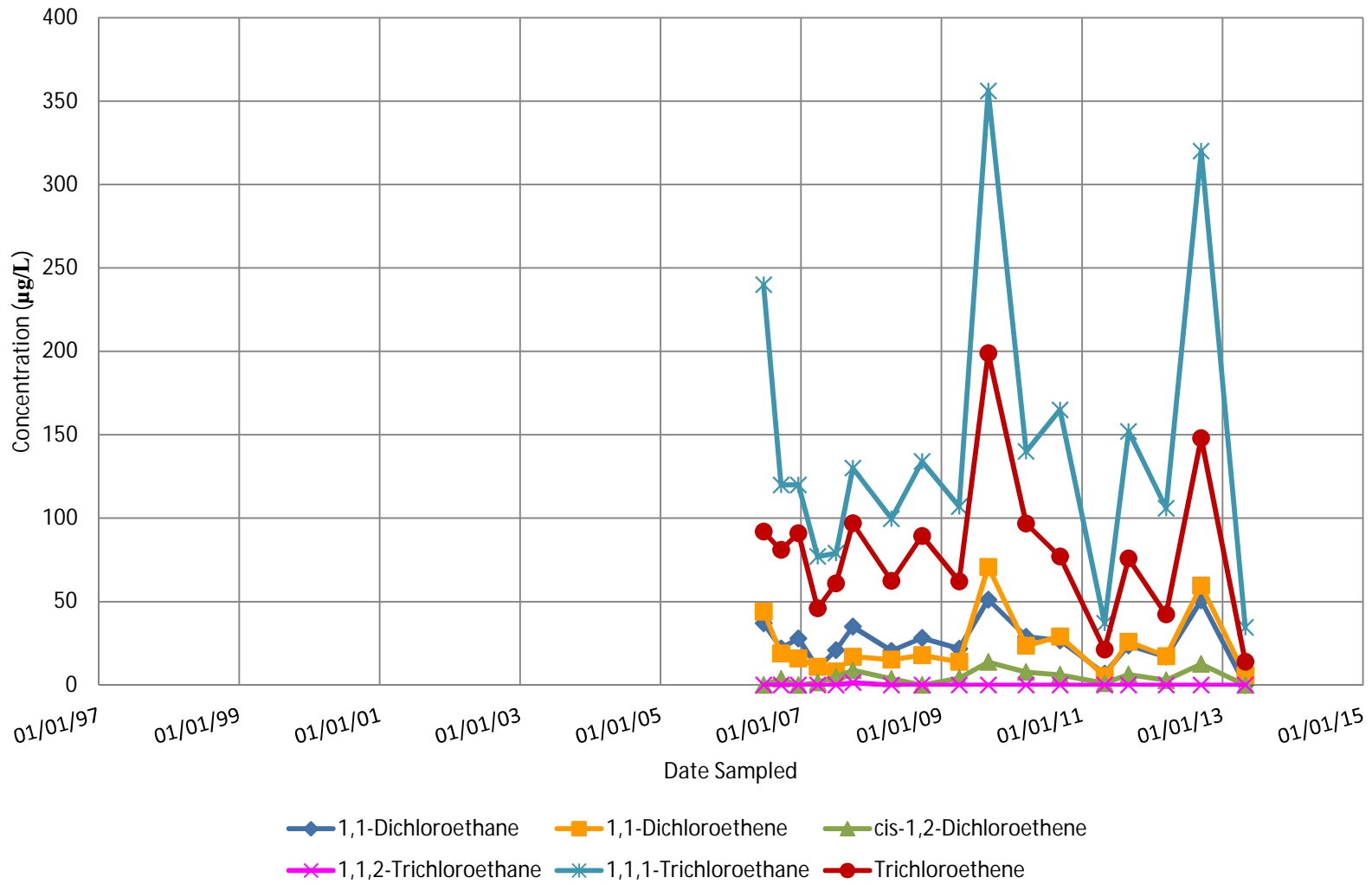


FIGURE 16
MW-113 CVOC Concentration Trends
N.W. Mauthe Superfund Site



Appendix B

Tables 1 to 6

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
09/25/07		8,290,363											
	10/01/07	8,300,685											
10/01/07		8,301,251	10,888										
10/02/07		8,301,251	0		7.7								
10/15/07		8,324,675	23,424										
10/16/07		8,324,675	0		7.4	1.700			6.93	3.9		7.30	0.60
10/22/07		8,355,957	31,282										
10/23/07		8,355,957	0		7.5	1.500			7.04	3.75		NA	NA
10/29/07		8,370,413	14,456	October									
10/30/07		8,370,413	0	71,891	7.4	1.900			NA	NA		NA	NA
	11/01/07	8,372,575											
11/05/07		8,377,912	7,499										
11/06/07		8,377,912	0	November	8.3	1.900	1.300		7.8	4.30		8.2	0.18
11/16/07		8,386,583	8,671	21,587									
	12/01/07	8,394,162											
12/03/07		8,395,372	8,789										
12/04/07		8,395,372	0		8.6	3.100	2.500		8.4	4.60		8.6	0.16
12/12/07		8,399,522	4,150	December									
12/21/07		8,402,508	2,986	25,977									
	01/01/08	8,420,139											
01/01/08		8,420,868	18,360										
01/02/08		8,420,868	0		8.7	1.300	1.200		8.4	4.50		8.7	0.62
01/02/08		8,421,628	760										
01/10/08		8,459,333	37,705										
01/15/08		8,479,244	19,911	January									
01/25/08		8,497,063	17,819	84,612									
	02/01/08	8,504,750											
02/01/08		8,505,562	8,499										
02/03/08		8,507,408	1,846	February									
02/04/08		8,507,408	0	22,861	8.9	1.700	1.600		8.7	2.60		8.8	0.70
	03/01/08	8,527,611											
03/02/08		8,528,931	21,523	March	9.0	2.9	2.500		8.7	3.60		8.8	2.50
03/31/08		8,653,211	124,280	128,713									
	04/01/08	8,656,324											
04/01/08		8,657,629	4,418		9.0	1.6	1.530		8.7	1.60		8.9	1.45
04/01/08		8,661,298	3,669										
04/04/08		8,682,788	21,490										
04/07/08		8,697,084	14,296										
04/08/08		8,697,084	0		9.1	0.063			8.7	1.40		8.9	0.54
04/14/08		8,790,128	93,044										
04/15/08		8,790,128	0		9.1	0.36			8.7	0.90		8.8	0.17
04/15/08		8,797,710	7,582					Installed			Installed		
04/16/08		8,804,525	6,815					1,074			2,804		
04/16/08		8,806,972	2,447					1,589			3,661		
04/21/08		8,826,834	19,862					5,176			11,176		
04/22/08		8,826,834	0		9.1	0.87		5,649	8.8	0.95	12,292	8.9	0.55
04/28/08		8,860,276	33,442	April				13,291			36,802		
04/29/08		8,860,276	0	212,193	9.1	0.51		14,721	8.8	0.96	40,534	9.1	0.43

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	05/01/08	8,868,517											
05/05/08		8,890,994	30,718				22,372				59,203		
05/06/08		8,890,994	0		9.1	0.95	0.679	22,844	8.7	1.14	60,259	8.8	0.62
05/12/08		8,907,573	16,579				28,018				70,853		
05/13/08		8,907,573	0		9.2	0.69		28,487	8.8	1.00	71,555	9.0	0.34
05/19/08		8,920,045	12,472				32,756				79,328		
05/20/08		8,920,045	0		9.1	0.74		33,225	8.8	0.96	80,376	8.9	0.27
05/26/08		8,929,582	9,537	May			36,557				85,277		
05/27/08		8,929,582	0	66,866	9.0	0.60		37,025	8.9	1.04	85,979	8.9	0.16
	06/01/08	8,935,384											
06/02/08		8,936,965	7,383				39,411				90,202		
06/03/08		8,936,965	0		9.3	0.90	0.824	39,876	9.0	1.06	90,901	9.0	0.54
06/09/08		8,951,078	14,113				43,187				101,102		
06/10/08		8,951,078	0		9.2	0.85		44,118	9.0	1.53	106,505	9.0	0.38
06/11/08		8,960,258	9,180				45,176				112,396		
06/16/08		8,999,813	39,555				52,865				140,673		
06/16/08		8,999,813	0				52,865				141,398		
06/17/08		8,999,813	0		9.2	1.4		53,808	9.1	3.40	143,560	9.1	0.33
06/18/08		9,007,718	7,905				54,790				146,825		
06/23/08		9,016,923	9,205				57,605				153,557		
06/24/08		9,016,923	0		9.3	0.20		58,074	9.1	2.50	154,613	9.0	0.14
06/30/08		9,026,850	9,927	June			61,392				160,227		
06/30/08		9,026,850	0	91,466			61,392				160,573		
	07/01/08	9,026,850											
07/01/08		9,026,850	0		9.3	1.4	1.290	61,861	9.0	2.45	161,266	9.1	0.58
07/07/08		9,035,952	9,102				64,701				166,481		
07/08/08		9,035,952	0		9.4	1.2		65,168	9.1	1.90	167,518	9.2	1.05
07/10/08		9,041,071	5,119				66,138				170,315		
07/14/08		9,054,932	13,861				68,973				182,057		
07/15/08		9,054,932	0		9.4	0.82		69,444	9.0	1.80	184,517	9.2	0.54
07/21/08		9,083,663	28,731				74,198				206,929		
07/22/08		9,083,663	0		9.4	0.74		75,898	9.2	2.52	211,453	9.2	0.31
07/25/08		9,114,297	30,634				81,242				230,374		
07/28/08		9,121,075	6,778				83,136				235,668		
07/29/08		9,121,075	0		7.4	0.70		83,609	7.2	3.30	237,073	7.2	0.30
07/29/08		9,123,409	2,334	July			83,646				237,455		
	08/01/08	9,127,730		100,880									
08/04/08		9,137,140	13,731				87,426				248,221		
08/05/08		9,137,140	0		7.6	1.30	1.260	87,426	7.2	2.72	250,342	7.2	0.41
08/05/08		9,141,581	4,441				87,938				252,120		
08/09/08		9,151,886	10,305				90,785				260,213		
08/11/08		9,154,723	2,837				91,732				262,298		
08/12/08		9,154,723	0		7.5	1.2		92,206	7.2	2.45	263,337	7.3	0.25
08/13/08		9,157,388	2,665				92,710				264,058		
08/18/08		9,162,704	5,316				94,604				267,897		
08/19/08		9,162,704	0		7.5	0.98		95,077	7.2	2.08	268,595	7.2	0.20
08/19/08		9,163,932	1,228				95,106				268,623		
08/21/08		9,166,109	2,177				96,049				270,020		
08/24/08		9,168,274	2,165				96,993				271,417		
08/26/08		9,168,274	0	August	7.5	1.1		97,465	7.1	2.25	272,112	7.1	0.22
	09/01/08	9,173,323		45,593									

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
09/01/08		9,173,586	5,312					99,390			274,587		
09/02/08		9,173,586	0		7.6	1.4	1.290	99,863	7.3	2.50	274,936	7.3	0.21
09/02/08		9,174,445	859					99,894			274,962		
09/06/08		9,176,960	2,515					100,837			276,718		
09/08/08		9,176,960	0		7.5	1.3		101,310	7.2	2.25	277,071	7.3	0.16
09/15/08		9,182,218	5,258					103,257			279,911		
09/16/08		9,182,218	0		7.6	1.3		103,731	7.3	2.60	280,611	7.6	0.37
09/18/08		9,185,245	3,027					104,715			281,689		
09/22/08		9,187,538	2,293					105,663			283,095		
09/23/08		9,187,538	0		7.5	1.6		106,137	7.3	3.05	283,475	7.5	0.17
09/28/08		9,191,553	4,015					107,560			285,589		
09/30/08		9,191,553	0	September	7.6	1.8		108,035	7.4	3.70	285,942	7.4	0.18
	10/01/08	9,192,867		19,545									
10/05/08		9,195,280	3,727					109,500			287,383		
10/07/08		9,195,280	0		7.7	2.2	2.000	109,975	7.4	4.38	288,093	7.8	0.12
10/07/08		9,196,521	1,241					110,012			288,124		
10/10/08		9,200,017	3,496					110,965			290,943		
10/12/08		9,200,017	0					111,919			291,644		
10/14/08		9,200,017	0		7.8	1.9		112,396	7.5	3.48	292,698	7.8	0.27
10/16/08		9,204,404	4,387					112,906			293,436		
10/18/08		9,206,201	1,797					113,861			294,504		
10/21/08		9,206,201	0		7.8			114,337	7.5	4.02	295,563	7.9	0.28
10/22/08		9,208,980	2,779					114,848			296,250		
10/26/08		9,211,601	2,621					116,279			297,676		
10/28/08		9,211,601	0	October	7.9	2.0		116,756	7.7	3.96	298,743	8.2	0.26
	11/01/08	9,214,938		22,071									
11/01/08		9,215,379	3,778					117,743			300,201		
11/04/08		9,215,379	0		8.0	2.1	1.880	118,698	7.7	4.32	301,273	8.1	0.20
11/04/08		9,217,467	2,088					118,732			301,305		
11/07/08		9,219,330	1,863					119,685			302,376		
11/10/08		9,220,422	1,092					120,162			303,090		
11/20/08		9,229,031	8,609					123,506			309,112		
11/24/08		9,231,935	2,904					124,939			310,833		
11/24/08		9,232,260	325					124,939			311,189		
11/26/08		9,233,464	1,204					125,702			311,660		
11/28/08		9,234,926	1,462	November				126,192			312,744		
	12/01/08	9,234,926		19,988									
12/02/08		9,234,926	0		8.2	2.3	2.190	127,656	7.8	3.57	314,118	8.3	0.18
12/12/08		9,242,670	7,744					130,122			316,912		
12/17/08		9,247,587	4,917	December				131,563			320,808		
	01/01/09	9,266,230		31,304									
01/02/09		9,268,140	20,553					136,435			338,229		
01/06/09		9,268,140	0		7.8	2.5	2.430	137,894	7.7	4.48	341,351	7.8	1.05
01/12/09		9,277,419	9,279	January				139,384			344,897		
	02/01/09	9,287,182		20,952									
02/01/09		9,287,326	9,907					143,256			351,798		
02/03/09		9,287,326	0		7.8	3.3	2.900	143,738	7.9	4.69	352,143	8.2	0.34
02/05/09		9,288,848	1,522	February				143,772			352,912		
	03/01/09	9,334,332		47,151									

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
03/01/09		9,335,249	46,401					153,077			393,568		
03/03/09		9,335,249	0		7.6	2.4	1.970	153,561	7.9	4.24	394,973	8.2	0.87
03/11/09		9,355,734	20,485					156,519			412,282		
03/30/09		9,463,572	107,838					182,357			500,471		
03/31/09		9,463,572	0	March				183,323			501,935		
	<i>04/01/09</i>	<i>9,467,680</i>		133,348									
04/01/09		9,469,538	5,966					184,290			504,856		
04/03/09		9,478,305	8,767					187,194			511,375		
04/06/09		9,485,542	7,237					189,607			516,807		
04/07/09		9,485,542	0		7.7	0.84	0.730	190,569	7.9	1.14	518,251	8.1	0.52
04/13/09		9,498,358	12,816					194,432			525,799		
04/14/09		9,498,358	0		7.7	0.59		194,908	8.0	1.20	525,799	8.2	0.27
04/20/09		9,507,740	9,382					198,262			532,295		
04/21/09		9,507,740	0		7.8	1.0		198,262	8.0	0.96	533,364	8.3	1.74
04/27/09		9,545,303	37,563					208,646			561,846		
04/28/09		9,545,303	0		8.0	1.2		210,663	7.7	1.89	566,157	7.5	0.28
	<i>05/01/09</i>	<i>9,568,209</i>		April									
05/01/09		9,574,025	28,722	100,528				217,567			582,471		
05/04/09		9,582,624	8,599					220,929			588,270		
05/05/09		9,582,624	0		7.6	0.76	0.724	221,884	8.0	1.29	589,714	8.0	0.33
05/11/09		9,599,171	16,547					227,170			599,566		
05/12/09		9,599,171	0		8.0	0.89		228,124	7.6	0.84	600,996	7.9	0.24
05/18/09		9,613,720	14,549					232,921			609,305		
05/19/09		9,613,720	0		7.4	0.79		233,874	7.0	0.84	610,378	7.2	0.38
05/19/09		9,615,798	2,078					233,908			610,421		
05/19/09		9,616,122	324					233,908			610,775		
05/25/09		9,624,219	8,097					237,697			615,786		
05/26/09		9,624,219	0		7.3	0.58		238,168	7.1	1.08	616,149	7.0	0.16
	<i>06/01/09</i>	<i>9,650,519</i>		May									
06/01/09		9,652,323	28,104	82,310				245,914			637,378		
06/02/09		9,652,323	0		7.3	0.23	0.648	246,871	6.9	1.05	638,835	7.2	0.26
06/03/09		9,658,104	5,781					248,350			641,072		
06/15/09		9,701,735	43,631					261,249			674,466		
	<i>07/01/09</i>	<i>9,727,520</i>		June									
07/01/09		9,727,975	26,240	77,001				272,082			691,914		
07/05/09		9,732,032	4,057					273,967			694,431		
07/07/09		9,732,032	0		7.4	0.96	0.878	274,443	7.1	2.20	695,508	7.1	0.20
07/20/09		9,742,289	10,257					278,743			700,527		
	<i>08/01/09</i>	<i>9,748,231</i>		July									
08/03/09		9,749,397	7,108	20,712				282,543			704,414		
08/04/09		9,749,397	0		7.5	1.9	1.680	283,019	7.1	2.80	704,768	7.3	0.14
08/08/09		9,752,139	2,742					284,005			706,115		
08/08/09		9,753,763	1,624					284,480			707,282		
08/09/09		9,757,508	3,745					284,962			710,677		
08/10/09		9,761,572	4,064					285,930			714,131		
08/10/09		9,762,328	756					286,411			714,491		
08/12/09		9,765,851	3,523					287,368			717,355		
08/13/09		9,767,253	1,402					287,846			718,430		
08/17/09		9,771,256	4,003					289,758			720,916		
08/30/09		9,785,737	14,481					295,976			730,538		

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	09/01/09	9,787,043		August									
09/01/09		9,787,352	1,615	38,811	7.6	1.6	1.320	296,492	7.1	2.85	731,650	7.4	0.53
09/10/09		9,794,060	6,708					299,850			735,572		
09/21/09		9,800,194	6,134					303,204			738,803		
09/22/09		9,800,194	0					303,684			739,163		
	10/01/09	9,806,949		September									
10/01/09		9,807,491	7,297	19,906				306,569			743,395		
10/05/09		9,811,856	4,365					308,500			746,224		
10/06/09		9,811,856	0		6.9	1.8	1.700	308,983	6.8	2.48	746,576	7.1	0.55
10/15/09		9,827,819	15,963					314,838			757,329		
10/18/09		9,830,464	2,645					316,288			758,757		
	11/01/09	9,871,202		October									
11/02/09		9,875,106	44,642	64,253				329,981			793,417		
11/03/09		9,875,106	0		7.4	1.2	1.150	330,961	7.0	2.60	795,595	7.2	0.46
11/04/09		9,880,551	5,445					331,974			797,084		
11/05/09		9,882,809	2,258					332,950			798,526		
11/11/09		9,891,712	8,903					337,309			803,889		
11/12/09		9,893,927	2,215					338,274			805,324		
11/16/09		9,896,880	2,953					339,720			807,132		
11/17/09		9,897,695	815					340,200			807,495		
11/20/09		9,899,892	2,197					341,164			808,946		
11/30/09		9,914,595	14,703					346,476			819,664		
	12/01/09	9,914,595	0	November									
12/01/09		9,914,595	0	43,393	7.6	1.7	1.500	347,446	7.3	2.25	820,740	7.8	0.67
12/15/09		9,931,024	16,429					354,237			829,781		
12/18/09		9,933,254	2,230					355,200			831,213		
	01/01/10	9,956,004		December									
01/03/10		9,960,070	26,816	41,409				362,443			853,235		
01/05/10		9,960,070	0		6.9	2.3	2.220	362,924	7.2	5.36	855,045	7.2	0.68
01/14/10		9,969,979	9,909					365,847			860,488		
01/18/10		9,972,503	2,524					366,807			862,304		
01/31/10		9,991,034	18,531					370,664			878,832		
	02/01/10	9,991,034		January									
02/02/10		9,991,034	0	35,030	7.4	1.6	1.460	371,145	7.2	4.05	880,637	7.2	0.46
02/03/10		9,994,392	3,358					371,664			881,364		
02/16/10		10,002,996	8,604					374,543			887,937		
02/28/10		10,009,542	6,546					376,928			892,655		
	03/01/10	10,009,542		February									
03/02/10		10,009,542	0	18,508	7.6	1.6	1.340	376,928	7.4	2.70	893,732	7.4	1.41
03/06/10		10,015,341	5,799					377,919			898,085		
03/13/10		10,048,616	33,275					383,764			927,938		
03/17/10		10,065,891	17,275					388,140			942,069		
03/23/10		10,077,601	11,710					392,478			950,481		
03/31/10		10,088,487	10,886					396,786			958,091		
	04/01/10	10,088,725		March									
04/01/10		10,088,817	330	79,183				396,786			958,456		
04/04/10		10,092,465	3,648					398,207			961,014		
04/06/10		10,092,465	0		7.4	1.3	1.180	399,166	7.2	2.00	962,110	7.2	0.20
04/19/10		10,151,166	58,701					416,846			1,005,028		
	05/01/10	10,189,439		April									
05/03/10		10,196,869	45,703	100,715				432,284			1,038,553		
05/04/10		10,196,869	0		7.3	0.98	0.902	433,730	7.1	1.12	1,040,370	7.2	0.37
05/17/10		10,258,463	61,594					453,256			1,083,344		
06/01/10		10,294,510	36,047					466,168			1,109,480		
	06/01/10	10,294,510		May									
06/01/10		10,294,510	0	105,071	7.6	0.85	0.762	467,117	7.2	1.44	1,110,569	7.3	0.28
06/21/10		10,372,589	78,079					488,138			1,171,628		

TABLE 1
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N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
06/30/10		10,400,340	27,751					495,720			1,193,925		
06/30/10		10,400,889	549					496,193			1,194,286		
	07/01/10	10,401,954		June									
07/01/10		10,402,536	1,647	107,444				496,664			1,195,375		
07/05/10		10,409,431	6,895					499,493			1,200,058		
07/06/10		10,409,431	0		7.3	1.1	0.988	499,963	7.3	1.92	1,200,783	7.5	0.41
07/12/10		10,426,614	17,183					504,247			1,213,873		
07/21/10		10,506,902	80,288					525,545			1,275,358		
07/22/10		10,515,567	8,665					527,488			1,282,668		
07/23/10		10,532,459	16,892					531,679			1,283,332		
	08/01/10	10,586,662		July									
08/02/10		10,594,781	62,322	184,709				549,129			1,283,332		
08/03/10		10,594,781	0		7.8	0.54	0.515	549,601	7.4	1.20	1,283,332	7.5	0.20
08/04/10		10,599,046	4,265					550,588			1,283,332		
08/04/10		10,599,046	0					550,588			1,283,358		
08/04/10		10,599,046	0					550,588			1,283,358		
08/05/10		10,600,937	1,891					551,531			1,284,413		
08/06/10		10,602,372	1,435					552,002			1,285,481		
08/07/10		10,604,242	1,870					552,943			1,286,560		
08/12/10		10,621,705	17,463					558,442			1,299,650		
08/18/10		10,644,322	22,617					565,095			1,317,296		
	09/01/10	10,664,511		August									
09/06/10		10,672,363	28,041	77,849				575,879			1,336,978		
09/07/10		10,672,363	0		7.7	0.64	0.588	575,879	7.2	1.28	1,337,698	7.4	0.19
09/09/10		10,675,017	2,654					576,846			1,338,823		
09/09/10		10,675,348	331					576,846			1,339,184		
09/15/10		10,681,923	6,575					579,656			1,343,454		
09/20/10		10,688,747	6,824					582,004			1,348,431		
09/28/10		10,712,898	24,151					588,142			1,368,075		
09/28/10		10,713,225	327					588,142			1,368,432		
	10/01/10	10,717,803		September									
10/01/10		10,718,374	5,149	53,291				590,497			1,371,651		
10/03/10		10,721,339	2,965					591,909			1,373,451		
10/05/10		10,721,339	0		7.6	0.80	0.763	592,849	7.3	1.32	1,374,902	7.5	0.10
10/15/10		10,733,086	11,747					597,097			1,380,767		
10/17/10		10,734,957	1,871					598,030			1,381,848		
10/31/10		10,760,102	25,145					605,549			1,401,547		
	11/01/10	10,760,102		October									
11/02/10		10,760,102	0	42,299	7.8	0.65	0.639	606,486	7.6	1.44	1,403,369	7.9	0.20
11/11/10		10,773,294	13,192					611,203			1,410,005		
11/14/10		10,775,484	2,190					612,137			1,411,471		
11/17/10		10,778,424	2,940					613,539			1,413,301		
11/28/10		10,790,717	12,293					618,231			1,422,421		
	12/01/10	10,794,632		November									
12/04/10		10,800,013	9,296	34,530				622,006			1,428,648		
12/07/10		10,800,013	0		7.6	1.0	0.989	623,423	7.8	1.80	1,430,482	7.9	0.24
12/15/10		10,811,058	11,045					627,228			1,435,313		
12/20/10		10,814,659	3,601					628,621			1,437,887		
12/23/10		10,816,825	2,166					629,558			1,439,358		
	01/01/11	10,827,569		December									
01/02/11		10,829,348	12,523	32,938				632,850			1,449,967		
01/04/11		10,829,348	0		8.0	1.6	1.500	633,803	7.9	5.31	1,452,901	8.0	0.53
01/17/11		10,845,438	16,090					638,076			1,462,175		
01/28/11		10,852,203	6,765					640,437			1,467,352		
01/30/11		10,853,317	1,114					640,910			1,468,093		

**TABLE 1
Influent - Effluent Compliance Summary**

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	02/01/11	10,853,317		January									
02/01/11		10,853,317	0	25,748	7.9	2.1	2.100	641,382	7.7	4.90	1,468,834	7.6	0.18
02/02/11		10,854,899	1,582					641,426			1,469,273		
02/14/11		10,859,963	5,064					643,318			1,472,988		
02/21/11		10,876,100	16,137					646,167			1,488,233		
02/21/11		10,876,705	605					646,167			1,488,978		
02/24/11		10,880,277	3,572					647,105			1,491,974		
02/27/11		10,883,601	3,324					648,128			1,494,713		
	03/01/11	10,883,601		February									
03/01/11		10,883,601	0	30,284	7.8	1.8	1.530	648,594	7.7	4.95	1,496,572	7.8	0.52
03/21/11		10,957,602	74,001					664,834			1,558,957		
	04/01/11	11,023,291		March									
04/04/11		11,045,838	88,236	139,690				687,442			1,632,177		
04/05/11		11,045,838	0		8.0	0.40	0.380	688,903	7.8	1.10	1,637,351	7.7	0.21
04/16/11		11,138,592	92,754					710,138			1,708,997		
04/26/11		11,216,566	77,974					731,830			1,771,918		
04/29/11		11,258,391	41,825					743,289			1,804,105		
04/29/11		11,262,451	4,060					744,757			1,807,043		
	05/02/11	11,274,169		April									
05/02/11		11,277,586	15,135	250,878				750,559			1,818,009		
05/03/11		11,277,586	0		7.8	0.37	0.338	751,514	7.6	0.68	1,819,601	7.8	0.20
05/16/11		11,310,055	32,469					763,336			1,841,085		
05/17/11		11,311,520	1,465					763,807			1,842,263		
	06/01/11	11,344,383		May									
06/02/11		11,347,664	36,144	70,214				778,512			1,868,238		
06/06/11		11,354,057	6,393					781,832			1,872,152		
06/07/11		11,354,057	0		7.7	0.46	0.447	782,305	7.6	0.85	1,872,545	7.7	0.14
06/17/11		11,368,867	14,810					788,961			1,881,915		
06/20/11		11,373,134	4,267					790,860			1,884,626		
	07/01/11	11,419,112		June									
07/04/11		11,434,679	61,545	74,729				811,146			1,932,424		
07/05/11		11,434,679	0		7.9	0.78	0.752	811,621	7.6	1.50	1,933,199	7.5	0.19
07/18/11		11,450,616	15,937					818,915			1,942,544		
07/27/11		11,470,412	19,796					825,753			1,958,375		
07/28/11		11,473,213	2,801					826,666			1,960,688		
	08/01/11	11,483,192		July									
08/01/11		11,484,004	10,791	64,080				830,795			1,968,801		
08/02/11		11,484,004	0		7.9	0.86	0.800	831,711	7.5	1.26	1,970,342	7.5	0.42
08/04/11		11,492,474	8,470					834,025			1,975,014		
08/05/11		11,493,370	896					834,506			1,975,820		
08/15/11		11,509,618	16,248					841,800			1,986,618		
08/31/11		11,524,004	14,386					849,495			1,994,794		
	09/01/11	11,524,179		August									
09/01/11		11,524,431	427	40,987				849,948			1,994,794		
09/03/11								850,953			1,997,262		
09/05/11		11,533,935	9,504					852,322			2,003,014		
09/06/11		11,533,935	0		8.0	1.2	1.180	852,778	7.7	1.65	2,004,161	7.7	0.55
09/08/11		11,538,054	4,119					854,174			2,005,726		
09/19/11		11,547,336	9,282					859,158			2,011,134		
09/20/11		11,548,416	1,080					859,611			2,011,902		
09/28/11		11,562,993	14,577					863,696			2,024,247		

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	10/01/11	11,568,104		September									
10/03/11		11,572,412	9,419	43,925				867,344			2,031,123		
10/04/11		11,574,566	2,154					868,253			2,032,650		
10/05/11		11,574,566	0					868,707			2,033,029		
10/06/11		11,574,566	0					869,161			2,033,785		
10/08/11		11,579,097	4,531					870,519			2,036,082		
10/10/11		11,579,097	0		7.5	1.2	1.090	870,972	7.4	2.15	2,036,082	7.5	0.22
10/26/11		11,603,315	24,218					879,056			2,054,141		
10/30/11		11,606,358	3,043					880,416			2,055,759		
	11/01/11	11,607,509		October			Pounds Cr						
11/01/11		11,608,102	1,744	39,405			0.358	881,323			2,055,759		
11/02/11		11,608,233	131					881,362			2,055,792		
11/03/11		11,608,233	0		8.2	1.3	1.220	881,378	8.1	2.46	2,055,818	8.0	0.03
11/05/11		11,611,395	3,162					882,340			2,059,467		
11/06/11		11,614,756	3,361					883,608			2,062,594		
11/07/11		11,616,924	2,168					883,718			2,063,343		
11/08/11		11,618,636	1,712					884,345			2,065,014		
11/12/11		11,651,616	32,980					890,384			2,094,235		
11/15/11		11,662,529	10,913					894,135			2,102,462		
11/23/11		11,677,899	15,370					900,936			2,112,833		
11/29/11		11,687,640	9,741				Pounds Cr	905,028			2,119,690		
	12/01/11	11,689,609		November			0.834						
12/01/11		11,687,640	0	82,100	7.4	1.7	1.700	905,938	7.8	2.65	2,119,690	8.0	0.72
12/06/11		11,706,691	19,051					910,893			2,134,888		
12/15/11		11,724,224	17,533					918,198			2,147,141		
12/26/11		11,737,368	13,144					924,102			2,155,863		
12/31/11		11,742,107	4,739					926,371			2,158,911		
	01/01/12	11,742,204		December			Pounds Cr						
01/04/12		11,744,667	2,560	52,595			0.745	927,731			2,158,911		
01/05/12		11,744,667	0		6.9	0.98	0.862	928,184	7.5	1.84	2,161,198	7.3	0.27
01/19/12		11,754,619	9,952					932,303			2,166,977		
01/27/12		11,758,987	4,368					934,572			2,169,652		
01/31/12		11,761,124	2,137				Pounds Cr	935,480			2,171,180		
	02/01/12	11,761,228		January			0.137						
02/02/12		11,761,124	0	19,024	7.4	2.1	1.860	936,191	7.7	2.50	2,172,687	7.7	6.1
02/07/12		11,763,586	2,358					938,043		2.80	2,176,546		1.71
02/22/12		11,778,355	14,769					941,736			2,183,827		
02/24/12		11,780,157	16,571					942,642			2,184,964		
02/28/12		11,782,379	18,793				Pounds Cr	943,547			2,186,478		
	03/01/12	11,783,379		February			0.329						
03/01/12		11,782,379	0	21,255	7.1	2.6	2.560	944,002	7.3	3.45	2,186,478	7.6	2.04
03/14/12		11,824,851	41,472					956,400			2,221,364		
03/21/12		11,839,925	15,074					962,783			2,231,770		
03/25/12		11,848,965	9,040					965,591			2,239,149		
	04/01/12	11,865,023		March			Pounds Cr						
04/03/12		11,871,806	22,841	81,644			1.740	973,817			2,256,557		
04/05/12		11,871,806	6,783		7.6	0.83	0.730	975,189	7.9	1.28	2,258,866	7.8	0.48
04/18/12		11,896,899	25,093					984,322			2,273,887		
04/21/12		11,906,449	9,550					986,147			2,282,902		
	05/01/12	11,923,538		April			Pounds Cr						
05/02/12		11,930,935	24,486	58,515			0.356	996,194			2,300,258		
05/03/12		11,933,848	2,913					997,107			2,302,572		

TABLE 1
Influent - Effluent Compliance Summary

N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
05/09/12		11,989,964	56,116					1,010,822			2,349,979		
05/14/12		12,005,061	15,097					1,016,338			2,361,277		
05/16/12		12,005,061	0		6.5	0.67	0.581	1,018,169	7.4	0.63	2,363,951	7.6	0.15
05/20/12		12,016,709	11,648					1,021,100			2,368,989		
05/22/12		12,018,570	1,861					1,022,007			2,370,141		
05/24/12		12,021,249	2,679					1,023,245			2,372,066		
05/31/12		12,028,808	7,559					1,027,317			2,378,556		
	06/01/12	12,029,342		May			Pounds Cr						
06/02/12		12,030,994	2,186	105,804			0.512	1,027,317			2,378,556		
06/05/12		12,033,617	2,623					1,028,676			2,380,101		
06/07/12		12,033,617	0		6.8	0.55	0.507	1,029,581	7.4	0.99	2,381,259	7.7	0.17
06/19/12		12,046,851	13,234					1,034,134			2,389,253		
06/29/12		12,056,747	9,896					1,038,653			2,395,689		
	07/01/12	12,057,998		June			Pounds Cr						
07/03/12		12,059,332	1,334	28,656			0.121	1,040,009			2,397,210		
07/05/12		12,059,332	0		6.1	0.98	0.906	1,040,913	6.2	1.24	2,397,969	6.6	0.19
07/10/12		12,064,003	4,671					1,042,739			2,402,552		
07/20/12		12,069,263	5,260					1,045,446			2,402,552		
	08/01/12	12,078,083		July			Pounds Cr						
08/01/12		12,078,359	9,096	20,085			0.152	1,049,510			2,408,561		
08/02/12		12,078,359	0		6.2	1.20	1.120	1,049,969	6.2	1.72	2,408,954	6.0	0.56
08/07/12		12,082,510	4,151					1,051,808			2,410,869		
08/16/12		12,098,108	15,598					1,056,800			2,423,447		
	09/01/12	12,111,167		August			Pounds Cr						
09/01/12		12,111,772	13,664	33,084			0.309	1,063,135			2,432,088		
09/09/12		12,116,611	4,839					1,065,875			2,434,745		
09/11/12		12,117,783	1,172			1.70	1.520	1,066,747	6.4	0.72	2,435,127	6.3	0.21
09/18/12		12,121,226	3,443					1,068,577			2,437,061		
09/26/12		12,125,024	3,798					1,070,837			2,438,957		
	10/01/12	12,126,164		September			Pounds Cr						
10/04/12		12,127,304	2,280	14,997			0.190	1,072,193			2,440,091		
10/04/12		12,127,304	1,140			1.50	1.370	1,072,193	6.4	1.44	2,440,091	6.2	0.32
10/05/12		12,129,085	1,781					1,073,276			2,440,999		
10/09/12		12,129,791	706					1,073,696			2,441,370		
10/19/12		12,163,907	34,116					1,081,043			2,471,345		
10/30/12		12,189,653	25,746					1,092,239			1,289,448		
	11/01/12	12,191,094		October			Pounds Cr						
11/06/12		12,196,769	7,116	64,930			0.741	1,096,343			2,493,654		
11/09/12		12,198,437	1,668		NA	1.1	1.040	1,097,450	NA	1.34	2,494,750	NA	0.21
11/22/12		12,212,741	14,304					1,103,179			2,504,679		
11/30/12		12,218,011	5,270					1,106,155			2,507,598		
	12/01/12	12,218,663		November			Pounds Cr						
12/03/12		12,219,752	1,089	27,569			0.239	1,107,006			2,508,689		
12/10/12		12,223,289	3,537		8.0	1.00	1.100	1,109,121	7.7	1.60	2,510,506	8.0	0.27
12/26/12		12,234,632	11,343					1,114,683			2,517,462		
12/31/12		12,239,248	4,616					1,117,237			2,520,012		

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N.W. Mauthe Superfund Site
Appleton, Wisconsin
Terracon Project No. 58117057

Date Actual	OUTFALL 001							Manhole #1			Manhole #2		
	Date For Linear Interpolation	Metered Discharge Reading (gallons)	Gallons Discharged Between Meter Reading	Monthly Discharge (gallons)	pH	Hexavalent Chromium Lab Analysis (mg/L) [Local Limit 4.5 mg/L]	Total Chromium Lab Analysis (mg/L) [Local Limit 7.0 mg/L]	Flow Totalizer #1 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)	Flow Totalizer #2 Reading (gallons)	pH	Hexavalent Chromium Hach Test Kit (mg/L)
	01/01/13	12,239,543		December			Pounds Cr						
01/01/13		12,239,958	710	20,880			0.191	1,117,663			2,520,377		
01/10/13		12,246,590	6,632			1.90	1.720	1,120,640	7.7	1.68	2,524,770	8.0	1.32
01/24/13		12,278,928	32,338					1,130,141			2,550,847		
01/28/13		12,282,035	3,107					1,131,414			2,553,042		
01/31/13		12,287,892	5,857					1,132,425			2,558,715		
	02/01/13	12,288,247		January			Pounds Cr						
02/01/13		12,289,018	1,126	48,644			0.697	1,132,680			2,559,456		
02/07/13		12,293,874	4,856		7.9	0.82	0.663	1,134,376	7.6	1.35	2,563,137	8.0	0.22
02/20/13		12,308,445	14,571					1,038,672			2,575,057		
02/27/13		12,313,181	19,307					1,140,359			2,578,725		
	03/01/13	12,314,165		February			Pounds Cr						
03/03/13		12,315,958	2,777	25,918			0.143	1,141,206			2,580,927		
03/07/13		12,318,024	2,066		7.9	0.83	0.753	1,142,054	7.7	1.44	2,582,395	7.8	0.27
03/18/13		12,361,201	43,177					1,151,536			2,619,703		
03/20/13		12,365,136	3,935					1,153,250			2,622,317		
03/27/13		12,378,442	13,306					1,159,233			2,630,884		
03/31/13		12,400,821	22,379					1,164,838			2,649,804		
	04/01/13	12,403,728		March			Pounds Cr						
04/01/13		12,407,465	3,737	89,563			0.562	1,165,570			2,655,346		
04/11/13		12,461,497	54,032		7.4	0.42	0.431	1,180,148	7.0	0.60	2,700,747	7.4	0.14
04/17/13		12,522,138	60,641					1,196,092			2,749,790		
	05/01/13	12,570,545		April			Pounds Cr						
05/01/13		---	---	166,817			0.599						
05/01/13		12,571,333	49,195		8.1	0.56	0.431	1,215,096	7.3	0.38	2,785,968	7.8	0.09

Italicized red type metered discharge reading was calculated by linear interpolation to 12 midnight.

