Five-Year Review Report

Third Five-Year Review Report

for

N. W. Mauthe Superfund Site

Appleton

Outagamie County, Wisconsin

April 2011

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List of Acronyms

ACL	Alternative Concentration Limit
APR	City of Appleton Parks and Recreation Department
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLEAN	Contaminated Lands Environmental Action Network
EPA	United States Environmental Protection Agency
ES	Enforcement Standard
ESD	Explanation of Significant Difference
FSP	Field Sampling Plan
HI	Hazard Index
IC	Institutional Control
LTRA	Long Term Response Action
MCL	Maximum Contaminant Level
MCO	Midwest Contract Operations, Inc.
NCP	National Contingency Plan
NPL	National Priorities List
NR	Natural Resources (e.g. ch. NR 140, Wis. Adm. Code)
O&M	Operation and Maintenance
PAL	Preventive Action Limit
POTW	Publicly Owned Treatment Works
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance / Quality Control
RA	Remedial Action
RAO	Remedial Action Objective
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RR	Remediation and Redevelopment Program

VOC	Volatile Organic Compound
WDHS	Wisconsin Department of Health Services
WDNR	Wisconsin Department of Natural Resources
WDOJ	Wisconsin Department of Justice
WISC	Wisconsin's Initiative for Sustainable Cleanups

Executive Summary

The third five-year review of the N. W. Mauthe Superfund site at 725 South Outagamie Street in Appleton, Wisconsin revealed that the containment and treatment system installed by the Environmental Protection Agency (EPA) in 1995 and 1996 is operating as designed. The remedy at the N. W. Mauthe Superfund site is currently protective of human health and the environment in the short-term based on completion of the following actions: demolition and removal of contaminated buildings; removal of containerized wastes; excavation of contaminated soils greater than 500 milligrams per kilogram (mg/kg) of chromium; installation of a clay cap over the remaining soil with levels below 500 mg/kg of chromium; installation of a contaminated groundwater collection and treatment system; installation or improvement of foundation drain systems for those residents or businesses located within the groundwater contaminant plume; and cleaning, painting or sealing of affected basements to prevent future contaminated groundwater seepage into the residential buildings. As a result, the exposure pathways that could result in unacceptable risks in the short term are being controlled.

The remedy will be protective in the long-term once institutional controls (ICs) have been upgraded. IC options include long-term environmental easements and/or other use restrictions to prevent: access to, excavation or disturbance of the constructed cap, access to remaining soil contamination, disturbance of the groundwater collection and treatment system and installation of drinking water wells. An IC Plan will be developed and will specify which ICs will be upgraded at the site.

In 2005, OMNNI Associates, Inc. (OMNNI) began working with the Wisconsin Department of Natural Resources (WDNR) to perform a System Evaluation of the groundwater collection and treatment system, including a historical review of investigative and remedial work performed at the site and supplemental soil and groundwater analysis. In 2007, OMNNI confirmed that chromium levels in soils on site are below 500 mg/kg, chromium and cyanide are present in groundwater above the cleanup goals, and the current groundwater collection and treatment system will need to continue to operate for hundreds of years to meet cleanup goals. OMNNI recommended the remediation plan and cleanup goals for the site be reviewed.

In April 2006, the WDNR and OMNNI, working in cooperation with the City of Appleton, began a pilot study to discharge the combined influent from manhole no.1 and manhole no.2 directly to the sanitary sewer, bypassing the on-site treatment process. The combined influent has historically met discharge limits prior to on-site treatment from the start of the system; however, previous discharge permits required on-site treatment prior to discharge. Direct discharge of the combined influent was approved under a new discharge permit in May 2006. Since April 2006, the combined influent has been direct discharged without on-site treatment to the sanitary sewer.

In June 2006, the WDNR and OMNNI installed MW-109 through MW-113 to replace several key wells installed during the Remedial Investigation (RI) that were abandoned to perform the Remedial Action (RA) and not previously replaced. These replacement wells, located in areas of historically high groundwater contaminant concentrations, will assist in the on-going monitoring of the contaminant plume and evaluation of the progress of the remedy. The Record of Decision (ROD) identified chromium concentrations in groundwater exceeded 5,000

micrograms/liter (µg/L) which corresponds to the Hazard Index (HI) of one for occupational dermal exposure. In the past five years, chromium has exceeded the concentration that represents a HI of one at the newly installed wells MW-110, MW-112 and MW-113.

AECOM began work under contract with the WDNR in 2007 to perform a Site-Specific Sustainable Remediation System Evaluation. AECOM identified several alternative supplemental remedies, system efficiencies and alternative energy sources that could be incorporated to increase efficiency and reduce long-term costs for operation and maintenance (O&M).

The groundwater cleanup goals do not appear to be attainable in a reasonable amount of time with the existing collection system and clay cap. System efficiencies and supplemental remedies identified by OMNNI and AECOM could be implemented to reduce the time necessary to meet the cleanup goals. Regardless, on-going O&M of the groundwater collection system and treatment building needs to continue.

The WDNR developed a Cooperative Agreement with the city of Appleton Parks and Recreation Department (APR) in 2008. The Cooperative Agreement allows APR to utilize the truck bay and office of the treatment building, currently not needed by the O&M contractor, in exchange for maintenance of the grounds and a daily presence to observe Site conditions. The current Cooperative Agreement expires in May 2012 and is anticipated to be renewed.

In April 2010, the WDNR's Remediation and Redevelopment Program (RR) placed all parcels that contain the treatment building and groundwater collection trenches were placed on the WDNR's RR Sites Map and noted the parcels have continuing environmental obligations. The RR Sites Map is part of WDNR's web-based mapping system that provides information and notice about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin. The RR Sites Map is part of the WDNR's Contaminated Lands Environmental Action Network (CLEAN), an inter-linked network of WDNR databases tracking information on different contaminated land activities.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: N. W. Mauthe Superfund Site		
EPA ID *(from WasteLAN)*: WID083290981		
Region: 5	**State:** WI	**City/County:** Appleton/Outagamie
SITE STATUS		
NPL status: ✓**Final** Deleted Other (specify)		
Remediation status (choose all that apply): Under Construction ✓**Operating** Complete		
Multiple OUs?* YES ✓**NO**	**Construction completion date:** 03 / 27 / 1997	
Has site been put into reuse? ✓ YES **NO**		
REVIEW STATUS		
Lead agency: EPA **State** Tribe Other Federal Agency _____		
Author name: Jennifer Borski		
Author title: Hydrogeologist	**Author affiliation: WDNR**	
Review period:** 01 / 13 / 2011 to 03 / 31 / 2011		
Date(s) of site inspection: 01 / 28 / 2011		
Type of review: Post-SARA Pre-SARA NPL-Removal only Non-NPL Remedial Action Site ✓**NPL State/Tribe-lead** Regional Discretion		
Review number: 1 (first) 2 (second) ✓**3 (third)** Other (specify) _____		
Triggering action: Actual RA Onsite Construction at OU #____ Actual RA Start at OU#____ Construction Completion ✓**Previous Five-Year Review Reports** Other (specify)		
Triggering action date *(from WasteLAN)*: 04 / 26 / 2006		
Due date *(five years after triggering action date)*: 04 / 26 / 2011		

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form Continued

Issues:

No current issues were identified during the five-year review. Monitoring data show that the level of contaminants in the groundwater are declining, although at a slower rate than expected. WDNR is evaluating options to reduce the total time required to reach the groundwater cleanup goals and may propose modifications to the system. If significant modifications are needed, appropriate remedy decision documentation will be developed as appropriate. After potential modifications have been evaluated and implemented, efforts to improve long-term effectiveness of institutional controls (ICs) may be pursued.

Recommendations and Follow-up Actions:

- After potential remedy modifications are evaluated, EPA may initiate appropriate documentation of any modifications to be implemented. At that point WDNR and EPA will develop an IC Plan to address long-term effectiveness of ICs at the Site..

Protectiveness Statement:

The remedy at the N. W. Mauthe Superfund Site is currently protective of human health and the environment in the short-term based on completion of the following actions: demolition and removal of contaminated buildings; removal of containerized wastes; excavation of contaminated soils greater than 500 mg/kg of chromium; capping of remaining soils contaminated at levels below 500 mg/kg of chromium, fencing of the cap area, installation of a contaminated groundwater collection and treatment system; installation or improvement of foundation drain systems for those residents or businesses located within the groundwater contaminant plume; and cleaning, painting or sealing of affected basements to prevent future contaminated groundwater seepage into the residential buildings. Neighboring residents are connected to a public water supply and do not have wells. APR maintains and regularly observes the capped area and treatment building. As a result, exposure pathways that could result in unacceptable risks in the short term are being controlled. In addition, continuing obligations of the WDNR to maintain the cap, treatment building and collection system are recorded on the RR Sites Map on the internet providing notice to existing and future property owners of the presence of the cap, treatment building and/or collection system on the appropriate properties. The access agreements with the current property owners also help ensure that they will not disturb the portions of the collection system on their properties.

The remedy will be protective in the long-term once ICs have been upgraded. IC options include long-term environmental easements and/or other use restrictions to prevent: access to, excavation or disturbance of the constructed cap, access to remaining soil contamination, disturbance of the groundwater collection and treatment system and installation of drinking water wells. An IC Plan will be developed and will specify which ICs will be upgraded at the site.

Five-Year Review Report

I. Introduction

The Purpose of the Review

The purpose of the five-year review is to determine whether the remedy at a site is expected to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review, if any, and recommendations to address them.

The Wisconsin Department of Natural Resources (WDNR) is preparing this five-year review pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP). CERCLA §121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The Environmental Protection Agency (EPA) interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

Who Conducted the Five-Year Review

The WDNR, Northeast Region has conducted a five-year review of the remedial actions implemented at the N. W. Mauthe Superfund site in Appleton, Wisconsin. This review was conducted from January through March 2011. This report documents the results of the review.

Other Review Characteristics

This is the third statutory five-year review for the N. W. Mauthe Superfund site. The triggering action for this review is the date of the second five-year review, as shown in EPA's WasteLAN database: April 26, 2006. Five-year reviews are required for the N. W. Mauthe Superfund site due to hazardous substances, pollutants, or contaminants left onsite above levels that allow for unlimited use and unrestricted exposure.

II. Site Chronology

Table 1: Chronology of Site Events

Event	Date
Wisconsin Chromium Corp, owned by Norbert W. Mauthe, operated hard chrome plating at site.	1960 -1976
Norbert W. Mauthe owner of Wisconsin Chromium Corp	1946 - 1976
Plating facility operated electroplating of zinc and cadmium and possibly copper and silver at site	1978 – 1987
Complaint of environmental contamination received by WDNR	Mar 1982
Initial investigation by WDNR and temporary groundwater collection	Apr – May 1982
WDNR pursued Norbert W. Mauthe for remedial action at site	1982 – 1985
WDOJ initiated legal action against Norbert W. Mauthe	Oct 1982
WDNR site investigation of soil and groundwater	Nov 1982
Superfund Field Investigation Team performed site inspection	Oct 1984
Initial soil removal and liquid asphalt applied to site by WDNR	Oct 1984
Outagamie County Circuit Court ordered Norbert W. Mauthe to develop a cleanup plan for the site	1985
Norbert W. Mauthe's consultant proposed cleanup plan which was rejected by WDNR	1986
Norbert W. Mauthe's insurance carrier rejected claims for costs and remedial action	1986
Norbert W. Mauthe passed away	1986
Health reaction to exposure of contaminated soils by Sprint field worker	Aug 1987
WDOJ settled with Norbert W. Mauthe's estate	1988
EPA Technical Assistance Team conducted site assessment	June 1988
Cooperative agreement signed between EPA and WDNR for state-lead RI/FS	Sept 1988
EPA Technical Assistance Team conducted second site assessment for immediate threats	Jan 4, 1989
Site listed on NPL	Mar 1989
WDNR begins RI/FS	Sept 1989

Table 1: Chronology of Site Events

Event	Date
EPA installed fence around Mauthe property to prevent access and excavated highly contaminated soils as an emergency remedial response action	1991
WDNR installed groundwater diversion system in basement at 1414 W. Second St.	1991
RI initiated with public meeting	1991
RI complete	Feb 4, 1993
FS complete	May 1993
ROD selecting remedy signed	March 31, 1994
Site buildings removed by EPA	1995
Soil with chromium > 500 mg/kg removed and three groundwater collection trenches installed by EPA in Phase I RA	1995
Groundwater treatment building and system constructed by EPA in Phase II RA	1996
Phase I RA closure report	July 31, 1996
Groundwater treatment system start-up by CH_2MHill	Jan 14, 1997
Groundwater treatment operation by MCO	Feb 20, 1997
Phase II RA closure report	July 29, 1997
Final O&M Manual	April 29, 1997
Plans for LTRA	Sept 5, 1997
WDNR assumes management of O&M of groundwater collection trenches and groundwater treatment system and building. MCO is O&M Operator.	1998
EPA approval of reduction in groundwater monitoring program	Jan 18, 2000
Signature of first five-year review performed by WDNR (lead) & EPA	April 26, 2001
EPA approval of reduction in groundwater monitoring program	April 17, 2003
Start of WDNR contract with OMNNI Associates for *Evaluation of Collection and Treatment System and Proposal for Modifications at N. W. Mauthe Site*	Jan 26, 2005
Four deep piezometers installed by WDNR to delineate vertical extent of chromium and VOCs in groundwater	June 2005

Table 1: Chronology of Site Events

Event	Date
Direct discharge pilot study begins.	April 18, 2006
Signature of second five-year review performed by WDNR (lead) & EPA	April 26, 2006
City of Appleton Industrial User Permit No. 06-21 issued to allow direct discharge of combined influent without on-site treatment.	May 26, 2006
Five monitoring wells installed by WDNR to evaluate metals and VOCs in groundwater in the area of the former plating buildings	May 2006
Simulation of Solute Movement at a Chromium-Contaminated Site Report, OMNNI Associates, LLC	March 16, 2007
Addiitonal Site Investigation Report, OMNNI Associates, LLC	April 24, 2007
OMNNI Associates, LLC starts as O&M Operator.	October 14, 2007
Cooperative Agreement between WDNR and City of Appleton Parks and Recreation Department for use of building for a satellite work station in exchange for maintenance of grounds.	May 30, 2008
Properties with treatment building and groundwater collection trench system placed on WDNR's RR Sites Map for Continuing Obligations	April 2010
Cooperative Agreement between WDNR and City of Appleton Parks and Recreation Department renewed.	June 4, 2010

III. Background

The N. W. Mauthe site is located at 725 South Outagamie Street in Appleton, Wisconsin. (See **Figure 1 in Appendix A**.) Appleton has a population of 72,623 (2010 Census). Electroplating of chromium took place at the site from 1960 until 1976 by Norbert W. Mauthe. Mr. Mauthe then performed electroplating of zinc and cadmium and possibly copper and silver at the site from 1978 until 1987 when all operations at the site ceased. The property is currently owned by Carol Mauthe, widow of Mr. Mauthe. The site also includes adjacent areas where groundwater contamination from the plating operations has migrated.

Physical Characteristics and Land Use

The site is approximately a one-acre triangular shaped parcel. It is bound to the north by Melvin Street, to the west by a parking lot for Miller Electric and Manufacturing Company and to the southeast by Canadian National Railroad. Immediately adjacent to the railroad are three residences (801 South Outagamie Street, 1410 West Second Street and 1414 West Second Street), one business/residence (1428 West Second Street) and one business (1400 West Second Street). The surrounding area is a mix of residential/commercial. Land use at the properties immediately surrounding the site is the same as land use prior to remedial action at the site.

The Fox River is located approximately ½ mile southeast of the site. The depth to groundwater at the site ranges from 6 to 15 feet below ground surface. (See the **groundwater elevation vs. time graph** in **Appendix E**.) The City of Appleton is served by a municipal water system.

History of Contamination and Initial Response

The WDNR received a complaint of yellow-green surface water in a ditch along the railroad tracks adjacent to 725 South Outagamie Street in March 1982. The WDNR also received a complaint of yellow-green water being pumped from a residential foundation drain sump south of the site. The WDNR took immediate action in April and May 1982 by installing a shallow drain system to collect contaminated groundwater and surface water. The system operated until late 1984.

The WDNR initiated an investigation into groundwater in November 1982. The investigation confirmed that plating operations contributed metals, cyanide and Volatile Organic Compounds (VOCs) to the groundwater above WDNR standards and impacted soils above WDNR direct contact residual contaminant levels. The amount of contamination released to the environment is not known.

In October 1984, the WDNR installed a temporary asphalt cover to limit infiltration of surface water while continuing to pursue Mr. Mauthe for cleanup of the contamination. In 1985, Mr. Mauthe was ordered by the Outagamie County Circuit Court to develop a cleanup plan. The consultant for Mr. Mauthe proposed a cleanup plan in 1986, which was subsequently rejected by the WDNR. Mr. Mauthe's insurance carrier then rejected claims for costs associated with cleanup of the contamination, rendering Mr. Mauthe and his company financially unable to perform any significant cleanup work. Mr. Mauthe passed away in 1986.

In May 1987, a contractor of AT&T installed a fiber optics cable along the railroad right-of-way adjacent to the site. In August 1987, a contractor of U.S. Sprint also installed a fiber optics cable in a trench between the railroad tracks. Several workers developed skin irritation and rashes, apparently caused by contact with the water and soil in the U.S. Sprint trench. In November 1987, AT&T and U.S. Sprint installed a joint conduit system for the fiber optics cables outside of the contaminated areas. They abandoned the two initial trenches and antiseep plugs were installed.

In March 1989, the site was listed on the National Priorities List (NPL). WDNR initiated the Remedial Investigation / Feasibility Study (RI/FS) in September 1989. In November 1991, CH_2M Hill under contract with the WDNR, began the RI/FS. The RI/FS included the installation of monitoring wells, surface and subsurface soil sampling, test pit excavation, groundwater, residential sump pump and sewer water sampling, hydraulic conductivity testing, surface water sampling and videotaping of the sanitary and storm sewer lines.

In 1991, the EPA installed a fence around the site and excavated some of the highly contaminated soil adjacent to the chrome building and from a tank pit within the building as part of a time-critical removal action. EPA also steam cleaned the walls, floors and ceilings of the office areas and the floors and uninsulated portions of the zinc and chromium buildings. Miscellaneous debris was decontaminated and disposed of or placed in containers stored in the buildings onsite.

In 1991, the WDNR installed a groundwater diversion system called an Electro-Pulse Shield in the basement at 1414 West Second Street. Installation of the shield reduced seepage of contaminated water into the basement.

A final RI Report, dated February 4, 1993 and final FS Report, dated May 1993, were approved by the EPA and the WDNR in 1993. The RI found significant contamination of concern in soil and groundwater both on and off the Mauthe property. The greatest concentrations of contamination were in the area around the zinc and chromium buildings. The contaminants most often detected include total and hexavalent chromium, zinc, cadmium, cyanide, trichloroethene, 1,1,1-trichloroethane, 1,1-dichloroethene and toluene.

Basis for Taking Action

The contaminants of concern identified were generally those associated with the plating industry and include metals (cadmium, chromium, copper, mercury, manganese, and zinc), cyanide, and organic solvents (primarily 1,2, dichloroethene, 1,1,1-trichloroethane, trichloroethene, benzene, and xylene).

Subsurface soil contamination at the site was detected to a maximum depth of 25 feet. Soil contamination extended across the entire Mauthe property and south to the south side of the railroad tracks and onto property at 1414 West Second Street. Chromium was the most widely distributed contaminant.

Chromium, primarily hexavalent chromium, was found in groundwater above WDNR standards at the Mauthe property and adjacent properties. The groundwater impacts were limited to the area bounded on the north by Melvin Street, to the east by Outagamie Street, to the south by West Second Street and to the west by the parking lot for Miller Electric located just west of the Mauthe property.

Public health was threatened by the contamination through direct contact with contamination in and around the buildings on-site, and by impacted surficial soils and groundwater on and adjacent to the Mauthe property and impacted surface water on and off-site. Public health was also threatened by contamination in groundwater through seepage of water into basements and surficial discharge of water from foundation sumps. The Record of Decision (ROD) selecting a remedy was signed on March 31, 1994.

IV. Remedial Actions

Remedy Selection

Remedial Action Objectives (RAOs) and the selected remedy are outlined in the ROD, signed March 31, 1994. Details of the remedy are described in the Final Design Submittal, dated May 1995.

RAOs identified include:

- Prevent migration of contaminants in groundwater and in the long term, to remediate the groundwater to protect human health and the environment and to meet state and federal standards;
- Prevent human exposure to contaminated soils, groundwater or surface water that pose unacceptable risks.

The selected remedy includes the following activities:

- Demolition and removal of the buildings on the N. W. Mauthe property, with proper management and disposal of the building debris;
- Removal and proper disposal of the containerized waste stored onsite at the time of the ROD;
- Excavation of soils with a total chromium concentration greater than 500 milligrams per kilogram (mg/kg), removing approximately 80% of the chromium contaminant mass, including the removal of soils beneath the railroad tracks;
- Off-site treatment and proper disposal of excavated soils in excess of 500 mg/kg;
- Backfilling of the excavation with excavated soils less than 50 mg/kg and clean soils;
- Capping of the site with two feet of clay soil and topsoil with a vegetative cover;
- Installation of three groundwater collection trenches and construction and operation of a groundwater treatment facility with discharge to the sanitary sewer 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 basement walls and floors for homes or businesses in the area of the site, to prevent seepage of contaminated water into the buildings;
- ICs, such as deed restrictions or easements and site access controls that are intended to prevent access, excavation, disturbance of the newly constructed cap, future soil excavation in the railroad corridor for areas in the corridor where contaminated soils will remain and installation of drinking water wells;
- Monitoring of the effectiveness of the groundwater treatment system and groundwater quality; and
- Operation and maintenance (O&M) of all systems.

Remedy Implementation

Demolition of the site buildings and the removal and disposal of the containerized waste was accomplished in the fall of 1994 during remedial design (RD). The RD was split into two parts to allow a trench test to be completed on a portion of the groundwater collection system before design of the groundwater treatment facility. Excavation, trench installation and related activities took place in 1995 (Phase I). The treatment building and clay cap were constructed in 1996 (Phase II). The system began operation in January 1997 and has operated continuously since that time.

Phase I took place between June 9 and November 18, 1995. In July 1995, 25 monitoring wells were abandoned. MW-26R, located in the northwest corner of the Mauthe property could not be located and was assumed to have been previously abandoned.

The excavation of a "hot spot" area with soils at greater than 500 mg/kg chromium removed a majority of the contaminant source area and occurred between July and October 1995. Additional soils were excavated on and off the Mauthe property to access the soils identified for removal. Excavated soils greater than 50 mg/kg were transported off-site for proper disposal. Excavated soils less than 50 mg/kg were replaced onsite along with clean soils. Two feet of clay and a vegetative cover were installed in June 1996. The **excavation area** is shown on **Figure 2** in **Appendix A**. The APR maintains the vegetative cover over the clay cap through a **cooperative agreement** (see **Appendix H**)

The groundwater collection trench system was designed with several purposes. The west trench, located on Miller Electric property, and the southeast trench, located along Outagamie Street and West Second Street, were designed to prevent further migration of contamination by surrounding the delineated plume. The central trench, located along the south side of the railroad corridor, was designed to prevent further migration of contamination from the Mauthe property and reverse the groundwater gradient between the site and residences to the south. In addition to the collection trenches, two 33-foot deep sumps (manholes) with pumps were constructed in June and August 1995. Associated piping was installed in October 1995 to transport the collected groundwater to the treatment building.

Residential foundation drains were installed at 1410 and 1414 West Second Street in October 1995. A sealant was applied to the exteriors of the foundations. The new residential foundation drains at 1410 and 1414 West Second Street along with the existing foundation drain at 801 South Outagamie Street were connected to the southeast collection trench. The interior floors and walls of the foundations at 1410 and 1414 West Second Street and 801 South Outagamie Street were seal coated in October and November 1995.

The existing foundation drain at 1428 West Second Street was not connected to the collection trench as initially planned. This was discovered in May 2002 and the drain at 1428 West Second Street was connected to the southeast trench at that time.

Eight new monitoring wells were installed in October 1995. Four piezometers were installed within the filter material of the groundwater collection trenches to assist with evaluation of the groundwater collection. These piezometers were scheduled to be abandoned after initial system evaluation. These piezometers were abandoned by WDNR in May 2004 due to the poor condition of the wells.

Phase I of the RA is documented in the report, Phase I Remedial Action Closure Report, dated July 31, 1996. Final as-builts design documents were not submitted with the Phase I report. As-builts were received on November 6, 1996 but did not accurately reflect actual construction details. Ms. Borski spoke with Ike Johnson with CH_2MHill on January 20, 2005 and learned that final as-builts were not generated. Instead, post-construction notes were written on construction plans and submitted. This is confirmed in a letter from Cathy Barnett with CH_2M Hill dated November 1, 1996. Sheets # 3, 4, 5A, 5B, 5C (four different sheets), 5D, 7, 13, 9, 10, 11, 14 and 17 were submitted in November 1996 to document construction of Phase I. The estimated location of the **existing collection system** is shown on **Figure 2** in **Appendix A**.

Phase II of the RA took place between August 1996 to February 1997 and April 1997 to May 1997 and included construction of the treatment building and treatment system. The final landscape work took place in April 1997. The perimeter fence at the Mauthe property was also installed in April 1997. This fence is locked and provides for general security of the property, including the cap, and portions of the ground water collection system.

The asphalt drive north of the treatment building was constructed in November 1996. Phase II is documented in the report, Phase II Remedial Action Construction Documentation Report, dated July 29, 1997.

Based on existing data, the groundwater collection trench is containing the migration of groundwater contamination. (See **Figure 5, Appendix A**.) Since April 2006, the combined influent from manhole no. 1 and manhole no. 2 are directly discharged to the sanitary sewer without on-site pre-treatment under a permit. The combined influent has historically met discharge limits prior to on-site treatment from the start of the system operations, so the City of Appleton revised the discharge permit so that treatment was no longer required. There have been no additional removal actions since 1995/1996.

Additional Collection Trench Activity

Additional construction activity took place in May 2002 when the WDNR received a complaint of yellow-green water ponding in the grass at 1428 West Second Street. The RD called for connection of residential drain sumps to the groundwater collection system for 801 South Outagamie Street, 1410, 1414 and 1428 West Second Street. While post-construction reports documented that all drain sumps for the residences listed were tied to the collection system, the drain sump at 1428 West Second Street was, in fact, not tied into the collection system. WDNR contacted the railroad for permission to excavate within the right-of-way to connect 1428 West Second Street to the central collection trench, however, this access was not granted. Therefore, a lateral connection from the drain sump at 1428 West Second Street to the southeast collection trench was constructed in May 2002. The updated collection system is shown on all current site figures.

Implementation of Institutional Controls and Other Measures

Institutional Controls (ICs) are required to ensure the protectiveness of the remedy. ICs are non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with

ICs is required to assure long-term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure (UU/UE).

The ROD called for ICs, such as deed restrictions or easements and site access controls that are intended to prevent access, excavation, disturbance of the newly constructed cap, future soil excavation in the railroad corridor for areas in the corridor where contaminated soils will remain and installation of drinking water wells. WDNR is currently working with Ms. Mauthe, the site property owner, to implement an environmental easement that permanently meets the objectives called for in the ROD.

In the short term, adequate controls are in place and have been effective. All affected property owners are aware of the property use limitations imposed by the remedy. Appropriate signage is currently posted within the treatment building. All properties that contain the treatment building and groundwater collection trenches are marked on the **RR Sites Map** which is part of WDNR's web-based mapping system that provides information and notice about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin. The RR Sites Map is part of the WDNR's Contaminated Lands Environmental Action Network (CLEAN), an inter-linked network of WDNR databases tracking information on different contaminated land activities. RR Sites Map includes (but is not limited to) the following environmental data:

- completed and ongoing investigations and cleanups of contaminated soil and/or groundwater;
- public registry of sites where continuing obligations have been put in place;
- cleanup of sites under the federal Superfund (CERCLA) statute;
- liability exemptions and clarifications at contaminated properties (i.e. brownfields); and
- WDNR funding assistance.

Continuing obligations of WDNR to maintain the cap, treatment building and collection system are recorded on the RR Sites Map on the internet providing notice to existing and future property owners of the presence of the cap, treatment building and/or collection system on the appropriate properties.

Neighboring residents are required by City ordinance to be connected to a public water supply and do not have wells. APR maintains and regularly observes the capped area and treatment building under a Cooperative Agreement with WDNR, and so ensures that the integrity of the remedy is protected. The current property owners are aware that they can not disturb the portions of the collection system on their properties. Further ICs will likely be necessary, however, once the current consideration of remedy modifications is completed, to ensure the long-term protectiveness of the remedy. Those additional measures will be developed under an IC Plan.

System Operations/O&M

Monthly and annual O&M activities are performed at the treatment building and manholes. These activities are detailed in the Final O&M Manual dated April 29, 1997. In addition, existing wells are inspected annually. Monthly O&M activities are summarized in the **Routine Site Inspection** Sheet and **Operator Log Sheet** in **Appendix I**. The current **groundwater monitoring plan** is shown in **Table 2** in **Appendix B**.

Table 3 below details O&M costs for each WDNR fiscal year (July 1st through June 30th) since July 1, 2005. **Table 3** does not include WDNR salaries for oversight of the site or additional costs paid directly by WDNR (e.g. permit renewals, fourth quarter compliance sampling, utility invoices, repairs beyond the O&M contract, etc.).

Table 3: System Operations/O&M Costs

Dates		Total Cost rounded to nearest $1,000
From	To	
7/1/05	6/30/06	$36,000
7/1/06	6/30/07	$22,000
7/1/07	6/30/08	$27,000
7/1/08	6/30/09	$24,000
7/1/09	6/30/10	$23,000
7/1/10	12/31/10	$11,000

These costs include payment to the O&M contractor for routine O&M only.

V. Progress Since the Last Review

The second five-year review performed in 2006 concluded that the remedy is protective of human health and the environment. Several issues with the monitoring network, collection system and treatment system were identified with recommendations for follow up. These recommendations are detailed in **Table 4** below and include actions taken since the second five-year review report.

Table 4: Actions Taken Since the Last Five-Year Review

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
O&M	Continue O&M of groundwater collection and treatment system.	WDNR	On-going	WDNR maintained O&M contract with local consultants for continuous system operation.	Midwest Contract Operations (MCO) contract for O&M through 10/13/07. OMNNI contract for O&M 10/14/07 through 9/30/11 (one-year contract and three one-year renewals). O&M contract to be rebid for 10/1/11.

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Evaluate contaminant trends in groundwater and determine optimal monitoring well configuration and frequency of sampling for site remedy monitoring.	Prepare a trend analysis report and analysis of current monitoring network.	WDNR	None established.	1. WDNR continues to evaluate the collection and monitoring network. WDNR contracted with OMNNI Associates to conduct the evaluation. Four piezometers (PZ-5 – PZ-8) to delineate vertical extent of chromium and VOCs in groundwater were installed in June 2005. Four additional monitoring wells were installed in the source area in 2006 to delineate the horizontal extent of chromium and VOCs in groundwater and adequately monitor contamination until ARARs are met.	January 2005 to April 2007
It is unclear if ICs are in place.	1. Perform a title search to determine what ICs are currently in place. 2. Evaluate ICs identified in the ROD to determine appropriate means to adequately protect the remedy.	EPA EPA and WDNR	July 2006 October 2006	Title Search ordered in 2006 but may not have been completed; followup ongoing. 2. WDNR placed continuing obligations on RR Sites Map on internet.	April 2010
Corrosion within manhole no. 2. Presence of hydrogen sulfide.	Investigate the source of hydrogen sulfide. Identify and implement the most cost-effective option to address the corrosion within manhole no. 2 and odor issues.	WDNR	October 2006	No action taken due to insufficient funds and workload.	Issue being addressed through ongoing O&M obligations above.

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
No exit strategy exists for collection and treatment system components. . This issue does not affect the protectiveness of the remedy.	Develop an exit strategy that determines the appropriate disposition of the residential sump laterals, groundwater collection trenches, manholes, groundwater treatment facility and associated piping upon completion of the remedy.	WDNR	TBD.	Action does not impact the protectiveness of the remedy and has been suspended until completion of Wisconsin's Initiative for Sustainable Cleanups (WISC) - A Practical Guide to Green Remediation in the State of Wisconsin (WISC Guide) and N. W. Mauthe Site-Specific Sustainability Analysis (Sustainability Analysis) by AECOM under separate contract by WDNR	On-going
Alternative technologies may be available for a more cost-effective and efficient treatment process.	1. Achieve long-term approval for direct discharge to the City of Appleton POTW.	WDNR	June 2006	1. As shown in **Plot 1 in Appendix E**, historical influent hexavalent chromium concentrations were consistently well below the POTW discharge limits. A Pilot study for direct discharge to sanitary initiated. Final approval for direct discharge achieved.	April 2006 June 27, 2006
	2. Complete the system evaluation.	WDNR	April 2007	2. OMMNI's Simulation of Solute Movement at a Chromium-Contaminated Site.	March 16, 2007
	3. Review System Evaluation proposals for a more cost-effective and efficient treatment process.	EPA and WDNR	June 2007	OMNNI's Additional Site Investigation Report.	
	4. Implement amendments to the system for a more cost-effective and efficient treatment process.	WDNR	October 2008	3&4. Action suspended until completion of WISC Guide and Sustainability Analysis by AECOM under separate contract by WDNR.	April 24, 2007 July 2007 – On-going

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
Groundwater cleanup goals likely unable to be met in reasonable amount of time.	1. Identify and implement modifications to the system to increase efficiency and reduce the amount of time necessary to achieve remedial action objectives. 2. Perform evaluation of whether ACLs may be appropriate for the site conditions.	WDNR EPA and WDNR	October 2008 October 2008	1&2. Action suspended until completion of WISC Guide and Sustainability Analysis by AECOM under separate contract by WDNR.	July 2007
Monitoring network should be enhanced.	Install additional monitoring wells in former source areas to enhance the network and assist in the on-going monitoring of the contaminant plume and evaluation of the progress of the remedy.	WDNR	June 2006	Installation of monitoring wells (MW 109-MW 113) in former source areas and wells added to long-term monitoring plan.	May 26, 2006 On-going
Filtering procedures, analyzing laboratory, analytical methods and QAPP need to be clarified for consistency.	1. Identify filtering procedures with O&M contractor. 2. Identify appropriate analyzing laboratory for soil and groundwater analysis. 3. Identify appropriate analytical methods for soil and groundwater analysis. 4. Identify and implement necessary items in the QAPP critical for the on-going evaluation of the progress of the remedy.	WDNR EPA and WDNR EPA and WDNR EPA and WDNR	May 2006 June 2006 June 2006 October 2006	1. O&M contractor informed to filter total chrome and not filter hex chrome water samples. 2. According to QAPP (12/94), Sec 9, WI certified lab to be used. Pace is WI certified. 3. According to QAPP (12/94), Sec 9.1, EPA analytical methods to be used.	February 26, 2006 June 5, 2006
Changes to WDNR PALs in 2004.	Track changes to PAL standards as O&M and System Evaluation continues. Re-evaluate changes to PAL standards during the next five-year review.	WDNR WDNR	On-going April 2011	1. Reviewed current NR 140 PALs.	February 2011 April 2011 and On-going
Influent/effluent sampling points not labeled.	Label influent and effluent sampling points in the treatment building.	WDNR	June 2006	Sample point signs installed.	August 21, 2006

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
General maintenance and building upkeep.	Maintain groundwater collection system and treatment building.	WDNR	TBD. This should be evaluated during each five-year review.	1. Sample ports installed on each manhole line (#1 and #2).	June 2006
				2. Submersible pumps were installed in MW 109-MW113. MCO installed new locks on MW 109-MW 113 and piezometers PZ5-PZ8.	December 2006
				3. Influent flow meters and flow totalizers installed on each manhole line (#1 and #2) by Ogden Plumbing and OMNNI.	April 15, 2008
				4. Address numbers replaced on fencing and doors. Front and back doors replaced by La Force, Inc.	May 20, 2008
				5. Keller, Inc. repaired gutters and replaced snow guards.	July 10, 2008
				6. Exterior overhead doors newly painted.	August 21, 2008
				7. La Force, Inc. replaced front and back lock cylinders.	November 4 and 7, 2008
				8. Ogden Plumbing and Town and Country Electric retrofitted Manhole #1 and #2's piping and electrical components.	November 24-26, 2008
				9. Dampers fixed and two exit signs replaced.	November 26, 2008
				10. Bracket replacement on overhead truck door.	August 12, 2009
				11. Ogden Plumbing replaced the water valve in the truck bay.	November 2, 2009
				12. Ogden Plumbing replaced four cracked heating units in treatment building.	November 11-12, 2009
				13. The flow totalizer for Manhole #2 was reassembled and fixed	August 4, 2010

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
General Maintenance and Building Upkeep.	Maintain groundwater collection system and treatment building.	WDNR	TBD. This should be evaluated during each five-year review.	14. Ogden Plumbing replaced two cracked heating units in truck bay.	Ongoing
Update Access Agreements.	Access agreements will expire and property turnover will occur. Maintain access and pursue long-term easements with property owners.	WDNR	None established	Access agreements updated.	January 2011

VI. Five-Year Review Process

Administrative Components

Jennifer Borski of WDNR and David Seely, Remedial Project Manager (RPM), of EPA met at the site on January 28, 2011 to discuss the status of the site and process and time schedule for the second five-year review. Brian Wayner, Environmental Engineer with OMNNI Associates and O&M contractor also participated in the site inspection to discuss system issues.

Ms. Borski discussed the community involvement appropriate for the third five-year review with Mr. Seely on January 28, 2011. Ms. Borski also consulted with Kurt Eggebrecht and Tim Mirkes of the City of Appleton Health Department, Alderperson Peter Stueck and Rob Thiboldeaux of Wisconsin Department of Health Services (WDHS).

Community Notification and Involvement

A press release regarding the start of the third five-year review was issued to the Appleton Post Crescent by WDNR on January 20, 2011. The press release appeared on the WDNR website on January 20, 2011. Ms. Borski updated the fact sheet titled *N W Mauthe Superfund Site, 725 South Outagamie Street, Appleton, WI* in January 2011 for distribution to adjacent property owners and persons interested in the status of the site. On January 27, 2011, the fact sheet was sent along with a letter to owners of property on which the groundwater collection system is constructed to inform them of the start of the five-year review process (715, 725 and 801 South Outagamie Street, 1400, 1410, 1414 and 1428 West Second Street and Miller Electric regarding 1515 West Melvin Street). An electronic mail message was also sent to the Wisconsin Department of Health Services (WDHS), City of Appleton Health Department, City of Appleton Parks and Recreation (APR) Department, and the local Alderman.

On January 31, 2011, at the request of Mr. David Seely, EPA RPM, a separate letter and fact sheet were sent to nearby property owners and occupants of 1354, 1357, 1407, 1407.5 and 1417 West Second Street and 901 South Outagamie Street to inform the immediate community of the start of the five-year review process. Mayor Tim Hanna of the City of Appleton was also

notified electronically on January 31, 2011.

The property owner at 1410 West Second Street contacted Ms. Borski and was previously unaware of the presence of the site or that his foundation drained passively to the collection system. The owner apparently purchased the property at auction after foreclosure. The property owner at 715 South Outagamie Street contacted Ms. Borski and was also previously unaware of the presence of the site or a monitoring well on his property. Ms. Borski updated both access agreements.

Document Review

Ms. Borski performed review of documents listed in **Appendix D** during January through March 2011 along with ch. NR 140, Wis. Adm. Code for current groundwater cleanup standards.

Data Review

The original groundwater monitoring plan is outlined in the Field Sampling Plan (FSP) within the *Site-Specific Plans for N. W. Mauthe Long Term Response Action*, (LTRA Plans) dated September 5, 1997. The LTRA Plans call for quarterly sampling at all wells and analysis of groundwater for cadmium, chromium, cyanide, copper, mercury, manganese, zinc and VOCs. The sample collection procedures called for VOCs to be unfiltered and metals filtered during collection of groundwater. Monitoring wells referenced in the LTRA Plans include W-2, W-8, W-15, MW-101, MW-102, MW-103, MW-104, MW-105, MW-106, MW-107 and MW-108. These wells are located both upgradient and downgradient of the groundwater collection system as well as within the area where contaminated groundwater flow is being contained.

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:

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.

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

4. Elimination of quarterly cadmium sampling at all site wells;
5. 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;
6. 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.
7. 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.

In June 2005, WDNR installed four piezometers within the groundwater containment area (PZ-5 and PZ-6 in the fomer source areas; and PZ-7 and PZ-8 in the adjacent residential/commercial area south of the railroad tracks) to evaluate the potential veritical migration of groundwater contamination. Groundwater samples were taken from these piezometers and analyzed for

chromium and samples taken from PZ-5 and PZ-6 were also analyzed for VOCs. These samples did not have any detections above ARARs indicating that the groundwater contamination was not migrating vertically. WDNR continues to monitor water levels annually.

In May 2006, WDNR installed five monitoring wells (MW-109, MW-110, MW-111, MW-112 and MW-113) in the source area on the Mauthe property and analyzed for cadmium, chromium, hexavalent chromium, copper, cyanide, manganese, mercury, zinc and VOCs. WDNR continues to monitor all wells for chromium and VOCs semi-annually and manganese every four years. WDNR also monitors MW-110 and MW-112 semi-annually and MW-111 annually for cyanide.

With the approved monitoring reductions, and installation of the four piezometers and five monitoring wells, the current monitoring plan consists of the following:

- Recording of pH, temperature, specific conductivity, dissolved oxygen, redox potential and ferrous iron at all monitoring wells;
- Recording of water level measurements at all monitoring wells and piezometers;
- Analysis for total dissolved chromium semi-annually at MW-103, MW-104, MW-107 and MW-110 through MW-113, annually at MW-101 and MW-102 and every four years at W-2, W-8, W-15, MW-105, MW-106 and MW-108;
- Analysis for manganese every four years at all monitoring wells;
- Analysis for cyanide semi-annually at MW-110 and MW-112 and annually at MW-111;
- Analysis for VOCs semi-annually at MW-107 and MW-109 through MW-113.