Industrial User (Wastewater Discharge) Permit 12-21 Outfall 001 Effluent Limits		
pH	Hexavalent Chromium	Total Chromium
Between 5.0 and 12.4 s.u.	<4.5 mg/L	<7.0 mg/L

TABLE 2
City of Appleton Compliance Limits, Outfall 001
 N.W. Mauthe Superfund Site - Appleton, WI

		Aluminum (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Chromium Total (mg/L)	Copper (mg/L)	Cyanide (mg/L)	Lead (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Hexavalent Chromium (mg/L)
Permit #12-21 Limits		70	1.0	0.3	7.0	3.5	1.0	2.0	0.002	2.0	10.0	4.5
Sampler	Sample Date											
CH2M Hill	02/20/97	<.02	<.003	<.00050	0.04	<.01	<.00001	<.005	<.0002	<.005	0.0051	<.01
CH2M Hill	03/24/98	0.0152	<.002	<.00004	0.0637	<.0095	<.0017	<.0006	<.000015	<.0095	0.0046	0.1000
Appleton	04/29/98	<.011	<.002	<.005	0.2200	<.05	0.0020	<.1	<.0002	<.04	<.005	NA
Appleton	10/07/98	<.011	<.002	0.0050	0.1700	<.05	<.001	<.1	<.0002	<.04	0.0250	NA
MCO	03/18/99	<.009	<.003	<.00031	NA	.00068****	<.000032	<.0024	<.00005	.00351****	<.012	<.0036
Appleton	03/18/99	<.011	<.002	<.005	<.05	<.05	0.0010	0.1000	<.00005	0.0400	0.0180	NA
Appleton	09/21/99	<.011	<.002	<.005	<.05	<.05	0.0030	<.1	<.00015	<.04	0.0080	NA
Appleton	02/15/00	<.015	<.0020	<.005	0.0900	<.05	<.001	<.1	<.00013	<.04	0.0280	NA
MCO	03/13/00	<.009	<.003	<.00031	0.1400	<.0006	<.0044	<.0024	<.00005	0.0012	<.012	NA
Appleton	02/21/01	<.015	<.002	<.005	0.11	<.05	0.001	<.1	<.00013	<.04	0.042	NA
MCO	03/01/01	<.034	<.0027	.012 ****	0.25	.0088 ****	<.0033	<.17	<.00005	.036 ****	0.015	<.0036
Appleton	10/02/01	0.016	<.002	<.005	0.14	<.05	<.001	<.1	<.00013	<.04	0.065	NA
MCO	03/19/02	<.034	<.0027	<.0075	0.36	<.0077	<.0027	<.17	<.00005	<.017	<.012	<.0036
Appleton	05/02/02	<.049	<.012	<.014	0.362	<.015	<.0014	<.060	<.00011	<.011	<.009	NA
Appleton	11/12/02	0.027	<.0082	<.00053	0.23	<.009	<.0007	<.00084	<.000028	0.0044	0.0081	NA
Appleton	02/11/03	<.027	<.0082	<.00053	0.086	<.0009	<.0014	<.0013	<.000028	0.0036	<.0025	NA
Appleton	03/24/03	<.045	<.0027	<.0088	0.13	0.075	<.0050	<.16	<.000050	<.019	<.0044	<.0036
Appleton	10/23/03	0.0045	0.0013	<.00001	0.221	<.0008	<.0005	<.00006	0.0002	<.025	<.010	NA
Appleton	03/24/04	<.050	<.0026	<.010	0.15	<.0060	<.0050	<.16	<.000025	<.020	<.010	NA
Appleton	11/09/04	0.0071	<.0012	<.00001	0.04	0.0008	<.0005	<.008	<.0002	0.0013	<.01	NA
MCO	08/08/05	0.023	<.0035	<.0003	0.039	0.0019	<.0037	<.0011	<.000026	<.0044	0.0024	<.0005
Appleton	11/05/06	0.0052	<.0012	<.00001	0.088	<.0005	<.0005	<.0008	<.0002	0.0017	<.010	NA
Appleton	02/23/06	0.0021	<.0012	<.00001	0.08	<.0005	<.0005	<.0008	<.0002	0.0022	<.010	NA
MCO	03/23/06	<.020	<.0076	<.00074	0.32	0.0018	0.0043	<.0034	<.000026	0.0033	<.020	NA
Appleton	06/27/06	<.0200	<.0076	<.00074	0.700	0.0016	<.0094	<.0034	<.000072	0.0021	<.020	<.0350
Appleton	10/05/06	0.037	<.00011	<.00001	4.575	0.0068	0.01	<.001	<.0002	0.0026	<.010	NA
Appleton	03/22/07	<.07	<.07	<.01	1.9	3.5	<.004	<.03	<.0002	<.04	<.01	NA
MCO	04/02/07	0.0383	0.00024	0.000086	1.41	0.0041	<.0094	0.00013	<.00019	0.0035	0.009	NA
Appleton	12/04/07	<.07	<.001	<.01	3.4	<.01	0.008	<.03	<.0002	<.04	<.01	1.5
Appleton	01/16/08	0.21	<.0005	<.01	<.03	0.02	0.017	0.06	0.0003	<.04	0.04	NA
OMNNI	04/08/08	0.0114	0.00043	0.00011	0.864	0.0043	0.014 J	0.000095 J	<.00001	0.0024	0.0071	0.063
Appleton	08/19/08	<.08	<.001	<.01	0.95	<.01	0.005	<.03	0.0002	<.02	<.01	NA
Appleton	03/31/09	<.09	<.012	<.01	0.99	<.01	<.008	<.05	<.0002	<.02	<.01	NA
OMNNI	04/07/09	<.0151	0.003 J	0.00040 J	0.767	0.0024 J	<.0060	<.0014	<.00010	0.0016 J	0.0137 J	0.84
Appleton	09/22/09	<.08	<.006	<.01	2.3	<.01	<.008	<.05	<.0002	<.02	<.01	NA
Appleton	03/02/10	<.06	<.002	<.01	1.6	<.01	<.008	<.03	<.0002	<.01	<.01	NA
OMNNI	04/06/10	0.0501 J	<.0014	0.00043 J	1.16	0.0024 J	<.0061	<.00075	<.0001	0.0023 J	0.0046 J	1.3
Appleton	11/02/10	<.10	<.010	<.01	0.71	<.01	<.008	<.03	<.0002	<.01	<.01	NA
Appleton	02/24/11	<.08	<.001	<.01	1.5	<.01	0.008	<.04	<.0002	<.02	<.01	NA
OMNNI	04/05/11	0.0725 J	0.0025 J	<.00026	0.401	0.0028 J	<.0061	<.0014	<.00010	0.00053 J	0.0023 J	0.40
Appleton	10/26/11	<.08	<.005	<.01	1.2	<.01	0.007	<.04	<.0002	<.02	<.01	NA
Appleton	03/21/12	<.11	<.004	<.01	1.3	0.01	0.007	<.04	<.0002	<.02	<.01	NA
Terracon	04/05/12	<.0695	<.0047	<.00039	0.696	0.014†	<.0061	<.0014	<.00010	0.001†	<.0053	0.83
Appleton	10/04/12	0.0865	0.0051	0.00049	1.43	0.003†	0.026	0.0022	0.0001	0.0019†	<.0053	NA
Terracon	04/11/13	0.078	<.004	<.00048	0.431	0.003†	<.0038	<.027	<.00010	0.0013†	<.0024	0.42
Appleton	04/17/13	<.0714	<.0042	<.00048	0.279	0.003†	<.0038	<.027	<.00010	0.0062†	<.0024	NA

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
W-2	02/01/97	-		798.66
	05/01/97	-		801.01
	09/01/97	-		800.28
	12/01/97	-	804.66	797.69
	03/01/98	-		802.08
	06/01/98	-		799.38
	10/27/98	5.85		798.81
	02/08/99	4.50		800.16
	06/08/99	3.31		801.35
	09/13/99	5.78		798.88
	12/15/99	6.63		798.03
	03/13/00	1.60		803.06
	06/22/00	2.63		802.03
	09/27/00	3.28		801.38
	12/19/00	4.78		799.88
	03/01/01	5.93		798.73
	06/19/01	1.83		802.83
	09/24/01	5.94		798.72
	12/05/01	4.93		799.73
	03/19/02	1.08		803.58
	06/20/02	2.78		801.88
	09/18/02	6.38		798.28
	12/17/02	6.81		797.85
	03/24/03	4.31		800.35
	06/10/03	3.14		801.52
	09/10/03	6.11		798.55
	12/10/03	4.03		800.63
	03/24/04	1.26		803.40
	07/09/04	3.44		801.22
	09/21/04	6.79		797.87
	03/29/05	4.51		800.15
	06/20/05	4.83		799.83
	09/21/05	6.21		798.45
	12/14/05	5.51		799.15
	03/21/06	0.08		804.58
	06/28/06	6.02		798.64
	09/20/06	8.75		795.91
	12/09/06	6.20		798.46
	03/13/07	3.80		800.86
	07/03/07	6.16		798.50
	09/27/07	5.66		799.00
	04/16/08	5.91		798.75
	04/03/09	1.20		803.46
	03/17/10	1.37		803.29
	04/29/11	0.65		804.01
	03/14/12	1.55		803.11
	04/29/13	1.68		802.98

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
W-8	02/01/97	-		797.22
	05/01/97	-		797.66
	09/01/97	-		798.01
	12/01/97	-	803.36	796.52
	03/01/98	-		798.16
	06/01/98	-		797.31
	10/27/98	6.41		796.95
	02/08/99	5.49		797.87
	06/08/99	4.38		798.98
	09/13/99	6.71		796.65
	12/15/99	6.91		796.45
	03/13/00	6.25		797.11
	06/22/00	6.42		797.34
	09/27/00	5.66		797.70
	12/19/00	6.80		796.56
	03/01/01	5.41		797.95
	06/19/01	5.02		798.34
	09/24/01	3.38		799.98
	12/05/01	7.02		796.34
	03/19/02	3.63		799.73
	06/20/02	5.66		797.70
	09/18/02	6.93		796.43
	12/17/02	9.00		794.36
	03/24/03	6.18		797.18
	06/10/03	6.11		797.25
	09/10/03	6.71		796.65
	12/10/03	6.62		796.74
	03/23/04	6.55		796.81
	07/09/04	6.11		797.25
	09/21/04	7.08		796.28
	03/29/05	6.24		797.12
	06/20/05	6.60		796.76
	09/21/05	6.84		796.52
	12/14/05	6.71		796.65
	03/21/06	6.57		796.79
	06/28/06	7.18		796.18
	09/20/06	7.07		796.29
	12/19/06	6.87		796.49
	03/13/07	6.48		796.88
	07/03/07	7.29		796.07
	09/27/07	6.52		796.84
	04/16/08	6.11		797.25
	04/03/09	6.16		797.20
	03/17/10	6.14		797.22
	04/29/11	5.92		797.44
	03/14/12	6.09		797.27
	04/29/13	6.46		796.90

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
W-15	02/01/97	-		793.97
	05/01/97	-		796.92
	09/01/97	-		797.23
	12/01/97	-	803.76	795.52
	03/01/98	-		796.78
	06/01/98	-		796.32
	10/27/98	7.95		795.81
	02/08/99	9.19		794.57
	06/08/99	6.89		796.87
	09/13/99	7.85		795.91
	12/15/99	8.97		794.79
	03/13/00	7.80		795.96
	06/22/00	6.42		797.34
	09/27/00	6.30		797.46
	12/19/00	7.99		795.77
	03/01/01	9.52		794.24
	06/19/01	6.91		796.82
	09/24/01	6.65		797.11
	12/05/01	8.15		795.61
	03/19/02	7.22		796.54
	06/20/02	6.84		796.92
	09/18/02	7.28		796.48
	12/17/02	9.98		793.78
	03/24/03	9.77		793.99
	06/10/03	7.04		796.72
	09/10/03	7.06		796.70
	12/10/03	7.15		796.61
	03/23/04	6.58		797.18
	07/09/04	6.45	803.66 ****	797.21
	09/21/04	7.26		796.40
	03/29/05	7.50		796.16
	06/20/05	6.82		796.84
	09/21/05	7.05		796.61
	12/14/05	7.88		795.78
	03/21/06	6.95		796.71
	06/28/06	6.98	803.42 *****	796.44
	09/20/06	7.13		796.29
	12/19/06	8.02		795.40
	03/13/07	7.22		796.20
	07/03/07	7.00		796.42
	09/27/07	6.67		796.75
	04/16/08	-		-
	04/03/09	6.24		797.18
	03/17/10	7.19		796.23
	04/29/11	6.21		797.21
	03/14/12	6.62		796.80
	429/2013	6.41		797.35

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-101	02/01/97	-		797.16
	05/01/97	-		799.99
	09/01/97	-		798.67
	12/01/97	-	807.59	798.21
	03/01/98	-		803.43
	06/01/98	-		800.48
	10/27/98	10.26		797.33
	02/08/99	11.91		795.68
	06/08/99	9.79		797.80
	09/13/99	10.35		797.24
	12/15/99	9.01		798.58
	03/13/00	12.67		794.92
	06/22/00	6.28		801.31
	09/27/00	10.41		797.18
	12/19/00	10.73		796.86
	03/01/01	12.61		794.98
	06/19/01	8.43		799.16
	09/24/01	10.50		797.09
	12/05/01	10.98		796.61
	03/19/02	8.10		799.49
	06/20/02	7.08		800.51
	09/18/02	10.23		797.36
	12/17/02	12.47		795.12
	03/24/03	10.00		797.59
	06/10/03	7.41		800.18
	09/10/03	9.53		798.06
	12/10/03	8.31		799.28
	03/23/04	5.95		801.64
	07/09/04	7.84		799.75
	09/21/04	10.50		797.09
	03/29/05	9.00		798.59
	06/20/05	9.28		798.31
	09/21/05	9.64		797.95
	12/14/05	8.93		798.66
	03/21/06	8.10		799.49
	06/28/06	8.88		798.71
	09/20/06	8.90		798.69
	12/19/06	8.95		798.64
	03/13/07	8.73		798.86
	07/03/07	7.39		800.20
	09/27/07	7.31		800.28
	04/16/08	3.76		803.83
	04/03/09	5.09		802.50
	03/17/10	7.27		800.32
	04/29/11	3.36		804.23
	03/14/12	6.55		801.04
	04/29/13	5.46		802.13

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-102	02/01/97	-		780.72
	05/01/97	-		780.89
	09/01/97	-		780.79
	12/01/97	-	804.45	780.95
	03/01/98	-		780.47
	06/01/98	-		780.72
	10/27/98	24.11		780.34
	02/08/99	23.84		780.61
	06/08/99	23.59		780.86
	09/13/99	23.70		780.75
	12/15/99	24.27		780.18
	03/13/00	24.00		780.45
	06/22/00	23.69		780.76
	09/27/00	23.65		780.80
	12/19/00	24.06		780.39
	03/01/01	26.01		778.44
	06/19/01	23.35		781.10
	09/24/01	23.88		780.57
	12/05/01	24.08		780.37
	03/19/02	23.75		780.70
	06/20/02	23.05		781.40
	09/18/02	24.50		779.95
	12/17/02	25.30		779.15
	03/24/03	23.80		780.65
	06/10/03	23.09		781.36
	09/10/03	23.98	804.37 ***	780.39
	12/10/03	23.22		781.15
	03/23/04	23.56		780.81
	07/09/04	23.52		780.85
	09/21/04	24.65		779.72
	03/29/05	21.24		783.13
	06/20/05	23.81		780.56
	09/21/05	24.71		779.66
	12/14/05	24.25		780.12
	03/21/06	23.39		780.98
	06/28/06	23.95		780.42
	09/20/06	25.15		779.22
	12/19/06	25.26		779.11
	03/13/07	24.41		779.96
	07/03/07	23.89		780.48
	09/27/07	24.38		779.99
	04/16/08	23.20		781.13
	04/03/09	23.48		780.89
	03/17/10	23.44		780.93
	04/29/11	23.18		781.19
	03/14/12	23.48		780.89
	04/29/13	21.05		783.40

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-103	02/01/97	-		795.29
	05/01/97	-		791.83
	09/01/97	-		789.60
	12/01/97	-	803.74	787.78
	03/01/98	-		791.03
	06/01/98	-		789.13
	10/27/98	11.96		791.78
	02/08/99	10.24		793.50
	06/08/99	8.69		795.05
	09/13/99	9.79		793.95
	12/15/99	12.68		791.06
	03/13/00	9.63		794.07
	06/22/00	8.22		795.52
	09/27/00	7.76		795.98
	12/19/00	10.78		792.96
	03/01/01	9.15		794.59
	06/19/01	5.52		798.22
	09/24/01	9.80		793.94
	12/05/01	11.13		792.61
	03/19/02	4.96		798.78
	06/20/02	7.42		796.32
	09/18/02	9.00		794.74
	12/17/02	13.01		790.73
	03/24/03	7.63		796.11
	06/10/03	7.77		795.97
	09/10/03	9.60		794.14
	12/10/03	8.09		795.65
	03/23/04	4.01		797.73
	07/09/04	12.91		790.83
	09/21/04	10.30		793.44
	03/29/05	NR		---
	06/20/05	9.55		794.19
	09/21/05	9.70		794.04
	12/14/05	10.40		793.34
	03/21/06	7.87		795.87
	06/28/06	9.75		793.99
	09/20/06	11.23		792.51
	12/20/06	10.36		793.38
	03/13/07	9.91		793.83
	07/03/07	9.45		794.29
	09/27/07	9.52		794.22
	04/16/08	7.06		796.68
	09/22/08	9.62		794.12
	04/03/09	8.22		795.52
	09/01/09	9.78		793.96
	03/17/10	8.07		795.67

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-103	09/09/10	8.66		795.08
	04/29/11	4.32		799.42
	09/01/11	9.63		794.11
	03/14/12	7.95		795.79
	09/11/12	11.30		792.44
	04/29/13	6.47		797.27
MW-104	02/01/97	-		792.94
	05/01/97	-		789.91
	09/01/97	-		798.59
	12/01/97	-	807.28	795.70
	03/01/98	-		799.46
	06/01/98	-		796.60
	10/27/98	10.51		796.77
	02/08/99	9.04		798.24
	06/08/99	7.49		799.79
	09/13/99	10.28		797.00
	12/15/99	10.78		796.50
	03/13/00	9.51		797.77
	06/22/00	8.41		798.88
	09/27/00	8.61		798.67
	12/19/00	10.49		796.79
	03/01/01	8.44		798.84
	06/19/01	7.51		799.71
	09/24/01	10.39		796.89
	12/05/01	10.81		796.47
	03/19/02	7.82		799.46
	06/20/02	8.60		798.68
	09/18/02	12.05		795.23
	12/17/02	12.70		794.58
	03/24/03	12.60		794.68
	06/10/03	8.81		798.47
	09/10/03	11.17		796.11
	12/10/03	8.66		798.62
	03/23/04	7.44		799.84
	09/21/04	15.21		792.07
	03/29/05	11.09		796.19
	06/20/05	9.57		797.71
	09/21/05	18.95		788.33
12/14/05	9.94		797.34	
03/21/06	8.53		798.75	
06/28/06	11.23		796.05	
09/20/06	12.81		794.47	
12/20/06	24.46		782.82	
03/13/07	12.11		795.17	
07/03/07	13.04		794.24	
09/27/07	21.47		785.81	
04/16/08	7.88		799.40	

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
	09/22/08	17.08		790.20
MW-104	04/03/09	7.93		799.35
	09/01/09	19.45		787.83
	03/17/10	8.13		799.15
	09/09/10	11.46		795.82
	04/29/11	7.60		799.68
	09/01/11	17.67		789.61
	03/14/12	8.28		799.00
	09/11/12	24.08		783.20
	04/29/13	8.62		798.66
MW-105	02/01/97	-		793.74
	05/01/97	-		800.60
	09/01/97	-		800.37
	12/01/97	-	803.96	799.03
	03/01/98	-		800.08
	06/01/98	-		800.50
	10/27/98	5.41		798.55
	02/08/99	6.46		797.50
	06/08/99	3.04		800.92
	09/13/99	4.60		799.36
	12/15/99	5.28		798.68
	03/13/00	4.97		798.99
	06/22/00	3.06		800.90
	09/27/00	3.38		800.58
	12/19/00	5.28		798.68
	03/01/01	7.24		796.72
	06/19/01	2.43		801.53
	09/24/01	3.87		800.09
	12/05/01	5.55		798.41
	03/19/02	3.94		800.02
	06/20/02	4.08		799.88
	09/18/02	5.40		798.56
	12/17/02	7.34		796.62
	03/24/03	6.81		797.15
	06/10/03	4.27		799.69
	09/10/03	4.88	803.84 ***	798.96
	12/10/03	4.36		799.24
	03/23/04	3.80		800.04
	07/09/04	3.61	803.74 ****	800.13
	09/21/04	4.92		798.82
	03/29/05	3.85		799.89
	06/20/05	4.15		799.59
	09/21/05	4.70		799.04
	12/14/05	5.25		798.49
	03/21/06	4.26		799.48
	06/28/06	4.81	803.54 *****	798.73
	09/20/06	4.51		799.03
	12/19/06	5.40		798.14
	03/13/07	6.46	803.46*****	797.08

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-105	07/03/07	4.30		799.16
	09/27/07	3.81		799.65
	04/16/08	3.53		799.93
	04/03/09	3.29		800.17
	03/17/10	4.05		799.41
	04/29/11	2.30		801.16
	03/14/12	3.50		799.96
	04/29/13	3.41		800.55
MW-106	02/01/97	-		794.75
	05/01/97	-		797.23
	09/01/97	-		796.91
	12/01/97	-	804.08	795.48
	03/01/98	-		797.37
	06/01/98	-		796.76
	10/27/98	8.12		795.96
	02/08/99	9.75		794.33
	06/08/99	6.72		797.36
	09/13/99	7.88		796.20
	12/15/99	8.71		795.37
	03/13/00	8.72		795.36
	06/22/00	6.87		797.21
	09/27/00	7.41		796.67
	12/19/00	8.55		795.53
	03/01/01	9.54		794.54
	06/19/01	6.30		797.78
	09/24/01	7.57		796.51
	12/05/01	8.72		795.36
	03/19/02	7.64		796.44
	06/20/02	7.21		796.87
	09/18/02	7.88		796.20
	12/17/02	10.49		793.59
	03/24/03	9.98		794.10
	06/10/03	7.54		796.54
	09/10/03	7.35	804.00 ***	796.65
	12/10/03	7.18		796.82
	03/23/04	7.54		796.46
	07/09/04	6.48	803.90 ****	797.42
	09/21/04	8.02		795.88
	03/29/05	8.26		795.64
	06/20/05	7.31		796.59
	09/21/05	7.85		796.05
	12/14/05	8.47		795.43
	03/21/06	7.41		796.49
	06/28/06	7.78	803.83 *****	796.05
	09/20/06	7.90		795.93
	12/19/06	8.39		795.44
	03/13/07	9.08		794.75

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)	
MW-106	07/03/07	7.35		796.48	
	09/27/07	6.92		796.91	
	04/16/08	5.65		798.18	
	04/03/09	7.03		796.80	
	03/17/10	7.03		796.80	
	04/29/11	5.05		798.78	
	03/14/12	6.75		797.33	
	04/29/13	7.04		797.04	
MW-107	02/01/97	-		788.23	
	05/01/97	-		796.60	
	09/01/97	-		797.64	
	12/01/97	-	809.01	796.49	
	03/01/98	-		796.68	
	06/01/98	-		796.31	
	10/27/98	10.71		798.30	
	02/08/99	11.11		797.90	
	06/08/99	11.04		797.97	
	09/13/99	11.55		797.46	
	12/15/99	11.66		797.35	
	03/13/00	11.13		797.88	
	06/22/00	10.69		798.32	
	09/27/00	12.36		796.65	
	12/19/00	7.32		799.29	
	*	03/01/01	-		-
		06/19/01	10.10	809.06 **	798.96
		09/24/01	11.23		797.88
		12/05/01	11.59		797.47
		03/19/02	9.79		799.27
		06/20/02	10.18		798.88
		09/18/02	11.16		797.90
		12/17/02	12.11		796.95
		03/24/03	12.46		796.60
		06/10/03	10.40		798.66
		09/10/03	11.34		797.72
		12/10/03	10.88		798.18
		03/23/04	9.04		800.02
		07/09/04	11.53		797.53
		09/21/04	12.55		796.51
		03/29/05	10.48		798.58
		06/20/05	11.14		797.92
	09/21/05	11.69		797.37	
	12/14/05	11.10		797.96	
	03/21/06	10.09		798.97	
	06/28/06	11.69		797.37	
	09/20/06	12.14		796.92	
	12/19/06	11.45		797.61	
	03/13/07	10.95		798.11	

TABLE 3**Groundwater Elevations**

N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-107	07/03/07	11.34		797.72
	09/27/07	10.86		798.20
	04/16/08	8.92		800.14
	09/22/08	11.35		797.71
	04/03/09	9.02		800.04
	09/01/09	11.15		797.91
	03/17/10	9.09		799.97
	09/09/10	10.72		798.34
	04/29/11	8.17		800.89
	09/01/11	11.14		797.92
	03/14/12	8.74		800.32
	09/11/12	11.51		797.55
	04/29/13	9.33		799.76
MW-108	02/01/97	-		798.36
	05/01/97	-		793.32
	09/01/97	-		790.53
	12/01/97	-	806.61	788.65
	03/01/98	-		795.59
	06/01/98	-		789.30
	10/27/98	6.98		799.63
	02/08/99	6.72		799.89
	06/08/99	5.80		800.81
	09/13/99	6.68		799.93
	12/15/99	6.87		799.74
	03/13/00	6.84		799.77
	06/22/00	6.28		800.33
	09/27/00	6.31		800.30
	12/19/00	11.42		797.59
	03/01/01	7.04		799.57
	06/19/01	5.87		800.74
	09/24/01	6.52		800.09
	12/05/01	7.70		798.91
	03/19/02	6.25		800.36
	06/20/02	6.43		800.18
	09/18/02	6.72		799.89
	12/17/02	7.78		798.83
	03/24/03	8.69		797.96
	06/10/03	7.00		799.61
	09/10/03	6.91		799.70
	12/10/03	5.18		801.43
	03/23/04	6.24		800.37
	07/09/04	6.12		800.49
	09/21/04	6.91		799.70
	03/29/05	6.64		799.97
	06/20/05	6.78		799.83
	09/21/05	6.66		799.95
	12/14/05	6.68		799.93

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-108	03/21/06	6.71		799.90
	06/28/06	6.82		799.79
	09/20/06	6.75		799.86
	12/19/06	6.90		799.71
	03/13/07	6.75		799.86
	07/03/07	7.53		799.08
	09/27/07	6.55		800.06
	04/16/08	1.27		805.34
	04/03/09	6.04		800.57
	03/17/10	6.32		800.29
	04/29/11	6.76		799.85
	03/14/12	6.39		800.22
	04/29/13	6.58		800.03
MW-109	06/21/06	8.98	810.52	801.54
	09/20/06	8.90		801.62
	12/19/06	9.68		800.84
	03/13/07	9.32		801.20
	07/03/07	9.11		801.41
	09/27/07	8.08		802.44
	04/16/08	7.68		802.84
	09/22/08	9.04		801.48
	04/03/09	7.85		802.67
	09/01/09	8.53		801.99
	03/17/10	8.05		802.47
	09/09/10	9.46		801.06
	04/29/11	7.39		803.13
	09/01/11	9.54		800.98
	03/14/12	7.71		802.81
	09/11/12	8.99		801.53
04/29/13	8.92		801.60	
MW-110	06/21/06	10.39	809.81	799.42
	09/20/06	11.09		798.72
	12/19/06	11.06		798.75
	03/13/07	11.04		798.77
	07/03/07	10.60		799.21
	09/27/07	10.33		799.48
	04/16/08	8.31		801.50
	09/22/08	10.67		799.14
	04/03/09	8.72		801.09
	09/01/09	10.52		799.29
	03/17/10	8.92		800.89
	09/09/10	10.24		799.57
	04/29/11	6.72		803.09
	09/01/11	10.57		799.24
	03/14/12	7.98		801.83
	09/11/12	10.91		798.90
04/29/13	8.75		801.06	

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-111	06/21/06	10.69	807.59	796.90
	09/20/06	13.45		794.14
	12/19/06	14.97		792.62
	03/13/07	9.63		797.96
	07/03/07	9.00		798.59
	09/27/07	8.66		798.93
	04/16/08	5.46		802.13
	09/22/08	10.03		797.56
	04/03/09	5.68		801.91
	09/01/09	9.95		797.64
	03/17/10	6.17		801.42
	09/09/10	8.83		798.76
	04/29/11	5.25		802.34
	09/01/11	9.33		798.26
	03/14/12	6.11		801.48
	09/11/12	12.61		794.98
	04/29/13	6.61		800.98
MW-112	06/21/06	15.70	808.14	792.44
	09/20/06	10.75		797.39
	12/19/06	11.93		796.21
	03/13/07	10.23		797.91
	07/03/07	8.91		799.23
	09/27/07	9.01		799.13
	04/16/08	6.57		801.57
	09/22/08	9.29		798.85
	04/03/09	6.85		801.29
	09/01/09	9.32		798.82
	03/17/10	7.87		800.27
	09/09/10	8.57		799.57
	04/29/11	3.69		804.45
	09/01/11	9.19		798.95
	03/14/12	3.49		804.69
	09/11/12	10.57		797.57
	04/29/13	6.11		802.03

TABLE 3
Groundwater Elevations

N.W. Mauthe Superfund Site - Appleton, WI
Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
MW-113	06/21/06	9.69	808.24	798.55
	09/20/06	10.27		797.97
	12/19/06	10.03		798.21
	03/13/07	8.93		799.31
	07/03/07	9.75		798.49
	09/27/07	9.67		798.57
	04/16/08	7.03		801.21
	09/22/08	9.97		798.27
	04/03/09	7.41		800.83
	09/01/09	9.72		798.52
	03/17/10	7.37		800.87
	09/09/10	9.48		798.76
	04/29/11	6.50		801.74
	09/01/11	9.74		798.50
	03/14/12	6.86		801.38
	09/11/12	10.11		798.13
04/29/13	8.14		800.10	
PZ-05	07/19/05	37.39	810.88	773.49
	09/21/05	28.56		782.32
	12/19/06	27.98		782.90
	03/13/07	28.61		782.27
	07/03/07	28.00		782.88
	09/27/07	28.06		782.82
	04/16/08	27.83		810.88
	04/03/09	28.00		782.88
	03/17/10	28.33		782.55
	04/29/11	27.33		783.55
	03/14/12	27.68		783.20
04/29/13	27.40		783.48	
PZ-06	07/19/05	36.31	809.77	773.46
	09/21/05	29.79		779.98
	12/19/06	29.49		780.28
	03/13/07	29.93		779.84
	07/03/07	30.03		779.74
	09/27/07	29.54		780.23
	04/16/08	28.97		809.77
	04/03/09	29.15		780.62
	03/17/10	29.72		780.05
	04/29/11	28.37		781.40
	03/14/12	28.85		780.92
04/29/13	28.40		781.37	

TABLE 3
Groundwater Elevations
 N.W. Mauthe Superfund Site - Appleton, WI
 Terracon Project No. 58117057

Well Name	Date Measured	Depth To Water (feet)	Reference Elevation (To Top PVC) (feet)	Groundwater Elevation (feet)
PZ-07	07/19/05	32.03	804.48	772.45
	09/21/05	27.34		777.14
	12/19/06	29.37		775.11
	03/13/07	24.41		780.07
	07/03/07	23.74		780.74
	09/27/07	25.15		779.33
	04/16/08	23.83		804.48
	04/03/09	23.76		780.72
	03/17/10	24.33		780.15
	04/29/11	23.27		781.21
	03/14/12	23.70		780.78
	04/29/13	24.19		780.29
	PZ-08	07/19/05	32.07	804.35
09/21/05		24.47		779.88
12/19/06		28.16		776.19
03/13/07		21.90		782.45
07/03/07		23.19		781.16
09/27/07		22.47		781.88
04/16/08		21.00		804.35
04/03/09		20.63		783.72
03/17/10		21.25		783.10
04/29/11		20.65		783.70
03/14/12		20.94		783.41
04/29/13		20.25		784.10

- * Casing for MW-107 was damaged. Groundwater elevation could not be determined.
- ** Reflects new elevation of MW-107 after repair to well casing.
- *** Monitoring wells re-surveyed after casings were shortened.
- **** New elevation after the PVC casing was shortened after the March 23, 2004 sampling event.
- ***** New elevation after the PVC casing was shortened after the March 21, 2006 sampling event.
- *****New elevation after PVC casing was shortened after the December 19, 2006 sampling event.