The current **long-term monitoring plan** is detailed in **Table 2 in Appendix B**.

Historical groundwater data from the RI was reviewed and compared with post remedy groundwater data from 1997 through March 2010 and is summarized below. All wells included in the LTRA Plans for sampling are present and in good condition. **Appendix E** provides a series of graphs showing the progress of the groundwater cleanup for various monitoring locations.

Cadmium, copper, mercury and zinc are not present above 1992 State Preventative Action Limit (PALs) of 1 µg /L, 500 µg /L, 0.2 µg /L and 2,500 µg /L respectively, in any well and sampling for these parameters was discontinued as detailed above. Manganese is consistently present above the PAL at W-15, MW-105, MW-110 and MW-112 and intermittently at MW-101, MW-102, MW-103, MW-106, MW-108, MW-109, MW-111 and MW-113. It does not appear that the presence of manganese is related to contamination from plating operations, therefore, it is monitored every four years to assist in evaluation of the geochemistry of the site.

Cyanide was not detected above the 1992 PAL (40 µg /L) in any of the wells included in the original monitoring plan. Therefore, sampling for cyanide was discontinued as detailed above. However after installation of five new monitoring wells within the source area on the Mauthe property, cyanide was detected in wells, MW-110, MW-111 and MW-112. Therefore, sampling for cyanide at these three locations was added back into the monitoring plan.

Chromium is sampled every four years at W-2, W-8, W-15, MW-105, MW-106 and MW-108 where chromium has been below the 1992 PAL (5 µg /L) for more than five years and wells are located outside the collection trench areas. Chromium is sampled annually MW-101, MW-102 where chromium has been below the 1992 PAL for more than five years but the wells are located inside the collection trench areas. Chromium is sampled semi-annually at MW-103,

MW-104, MW-107, MW-109, MW-110, MW-111, MW-112 and MW-113 where chromium is present above the 1992 PAL. Analysis of hexavalent chromium began in December 2003 to determine the percentage of hexavalent chromium present. It appears that all chromium present in groundwater is in the hexavalent state. Therefore, hexavalent chromium analysis in monitoring wells was discontinued after September 2006 as a cost savings measure.

Total dissolved chromium (chromium) in MW-103 ranged from 6.3 to 720 micrograms per liter (µg/L) between 1998 and 2001, from 1.2 to 350 µg/L between 2002 and 2006 and from 16.4 to 380 µg/L between 2007 and 2010 A **concentration versus time graph for chromium** at MW-103 is included in **Appendix E**.

Chromium at MW-104 generally increased over time through 2004, with one outlier result of 1,200 µg/L in September 2003, and then decreased and remained relatively stable. Chromium ranged from 62 to 840 µg/L between 1998 and 2001, from 2.8 to 790 µg/L between 2002 and 2006 (with the one outlier of 1,200 µg/L) and ranged from 1.3 to 719 µg/L between 2007 and 2010. A **concentration versus time graph for chromium** at MW-104 is included in **Appendix E.**

Chromium at MW-107 has generally been stable over the past five years. Since 1998, with the exception of a spike in concentration in 2000, chromium has been decreasing. Chromium ranged from 3,200 to 11,200 µg/L between 1998 and 2001, from 2,400 to 7,000 µg/L between 2002 and 2006, and from 2,000 to 4,410 µg/L between 2007 and 2010. A **concentration versus time graph for chromium** at MW-107 is included in **Appendix E**.

OMNNI installed five source-area wells in May 2006 (MW-109 through MW-113) and found significantly higher concentrations of chromium at MW-110, MW-112 and MW-113, located within the former plating buildings:

- MW-109 is located between former MW-26R in the northwest corner of the Mauthe property where chromium was present at 150,000 µg/L and former MW-25R on the west side of the Mauthe property where chromium was present at 124,000 µg/L in May 1992. Chromium ranged from 450 to 2,700 µg/L at MW-109 between 2006 and 2010;
- MW-110 is located at former MW-17 between the former zinc plating building and the former chrome plating building where chromium was present at 73,300 µg/L in May 1992. Chromium ranged from 3,200 to 51,000 µg/L at MW-110 between 2006 and 2010;
- MW-111 is located in the northeast corner of the Mauthe property, west of former MW-13R, where chromium was present at 18,600 µg/L in May 1992. Chromium ranged from 6.7 to 2,300 µg/L at MW-111 between 2006 and 2010;
- MW-112 is located within the former zinc plating building in the location of the collection pit where chromium was present in soil at 15,000 mg/kg, zinc at 14,900 mg/kg, cadmium at 3,660 mg/kg and cyanide at 2,960 mg/kg in January 1992. **Chromium ranged from 7,150 to 150,000 µg/L at MW-112 between 2006 and 2010**;
- MW-113 is located at former MW-15 at the southeast corner of the former chrome plating building where chromium was present at 860,000 µg/L in February 1992 and 789,000 µg/L in May 1992. Chromium ranged from 11,000 to 55,000 µg/L at MW-113 between 2006 and 2010.

Historic Figure 1 from the RI/FS reports is included in **Appendix A** for reference to former well locations. A chromium iso-concentration map for March 2010 is shown on **Figure 5 in Appendix A**. **Concentration versus time graphs for chromium** at MW-109 through MW-113

are included in **Appendix E**.

MW-109 through MW-113 were initially analyzed for cadmium, copper, cyanide, manganese, mercury and zinc in addition to chromium in 2006. Cadmium and mercury were not detected in any well. Copper was detected at all wells at very low concentrations, well below the 1992 PAL. Manganese was detected at all wells above the 1992 PAL and appears to be indicative of background concentrations. Zinc was not detected in any well with the exception of the initial event at MW-112 in June 2006, which was well above the 1992 PAL. Subsequent sampling confirmed zinc is not present above the1992 PAL. The concentration of zinc detected in the initial event at MW-112 following construction and well development is attributed to turbidity. As a result, analysis of cadmium, copper, mercury and zinc has been discontinued. Manganese continues to be analyzed every four years but it is not believed to be associated with the site contamination.

Cyanide was detected below the 1992 PAL at MW-109 and MW-113 and has been discontinued. Cyanide was detected below the 1992 PAL (40 ug/l) at MW-111 but is continued to be analyzed annually since its concentration (27 ug/l) was greater than ½ of the PAL. Since 2007, the concentration has consistently been below ½ of the PAL and it may be appropriate to consider discontinuing analysis of cyanide at MW-111. Cyanide was detected above the 1992 PAL at MW-110 and MW-112 and continues to be analyzed semi-annually. Cyanide ranged from 6.6 to 79 µg/L at MW-110 and from 35 to 450 µg/L at MW-112 between 2006 and 2010.

VOCs are no longer sampled at W-2, W-8, W-15, MW-101, MW-102, MW-103, MW-104, MW-105, MW-106 and MW-108 since they were not detected or were consistently well below the PALs. VOCs remain in groundwater at MW-107, which is located in a source area, and their concentrations were relatively stable from 1997 through 2010. VOCs detected at MW-107 include 1,1-dichroloethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane and trichloroethene. A **concentration versus time graph for VOCs** at MW-107 is included in **Appendix E**.

MW-109 through MW-113 were installed in the former source areas on the Mauthe property were initially analyzed for VOCs in 2006. VOCs routinely detected above 1992 PALs include: 1,1-dichloroethene, 1,1,2-trichloroethane and trichloroethane at MW-109, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, 1,1,1-trichloroethane and trichloroethene at MW-110, 1,1-dichloroethene, 1,1,1-trichloroethane and trichloroethene at MW-111, trichloroethene at MW-112 and 1,1-dichloroethene, 1,1,1-trichloroethane and trichloroethene at MW-113. VOCs are analyzed semi-annually at MW-109 through MW-113. **Concentration versus time graphs for VOCs** at MW-110 and MW-113 are included in **Appendix E.**

Evaluation of the historical groundwater data provided in the RI report and the latest Operation and Maintenance Report reveals the existing network is currently adequate to delineate the horizontal extent of the contaminant plume. Groundwater data from 1997 through 2010 for metals and VOCs is shown in **Tables 5 and 6** in **Appendix B**.

Table 7 compares maximum historic concentrations prior to cleanup action, concentrations following the remedy in May 1997, concentrations in December 2005 after eight years of system operation, concentrations in March 2010 after installation of wells in the source area and the current cleanup goals. Based on the data provided in the table, it appears the excavation significantly reduced contaminant concentrations in groundwater. However, continued operation of the system does not appear to have produced substantial continued reduction of

contaminant concentrations. It should be noted that the table includes data from the newly installed wells within the former source areas and these wells represent the significant increase of the maximum concentrations detected in March 2010.

Table 7: Maximum Contaminant Concentrations in Groundwater and Groundwater Cleanup Goals (units in µg/L)

Contaminant	Maximum concentration according to FS report, May 1993	Maximum concentration in May 1997	Maximum concentration in Dec 2005	Maximum concentration in March 2010	Current Cleanup Goal (1992 WDNR PAL)
Chromium[1]	860,000	3,600	2,400	31,300	5
Cyanide[2]	?	<0.78	Not analyzed	110	40
1,1-dichloroethane[3]	?	36	42	159	85
1,1-dichloroethene[4]	190	40	26	169	0.7
Cis-1,2-dichloroethene[5]	?	3.1	< 4.1	47.3	10
1,1,1-trichloroethane[6]	2,100	390	250	718	40
Trichloroethene[7]	1,800	420	490	556	0.18

[1] FS report chromium data is from MW-15. May 1997 and Dec 2005 chromium data is from MW-107 as no well was located at former MW-15 during that time. March 2010 chromium data is from MW-113, located at former MW-15.
[2] May 1997 cyanide data was from W-15. March 2010 cyanide data is from MW-112.
[3] Dec 2005 1,1-dichloroethane data is from MW-107. March 2010 1,1-dichloroethane data is from MW-110.
[4] Dec 2005 1,1-dichloroethene data is from MW-107. March 2010 1,1-dichloroethene data is from MW-110.
[5] Dec 2005 cis-1,2-dichloroethene data is from MW-107. March 2010 cis-1,2-dichloroethene data is from MW-110.
[6] Dec 2005 1,1,1-trichloroethane data is from MW-107. March 2010 1,1,1-trichloroethane data is from MW-110.
[7] Dec 2005 trichloroethene data is from MW-107. March 2010 trichloroethene data is from MW-112.

In 2006, approval to discharge collected groundwater directly to the Publicly Owned Treatment Works (POTW) was granted. Ongoing chromium monitoring of the groundwater influent an discharge (as shown in **Table 9** of **Appendix B**) shows that the chromium concentrations have remain well within the POTW discharge limitations. Therefore, treatment of the collected contaminated groundwater remains unnecessary prior to discharging to the POTW.

Site Inspection

Ms. Borski performed a site inspection on January 28, 2011. Mr. Brian Wayner, O&M Operator, and Mr. David Seely, EPA RPM, accompanied Ms. Borski. The **Site Inspection Checklist** is included in **Appendix F**. The inspection included a walk-through of the treatment building, opening the covers to manhole no. 1 and manhole no. 2 and walking along the sidewalk in front of the following properties to observe the condition of each property: 725 and 801 South Outagamie Street, 1400, 1410, 1414 and 1428 West Second Street.

While the condition of the vegetative cover at the site was not visible on January 28, 2011 due to snow cover, Ms. Borski observed in multiple site visits in the summer of 2010 that the

vegetative cap is in good condition and being maintained by APR under the Cooperative Agreement, discussed above. Generally, the treatment building is in good condition. The treatment building is locked when the O&M Operator or APR staff are not on site. Mr. Wayner and Ms. Borski have keys to the treatment building along with APR Department Director and the lead APR staff at the satellite office

Interviews

The following people were interviewed during the five-year review process:

- Brian Wayner, OMNNI Associates – O&M Operator
- Oscar Rodriguez – Private Resident at 1410 West Second Street
- Carol Mauthe – Owner of Source Property at 725 South Outagamie Street
- Bill Lecker, City of Appleton – Director of Parks and Recreation Department
- Tim McGuire, City of Appleton – Park Foreman
- Rick Drewa – Owner of 715 South Outagamie Street
- Kurt Eggebrecht, City of Appleton –Health Officer
- Tim Mirkes, City of Appleton – Health Sanitarian
- David Lease, Miller Electric – Facilities Manager

Interview records are included in **Appendix G**.

On January 18, 2011, Ms. Borski interviewed Brian Wayner with OMNNI by phone. Mr. Wayner worked on the System Evaluation from 2005 through 2007 and has been the O&M Operator from October 2007 to present. Mr. Wayner indicated that the maintenance requirements of the building are increasing due to its age. Mr. Wayner also indicated that the pumps in both Manhole No 1 and Manhole No 2 would likely need replacement within the next five years. Also if an exceedance of the discharge permit limitations were verified, the treatment system could not be restarted immediately.

On February 1, 2011, Ms. Borski interviewed Oscar Rodriguez, owner and occupant of 1410 West Second Street, by phone. A portion of the south collection trench is located on his property and the residential drain tile is passively tied into the collection system. Mr. Rodriguez purchased the home in approximately June 2009 and was not aware of the site, located adjacent to his property, or the presence of the south collection trench or drain tile situation. Mr. Rodriguez stated he purchased the property from a Realtor that believes the previous owner lost the property to foreclosure.

On February 1, 2011, Ms. Borski interviewed Carol Mauthe, owner of the site, by phone. Ms. Mauthe is pleased with the appearance of the property and Cooperative Agreement with APR. Ms. Mauthe stated she would consider a long-term environmental easement to the property but also expressed interest in selling the property for profit. Ms. Borski recommended follow-up with a face-to-face meeting.

On February 2, 2011, Ms. Borski interviewed Bill Lecker and Tim McGuire with APR in regard to the **Cooperative Agreement** established in 2008 and renewed in 2010 (see **Appendix H**). APR expressed interest in establishing a new Cooperative Agreement when the current one expires in May 2012.

On February 9, 2011, Ms. Borski interviewed Rick Drewa of Options in Housing, LLC, owner of

715 South Outagamie Street, by phone. Well W-2 is located on his property. Mr. Drewa purchased the property and was not aware of the site, located across Melvin Street from his property, or the presence of well W-2 on his property. He is now aware that the well must not be disturbed and a new access agreement was developed.

On February 14, 2011, Ms. Borski interviewed Kurt Eggebrecht, City Health Officer with the City of Appleton, and Tim Mirkes, Sanitarian, at their office. Mr. Eggebrecht is not aware of any complaints to his office in regard to this site in the past five years. One potential purchaser contacted the Health Department in regard to 1400 West Second Street. The Health Department referred the potential purchaser to Ms. Borski. After speaking with Ms. Borski about the site and location of the south collection trench, W-15 and MW-106, the potential purchaser bought the property.

On February 14, 2011, Ms. Borski interviewed Carol Mauthe and her son, Mark Mauthe, at the Appleton Health Department. Mr. Eggebrecht and Mr. Mirkes also attended. The Mauthes stated that they were not aware EPA did not remove all contamination from the property and were not aware of the conclusions of OMNNI's 2007 System Evaluation. On February 25, 2011, Mark Mauthe provided verbal permission for Ms. Borski to move forward with drafting a long-term environmental easement.

On March 30, 2011, Ms. Borski interviewed David Lease, Facility Manager for Miller Electric, regarding their property at 1515 West Melvin Street. The west collection trench, manhole no. 1 and MW-101, PZ-6, MW-107 and MW-108 are located on Miller Electric property. Mr. Lease stated there are no concerns at this time. Ms. Borski communicated that cigarette butts were found adjacent to manhole no. 1 during the site inspection in January 2011. Mr. Lease will follow-up internally with this complaint.

Conclusions

The site inspection reveals that the fence and vegetative cover are adequately protecting the clay cap at the site. The covers to manhole nos. 1 and 2 are secure. The treatment building is secure and in good condition. The treatment system is no longer utilized and the combined influent from manhole no. 1 and manhole no. 2 is discharged directly to the sanitary sewer under a wastewater discharge permit and should be continued. The Cooperative Agreement with APR should be continued. WDNR and OMNNI Associates should continue to pursue options to increase the efficiency of the collection and treatment system. Once the pending evaluation of remedy optimization measures is completed and any changes to the nature and scope of the needed use limitations are defined, any necessary long-term environmental easements and/or other use restrictions should be pursued with current property owners to assure the long-term effectiveness of the restrictions called for in the ROD.

VII. Technical Assessment

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

Yes.

Based on the existing data, the remedy is functioning as intended by the decision documents.

Remedial Action Performance

The collection trenches appear to be containing the plume. The residential foundation drain laterals are effectively keeping contaminated water from seeping into basements. The discharge permit was modified to allow the collected groundwater to be discharged directly to the Appleton POTW. Although the treatment system is no longer utilized, the treatment building and piping infrastructure is utilized for combining the effluent prior to discharge to the POTW in compliance with the wastewater discharge permit. A clay cap is in place to prevent direct contact with remaining soil contamination and a fence is in place to protect the cap. Progress toward achieving the required cleanup levels has been slower than expected. The groundwater collection system continues to be evaluated by WDNR and modifications may be proposed to allow for a more efficient and timely cleanup. Cleanup goals are discussed under Question B below.

System Operations/O&M

The existing collection system is being effectively operated and maintained. The treatment system is no longer utilized as the collected water is now discharged to the POTW. Continuous operation of the system is effectively containing the contamination.

Opportunities for Optimization

Opportunities exist to enhance the system performance and reduce long term costs for monitoring, sampling and operation of the collection system and treatment building. Alternative options for a more cost effective and timely cleanup of remaining contamination are being evaluated by WDNR.

Early Indicators of Potential Problems

There are no indicators that the system is failing to contain the contamination. Continued containment of the contamination is expected as long as the system is adequately maintained. However the progress toward ultimate cleanup of the groundwater has been slow. WDNR is evaluating options to more effectively cleanup the groundwater in a timely manner.

Once the pending evaluation of remedy optimization measures is completed and any changes to the nature and scope of the needed use limitations are defined, any necessary ICs such as long-term environmental easements and/or other use restrictions should be pursued with current property owners to assure the long-term effectiveness of the restrictions called for in the ROD.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Yes.

Exposure Assumptions

Land use at and near the site is a mix of residential, commercial and light industrial. Land use and site conditions at and near the site are not expected to change. No new human health or ecological routes of exposure or receptors have been identified since the ROD. There are no new contaminants or unanticipated toxic byproducts identified since the ROD.

Toxicity Data

The ROD identified chromium concentrations in soil that would result in a hazard index (HI) of one for current exposure scenarios. Chromium concentrations in soil of 570 mg/kg and 780 mg/kg resulted in a HI of one for dermal contact and ingestion pathways respectively. EPA addressed soils that exceeded the HI of one by removing soils with chromium greater than 500 mg/kg.

The ROD identified chromium concentrations of 5,000 micrograms per liter (µg/L) in groundwater that represent a HI of one for occupational dermal exposure. In the past five years, chromium has exceeded 5,000 µg/L in the newly installed wells within the former source area on the Mauthe property at MW-110, MW-112 and MW-113.

Cleanup Levels

The long term RAO for the N.W. Mauthe site is to reduce the contaminant concentrations in groundwater to meet state and/or federal groundwater quality standards, whichever are more stringent. The WDNR PALs outlined in ch. NR 140, Wis. Adm. Code are the more stringent standard for each contaminant of concern. PAL standards for eight of the initial contaminants of concern were updated in February 2004 and three were again updated in January 2011 and are outlined in **Table 8**.

Table 8: Changes in Chemical-Specific Groundwater Standards (units in µg/L)

Contaminant	Cleanup Level	WDNR PAL		WDNR ES		EPA MCL	
Cadmium[3, 5]	1	Previous[1]	1	Previous[1]	10	Previous[6]	5
		New[2]	0.5	New[2]	5	New[7]	No change
Chromium	5	Previous[1]	5	Previous[1]	50	Previous[6]	100
		New[2]	10	New[2]	100	New[7]	No change
Copper[4]	500	Previous[1]	500	Previous[1]	1,000	Previous[6]	None established
		New[2]	130	New[2]	1,300	New[7, 8]	1,300
Manganese	25	Previous[1]	25	Previous[1]	50	Previous[6]	None established
		New[2]	No change	New[2]	No change	New[7, 8]	50
		New[9]	60	New[9]	300		
Benzene[5]	0.067	Previous[1]	0.067	Previous[1]	5	Previous[6]	5
		New[2]	0.5	New[2]	No change	New[7]	No change
1,1-dichloroethene	0.24	Previous[1]	0.024	Previous[1]	7	Previous[6]	7
		New[2]	0.7	New[2]	No change	New[7]	No change
Cis-1,2-dichloroethene	10	Previous[1]	10	Previous[1]	100	Previous[6]	70
		New[2]	7	New[2]	70	New[7]	No change
Toluene[5]	68.6	Previous[1]	68.6	Previous[1]	343	Previous[6]	1,000
		New[2]	200	New[2]	1,000	New[7]	No change
		New[9]	160	New[9]	800		
Trichloroethene	0.18	Previous[1]	0.18	Previous[1]	5	Previous[6]	5
		New[2]	0.5	New[2]	No change	New[7]	No change
1,1,2-Trichloroethane	0.06	Previous[1]	0.06	Previous[1]	0.6	Previous[6]	5
		New[2]	0.5	New[2]	5	New[7]	No change
Xylene[5]	124	Previous[1]	124	Previous[1]	620	Previous[6]	10,000
		New[2]	1,000	New[2]	10,000	New[7]	No change
		New[9]	400	New[9]	2,000		

[1] Ch. NR 140.10, Wis. Adm. Code, Jan 1992
[2] Ch. NR 140, Wis. Adm. Code, Feb 2004
[3] Removed from sampling schedule by approval from EPA on April 17, 2003
[4] Removed from sampling schedule by approval from EPA on Jan 18, 2000
[5] Not detected during five-year review period.
6 40 CFR 141.61 & 141.62, Sept 1992
7 40 CFR 141.61 & 141.62, July 2002
8 EPA Secondary Public Health Goal
9 Ch. NR 140, Wis. Adm. Code, January 2011

Standards for three contaminants decreased from 1992 to 2004: cadmium, copper, and cis-1-2-dichloroethene. Cadmium was removed from the monitoring schedule with approval from EPA on April 17, 2003 because cadmium levels had been below the PAL at all monitoring points. While the PAL for cadmium decreased from 1 µg /L in 1992 to 0.5 µg /L in 2004, historic cadmium levels had not been above the 2004 PAL. Cadmium was also not detected at MW-109 through MW-113. Therefore, sampling for cadmium does not need to be resumed.

Copper was removed from the monitoring schedule with approval from EPA on January 18, 2000 due because copper levels had been below the PAL at all monitoring points. While the PAL for copper decreased from 500 µg /L in 1992 to 130 µg /L in 2004, historic copper concentrations were not above the 2004 PAL. Copper was also not above the 1992 PAL or

2004 PAL at MW-109 through MW-113. Therefore, sampling for copper does not need to be resumed.

The PAL for cis-1,2-dichloroethene decreased from 10 µg /L in 1992 to 7 µg /L in 2004. Cis-1,2-dichloroethene is currently monitored at all on-site wells.

The PALs for benzene, toluene and xylene increased from 1992 to 2004 and the PALs for toluene and xylene were then decreased in 2011 to below the 2004 PALs but above the 1992 PALs. However, benzene, toluene and xylene are no longer detected in monitoring wells for the site. Consideration of changes to the PALs from 1992 to 2004 to 2011 is not necessary at this time.

Chromium, trichloroethene and 1,1,2-trichloroethane PALs increased from 1992 to 2004. Since a minimal reduction to post-excavation groundwater concentrations has been observed since 1997, consideration of the change in standards does not need to be evaluated at this time. More importantly is an evaluation as to whether the PALs will be met within a reasonable amount of time under the existing remedy design or if alternative standards should be considered.

Remedial Action Objectives

RAOs in the ROD are "to prevent direct contact or ingestion of ponded water, groundwater or soils or debris with contaminants producing a total excess cancer risk greater than 1×10^{-6}, or a HI level that exceeds one and to prevent the discharge of water that exceeds state or federal surface water criteria to local storm sewers which would ultimately discharge to the Fox River." This RAO is still valid.

Another objective for groundwater "is to protect the underlying bedrock aquifer and contain and/or control the further migration of contaminants. The long term remedial objective for the N.W. Mauthe site is to reduce the contaminant concentration in groundwater to meet state and/or federal groundwater quality standards, whichever are more stringent." The ROD goes on to state that if it is determined that "it is not possible… to achieve the groundwater standards or to achieve further reductions, then" alternative options exist. Those options include "establishing Alternative Concentration Limits (ACL) under the substantive requirements of NR 140.28, Wis. Adm. Code which can be no higher than the enforcement standard (ES)" or pursuit of a "technical impractibility waiver under Section 121(d) of CERCLA, which may be used to set an alternative groundwater goal higher than the ES or establish other approaches to groundwater containment or remediation that are protective of human health and the environment." The objective to protect the underlying bedrock aquifer and contain further migration is still valid. However, it appears that it may not be possible to achieve the groundwater standards for each contaminant of concern, within a reasonable amount of time. As a result, the alternative options presented should be pursued. These options are being evaluated by WDNR. Any recommendations will be discussed with EPA to determine if ESDs or amendments to the ROD are appropriate to proceed with expediting the cleanup.

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

No.

Technical Assessment Summary

According to the data reviewed, the site inspection, and the interviews, the remedy is functioning as intended by the ROD. The horizontal and vertical migration of the contaminated groundwater has been prevented by the groundwater collection system. Influent concentrations do not require on-site treatment prior to discharge to the local POTW. Additionally, there have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. All RAOs are still valid.

VIII. Issues

The protectiveness of the remedy relies upon preventing the migration of the contaminated groundwater through collection and treatment. Monitoring data indicate that the migration of the contaminated groundwater is being adequately controlled. Additionally, since the levels of contamination in the collected groundwater were shown to be consistently below those levels required for discharge to the POTW, on-site treatment of the collected contaminated groundwater is no longer required. However, implementation of ICs on the site property is necessary to meet the long-term restrictions called for in the ROD.

Issue	Currently Affects Protectiveness	Affects Future Protectiveness
ICs need to be upgraded on the site property	No	Yes

Monitoring data also show that the level of contaminants in the groundwater are declining. However the progress toward ultimate cleanup of the groundwater has been slow. WDNR is evaluating options to reduce the total time required to reach the groundwater cleanup goals and may propose modifications to the system. If significant modifications are needed, appropriate remedy decision documentation will be developed as appropriate.

IX. Recommendations and Follow-up Actions

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
					Current	Future
ICs need to be upgraded on the site property	Develop and an IC Plan to evaluate proper types and locations of enforceable use restrictions on site property	WDNR	U.S.EPA	October 31, 2011.	N	Y

X. Protectiveness Statement

The remedy at the N. W. Mauthe Superfund Site is currently protective of human health and the environment in the short-term based on completion of the following actions: demolition and removal of contaminated buildings; removal of containerized wastes; excavation of contaminated soils greater than 500 mg/kg of chromium; capping of remaining soils contaminated at levels below 500 mg/kg of chromium, fencing of the cap area, installation of a contaminated groundwater collection and treatment system; installation or improvement of foundation drain systems for those residents or businesses located within the groundwater contaminant plume; and cleaning, painting or sealing of affected basements to prevent future contaminated groundwater seepage into the residential buildings. Neighboring residents are connected to a public water supply and do not have wells. APR maintains and regularly observes the capped area and treatment building. As a result, exposure pathways that could result in unacceptable risks in the short term are being controlled. In addition, continuing obligations of the WDNR to maintain the cap, treatment building and collection system are recorded on the RR Sites Map on the internet providing notice to existing and future property owners of the presence of the cap, treatment building and/or collection system on the appropriate properties. The access agreements with the current property owners also help ensure that they will not disturb the portions of the collection system on their properties.

The remedy will be protective in the long-term once institutional controls (ICs) have been upgraded. IC options include long-term environmental easements and/or other use restrictions to prevent: access to, excavation or disturbance of the constructed cap, access to remaining soil contamination, disturbance of the groundwater collection and treatment system and installation of drinking water wells. An IC Plan will be developed and will specify which ICs will be upgraded at the site.

XI. Next Review

The next five-year review is due within five years of the signature date of this report.

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Appendix A – Site Maps

Figure 1 – Site Location
Figure 2 – Site Detail
Figure 3 – Groundwater Elevation Contours, March 17, 2010
Figure 4 – Piezometric Groundwater Elevation Contours, March 17, 2010
Figure 5 – Iso-concentration Map, Total Chromium in Groundwater, March 17, 2010
Historic Figure 1 – Site Detail from RI/FS Report

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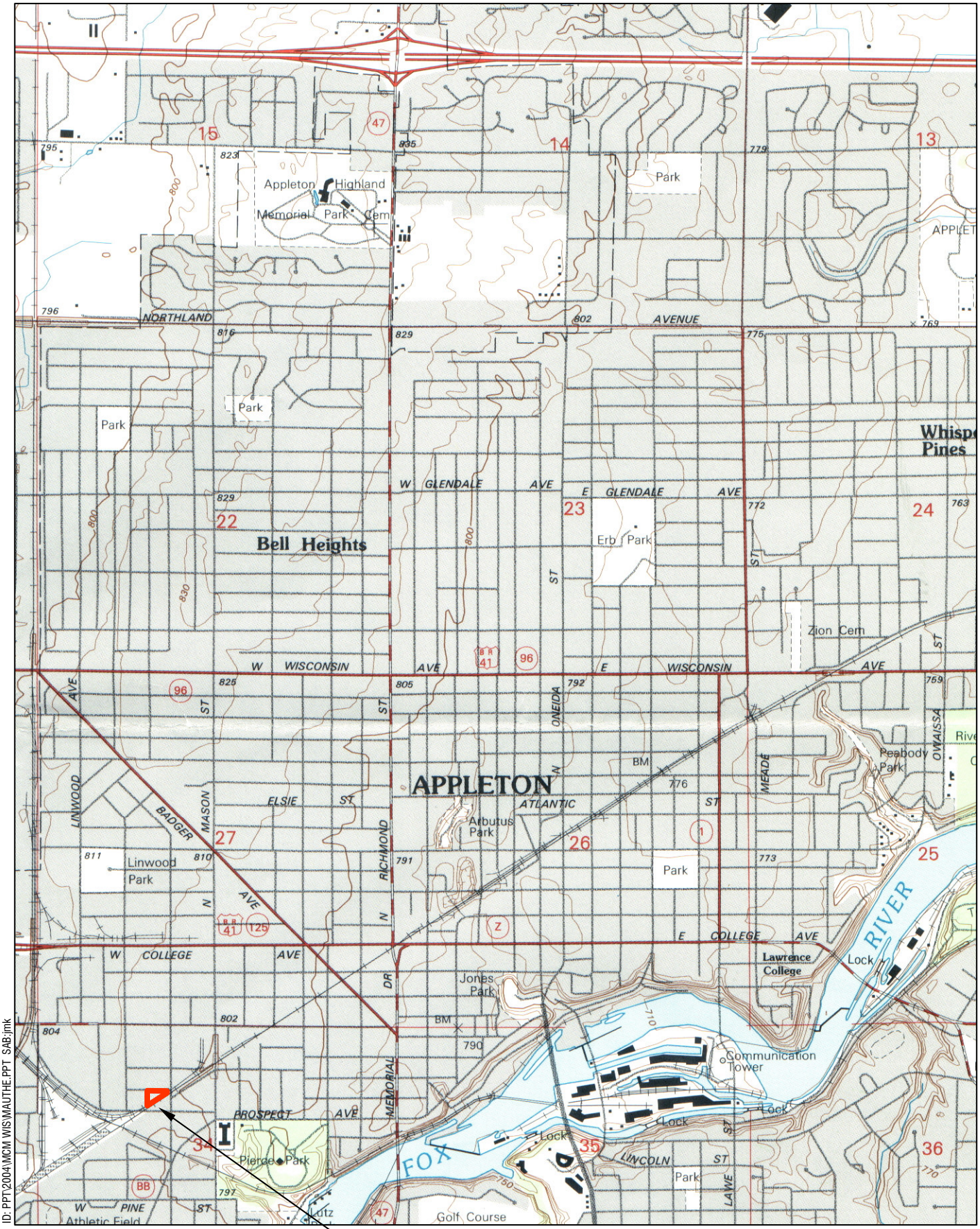

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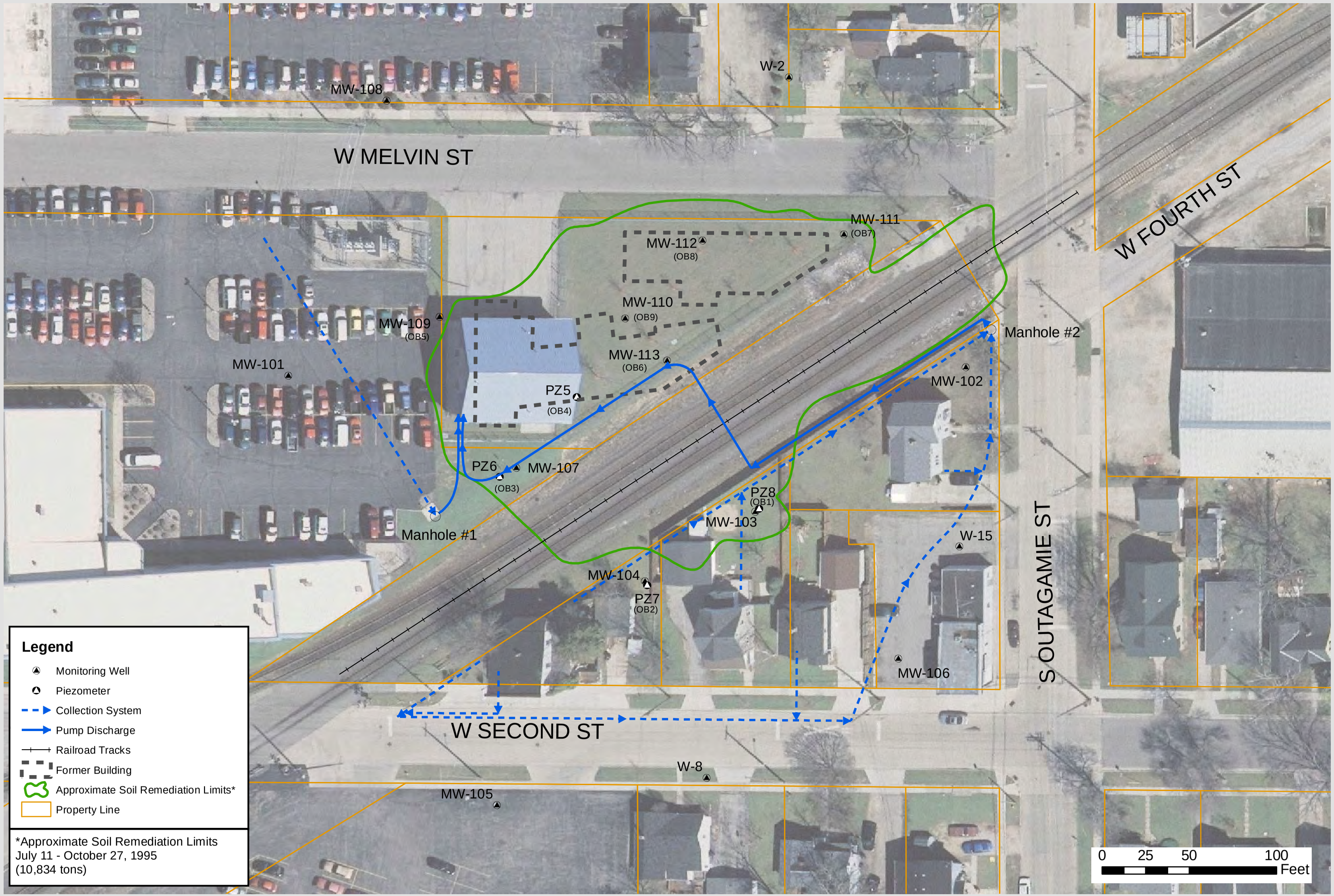
McMAHON ASSOCIATES, INC.
ENGINEERS ■ ARCHITECTS
PROJ. MGRS. ■ SURVEYORS

NORTH
SCALE: 1" = 2000'

Figure 1
SITE LOCATION MAP
N.W. MAUTHE SUPERFUND SITE - APPLETON, WI
McM #M0050-930746.14 8/11/04



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)

N
W E
S

Project Manager:	BDW	Date:	1/31/2011
Project Engineer:	BDW		
Drawn By:	JCW		
Checked By:	BDW		

N.W. MAUTHE SITE

SITE DETAIL MAP

OMNI ASSOCIATES
ONE SYSTEMS DRIVE APPLETON, WI 54914
PHONE (920) 735-6900
FAX (920) 830-6100
725 SOUTH OUTAGAMIE STREET
APPLETON, WISCONSIN

SCALE: 1 " = 50 '

PROJECT NO. **N1866A05**

FIGURE NO. **FIG 2**

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Legend

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour (2 ft)
- Railroad Tracks
- Former Building
- Collection System
- Pump Discharge
- Approximate Soil Remediation Limits*
- Property Line

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

NOTE:
Groundwater contours were drawn assuming no influence by the groundwater collection system.

MW-108 800.29
W-2 803.29
802
W MELVIN ST
W FOURTH ST
ELECTRIC SUBSTATION
WEST GROUNDWATER COLLECTION TRENCH
MW-109 802.47
MW-112 800.27
MW-111 801.42
800
MW-110 800.89
MW-113 800.87
MANHOLE NO. 2
MW-101 800.32
GROUNDWATER TREATMENT FACILITY
PZ5
MW-102 780.93
HSE 801 S. OUTAGAMIE
PZ6
MW-107 799.97
CENTRAL GROUNDWATER COLLECTION TRENCH
FOUNDATION DRAIN LATERAL
796
MANHOLE NO. 1
MW-103 795.67
PZ8
W-15 796.23
GAR
FOUNDATION DRAIN LATERAL
GAR
MW-104 799.15
PZ7
BUILDING
TAVERN
GAR
HSE 1414 W. SECOND
HSE 1410 W. SECOND
TAVERN 1428 W. SECOND
SUMP EFFLUENT PIPE
MW-106 796.80
S OUTAGAMIE ST
FOUNDATION DRAIN LATERAL
W SECOND ST
SOUTHEAST GROUNDWATER COLLECTION TRENCH
W-8 797.22
MW-105 799.41
798
0 25 50 100 Feet

N
W E
S

Project Manager: BDW
Project Engineer: BDW
Drawn By: JCW
Checked By: BDW
Date: 5/5/2010

N.W. MAUTHE SITE
GROUNDWATER ELEVATION CONTOUR MAP (3/17/2010)

725 SOUTH OUTAGAMIE STREET
APPLETON, WISCONSIN

OMNI ASSOCIATES
ONE SYSTEMS DRIVE PHONE (920) 735-6900
APPLETON, WI 54914 FAX (920) 830-6100

SCALE: 1 " = 50 '
PROJECT NO. N1866A05
FIGURE NO. FIG 3

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Legend

- Monitoring Well
- Piezometer
- Groundwater Elevation Contour (2 ft)
- Railroad Tracks
- Former Building
- Collection System
- Pump Discharge
- Approximate Soil Remediation Limits*
- Property Line

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

NOTE:
Groundwater contours were drawn assuming no influence by the groundwater collection system.