Note: OMNNI Associates, Inc. collected water level readings from MW-109 to MW-113 on June 21, 2006 and September 20, 2006 and from PZ-5 to PZ-8 on July 19, 2005 and September 21, 2005.

TABLE 4
Groundwater Geochemical Parameters
N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Purge* Volume (gallons)	pH (std units)	Temperature (°C)	Conductivity (units as shown)	Dissolved Oxygen (ppm, unless noted)	Redox (mV)	Alkalinity (gpg)	Ferrous Iron (mg/L)
MW-103	02/20/97	NR	6.30	6.00	700 us	NA	NA	NA	NA
	05/27/97	NR	7.67	11.60	NA	NA	NA	NA	NA
	09/18/97	NR	7.21	10.50	1030 us	NA	NA	NA	NA
	12/12/97	NR	7.43	9.00	970 us	NA	NA	NA	NA
	03/25/98	NR	7.82	9.40	1441 us	NA	NA	NA	NA
	06/10/98	NR	6.24	9.90	1356 us	NA	NA	NA	NA
	10/27/98	8.00	7.66	12.70	1566 us	0.70	147.00	12.00	0.20
	02/09/99	7.80	7.48	9.90	1443 us	1.40	53.00	11.20	0.80
	06/08/99	9.50	7.42	13.90	1350 us	0.70	109.00	7.20	0.00
	09/13/99	4.10	7.41	12.90	985 us	1.60	(165.00)	12.00	0.00
	12/15/99	4.60	7.82	10.60	2.58 ms	1.40	(294.00)	10.80	0.00
	03/13/00	4.00	6.57	9.40	1292 us	1.00	76.00	8.40	0.40
	06/22/00	4.00	8.43	11.50	1354 us	0.99	(90.00)	6.00	0.00
	09/27/00	11.00	7.48	13.70	1131 us	1.40	(302.00)	7.60	0.00
	12/19/00	9.00	7.90	6.60	1063 us	1.56	(344.00)	9.20	0.40
	03/01/01	8.50	7.68	11.20	1160 us	1.88	(374.00)	8.00	0.60
	06/19/01	13.00	7.81	14.10	1848 us	1.10	(28.00)	7.40	0.00
	09/24/01	2.00	7.32	12.70	1743 us	1.00	(47.00)	12.00	0.00
	12/05/01	11.00	7.18	9.00	1121 us	1.40	(291.00)	10.80	0.60
	03/19/02	11.00	7.60	11.40	1050 us	1.50	(311.00)	10.00	0.40
	06/20/02	12.00	7.47	14.40	1830 us	0.80	(62.00)	10.80	0.00
	09/18/02	10.00	7.18	13.00	748 us	1.40	(170.00)	11.20	0.00
	12/17/02	8.00	7.22	9.60	1134 us	1.20	(284.00)	10.00	0.40
	03/24/03	11.00	7.54	11.00	1262 us	1.20	(320.00)	10.00	0.60
	06/10/03	10.00	7.13	14.10	1644 us	0.60	(80.00)	10.00	0.20
	09/10/03	10.00	7.14	13.20	920 us	1.00	(165.00)	10.40	0.00
	12/10/03	10.00	7.28	10.40	1210 us	0.80	(310.00)	7.80	0.20
	03/24/04	8.60	7.30	10.20	656 us	EM	(126.00)	NA	0.00
	07/09/04	5.00	7.20	14.00	996 us	16.30	283.00	NA	0.00
	09/21/04	1.50	7.10	20.10	1004 us	EM	(19.00)	NA	0.00
	03/29/05	12.00	7.00	10.20	1164 us	1.16	84.00	NA	0.00
	06/21/05	7.00	7.10	13.30	1253 us	1.46	142.00	NA	0.00
	09/21/05	10.00	7.30	13.50	1233 us	3.40	225.00	NA	0.00
	12/14/05	7.00	7.20	9.90	1295 us	1.53	NA	NA	0.00
	03.23/06	7.00	7.00	11.50	1140 us	230.00	252.00	NA	0.00
	06/28/06	5.00	7.10	11.80	746 us	2.75	232.00	NA	0.00
	12/20/06	8.00	7.40	10.80	1207 us	2.89	241.00	NA	0.23
	03/28/07	8.0	7.2	10.8	1075 us	3.09	238.0	NA	0.05
	07/03/07	8.0	7.4	11.3	1154 us	3.54	126.0	NA	0.38
	09/28/07	8.0	7.2	13.7	1294 us	3.14	217.0	NA	0.00
	04/16/08	1.0	7.09	12.0	556 us	0.83	233	NA	NA
	09/22/08	1.0	7.27	13.8	1446 us	0.20	183.7	NA	NA
	04/03/09	1.0	7.40	9.4	1451 us	1.89	NA	NA	NA
	09/01/09	1.0	7.33	12.4	1409 µs	0.22	267	NA	NA
	03/17/10	1.5	7.30	10.8	1480 µs	0.89	231	NA	NA
	09/09/10	1.25	7.21	12.6	1468 µs	0.40	133.2	NA	NA
	04/29/11	1.25	7.36	10.2	1304 µs	2.17	244	NA	0.09
	09/01/11	1.5	7.36	13.5	1316 µs	0.63	89.7	NA	NA
	03/14/12	2.0	6.20	10.2	0.12 S/m	0.70	175.0	NA	NA
	09/11/12	2.5	7.03	15.9	1.15 ms	1.05	117.8	NA	NA
	04/29/13	1.5	12.45	9.3	0.97 ms	1.82	(102.50)	NA	NA

TABLE 4
Groundwater Geochemical Parameters
N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Purge* Volume (gallons)	pH (std units)	Temperature (°C)	Conductivity (units as shown)	Dissolved Oxygen (ppm, unless noted)	Redox (mV)	Alkalinity (gpg)	Ferrous Iron (mg/L)
MW-104	02/20/97	NR	7.43	8.00	1000 us	NA	NA	NA	NA
	05/27/97	NR	8.00	12.00	NA	NA	NA	NA	NA
	09/18/97	NR	7.13	10.50	1030 us	NA	NA	NA	NA
	12/12/97	NR	7.10	9.60	1000 us	NA	NA	NA	NA
	03/25/98	NR	7.94	8.30	1378 us	NA	NA	NA	NA
	06/10/98	NR	6.53	9.70	1101 us	NA	NA	NA	NA
	10/27/98	8.00	7.84	13.20	1272 us	0.90	103.00	16.40	0.40
	02/09/99	9.50	7.66	10.10	1126 us	1.50	193.00	11.20	0.00
	06/08/99	13.00	6.80	15.60	1259 us	1.60	103.00	6.40	0.00
	09/13/99	13.80	7.08	13.90	1334 us	1.80	(146.00)	10.80	0.00
	12/15/99	11.20	7.68	10.80	1172 us	2.00	(232.00)	11.20	0.00
	03/13/00	16.50	6.91	10.20	1121 us	0.40	69.00	11.20	0.60
	06/22/00	11.00	8.65	11.60	1137 us	0.71	(211.00)	6.80	0.00
	09/27/00	8.00	7.24	12.90	1130 us	1.70	(123.00)	13.20	0.00
	12/19/00	8.00	7.75	8.20	1144 us	1.05	(240.00)	12.40	0.00
	03/01/01	9.50	7.72	10.60	1230 us	0.90	(220.00)	12.40	0.20
	06/19/01	13.00	7.91	12.90	1581 us	0.80	(110.00)	6.80	0.00
	09/24/01	8.00	7.18	12.40	1580 us	0.80	(99.00)	9.60	0.20
	12/05/01	7.00	7.22	9.90	1300 us	1.00	(311.00)	9.60	0.00
	03/19/02	10.00	7.70	10.60	1110 us	0.70	(210.00)	11.60	0.20
	06/20/02	10.00	7.53	13.00	1420 us	0.80	(174.00)	12.40	0.20
	09/18/02	9.00	7.03	14.60	1275 us	1.60	(148.00)	12.40	0.00
	12/17/02	8.00	7.31	10.00	1264 us	0.80	(294.00)	8.80	0.00
	03/24/03	8.00	7.61	10.40	1031 us	0.80	(240.00)	10.80	0.00
	06/10/03	10.00	7.40	15.00	1374 us	0.60	(91.00)	11.20	0.40
	09/10/03	9.00	7.08	14.20	1144 us	1.20	(151.00)	8.80	0.00
	12/01/03	8.00	7.35	10.10	1177 us	0.80	(280.00)	8.80	0.00
	03/24/04	13.60	7.30	9.90	1496 us	EM	(91.00)	NA	0.00
	07/09/04	5.00	7.00	12.00	1648 us	2.90	EM	NA	0.00
	09/21/04	1.00	7.00	13.10	1648 us	EM	1.00	NA	0.00
	03/29/05	6.00	7.00	10.20	1939 us	2.69	86.00	NA	0.00
	06/21/05	7.00	7.10	12.50	1999 us	3.50	125.00	NA	0.00
	09/21/05	7.00	7.10	13.80	1926 us	2.78	213.00	NA	0.00
	12/14/05	7.00	6.90	10.90	2320 us	2.11	253.00	NA	NA **
	03/23/06	10.00	6.90	10.60	2250 us	1.73	209.00	NA	0.00
	06/28/06	5.00	6.80	11.30	2290 us	1.40	215.00	NA	0.26
	12/20/06	8.00	7.10	11.90	2120 us	2.08	248.00	NA	0.00
	03/28/07	8.0	6.9	10.1	2450 us	3.80	226.0	NA	0.07
	07/03/07	6.0	7.1	11.5	2180 us	1.51	247.0	NA	0.61
	09/28/07	6.0	6.9	14.7	2380 us	2.22	266.0	NA	0.05
	04/16/08	1.0	6.96	13.9	853 us	1.74	157.0	NA	NA
	09/22/08	1.0	7.06	13.1	3.43 ms	0.23	61.8	NA	NA
	04/03/09	1.0	7.25	8.1	2.88 ms	1.67	NA	NA	NA
	09/01/09	1.0	7.11	11.6	3110 µs	0.60	262	NA	NA
	03/17/10	1.5	7.14	9.9	3.07 ms	0.93	210	NA	NA
	09/09/10	1.25	7.07	12.4	3.05 ms	0.24	(156.2)	NA	NA
	04/29/11	1.25	7.32	10.2	2980 µs	1.34	243	NA	0.00
	09/01/11	1.5	7.31	13.4	2.58 ms	0.31	(150.80)	NA	NA
	03/14/12	2.0	6.20	10.1	0.16 S/m	1.00	165.00	NA	NA
	09/11/12	2	6.95	13.4	1.85 ms	0.25	84.90	NA	NA
	04/29/13	2	11.68	9.3	2.10 ms	0.24	(123.50)	NA	NA

TABLE 4
Groundwater Geochemical Parameters
N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Purge* Volume (gallons)	pH (std units)	Temperature (°C)	Conductivity (units as shown)	Dissolved Oxygen (ppm, unless noted)	Redox (mV)	Alkalinity (gpg)	Ferrous Iron (mg/L)
MW-107	02/20/97	NR	7.46	9.00	650 us	NA	NA	NA	NA
	05/27/97	NR	7.12	10.80	NA	NA	NA	NA	NA
	09/18/97	NR	7.07	12.50	700 us	NA	NA	NA	NA
	12/12/97	NR	7.08	10.50	730 us	NA	NA	NA	NA
	03/25/98	NR	7.87	10.20	1081 us	NA	NA	NA	NA
	06/10/98	NR	7.17	10.60	1042 us	NA	NA	NA	NA
	10/27/98	10.00	7.41	12.10	1179 us	1.10	62.00	20.00	10.00
	02/09/99	9.00	8.10	12.00	1189 us	1.30	263.00	7.20	0.40
	06/08/99	9.00	7.48	15.60	1406 us	2.20	163.00	4.80	0.40
	09/13/99	8.00	7.30	12.90	1301 us	2.60	(114.00)	14.00	0.60
	12/15/99	10.00	7.63	11.30	1419 us	2.80	(42.00)	12.40	1.00
	03/13/00	14.50	5.76	10.90	1389 us	1.20	58.00	8.40	0.60
	06/22/00	10.00	8.75	12.40	1574 us	0.62	(120.00)	6.40	0.00
	09/27/00	10.00	7.42	14.20	1505 us	1.60	(114.00)	9.20	0.00
	12/19/00	13.00	7.69	9.50	1524 us	1.21	(38.00)	10.40	0.00
	03/01/01	16.00	7.81	9.90	1704 us	1.31	(93.00)	12.40	0.20
	06/19/01	15.00	7.64	13.40	1221 us	0.80	(80.00)	6.00	0.20
	09/24/01	9.00	7.04	12.40	977 us	0.60	(77.00)	12.00	0.40
	12/05/01	13.00	7.15	9.20	1611 us	0.80	(95.00)	8.40	0.00
	03/19/02	12.00	7.64	10.00	1730 us	1.30	8.00	9.60	0.20
	06/20/02	10.00	7.48	13.60	1304 us	0.60	(110.00)	9.60	0.40
	09/10/02	10.00	7.52	13.10	1403 us	2.00	(104.00)	12.40	0.40
	12/17/02	10.00	7.22	10.40	1593 us	0.80	(110.00)	7.80	0.00
	03/24/03	10.00	7.30	10.30	1362 us	1.00	(48.00)	10.80	0.00
	06/10/03	11.00	7.20	14.00	1277 us	0.80	(200.00)	9.20	1.00
	09/10/03	10.00	7.46	13.30	1121 us	1.30	(99.00)	8.00	0.20
	12/01/03	10.00	7.41	9.80	1360 us	1.00	(98.00)	8.40	0.00
	03/24/04	9.00	7.30	11.10	1704 us	EM	(109.00)	NA	0.00
	07/09/04	6.00	7.30	13.20	1704 us	4.59	166.00	NA	0.00
	09/21/04	3.00	7.10	14.30	1649 us	EM	7.00	NA	0.00
	03/29/05	9.00	7.20	11.50	1749 us	2.83	85.00	NA	0.00
	06/21/05	8.00	7.30	12.70	2010 us	1.85	119.00	NA	0.00
	09/21/05	8.00	7.50	15.20	1594 us	2.92	221.00	NA	0.00
	12/14/05	8.00	7.40	12.30	1708 us	1.80	250.00	NA	0.00
	03/27/06	10.00	7.30	11.90	1726 us	2.65	269.00	NA	0.00
	06/28/06	7.00	7.20	13.40	1696 us	3.76	212.00	NA	0.04
	12/20/06	8.00	7.20	11.80	1655 us	3.83	234.00	NA	0.08
	03/28/07	8.0	7.3	10.4	1599 us	7.14	240	NA	0.01
	07/03/07	7.0	7.5	11.8	1163 us	3.41	258	NA	0.00
	09/28/07	6.0	7.4	13.1	1642 us	2.64	238	NA	0.02
	04/16/08	1.0	7.30	13.5	NA	2.12	197.9	NA	NA
	09/22/08	1.0	7.47	15.4	1650 us	0.23	171.8	NA	NA
	04/03/09	1.5	7.63	10.0	1615 us	2.32	NA	NA	NA
	09/01/09	1.25	7.51	13.9	1586 µs	0.16	278	NA	NA
	03/17/10	1.5	7.61	11.2	1566 µs	2.09	258	NA	NA
	09/09/10	1.5	7.46	14.1	1532 µs	0.24	239	NA	NA
	04/29/11	1.25	7.63	11.0	1516 µs	1.66	274	NA	0.00
	09/01/11	1.5	7.63	15.0	1490 µs	0.28	184.1	NA	NA
	03/14/12	1	6.40	11.6	0.14 S/m	1.90	169.0	NA	NA
	09/11/12	2	7.27	16.8	1.27 ms	0.14	37.2	NA	NA
	04/30/13	2	10.66	9.7	1.11 ms	3.03	(70.4)	NA	NA

TABLE 4
Groundwater Geochemical Parameters
N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Purge* Volume (gallons)	pH (std units)	Temperature (°C)	Conductivity (units as shown)	Dissolved Oxygen (ppm, unless noted)	Redox (mV)	Alkalinity (gpg)	Ferrous Iron (mg/L)
MW-112	06/21/06	2.00	7.21	12.40	1338 us	-	-	-	-
	09/20/06	2.00	7.28	14.60	1238 us	-	-	-	-
	12/20/06	8.00	7.50	10.70	1817 us	1.94	729.00	NA	0.00
	03/28/07	10.0	7.5	9.5	2050 us	7.93	228	NA	0.00
	07/03/07	9.0	7.6	13.7	1909 us	3.48	234	NA	0.28
	09/28/07	11.0	7.6	13.7	1921 us	6.80	267	NA	0.04
	04/16/08	1.25	7.50	12.9	NA	2.44	270	NA	NA
	09/22/08	1.25	7.71	15.9	2.34 ms	0.15	208	NA	NA
	04/03/09	1.5	7.79	7.6	2.5 ms	2.69	NA	NA	NA
	09/01/09	1.25	7.76	15.5	2320 µs	0.75	217	NA	NA
	03/17/10	1.5	7.81	8.5	1891 µs	3.02	264	NA	NA
	09/09/10	1.5	7.56	15.7	1921 µs	0.70	229	NA	NA
	04/29/11	1.25	7.75	8.4	1268 µs	2.92	252	NA	0.10
	09/01/11	1.5	7.83	15.0	1581µs	0.44	169.0	NA	NA
	03/14/12	1.5	6.60	8.4	0.076 S/m	9.40	215.0	NA	NA
	09/12/12	3	7.26	17.2	1.23 ms	0.22	219.7	NA	NA
	04/30/13	2	8.87	8.3	1.65 ms	0.55	(105.6)	NA	NA
MW-113	06/21/06	2.00	6.91	12.90	1020 us	-	-	-	-
	09/20/06	2.00	7.11	14.60	900 us	-	-	-	-
	12/20/06	8.00	7.20	10.60	1757 us	2.07	234.00	NA	0.00
	03/29/07	10.0	7.3	8.0	1508 us	9.52	235	NA	***
	07/03/07	7.0	7.6	10.9	1552 us	2.05	262	NA	0.13
	09/28/07	13.0	7.4	14.4	1514 us	6.87	276	NA	0.00
	04/16/08	1.25	7.45	11.8	NA	1.85	267	NA	NA
	09/22/08	1.25	7.59	15.5	1711 us	0.22	218	NA	NA
	04/03/09	1.5	7.70	7.4	1749 us	3.50	NA	NA	NA
	09/01/09	1.25	7.56	15.6	1615 µs	0.57	270	NA	NA
	03/17/10	1.5	7.68	8.5	1800 µs	3.22	235	NA	NA
	09/09/10	1.5	7.49	15.5	1722 µs	0.37	223	NA	NA
	04/29/11	1.25	7.65	9.3	1660 µs	1.68	281	NA	0.00
	09/01/11	1.5	7.67	16.2	1552 µs	0.27	184.8	NA	NA
	03/14/12	2	6.60	8.8	0.15 S/m	4.50	236.0	NA	NA
	09/12/12	3	7.09	19.1	1.40 ms	1.40	55.0	NA	NA
	04/30/13	3	10.82	8.3	1.14 ms	0.30	(116.4)	NA	NA

ppm = parts per million
us = microsiemens / centimeter
S/m = siemens / meter
mV = millivolts
gpg = grains per gallon
EM - Equipment malfunction.

Note: A different meter was used to test ferrous iron beginning on the March 2006 sampling event.

ms = millisiemens / centimeter
NA = not analyzed
NR = not recorded

() = Indicates a negative value.

* = Each monitoring well was purged dry twice prior to sampling
The second purging was conducted approximately 3-hrs after initial purging. The volume of purge water collected represents the total of the two well purges. Purge volumes prior to 10/27/98 were not available.

** = Not analyzed due to poor water clarity from recent piezometer installation nearby.

*** = Too cloudy for testing.

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
W-2	02/20/97	NA	15	NA	26	NA	460.0	NA	49
	05/27/97	0.43	8.5	NA	<10	NA	170.0	<.2	30
	09/18/97	0.27	4.5**	NA	9.5**	3**	116.0	<.03	16.9
	12/12/97	.13*	6.2	NA	<9.7	<.8	133.0	.06*	20.4
	03/25/98	0.08	<3.9	NA	<9.5	<1.7	83.8	.007*	18.6
	06/10/98	.31*	16.4	NA	18.6**	<1.7	466.0	.027*	40.8
	10/27/98	.51*	3.60	NA	4.7*	<.0032	69.0	<.05	170
	02/09/99	.46*	<.62	NA	4.0	<.0032	240.0	<.05	23
	06/08/99	<.31	<.62	NA	1.8*	<.0032	290.0	<.05	<12
	09/13/99	<.31	2.00	NA	3.2	<.0032	240.0	<.05	<12
	12/15/99	<.31	.72 *	NA	NA	NA	2.8	NA	NA
	03/13/00	<.31	.79 *	NA	NA	NA	7.8	NA	NA
	06/22/00	<.31	<.62	NA	NA	NA	<.42	NA	NA
	09/27/00	2.70	1.1*	NA	NA	NA	17.0	NA	NA
	12/19/00	.24*	.91*	NA	NA	NA	8.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	<.20	NA	NA
	06/19/01	<.17	.55 *	NA	NA	NA	48.0	NA	NA
	09/24/01	<.17	<.34	NA	NA	NA	52	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	<.20	NA	NA
	03/19/02	.27*	<.57	NA	NA	NA	<.20	NA	NA
	06/20/02	<.23	<.44	NA	NA	NA	61.0	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	110.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	150.0	NA	NA
	03/24/03	<.17	<.43	NA	NA	NA	8.5	NA	NA
	03/24/04	NA	<.45	5.0	NA	NA	<.10	NA	NA
	03/29/05	NA	1.2	<.27	NA	NA	1.3	NA	NA
	03/23/06	NA	0.52	<.50	NA	NA	4.1	NA	NA
	03/27/07	NA	<.19	NA	NA	NA	4.7	NA	NA
	04/29/11	NA	0.51 J	NA	NA	NA	21.7	NA	NA
W-8	02/20/97	NA	17	NA	22	NA	320.0	NA	34
	05/27/97	1.6	37	NA	27	NA	670.0	<.2	54
	09/18/97	0.45	14.4	NA	14.6**	1**	338.0	.11**	31.8
	12/12/97	0.5*	5.7	NA	<9.7	<.8	147.0	.07*	17.1
	03/25/98	0.43	10.1	NA	15**	<1.7	205.0	.007*	21
	06/10/98	0.54	9.9	NA	12.6**	<1.7	264.0	.016*	21.6
	10/27/98	0.80	3.90	NA	4.8*	<.0032	64.0	<.05	85
	02/09/99	<.31	<.62	NA	<60	<.0032	850.0	<.05	12
	06/08/99	<.31	<.62	NA	2.6	<.0032	50.0	<.05	<12
	09/13/99	<.31	1.90	NA	2.7	<.0032	98.0	<.05	29
	12/15/99	<.31	2.80	NA	NA	NA	180.0	NA	NA
	03/13/00	<.31	1.4 *	NA	NA	NA	65.0	NA	NA
	06/22/00	<.31	3.10	NA	NA	NA	74.0	NA	NA
	09/27/00	.27*	.75*	NA	NA	NA	26.0	NA	NA
	12/19/00	<.23	.66*	NA	NA	NA	40.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	23.0	NA	NA
	06/19/01	<.17	1*	NA	NA	NA	100.0	NA	NA
	09/24/01	<.17	<.34	NA	NA	NA	380.0	NA	NA
	12/25/01	<.23	<.57	NA	NA	NA	<.20	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	21.0	NA	NA
	06/20/02	<.23	.47*	NA	NA	NA	1400.0	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	620.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	34.0	NA	NA
	03/24/03	<.17	<.43	NA	NA	NA	27.0	NA	NA
	03/24/04	NA	0.76*	3.8	NA	NA	1.7*	NA	NA
	03/29/05	NA	<.52	<.27	NA	NA	9.7	NA	NA
	03/23/06	NA	<.4	<.50	NA	NA	5.5	NA	NA
	03/27/07	NA	<.19	NA	NA	NA	6.0	NA	NA
	04/29/11	NA	0.63 J	NA	NA	NA	<.014	NA	NA

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
W-15	02/20/97	NA	32	NA	52	NA	430.0	NA	88
	05/27/97	0.27	5.9	NA	15	NA	97.0	<.2	39
	09/18/97	0.31	13.9	NA	18.8**	<.78	325.0	<.03	35.5
	12/12/97	.12*	5.7	NA	9.7**	<.8	80.9	.03*	18.5
	03/25/98	.04*	<3.9	NA	<9.5	<1.7	85.7	.038*	13.7
	06/10/98	.11*	10	NA	13.2**	<1.7	147.0	.016*	18.8
	10/27/98	.41*	6.80	NA	7.40	<.0032	110.0	<.05	100
	02/09/99	<.31	<.62	NA	<.60	<.0032	320.0	<.05	<12
	06/08/99	<.31	2.40	NA	14.00	<.0032	130.0	<.05	66
	09/13/99	<.31	5.30	NA	6.40	<.0032	130.0	<.05	16
	12/15/99	<.31	5.00	NA	NA	NA	90.0	NA	NA
	03/13/00	<.31	7.00	NA	NA	NA	130.0	NA	NA
	06/22/00	<.31	1.80	NA	NA	NA	11.0	NA	NA
	09/27/00	<.23	4.20	NA	NA	NA	24.0	NA	NA
	12/19/00	<.23	1.4*	NA	NA	NA	930.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	<2.0	NA	NA
	06/19/01	<.17	<.34	NA	NA	NA	<2	NA	NA
	09/24/01	<.17	<.34	NA	NA	NA	290.0	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	2.5	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	22.0	NA	NA
	06/20/02	.36*	.47*	NA	NA	NA	3.1	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	110.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	31.0	NA	NA
	03/24/03	<0.17	0.47*	NA	NA	NA	27.0	NA	NA
	03/24/04	NA	1.80	3.8	NA	NA	1.1*	NA	NA
	03/29/05	NA	0.98	<2.7	NA	NA	24.0	NA	NA
	03/23/06	NA	1.60	<5.0	NA	NA	8.0	NA	NA
	03/28/07	NA	<1.9	NA	NA	NA	13	NA	NA
	04/29/11	NA	2.8 J	NA	NA	NA	8.3	NA	NA
MW-101	02/20/97	NA	36	NA	41	NA	820.0	NA	49
	05/27/97	<.2	10	NA	11	NA	170.0	<.03	18
	09/18/97	.06**	11.9	NA	10.7**	1**	145.0	<.05	18.2
	12/12/97	.06*	12.8	NA	<9.7	<.8	176.0	.05*	20.7
	03/25/98	.04*	20.9	NA	21.6**	<1.7	239.0	.007*	32.7
	06/10/98	.27*	48.2	NA	46.8	<1.7	604.0	.044*	75.9
	10/27/98	<.16	3.20	NA	4.2*	<.0032	24.0	<.05	54
	02/09/99	<.31	<0.62	NA	<.60	<.0032	1900.0	<.05	14
	06/08/99	<.31	1.80	NA	8.2	<.0032	380.0	<.05	39
	09/13/99	<.31	2.90	NA	5.1	<.0032	31.0	<.05	<12
	12/15/99	<.31	2.50	NA	NA	NA	9.1	NA	NA
	03/13/00	<.31	2.30	NA	NA	NA	100.0	NA	NA
	06/22/00	<.31	1.4 *	NA	NA	NA	<4.2	NA	NA
	09/27/00	<.23	19.00	NA	NA	NA	37.0	NA	NA
	12/19/00	<.23	7.20	NA	NA	NA	18.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	13.0	NA	NA
	06/19/01	<.17	8.50	NA	NA	NA	9.1	NA	NA
	09/24/01	<.17	0.55 *	NA	NA	NA	<2.0	NA	NA
	12/05/01	<.23	0.90*	NA	NA	NA	<2.0	NA	NA
	03/19/02	<.23	0.66*	NA	NA	NA	<2.0	NA	NA
	06/20/02	<.23	0.58*	NA	NA	NA	2.2	NA	NA
	09/18/02	<.23	<0.44	NA	NA	NA	13.0	NA	NA
	12/17/02	<.23	<0.44	NA	NA	NA	33.0	NA	NA
	03/24/03	<.17	0.50*	NA	NA	NA	8.3	NA	NA
	03/24/04	NA	0.79*	<3.6	NA	NA	<1.0	NA	NA
	03/29/05	NA	1.10	<2.7	NA	NA	16.0	NA	NA
	03/23/06	NA	0.55	<5.0	NA	NA	45.0	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	14.0	NA	NA
	04/16/08	NA	2.4 J	NA	NA	NA	NA	NA	NA
	04/03/09	NA	1.9 J	NA	NA	NA	NA	NA	NA
	03/17/10	NA	2.5 J	NA	NA	NA	NA	NA	NA
	04/29/11	NA	1.4 J	NA	NA	NA	0.50 J	NA	NA
	03/16/12	NA	<2.0	NA	NA	NA	0.50 J	NA	NA
	04/29/13	NA	<2.0	NA	NA	NA	NA	NA	NA

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-102	02/20/97	NA	26	NA	38	NA	570.0	NA	34
	05/27/97	0.21	48	NA	77	NA	920.0	<.2	73
	09/18/97	.08**	<3.92	NA	6.9**	2**	302.0	<.03	8.7
	12/12/97	.04*	<3.9	NA	<9.7	<.8	387.0	.04*	10.9
	03/25/98	.11*	<3.9	NA	9.5**	<1.7	302.0	.007*	7.4*
	06/10/98	.04*	<3.9	NA	<9.8	<1.7	318.0	.018*	9.5
	10/27/98	.27*	.98*	NA	3.2*	<.0032	340.0	<.05	24
	02/09/99	<.31	.73*	NA	<.60	<.0032	670.0	<.05	20
	06/08/99	<.31	1.2*	NA	5.8	<.0032	140.0	<.05	36
	09/13/99	<.31	4.00	NA	15.0	<.0032	160.0	<.05	73
	12/15/99	<.31	1.2 *	NA	NA	NA	550.0	NA	NA
	03/13/00	<.31	1.70	NA	NA	NA	580.0	NA	NA
	06/22/00	<.31	<.62	NA	NA	NA	310.0	NA	NA
	09/27/00	<.23	2.10	NA	NA	NA	130.0	NA	NA
	12/19/00	.33*	2.90	NA	NA	NA	110.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	<2.0	NA	NA
	06/19/01	<.17	<.34	NA	NA	NA	<2	NA	NA
	09/24/01	.48 *	1.40	NA	NA	NA	46.0	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	100.0	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	87.0	NA	NA
	06/20/02	<.17	1.80	NA	NA	NA	44.0	NA	NA
	09/18/02	<.23	1.4*	NA	NA	NA	<2.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	38.0	NA	NA
	03/24/03	0.21*	<.43	NA	NA	NA	3.5	NA	NA
	03/24/04	NA	<0.45	<3.6	NA	NA	65.0	NA	NA
	03/29/05	NA	0.71	<2.7	NA	NA	190.0	NA	NA
	03/23/06	NA	<0.40	<5.0	NA	NA	100.0	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	230	NA	NA
	04/16/08	NA	<0.57	NA	NA	NA	NA	NA	NA
	04/03/09	NA	<0.57	NA	NA	NA	NA	NA	NA
	03/17/10	NA	0.74 J	NA	NA	NA	NA	NA	NA
	04/29/11	NA	6.1	NA	NA	NA	32.1	NA	NA
	03/14/12	NA	<2.0	NA	NA	NA	NA	NA	NA
	04/29/13	NA	130	NA	NA	NA	NA	NA	NA

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-103	02/20/97	NA	1,300	NA	47	NA	800.0	NA	27
	05/27/97	<.2	160.0	NA	31	NA	900.0	<.2	29
	09/18/97	.06**	35.2	NA	13.5**	3**	287.0	<.03	13.7
	12/12/97	.04*	16.3	NA	<9.7	<.8	84.3	.09*	21.4
	03/25/98	.04*	15.5	NA	<9.5	<1.7	83.0	.007*	7.5*
	06/10/98	.15*	57.6	NA	27.5	<1.7	417.0	.02*	33.7
	10/27/98	<.16	6.30	NA	2.3*	<.0032	27.0	<.05	30.0
	06/08/99	<.31	87.00	NA	3.5	<.0032	810.0	<.05	30
	09/13/99	<.31	720.0	NA	5.9	<.0032	83.0	<.05	15
	12/15/99	<.31	260.0	NA	NA	NA	160.0	NA	NA
	03/13/00	<.31	600.0	NA	NA	NA	79.0	NA	NA
	06/22/00	<.31	130.0	NA	NA	NA	180.0	NA	NA
	09/27/00	<.23	280.0	NA	NA	NA	230.0	NA	NA
	12/19/00	<.23	180.0	NA	NA	NA	170.0	NA	NA
	03/01/01	<.23	49.0	NA	NA	NA	240.0	NA	NA
	06/19/01	<.17	11.0	NA	NA	NA	350.0	NA	NA
	09/24/01	<.17	12.0	NA	NA	NA	280.0	NA	NA
	12/05/01	<.23	2.9	NA	NA	NA	230.0	NA	NA
	03/19/02	<.23	73.0	NA	NA	NA	7.9	NA	NA
	06/20/02	<.23	14.0	NA	NA	NA	630.0	NA	NA
	09/18/02	<.23	6.5	NA	NA	NA	560.0	NA	NA
	12/17/02	<.23	6.2	NA	NA	NA	3.7	NA	NA
	03/24/03	.26*	350.0	NA	NA	NA	48.0	NA	NA
	06/10/03	NA	150.0	NA	NA	NA	NA	NA	NA
	09/10/03	NA	9.10	NA	NA	NA	NA	NA	NA
	12/10/03	NA	7.70	NA	NA	NA	NA	NA	NA
	12/15/03	NA	NA	<3.6	NA	NA	NA	NA	NA
	03/24/04	NA	5.60	6.3	NA	NA	7.6	NA	NA
	07/09/04	NA	11.00	16.0	NA	NA	NA	NA	NA
	12/09/04	NA	1.20	<3.6	NA	NA	NA	NA	NA
03/29/05	NA	220.0	350.0	NA	NA	82.0	NA	NA	
06/22/05	NA	240.0	250.0	NA	NA	NA	NA	NA	
09/21/05	NA	110.0	69.0	NA	NA	NA	NA	NA	
12/15/05	NA	120.0	150.0	NA	NA	NA	NA	NA	
03/23/06	NA	16.0	270.0	NA	NA	8.4	NA	NA	
06/28/06	NA	40.0	29.0	NA	NA	NA	NA	NA	
09/20/06	NA	45.0	35.0	NA	NA	NA	NA	NA	
12/20/06	NA	15.0	NA	NA	NA	NA	NA	NA	
03/28/07	NA	31	NA	NA	NA	38	NA	NA	
07/03/07	NA	90	NA	NA	NA	NA	NA	NA	
09/28/07	NA	78	NA	NA	NA	NA	NA	NA	
04/16/08	NA	380	NA	NA	NA	NA	NA	NA	
09/22/08	NA	240	NA	NA	NA	NA	NA	NA	
04/03/09	NA	171	NA	NA	NA	NA	NA	NA	
09/01/09	NA	157	NA	NA	NA	NA	NA	NA	
03/17/10	NA	114	NA	NA	NA	NA	NA	NA	
09/09/10	NA	16.4	NA	NA	NA	NA	NA	NA	
04/29/11	NA	23.1	NA	NA	NA	<0.14	NA	NA	
09/01/11	NA	54.5	NA	NA	NA	NA	NA	NA	
03/14/12	NA	27.0	NA	NA	NA	NA	NA	NA	
09/11/12	NA	10.8	NA	NA	NA	NA	NA	NA	
04/29/13	NA	24.8	NA	NA	NA	NA	NA	NA	

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-104	02/20/97	NA	5.9	NA	15	NA	550.0	NA	6.9
	05/27/97	<.02	6.9	NA	11	NA	470.0	<.2	5.2
	09/18/97	<.04	35.6	NA	5**	3**	235.0	<.03	4.74
	12/12/97	.04*	61.8	NA	9.8**	<.8	279.0	.05*	14
	03/25/98	.04*	66.8	NA	<9.5	<1.7	73.6	.008*	7.4*
	06/10/98	.04*	219.0	NA	<9.8	<1.7	107.0	.016*	12.8
	10/27/98	.29*	150.0	NA	2.3*	<.0032	25.0	<.05	30
	02/09/99	<.31	94.0	NA	1.4*	<.0032	1000.0	<.05	<12
	06/08/99	1*	62.0	NA	12.0	<.0032	620.0	<.05	17
	09/13/99	<.31	80.0	NA	3.2	<.0032	9.2	<.05	<12
	12/15/99	<.31	170.0	NA	NA	NA	1.6	NA	NA
	03/13/00	<.31	300.0	NA	NA	NA	13.0	NA	NA
	06/22/00	<.31	210.0	NA	NA	NA	41.0	NA	NA
	09/27/00	<.23	510.0	NA	NA	NA	3.9	NA	NA
	12/19/00	<.23	790.0	NA	NA	NA	<2	NA	NA
	03/01/01	<.23	840.0	NA	NA	NA	<2	NA	NA
	06/19/01	<.17	680.0	NA	NA	NA	2.3	NA	NA
	09/24/01	<.17	310.0	NA	NA	NA	17.0	NA	NA
	12/05/01	<.23	390.0	NA	NA	NA	2.2	NA	NA
	03/19/02	<.23	430.0	NA	NA	NA	<2.0	NA	NA
	06/20/02	<.23	490.0	NA	NA	NA	14.0	NA	NA
	09/18/02	<.23	410.0	NA	NA	NA	27.0	NA	NA
	12/17/02	<.23	240.0	NA	NA	NA	8.9	NA	NA
	03/24/03	<.17	180.0	NA	NA	NA	4.2	NA	NA
	06/10/03	NA	420.0	NA	NA	NA	NA	NA	NA
	09/10/03	NA	1200.0	NA	NA	NA	NA	NA	NA
	12/10/03	NA	790.0	NA	NA	NA	NA	NA	NA
	12/15/03	NA	NA	700.0	NA	NA	NA	NA	NA
	03/24/04	NA	550.0	580.0	NA	NA	<1.0	NA	NA
	07/09/04	NA	370.0	380.0	NA	NA	NA	NA	NA
	09/22/04	NA	87.0	33.0	NA	NA	NA	NA	NA
	12/09/04	NA	56.0	57.0	NA	NA	NA	NA	NA
	03/29/05	NA	260.0	260.0	NA	NA	1.0	NA	NA
	06/22/05	NA	280.0	230.0	NA	NA	NA	NA	NA
	09/21/05	NA	17.0	25.0	NA	NA	NA	NA	NA
	12/15/05	NA	95.0	110.0	NA	NA	NA	NA	NA
03/23/06	NA	66.0	200.0	NA	NA	6.3	NA	NA	
06/28/06	NA	76.0	58.0	NA	NA	NA	NA	NA	
09/20/06	NA	2.8	<6.8	NA	NA	NA	NA	NA	
12/20/06	NA	8.4	NA	NA	NA	NA	NA	NA	
03/28/07	NA	160	NA	NA	NA	130	NA	NA	
07/03/07	NA	97	NA	NA	NA	NA	NA	NA	
09/28/07	NA	11.0	NA	NA	NA	NA	NA	NA	
04/16/08	NA	545	NA	NA	NA	NA	NA	NA	
09/22/08	NA	1.3 J	NA	NA	NA	NA	NA	NA	
04/03/09	NA	144	NA	NA	NA	NA	NA	NA	
09/01/09	NA	1.4 J	NA	NA	NA	NA	NA	NA	
03/17/10	NA	719	NA	NA	NA	NA	NA	NA	
09/09/10	NA	6.7	NA	NA	NA	NA	NA	NA	
04/29/11	NA	376	NA	NA	NA	7.7	NA	NA	
09/01/11	NA	5.4	NA	NA	NA	NA	NA	NA	
03/14/12	NA	510	NA	NA	NA	NA	NA	NA	
09/11/12	NA	<2.0	NA	NA	NA	NA	NA	NA	
04/29/13	NA	1.3 J	NA	NA	NA	NA	NA	NA	

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-105	02/20/97	NA	21	NA	22	NA	1100.0	NA	23
	05/27/97	<.2	5	NA	<10	NA	120.0	<.2	12
	09/18/97	.14**	29.5	NA	28.3	1**	532.0	<.03	46
	12/12/97	.36*	15.8	NA	12.5**	<.8	297.0	.03*	27.1
	03/25/98	.04*	30.8	NA	27.6	<1.7	518.0	.064*	44
	06/10/98	.048*	13.7	NA	15.3**	<1.7	217.0	.016*	22.1
	10/27/98	.29*	8.80	NA	8.20	<.0032	150.0	<.05	70
	02/09/99	<.31	1.3*	NA	4.30	<.0032	2000.0	<.05	19
	06/08/99	<.31	1*	NA	18.00	<.0032	1300.0	<.05	66
	09/13/99	<.31	.64*	NA	24.00	<.0032	1700.0	<.05	30
	12/15/99	<.31	<.62	NA	NA	NA	860.0	NA	NA
	03/13/00	<.31	4.80	NA	NA	NA	660.0	NA	NA
	06/22/00	<.31	1.0*	NA	NA	NA	600.0	NA	NA
	09/27/00	<.23	1.2*	NA	NA	NA	700.0	NA	NA
	12/19/00	<.23	<.4	NA	NA	NA	230.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	43.0	NA	NA
	06/19/01	<.17	.75*	NA	NA	NA	230.0	NA	NA
	09/24/01	<.17	.73*	NA	NA	NA	530.0	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	<2.0	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	22.0	NA	NA
	06/20/02	<.23	.60*	NA	NA	NA	1400.0	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	600.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	58.0	NA	NA
	03/24/03	.21*	<.43	NA	NA	NA	86.0	NA	NA
	03/24/04	NA	3.80	6.3	NA	NA	89.0	NA	NA
	03/29/05	NA	<0.52	<2.7	NA	NA	82.0	NA	NA
	03/23/06	NA	0.42	<5.0	NA	NA	43.0	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	23	NA	NA
	04/29/11	NA	0.64 J	NA	NA	NA	1.8 J	NA	NA
MW-106	02/20/97	NA	21	NA	24	NA	320.0	NA	26
	05/27/97	<.02	40	NA	35	NA	590.0	<.2	68
	09/18/97	.05**	5.5	NA	6.2**	1**	56.9	<.03	35.6
	12/12/97	.04*	9.2	NA	9.7**	<.08	155.0	.03*	18.4
	03/25/98	NA	13.40	NA	14.4**	<1.7	150.0	.007*	18.5
	06/10/98	.04*	<3.9	NA	10.2**	<1.7	10.0	.016*	10.9
	10/27/98	.27*	3.20	NA	4.3*	<.0032	38.0	<.05	88
	02/09/99	<.31	<.62	NA	1.1*	<.0032	760.0	<.05	22
	06/08/99	<.31	.79*	NA	2.3	<.0032	900.0	<.05	<12
	09/13/99	<.31	1.80	NA	4.7	<.0032	1100.0	<.05	30
	12/15/99	<.31	1.3*	NA	NA	NA	130.0	NA	NA
	03/31/00	<.31	2.30	NA	NA	NA	270.0	NA	NA
	06/22/00	<.31	.73*	NA	NA	NA	<4.2	NA	NA
	09/27/00	<.23	.88*	NA	NA	NA	50.0	NA	NA
	12/19/00	<.23	.77*	NA	NA	NA	22.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	45.0	NA	NA
	06/19/01	.21*	.39*	NA	NA	NA	57.0	NA	NA
	09/24/01	<.17	<.34	NA	NA	NA	950.0	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	310.0	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	92.0	NA	NA
	06/20/02	<.23	<.44	NA	NA	NA	270.0	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	420.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	41.0	NA	NA
	03/24/03	<0.17	<.43	NA	NA	NA	2.1	NA	NA
	03/24/04	NA	<0.45	3.8	NA	NA	190.0	NA	NA
	03/29/05	NA	1.10	<2.7	NA	NA	15.0	NA	NA
	03/23/06	NA	0.45	<5.0	NA	NA	30.0	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	15	NA	NA
	04/29/11	NA	0.79 J	NA	NA	NA	0.16 J	NA	NA

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-107	02/20/97	NA	2,000	NA	13	NA	190.0	NA	6.9
	05/27/97	<.2	3,600	NA	<10	NA	91.0	<.2	10
	09/18/97	<.04	2,670	NA	<8.1	1**	59.3	<.03	33.5
	12/12/97	.04*	2,310	NA	<9.7	<.8	48.4	.1*	6.7
	03/25/98	.04*	11,200*	NA	12.1**	<1.7	68.2	.041*	9.3*
	06/10/98	.11*	6,240	NA	13.8**	<1.7	161.0	.027*	17.3*
	10/27/98	<.16	7,100	NA	1.2*	<.0032	28.0	<.05	94
	02/09/99	<.31	3,200	NA	1.9*	<.0032	49.0	<.05	<12
	06/08/99	<.31	5,800	NA	3.0	<.0032	25.0	<.05	<12
	09/13/99	<.31	4,000	NA	1.9*	<.0032	18.0	<.05	<12
	12/15/99	<.31	14,000	NA	NA	NA	.83 *	NA	NA
	03/13/00	<.31	8,100	NA	NA	NA	22.0	NA	NA
	06/22/00	<.31	14,000	NA	NA	NA	<42	NA	NA
	09/27/00	<.23	11,000	NA	NA	NA	4.9	NA	NA
	12/19/00	<.23	10,000	NA	NA	NA	2.4	NA	NA
	03/01/01	<.23	5,000	NA	NA	NA	2.2	NA	NA
	06/19/01	<.17	8,200	NA	NA	NA	<2	NA	NA
	09/24/01	<.17	5,300	NA	NA	NA	270.0	NA	NA
	12/05/01	<.23	6,200	NA	NA	NA	10.0	NA	NA
	03/19/02	<.23	7,000	NA	NA	NA	<20	NA	NA
	06/20/02	<.23	7,000	NA	NA	NA	<20	NA	NA
	09/18/02	<.17	4,300	NA	NA	NA	24.0	NA	NA
	12/17/02	<.17	3,700	NA	NA	NA	15.0	NA	NA
	03/24/03	<10	3,800	NA	NA	NA	7.7	NA	NA
	06/10/03	NA	5,900	NA	NA	NA	NA	NA	NA
	09/10/03	NA	5,200	NA	NA	NA	NA	NA	NA
	12/10/03	NA	5,200	NA	NA	NA	NA	NA	NA
	12/15/03	NA	NA	5,500	NA	NA	NA	NA	NA
	03/24/04	NA	3,900	4,100	NA	NA	1.2*	NA	NA
	07/09/04	NA	3,400	5,000	NA	NA	NA	NA	NA
	09/22/04	NA	4,100	4,400	NA	NA	NA	NA	NA
	12/14/04	NA	6,300	5,800	NA	NA	NA	NA	NA
	03/29/05	NA	3,600	4,100	NA	NA	1.9	NA	NA
	06/22/05	NA	3,300	2,900	NA	NA	NA	NA	NA
	09/21/05	NA	2,500	2,500	NA	NA	NA	NA	NA
	12/15/05	NA	2,400	2,700	NA	NA	NA	NA	NA
03/23/06	NA	3,200	3,600	NA	NA	1.90	NA	NA	
06/28/06	NA	3,600	3,000	NA	NA	NA	NA	NA	
09/20/06	NA	4,100	4,200	NA	NA	NA	NA	NA	
12/19/06	NA	2,700	NA	NA	NA	NA	NA	NA	
03/28/07	NA	4,200	NA	NA	NA	1.7	NA	NA	
07/03/07	NA	2,800	NA	NA	NA	NA	NA	NA	
09/28/07	NA	2,000	NA	NA	NA	NA	NA	NA	
04/16/08	NA	4,410	NA	NA	NA	NA	NA	NA	
09/22/08	NA	2,950	NA	NA	NA	NA	NA	NA	
04/03/09	NA	3,790	NA	NA	NA	NA	NA	NA	
09/01/09	NA	2,420	NA	NA	NA	NA	NA	NA	
03/17/10	NA	3,240	NA	NA	NA	NA	NA	NA	
09/09/10	NA	2,480	NA	NA	NA	NA	NA	NA	
04/29/11	NA	2,940	NA	NA	NA	0.32 J	NA	NA	
09/01/11	NA	1,960	NA	NA	NA	NA	NA	NA	
03/14/12	NA	2,700	NA	NA	NA	NA	NA	NA	
09/11/12	NA	2,410	NA	NA	NA	NA	NA	NA	
04/30/13	NA	3,020	NA	NA	NA	NA	NA	NA	

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
MW-108	02/20/97	NA	25	NA	23	NA	490.0	NA	31
	05/27/97	<.2	11	NA	13	NA	210.0	<.2	15
	09/18/97	.14**	27.4	NA	22.4**	1**	462.0	<.03	36.6
	12/12/97	.04*	5.6	NA	<9.7	<.8	74.8	.03*	27.9
	03/25/98	.04*	9.4	NA	10.4**	<1.7	142.0	.007*	13.8
	06/10/98	.14*	28.4	NA	25.5	<1.7	478.0	.021*	40.5
	10/27/98	.26*	8.90	NA	7.40	<.0032	88.0	<0.5	44
	02/09/99	<.31	1.70	NA	3.90	<.0032	560.0	<.05	30
	06/08/99	<.31	3.10	NA	1.4*	<.0032	450.0	<.05	54
	09/13/99	<.31	4.50	NA	5.30	<.0032	100.0	<.05	<12
	12/15/99	<.31	6.10	NA	NA	NA	79.0	NA	NA
	03/13/00	<.31	3.6	NA	NA	NA	41.0	NA	NA
	06/22/00	<.31	6.5	NA	NA	NA	<4.2	NA	NA
	09/27/00	<.23	2.9	NA	NA	NA	29.0	NA	NA
	12/19/00	<.23	3.0	NA	NA	NA	22.0	NA	NA
	03/01/01	<.23	<.57	NA	NA	NA	<2.0	NA	NA
	06/19/01	<.17	2.40	NA	NA	NA	110.0	NA	NA
	09/24/01	<.17	<.34	NA	NA	NA	40.0	NA	NA
	12/05/01	<.23	<.57	NA	NA	NA	7.4	NA	NA
	03/19/02	<.23	<.57	NA	NA	NA	3.4	NA	NA
	06/20/02	<.23	.85*	NA	NA	NA	39.0	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	150.0	NA	NA
	12/17/02	<.23	.67*	NA	NA	NA	34.0	NA	NA
03/24/03	<.17	.67*	NA	NA	NA	3.3	NA	NA	
03/24/04	NA	0.79*	<36	NA	NA	83.0	NA	NA	
03/29/05	NA	0.65	<2.7	NA	NA	2.6	NA	NA	
03/27/06	NA	<0.40	<5.0	NA	NA	6.2	NA	NA	
03/27/07	NA	<1.9	NA	NA	NA	1.4	NA	NA	
04/29/11	NA	1.8 J	NA	NA	NA	0.70 J	NA	NA	
MW-109	**** 06/21/06	<0.92	1,300	1,400	2.4*	<9.4	480.0	<0.072	<20
	**** 09/20/06	NA	450	NA	-	<9.4	430.0	NA	<20
	12/19/06	NA	550	NA	NA	NA	NA	NA	NA
	03/29/07	NA	2,700	NA	NA	0.94	15	NA	<20
	07/03/07	NA	2,200	NA	NA	NA	NA	NA	NA
	09/28/07	NA	1,300	NA	NA	NA	NA	NA	NA
	04/16/08	NA	1,550	NA	NA	NA	NA	NA	NA
	09/22/08	NA	892	NA	NA	NA	NA	NA	NA
	04/03/09	NA	912	NA	NA	NA	NA	NA	NA
	09/01/09	NA	1,520	NA	NA	NA	NA	NA	NA
	03/17/10	NA	867	NA	NA	NA	NA	NA	NA
	09/09/10	NA	718	NA	NA	NA	NA	NA	NA
	04/29/11	NA	1,110	NA	NA	NA	3.8 J	NA	NA
	09/01/11	NA	2,040	NA	NA	NA	NA	NA	NA
03/16/12	NA	866	NA	NA	NA	NA	NA	NA	
09/11/12	NA	582	NA	NA	NA	NA	NA	NA	
04/29/13	NA	986	NA	NA	NA	NA	NA	NA	
MW-110	**** 06/21/06	<0.92	24,000	26,000	2.9*	40	290.0	<0.072	<20
	**** 09/20/06	NA	15,000	NA	NA	41	260.0	NA	<20
	12/19/06	NA	15,000	NA	NA	53	NA	NA	NA
	03/29/07	NA	47,000	NA	NA	6.6	84	NA	<20
	07/03/07	NA	3,200	NA	NA	79	NA	NA	NA
	09/28/07	NA	51,000	NA	NA	71	NA	NA	NA
	04/16/08	NA	32,500	NA	NA	55	NA	NA	NA
	09/22/08	NA	32,500	NA	NA	57	NA	NA	NA
	04/03/09	NA	30,900	NA	NA	42	NA	NA	NA
	09/01/09	NA	34,400	NA	NA	21	NA	NA	NA
	03/17/10	NA	22,800	NA	NA	39	NA	NA	NA
	09/09/10	NA	5,060	NA	NA	7.5 J	NA	NA	NA
	04/29/11	NA	27.2	NA	NA	<6.1	0.22 J	NA	NA
	09/01/11	NA	7,270	NA	NA	6.6 J	NA	NA	NA
03/14/12	NA	4,530	NA	NA	6.6 J	NA	NA	NA	
09/12/12	NA	10,800	NA	NA	13 J	NA	NA	NA	
04/30/13	NA	294	NA	NA	4.3 J	NA	NA	NA	

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)	
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000	
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000	
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500	
MW-111	****	06/21/06	<0.92	1,400	1,400	3.3*	27	190.0	<0.072	<20
	****	09/20/06	NA	22	NA	-	20*	210.0	NA	<20
		12/19/06	NA	6.7	NA	NA	NA	NA	NA	NA
		03/29/07	NA	2,300	NA	NA	31	11	NA	<20
		07/03/07	NA	41	NA	NA	NA	NA	NA	NA
		09/28/07	NA	340	NA	NA	NA	NA	NA	NA
		04/16/08	NA	212	NA	NA	16 J	NA	NA	NA
		09/22/08	NA	743	NA	NA	NA	NA	NA	NA
		04/03/09	NA	381	NA	NA	13 J	NA	NA	NA
		09/01/09	NA	1,380	NA	NA	NA	NA	NA	NA
		03/17/10	NA	649	NA	NA	17 J	NA	NA	NA
		09/09/10	NA	438	NA	NA	NA	NA	NA	NA
		04/29/11	NA	238	NA	NA	<6.1	<0.14	NA	NA
		09/01/11	NA	572	NA	NA	NA	NA	NA	NA
		03/14/12	NA	432	NA	NA	13	NA	NA	NA
	09/12/12	NA	24.5	NA	NA	NA	NA	NA	NA	
	04/30/13	NA	478	NA	NA	11 J	NA	NA	NA	
MW-112	****	06/21/06	<0.92	130,000	140,000	5.3	140	180.0	<0.072	34,000
	****	09/20/06	NA	69,000	NA	NA	84	130.0	NA	<20
		12/19/06	NA	55,000	NA	NA	88	NA	NA	<200
		03/28/07	NA	140,000	NA	NA	450	110	NA	<20
		07/03/07	NA	100,000	NA	NA	35	NA	NA	<200
		09/28/07	NA	150,000	NA	NA	320	NA	NA	34
		04/16/08	NA	88,400	NA	NA	380	NA	NA	NA
		09/22/08	NA	77,400	NA	NA	210	NA	NA	NA
		04/03/09	NA	76,200	NA	NA	210	NA	NA	NA
		09/01/09	NA	69,000	NA	NA	150	NA	NA	NA
		03/17/10	NA	21,500	NA	NA	110	NA	NA	NA
		09/09/10	NA	7,150	NA	NA	110	NA	NA	NA
		04/29/11	NA	1,840	NA	NA	<6.1	2.6 J	NA	NA
		09/01/11	NA	15,600	NA	NA	51	NA	NA	NA
		03/14/12	NA	149	NA	NA	<6.1	NA	NA	NA
	09/12/12	NA	18,600	NA	NA	32	NA	NA	NA	
	04/30/13	NA	216	NA	NA	5.2 J	NA	NA	NA	
MW-113	****	06/21/06	<0.92	25,000	26,000	3.4*	11	170.0	<0.072	<20
	****	09/20/06	NA	31,000	NA	NA	12*	85.0	NA	<20
		12/19/06	NA	21,000	NA	NA	NA	NA	NA	NA
		03/29/07	NA	11,000	NA	NA	<0.94	3.2	NA	<20
		07/03/07	NA	21,000	NA	NA	NA	NA	NA	NA
		09/28/07	NA	55,000	NA	NA	NA	NA	NA	NA
		04/16/08	NA	16,400	NA	NA	NA	NA	NA	NA
		09/22/08	NA	24,300	NA	NA	NA	NA	NA	NA
		04/03/09	NA	18,800	NA	NA	NA	NA	NA	NA
		09/01/09	NA	37,400	NA	NA	NA	NA	NA	NA
		03/17/10	NA	31,300	NA	NA	NA	NA	NA	NA
		09/09/10	NA	18,400	NA	NA	NA	NA	NA	NA
		04/29/11	NA	2,760	NA	NA	NA	<0.14	NA	NA
		09/01/11	NA	16,700	NA	NA	NA	NA	NA	NA
		03/14/12	NA	7,460	NA	NA	NA	NA	NA	NA
	09/12/12	NA	25,800	NA	NA	NA	NA	NA	NA	
	04/30/13	NA	776	NA	NA	NA	NA	NA	NA	

TABLE 5
Historical Groundwater Analytic Test Results--Selected Metals

N.W. Mauthe Superfund Site - Appleton, Wisconsin

Well Name	Sample Date	Cadmium (ug/l)	Chromium (ug/l)	Hexavalent Chromium (ug/l)	Copper (ug/l)	Cyanide (ug/l)	Manganese (ug/l)	Mercury (ug/l)	Zinc (ug/l)
Max Contaminant Level (MCL)		5	100	100***	100	200	50.0	2	5,000
1992 ES NR 140		10	50	50	1,000	200	50.0	2	5,000
1992 PAL NR 140		1.0	5	5***	500	40	25.0	0.2	2,500
PZ-5	07/19/05****	NA	1.3*	<5.0	NA	NA	NA	NA	NA
	09/21/05****	NA	0.41*	<5.0	NA	NA	NA	NA	NA
PZ-6	07/19/05****	NA	1.2*	<5.0	NA	NA	NA	NA	NA
	09/21/05****	NA	<0.40	<5.0	NA	NA	NA	NA	NA
PZ-7	07/19/05****	NA	<0.52	<5.0	NA	NA	NA	NA	NA
	09/21/05****	NA	0.55*	<5.0	NA	NA	NA	NA	NA
PZ-8	07/19/05****	NA	1.1*	<5.0	NA	NA	NA	NA	NA
	09/21/05****	NA	<0.40	<5.0	NA	NA	NA	NA	NA

EXPLANATION:

Samples collected prior to 10/27/98 were collected by CH2M Hill.

* = Analyte detected between limit of detection and limit of quantitation.

** = Compound was found in sample and blank.

*** = Standard is for Total Chromium.

**** = OMNNI Associates, Inc. collected groundwater samples from PZ-5 to PZ-8 on July 19, 2005 and September 21, 2005 and MW-109 to MW-113 on June 21, 2006 and September 20, 2006 using a peristaltic pump and dedicated tubing.

ND = Not detected above the analytical laboratories method detection limit

NA = Not Analyzed

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MW-104 = Was tested for Aluminum, Nickel, Arsenic & Lead. No quantifiable detections were noted for any of the analytes.

ug/L = Microgram/Liter

mg/L = Milligram / Liter

 Indicates an exceedance of the 1992 NR 140 Groundwater Quality Enforcement Standard (ES)

 Indicates Exceedance of the 1992 NR 140 Groundwater Preventive Action Limit (PAL)

NOTE: The EPA Record of Decision establishes the 1992 PALS as the cleanup goals for the site.

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
 N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
W-2	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<7	<7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<7	<7	<.4	<68	<40	<.5	<.5	.4**	-
	06/10/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	.15*	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	.13*	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	<.42	<.32	<.42	***	<.43
W-8	02/20/97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<40	<7	<7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<40	<7	<7	<.4	<68	<40	<.5	<.5	.4**	-
	03/25/98	<.5	<.6	<85	<40	<7	<7	<.3	<68	<40	<.5	<.5	.3**	-
	06/10/98	<.5	<.6	<85	<40	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	.19*	<.15	<.15	<.15	<.16	<.17	***	.15*	<.14	<.15	<.15	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	0.13	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	<.42	<.32	<.42	***	<.43
W-15	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	0.22	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<7	<7	<124	<68	<40	<.5	<.5	<124	-

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	12/12/97	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<7	<7	<.4	<68	<40	<.5	<.5	.4**	-
	06/10/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	06/08/99	.16*	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.50*	<.42	<.32	<.42	***	<.43
MW-101	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	.491*	.353*	<7	<7	<124	<68	3.03	<.5	3.31	<124	-
	12/12/97	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	06/10/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	<.14	<.15	<.16	<.17	***	0.91	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.40*	<.42	<.32	<.42	***	<.43
MW-102	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<.85	<.85	<7	<7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.85	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.85	<7	<7	<.4	<68	<40	<.5	<.5	.4*	-
	06/10/98	<.5	<.6	<85	<.85	<7	<7	<120	<68	<40	<.5	<.5	<120	-

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	<.14	<.15	<.16	<.17	***	0.65	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	.21*	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	<.42	<.32	<.42	***	<.43
MW-103	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<.7	<.7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	06/10/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	<.14	<.15	<.16	<.17	***	.15*	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	.23*	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.39	***	<.37	<.42	<.32	<.42	***	<.42
MW-104	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<.7	<.7	<124	<68	.324*	<.5	<.5	<124	-
	12/12/97	<.5	<.6	0.4	<.7	<.7	<.7	<120	<68	1*	<.5	0.9	<120	-
	03/25/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	.8*	<.5	<.5	<120	-
	06/10/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	2*	<.5	<.5	<120	-
	10/27/98	<.24	<.23	.35*	<.28	<.27	<.26	<.17	<.21	1.8	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	.38*	<.15	<.16	<.17	***	.17*	1.5	<.15	<.14	***	<.37

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	06/08/99	<.13	<.15	.34*	<.15	<.16	<.17	***	.14*	1.4	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	.38*	<.15	<.16	<.17	***	.27*	1.6	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	.38 *	<.35	<.15	<.39	***	<.37	1.6	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	2.8	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	2.4	<.25	<.23	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	1.3*	<.32	<.42	***	<.43
MW-105	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<.7	<.7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<.7	<.7	<.4	<68	<40	<.5	<.5	.4*	-
	06/10/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	.16*	<.15	<.14	<.15	<.16	<.17	***	.3*	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13*	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	****	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	0.64*	<.42	<.32	<.42	***	<.43
MW-106	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<.7	<.7	<124	<68	2.73*	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	06/10/98	<.5	<.6	<85	<.7	<.7	<.7	<120	<68	<40	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.27	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	.18*	<.15	<.14	<.15	<.16	<.17	***	<.17	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	<.13	<.14	<.15	<.14	***	<.37

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	03/13/00	<.32	<.28	<.36	<.35	<.15	0.39	***	<.37	<.33	<.11	<.34	***	<.71
	03/01/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	5.7	<.42	<.32	<.42	***	<.43
MW-107	02/20/97	<.5	0.3	11	8.4	0.7	<.7	<.5	<.5	81	0.6	50	<.5	-
	05/27/97	0.09	1.10	36	40	3.1	<3.1	<.5	0.34	390	3.5	420	<.5	-
	09/18/97	<10	<12	47.6*	22.1	2.61*	<2.61	<2480	<68	265*	2.83	295	<2480	-
	12/12/97	<10	<12	56*	23	3*	<3	<2500	<68	280	3	290	<2500	-
	03/25/98	<25	<30	61*	69	5*	<5	<17	<68	720	5	620	17*	-
	06/10/98	<12	<15	59*	58	<3	<3	<3100	63*	340*	4*	390	<3100	-
	10/27/98	<.24	1.4	62	46*	3.6	.51*	<.17	<.21	550	4.9	640	<.36	-
	02/09/99	<3.2	<3.8	48	24	<4.0	<4.2	***	<3.2	220	<.38	250	***	<9.2
	06/08/99	<2.6	<3.0	42	20	<3.2	<3.4	***	<2.6	200	<3.0	310	***	<7.4
	09/13/99	<.26	<3.0	34	19	<.32	<3.4	***	<2.6	180	<.3.0	320	***	<.7.4
	12/15/99	<3.2	<3.8	37	56	4.6 *	<4.2	***	<3.2	570	4.5 *	880	***	<9.2
	03/13/00	<26	<23	50 *	32 *	<12	<31	***	<30	340	<.90	630	***	<57
	06/22/00	<26	<23	<29	50 *	<12	<31	***	<30	540	<9	850	***	<57
	09/27/00	<26	<23	35*	54*	<12	<31	***	<30	560	<9	870	***	<57
	12/19/00	<6.4	<5.6	36	53	4.5*	<7.8	***	<7.5	480	4.1*	790	***	<20
	03/01/01	<6.0	<7.4	<32	<6.7	<14	<6.5	***	<8.7	420	<13	760	***	<28
	06/25/01	<6.5	<15	26	35	<9	<6.1	***	<6.2	360	<6.5	620	***	<32
	09/24/01	<6.5	<15	36	50	<9	<6.1	***	<6.2	480	<6.5	760	***	<32
MW-107	12/05/01	<6.5	<15	40	50	<9	<6.1	***	<6.2	500	<6.5	810	***	<32
(cont.)	03/19/02	<6.0	<7.5	37*	43	<14	<6.5	***	<8.7	440	<13	740	***	<28
	06/20/02	<7.9	<11	31	39	<7.2	<8.9	***	<7.6	410	<6.8	690	***	<14
	09/18/02	<7.9	<11	34	39	<7.2	<8.9	***	<7.6	430	<6.8	710	***	<14
	12/17/02	<7.9	<11	40	43	<7.2	<8.9	***	<7.6	470	<6.8	850	***	<14
	03/24/03	<.17	<.18	33*	37*	<19	<19	***	<19	390	<16	640	***	<22
	06/10/03	<5.7	<8.0	<5.3	39	<11	<8.2	***	<7.2	400	<9.0	680	***	<17
	09/10/03	<17	<18	36*	41*	<19	<19	***	<19	430	<16	730	***	<22
	12/10/03	<17	<18	25*	31*	<19	<19	***	<19	380	<16	740	***	<22