W MELVIN ST
W FOURTH ST
S OUTAGAMIE ST
W SECOND ST

MW-108
W-2
MW-111
MW-112
MW-110
MW-109
MW-113
MW-101
MW-102
MW-107
MW-103
MW-104
MW-105
MW-106
PZ5
782.55
PZ6
780.05
PZ7
780.15
PZ8
783.10
W-15
W-8

ELECTRIC SUBSTATION
WEST GROUNDWATER COLLECTION TRENCH
GROUNDWATER TREATMENT FACILITY
MANHOLE NO. 2
MANHOLE NO. 1
HSE 801 S. OUTAGAMIE
CENTRAL GROUNDWATER COLLECTION TRENCH
FOUNDATION DRAIN LATERAL
BUILDING
TAVERN 1428 W. SECOND
SUMP EFFLUENT PIPE
GAR
HSE 1414 W. SECOND
HSE 1410 W. SECOND
TAVERN
SOUTHEAST GROUNDWATER COLLECTION TRENCH

784
782
780

0 25 50 100 Feet

N W E S

Project Manager:	BDW
Project Engineer:	BDW
Drawn By:	JCW
Checked By:	BDW
Date:	5/5/2010

N.W. MAUTHE SITE
PIEZOMETRIC GROUNDWATER ELEVATION CONTOUR MAP (3/17/2010)

725 SOUTH OUTAGAMIE STREET
APPLETON, WISCONSIN

OMNI ASSOCIATES
ONE SYSTEMS DRIVE APPLETON, WI 54914
PHONE (920) 735-6900
FAX (920) 830-6100

SCALE: 1 " = 50 '
PROJECT NO. N1866A05
FIGURE NO. FIG 4

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Legend

- Monitoring Well
- Piezometers
- Groundwater Chromium Concentration (ug/L)
- Railroad Tracks
- Former Building
- Collection System
- Pump Discharge
- Approximate Soil Remediation Limits*
- Property Line

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

MW-108
W-2
W MELVIN ST
W FOURTH ST
ELECTRIC SUBSTATION
WEST GROUNDWATER COLLECTION TRENCH
MW-109
867
MW-110
22,800
MW-112
21,500
MW-111
649
MW-113
31,300
MW-101
2.5
GROUNDWATER TREATMENT FACILITY
10,000
1000
MANHOLE NO. 2
MW-102
0.74
HSE 801 S. OUTAGAMIE
MW-107
3240
CENTRAL GROUNDWATER COLLECTION TRENCH
MW-103
114
FOUNDATION DRAIN LATERAL
W-15
MANHOLE NO. 1
GAR
MW-104
719
FOUNDATION DRAIN LATERAL
GAR
TAVERN
BUILDING
TAVERN 1428 W. SECOND
GAR
HSE 1414 W. SECOND
HSE 1410 W. SECOND
SUMP EFFLUENT PIPE
FOUNDATION DRAIN LATERAL
MW-106
S OUTAGAMIE ST
W SECOND ST
SOUTHEAST GROUNDWATER COLLECTION TRENCH
W-8
MW-105

0 25 50 100 Feet

N
W E
S

Project Manager: BDW
Project Engineer: BDW
Drawn By: JCW
Checked By: BDW
Date: 5/5/2010

ISOCONCENTRATION MAP - TOTAL CHROMIUM (3/17/2010)

N.W. MAUTHE SITE

725 SOUTH OUTAGAMIE STREET
APPLETON, WISCONSIN

OMNI ASSOCIATES
ONE SYSTEMS DRIVE APPLETON, WI 54914
PHONE (920) 735-6900
FAX (920) 830-6100

SCALE:
1 " = 50 '

PROJECT NO.
N1866A05

FIGURE NO.
FIG 5

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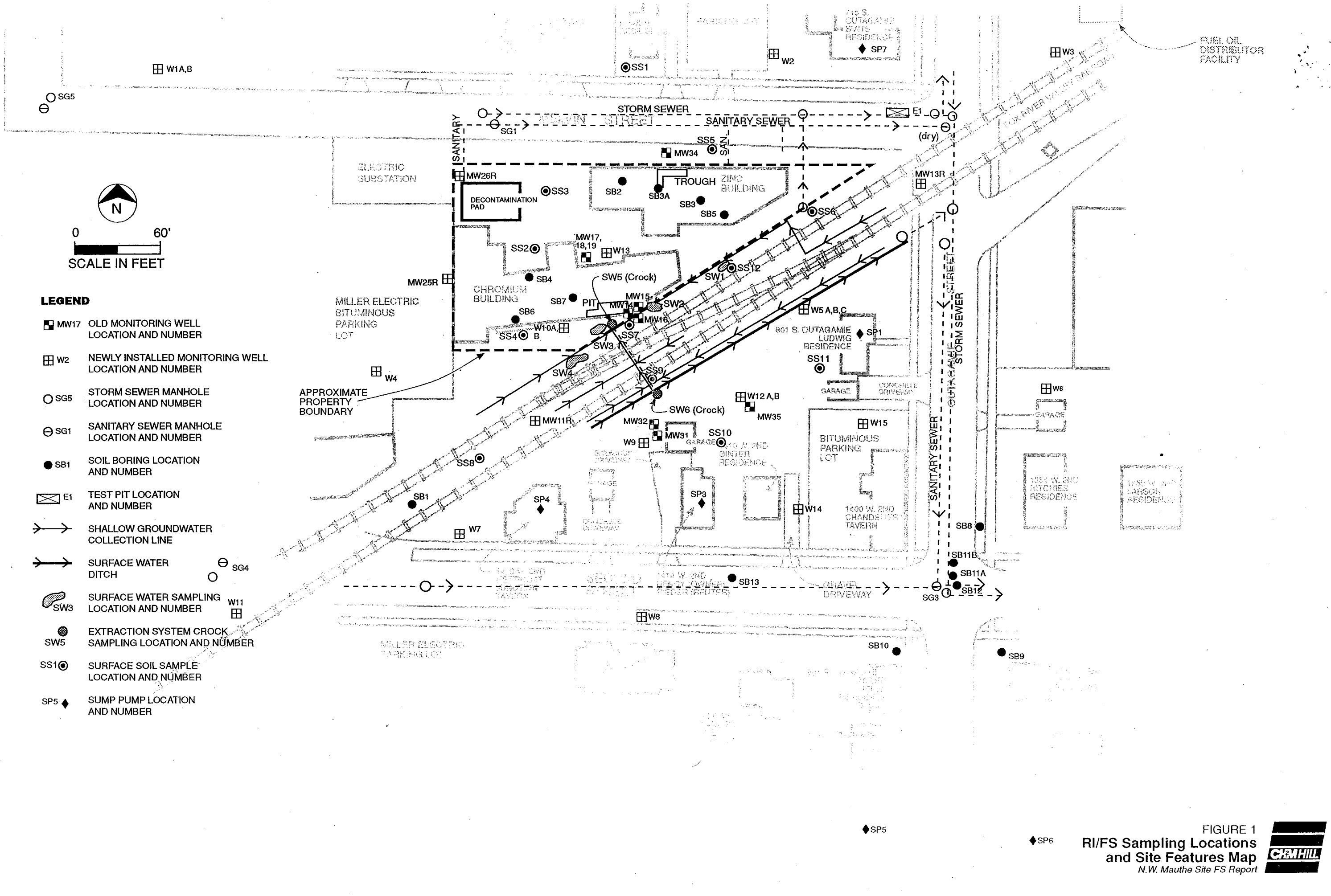

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FIGURE 1
RI/FS Sampling Locations and Site Features Map
N.W. Mauthe Site FS Report

CH2MHILL

Appendix B – Tables

Table 2 – Long Term Monitoring Plan
Table 5 – Groundwater Results – Metals
Table 6 – Groundwater Results – VOCs
Table 9 – Influent and Effluent Summary
Table 10 – Appleton POTW Discharge Limits

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Table 2
Long-Term Groundwater Monitoring Plan - Updated March 2011
N. W. Mauthe Superfund Site, Appleton, WI
WDNR BRRTS #02-45-000127

Well ID	Water Level	pH	Temperature	Specific Conductivity	Dissolved Oxygen	Redox	Ferrous Iron	Chromium Total (Filtered)	Manganese	Cyanide	VOCs
W-2	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
W-8	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
W-15	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
MW-101	A	A	A	A	A	A	4YR	A	4YR		
MW-102	A	A	A	A	A	A	4YR	A	4YR		
MW-103	A	SA	SA	SA	SA	SA	4YR	SA	4YR		
MW-104	A	SA	SA	SA	SA	SA	4YR	SA	4YR		
MW-105	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
MW-106	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
MW-107	SA	SA	SA	SA	SA	SA	4YR	SA	4YR		SA
MW-108	A	4YR	4YR	4YR	4YR	4YR	4YR	4YR	4YR		
MW-109**	SA	SA	SA	SA	SA	SA	4YR	SA	4YR		SA
MW-110**	SA	SA	SA	SA	SA	SA	4YR	SA	4YR	SA	SA
MW-111**	SA	SA	SA	SA	SA	SA	4YR	SA	4YR	A	SA
MW-112**	SA	SA	SA	SA	SA	SA	4YR	SA	4YR	SA	SA
MW-113**	SA	SA	SA	SA	SA	SA	4YR	SA	4YR		SA
PZ-5*	A										
PZ-6*	A										
PZ-7*	A										
PZ-8*	A										

Notes: A=annual (March)
SA=semi-annual (March, September)
4YR= every four years in March (2007, 2011, 2015, etc)
Copper, Cyanide, Mercury and Zinc (W-2 - MW-108) eliminated January 18, 2000
Cadmium (W-2 - MW-108) and VOCs (W-2 - MW-106, MW-108) eliminated April 17, 2003
PZ-1 - PZ-4 abandoned May 2004
* installed May 2005
** installed May 2006
Hexavalent chromium analysis eliminated October 2006

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Table 5 - Groundwater Analytical 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	<0.05	23
	06/08/99	<.31	<.62	NA	1.8*	<.0032	290.0	<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	<2.0	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	<2.0	NA	NA
	03/19/02	.27*	<.57	NA	NA	NA	<2.0	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	<0.17	<0.43	NA	NA	NA	8.5	NA	NA
	03/24/04	NA	<0.45	5.0	NA	NA	<1.0	NA	NA
	03/29/05	NA	1.2	<2.7	NA	NA	1.3	NA	NA
	03/23/06	NA	0.52	<5.0	NA	NA	4.1	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	4.7	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	<2.0	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	<0.52	<2.7	NA	NA	9.7	NA	NA
	03/23/06	NA	<0.4	<5.0	NA	NA	5.5	NA	NA
	03/27/07	NA	<1.9	NA	NA	NA	6.0	NA	NA

Table 5 - Groundwater Analytical 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
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	<.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	.55 *	NA	NA	NA	<2.0	NA	NA
	12/05/01	<.23	.90*	NA	NA	NA	<2.0	NA	NA
	03/19/02	<.23	.66*	NA	NA	NA	<2.0	NA	NA
	06/20/02	<.23	.58*	NA	NA	NA	2.2	NA	NA
	09/18/02	<.23	<.44	NA	NA	NA	13.0	NA	NA
	12/17/02	<.23	<.44	NA	NA	NA	33.0	NA	NA
	03/24/03	<.17	.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

Table 5 - Groundwater Analytical 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*	<0.43	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

Table 5 - Groundwater Analytical 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

Table 5 - Groundwater Analytical 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
	12/05/02	<.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

Table 5 - Groundwater Analytical 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
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

Table 5 - Groundwater Analytical 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	<2.3	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

Table 5 - Groundwater Analytical 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
MW-109	6/21/06****	<0.92	1,300	1,400	2.4*	<9.4	480.0	<0.072	<20
	9/20/06****	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
MW-110	6/21/06****	<0.92	24,000	26,000	2.9*	40	290.0	<0.072	<20
	9/20/06****	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
MW-111	6/21/06****	<0.92	1,400	1,400	3.3*	27	190.0	<0.072	<20
	9/20/06****	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

Table 5 - Groundwater Analytical 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-112	6/21/06****	<0.92	130,000	140,000	5.3	140	180.0	<0.072	34,000
	9/20/06****	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
MW-113	6/21/06****	<0.92	25,000	26,000	3.4*	11	170.0	<0.072	<20
	9/20/06****	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
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.

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Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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	-
	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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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	-
	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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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
	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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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
	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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)
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
	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
	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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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	-
	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
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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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-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
	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
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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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
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
	09/28/07[A]	<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

Table 6 - Groundwater Analytical Results / Detected Volatile Organic Compounds (VOCs)

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
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
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

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)

Table 9 - Influent and Effluent Summary
N.W. Mauthe Superfund Site - Appleton, Wisconsin

	OUTFALL 001							Manhole #1			Manhole #2		
Date Actual	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
	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

Table 9 - Influent and Effluent Summary
N.W. Mauthe Superfund Site - Appleton, Wisconsin

	OUTFALL 001							Manhole #1			Manhole #2		
Date Actual	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)
06/30/08		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**									
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		

Table 9 - Influent and Effluent Summary
N.W. Mauthe Superfund Site - Appleton, Wisconsin

	OUTFALL 001							Manhole #1			Manhole #2		
Date Actual	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)
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**									
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		
	04/01/09	*9,467,680*		**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
	05/01/09	*9,568,209*		**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
	06/01/09	*9,650,519*		**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		
	07/01/09	*9,727,520*		**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		
	08/01/09	*9,748,231*		**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		
	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

Table 9 - Influent and Effluent Summary
N.W. Mauthe Superfund Site - Appleton, Wisconsin

	OUTFALL 001							Manhole #1			Manhole #2		
Date Actual	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)
10/15/09		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*		**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			433,730	7.1	1.12	1,040,370	7.2	0.37

Table #10

CITY OF APPLETON POTW EFFLUENT COMPLIANCE LIMITS
Effluent Point 001
N.W. Mauthe Superfund Site - Appleton, Wisconsin
MCO No. M0050-930746.22

	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)
Effluent Limits Permit #00-21	70	1.0	0.3	7.0	3.5	1.0	2.0	0.002	2.0	10.0	4.5

mg/l = milligram / liter
ug/l = microgram / liter

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Appendix C – Fact Sheet

N W Mauthe Superfund Site, 725 South Outagamie Street, Appleton, WI, January 2011

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N W Mauthe Superfund Site
725 South Outagamie Street
Appleton, WI

January 2011

History

The property at 725 South Outagamie Street in Appleton was a metal plating facility from 1960 to 1987. The Wisconsin Chromium Corporation conducted chrome electroplating there until 1976. Norbert W. Mauthe purchased the property and performed other types of electroplating from 1978 to 1987. Plating operations at the property ended in 1987.

In 1982, the Department of Natural Resources (DNR) received a complaint about environmental contamination and investigated the property. DNR found contamination from plating solutions in both the soil and the groundwater. These contaminants included chromium, cadmium, cyanide, zinc and volatile organic compounds. This contamination had also spread to neighboring properties where it was in the soil, the groundwater and some basements.

State and Federal Responses

N. W. Mauthe did not take the legally required environmental response. The DNR installed a temporary groundwater collection system to reduce the movement of contaminated groundwater and investigated the spread of the contamination. In addition, DNR asked the Wisconsin Department of Justice (DOJ) to take legal action against N. W. Mauthe, which DOJ did in 1982.

In 1984, DNR removed the most contaminated soils and paved the property with asphalt. The asphalt prevented people and animals from coming into contact with any remaining contaminated soil, and also prevented rainwater from flushing more contamination into the groundwater. In 1986, N. W. Mauthe passed away, and in 1988, the state settled the legal action with his estate.

DNR requested that the Environmental Protection Agency (EPA) add the N.W. Mauthe property to the Superfund National Priorities List (NPL), which would make the property eligible for Superfund funding and response actions. EPA acted on DNR's request in March of 1989. This allowed the state to begin a Remedial Investigation / Feasibility Study (RI/FS) in September of 1989. The RI/FS is a federal requirement to fully understand the extent of the contamination so that the best options can be selected for cleanup.

More Contaminant Removal

EPA began contaminant removal in 1995 with a "removal action". A removal action is a short-term strategy to remove or contain hazards. EPA removed the buildings used for electroplating and excavated all soil with more than 500 milligrams per kilogram (mg/kg) of chromium. EPA then constructed a groundwater collection system with three trenches to pull contaminated groundwater back to a central location. In

1996, EPA constructed a system to treat the collected groundwater using ferrous sulfate that required an operator to be at the plant daily. After treatment, the water was discharged to the city of Appleton's sanitary sewer under permit. This system started operation in 1997.

Current Operations

In 1998, EPA turned over operation and maintenance (O&M) of the groundwater collection and treatment system to DNR. DNR now supervises a local contractor that performs the site work. This includes testing the groundwater at monitoring points throughout the neighborhood. The contractor provides DNR with reports on the groundwater contamination and system operations twice a year.

DNR added four additional deep wells in June 2005 and four shallow wells in June 2006 to determine the severity and depth of the remaining groundwater contamination, and to better evaluate the efficiency of the collection system. In 2006, the DNR also worked with the city of Appleton to review historical groundwater data in an effort to minimize the labor-intensive on-site pre-treatment and operation process. As a result of that review, the city of Appleton amended the discharge permit to allow the collected water to be discharged to the sanitary sewer without the costly on-site pre-treatment process. This significantly reduced the DNR's annual O&M costs associated with the system.

In 2007, the DNR worked with the city of Appleton's Parks and Recreation Department to develop a Cooperative Agreement. The Cooperative Agreement allows the city to utilize the previously vacant truck bay on-site in exchange for maintenance of the grounds.

Five-Year Reviews

Federal law requires a review of operations every five years at Superfund sites with continuing cleanups. The first five-year review for the N. W. Mauthe site was completed in April 2001 and concluded that the groundwater collection and treatment system was operating as designed. The second five-year review was completed in April 2006 and again concluded that the groundwater collection and treatment system was operating as designed. The third five-year review has now begun and provides another opportunity for residents to ask questions and learn more about the status of the cleanup. The third five-year review is scheduled to be completed in April of 2011. Residents may contact DNR's project manager to discuss this cleanup or to view information.

For More Information

You may direct questions about the N. W. Mauthe Superfund site to DNR project manager:
Jennifer Borski, DNR
625 E. County Road Y, STE. 700
Oshkosh, WI 54901-9731
Phone: (920) 424-7887
Fax: (920) 424-4404
E-mail: jennifer.borski@wisconsin.gov

You may also view information about this cleanup in the DNR tracking system on the internet at http://botw.dnr.state.wi.us/botw/SetUpBasicSearchForm.do. Enter 0245000127 in the activity number box.

To view the EPA website and additional reports for this property visit the following address:
http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0505061

Appendix D – Documents Reviewed

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DOCUMENTS REVIEWED

Remedial Investigation Report, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, February 4, 1993.

Feasibility Study Report, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, May 1993.

Declaration for the Record of Decision, March 31, 1994.

Record of Decision Summary, N. W. Mauthe Site, City of Appleton, Outagamie County, Wisconsin, March 1994.

Final Design Submittal, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, May 1995.

Phase I Remedial Action Closure Report, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, July 31, 1996.

Phase II Remedial Action Construction Documentation Report, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, July 29, 1997.

Final O&M Manual, Groundwater Treatment System, N. W. Mauthe Site, Appleton, Wisconsin, CH_2M Hill, April 29, 1997.

Site Specific Plans for the N. W. Mauthe Long Term Response Action, CH_2M Hill, September 5, 1997.

Long-Term Remedial Action Report, N. W. Mauthe Long-Term Response Action, CH_2M Hill, November 1998.

Simulation of Solute Movement at a Chromium-Contaminated Site, N. W. Mauthe Property, 725 S. Outagamie St., Appleton, WI, OMNNI Associates, March 16, 2007.

Additional Site Investigation Report, N. W. Mauthe Site, System Evaluation, WDNR BRRTS Number 02-45-000127, OMNNI Associates, April 24, 2007.

Semi-Annual Operation & Maintenance Report, Report #41 (October 2009 – April 2010), N. W. Mauthe Superfund Site, WDNR BRRTS Number 02-45-000127, OMNNI Associates, May 12, 2010.

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Appendix E – Concentration vs. Time Graphs

Plot 1 – Hexavalent Chromium in Collected, Untreated Groundwater
MW-103 C. vs. T. for chromium
MW-104 C. vs. T. for chromium
MW-107 C. vs. T. for chromium
MW-109 C. vs. T. for chromium
MW-110 C. vs. T. for chromium
MW-111 C. vs. T. for chromium
MW-112 C. vs. T. for chromium
MW-113 C. vs. T. for chromium
Influent Hexavalent Chromium C vs. T. (Sump 1, Sump 2 & Combined)
MW-107 C. vs. T. for VOCs
MW-110 C. vs. T. for VOCs
MW-113 C. vs. T. for VOCs
All wells – Groundwater Elevation vs. Time
Monthly Effluent (gallons per month) vs. Time

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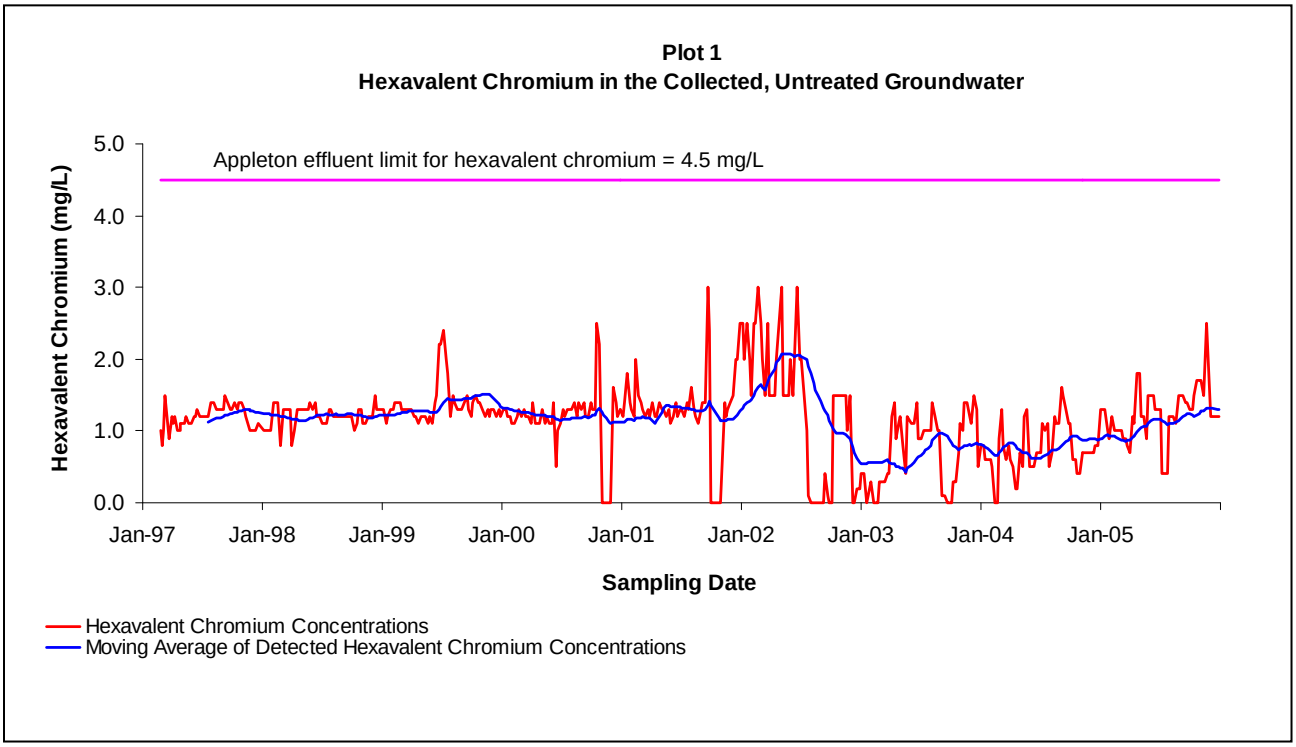
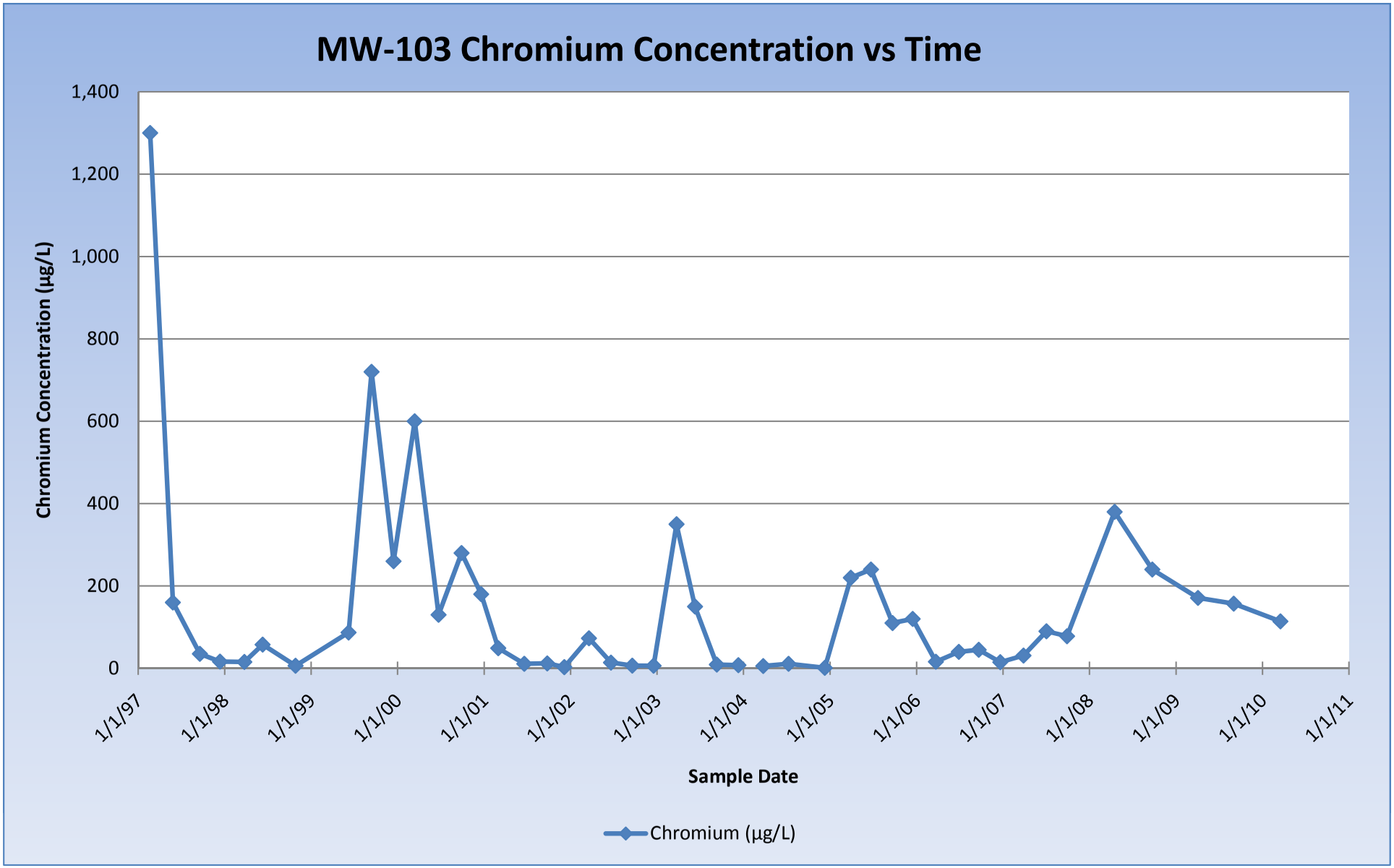
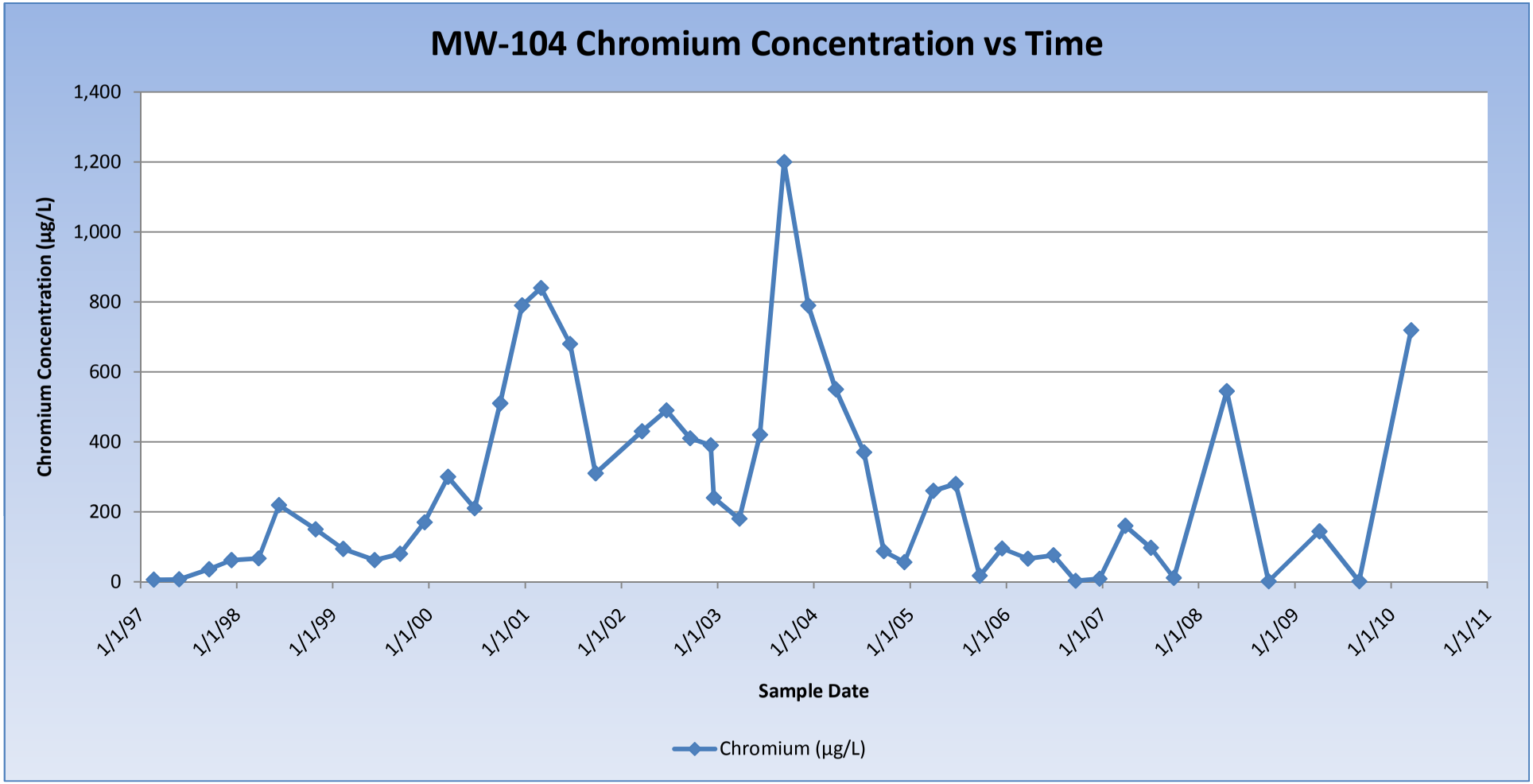
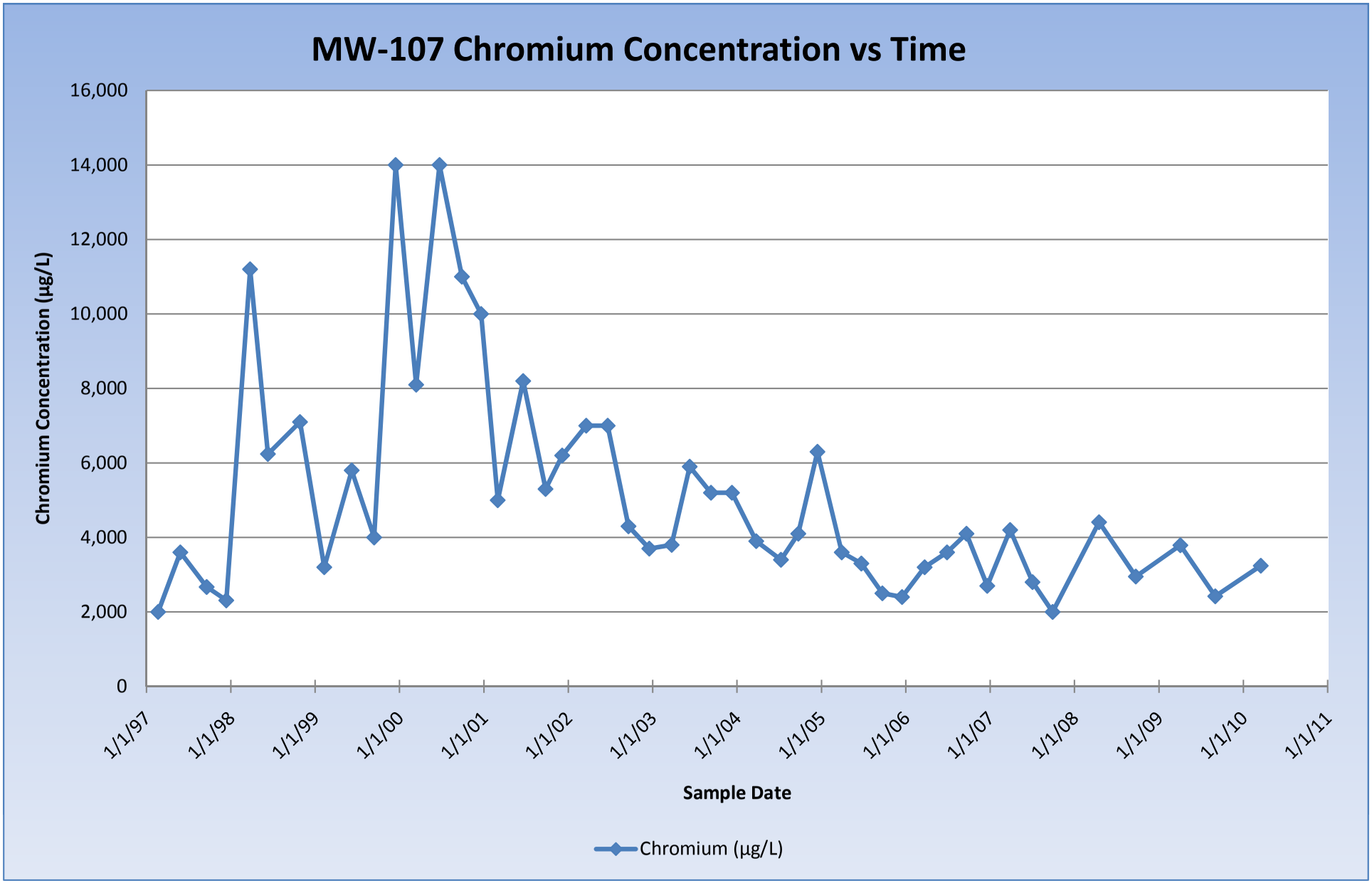
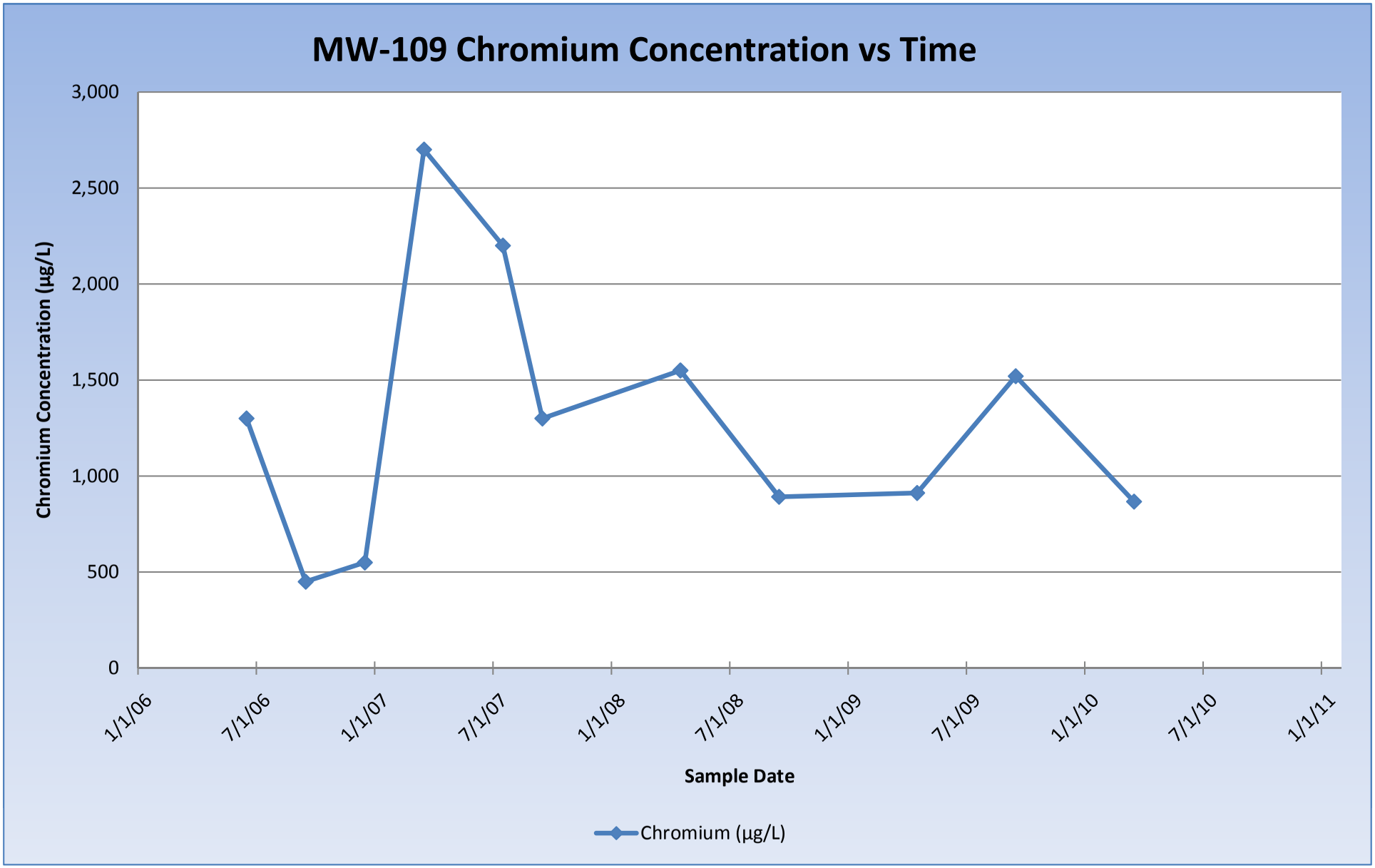


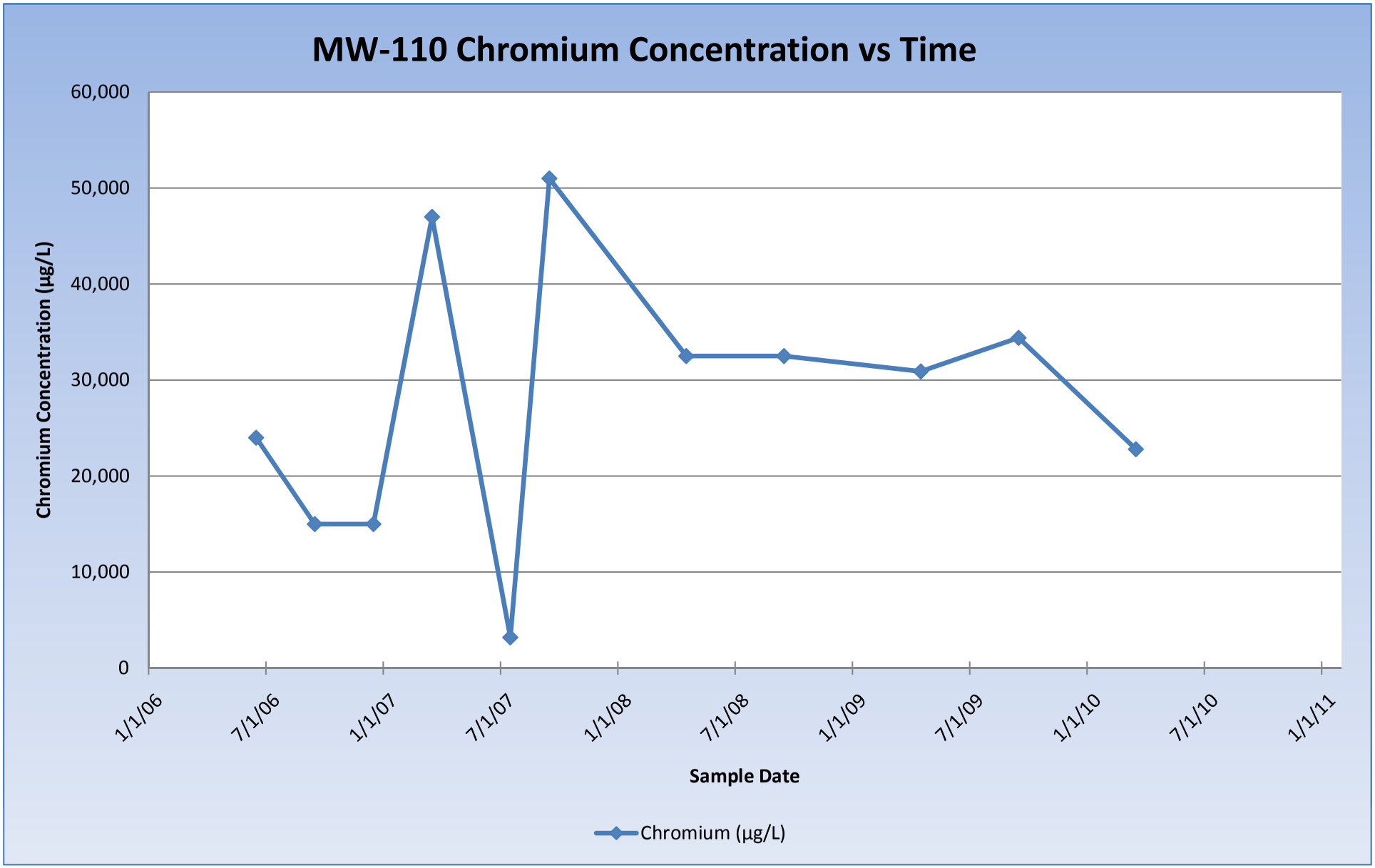
Plot 1 shows the hexavalent chromium concentrations found in groundwater collected at the site prior to the groundwater being treated by the on-site treatment system. The highest concentration found over that time period was 3.0 mg/L, which is less than the City of Appleton pretreatment standard. – Additional Site Investigation Report, OMNNI Associates, April 24, 2007