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	03/24/04	<7.5	<7.0	<7.1	22	<6.8	<6.0	***	<7.6	220	<8.1	370	***	<19
	07/29/04	<2.0	<1.8	29	25	<4.1	<4.4	***	<3.4	310	3.4	510	***	<13.1
	09/22/04	<7.5	<7.0	28	34	<6.8	<6.0	***	<7.6	270	<8.1	570	***	<19
	12/14/04	<7.5	<7.0	33	40	<6.8	<6.0	***	<7.6	410	<8.1	800	***	<19
	03/29/05	<2.0	<1.8	39	20	<4.1	<4.4	***	<3.4	200	0.21	330	***	<13.1
	06/22/05	<1.0	<0.92	18	8.2	<2.1	<2.2	***	<1.7	82	<1.0	160	***	<6.6
	09/21/05	<2.0	<1.8	39	18.0	<4.1	<4.4	***	<3.4	220	<2.1	470	***	<13.1
	12/15/05	<2.0	<1.8	42	26.0	<4.1	<4.4	***	<3.4	250	<2.1	490	***	<13.1
	03/23/06	<2.0	<1.8	31	16.0	<4.1	<4.4	***	<3.4	150	<2.1	330	***	<13.1
	06/28/06	<2.0	<1.8	37	28.0	<4.1	<4.4	***	<3.4	270	<2.1	550	***	<13.1
	09/20/06	<4.1	<3.7	32	31.0	<8.3	<8.9	***	<6.7	330	<4.2	700	***	<26.3
	12/19/06	<2.0	<1.8	52	30	<4.1	<4.4	***	<3.4	280	3.3*	580	***	<13.1
	03/28/07	<0.82	<0.74	19	18	2.1	<1.8	***	<1.3	190	1.7	340	***	<5.3
	07/03/07	<1.0	<0.92	30	15	2.3	<2.2		<1.7	160	1.5	350	***	<6.6
	09/28/07	<2.0	<1.8	35	19	<4.1	<4.4	***	<3.4	210	2.4*	420	***	<13.1
	04/16/08	<2.0	<1.8	20.8	21.8	<4.2	<4.4	***	<3.4	257	2.7 J	550	***	<13.2
	09/22/08	<2.0	<6.5	38.5	34.2	4.5 J	<4.4	***	<3.4	368	2.8 J	679	***	<13.2
	04/03/09	<2.0	<6.5	22.6	22.7	<4.2	<4.4	***	<3.4	283	<2.1	593	***	<13.2
	09/01/09	<2.0	<6.5	41.4	37.7	<4.2	<4.4	***	<3.4	347	2.8 J	715	***	<13.2
	03/17/10	<2.0	<6.5	25.3	29.0	<4.2	<4.4	***	<3.4	276	<2.1	620	***	<13.2
	09/09/10	<2.0	<6.5	25.8	26.7	<4.2	<4.4	***	<3.4	283	<2.1	685	***	<13.2
	04/29/11	<2.0	<6.5	21.0	18.3	<4.2	<4.4	***	<3.4	213	<2.1	551	***	<13.2
	09/01/11	<2.0	<6.5	31.5	26.1	<4.2	<4.4	***	5.2	297	2.3 J	641	***	<13.2
	03/14/12	<2.0	<6.5	21.4	15.6	<4.2	<4.4	***	<3.4	190	<2.1	463	***	<13.2
	09/11/12	<2.0	<6.5	32.0	30.5	4.2J	<4.4	<4.2	<3.4	305	<2.1	664	<9.0	<13.2
	04/30/13	<2.5	<3.4	16.3	15.5	<2.1	<1.9	<2.5	<2.2	177	<1.9	460	<4.1	<6.6
MW-108	02/20/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	05/27/97	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	-
	09/18/97	<.5	<.6	<85	<.7	<7	<7	<124	<68	<40	<.5	<.5	<124	-
	12/12/97	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-
	03/25/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<40	<.5	<.5	<120	-

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
 N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	06/10/98	<.5	<.6	<85	<.7	<7	<7	<120	<68	<44	<.5	<.5	<120	-
	10/27/98	<.24	<.23	<.22	<.28	<.27	<.26	<.17	<.21	<.26	<.23	<.29	<.36	-
	02/09/99	<.13	<.15	<.14	<.15	<.16	<.17	***	0.83	<.14	<.15	<.14	***	<.37
	06/08/99	<.13	<.15	<.14	<.15	<.16	<.17	***	.15*	<.14	<.15	<.14	***	<.37
	09/13/99	<.13	<.15	<.14	<.15	<.16	<.17	***	0.84	<.14	<.15	<.14	***	<.32
	03/13/00	<.32	<.28	<.36	<.35	<.15	<.39	***	<.37	<.33	<.11	<.36	***	<.71
	03/31/01	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/19/02	<.12	<.15	<.64	<.13	<.28	<.13	***	<.17	<.17	<.25	<.13	***	<.56
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	<.42	<.32	<.42	***	<.43
	03/24/03	<.35	<.35	<.35	<.39	<.39	<.37	***	<.37	<.42	<.32	<.42	***	<.43
MW-109	06/21/06	-	0.40*	1.3*	1.9	<0.83	<0.89	***	-	37	0.45*	46	***	-
	09/20/06	-	0.39*	1.7*	2.2	<0.83	<0.89	***	-	37	0.45*	51	***	-
	12/19/06	<0.41	0.44*	2.7	1.1*	<0.83	<0.89	***	-	33	0.52*	42	***	<2.63
	03/29/07	<0.41	<0.37	0.85	1.3	<0.83	<0.89	***	<13	27	<0.42	37	***	<2.63
	07/03/07	<0.41	0.38*	1.7	1.3	<0.83	<0.89	***	<0.67	34	0.54	47	***	<2.63
	09/28/07	<0.41	<0.37	<0.75	1.1*	<0.83	<0.89	***	<0.67	22	<0.42	35	***	<2.63
	04/16/08	<0.41	0.39 J	1.9	1.9	<0.83	<0.89	***	<0.67	31.9	0.45 J	39.4	***	<2.63
	09/22/08	<0.41	<1.3	0.98 J	1.4	<0.83	<0.89	***	<0.67	26.9	<0.42	38.8	***	<2.63
	04/03/09	<0.41	<1.3	2.4	1.1	<0.83	<0.89	***	<0.67	29.6	<0.42	36.3	***	<2.63
	09/01/09	<0.41	<1.3	1.4	2.2	<0.83	<0.89	***	<0.67	35.8	0.50 J	50.8	***	<2.63
	03/17/10	<0.41	<1.3	2.4	1.6	<0.83	<0.89	***	<0.67	27.4	<0.42	37.9	***	<2.63
	09/09/10	<0.41	<1.3	0.84 J	1.2	<0.83	<0.89	***	<0.67	23.5	<0.42	41.5	***	<2.63
	04/29/11	<0.41	<1.3	2.2	1.6	<0.83	<0.89	***	<0.67	27.1	0.43 J	38.6	***	<13.2
	09/01/11	<0.41	<1.3	2.7	2.6	<0.83	<0.89	***	<0.67	52.5	0.69 J	66.8	***	<2.63
	03/14/12	<0.41	<1.3	2.4	1.1	<0.83	<0.89	***	<0.67	22.3	<0.42	33.5	***	<2.63
	09/11/12	<0.41	<1.3	1.1	0.91J	<0.83	<0.89	***	<0.67	19.5	<0.42	30.2	***	<2.63
	04/30/13	<0.50	<0.69	1.8	1.0	<0.42	<0.37	***	<0.44	16.7	<0.39	28.7	***	<1.32
MW-110	06/21/06	-	<3.7	310	340	56	19	***	-	1,500	<4.2	27	***	-
	09/20/06	-	<3.7	260	300	57	28*	***	-	1,100	<4.2	30	***	-
	12/19/06	<4.1	<3.7	230	240	55	16*	***	<6.7	910	<4.2	23	***	<2.63

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
	03/29/07	<8.2	<7.4	250	340	59	24	***	<13	1,500	<8.4	32	***	<53
	07/03/07	<8.2	<7.4	270	230	59	18	***	<13	1,300	<8.4	26	***	<53
	09/28/07	<10	<9.2	380	350	67*	23*	***	<17	1,600	<10	32*	***	<2.63
	04/16/08	<8.2	<7.4	206	195	55.9	<17.8	***	<13.4	918	<8.4	28.2	***	<52.6
	09/22/08	<4.1	<13.0	246	239	73.5	29.1	***	<6.7	1,210	<4.2	45.5	***	<26.3
	04/03/09	<4.1	<13.0	195	188	56.5	14.0	***	<6.7	914	<4.2	26.2	***	<26.3
	09/01/09	<4.1	<13.0	257	268	74.9	16.3	***	<6.7	1,130	<4.2	44.2	***	<26.3
	03/17/10	<4.1	<13.0	159	169	47.3	9.8 J	***	<6.7	718	<4.2	29.8	***	<26.3
	09/09/10	<1.0	<3.2	36.3	47.7	17.2	3.3	***	<1.7	252	<1.0	23.5	***	<6.6
	04/29/11	<0.41	<1.3	0.84 J	0.62 J	<0.83	<0.89	***	<0.67	6.6	<0.42	1.0	***	<2.63
	09/01/11	<0.41	<1.3	32.5	40.0	22.2	3.0	***	<0.67	232	0.87 J	32.7	***	<2.63
	03/14/12	<1.6	<1.3	39.6	29.9	13.4	2.3	***	<0.67	170	0.46 J	15.8	***	<2.63
	09/12/12	<1.6	<5.2	65.3	68.9	24.4	5.2	***	<2.7	313	<1.7	22.7	***	<10.5
	04/30/13	<0.50	<0.69	6.8	4.4	1.9	0.38 J	***	<0.44	28.1	<0.39	4.7	***	<1.32
MW-111	06/21/06	-	0.59*	2.7	11	<0.83	<0.89	***	-	78	0.71	180	***	-
	09/20/06	-	<0.37	3.2	7.7	<0.83	<0.89	***	-	36	<0.42	97	***	-
	12/19/06	<0.41	<0.37	2.0*	1.5*	<0.83	<0.89	***	<0.67	7.9	<0.42	21	***	<2.63
	03/29/07	<0.41	0.77	1.7	7.3	<0.83	<0.89	***	<0.67	52	<0.42	120	***	<2.63
	07/03/07	<0.41	<0.37	<0.36	1.8	<0.83	<0.89	***	<0.67	14	<0.42	37	***	<2.63
	09/28/07	<0.41	<0.37	2.4*	2.8	<0.83	<0.89	***	<0.67	22	<0.42	55	***	<2.63
	04/16/08	<0.41	1.2	1.6	2.7	<0.83	<0.89	***	<0.67	20.3	<0.42	52.9	***	<2.63
	09/22/08	<0.41	<1.3	2.6	6.7	<0.83	<0.89	***	<0.67	59.0	0.53 J	142	***	<2.63
	04/03/09	<0.41	<1.3	1.6	2.7	<0.83	<0.89	***	<0.67	21.4	<0.42	57.7	***	<2.63
	09/01/09	<0.41	<1.3	2.5	7.5	<0.83	<0.89	***	<0.67	56.8	0.51 J	147	***	<2.63
	03/17/10	<0.41	<1.3	1.8	3.9	<0.83	<0.89	***	<0.67	27.5	<0.42	75.3	***	<2.63
	09/09/10	<0.41	<1.3	2.2	4.5	<0.83	<0.89	***	<0.67	37.5	<0.42	110	***	<2.63
	04/29/11	<0.41	<1.3	2.0	2.7	<0.83	<0.89	***	<0.67	21.1	<0.42	65.0	***	<2.63
	09/01/11	<0.41	<1.3	2.3	4.5	<0.83	<0.89	***	<0.67	39.7	<0.42	109	***	<2.63
	03/14/12	<0.41	<1.3	2.3	2.7	<0.83	<0.89	***	<0.67	23.9	<0.42	62.6	***	<2.63
	09/12/12	<0.41	<1.3	3.1	3.2	<0.83	<0.89	***	<0.67	24.1	<0.42	66.7	***	<2.63
	04/30/13	<0.50	<0.69	1.8	2.9	<0.42	<0.37	***	<0.44	19.8	<0.39	64.1	***	<1.32

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
N.W. Mauthe Superfund Site - Appleton, Wisconsin

		Detected Volatile Organic Compounds (µg/L)												
		Benzene	Chloroform	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2,-Dichloro ethene	Trans-1,2,-Dichloro ethene	Ortho-Xylene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	Meta, para Xylene	Total Xylenes
1992 US EPA MCL		5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000
1992 ES NR 140		5	6	850	7	100	100	620**	343	200	0.6	5	620**	620
1992 PAL NR 140		0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124
MW-112	06/21/06	-	<1.8	<3.7	<3.8	<4.1	<4.4	***	-	7.9*	<2.1	450	***	-
	09/20/06	-	<0.37	<7.5	<5.7	<8.3	<8.9	***	-	<9.0	<4.2	540	***	-
	12/19/06	<2.0	<1.8	<3.8	<2.8	<4.1	<4.4	***	<3.4	<4.5	<2.1	240	***	<13.1
	03/29/07	<4.1	<3.7	<7.5	<5.7	<8.3	<8.9	***	<6.7	20	<4.2	940	***	<26.3
	07/03/07	<2.0	<1.8	<3.8	<2.8	<4.1	<4.4	***	<3.4	11	<2.1	750	***	<13.1
	09/28/07	<4.1	<3.7	<7.5	<5.7	<8.3	<8.9	***	<6.7	13*	<4.2	820	***	<2.63
	04/16/08	<4.1	<3.7	<7.5	<5.7	<8.3	<8.9	***	<6.7	20.1	<4.2	1130	***	<26.3
	09/22/08	<4.1	<13.0	<7.5	5.7 J	<8.3	<8.9	***	<6.7	19.0	<4.2	1160	***	<26.3
	04/03/09	<4.1	<13.0	<7.5	5.8 J	<8.3	<8.9	***	<6.7	20.6	<4.2	1250	***	<26.3
	09/01/09	<4.1	<13.0	<7.5	8.2 J	<8.3	<8.9	***	<6.7	25.8	<4.2	1600	***	<26.3
	03/17/10	<4.1	<13.0	<7.5	<5.7	<8.3	<8.9	***	<6.7	<9.0	<4.2	556	***	<26.3
	09/09/10	<4.1	<13.0	<7.5	<5.7	<8.3	<8.9	***	<6.7	<9.0	<4.2	546	***	<26.3
	04/29/11	<0.41	<1.3	<0.75	<0.57	<0.83	<0.89	***	<0.67	0.94 J	<0.42	111	***	<2.63
	09/01/11	<2.0	<6.5	<3.8	<2.8	<4.2	<4.4	***	<3.4	7.5	<2.1	557	***	<13.2
	09/01/11	<0.41	<1.3	<0.75	<0.57	<0.83	<0.89	***	<0.67	<0.90	<0.42	47.9	***	<2.63
	09/12/12	<2.0	<6.5	<3.8	<2.8	<4.2	<4.4	***	<3.4	7.8	<2.1	623	***	<13.2
	04/30/13	<0.50	<0.69	<0.28	<0.43	<0.43	<0.37	***	<0.44	<0.44	<0.39	75.0	***	<1.32
MW-113	06/21/06	-	<0.74	37	44	4.4*	<1.8	***	-	240	<0.84	92	***	-
	09/20/06	-	<0.37	22	19	3.6	1.3*	***	-	120	0.82*	81	***	-
	12/19/06	<2.0	<1.8	28	16	5.2*	<4.4	***	<3.4	120	<2.1	91	***	<13.1
	03/29/07	<0.41	<0.37	10	11	1.6	<0.89	***	<0.67	77	<0.42	46	***	<2.63
	07/03/07	<2.0	<1.8	21	8.1	4.9	<4.4	***	<13.1	79	<2.1	61	***	<13.1
A	09/28/07	<0.41	0.57	35	17	8.9	<0.89	***	<0.67	130	1.5	97	***	<2.63
	04/16/08	<0.41	<0.37	20.5	15.3	3.7	<0.89	***	<0.67	99.7	0.44 J	62.4	***	<2.63
	09/22/08	<4.1	<13.0	28.2	17.9	<8.3	<8.9	***	<6.7	134	<4.2	89.4	***	<26.3
	04/03/09	<0.41	<1.3	21.8	13.9	4.1	<0.89	***	<0.67	107	<0.42	62.2	***	<2.63
	09/01/09	<1.0	<3.2	51.2	70.8	13.8	4.0	***	<1.7	356	1.4 J	199	***	<6.6
	03/17/10	<1.0	<3.2	29.0	23.6	7.8	<2.2	***	<1.7	140	<1.0	96.8	***	<6.6
	09/09/10	<0.82	<2.6	26.7	29.1	6.1	<1.8	***	<1.3	165	<0.84	77.0	***	<5.3
	04/29/11	<0.50	<1.3	6.9	5.5	1.1	<0.89	***	<0.67	37.1	<0.42	21.3	***	<2.63

TABLE 6
Historical Groundwater Analytic Test Results--Volatile Organic Compounds
 N.W. Mauthe Superfund Site - Appleton, Wisconsin

	Detected Volatile Organic Compounds (µg/L)													
	Benzene	Chloroform	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2,-Dichloroethene	Trans-1,2,-Dichloroethene	Ortho-Xylene	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Meta, para Xylene	Total Xylenes	
1992 US EPA MCL	5.0	100	-	7.0	70	100	10,000	1,000	200	5.0	5.0	10,000**	10,000	
1992 ES NR 140	5	6	850	7	100	100	620**	343	200	0.6	5	620**	620	
1992 PAL NR 140	0.067	0.6	85	0.024	10	20	124**	68.6	40	0.06	0.18	124**	124	
	09/01/11	<0.41	<1.3	23.8	26.0	6.3	1.2	***	<0.67	152	0.55 J	75.9	***	<2.63
	03/14/12	<0.41	<1.3	17.1	17.3	2.9	<0.89	***	<0.67	106	<0.42	42.3	***	<2.63
	09/12/12	<2.0	<6.5	50.8	59.6	12.6	<4.4	***	<3.4	320	<2.1	148	***	<13.2
	04/30/13	<.50	<0.69	6.2	5.8	0.94	<0.37	***	<3.4	34.6	<2.1	14.0	***	<1.32
PZ-5	07/19/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	1.7*	<0.42	<0.48	NA	NA	NA
	09/21/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	<0.90	<0.42	<0.48	NA	NA	NA
	09/21/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	<0.90	<0.42	<0.48	NA	NA	NA
PZ-6	07/19/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	<0.90	<0.42	<0.48	NA	NA	NA
	09/21/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	<0.90	<0.42	<0.48	NA	NA	NA
	09/21/05	<0.37	<0.75	<0.57	<0.83	<0.89	NA	NA	<0.90	<0.42	<0.48	NA	NA	NA

EXPLANATION:

Results prior to 10/27/98 for cis-1,2,-Dichloroethene and Trans-1,2 Dichloroethene were listed as Total Dichloroethene and were placed in this table under the heading cis-1,2,-Dichloroethene.

Results prior to 10/27/98 for Ortho Xylene and Meta, para Xylene were listed as Total Xylenes and were placed in this table under the heading Meta, para Xylene.

* = Analyte detected between limit of detection and limit of quantitation.

J = Estimated Concentration above the adjusted method detection limit and below the adjusted reporting limit.

** = Standard includes Ortho-, Meta, para-Xylenes

*** = As of 02/09/99 Xylene results are listed as "Total Xylenes".

WM Equipment Malfunction, no accurate measurement.

NOTE: The EPA Record of Decision establishes the 1992 PAL's as the clean-up goals for the site.

A = 1,2-Dichloroethane was detected at 0.87 ug/l.

ND = Not Detected

NA = Not Analyzed

MCL = Maximum Contaminant Levels

ug/l = Microgram/Liter

= Indicates an exceedance of the 1992 NR 140 Groundwater Quality Enforcement Standards (ES)

= Indicates an exceedance of the 1992 NR 140 Groundwater Quality Preventive Action Limits (PAL)

Appendix C

Laboratory Analytic Test Reports and Chain-of-
Custody Record
Groundwater Sampling Field Sheets

May 08, 2013

Scott Hodgson
Terracon, Inc. - Franklin
9856 South 57th Street
Franklin, WI 53132

RE: Project: 58117057 NW MAUTHE
Pace Project No.: 4077127

Dear Scott Hodgson:

Enclosed are the analytical results for sample(s) received by the laboratory on May 01, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Milewsky

dan.milewsky@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 11888

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

SAMPLE SUMMARY

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4077127001	MW-101	Water	04/29/13 13:00	05/01/13 15:24
4077127002	MW-102	Water	04/29/13 11:55	05/01/13 15:24
4077127003	MW-103	Water	04/29/13 15:50	05/01/13 15:24
4077127004	MW-104	Water	04/29/13 15:05	05/01/13 15:24
4077127005	MW-109	Water	04/29/13 14:10	05/01/13 15:24
4077127006	MW-107	Water	04/30/13 07:25	05/01/13 15:24
4077127007	MW-110	Water	04/30/13 08:55	05/01/13 15:24
4077127008	MW-111	Water	04/30/13 12:25	05/01/13 15:24
4077127009	MW-112	Water	04/30/13 11:35	05/01/13 15:24
4077127010	MW-113	Water	04/30/13 10:20	05/01/13 15:24
4077127011	BD-1	Water	04/30/13 00:00	05/01/13 15:24
4077127012	TRIP BLANK	Water	04/30/13 00:00	05/01/13 15:24

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4077127001	MW-101	EPA 6010	DLB	1	PASI-G
4077127002	MW-102	EPA 6010	DLB	1	PASI-G
4077127003	MW-103	EPA 6010	DLB	1	PASI-G
4077127004	MW-104	EPA 6010	DLB	1	PASI-G
4077127005	MW-109	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
4077127006	MW-107	EPA 6010	DLB	1	PASI-G
		EPA 8260	LAP	64	PASI-G
4077127007	MW-110	EPA 6010	DLB	1	PASI-G
		EPA 8260	LAP	64	PASI-G
		EPA 335.4	DAW	1	PASI-G
4077127008	MW-111	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 335.4	DAW	1	PASI-G
4077127009	MW-112	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		EPA 335.4	DAW	1	PASI-G
4077127010	MW-113	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
4077127011	BD-1	EPA 8260	HNW	64	PASI-G
4077127012	TRIP BLANK	EPA 8260	HNW	64	PASI-G

REPORT OF LABORATORY ANALYSIS

HITS ONLY

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
4077127002	MW-102					
EPA 6010	Chromium, Dissolved	130	ug/L	5.0	05/02/13 16:02	
4077127003	MW-103					
EPA 6010	Chromium, Dissolved	24.8	ug/L	5.0	05/02/13 16:05	
4077127004	MW-104					
EPA 6010	Chromium, Dissolved	1.3J	ug/L	5.0	05/02/13 16:09	
4077127005	MW-109					
EPA 6010	Chromium, Dissolved	986	ug/L	5.0	05/02/13 16:12	
EPA 8260	1,1-Dichloroethane	1.8	ug/L	1.0	05/03/13 07:32	
EPA 8260	1,1-Dichloroethene	1.0	ug/L	1.0	05/03/13 07:32	
EPA 8260	1,1,1-Trichloroethane	16.7	ug/L	1.0	05/03/13 07:32	
EPA 8260	Trichloroethene	28.7	ug/L	1.0	05/03/13 07:32	
4077127006	MW-107					
EPA 6010	Chromium, Dissolved	3020	ug/L	5.0	05/02/13 16:14	
EPA 8260	1,1-Dichloroethane	16.3	ug/L	5.0	05/02/13 16:34	
EPA 8260	1,1-Dichloroethene	15.5	ug/L	5.0	05/02/13 16:34	
EPA 8260	1,1,1-Trichloroethane	177	ug/L	5.0	05/02/13 16:34	
EPA 8260	Trichloroethene	460	ug/L	5.0	05/02/13 16:34	
4077127007	MW-110					
EPA 6010	Chromium, Dissolved	294	ug/L	5.0	05/02/13 16:20	
EPA 8260	1,1-Dichloroethane	6.8	ug/L	1.0	05/02/13 18:58	
EPA 8260	1,1-Dichloroethene	4.4	ug/L	1.0	05/02/13 18:58	
EPA 8260	cis-1,2-Dichloroethene	1.9	ug/L	1.0	05/02/13 18:58	
EPA 8260	trans-1,2-Dichloroethene	0.38J	ug/L	1.0	05/02/13 18:58	
EPA 8260	1,1,1-Trichloroethane	28.1	ug/L	1.0	05/02/13 18:58	
EPA 8260	Trichloroethene	4.7	ug/L	1.0	05/02/13 18:58	
EPA 335.4	Cyanide	0.0043J	mg/L	0.020	05/02/13 20:32	
4077127008	MW-111					
EPA 6010	Chromium, Dissolved	478	ug/L	5.0	05/02/13 16:23	
EPA 8260	1,1-Dichloroethane	1.8	ug/L	1.0	05/06/13 15:02	
EPA 8260	1,1-Dichloroethene	2.9	ug/L	1.0	05/06/13 15:02	
EPA 8260	1,1,1-Trichloroethane	19.8	ug/L	1.0	05/06/13 15:02	
EPA 8260	Trichloroethene	64.1	ug/L	1.0	05/06/13 15:02	
EPA 335.4	Cyanide	0.011J	mg/L	0.020	05/02/13 20:36	
4077127009	MW-112					
EPA 6010	Chromium, Dissolved	216	ug/L	5.0	05/02/13 16:25	
EPA 8260	1,1-Dichloroethane	<0.28	ug/L	1.0	05/06/13 16:38	
EPA 8260	Trichloroethene	75.0	ug/L	1.0	05/06/13 16:38	
EPA 335.4	Cyanide	0.0052J	mg/L	0.020	05/02/13 20:37	
4077127010	MW-113					
EPA 6010	Chromium, Dissolved	776	ug/L	5.0	05/02/13 16:29	
EPA 8260	1,1-Dichloroethane	6.2	ug/L	1.0	05/06/13 17:01	
EPA 8260	1,1-Dichloroethene	5.8	ug/L	1.0	05/06/13 17:01	

REPORT OF LABORATORY ANALYSIS

HITS ONLY

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
4077127010	MW-113					
EPA 8260	cis-1,2-Dichloroethene	0.94J	ug/L	1.0	05/06/13 17:01	
EPA 8260	1,1,1-Trichloroethane	34.6	ug/L	1.0	05/06/13 17:01	
EPA 8260	Trichloroethene	14.0	ug/L	1.0	05/06/13 17:01	
4077127011	BD-1					
EPA 8260	1,1-Dichloroethane	5.9	ug/L	1.0	05/06/13 17:23	
EPA 8260	1,1-Dichloroethene	5.4	ug/L	1.0	05/06/13 17:23	
EPA 8260	cis-1,2-Dichloroethene	0.91J	ug/L	1.0	05/06/13 17:23	
EPA 8260	1,1,1-Trichloroethane	33.2	ug/L	1.0	05/06/13 17:23	
EPA 8260	Trichloroethene	13.6	ug/L	1.0	05/06/13 17:23	

REPORT OF LABORATORY ANALYSIS

PROJECT NARRATIVE

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Method: EPA 6010

Description: 6010 MET ICP, Dissolved

Client: Terracon, Inc. - Franklin

Date: May 08, 2013

General Information:

10 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

PROJECT NARRATIVE

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Method: EPA 8260

Description: 8260 MSV

Client: Terracon, Inc. - Franklin

Date: May 08, 2013

General Information:

8 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

PROJECT NARRATIVE

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Method: EPA 335.4

Description: 335.4 Cyanide, Total

Client: Terracon, Inc. - Franklin

Date: May 08, 2013

General Information:

3 samples were analyzed for EPA 335.4. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 335.4 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE
Pace Project No.: 4077127

Sample: MW-101		Lab ID: 4077127001	Collected: 04/29/13 13:00	Received: 05/01/13 15:24	Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	<1.2	ug/L	5.0	1.2	1		05/02/13 16:00	7440-47-3	
Sample: MW-102		Lab ID: 4077127002	Collected: 04/29/13 11:55	Received: 05/01/13 15:24	Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	130	ug/L	5.0	1.2	1		05/02/13 16:02	7440-47-3	
Sample: MW-103		Lab ID: 4077127003	Collected: 04/29/13 15:50	Received: 05/01/13 15:24	Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	24.8	ug/L	5.0	1.2	1		05/02/13 16:05	7440-47-3	
Sample: MW-104		Lab ID: 4077127004	Collected: 04/29/13 15:05	Received: 05/01/13 15:24	Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	1.3J	ug/L	5.0	1.2	1		05/02/13 16:09	7440-47-3	
Sample: MW-109		Lab ID: 4077127005	Collected: 04/29/13 14:10	Received: 05/01/13 15:24	Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	986	ug/L	5.0	1.2	1		05/02/13 16:12	7440-47-3	
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/03/13 07:32	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/03/13 07:32	75-27-4	
Bromoform	<0.23	ug/L	1.0	0.23	1		05/03/13 07:32	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/03/13 07:32	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/03/13 07:32	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/03/13 07:32	135-98-8	

Date: 05/08/2013 04:58 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-109 **Lab ID: 4077127005** Collected: 04/29/13 14:10 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/03/13 07:32	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/03/13 07:32	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/03/13 07:32	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/03/13 07:32	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/03/13 07:32	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/03/13 07:32	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/03/13 07:32	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/03/13 07:32	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/03/13 07:32	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/03/13 07:32	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/03/13 07:32	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/03/13 07:32	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/03/13 07:32	75-71-8	
1,1-Dichloroethane	1.8	ug/L	1.0	0.28	1		05/03/13 07:32	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	107-06-2	
1,1-Dichloroethene	1.0	ug/L	1.0	0.43	1		05/03/13 07:32	75-35-4	
cis-1,2-Dichloroethene	<0.42	ug/L	1.0	0.42	1		05/03/13 07:32	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/03/13 07:32	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/03/13 07:32	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/03/13 07:32	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/03/13 07:32	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	1.0	0.29	1		05/03/13 07:32	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	1.0	0.26	1		05/03/13 07:32	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/03/13 07:32	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/03/13 07:32	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/03/13 07:32	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/03/13 07:32	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/03/13 07:32	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/03/13 07:32	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/03/13 07:32	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/03/13 07:32	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/03/13 07:32	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/03/13 07:32	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/03/13 07:32	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/03/13 07:32	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/03/13 07:32	120-82-1	
1,1,1-Trichloroethane	16.7	ug/L	1.0	0.44	1		05/03/13 07:32	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/03/13 07:32	79-00-5	
Trichloroethene	28.7	ug/L	1.0	0.43	1		05/03/13 07:32	79-01-6	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-109 **Lab ID: 4077127005** Collected: 04/29/13 14:10 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/03/13 07:32	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/03/13 07:32	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/03/13 07:32	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/03/13 07:32	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/03/13 07:32	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/03/13 07:32	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/03/13 07:32	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95 %		43-137		1		05/03/13 07:32	460-00-4	
Dibromofluoromethane (S)	94 %		70-130		1		05/03/13 07:32	1868-53-7	
Toluene-d8 (S)	101 %		55-137		1		05/03/13 07:32	2037-26-5	

Sample: MW-107 **Lab ID: 4077127006** Collected: 04/30/13 07:25 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	3020	ug/L	5.0	1.2	1		05/02/13 16:14	7440-47-3	
8260 MSV		Analytical Method: EPA 8260							
Benzene	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	71-43-2	
Bromobenzene	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	108-86-1	
Bromochloromethane	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	74-97-5	
Bromodichloromethane	<2.3	ug/L	5.0	2.3	5		05/02/13 16:34	75-27-4	
Bromoform	<1.2	ug/L	5.0	1.2	5		05/02/13 16:34	75-25-2	
Bromomethane	<2.1	ug/L	25.0	2.1	5		05/02/13 16:34	74-83-9	
n-Butylbenzene	<2.0	ug/L	5.0	2.0	5		05/02/13 16:34	104-51-8	
sec-Butylbenzene	<3.0	ug/L	25.0	3.0	5		05/02/13 16:34	135-98-8	
tert-Butylbenzene	<2.1	ug/L	5.0	2.1	5		05/02/13 16:34	98-06-6	
Carbon tetrachloride	<1.8	ug/L	5.0	1.8	5		05/02/13 16:34	56-23-5	
Chlorobenzene	<1.8	ug/L	5.0	1.8	5		05/02/13 16:34	108-90-7	
Chloroethane	<2.2	ug/L	5.0	2.2	5		05/02/13 16:34	75-00-3	
Chloroform	<3.4	ug/L	25.0	3.4	5		05/02/13 16:34	67-66-3	
Chloromethane	<1.9	ug/L	5.0	1.9	5		05/02/13 16:34	74-87-3	
2-Chlorotoluene	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	95-49-8	
4-Chlorotoluene	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	106-43-4	
1,2-Dibromo-3-chloropropane	<7.5	ug/L	25.0	7.5	5		05/02/13 16:34	96-12-8	
Dibromochloromethane	<9.5	ug/L	25.0	9.5	5		05/02/13 16:34	124-48-1	
1,2-Dibromoethane (EDB)	<1.9	ug/L	5.0	1.9	5		05/02/13 16:34	106-93-4	
Dibromomethane	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	74-95-3	
1,2-Dichlorobenzene	<2.2	ug/L	5.0	2.2	5		05/02/13 16:34	95-50-1	
1,3-Dichlorobenzene	<2.3	ug/L	5.0	2.3	5		05/02/13 16:34	541-73-1	
1,4-Dichlorobenzene	<2.2	ug/L	5.0	2.2	5		05/02/13 16:34	106-46-7	
Dichlorodifluoromethane	<2.0	ug/L	5.0	2.0	5		05/02/13 16:34	75-71-8	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-107 **Lab ID: 4077127006** Collected: 04/30/13 07:25 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,1-Dichloroethane	16.3	ug/L	5.0	1.4	5		05/02/13 16:34	75-34-3	
1,2-Dichloroethane	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	107-06-2	
1,1-Dichloroethene	15.5	ug/L	5.0	2.1	5		05/02/13 16:34	75-35-4	
cis-1,2-Dichloroethene	<2.1	ug/L	5.0	2.1	5		05/02/13 16:34	156-59-2	
trans-1,2-Dichloroethene	<1.9	ug/L	5.0	1.9	5		05/02/13 16:34	156-60-5	
1,2-Dichloropropane	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	78-87-5	
1,3-Dichloropropane	<2.3	ug/L	5.0	2.3	5		05/02/13 16:34	142-28-9	
2,2-Dichloropropane	<1.8	ug/L	5.0	1.8	5		05/02/13 16:34	594-20-7	
1,1-Dichloropropene	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	563-58-6	
cis-1,3-Dichloropropene	<1.5	ug/L	5.0	1.5	5		05/02/13 16:34	10061-01-5	
trans-1,3-Dichloropropene	<1.3	ug/L	5.0	1.3	5		05/02/13 16:34	10061-02-6	
Diisopropyl ether	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	108-20-3	
Ethylbenzene	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	100-41-4	
Hexachloro-1,3-butadiene	<6.3	ug/L	25.0	6.3	5		05/02/13 16:34	87-68-3	
Isopropylbenzene (Cumene)	<1.7	ug/L	5.0	1.7	5		05/02/13 16:34	98-82-8	
p-Isopropyltoluene	<2.0	ug/L	5.0	2.0	5		05/02/13 16:34	99-87-6	
Methylene Chloride	<1.8	ug/L	5.0	1.8	5		05/02/13 16:34	75-09-2	
Methyl-tert-butyl ether	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	1634-04-4	
Naphthalene	<12.5	ug/L	25.0	12.5	5		05/02/13 16:34	91-20-3	
n-Propylbenzene	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	103-65-1	
Styrene	<1.7	ug/L	5.0	1.7	5		05/02/13 16:34	100-42-5	
1,1,1,2-Tetrachloroethane	<2.3	ug/L	5.0	2.3	5		05/02/13 16:34	630-20-6	
1,1,2,2-Tetrachloroethane	<1.9	ug/L	5.0	1.9	5		05/02/13 16:34	79-34-5	
Tetrachloroethene	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	127-18-4	
Toluene	<2.2	ug/L	5.0	2.2	5		05/02/13 16:34	108-88-3	
1,2,3-Trichlorobenzene	<3.8	ug/L	25.0	3.8	5		05/02/13 16:34	87-61-6	
1,2,4-Trichlorobenzene	<12.5	ug/L	25.0	12.5	5		05/02/13 16:34	120-82-1	
1,1,1-Trichloroethane	177	ug/L	5.0	2.2	5		05/02/13 16:34	71-55-6	
1,1,2-Trichloroethane	<1.9	ug/L	5.0	1.9	5		05/02/13 16:34	79-00-5	
Trichloroethene	460	ug/L	5.0	2.1	5		05/02/13 16:34	79-01-6	
Trichlorofluoromethane	<2.4	ug/L	5.0	2.4	5		05/02/13 16:34	75-69-4	
1,2,3-Trichloropropane	<2.3	ug/L	5.0	2.3	5		05/02/13 16:34	96-18-4	
1,2,4-Trimethylbenzene	<2.9	ug/L	25.0	2.9	5		05/02/13 16:34	95-63-6	
1,3,5-Trimethylbenzene	<12.5	ug/L	25.0	12.5	5		05/02/13 16:34	108-67-8	
Vinyl chloride	<0.92	ug/L	5.0	0.92	5		05/02/13 16:34	75-01-4	
m&p-Xylene	<4.1	ug/L	10.0	4.1	5		05/02/13 16:34	179601-23-1	
o-Xylene	<2.5	ug/L	5.0	2.5	5		05/02/13 16:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	43-137		5		05/02/13 16:34	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		5		05/02/13 16:34	1868-53-7	
Toluene-d8 (S)	99	%	55-137		5		05/02/13 16:34	2037-26-5	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-110 **Lab ID: 4077127007** Collected: 04/30/13 08:55 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	294	ug/L	5.0	1.2	1		05/02/13 16:20	7440-47-3	
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/02/13 18:58	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/02/13 18:58	75-27-4	
Bromoform	<0.23	ug/L	1.0	0.23	1		05/02/13 18:58	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/02/13 18:58	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/02/13 18:58	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/02/13 18:58	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/02/13 18:58	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/02/13 18:58	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/02/13 18:58	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/02/13 18:58	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/02/13 18:58	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/02/13 18:58	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/02/13 18:58	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/02/13 18:58	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/02/13 18:58	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/02/13 18:58	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/02/13 18:58	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/02/13 18:58	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/02/13 18:58	75-71-8	
1,1-Dichloroethane	6.8	ug/L	1.0	0.28	1		05/02/13 18:58	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	107-06-2	
1,1-Dichloroethene	4.4	ug/L	1.0	0.43	1		05/02/13 18:58	75-35-4	
cis-1,2-Dichloroethene	1.9	ug/L	1.0	0.42	1		05/02/13 18:58	156-59-2	
trans-1,2-Dichloroethene	0.38J	ug/L	1.0	0.37	1		05/02/13 18:58	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/02/13 18:58	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/02/13 18:58	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/02/13 18:58	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	1.0	0.29	1		05/02/13 18:58	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	1.0	0.26	1		05/02/13 18:58	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/02/13 18:58	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/02/13 18:58	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/02/13 18:58	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/02/13 18:58	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/02/13 18:58	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/02/13 18:58	91-20-3	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: **MW-110** Lab ID: **4077127007** Collected: 04/30/13 08:55 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/02/13 18:58	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/02/13 18:58	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/02/13 18:58	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/02/13 18:58	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/02/13 18:58	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/02/13 18:58	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/02/13 18:58	120-82-1	
1,1,1-Trichloroethane	28.1	ug/L	1.0	0.44	1		05/02/13 18:58	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/02/13 18:58	79-00-5	
Trichloroethene	4.7	ug/L	1.0	0.43	1		05/02/13 18:58	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/02/13 18:58	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/02/13 18:58	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/02/13 18:58	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/02/13 18:58	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/02/13 18:58	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/02/13 18:58	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/02/13 18:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	43-137		1		05/02/13 18:58	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		05/02/13 18:58	1868-53-7	
Toluene-d8 (S)	100	%	55-137		1		05/02/13 18:58	2037-26-5	