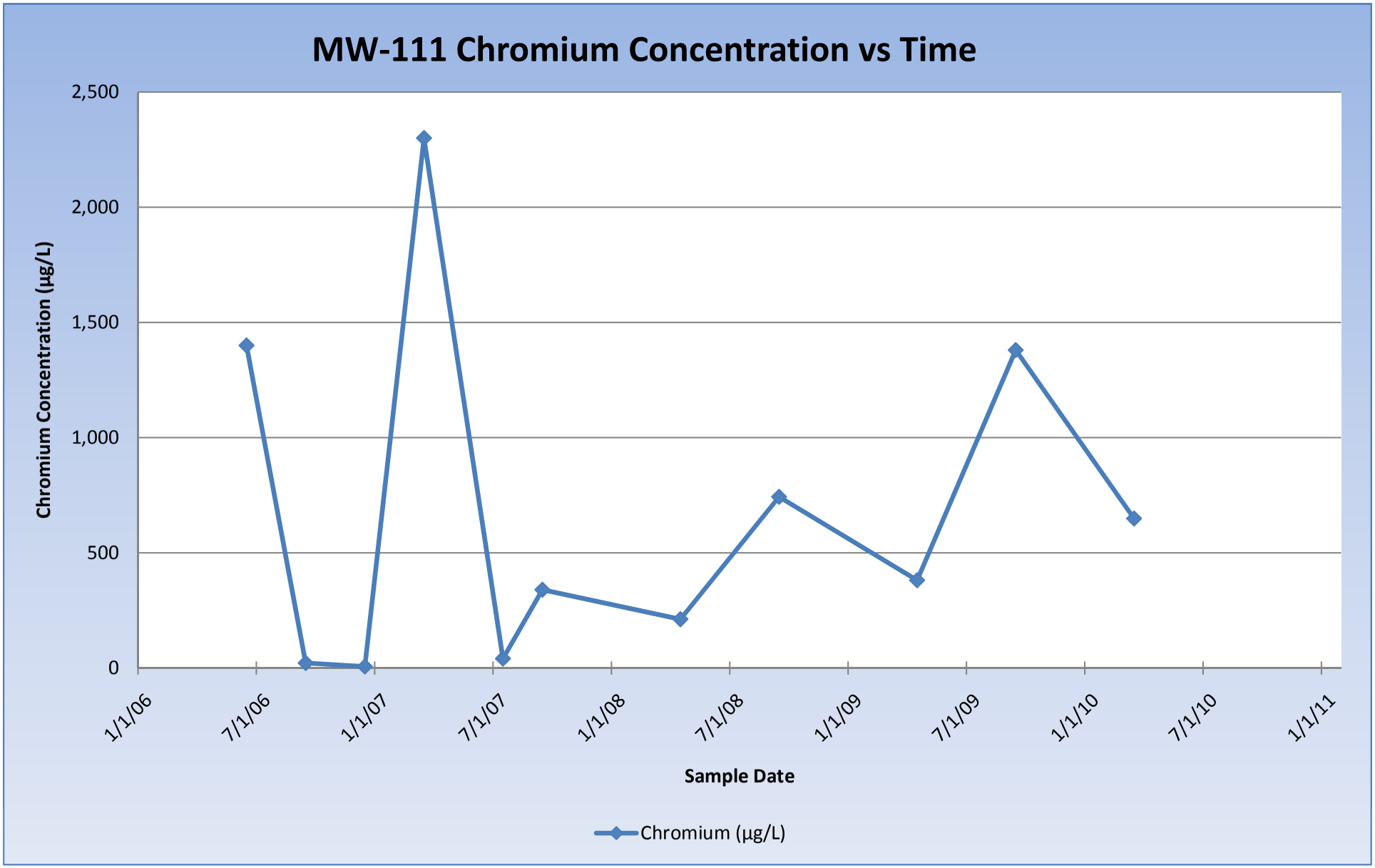

MW-103 Chromium Concentration vs Time
Chromium Concentration (µg/L)
1,400
1,200
1,000
800
600
400
200
0
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
Sample Date
Chromium (µg/L)

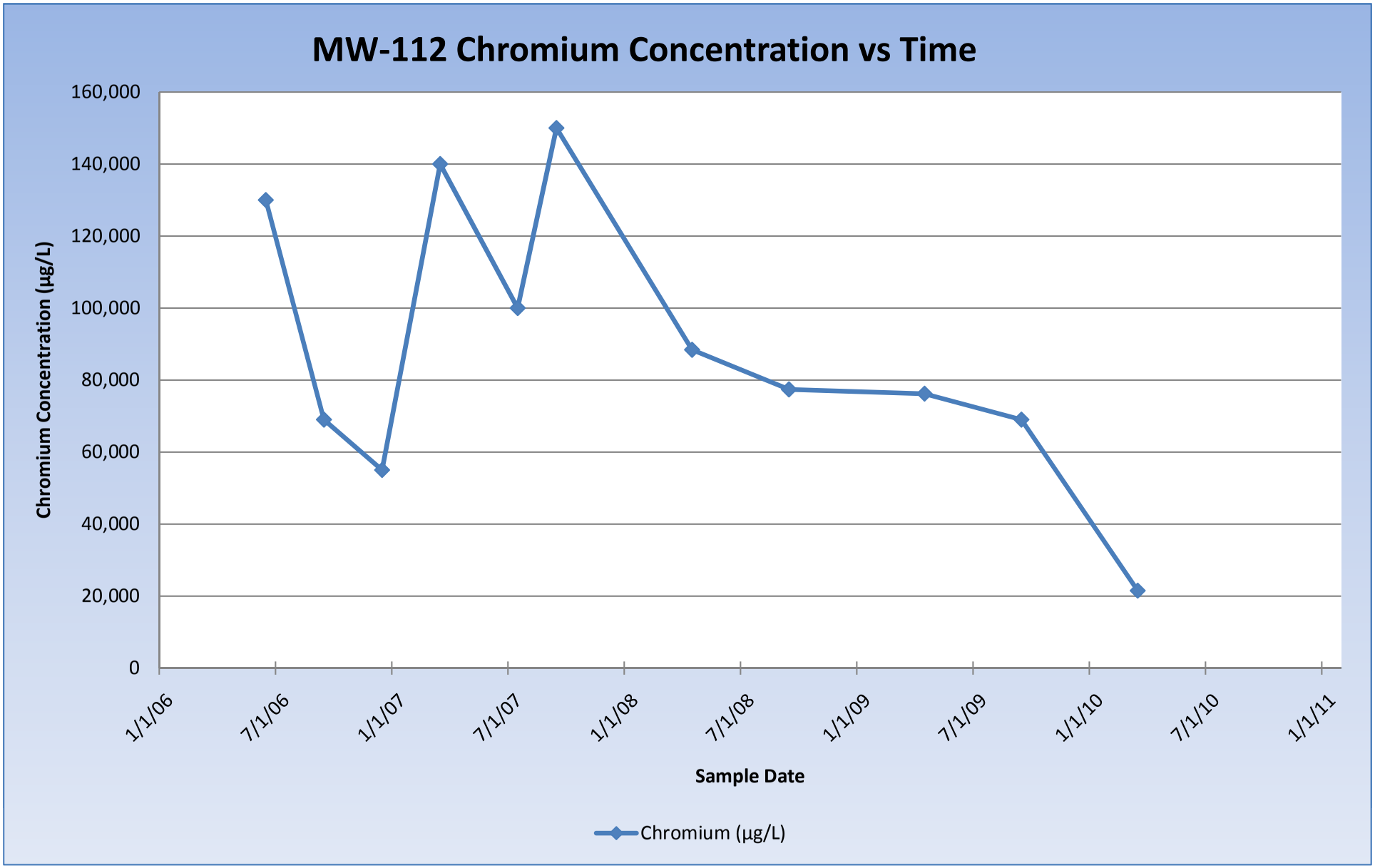

MW-104 Chromium Concentration vs Time
Chromium Concentration (µg/L)
1,400
1,200
1,000
800
600
400
200
0
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
Sample Date
Chromium (µg/L)

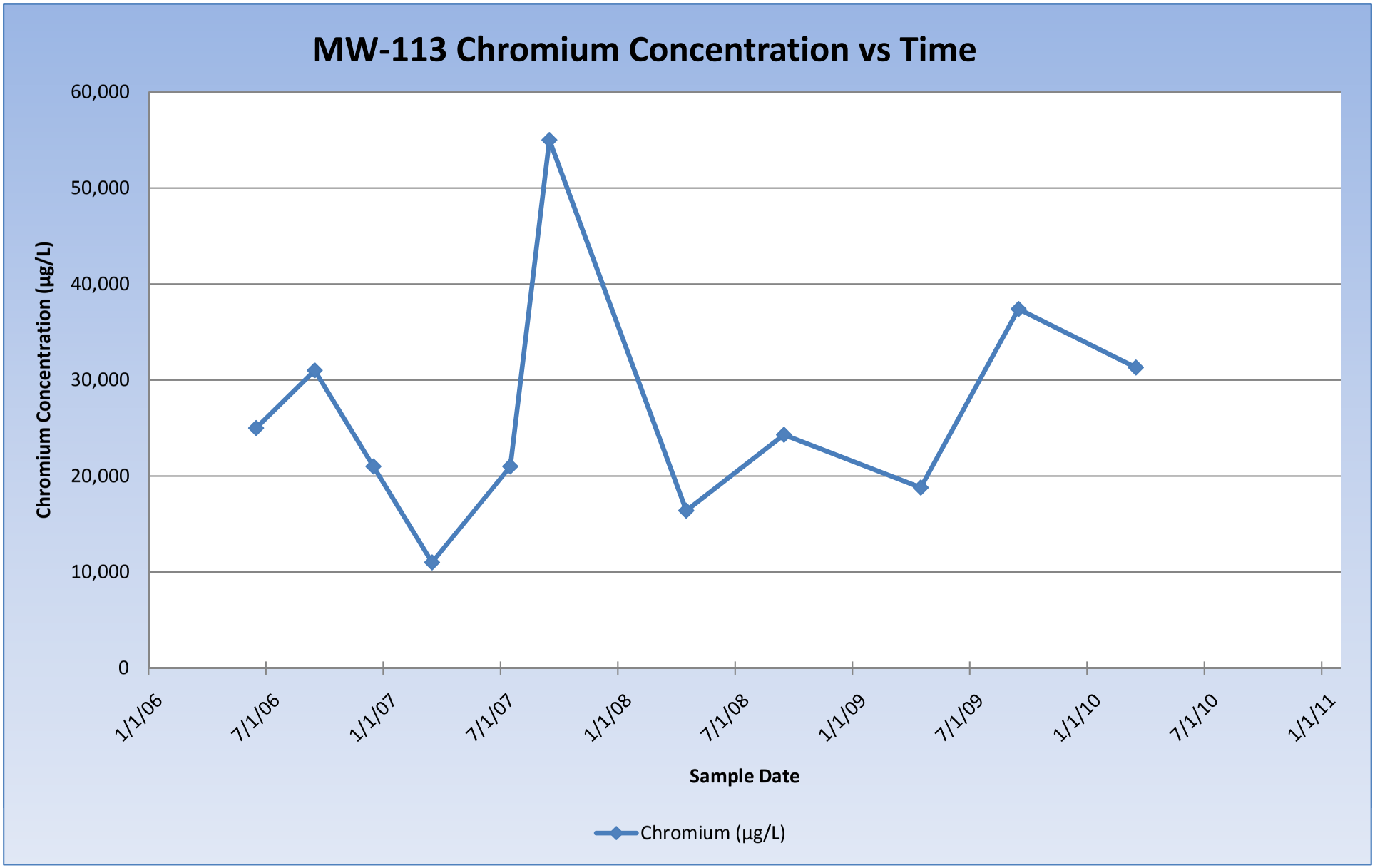

MW-107 Chromium Concentration vs Time
Chromium Concentration (µg/L)
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
Sample Date
Chromium (µg/L)


MW-109 Chromium Concentration vs Time
Chromium Concentration (µg/L)
3,000
2,500
2,000
1,500
1,000
500
0
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11
Sample Date
Chromium (µg/L)

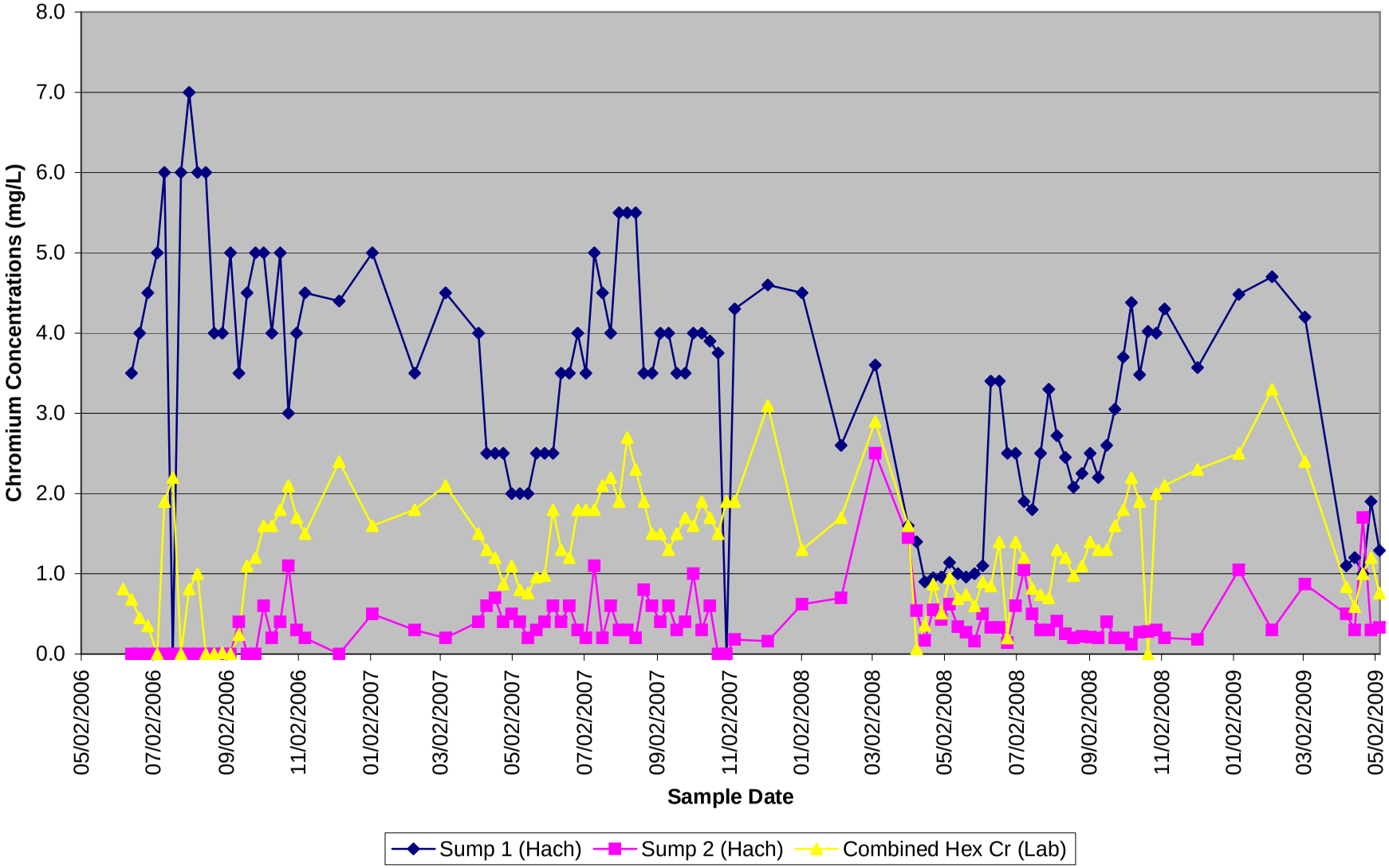

MW-110 Chromium Concentration vs Time
60,000
50,000
40,000
30,000
20,000
10,000
0
Chromium Concentration (µg/L)
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11
Sample Date
Chromium (µg/L)

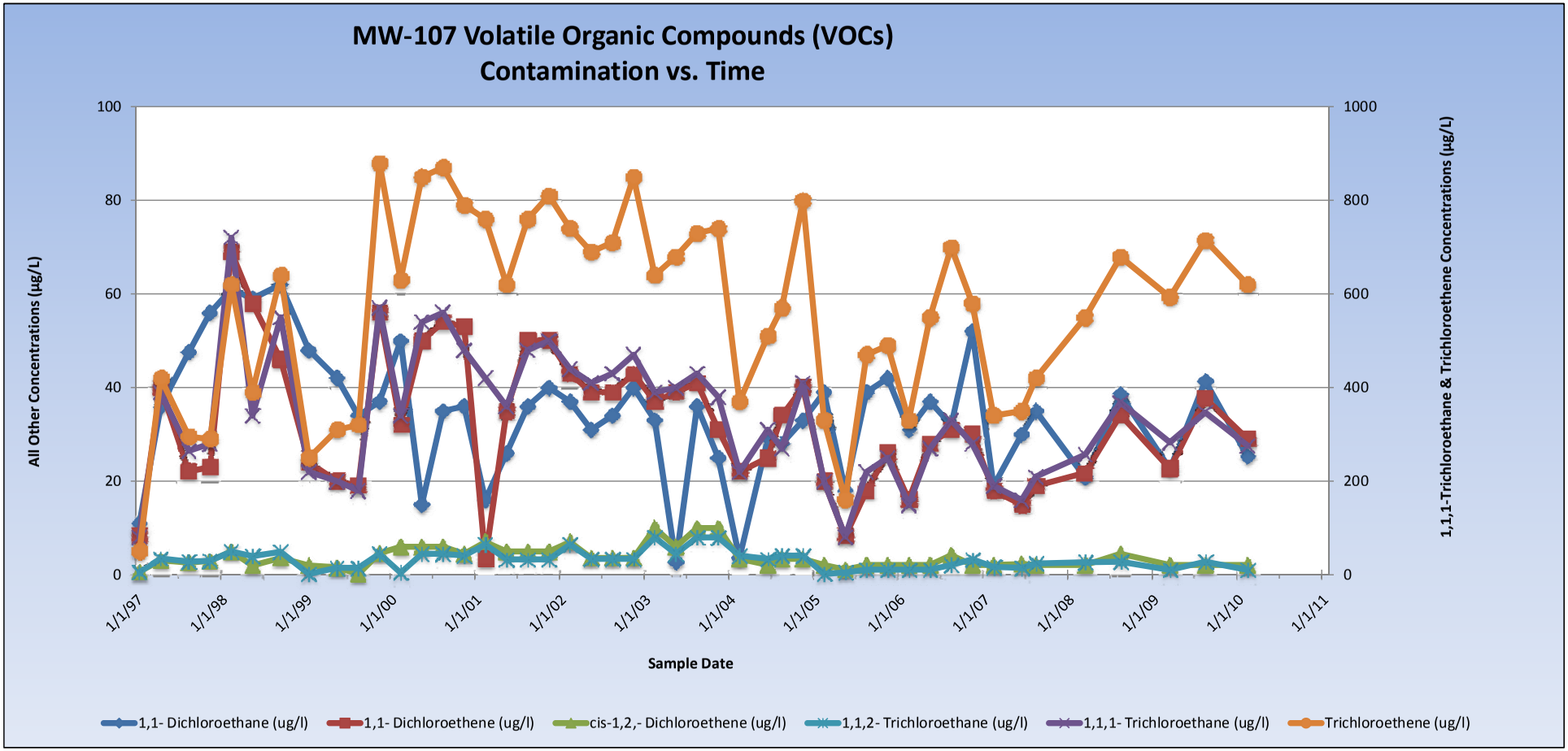

MW-111 Chromium Concentration vs Time
Chromium Concentration (µg/L)
2,500
2,000
1,500
1,000
500
0
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11
Sample Date
Chromium (µg/L)

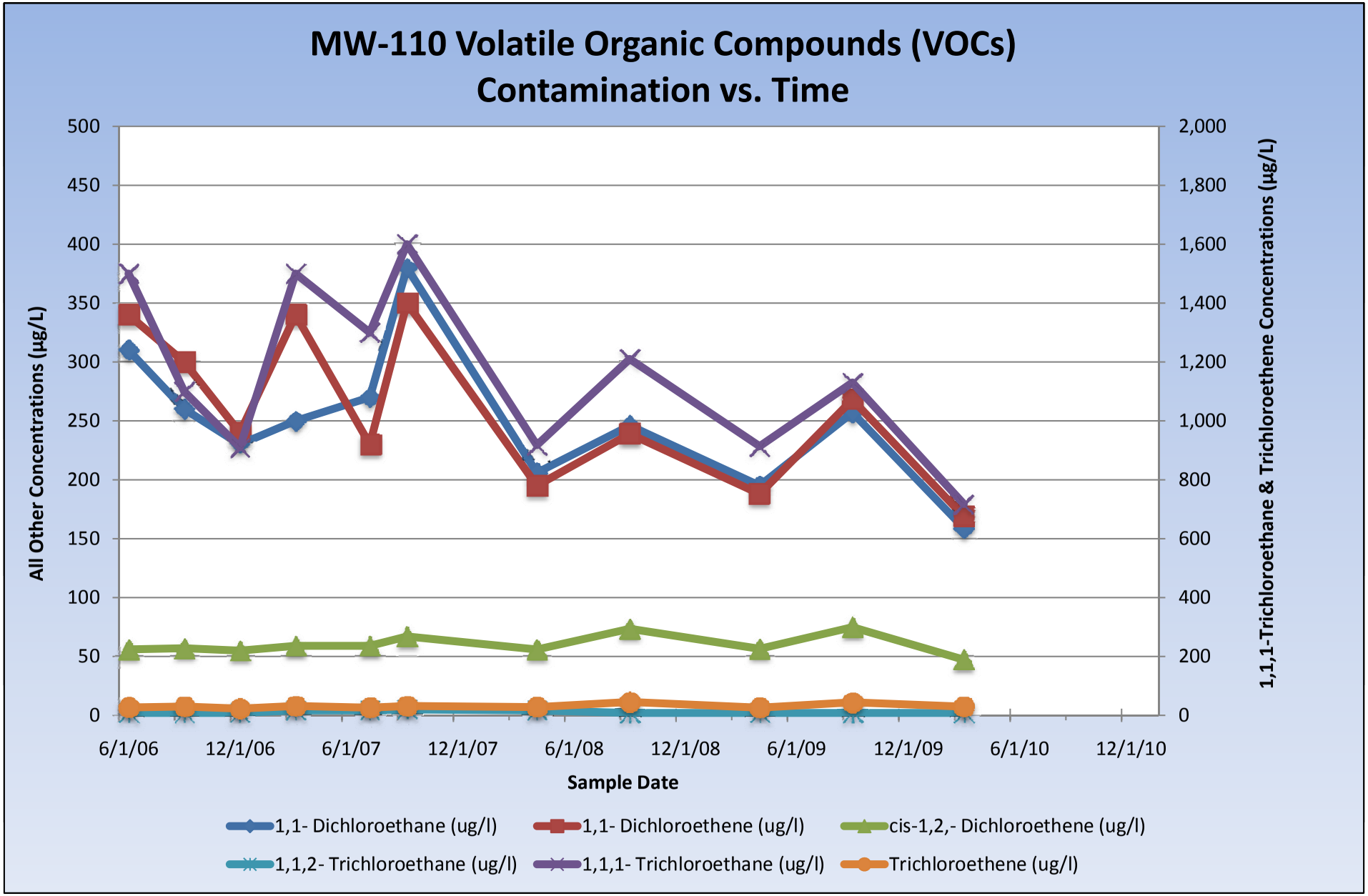

MW-112 Chromium Concentration vs Time
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Chromium Concentration (µg/L)
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11
Sample Date
Chromium (µg/L)