335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4

Cyanide **0.0043J** mg/L 0.020 0.0038 1 05/02/13 11:21 05/02/13 20:32 57-12-5

Sample: **MW-111** Lab ID: **4077127008** Collected: 04/30/13 12:25 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Chromium, Dissolved	478	ug/L	5.0	1.2	1		05/02/13 16:23	7440-47-3	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/06/13 15:02	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/06/13 15:02	75-27-4	
Bromoform	<0.23	ug/L	20.0	0.23	1		05/06/13 15:02	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/06/13 15:02	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/06/13 15:02	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/06/13 15:02	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/06/13 15:02	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/06/13 15:02	56-23-5	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: **MW-111** Lab ID: **4077127008** Collected: 04/30/13 12:25 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/06/13 15:02	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 15:02	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/06/13 15:02	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/06/13 15:02	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/06/13 15:02	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/06/13 15:02	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/06/13 15:02	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/06/13 15:02	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/06/13 15:02	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/06/13 15:02	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/06/13 15:02	75-71-8	
1,1-Dichloroethane	1.8	ug/L	1.0	0.28	1		05/06/13 15:02	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	107-06-2	
1,1-Dichloroethene	2.9	ug/L	1.0	0.43	1		05/06/13 15:02	75-35-4	
cis-1,2-Dichloroethene	<0.42	ug/L	1.0	0.42	1		05/06/13 15:02	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/06/13 15:02	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/06/13 15:02	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/06/13 15:02	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/06/13 15:02	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	20.0	0.29	1		05/06/13 15:02	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	20.0	0.26	1		05/06/13 15:02	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/06/13 15:02	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/06/13 15:02	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/06/13 15:02	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/06/13 15:02	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/06/13 15:02	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/06/13 15:02	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/06/13 15:02	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/06/13 15:02	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/06/13 15:02	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/06/13 15:02	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/06/13 15:02	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/06/13 15:02	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 15:02	120-82-1	
1,1,1-Trichloroethane	19.8	ug/L	1.0	0.44	1		05/06/13 15:02	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/06/13 15:02	79-00-5	
Trichloroethene	64.1	ug/L	1.0	0.43	1		05/06/13 15:02	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/06/13 15:02	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/06/13 15:02	96-18-4	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-111 **Lab ID: 4077127008** Collected: 04/30/13 12:25 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/06/13 15:02	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 15:02	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/06/13 15:02	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/06/13 15:02	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/06/13 15:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	90 %		43-137		1		05/06/13 15:02	460-00-4	
Dibromofluoromethane (S)	105 %		70-130		1		05/06/13 15:02	1868-53-7	
Toluene-d8 (S)	98 %		55-137		1		05/06/13 15:02	2037-26-5	

335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4

Cyanide	0.011J	mg/L	0.020	0.0038	1	05/02/13 11:21	05/02/13 20:36	57-12-5	
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Sample: MW-112 **Lab ID: 4077127009** Collected: 04/30/13 11:35 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved Analytical Method: EPA 6010									
Chromium, Dissolved	216	ug/L	5.0	1.2	1		05/02/13 16:25	7440-47-3	
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/06/13 16:38	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/06/13 16:38	75-27-4	
Bromoform	<0.23	ug/L	20.0	0.23	1		05/06/13 16:38	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/06/13 16:38	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/06/13 16:38	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/06/13 16:38	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/06/13 16:38	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/06/13 16:38	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/06/13 16:38	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 16:38	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/06/13 16:38	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/06/13 16:38	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/06/13 16:38	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/06/13 16:38	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/06/13 16:38	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/06/13 16:38	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/06/13 16:38	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/06/13 16:38	106-46-7	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-112 **Lab ID: 4077127009** Collected: 04/30/13 11:35 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/06/13 16:38	75-71-8	
1,1-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/06/13 16:38	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	107-06-2	
1,1-Dichloroethene	<0.43	ug/L	1.0	0.43	1		05/06/13 16:38	75-35-4	
cis-1,2-Dichloroethene	<0.42	ug/L	1.0	0.42	1		05/06/13 16:38	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/06/13 16:38	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/06/13 16:38	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/06/13 16:38	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/06/13 16:38	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	20.0	0.29	1		05/06/13 16:38	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	20.0	0.26	1		05/06/13 16:38	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/06/13 16:38	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/06/13 16:38	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/06/13 16:38	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/06/13 16:38	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/06/13 16:38	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/06/13 16:38	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/06/13 16:38	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/06/13 16:38	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/06/13 16:38	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/06/13 16:38	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/06/13 16:38	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/06/13 16:38	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 16:38	120-82-1	
1,1,1-Trichloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 16:38	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/06/13 16:38	79-00-5	
Trichloroethene	75.0	ug/L	1.0	0.43	1		05/06/13 16:38	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/06/13 16:38	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/06/13 16:38	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/06/13 16:38	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 16:38	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/06/13 16:38	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/06/13 16:38	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/06/13 16:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	89 %		43-137		1		05/06/13 16:38	460-00-4	
Dibromofluoromethane (S)	103 %		70-130		1		05/06/13 16:38	1868-53-7	
Toluene-d8 (S)	97 %		55-137		1		05/06/13 16:38	2037-26-5	

335.4 Cyanide, Total

Analytical Method: EPA 335.4 Preparation Method: EPA 335.4

Cyanide	0.0052J	mg/L	0.020	0.0038	1	05/02/13 11:21	05/02/13 20:37	57-12-5	
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ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-113 **Lab ID: 4077127010** Collected: 04/30/13 10:20 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved		Analytical Method: EPA 6010							
Chromium, Dissolved	776	ug/L	5.0	1.2	1		05/02/13 16:29	7440-47-3	
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/06/13 17:01	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:01	75-27-4	
Bromoform	<0.23	ug/L	20.0	0.23	1		05/06/13 17:01	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/06/13 17:01	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:01	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/06/13 17:01	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/06/13 17:01	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/06/13 17:01	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/06/13 17:01	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 17:01	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/06/13 17:01	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:01	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/06/13 17:01	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/06/13 17:01	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/06/13 17:01	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:01	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/06/13 17:01	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/06/13 17:01	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/06/13 17:01	75-71-8	
1,1-Dichloroethane	6.2	ug/L	1.0	0.28	1		05/06/13 17:01	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	107-06-2	
1,1-Dichloroethene	5.8	ug/L	1.0	0.43	1		05/06/13 17:01	75-35-4	
cis-1,2-Dichloroethene	0.94J	ug/L	1.0	0.42	1		05/06/13 17:01	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/06/13 17:01	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/06/13 17:01	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/06/13 17:01	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/06/13 17:01	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	20.0	0.29	1		05/06/13 17:01	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	20.0	0.26	1		05/06/13 17:01	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/06/13 17:01	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/06/13 17:01	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:01	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/06/13 17:01	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/06/13 17:01	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:01	91-20-3	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: MW-113 **Lab ID: 4077127010** Collected: 04/30/13 10:20 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/06/13 17:01	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:01	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/06/13 17:01	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/06/13 17:01	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:01	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/06/13 17:01	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:01	120-82-1	
1,1,1-Trichloroethane	34.6	ug/L	1.0	0.44	1		05/06/13 17:01	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:01	79-00-5	
Trichloroethene	14.0	ug/L	1.0	0.43	1		05/06/13 17:01	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:01	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/06/13 17:01	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/06/13 17:01	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:01	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/06/13 17:01	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/06/13 17:01	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	90 %		43-137		1		05/06/13 17:01	460-00-4	
Dibromofluoromethane (S)	105 %		70-130		1		05/06/13 17:01	1868-53-7	
Toluene-d8 (S)	98 %		55-137		1		05/06/13 17:01	2037-26-5	

Sample: BD-1 **Lab ID: 4077127011** Collected: 04/30/13 00:00 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/06/13 17:23	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:23	75-27-4	
Bromoform	<0.23	ug/L	20.0	0.23	1		05/06/13 17:23	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/06/13 17:23	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:23	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/06/13 17:23	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/06/13 17:23	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/06/13 17:23	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/06/13 17:23	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 17:23	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/06/13 17:23	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:23	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	106-43-4	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: BD-1 **Lab ID: 4077127011** Collected: 04/30/13 00:00 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/06/13 17:23	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/06/13 17:23	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/06/13 17:23	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:23	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/06/13 17:23	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/06/13 17:23	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/06/13 17:23	75-71-8	
1,1-Dichloroethane	5.9	ug/L	1.0	0.28	1		05/06/13 17:23	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	107-06-2	
1,1-Dichloroethene	5.4	ug/L	1.0	0.43	1		05/06/13 17:23	75-35-4	
cis-1,2-Dichloroethene	0.91J	ug/L	1.0	0.42	1		05/06/13 17:23	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/06/13 17:23	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/06/13 17:23	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/06/13 17:23	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/06/13 17:23	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	20.0	0.29	1		05/06/13 17:23	10061-01-5	
trans-1,3-Dichloropropene	<0.26	ug/L	20.0	0.26	1		05/06/13 17:23	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/06/13 17:23	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/06/13 17:23	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:23	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/06/13 17:23	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/06/13 17:23	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:23	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/06/13 17:23	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:23	630-20-6	
1,1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/06/13 17:23	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/06/13 17:23	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:23	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/06/13 17:23	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:23	120-82-1	
1,1,1-Trichloroethane	33.2	ug/L	1.0	0.44	1		05/06/13 17:23	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:23	79-00-5	
Trichloroethene	13.6	ug/L	1.0	0.43	1		05/06/13 17:23	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:23	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/06/13 17:23	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/06/13 17:23	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:23	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/06/13 17:23	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/06/13 17:23	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:23	95-47-6	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: BD-1 **Lab ID: 4077127011** Collected: 04/30/13 00:00 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Surrogates									
4-Bromofluorobenzene (S)	91 %		43-137		1		05/06/13 17:23	460-00-4	
Dibromofluoromethane (S)	104 %		70-130		1		05/06/13 17:23	1868-53-7	
Toluene-d8 (S)	98 %		55-137		1		05/06/13 17:23	2037-26-5	

Sample: TRIP BLANK **Lab ID: 4077127012** Collected: 04/30/13 00:00 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	71-43-2	
Bromobenzene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	108-86-1	
Bromochloromethane	<0.49	ug/L	1.0	0.49	1		05/06/13 17:46	74-97-5	
Bromodichloromethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:46	75-27-4	
Bromoform	<0.23	ug/L	20.0	0.23	1		05/06/13 17:46	75-25-2	
Bromomethane	<0.43	ug/L	5.0	0.43	1		05/06/13 17:46	74-83-9	
n-Butylbenzene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:46	104-51-8	
sec-Butylbenzene	<0.60	ug/L	5.0	0.60	1		05/06/13 17:46	135-98-8	
tert-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/06/13 17:46	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/06/13 17:46	56-23-5	
Chlorobenzene	<0.36	ug/L	1.0	0.36	1		05/06/13 17:46	108-90-7	
Chloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 17:46	75-00-3	
Chloroform	<0.69	ug/L	5.0	0.69	1		05/06/13 17:46	67-66-3	
Chloromethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:46	74-87-3	
2-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	95-49-8	
4-Chlorotoluene	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	106-43-4	
1,2-Dibromo-3-chloropropane	<1.5	ug/L	5.0	1.5	1		05/06/13 17:46	96-12-8	
Dibromochloromethane	<1.9	ug/L	5.0	1.9	1		05/06/13 17:46	124-48-1	
1,2-Dibromoethane (EDB)	<0.38	ug/L	1.0	0.38	1		05/06/13 17:46	106-93-4	
Dibromomethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	74-95-3	
1,2-Dichlorobenzene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:46	95-50-1	
1,3-Dichlorobenzene	<0.45	ug/L	1.0	0.45	1		05/06/13 17:46	541-73-1	
1,4-Dichlorobenzene	<0.43	ug/L	1.0	0.43	1		05/06/13 17:46	106-46-7	
Dichlorodifluoromethane	<0.40	ug/L	1.0	0.40	1		05/06/13 17:46	75-71-8	
1,1-Dichloroethane	<0.28	ug/L	1.0	0.28	1		05/06/13 17:46	75-34-3	
1,2-Dichloroethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	107-06-2	
1,1-Dichloroethene	<0.43	ug/L	1.0	0.43	1		05/06/13 17:46	75-35-4	
cis-1,2-Dichloroethene	<0.42	ug/L	1.0	0.42	1		05/06/13 17:46	156-59-2	
trans-1,2-Dichloroethene	<0.37	ug/L	1.0	0.37	1		05/06/13 17:46	156-60-5	
1,2-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	78-87-5	
1,3-Dichloropropane	<0.46	ug/L	1.0	0.46	1		05/06/13 17:46	142-28-9	
2,2-Dichloropropane	<0.37	ug/L	1.0	0.37	1		05/06/13 17:46	594-20-7	
1,1-Dichloropropene	<0.51	ug/L	1.0	0.51	1		05/06/13 17:46	563-58-6	
cis-1,3-Dichloropropene	<0.29	ug/L	20.0	0.29	1		05/06/13 17:46	10061-01-5	

ANALYTICAL RESULTS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Sample: TRIP BLANK **Lab ID: 4077127012** Collected: 04/30/13 00:00 Received: 05/01/13 15:24 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 8260									
trans-1,3-Dichloropropene	<0.26	ug/L	20.0	0.26	1		05/06/13 17:46	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	100-41-4	
Hexachloro-1,3-butadiene	<1.3	ug/L	5.0	1.3	1		05/06/13 17:46	87-68-3	
Isopropylbenzene (Cumene)	<0.34	ug/L	1.0	0.34	1		05/06/13 17:46	98-82-8	
p-Isopropyltoluene	<0.40	ug/L	1.0	0.40	1		05/06/13 17:46	99-87-6	
Methylene Chloride	<0.36	ug/L	1.0	0.36	1		05/06/13 17:46	75-09-2	
Methyl-tert-butyl ether	<0.49	ug/L	1.0	0.49	1		05/06/13 17:46	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:46	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	103-65-1	
Styrene	<0.35	ug/L	1.0	0.35	1		05/06/13 17:46	100-42-5	
1,1,1,2-Tetrachloroethane	<0.45	ug/L	1.0	0.45	1		05/06/13 17:46	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/06/13 17:46	79-34-5	
Tetrachloroethene	<0.47	ug/L	1.0	0.47	1		05/06/13 17:46	127-18-4	
Toluene	<0.44	ug/L	1.0	0.44	1		05/06/13 17:46	108-88-3	
1,2,3-Trichlorobenzene	<0.77	ug/L	5.0	0.77	1		05/06/13 17:46	87-61-6	
1,2,4-Trichlorobenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:46	120-82-1	
1,1,1-Trichloroethane	<0.44	ug/L	1.0	0.44	1		05/06/13 17:46	71-55-6	
1,1,2-Trichloroethane	<0.39	ug/L	1.0	0.39	1		05/06/13 17:46	79-00-5	
Trichloroethene	<0.43	ug/L	1.0	0.43	1		05/06/13 17:46	79-01-6	
Trichlorofluoromethane	<0.48	ug/L	1.0	0.48	1		05/06/13 17:46	75-69-4	
1,2,3-Trichloropropane	<0.47	ug/L	1.0	0.47	1		05/06/13 17:46	96-18-4	
1,2,4-Trimethylbenzene	<0.57	ug/L	5.0	0.57	1		05/06/13 17:46	95-63-6	
1,3,5-Trimethylbenzene	<2.5	ug/L	5.0	2.5	1		05/06/13 17:46	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/06/13 17:46	75-01-4	
m&p-Xylene	<0.82	ug/L	2.0	0.82	1		05/06/13 17:46	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/06/13 17:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	43-137		1		05/06/13 17:46	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		05/06/13 17:46	1868-53-7	
Toluene-d8 (S)	95	%	55-137		1		05/06/13 17:46	2037-26-5	

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE
Pace Project No.: 4077127

QC Batch: ICP/7463 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 4077127001, 4077127002, 4077127003, 4077127004, 4077127005, 4077127006, 4077127007, 4077127008, 4077127009, 4077127010

METHOD BLANK: 783172 Matrix: Water
Associated Lab Samples: 4077127001, 4077127002, 4077127003, 4077127004, 4077127005, 4077127006, 4077127007, 4077127008, 4077127009, 4077127010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<1.2	5.0	05/02/13 15:29	

LABORATORY CONTROL SAMPLE: 783173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	503	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 783174 783175

Parameter	Units	4077121001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Dissolved	ug/L	553	500	500	1090	1090	108	107	75-125	0	20	

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

QC Batch: MSV/19369 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 4077127006, 4077127007

METHOD BLANK: 780148 Matrix: Water

Associated Lab Samples: 4077127006, 4077127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	05/02/13 06:30	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	05/02/13 06:30	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	05/02/13 06:30	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	05/02/13 06:30	
1,1-Dichloroethane	ug/L	<0.28	1.0	05/02/13 06:30	
1,1-Dichloroethene	ug/L	<0.43	1.0	05/02/13 06:30	
1,1-Dichloropropene	ug/L	<0.51	1.0	05/02/13 06:30	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	05/02/13 06:30	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	05/02/13 06:30	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	05/02/13 06:30	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	05/02/13 06:30	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	05/02/13 06:30	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	05/02/13 06:30	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	05/02/13 06:30	
1,2-Dichloroethane	ug/L	<0.48	1.0	05/02/13 06:30	
1,2-Dichloropropane	ug/L	<0.50	1.0	05/02/13 06:30	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	05/02/13 06:30	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	05/02/13 06:30	
1,3-Dichloropropane	ug/L	<0.46	1.0	05/02/13 06:30	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	05/02/13 06:30	
2,2-Dichloropropane	ug/L	<0.37	1.0	05/02/13 06:30	
2-Chlorotoluene	ug/L	<0.48	1.0	05/02/13 06:30	
4-Chlorotoluene	ug/L	<0.48	1.0	05/02/13 06:30	
Benzene	ug/L	<0.50	1.0	05/02/13 06:30	
Bromobenzene	ug/L	<0.48	1.0	05/02/13 06:30	
Bromochloromethane	ug/L	<0.49	1.0	05/02/13 06:30	
Bromodichloromethane	ug/L	<0.45	1.0	05/02/13 06:30	
Bromoform	ug/L	<0.23	1.0	05/02/13 06:30	
Bromomethane	ug/L	<0.43	5.0	05/02/13 06:30	
Carbon tetrachloride	ug/L	<0.37	1.0	05/02/13 06:30	
Chlorobenzene	ug/L	<0.36	1.0	05/02/13 06:30	
Chloroethane	ug/L	<0.44	1.0	05/02/13 06:30	
Chloroform	ug/L	<0.69	5.0	05/02/13 06:30	
Chloromethane	ug/L	<0.39	1.0	05/02/13 06:30	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	05/02/13 06:30	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	05/02/13 06:30	
Dibromochloromethane	ug/L	<1.9	5.0	05/02/13 06:30	
Dibromomethane	ug/L	<0.48	1.0	05/02/13 06:30	
Dichlorodifluoromethane	ug/L	<0.40	1.0	05/02/13 06:30	
Diisopropyl ether	ug/L	<0.50	1.0	05/02/13 06:30	
Ethylbenzene	ug/L	<0.50	1.0	05/02/13 06:30	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	05/02/13 06:30	
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	05/02/13 06:30	

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

METHOD BLANK: 780148

Matrix: Water

Associated Lab Samples: 4077127006, 4077127007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<0.82	2.0	05/02/13 06:30	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	05/02/13 06:30	
Methylene Chloride	ug/L	<0.36	1.0	05/02/13 06:30	
n-Butylbenzene	ug/L	<0.40	1.0	05/02/13 06:30	
n-Propylbenzene	ug/L	<0.50	1.0	05/02/13 06:30	
Naphthalene	ug/L	<2.5	5.0	05/02/13 06:30	
o-Xylene	ug/L	<0.50	1.0	05/02/13 06:30	
p-Isopropyltoluene	ug/L	<0.40	1.0	05/02/13 06:30	
sec-Butylbenzene	ug/L	<0.60	5.0	05/02/13 06:30	
Styrene	ug/L	<0.35	1.0	05/02/13 06:30	
tert-Butylbenzene	ug/L	<0.42	1.0	05/02/13 06:30	
Tetrachloroethene	ug/L	<0.47	1.0	05/02/13 06:30	
Toluene	ug/L	<0.44	1.0	05/02/13 06:30	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	05/02/13 06:30	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	05/02/13 06:30	
Trichloroethene	ug/L	<0.43	1.0	05/02/13 06:30	
Trichlorofluoromethane	ug/L	<0.48	1.0	05/02/13 06:30	
Vinyl chloride	ug/L	<0.18	1.0	05/02/13 06:30	
4-Bromofluorobenzene (S)	%	103	43-137	05/02/13 06:30	
Dibromofluoromethane (S)	%	109	70-130	05/02/13 06:30	
Toluene-d8 (S)	%	99	55-137	05/02/13 06:30	

LABORATORY CONTROL SAMPLE & LCSD: 780149

780150

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	58.5	58.9	117	118	70-136	1	20	
1,1,2,2-Tetrachloroethane	ug/L	50	50.1	51.8	100	104	70-130	3	20	
1,1,2-Trichloroethane	ug/L	50	50.9	51.2	102	102	70-130	1	20	
1,1-Dichloroethane	ug/L	50	56.5	57.4	113	115	70-146	2	20	
1,1-Dichloroethene	ug/L	50	53.8	55.5	108	111	70-130	3	20	
1,2,4-Trichlorobenzene	ug/L	50	45.8	47.9	92	96	70-130	4	20	
1,2-Dibromo-3-chloropropane	ug/L	50	46.3	48.7	93	97	46-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	50	51.5	51.3	103	103	70-130	0	20	
1,2-Dichlorobenzene	ug/L	50	49.7	51.4	99	103	70-130	3	20	
1,2-Dichloroethane	ug/L	50	57.8	56.7	116	113	70-144	2	20	
1,2-Dichloropropane	ug/L	50	53.7	55.2	107	110	70-136	3	20	
1,3-Dichlorobenzene	ug/L	50	49.5	51.4	99	103	70-130	4	20	
1,4-Dichlorobenzene	ug/L	50	49.3	51.6	99	103	70-130	4	20	
Benzene	ug/L	50	55.9	55.8	112	112	70-137	0	20	
Bromodichloromethane	ug/L	50	56.0	58.5	112	117	70-133	4	20	
Bromoform	ug/L	50	46.9	48.6	94	97	59-130	4	20	
Bromomethane	ug/L	50	33.6	38.5	67	77	41-148	14	20	
Carbon tetrachloride	ug/L	50	61.1	61.3	122	123	70-154	0	20	
Chlorobenzene	ug/L	50	51.0	51.7	102	103	70-130	1	20	
Chloroethane	ug/L	50	50.0	50.4	100	101	70-139	1	20	

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

LABORATORY CONTROL SAMPLE & LCSD:		780149		780150							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroform	ug/L	50	58.3	57.5	117	115	70-130	1	20		
Chloromethane	ug/L	50	42.5	43.6	85	87	45-154	2	20		
cis-1,2-Dichloroethene	ug/L	50	52.8	52.4	106	105	70-130	1	20		
cis-1,3-Dichloropropene	ug/L	50	50.0	52.2	100	104	70-136	4	20		
Dibromochloromethane	ug/L	50	52.8	52.3	106	105	70-130	1	20		
Dichlorodifluoromethane	ug/L	50	38.6	39.4	77	79	20-157	2	20		
Ethylbenzene	ug/L	50	52.8	53.1	106	106	70-130	0	20		
Isopropylbenzene (Cumene)	ug/L	50	53.1	54.3	106	109	70-130	2	20		
m&p-Xylene	ug/L	100	105	104	105	104	70-130	0	20		
Methyl-tert-butyl ether	ug/L	50	51.7	50.9	103	102	59-141	2	20		
Methylene Chloride	ug/L	50	53.2	52.7	106	105	70-130	1	20		
o-Xylene	ug/L	50	52.0	52.1	104	104	70-130	0	20		
Styrene	ug/L	50	50.0	50.3	100	101	70-130	1	20		
Tetrachloroethene	ug/L	50	48.8	48.9	98	98	70-130	0	20		
Toluene	ug/L	50	52.3	52.1	105	104	70-130	0	20		
trans-1,2-Dichloroethene	ug/L	50	56.1	54.7	112	109	70-130	3	20		
trans-1,3-Dichloropropene	ug/L	50	51.9	53.5	104	107	55-135	3	20		
Trichloroethene	ug/L	50	55.5	57.3	111	115	70-130	3	20		
Trichlorofluoromethane	ug/L	50	59.4	58.1	119	116	50-150	2	20		
Vinyl chloride	ug/L	50	48.5	49.0	97	98	61-143	1	20		
4-Bromofluorobenzene (S)	%				105	102	43-137				
Dibromofluoromethane (S)	%				109	109	70-130				
Toluene-d8 (S)	%				96	96	55-137				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		782993		782994							
Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		4076865002 Result	Spike Conc.	Spike Conc.	MS Result						
1,1,1-Trichloroethane	ug/L	<0.44	50	50	58.7	59.8	117	120	70-136	2	20
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	51.6	50.0	103	100	70-130	3	20
1,1,2-Trichloroethane	ug/L	<0.39	50	50	51.4	51.7	103	103	70-130	1	20
1,1-Dichloroethane	ug/L	<0.28	50	50	57.1	56.9	114	114	70-146	0	20
1,1-Dichloroethene	ug/L	<0.43	50	50	55.6	54.9	111	110	70-130	1	20
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	48.4	46.8	97	94	70-130	3	20
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	47.1	46.1	94	92	46-150	2	20
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	51.5	52.7	103	105	70-130	2	20
1,2-Dichlorobenzene	ug/L	<0.44	50	50	50.9	49.8	102	100	70-130	2	20
1,2-Dichloroethane	ug/L	<0.48	50	50	57.7	57.0	115	114	70-146	1	20
1,2-Dichloropropane	ug/L	<0.50	50	50	54.6	55.5	109	111	70-136	2	20
1,3-Dichlorobenzene	ug/L	<0.45	50	50	49.5	50.3	99	101	70-130	2	20
1,4-Dichlorobenzene	ug/L	<0.43	50	50	51.1	50.9	102	102	70-130	0	20
Benzene	ug/L	<0.50	50	50	55.7	55.9	111	112	70-137	0	20
Bromodichloromethane	ug/L	<0.45	50	50	59.3	57.1	119	114	70-133	4	20
Bromoform	ug/L	<0.23	50	50	49.0	50.0	98	100	57-130	2	20
Bromomethane	ug/L	<0.43	50	50	39.0	40.1	78	80	41-148	3	20
Carbon tetrachloride	ug/L	<0.37	50	50	62.2	62.4	124	125	70-154	0	20
Chlorobenzene	ug/L	<0.36	50	50	51.1	52.0	102	104	70-130	2	20

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Parameter	Units	4076865002		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec							
Chloroethane	ug/L	<0.44	50	50	51.5	50.8	103	102	70-140	2	20					
Chloroform	ug/L	<0.69	50	50	57.8	58.8	116	118	70-130	2	20					
Chloromethane	ug/L	<0.39	50	50	43.7	43.5	87	87	45-154	0	20					
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	54.6	54.6	109	109	70-130	0	20					
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	52.2	51.5	104	103	70-136	1	20					
Dibromochloromethane	ug/L	<1.9	50	50	52.8	55.3	106	111	70-130	5	20					
Dichlorodifluoromethane	ug/L	<0.40	50	50	38.0	39.3	76	79	10-157	3	20					
Ethylbenzene	ug/L	<0.50	50	50	53.0	54.0	106	108	70-130	2	20					
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	54.4	55.1	109	110	70-130	1	20					
m&p-Xylene	ug/L	<0.82	100	100	106	108	106	108	70-130	2	20					
Methyl-tert-butyl ether	ug/L	<0.49	50	50	51.6	52.1	103	104	59-141	1	20					
Methylene Chloride	ug/L	<0.36	50	50	53.1	53.9	106	108	70-130	2	20					
o-Xylene	ug/L	<0.50	50	50	52.3	54.7	105	109	70-130	5	20					
Styrene	ug/L	<0.35	50	50	52.1	51.7	104	103	35-164	1	20					
Tetrachloroethene	ug/L	<0.47	50	50	50.1	51.1	100	102	70-130	2	20					
Toluene	ug/L	<0.44	50	50	52.4	52.6	105	105	70-130	0	20					
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	55.1	56.1	110	112	70-130	2	20					
trans-1,3-Dichloropropene	ug/L	<0.26	50	50	53.9	54.3	108	109	55-137	1	20					
Trichloroethene	ug/L	<0.43	50	50	55.8	56.3	112	113	70-130	1	20					
Trichlorofluoromethane	ug/L	<0.48	50	50	59.1	59.2	118	118	50-150	0	20					
Vinyl chloride	ug/L	<0.18	50	50	49.0	49.1	98	98	59-144	0	20					
4-Bromofluorobenzene (S)	%						103	105	43-137							
Dibromofluoromethane (S)	%						110	107	70-130							
Toluene-d8 (S)	%						98	98	55-137							

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

QC Batch:	MSV/19440	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	4077127005		

METHOD BLANK: 783097 Matrix: Water

Associated Lab Samples: 4077127005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	05/02/13 17:34	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	05/02/13 17:34	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	05/02/13 17:34	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	05/02/13 17:34	
1,1-Dichloroethane	ug/L	<0.28	1.0	05/02/13 17:34	
1,1-Dichloroethene	ug/L	<0.43	1.0	05/02/13 17:34	
1,1-Dichloropropene	ug/L	<0.51	1.0	05/02/13 17:34	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	05/02/13 17:34	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	05/02/13 17:34	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	05/02/13 17:34	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	05/02/13 17:34	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	05/02/13 17:34	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	05/02/13 17:34	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	05/02/13 17:34	
1,2-Dichloroethane	ug/L	<0.48	1.0	05/02/13 17:34	
1,2-Dichloropropane	ug/L	<0.50	1.0	05/02/13 17:34	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	05/02/13 17:34	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	05/02/13 17:34	
1,3-Dichloropropane	ug/L	<0.46	1.0	05/02/13 17:34	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	05/02/13 17:34	
2,2-Dichloropropane	ug/L	<0.37	1.0	05/02/13 17:34	
2-Chlorotoluene	ug/L	<0.48	1.0	05/02/13 17:34	
4-Chlorotoluene	ug/L	<0.48	1.0	05/02/13 17:34	
Benzene	ug/L	<0.50	1.0	05/02/13 17:34	
Bromobenzene	ug/L	<0.48	1.0	05/02/13 17:34	
Bromochloromethane	ug/L	<0.49	1.0	05/02/13 17:34	
Bromodichloromethane	ug/L	<0.45	1.0	05/02/13 17:34	
Bromoform	ug/L	<0.23	1.0	05/02/13 17:34	
Bromomethane	ug/L	<0.43	5.0	05/02/13 17:34	
Carbon tetrachloride	ug/L	<0.37	1.0	05/02/13 17:34	
Chlorobenzene	ug/L	<0.36	1.0	05/02/13 17:34	
Chloroethane	ug/L	<0.44	1.0	05/02/13 17:34	
Chloroform	ug/L	<0.69	5.0	05/02/13 17:34	
Chloromethane	ug/L	<0.39	1.0	05/02/13 17:34	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	05/02/13 17:34	
cis-1,3-Dichloropropene	ug/L	<0.29	1.0	05/02/13 17:34	
Dibromochloromethane	ug/L	<1.9	5.0	05/02/13 17:34	
Dibromomethane	ug/L	<0.48	1.0	05/02/13 17:34	
Dichlorodifluoromethane	ug/L	<0.40	1.0	05/02/13 17:34	
Diisopropyl ether	ug/L	<0.50	1.0	05/02/13 17:34	
Ethylbenzene	ug/L	<0.50	1.0	05/02/13 17:34	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	05/02/13 17:34	
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	05/02/13 17:34	

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

METHOD BLANK: 783097

Matrix: Water

Associated Lab Samples: 4077127005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<0.82	2.0	05/02/13 17:34	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	05/02/13 17:34	
Methylene Chloride	ug/L	<0.36	1.0	05/02/13 17:34	
n-Butylbenzene	ug/L	<0.40	1.0	05/02/13 17:34	
n-Propylbenzene	ug/L	<0.50	1.0	05/02/13 17:34	
Naphthalene	ug/L	<2.5	5.0	05/02/13 17:34	
o-Xylene	ug/L	<0.50	1.0	05/02/13 17:34	
p-Isopropyltoluene	ug/L	<0.40	1.0	05/02/13 17:34	
sec-Butylbenzene	ug/L	<0.60	5.0	05/02/13 17:34	
Styrene	ug/L	<0.35	1.0	05/02/13 17:34	
tert-Butylbenzene	ug/L	<0.42	1.0	05/02/13 17:34	
Tetrachloroethene	ug/L	<0.47	1.0	05/02/13 17:34	
Toluene	ug/L	<0.44	1.0	05/02/13 17:34	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	05/02/13 17:34	
trans-1,3-Dichloropropene	ug/L	<0.26	1.0	05/02/13 17:34	
Trichloroethene	ug/L	<0.43	1.0	05/02/13 17:34	
Trichlorofluoromethane	ug/L	<0.48	1.0	05/02/13 17:34	
Vinyl chloride	ug/L	<0.18	1.0	05/02/13 17:34	
4-Bromofluorobenzene (S)	%	96	43-137	05/02/13 17:34	
Dibromofluoromethane (S)	%	93	70-130	05/02/13 17:34	
Toluene-d8 (S)	%	102	55-137	05/02/13 17:34	

LABORATORY CONTROL SAMPLE & LCSD: 783098

783099

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	40.3	40.6	81	81	70-136	1	20	
1,1,2,2-Tetrachloroethane	ug/L	50	37.8	39.0	76	78	70-130	3	20	
1,1,2-Trichloroethane	ug/L	50	43.0	43.5	86	87	70-130	1	20	
1,1-Dichloroethane	ug/L	50	42.8	42.8	86	86	70-146	0	20	
1,1-Dichloroethene	ug/L	50	42.5	43.2	85	86	70-130	2	20	
1,2,4-Trichlorobenzene	ug/L	50	42.1	43.6	84	87	70-130	4	20	
1,2-Dibromo-3-chloropropane	ug/L	50	30.8	30.6	62	61	46-150	1	20	
1,2-Dibromoethane (EDB)	ug/L	50	42.7	44.0	85	88	70-130	3	20	
1,2-Dichlorobenzene	ug/L	50	43.8	44.7	88	89	70-130	2	20	
1,2-Dichloroethane	ug/L	50	41.0	41.6	82	83	70-144	1	20	
1,2-Dichloropropane	ug/L	50	43.8	44.5	88	89	70-136	2	20	
1,3-Dichlorobenzene	ug/L	50	43.1	44.1	86	88	70-130	2	20	
1,4-Dichlorobenzene	ug/L	50	43.3	44.1	87	88	70-130	2	20	
Benzene	ug/L	50	42.7	43.4	85	87	70-137	2	20	
Bromodichloromethane	ug/L	50	38.7	40.3	77	81	70-133	4	20	
Bromoform	ug/L	50	29.7	31.5	59	63	59-130	6	20	
Bromomethane	ug/L	50	32.2	35.9	64	72	41-148	11	20	
Carbon tetrachloride	ug/L	50	38.3	39.4	77	79	70-154	3	20	
Chlorobenzene	ug/L	50	45.2	46.5	90	93	70-130	3	20	
Chloroethane	ug/L	50	39.7	40.4	79	81	70-139	2	20	

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

LABORATORY CONTROL SAMPLE & LCSD:		783098	783099							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/L	50	43.1	43.7	86	87	70-130	1	20	
Chloromethane	ug/L	50	35.5	35.9	71	72	45-154	1	20	
cis-1,2-Dichloroethene	ug/L	50	42.5	44.0	85	88	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	50	36.4	37.4	73	75	70-136	3	20	
Dibromochloromethane	ug/L	50	36.1	38.0	72	76	70-130	5	20	
Dichlorodifluoromethane	ug/L	50	31.8	32.4	64	65	20-157	2	20	
Ethylbenzene	ug/L	50	45.0	45.7	90	91	70-130	1	20	
Isopropylbenzene (Cumene)	ug/L	50	44.9	46.1	90	92	70-130	3	20	
m&p-Xylene	ug/L	100	91.8	93.7	92	94	70-130	2	20	
Methyl-tert-butyl ether	ug/L	50	35.8	37.0	72	74	59-141	3	20	
Methylene Chloride	ug/L	50	42.9	43.5	86	87	70-130	1	20	
o-Xylene	ug/L	50	45.6	47.0	91	94	70-130	3	20	
Styrene	ug/L	50	45.3	46.3	91	93	70-130	2	20	
Tetrachloroethene	ug/L	50	43.7	44.8	87	90	70-130	2	20	
Toluene	ug/L	50	45.0	46.4	90	93	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	50	41.6	42.7	83	85	70-130	3	20	
trans-1,3-Dichloropropene	ug/L	50	37.5	39.1	75	78	55-135	4	20	
Trichloroethene	ug/L	50	44.5	45.4	89	91	70-130	2	20	
Trichlorofluoromethane	ug/L	50	43.1	43.1	86	86	50-150	0	20	
Vinyl chloride	ug/L	50	39.1	39.3	78	79	61-143	1	20	
4-Bromofluorobenzene (S)	%				97	95	43-137			
Dibromofluoromethane (S)	%				98	98	70-130			
Toluene-d8 (S)	%				101	103	55-137			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		783100	783101									
Parameter	Units	4077095003		MS Spike	MSD Spike	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD		
1,1,1-Trichloroethane	ug/L	ND	50	50	46.4	46.5	93	93	70-136	0	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	43.2	43.1	86	86	70-130	0	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	47.8	47.3	96	95	70-130	1	20	
1,1-Dichloroethane	ug/L	ND	50	50	48.3	48.1	97	96	70-146	0	20	
1,1-Dichloroethene	ug/L	ND	50	50	47.0	46.4	94	93	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	49.5	49.0	97	96	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50	35.4	37.4	71	75	46-150	6	20	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	48.6	47.5	97	95	70-130	2	20	
1,2-Dichlorobenzene	ug/L	ND	50	50	50.9	50.2	102	100	70-130	1	20	
1,2-Dichloroethane	ug/L	ND	50	50	45.5	45.4	91	91	70-146	0	20	
1,2-Dichloropropane	ug/L	ND	50	50	49.3	48.5	99	97	70-136	2	20	
1,3-Dichlorobenzene	ug/L	ND	50	50	49.6	49.9	99	99	70-130	1	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	50.1	50.6	100	101	70-130	1	20	
Benzene	ug/L	ND	50	50	48.1	47.8	96	96	70-137	1	20	
Bromodichloromethane	ug/L	ND	50	50	45.1	45.1	90	90	70-133	0	20	
Bromoform	ug/L	ND	50	50	35.9	36.1	72	72	57-130	0	20	
Bromomethane	ug/L	ND	50	50	35.9	34.9	72	69	41-148	3	20	
Carbon tetrachloride	ug/L	ND	50	50	45.0	45.7	90	91	70-154	2	20	
Chlorobenzene	ug/L	ND	50	50	52.3	51.9	105	104	70-130	1	20	

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Parameter	Units	4077095003		783100		783101		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Chloroethane	ug/L	ND	50	50	40.7	40.7	81	81	70-140	0	20			
Chloroform	ug/L	ND	50	50	48.3	48.8	97	98	70-130	1	20			
Chloromethane	ug/L	ND	50	50	30.0	29.2	60	58	45-154	3	20			
cis-1,2-Dichloroethene	ug/L		50	50	48.4	48.3	97	97	70-130	0	20			
cis-1,3-Dichloropropene	ug/L	ND	50	50	42.9	41.7	86	83	70-136	3	20			
Dibromochloromethane	ug/L	ND	50	50	43.5	42.9	87	86	70-130	2	20			
Dichlorodifluoromethane	ug/L	ND	50	50	17.5	16.5	35	33	10-157	6	20			
Ethylbenzene	ug/L	ND	50	50	51.7	51.2	103	102	70-130	1	20			
Isopropylbenzene (Cumene)	ug/L	ND	50	50	51.8	51.7	104	103	70-130	0	20			
m&p-Xylene	ug/L		100	100	105	104	104	104	70-130	0	20			
Methyl-tert-butyl ether	ug/L	ND	50	50	40.6	40.1	81	80	59-141	1	20			
Methylene Chloride	ug/L	ND	50	50	47.6	47.6	95	95	70-130	0	20			
o-Xylene	ug/L		50	50	52.6	52.3	105	105	70-130	0	20			
Styrene	ug/L	ND	50	50	51.6	51.4	103	103	35-164	1	20			
Tetrachloroethene	ug/L	ND	50	50	51.7	50.5	103	100	70-130	2	20			
Toluene	ug/L	ND	50	50	51.8	51.7	104	103	70-130	0	20			
trans-1,2-Dichloroethene	ug/L		50	50	46.8	46.4	94	93	70-130	1	20			
trans-1,3-Dichloropropene	ug/L	ND	50	50	44.4	43.7	89	87	55-137	2	20			
Trichloroethene	ug/L	ND	50	50	51.3	50.6	102	101	70-130	1	20			
Trichlorofluoromethane	ug/L	ND	50	50	46.6	46.3	93	93	50-150	1	20			
Vinyl chloride	ug/L	ND	50	50	36.4	34.9	73	70	59-144	4	20			
4-Bromofluorobenzene (S)	%						96	96	43-137					
Dibromofluoromethane (S)	%						96	97	70-130					
Toluene-d8 (S)	%						103	102	55-137					

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

QC Batch: MSV/19450 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 4077127008, 4077127009, 4077127010, 4077127011, 4077127012

METHOD BLANK: 783753 Matrix: Water
Associated Lab Samples: 4077127008, 4077127009, 4077127010, 4077127011, 4077127012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.45	1.0	05/06/13 06:48	
1,1,1-Trichloroethane	ug/L	<0.44	1.0	05/06/13 06:48	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	05/06/13 06:48	
1,1,2-Trichloroethane	ug/L	<0.39	1.0	05/06/13 06:48	
1,1-Dichloroethane	ug/L	<0.28	1.0	05/06/13 06:48	
1,1-Dichloroethene	ug/L	<0.43	1.0	05/06/13 06:48	
1,1-Dichloropropene	ug/L	<0.51	1.0	05/06/13 06:48	
1,2,3-Trichlorobenzene	ug/L	<0.77	5.0	05/06/13 06:48	
1,2,3-Trichloropropane	ug/L	<0.47	1.0	05/06/13 06:48	
1,2,4-Trichlorobenzene	ug/L	<2.5	5.0	05/06/13 06:48	
1,2,4-Trimethylbenzene	ug/L	<0.57	5.0	05/06/13 06:48	
1,2-Dibromo-3-chloropropane	ug/L	<1.5	5.0	05/06/13 06:48	
1,2-Dibromoethane (EDB)	ug/L	<0.38	1.0	05/06/13 06:48	
1,2-Dichlorobenzene	ug/L	<0.44	1.0	05/06/13 06:48	
1,2-Dichloroethane	ug/L	<0.48	1.0	05/06/13 06:48	
1,2-Dichloropropane	ug/L	<0.50	1.0	05/06/13 06:48	
1,3,5-Trimethylbenzene	ug/L	<2.5	5.0	05/06/13 06:48	
1,3-Dichlorobenzene	ug/L	<0.45	1.0	05/06/13 06:48	
1,3-Dichloropropane	ug/L	<0.46	1.0	05/06/13 06:48	
1,4-Dichlorobenzene	ug/L	<0.43	1.0	05/06/13 06:48	
2,2-Dichloropropane	ug/L	<0.37	1.0	05/06/13 06:48	
2-Chlorotoluene	ug/L	<0.48	1.0	05/06/13 06:48	
4-Chlorotoluene	ug/L	<0.48	1.0	05/06/13 06:48	
Benzene	ug/L	<0.50	1.0	05/06/13 06:48	
Bromobenzene	ug/L	<0.48	1.0	05/06/13 06:48	
Bromochloromethane	ug/L	<0.49	1.0	05/06/13 06:48	
Bromodichloromethane	ug/L	<0.45	1.0	05/06/13 06:48	
Bromoform	ug/L	<0.23	20.0	05/06/13 06:48	
Bromomethane	ug/L	<0.43	5.0	05/06/13 06:48	
Carbon tetrachloride	ug/L	<0.37	1.0	05/06/13 06:48	
Chlorobenzene	ug/L	<0.36	1.0	05/06/13 06:48	
Chloroethane	ug/L	<0.44	1.0	05/06/13 06:48	
Chloroform	ug/L	<0.69	5.0	05/06/13 06:48	
Chloromethane	ug/L	<0.39	1.0	05/06/13 06:48	
cis-1,2-Dichloroethene	ug/L	<0.42	1.0	05/06/13 06:48	
cis-1,3-Dichloropropene	ug/L	<0.29	20.0	05/06/13 06:48	
Dibromochloromethane	ug/L	<1.9	5.0	05/06/13 06:48	
Dibromomethane	ug/L	<0.48	1.0	05/06/13 06:48	
Dichlorodifluoromethane	ug/L	<0.40	1.0	05/06/13 06:48	
Diisopropyl ether	ug/L	<0.50	1.0	05/06/13 06:48	
Ethylbenzene	ug/L	<0.50	1.0	05/06/13 06:48	
Hexachloro-1,3-butadiene	ug/L	<1.3	5.0	05/06/13 06:48	
Isopropylbenzene (Cumene)	ug/L	<0.34	1.0	05/06/13 06:48	

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

METHOD BLANK: 783753

Matrix: Water

Associated Lab Samples: 4077127008, 4077127009, 4077127010, 4077127011, 4077127012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/L	<0.82	2.0	05/06/13 06:48	
Methyl-tert-butyl ether	ug/L	<0.49	1.0	05/06/13 06:48	
Methylene Chloride	ug/L	<0.36	1.0	05/06/13 06:48	
n-Butylbenzene	ug/L	<0.40	1.0	05/06/13 06:48	
n-Propylbenzene	ug/L	<0.50	1.0	05/06/13 06:48	
Naphthalene	ug/L	<2.5	5.0	05/06/13 06:48	
o-Xylene	ug/L	<0.50	1.0	05/06/13 06:48	
p-Isopropyltoluene	ug/L	<0.40	1.0	05/06/13 06:48	
sec-Butylbenzene	ug/L	<0.60	5.0	05/06/13 06:48	
Styrene	ug/L	<0.35	1.0	05/06/13 06:48	
tert-Butylbenzene	ug/L	<0.42	1.0	05/06/13 06:48	
Tetrachloroethene	ug/L	<0.47	1.0	05/06/13 06:48	
Toluene	ug/L	<0.44	1.0	05/06/13 06:48	
trans-1,2-Dichloroethene	ug/L	<0.37	1.0	05/06/13 06:48	
trans-1,3-Dichloropropene	ug/L	<0.26	20.0	05/06/13 06:48	
Trichloroethene	ug/L	<0.43	1.0	05/06/13 06:48	
Trichlorofluoromethane	ug/L	<0.48	1.0	05/06/13 06:48	
Vinyl chloride	ug/L	<0.18	1.0	05/06/13 06:48	
4-Bromofluorobenzene (S)	%	91	43-137	05/06/13 06:48	
Dibromofluoromethane (S)	%	106	70-130	05/06/13 06:48	
Toluene-d8 (S)	%	98	55-137	05/06/13 06:48	

LABORATORY CONTROL SAMPLE & LCSD: 783754

783755

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	57.0	56.8	114	114	70-136	0	20	
1,1,2,2-Tetrachloroethane	ug/L	50	52.3	50.3	105	101	70-130	4	20	
1,1,2-Trichloroethane	ug/L	50	53.5	52.1	107	104	70-130	3	20	
1,1-Dichloroethane	ug/L	50	55.3	55.1	111	110	70-146	0	20	
1,1-Dichloroethene	ug/L	50	55.9	56.4	112	113	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	50	52.3	51.5	105	103	70-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	50	45.0	44.1	90	88	46-150	2	20	
1,2-Dibromoethane (EDB)	ug/L	50	54.4	52.2	109	104	70-130	4	20	
1,2-Dichlorobenzene	ug/L	50	53.4	52.8	107	106	70-130	1	20	
1,2-Dichloroethane	ug/L	50	53.2	52.5	106	105	70-144	1	20	
1,2-Dichloropropane	ug/L	50	53.8	53.6	108	107	70-136	0	20	
1,3-Dichlorobenzene	ug/L	50	51.5	50.6	103	101	70-130	2	20	
1,4-Dichlorobenzene	ug/L	50	52.3	52.1	105	104	70-130	0	20	
Benzene	ug/L	50	55.5	55.4	111	111	70-137	0	20	
Bromodichloromethane	ug/L	50	55.9	55.7	112	111	70-133	0	20	
Bromoform	ug/L	50	48.5	47.0	97	94	59-130	3	20	
Bromomethane	ug/L	50	52.9	54.9	106	110	41-148	4	20	
Carbon tetrachloride	ug/L	50	59.4	58.7	119	117	70-154	1	20	
Chlorobenzene	ug/L	50	53.9	53.2	108	106	70-130	1	20	
Chloroethane	ug/L	50	55.3	56.1	111	112	70-139	1	20	

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

LABORATORY CONTROL SAMPLE & LCSD: 783754		783755								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/L	50	53.4	54.2	107	108	70-130	1	20	
Chloromethane	ug/L	50	52.5	52.4	105	105	45-154	0	20	
cis-1,2-Dichloroethene	ug/L	50	55.4	55.2	111	110	70-130	0	20	
cis-1,3-Dichloropropene	ug/L	50	46.0	45.1	92	90	70-136	2	20	
Dibromochloromethane	ug/L	50	52.0	51.3	104	103	70-130	1	20	
Dichlorodifluoromethane	ug/L	50	47.8	46.6	96	93	20-157	2	20	
Ethylbenzene	ug/L	50	57.2	56.5	114	113	70-130	1	20	
Isopropylbenzene (Cumene)	ug/L	50	53.5	52.2	107	104	70-130	3	20	
m&p-Xylene	ug/L	100	117	116	117	116	70-130	1	20	
Methyl-tert-butyl ether	ug/L	50	52.5	52.1	105	104	59-141	1	20	
Methylene Chloride	ug/L	50	54.8	54.4	110	109	70-130	1	20	
o-Xylene	ug/L	50	53.9	52.5	108	105	70-130	3	20	
Styrene	ug/L	50	52.5	51.2	105	102	70-130	2	20	
Tetrachloroethene	ug/L	50	53.0	52.7	106	105	70-130	1	20	
Toluene	ug/L	50	55.3	55.4	111	111	70-130	0	20	
trans-1,2-Dichloroethene	ug/L	50	56.4	57.4	113	115	70-130	2	20	
trans-1,3-Dichloropropene	ug/L	50	48.6	48.2	97	96	55-135	1	20	
Trichloroethene	ug/L	50	55.4	55.1	111	110	70-130	0	20	
Trichlorofluoromethane	ug/L	50	59.3	58.7	119	117	50-150	1	20	
Vinyl chloride	ug/L	50	57.6	56.9	115	114	61-143	1	20	
4-Bromofluorobenzene (S)	%				102	101	43-137			
Dibromofluoromethane (S)	%				105	105	70-130			
Toluene-d8 (S)	%				99	98	55-137			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 784781		784782											
Parameter	Units	4077164008		MS Spike	MSD Spike	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Conc.	Result	Result	% Rec	% Rec				
1,1,1-Trichloroethane	ug/L	<0.44	50	50	54.4	57.8	109	116	70-136	6	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	52.7	54.0	105	108	70-130	2	20		
1,1,2-Trichloroethane	ug/L	<0.39	50	50	52.3	54.6	105	109	70-130	4	20		
1,1-Dichloroethane	ug/L	<0.28	50	50	52.6	55.9	105	112	70-146	6	20		
1,1-Dichloroethene	ug/L	<0.43	50	50	54.7	58.7	109	117	70-130	7	20		
1,2,4-Trichlorobenzene	ug/L	<2.5	50	50	51.9	53.1	103	106	70-130	2	20		
1,2-Dibromo-3-chloropropane	ug/L	<1.5	50	50	45.9	47.7	92	95	46-150	4	20		
1,2-Dibromoethane (EDB)	ug/L	<0.38	50	50	53.4	55.9	107	112	70-130	5	20		
1,2-Dichlorobenzene	ug/L	<0.44	50	50	52.4	55.0	105	110	70-130	5	20		
1,2-Dichloroethane	ug/L	<0.48	50	50	51.5	54.8	103	110	70-146	6	20		
1,2-Dichloropropane	ug/L	<0.50	50	50	52.4	54.3	105	109	70-136	4	20		
1,3-Dichlorobenzene	ug/L	<0.45	50	50	50.0	51.7	100	103	70-130	3	20		
1,4-Dichlorobenzene	ug/L	<0.43	50	50	50.9	52.8	101	105	70-130	4	20		
Benzene	ug/L	<0.50	50	50	53.1	55.7	106	111	70-137	5	20		
Bromodichloromethane	ug/L	<0.45	50	50	54.8	57.7	110	115	70-133	5	20		
Bromoform	ug/L	<0.23	50	50	47.3	48.9	95	98	57-130	3	20		
Bromomethane	ug/L	<0.43	50	50	51.9	56.5	104	113	41-148	8	20		
Carbon tetrachloride	ug/L	<0.37	50	50	57.3	59.8	115	120	70-154	4	20		
Chlorobenzene	ug/L	<0.36	50	50	51.9	54.3	104	109	70-130	5	20		

Date: 05/08/2013 04:58 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Parameter	4077164008		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec							
Chloroethane	ug/L	<0.44	50	50	53.3	56.5	107	113	70-140	6	20				
Chloroform	ug/L	<0.69	50	50	51.5	54.9	103	110	70-130	6	20				
Chloromethane	ug/L	<0.39	50	50	50.4	54.4	101	109	45-154	8	20				
cis-1,2-Dichloroethene	ug/L	<0.42	50	50	53.9	56.2	108	112	70-130	4	20				
cis-1,3-Dichloropropene	ug/L	<0.29	50	50	44.8	46.8	90	94	70-136	4	20				
Dibromochloromethane	ug/L	<1.9	50	50	50.1	52.6	100	105	70-130	5	20				
Dichlorodifluoromethane	ug/L	<0.40	50	50	45.1	47.2	90	94	10-157	5	20				
Ethylbenzene	ug/L	<0.50	50	50	55.7	58.0	111	116	70-130	4	20				
Isopropylbenzene (Cumene)	ug/L	<0.34	50	50	51.8	54.3	104	109	70-130	5	20				
m&p-Xylene	ug/L	<0.82	100	100	113	119	113	119	70-130	5	20				
Methyl-tert-butyl ether	ug/L	<0.49	50	50	51.3	53.9	103	108	59-141	5	20				
Methylene Chloride	ug/L	<0.36	50	50	52.5	56.3	105	113	70-130	7	20				
o-Xylene	ug/L	<0.50	50	50	52.1	54.5	104	109	70-130	5	20				
Styrene	ug/L	<0.35	50	50	51.3	52.6	103	105	35-164	3	20				
Tetrachloroethene	ug/L	<0.47	50	50	51.7	53.9	103	108	70-130	4	20				
Toluene	ug/L	<0.44	50	50	53.9	55.9	108	112	70-130	4	20				
trans-1,2-Dichloroethene	ug/L	<0.37	50	50	54.7	57.4	109	115	70-130	5	20				
trans-1,3-Dichloropropene	ug/L	<0.26	50	50	48.1	50.4	96	101	55-137	5	20				
Trichloroethene	ug/L	<0.43	50	50	54.0	55.9	108	112	70-130	3	20				
Trichlorofluoromethane	ug/L	<0.48	50	50	56.9	59.8	114	120	50-150	5	20				
Vinyl chloride	ug/L	<0.18	50	50	54.5	58.7	109	117	59-144	7	20				
4-Bromofluorobenzene (S)	%						101	101	43-137						
Dibromofluoromethane (S)	%						105	105	70-130						
Toluene-d8 (S)	%						99	99	55-137						

QUALITY CONTROL DATA

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

QC Batch: WETA/17384

Analysis Method: EPA 335.4

QC Batch Method: EPA 335.4

Analysis Description: 335.4 Cyanide, Total

Associated Lab Samples: 4077127007, 4077127008, 4077127009

METHOD BLANK: 783021

Matrix: Water

Associated Lab Samples: 4077127007, 4077127008, 4077127009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	<0.0038	0.020	05/02/13 20:31	

LABORATORY CONTROL SAMPLE: 783022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.094	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 783023

783024

Parameter	Units	4077128001		783023		783024		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.					
Cyanide	mg/L	<0.0038	.1	<0.0038	.1	0.096	0.097	94	95	90-110	1	20

QUALIFIERS

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 58117057 NW MAUTHE

Pace Project No.: 4077127

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4077127001	MW-101	EPA 6010	ICP/7463		
4077127002	MW-102	EPA 6010	ICP/7463		
4077127003	MW-103	EPA 6010	ICP/7463		
4077127004	MW-104	EPA 6010	ICP/7463		
4077127005	MW-109	EPA 6010	ICP/7463		
4077127006	MW-107	EPA 6010	ICP/7463		
4077127007	MW-110	EPA 6010	ICP/7463		
4077127008	MW-111	EPA 6010	ICP/7463		
4077127009	MW-112	EPA 6010	ICP/7463		
4077127010	MW-113	EPA 6010	ICP/7463		
4077127005	MW-109	EPA 8260	MSV/19440		
4077127006	MW-107	EPA 8260	MSV/19369		
4077127007	MW-110	EPA 8260	MSV/19369		
4077127008	MW-111	EPA 8260	MSV/19450		
4077127009	MW-112	EPA 8260	MSV/19450		
4077127010	MW-113	EPA 8260	MSV/19450		
4077127011	BD-1	EPA 8260	MSV/19450		
4077127012	TRIP BLANK	EPA 8260	MSV/19450		
4077127007	MW-110	EPA 335.4	WETA/17384	EPA 335.4	WETA/17390
4077127008	MW-111	EPA 335.4	WETA/17384	EPA 335.4	WETA/17390
4077127009	MW-112	EPA 335.4	WETA/17384	EPA 335.4	WETA/17390

(Please Print Clearly)

Company Name: TERRACON
 Branch/Location: Milwaukee
 Project Contact: Nick Heine
 Phone: 414 473 0255
 Project Number: 5817057
 Project Name: MW Mark
 Project State: WI
 Sampled By (Print): Nick Heine
 Sampled By (Sign): Nick Heine
 PO #: _____

Regulatory Program: _____
 Matrix Codes:
 A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge
 W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Waste
 FILTERED? (YES/NO) _____
 PRESERVATION (CODE) _____
 A=None, B=HCL, C=H2SO4, D=HNO3, E=DI Water, F=Methanol, G=NaOH
 H=Sodium Bisulfate Solution, I=Sodium Thiosulfate, J=Other

CHAIN OF CUSTODY



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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

PAGE LAB #	CLIENT FIELD ID	DATE	COLLECTION TIME	MATRIX	Analyses Requested		
					Y/N	Pick Letter	
001	MW-101	4/24/13	1:00	GW	X		
002	MW-102	4/24/13	11:55	GW	X		
003	MW-103	4/24/13	3:50	GW	X		
004	MW-104	4/24/13	3:05	GW	X		
005	MW-109	4/24/13	2:10	GW	X		
006	MW-107	4/24/13	7:25	GW	X		
007	MW-110	4/30/13	8:55	GW	X		
008	MW-111	4/30/13	12:25	GW	X		
009	MW-112	4/30/13	11:35	GW	X		
010	MW-113	4/30/13	10:20	GW	X		
011	BO-1	4/30/13					
012	*TB						

Quote #: _____
 Mail To Contact: _____
 Mail To Company: _____
 Mail To Address: _____
 Invoice To Contact: _____
 Invoice To Company: _____
 Invoice To Address: _____
 Invoice To Phone: _____
 CLIENT COMMENTS: _____
 LAB COMMENTS (Lab Use Only): _____
 Profile #: _____

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed: _____
 Relinquished By: Nick Heine Date/Time: 5/1/13 3:24 Received By: [Signature] Date/Time: 5/1/13 1524
 Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____
 Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____
 Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____
 PACE Project No. 4097127
 Receipt Temp = 201 °C
 Sample Receipt pH OK Adjusted
 Cooler Custody Seal Present / Not Present
 Intact / Not Intact

*TB added to COC by lab. Date 5/1/13



Sample Condition Upon Receipt

Client Name: Terracon Project # 4077127

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used NA Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: _____ /Corr: ROI Biological Tissue is Frozen: yes

Temp Blank Present: yes no no

Person examining contents:
Date: 5/1/13
Initials: CHAA

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input checked="" type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>CHAA</u> Lab Std #ID of preservative _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>305</u>		

Client Notification/ Resolution: _____ If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: CHAA for DM Date: 5/1/13

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <u>NW Martha</u>		PROJECT NO. <u>5817057</u>
PROJECT LOCATION: <u>Appleton, WI</u>		
SAMPLE POINT: <u>MW 101</u>	SAMPLE POINT DESCRIPTION: <u>101 Miller Reg Electric. Parking Lot</u>	
CASING DIAMETER: <u>2"</u>		
WELL DEPTH:		
DATE: <u>4/29/13</u>	TIME: <u>12:10</u>	DEPTH TO GROUND WATER (FT): <u>5.46</u>
SAMPLING METHOD: <u>Low Flow</u>		FLOW RATE: <u>~200 ml/min</u>
SAMPLE TIME: <u>1:00</u>		TOTAL PURGED: <u>2.5 gal</u>

TIME	WATER LEVEL	TEMP. (° C)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)
12:15	6.45	9.6	9.35	6.18	-83.4	3.07
12:20	7.06	9.3	10.43	6.21	-85.3	2.59
12:25	7.76	8.9	10.54	6.12	-77.6	3.05
12:30	8.23	9.1	11.88	6.01	-90.8	3.00
12:35	8.57	8.9	9.97	6.04	-71.1	2.87
12:40	8.79	9.1	9.71	6.09	-72.5	2.47
12:45	9.11	9.2	9.66	6.24	-73.8	2.25
12:50	9.31	9.3	9.72	6.28	-75.5	2.13
12:55	9.62	9.3	9.59	6.33	-74.4	2.09
1:00						
1:05						
1:10						
1:15						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input checked="" type="checkbox"/> CLEAR	ODOR: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NOT NOTED	ANALYSES: <u>Total</u> <u>C</u> <u>(Filter)</u>
---	---	---

CLEANING PERFORMED IN FIELD: Alconox and Distilled Water AND Disposable gloves *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED
MJB

COMMENTS:
Hard Rain during Sampling. Covered Well Head.

SAMPLED BY: <u>MJB</u>	DATE: <u>4/29/13</u>
REVIEWED BY: <u>Scott A. Hodgson</u>	DATE: <u>5/8/13</u>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <i>NW Marthe</i>			PROJECT NO. <i>58117057</i>	
PROJECT LOCATION: <i>Appleton, WI</i>				
SAMPLE POINT: <i>MW 102</i>		SAMPLE POINT DESCRIPTION:		
CASING DIAMETER: <i>2"</i>		<i>801 Astyame Street Front Yard.</i>		
WELL DEPTH:				
DATE: <i>4/29/13</i>	TIME: <i>11:00</i>	AM/PM: <i></i>	DEPTH TO GROUND WATER (FT): <i>21.05</i>	
SAMPLING METHOD: <i>Low Flow</i>			FLOW RATE: <i>~200 ml/min</i>	
SAMPLE TIME: <i>11:55</i>			TOTAL PURGED: <i>2.5 gal</i>	

*WI
Mar
Z: 47
well*

TIME	WATER LEVEL	TEMP. (°C)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)
<i>11:05</i>	<i>22.56</i>	<i>10.5</i>	<i>6.68</i>	<i>0.82</i>	<i>-17.7</i>	<i>3.78</i>
<i>11:10</i>	<i>22.93</i>	<i>10.4</i>	<i>6.81</i>	<i>0.81</i>	<i>-18.6</i>	<i>4.12</i>
<i>11:15</i>	<i>23.11</i>	<i>10.5</i>	<i>6.88</i>	<i>0.82</i>	<i>-35.0</i>	<i>4.16</i>
<i>11:20</i>	<i>23.30</i>	<i>10.6</i>	<i>7.01</i>	<i>0.82</i>	<i>-20.2</i>	<i>4.01</i>
<i>11:25</i>	<i>23.50</i>	<i>10.6</i>	<i>6.57</i>	<i>0.82</i>	<i>-12.9</i>	<i>4.09</i>
<i>11:30</i>	<i>23.72</i>	<i>10.7</i>	<i>6.87</i>	<i>0.82</i>	<i>-18.4</i>	<i>3.99</i>
<i>11:35</i>	<i>23.95</i>	<i>10.7</i>	<i>7.18</i>	<i>0.83</i>	<i>-23.8</i>	<i>4.18</i>
<i>11:40</i>	<i>24.20</i>	<i>10.7</i>	<i>7.22</i>	<i>0.82</i>	<i>-27.3</i>	<i>4.28</i>
<i>11:45</i>	<i>24.51</i>	<i>10.7</i>	<i>7.30</i>	<i>0.81</i>	<i>-29.8</i>	<i>4.21</i>
<i>11:50</i>	<i>24.83</i>	<i>10.7</i>	<i>7.35</i>	<i>0.81</i>	<i>-31.2</i>	<i>4.15</i>
<i>11:55</i>						
<i>12:00</i>						
<i>12:05</i>						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input checked="" type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: <i>Total C, (F.H.M.)</i>
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CLEANING PERFORMED IN FIELD: *Alconox and Distilled Water AND Disposable gloves* *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED

NSA

COMMENTS:

SAMPLED BY: <i>NSH</i>	DATE: <i>4/29/13</i>
REVIEWED BY: <i>Scott A. Hodgson</i>	DATE: <i>5/8/13</i>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <u>NW Manthe</u>		PROJECT NO. <u>58117057</u>
PROJECT LOCATION: <u>Appleton, WI</u>		
SAMPLE POINT: <u>MW 103</u>	SAMPLE POINT DESCRIPTION: <u>MW 103 Next to PL 8</u>	
CASING DIAMETER: <u>2"</u>		
WELL DEPTH:		
DATE: <u>4/29/13</u>	TIME: <u>3:15</u>	DEPTH TO GROUND WATER (FT): <u>6.47</u>
SAMPLING METHOD: <u>Low Flow</u>	FLOW RATE: <u>-200 ml/min</u>	
SAMPLE TIME: <u>3:50</u>	TOTAL PURGED: <u>5 gal</u>	

TIME	WATER LEVEL	TEMP.(° C)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)
3:20	7.04	10.0	11.64	1.06	-102.9	2.52
3:25	7.19	9.9	13.53	1.05	-119.8	2.17
3:30	7.58	9.7	13.51	1.01	-114.2	1.97
3:35	7.85	9.6	12.97	0.98	-106.9	1.86
3:40	7.89	9.5	12.70	0.97	-103.7	1.84
3:45	7.91	9.3	12.45	0.97	-102.5	1.82
3:50						
3:55						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input type="checkbox"/>	ODOR: YES <input type="checkbox"/> NO <input type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: <u>Tot 1 Cr Filtered</u>
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CLEANING PERFORMED IN FIELD: Alconox and Distilled Water AND Disposable gloves *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED
MHW

COMMENTS:

SAMPLED BY: <u>NJH</u>	DATE: <u>4/29/13</u>
REVIEWED BY: <u>Scott A. Hodgson</u>	DATE: <u>5/8/13</u>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <i>NW Marthe</i>		PROJECT NO. <i>54112057</i>
PROJECT LOCATION: <i>Appleton, WI</i>		
SAMPLE POINT: <i>MW 107</i>	SAMPLE POINT DESCRIPTION:	
CASING DIAMETER: <i>2'</i>	<i>MW-107 South of Treatment Bldg. East of PE 6</i>	
WELL DEPTH:		
DATE: <i>4/30/13</i>	TIME: <i>6:45</i>	DEPTH TO GROUND WATER (FT): <i>9.33</i>
SAMPLING METHOD: <i>Low Flow</i>		FLOW RATE: <i>~ 200 ml/min</i>
SAMPLE TIME: <i>7:25</i>		TOTAL PURGED: <i>1.75 gal</i>

TIME	WATER LEVEL	TEMP. (°C)	pH	COND. (ms/cm)	ORP (mV)	DO (mg/L)
<i>6:50</i>	<i>10.39</i>	<i>9.8</i>	<i>7.83</i>	<i>1.17</i>	<i>-76.3</i>	<i>3.36</i>
<i>6:55</i>	<i>10.55</i>	<i>9.8</i>	<i>9.71</i>	<i>1.14</i>	<i>-80.0</i>	<i>3.32</i>
<i>7:00</i>	<i>10.81</i>	<i>9.8</i>	<i>10.06</i>	<i>1.12</i>	<i>-73.9</i>	<i>3.10</i>
<i>7:05</i>	<i>10.13</i>	<i>9.8</i>	<i>10.20</i>	<i>1.12</i>	<i>-71.1</i>	<i>3.13</i>
<i>7:10</i>	<i>11.52</i>	<i>9.7</i>	<i>11.08</i>	<i>1.12</i>	<i>-74.6</i>	<i>3.07</i>
<i>7:15</i>	<i>11.77</i>	<i>9.7</i>	<i>10.62</i>	<i>1.12</i>	<i>-72.2</i>	<i>3.06</i>
<i>7:20</i>	<i>12.01</i>	<i>9.7</i>	<i>10.66</i>	<i>1.11</i>	<i>-70.4</i>	<i>3.03</i>
<i>7:25</i>						
<i>7:30</i>						
<i>7:35</i>						
<i>7:40</i>						
<i>7:45</i>						
<i>7:50</i>						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: <i>VOL% Total CA (Filtered)</i>
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CLEANING PERFORMED IN FIELD: *Alconox and Distilled Water AND Disposable gloves* *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED
MJA

COMMENTS:

SAMPLED BY: <i>NJH</i>	DATE: <i>4/30/13</i>
REVIEWED BY: <i>Scott A. Hodgson</i>	DATE: <i>5/8/13</i>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: NW Marthe		PROJECT NO. SG117057
PROJECT LOCATION: Appleton WI		
SAMPLE POINT: MW-109	SAMPLE POINT DESCRIPTION:	
CASING DIAMETER: 2"	NW Bldg Corner	
WELL DEPTH:		
DATE: 4/29/13	TIME: 1:20	DEPTH TO GROUND WATER (FT): 8.92
SAMPLING METHOD: Low Flow		FLOW RATE: ~100 ml/min
SAMPLE TIME: 2:10		TOTAL PURGED: 2.5 gal

TIME	WATER LEVEL	TEMP. (°C)	pH	COND. (ms/cm)	ORP (mV)	DO (mg/L)
1:25	9.18	9.5	10.01	1.68	-99.1	1.05
1:30	9.54	9.3	11.35	1.63	-102.2	0.89
1:35	9.82	9.3	10.56	1.59	-98.4	0.90
1:40	10.08	9.4	11.42	1.58	-101.2	1.03
1:45	10.41	8.4	11.52	1.49	-72.9	3.64
1:50	10.76	9.0	11.12	1.54	-92.6	1.45
1:55	11.05	8.8	10.14	1.52	-84.2	2.52
2:00	11.36	9.0	10.84	1.47	-79.1	2.58
2:05	11.61	8.9	11.12	1.47	-81.3	2.53
2:10						
2:15						
2:20						
2:25						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: VOC Total Cr (Filtered)
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CLEANING PERFORMED IN FIELD: **Alconox and Distilled Water AND Disposable gloves** *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED
NJH

COMMENTS:

SAMPLED BY: NJH	DATE: 4/29/13
REVIEWED BY: Scott A. Hodgson	DATE: 5/8/13

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <i>NW Marthe</i>		PROJECT NO. <i>58117057</i>
PROJECT LOCATION: <i>Appleton, WI</i>		
SAMPLE POINT: <i>MW-110</i>	SAMPLE POINT DESCRIPTION: <i>MW-110</i>	
CASING DIAMETER: <i>2"</i>	<i>West Side of fenced Area.</i>	
WELL DEPTH:		
DATE: <i>4/30/13</i>	TIME: <i>7:40</i>	DEPTH TO GROUND WATER (FT): <i>8.75</i>
SAMPLING METHOD: <i>Low Flow</i>	FLOW RATE: <i>-100 ml/min</i>	
SAMPLE TIME: <i>8:55</i>	TOTAL PURGED: <i>3.0 gal</i>	

TIME	WATER LEVEL	TEMP. (° C)	pH	COND. (µs/cm)	ORP (mV)	DO (mg/L)
<i>7:50</i>	<i>9.41</i>	<i>7.0</i>	<i>8.53</i>	<i>3.20</i>	<i>-49.2</i>	<i>3.75</i>
<i>7:55</i>	<i>9.75</i>	<i>6.8</i>	<i>8.43</i>	<i>3.20</i>	<i>-44.9</i>	<i>3.86</i>
<i>8:00</i>	<i>10.15</i>	<i>6.7</i>	<i>7.89</i>	<i>3.24</i>	<i>-44.7</i>	<i>3.48</i>
<i>8:05</i>	<i>10.27</i>	<i>6.7</i>	<i>7.85</i>	<i>3.27</i>	<i>-49.3</i>	<i>3.03</i>
<i>8:10</i>	<i>10.52</i>	<i>6.8</i>	<i>7.81</i>	<i>2.67</i>	<i>-51.0</i>	<i>2.80</i>
<i>8:15</i>	<i>10.75</i>	<i>7.0</i>	<i>7.80</i>	<i>3.32</i>	<i>-54.0</i>	<i>2.51</i>
<i>8:20</i>	<i>11.03</i>	<i>6.7</i>	<i>7.82</i>	<i>3.17</i>	<i>-56.9</i>	<i>2.25</i>
<i>8:25</i>	<i>11.30</i>	<i>7.0</i>	<i>7.84</i>	<i>1.84</i>	<i>-59.3</i>	<i>2.04</i>
<i>8:30</i>	<i>11.55</i>	<i>7.2</i>	<i>7.88</i>	<i>2.25</i>	<i>-61.4</i>	<i>1.91</i>
<i>8:35</i>	<i>12.03</i>	<i>7.2</i>	<i>7.93</i>	<i>3.34</i>	<i>-62.9</i>	<i>1.93</i>
<i>8:40</i>	<i>12.35</i>	<i>7.2</i>	<i>8.08</i>	<i>3.15</i>	<i>-62.9</i>	<i>2.0</i>
<i>8:45</i>	<i>12.61</i>	<i>7.2</i>	<i>8.18</i>	<i>2.30</i>	<i>-65.2</i>	<i>1.85</i>
<i>8:50</i>	<i>12.79</i>	<i>7.7</i>	<i>8.29</i>	<i>2.44</i>	<i>-66.9</i>	<i>1.78</i>

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input type="checkbox"/> NOT NOTED <input checked="" type="checkbox"/>	ANALYSES: <i>Vol, Cyanide, Total Cr</i>
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CLEANING PERFORMED IN FIELD: *Alconox and Distilled Water AND Disposable gloves* *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED
NJH

COMMENTS:

SAMPLED BY: <i>NJH</i>	DATE: <i>4/30/13</i>
REVIEWED BY: <i>Scott A. Hodgson</i>	DATE: <i>5/8/13</i>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: 0020 0020 NW Martha		PROJECT NO. 5817057
PROJECT LOCATION: Appleton, WI		
SAMPLE POINT: MW III	SAMPLE POINT DESCRIPTION: MW III	
CASING DIAMETER: 2"	N6 Core of Fenced Lot.	
WELL DEPTH:		
DATE: 4/30/13	TIME: 11:45	DEPTH TO GROUND WATER (FT): 6.61
SAMPLING METHOD: Low Flow	FLOW RATE: ~200 ml/min	
SAMPLE TIME: 12:25	TOTAL PURGED: 2 gal	

TIME	WATER LEVEL	TEMP. (°C)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)
11:55	7.16	8.7	8.88	1.48	-81.1	3.75
12:00	7.55	8.3	9.37	1.45	-70.1	3.86
12:05	7.81	8.1	9.42	1.44	-58.9	3.85
12:10	7.99	8.3	8.36	1.43	-43.3	3.62
12:15	8.21	8.1	8.56	1.42	-43.2	3.94
12:20	8.37	8.0	8.70	1.43	-42.6	3.91
12:25	8.52	8.0	8.75	1.43	-43.7	3.89
12:30						
12:35						
12:40						
12:45						
12:50						
12:55						

SAMPLE APPEARANCE: VERY TURBID TURBID SLIGHTLY TURBID CLEAR	ODOR: YES NO NOT NOTED	ANALYSES: VOL., Total (filtered) Cyanide
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CLEANING PERFORMED IN FIELD: Alconox and Distilled Water AND Disposable gloves *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED

NJH

COMMENTS:

SAMPLED BY: NJH	DATE: 4/30/13
REVIEWED BY: Scott A. Hodgeson	DATE: 5/8/13

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <u>NW Mathe</u>		PROJECT NO. <u>58117057</u>
PROJECT LOCATION: <u>Appleton, WI</u>		
SAMPLE POINT: <u>MW-112</u>	SAMPLE POINT DESCRIPTION: <u>MW 112</u>	
CASING DIAMETER: <u>2"</u>	<u>NW Side of forest lot</u>	
WELL DEPTH:		
DATE: <u>4/30/13</u>	TIME: <u>10:45</u>	DEPTH TO GROUND WATER (FT): <u>6.11</u>
SAMPLING METHOD: <u>Low Flow</u>		FLOW RATE: <u>~ 200 ml/min</u>
SAMPLE TIME: <u>11:35</u>		TOTAL PURGED: <u>2.25 gal</u>

TIME	WATER LEVEL	TEMP. (° C)	pH	COND. (µS/cm)	ORP (mV)	DO (mg/L)
10:50	6.90	9.3	9.58	2.13	-129.3	0.51
10:55	6.95	10.2	9.58	2.06	-119.4	0.32
11:00	6.99	10.5	9.50	2.37	-122.5	0.38
11:05	7.24	9.0	9.71	2.37	-132.5	0.24
11:10	7.40	8.8	9.06	2.11	-118.4	0.21
11:15	7.67	8.5	8.96	1.78	-107.1	0.47
11:20	8.05	8.5	8.89	1.67	-104.8	0.57
11:25	8.23	8.3	8.84	1.64	-100.3	0.53
11:30	8.32	8.3	8.87	1.65	-105.6	0.55
11:35						
11:40						
11:45						
11:50						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: <u>UIC, Cyanide, Total Cr (Filtered)</u>
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CLEANING PERFORMED IN FIELD: Alconox and Distilled Water AND Disposable gloves *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED

NA

COMMENTS:

SAMPLED BY: <u>NJH</u>	DATE: <u>4/30/13</u>
REVIEWED BY: <u>Scott A. Hodgson</u>	DATE: <u>5/8/13</u>

TERRACON

GROUND WATER SAMPLING INFORMATION SHEET

PROJECT NAME: <u>NW Marthe</u>		PROJECT NO. <u>58117057</u>
PROJECT LOCATION: <u>Appleton, WI</u>		
SAMPLE POINT: <u>Mw 113</u>	SAMPLE POINT DESCRIPTION: <u>Mw 113</u>	
CASING DIAMETER: <u>2"</u>	<u>South Side of fence yard</u>	
WELL DEPTH:		
DATE: <u>4/30/13</u>	TIME: <u>9:15</u>	DEPTH TO GROUND WATER (FT): <u>8.14</u>
SAMPLING METHOD: <u>Low Flow</u>		FLOW RATE: <u>~200 ml/min</u>
SAMPLE TIME: <u>10:20</u>		TOTAL PURGED: <u>2.75 gal</u>

TIME	WATER LEVEL	TEMP. (° C)	pH	COND. (µmS/cm)	ORP (mV)	DO (mg/L)
9:20	8.44	8.6	7.88	1.60	-112.4	0.93
9:25	8.59	8.6	8.74	1.57	-94.6	0.37
9:30	8.67	7.7	8.57	1.55	-93.4	0.374
9:35	8.76	7.3	8.30	1.35	-91.0	0.30
9:40	8.82	7.2	8.10	1.20	-89.4	0.34
9:45	8.84	7.3	8.11	1.22	-90.1	0.35
9:50	8.88	7.5	8.13	1.16	-89.9	0.39
9:55	8.90	8.0	9.10	1.15	-100.5	0.37
10:00	8.90	7.9	9.67	1.14	-99.3	0.33
10:05	8.90	7.7	10.69	1.14	-113.8	0.33
10:10	8.90	8.0	10.73	1.14	-115.0	0.31
10:15	8.90	8.3	10.82	1.14	-116.3	0.30
10:20						

SAMPLE APPEARANCE: VERY TURBID <input type="checkbox"/> TURBID <input type="checkbox"/> SLIGHTLY TURBID <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/>	ODOR: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NOT NOTED <input type="checkbox"/>	ANALYSES: <u>VOL</u> Total Cr (Filtered)
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CLEANING PERFORMED IN FIELD: Alconox and Distilled Water AND Disposable gloves *INITIAL TO VERIFY OR NOTE OTHER CLEANING METHOD PERFORMED

NJH

COMMENTS: BD-VOL's

SAMPLED BY: <u>NJH</u>	DATE: <u>4/30/13</u>
REVIEWED BY: <u>Scott A. Hodgson</u>	DATE: <u>5/8/13</u>

Appendix D

Form 4400-194

**OPERATION, MAINTENANCE, MONITORING
AND OPTIMIZATION REPORTING OF
SOIL AND GROUNDWATER REMEDIATION SYSTEMS**

PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form is mandatory. Failure to submit this form as required is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1.a.

A. GENERAL INFORMATION:

1. Site name: N.W. Mauthe Superfund Site (BRRTS #02-45-000127)
2. Reporting period from: October 1, 2012 To: April 30, 2013 Days in period: 212
3. Regulatory agency (enter DNR, DCOM, DATCP and/or other): WDNR/USEPA
4. DNR issued site number: 02-45-000127
5. State reimbursement fund claim number and fund name (if not applicable, enter NA): NA
6. Site location:
 - a. DNR region and county: Northeast Region, Outagamie County
 - b. Street address and municipality: 725 S Outagamie Street, Appleton
 - c. Township, range, section and quarter quarter section: T21 N, R17E, Section 34, NE 1/4, NW 1/4
7. Responsible party:
 - a. Name: Carol Mauthe
 - b. Mailing address: 194 C S West Avenue, Appleton, Wisconsin 54915
 - c. Phone number: _____
8. Consultant:
 - a. Company name: Terracon Consultants, Inc.
 - b. Mailing address: 9856 S 57th Street, Franklin, Wisconsin 53132
 - c. Phone number: (414) 423-0255
9. Contaminants: chromium, cyanide, chlorinated solvents
10. Soil types (USCS or USDA): lean clay (CL); silty clay (CL-ML)
11. Hydraulic conductivity (cm/sec): 3.90 E x 10⁻⁷ 12. Average linear velocity of groundwater (ft/yr): 1.17

OPERATION, MAINTENANCE, MONITORING
AND OPTIMIZATION REPORTING OF
SOIL AND GROUNDWATER REMEDIATION SYSTEMS

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: N.W. Mauthe Superfund Site (BRRTS # 02-45-000127)

Reporting period from: October 1, 2012 To: April 30, 2013 Days in period: 212

A. GENERAL INFORMATION (CONTINUED):

13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location:

a. DNR region and county: NA

b. Township, range, section and quarter quarter section: NA

B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed page GW-1).
- Free product recovery (submit a completed page GW-1).
- In situ air sparging (submit a completed page GW-2).
- Groundwater natural attenuation (submit a completed page GW-3).
- Other groundwater remediation method (submit a completed page GW-4).
- Soil venting (including soil vapor extraction and bioventing, submit a completed page IS-1).
- Soil natural attenuation (submit a completed page IS-2).
- Other in situ soil remediation method (submit a completed page IS-3).
- Biopiles (submit a completed page ES-1).
- Landspreading/thinspreading of petroleum contaminated soil (submit a completed page ES-2).
- Other ex situ soil remediation method (submit a completed page ES-3).

C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications? (Y/N): yes
If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.
2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, explain: no
3. Is natural attenuation an effective low cost option at this time? (Y/N): no
4. Is closure sampling warranted at this time? (Y/N): no
5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain: no

D. ECONOMIC AND COST DATA TO DATE:

1. Total investigation costs (\$): Superfund site; EPA has cost information
2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): Superfund site; EPA has cost information
3. Total costs during the previous reporting period (\$): Approximately \$8,247.50
4. Total costs during this reporting period (\$): Approximately \$27,305.00
5. Total anticipated costs for the next reporting period (\$): Approximately \$13,070
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain: Yes
D4: manhole pump replacement, pump re-wiring, check valve replacement, system re-plumbing, D5: Garage door repair
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$): NA

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GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: N. W. Mauthe Superfund Site (BRRTS #02-45-000127)
Reporting period from: October 1, 2012 To: April 30, 2013 Days in period: 212

E. NAME(S), SIGNATURE(S) AND DATE OF PERSON(S) SUBMITTING FORM: Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form.

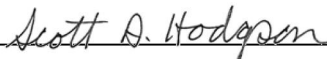
Registered Professional Engineers:

I (print name) Blaine R. Schroyer, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title, P.E. number and date:  Principal/Office Manager E-31505 6/4/2013

Hydrogeologists:

I (print name) Scott A. Hodgson, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

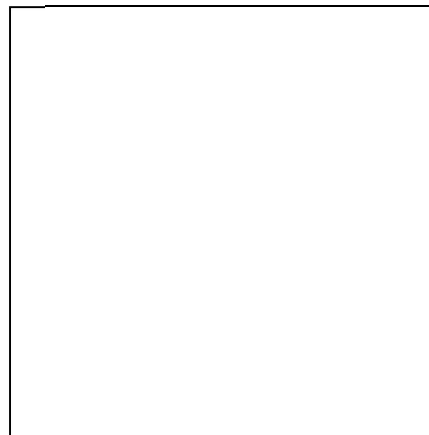
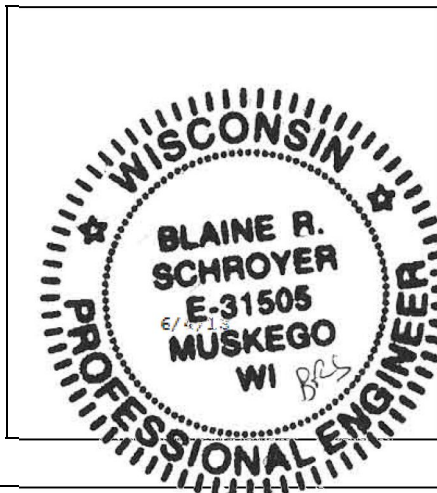
Signature, title and date:  Senior Project Manager 6/4/2013

Scientists:

I (print name) _____, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title and date: _____

Professional Seal(s), if applicable:



OPERATION, MAINTENANCE, MONITORING
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GROUNDWATER PUMP AND TREAT SYSTEMS AND FREE PRODUCT RECOVERY SYSTEMS

SITE NAME AND REPORTING PERIOD:

Site name: NW Mauthe Superfund site

Reporting period from: October 1, 2012 To: April 30, 2013 Days in period: 212

Date that the system was first started up: February 1997

A. GROUNDWATER EXTRACTION SYSTEM OPERATION:

1. Total number of groundwater extraction wells or trenches available and the number in use during period: three trenches available/used
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): 212
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: 100
4. Quantity of groundwater extracted during this time period (gallons): 444,381
5. Average groundwater extraction rate (gpm): 1.45 gpm
6. Quantity of dissolved phase contaminants removed during this time period in pounds: 3.172

B. FREE PRODUCT RECOVERY SYSTEM OPERATION:

1. Is free product (nonaqueous phase liquid) being recovered at this site? (Y/N) If yes, list method: no
2. Quantity of free product extracted during this time period (gallons, enter none if none): none
3. Average free product extraction rate (gpd): NA

C. SYSTEM EFFECTIVENESS EVALUATION:

1. Is a contaminated groundwater plume fully contained in the capture zone? (Y/N) If no, explain: No; system designed for containment only
2. If free product is present, is the free product fully contained in capture zone? (Y/N) If no, explain: NA
3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain. NA
4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.
 - a. Contaminant: TCE
 - b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 98.91 for ES and 99.89 for PAL
 - c. Maximum contaminant concentration level in any monitoring well of that contaminant (µg/L): 460 at MW-107
 - d. Maximum contaminant concentration level in any extraction well of that contaminant (µg/L): Not tested
 - e. If the maximum concentration in a monitoring well is more that one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer. System designed for containment only, not treatment

D. ADDITIONAL ATTACHMENTS: Attach the following to this form:

- Most recent report to the DNR Wastewater Program, if applicable.
- Groundwater contour map with capture zone indicated. **Figure 4**
- Groundwater contaminant distribution map (may be combined with contour map). **Figure 5**
- Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs.
- Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows:
 - Graph of contaminant concentrations versus time for each extraction well in use during the period. **NA**
 - Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination. **Figure 13**
- Groundwater contaminant chemistry table. **Tables 5 and 6**
- Groundwater elevations table. **Table 3**
- System operational data table. **Tables 1 and 2**

INSTRUCTIONS AND INFORMATION.

Specific Page by Page Instructions for This Form. The site name and reporting period is listed on every page. Then if the pages are inadvertently separated, that information can be used to determine which pages form the report.

When the form specifies that the person filling in the form "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item, for example: Page GI-2, C.1.a.

Page GI-1, General Site Information.

- A.1. List the name as it appears on the DNR tracking system. If the person filling out the form does not know what the name on the tracking system is, use the name that the DNR used in the most recent correspondence.
- A.2. The reporting period should be either from January 1 to June 30 or July 1 to December 31 for active systems. For passive systems, use a calendar year basis. If however the report covers a newly installed system, list the actual startup date instead of January 1 or July 1. For new passive systems, use the first date that monitoring data is available as the date of startup.
- A.3. Enter all regulatory agencies that regulate the site.
- A.4. This form is a DNR form. For that reason, list the DNR site number. If there are other agencies regulating the site, listing identification numbers for other agencies is also recommended, but not mandatory, unless specified by those other agencies.
- A.5. Some sites are eligible for reimbursement from one or more state agencies. List all agencies that will be asked to reimburse costs on this site and the claim numbers issued by those agencies.
- A.6. If the information listed for the site location is not sufficient information for a person to use to drive to a site (example: no street address in a rural area), also include a map that is sufficient for a person to use to drive to the site. A U.S.G.S. topographic map that shows the site location may be used.
- A.7. Self explanatory.
- A.8. Self explanatory.
- A.9. List the contaminants that have at one time exceeded the PALs or Table Values in ch. NR 720. If GRO and/or DRO exceed the ch. NR 720 standards, also list GRO and/or DRO. Do not list other contaminants that have never exceeded state standards at the site. If more room is necessary, write "SEE ATTACHED SHEETS" and list all contaminants on a separate sheet.
- A.10. List the predominant soil types that are contaminated. If there is both contaminated soil and groundwater at the site, list soil types both above and below the water table. If only some soil is contaminated, do not list the soil types that are uncontaminated. If the site soils meet soil cleanup criteria, but groundwater is contaminated, so state that. Specify if the USCS or USDA system is used for soil descriptions. This line specifies soil because the vast majority of contaminated sites do not have contaminated bedrock. If bedrock is contaminated, also list that bedrock type.
- A.11. If the groundwater meets ch. NR 140 standards, enter "NA - NO NR 140 EXCEEDANCES". Otherwise, list the estimated hydraulic conductivity and the method used to estimate it (bail-down tests, calculations based on grain size, pumping test, etc.) If the hydraulic conductivity has not been determined, state when the tests are to be conducted. When a number of test results are available, list the range of results and the geometric mean. If however some results have a low level of accuracy and some results have a high level of accuracy, you should only list the most accurate results. See the Section on aquifer testing in the *Guidance on Design, Installation and Operation of Ground Water Extraction and Product Recovery Systems* for more information.
- A.12. If the groundwater meets ch. NR 140 standards, enter "NA - NO NR 140 EXCEEDANCES". Otherwise, enter groundwater average linear velocity as a function of hydraulic conductivity, effective porosity and the groundwater gradient. You should use the geometric mean from A.11. (above) and the most representative value for the gradient at the site. Estimate the effective porosity based on soil types and geologic origin of the soil. If there are reasons to believe that the average liner velocity estimate is less than the actual rate at the site, so state that reason. Secondary porosity effects, flow through submerged utility trenches, widespread contaminant distribution in low permeability soils, etc., are reasons to assume that the actual migration rate is much greater than the predicted average linear velocity. In such cases, you should explain the reasoning for doubting the predicted average linear velocity.

Page GI-2, General Site Information Continued.

List site name as shown on page GI-1 and the reporting period.

- A.13. If the information listed for the soil treatment location is not sufficient information for a person to use to drive to a site, also include a map that is sufficient for a person to use to drive to the site. A U.S.G.S. topographic map or a plat map that shows the site location may be used.

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Page GI-2, General Site Information Continued.

- B. Check all methods used at a site. For example, if groundwater extraction, free product recovery and soil venting are used, check all three methods and submit the additional pages for those methods. If dual-phase or bioslurping are used, these methods extract both air and groundwater, check boxes for and attach additional pages for both soil venting and pump and treat.
- C. Remediation systems that use any form of enhancement are considered "active" and sites where there are no enhancements of any kind are considered "passive" forms of remediation. For purposes of these forms, natural attenuation (also called naturally occurring bioremediation) is "passive" and all other remediation methods are "active" methods.
- C.1. Design flow rates refers to flow rates such as gallons per minute extracted by a ground water extraction system, standard cubic feet per minute extracted by a soil venting system, standard cubic feet per minute injected by an in situ air sparging system, etc. If the actual flow rate is within 80 percent of the rate predicted in the design, consider that as meeting the design specification.
- C.2. Self explanatory.
- C.3. Self explanatory.
- C.4. Self explanatory.
- C.5. Self explanatory.
- D. The cost data in this section is used by DNR staff to evaluate whether or not the selected remedy is the most cost effective remedy and whether or not system modifications may be warranted to improve efficiency and/or cost effectiveness. Responsible parties and consultants are encouraged to submit cost information so that DNR staff may assist responsible parties and consultants accomplish environmental cleanups in the most cost effective manner.

Total costs for past costs are all costs to date. This information is for all costs that were incurred to investigate and/or remediate the site. These costs include but are not limited to: consulting labor and supplies, laboratory testing, transportation, equipment, etc. If the consultant does not pass all costs through the consulting firm, the consultant will need to contact their client for other non-consulting costs to determine total costs. Exceptions include costs for attorney fees, accounting, claim assistance in preparing claims to state reimbursement funds, or other indirect expenses that are not essential to remediating the site.

- D.1. Self explanatory.
- D.2. The initial implementation costs are all costs that are incurred to start implementing a remedy at a site. Costs for the investigation however are excluded because those costs are incurred prior to remedy selection. Since costs for treatability and/or pilot testing are used to procure data for remedial design and are specific to different remediation methods, these costs should be included in implementation costs and not investigation costs. Startup or shakedown costs are also considered implementation costs and should not be considered operation and maintenance costs.
- D.3. Costs for implementation or investigation should not be repeated here or they will be double counted.
- D.4. Costs for implementation or investigation should not be repeated here or they will be double counted.
- D.5. Costs for implementation or investigation should not be repeated here or they will be double counted.
- D.6. Examples of one-time or unusual costs include the following:
 - Replacing a burned out motor on a pump.
 - Replacement of a well that was destroyed by a snowplow.
 - Confirmation sampling to determine if the site meets closure criteria. This type of cost is considered an unusual cost because this type of sampling is not conducted during most reporting periods.
- D.7. This estimate of costs is for all costs to close out a site minus the salvage value of any remediation equipment. Pertinent costs include items such as well abandonment, equipment removal from the site, consulting costs associated with these items, etc. Do not include any costs that will not be paid by a state reimbursement fund, such as repaving.

Page GI-3, General Site Information Continued.

- E. Self explanatory.

Page GW-1, Groundwater Extraction and Product Recovery.

List site name as shown on page GI-1 and the reporting period.

- A.1. List two numbers, the total number of extraction wells at the site and the number that were in actual use during the period. If all wells were in use, state that on the form.
- A.2. The number of days of operation are the number of days that the system was actually operated. If the system was shut down for reasons such as: repairs were necessary, piping froze, shut down to provide time for subsurface conditions to equilibrate before sampling, etc., do not list those days as being in operation.
- A.3. System utilization is a measure of the amount of time that the system operated relative to the amount of time that it could have operated.

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Page GW-1, Groundwater Extraction and Product Recovery (Continued).

- A.4. Self explanatory.
- A.5. The average is for the entire site, not per well or trench. For purposes of determining the average ground water extraction rate, calculate the average based on the total volume of groundwater extracted divided by the time of the reporting period. For example, if the system operated at 10 gallons per minute for one month, the amount of water extracted would be approximately 432,000 gallons. If the reporting period was six months long, then the time period is approximately 260,000 minutes. Therefore, the average flow rate over six months is 432,000 divided by 260,000 minutes for an average flow rate of 1.67 gallons per minute (gpm).
- A.6. Calculate the total dissolved contaminants removed in pounds. If the estimate is a sum of BTEX and not based on a total hydrocarbon test (GRO and/or DRO), so state that on the form.

- B.1. Self explanatory.
- B.2. Self explanatory.
- B.3. The average should be based on the entire site over the entire reporting period. See instructions above for A.5. List the free product recovery rate as gallons per day (gpd), not gallons per minute (gpm).

- C.1. To answer this question, a thorough evaluation of water levels and chemical analyses in all monitoring points at the site is necessary.
- C.2. If the capture zone has not been determined mathematically, it will need to be determined to answer this question. See the *Guidance on Design, Installation and Operation of Ground Water Extraction and Product Recovery Systems* for and any recent update or errata sheets for more information on plume capture.
- C.3. Self explanatory.
- C.4. When free product is present, line C.4.a. should state "FREE PRODUCT" and lines C.4.b. through C.4.d. are left blank. Otherwise, complete the following calculations.
There typically are several compounds at most contaminated sites that exceed the standards in ch. NR 140. The purpose of this question is to focus on the single contaminant that requires the most treatment to achieve groundwater quality standards on a percent reduction basis. For example, the most recent round of sampling at an example site demonstrated the highest levels of contaminants were 1,000 µg/L benzene and 1,000 µg/L toluene in the most heavily contaminated monitoring well. The ES and PAL for benzene is 5 µg/L and 0.5 µg/L (respectively) and for toluene the ES and PAL is 343 µg/L and 68.6 µg/L (ES and PAL data as of August 1995). Therefore the percent reduction to meet the ES and PAL for benzene is 99.5 and 99.95 percent and for toluene it is 65.7 and 93.14 percent. For that reason, the single contaminant that is most critical to reaching state groundwater standards is benzene. Therefore benzene is entered on line a. In this example, 99.5 and 99.95 percent is entered on line b. In this example, 1,000 µg/L is entered on line c. In this example, benzene is the driving factor, therefore enter the maximum benzene level in the single most heavily contaminated extraction well during the most recent sampling period on line d.

- D. See the generic discussion at the end of the instructions (below) for figures, graphs and tables, starting on page INS-7.

Page GW-2, In Situ Air Sparging.

List site name as shown on page GI-1 and the reporting period.

- A.1. Self explanatory.
- A.2. Self explanatory.
- A.3. Self explanatory.

- B.1. See instructions for Page GW-1, Item C.4.
- B.2. Self explanatory.
- B.3. Self explanatory.

- C. See the generic discussion at the end of the instructions (below) for figures, graphs and tables, starting on page INS-7.

Page GW-3, Natural Attenuation in Groundwater.

List site name as shown on page GI-1 and the reporting period.

- A.1. See instructions for page GW-1, Item C.4.
- A.2.a. List the estimated hydraulic conductivity that was listed on line A.11 on page GI-1.
- A.2.b. List the groundwater average linear velocity that was listed on line A.12 on page GI-1.
- A.3. Assess the monitoring well network to determine if there is a down gradient well that has not been impacted by the contaminants. Consider the possibility of a submerged (or diving) plume in that assessment. If all evidence indicates that the plume does not extend to the farthest "clean" downgradient well, indicate "YES" on the form. Otherwise indicate "NO" on the form. If there are not plans to install such a well, explain.