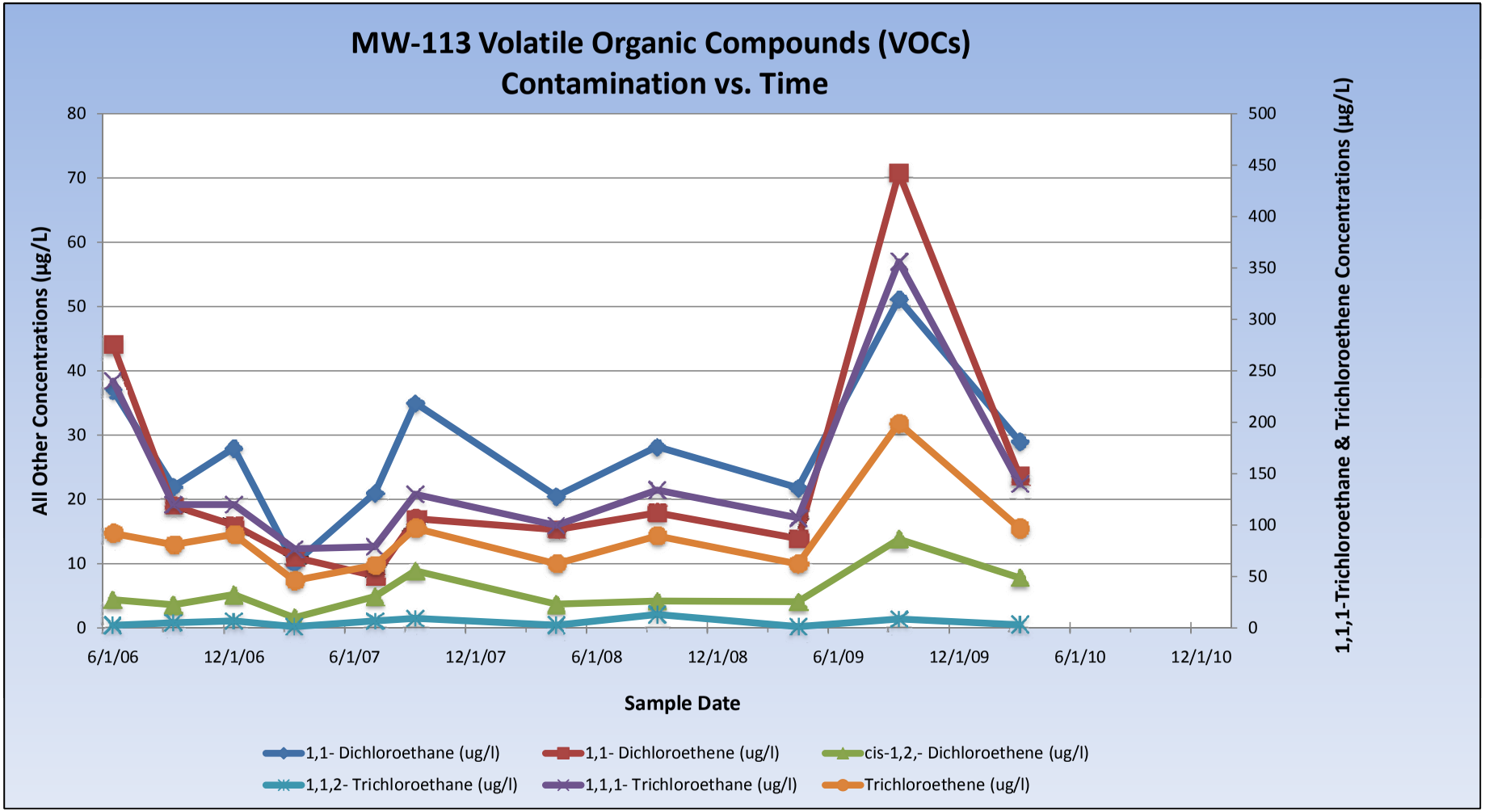

MW-113 Chromium Concentration vs Time
60,000
50,000
40,000
30,000
20,000
10,000
0
Chromium Concentration (µg/L)
1/1/06
7/1/06
1/1/07
7/1/07
1/1/08
7/1/08
1/1/09
7/1/09
1/1/10
7/1/10
1/1/11
Sample Date
Chromium (µg/L)

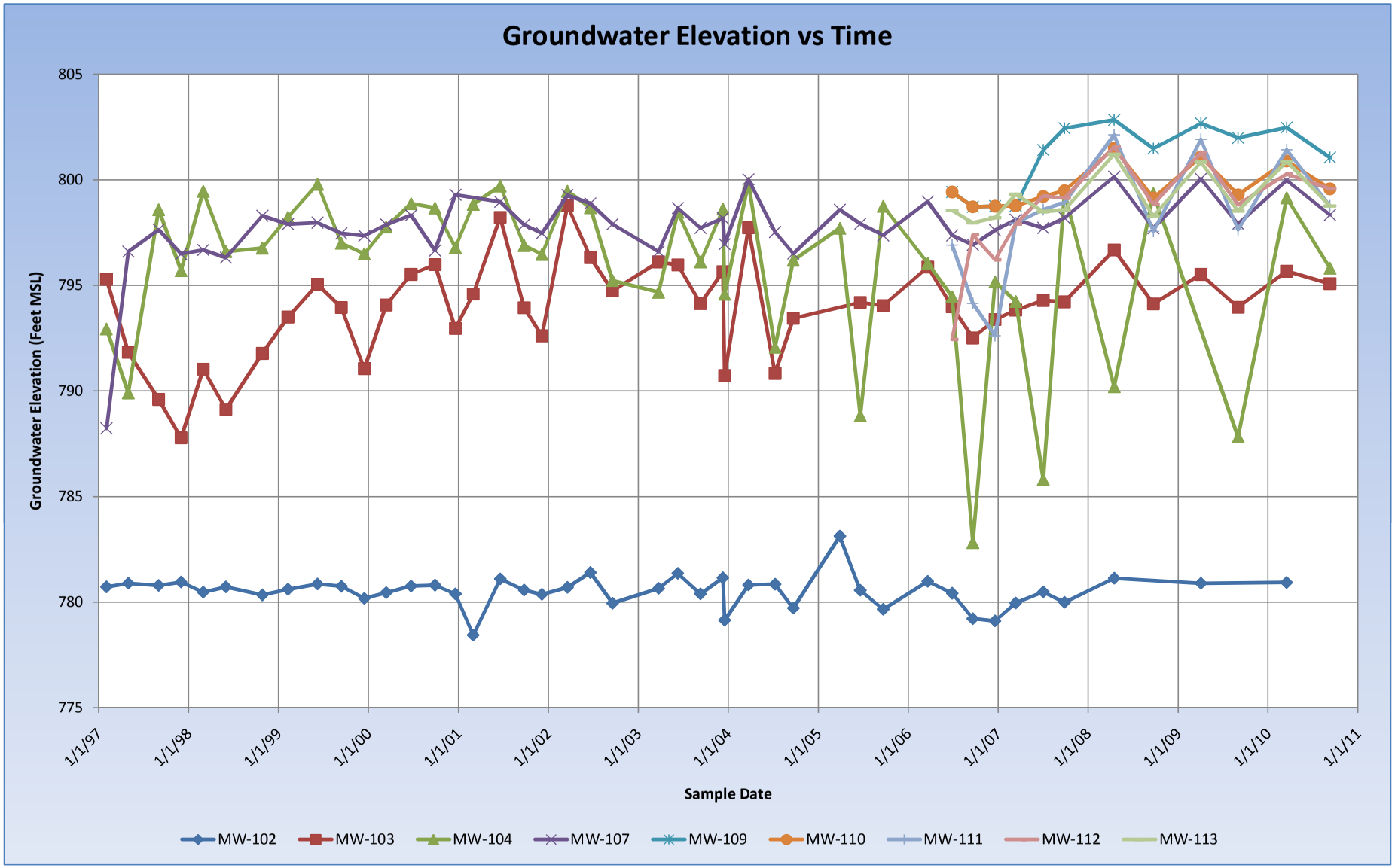
Influent Hexavalent Chromium vs. Time (Sump 1, Sump 2 & Combined)

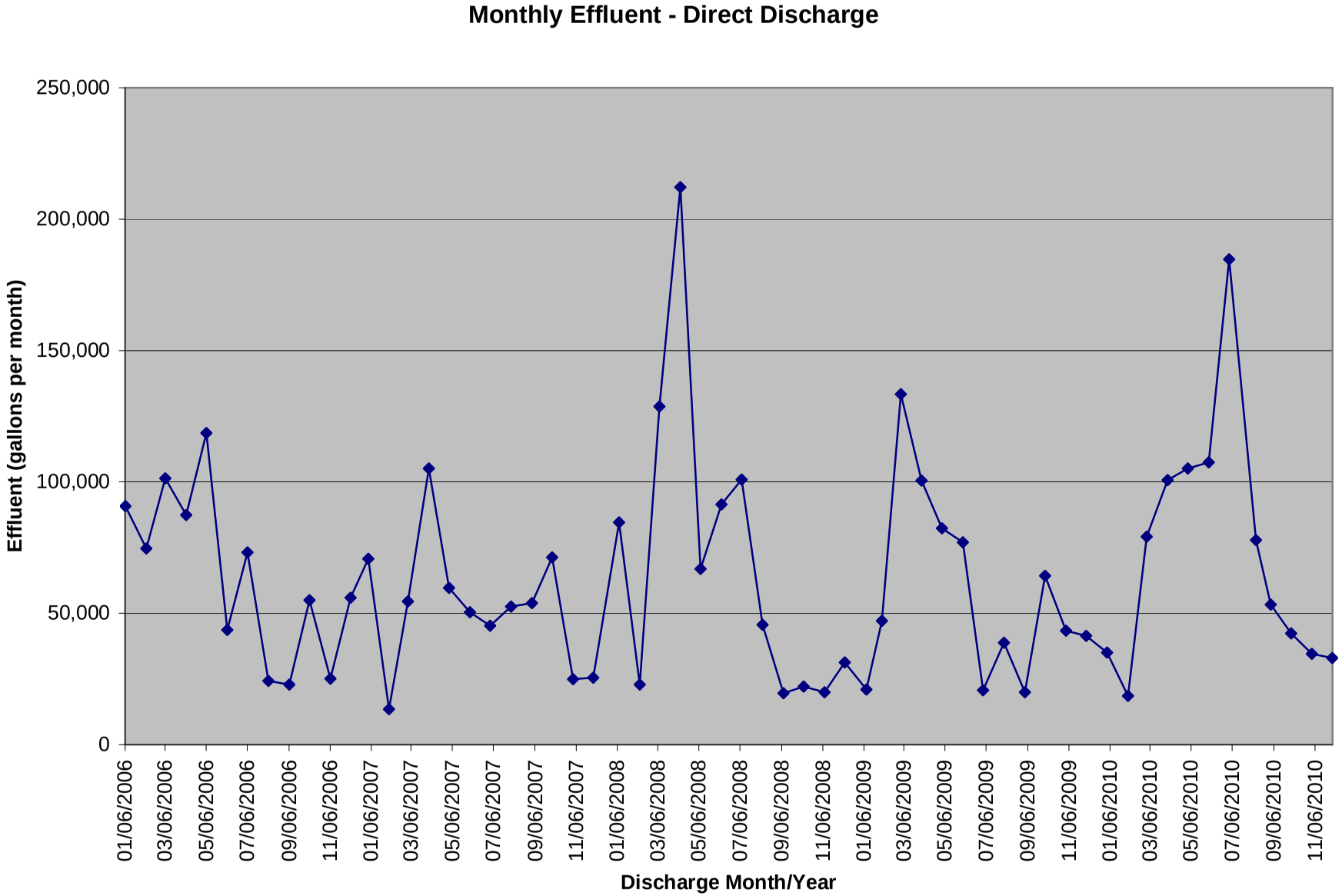



MW-107 Volatile Organic Compounds (VOCs)
Contamination vs. Time
All Other Concentrations (µg/L)
1,1,1-Trichloroethane & Trichloroethene Concentrations (µg/L)
100
80
60
40
20
0
1000
800
600
400
200
0
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
Sample Date
1,1- Dichloroethane (ug/l)
1,1- Dichloroethene (ug/l)
cis-1,2,- Dichloroethene (ug/l)
1,1,2- Trichloroethane (ug/l)
1,1,1- Trichloroethane (ug/l)
Trichloroethene (ug/l)


MW-110 Volatile Organic Compounds (VOCs)
Contamination vs. Time
All Other Concentrations (µg/L)
1,1,1-Trichloroethane & Trichloroethene Concentrations (µg/L)
500
450
400
350
300
250
200
150
100
50
0
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
6/1/06
12/1/06
6/1/07
12/1/07
6/1/08
12/1/08
6/1/09
12/1/09
6/1/10
12/1/10
Sample Date
1,1- Dichloroethane (ug/l)
1,1- Dichloroethene (ug/l)
cis-1,2,- Dichloroethene (ug/l)
1,1,2- Trichloroethane (ug/l)
1,1,1- Trichloroethane (ug/l)
Trichloroethene (ug/l)


MW-113 Volatile Organic Compounds (VOCs)
Contamination vs. Time
All Other Concentrations (µg/L)
1,1,1-Trichloroethane & Trichloroethene Concentrations (µg/L)
0
10
20
30
40
50
60
70
80
0
50
100
150
200
250
300
350
400
450
500
6/1/06
12/1/06
6/1/07
12/1/07
6/1/08
12/1/08
6/1/09
12/1/09
6/1/10
12/1/10
Sample Date
1,1- Dichloroethane (ug/l)
1,1- Dichloroethene (ug/l)
cis-1,2,- Dichloroethene (ug/l)
1,1,2- Trichloroethane (ug/l)
1,1,1- Trichloroethane (ug/l)
Trichloroethene (ug/l)


Groundwater Elevation vs Time
Groundwater Elevation (Feet MSL)
805
800
795
790
785
780
775
1/1/97
1/1/98
1/1/99
1/1/00
1/1/01
1/1/02
1/1/03
1/1/04
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09
1/1/10
1/1/11
Sample Date
MW-102
MW-103
MW-104
MW-107
MW-109
MW-110
MW-111
MW-112
MW-113


Monthly Effluent - Direct Discharge
Effluent (gallons per month)
250,000
200,000
150,000
100,000
50,000
0
01/06/2006
03/06/2006
05/06/2006
07/06/2006
09/06/2006
11/06/2006
01/06/2007
03/06/2007
05/06/2007
07/06/2007
09/06/2007
11/06/2007
01/06/2008
03/06/2008
05/06/2008
07/06/2008
09/06/2008
11/06/2008
01/06/2009
03/06/2009
05/06/2009
07/06/2009
09/06/2009
11/06/2009
01/06/2010
03/06/2010
05/06/2010
07/06/2010
09/06/2010
11/06/2010
Discharge Month/Year

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Appendix F – Site Inspection Checklist

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Site Inspection Checklist

I. SITE INFORMATION

Site name: N. W. Mauthe Superfund Site	**Date of inspection:** 1/28/2011
Location and Region: Appleton, WI, Region 5	**EPA ID:** WID083290981
Agency, office, or company leading the five-year review: WDNR	**Weather/temperature:** Light snow, overcast, 20°F

Remedy Includes: (Check all that apply)

- ✓**Landfill cover/containment**
- ✓**Access controls**
- ✓**Institutional controls**
- Groundwater pump and treatment
- Surface water collection and treatment
- Other_____
- Monitored natural attenuation
- ✓**Groundwater containment**
- Vertical barrier walls

II. INTERVIEWS

1. **O&M site manager** Brian Wayner (Name) O&M Operator (Title) 1/18/2011 (Date)
   Interviewed on phone
   Problems and suggestions provided. See Wayner interview record in Appendix G

2. **O&M staff** ____not applicable_____ _____ _____

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

   Agency City of Appleton Health Department
   Contact Kurt Eggebrecht, (Name) City of Appleton Health Officer (Title) 02/14/2011 (Date) 920-832-6429 (Phone no.)
   No problems or suggestions reported. See Eggebrecht interview record in Appendix G

4. **Other interviews – See Appendix G for interview records**

Oscar Rodriguez, Private Resident at 1410 W Second St, Appleton, WI

Carol Mauthe, Source Property Owner of 725 S. Outagamie St., Appleton, WI

Bill Lecker and Tim McGuire, City of Appleton Parks and Recreation Department, Appleton, WI

Rick Drewa, Options in Housing, LLC, Property Owner of 715 S. Outagamie St., Appleton, WI

David Lease, Facilities Manager for Miller Electric, Property Owner of 1515 W. Melvin St, Appleton, WI

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

1. **O&M Documents**
   - O&M manual ✓**Readily available** Up to date N/A
   - As-built drawings Readily available Up to date N/A
   - Maintenance logs ✓**Readily available** ✓**Up to date** N/A

   Remarks The O&M Manual is located at the WDNR Oshkosh office and in need of updating. O&M checklists created by O&M operator are present on site, readily available and up to date. Construction drawings are located on-site and at the WDNR Oshkosh office. Final as-builts were not generated by CH2M Hill.

2. **Site-Specific Health and Safety Plan** ✓**Readily available** ✓**Up to date** N/A
   Contingency plan/emergency response plan ✓**Readily available** ✓**Up to date** N/A
   Remarks_____

3. **O&M and OSHA Training Records** Readily available ✓**Up to date** N/A
   Remarks located at OMNNI office

4. **Permits and Service Agreements**
   - Air discharge permit Readily available Up to date ✓**N/A**
   - Effluent discharge ✓**Readily available** ✓**Up to date** N/A
   - Waste disposal, POTW ✓**Readily available** ✓ **Up to date** N/A
   - Other permits_____ Readily available Up to date ✓**N/A**

   Remarks effluent discharge and POTW permit are the same

5. **Gas Generation Records** Readily available Up to date ✓ **N/A**
   Remarks_____

6. **Settlement Monument Records** Readily available Up to date ✓**N/A**
   Remarks_____

7. **Groundwater Monitoring Records** ✓**Readily available** ✓**Up to date** N/A
   Remarks Need to start a binder on-site that includes a site map along with discharge monitoring and groundwater monitoring data.

8. **Leachate Extraction Records** Readily available Up to date ✓**N/A**
   Remarks_____

9. **Discharge Compliance Records**
   - Air Readily available Up to date ✓ **N/A**
   - Water (effluent) ✓**Readily available** ✓**Up to date** N/A

   Remarks_____

10. **Daily Access/Security Logs** Readily available Up to date ✓**N/A**
    Remarks_____

IV. O&M COSTS

1. **O&M Organization**

State in-house ✓**Contractor for State**
PRP in-house Contractor for PRP
Federal Facility in-house Contractor for Federal Facility
Other Utilities and O&M costs beyond general contract are separate state costs.

2. **O&M Cost Records (Routine)**

Readily available ✓**Up to date**
✓**Funding mechanism/agreement in place**
Original O&M cost estimate_____

WDNR fiscal year costs for **general O&M contract** during review period
(Note: Costs detailed below do not include WDNR salaries, utilities or "beyond routine O&M costs")

From July 1, 2005 to June 30, 2006 (FY06)….. $36,391.50

From July 1, 2006 to June 30, 2007 (FY07)…... $21,558.28

From July 1, 2007 to June 30, 2008 (FY08)…...$27,461.83

From July 1, 2008 to June 30, 2009 (FY09)……$24,075.14

From July 1, 2009 to June 30, 2010 (FY10)…… $22,580.85

From July 1, 2010 to December 31, 2010 (1/2 FY 11)…..$11,408.47

WDNR fiscal year costs for **utilities and "beyond routine O&M costs"**

Fiscal Year 2006						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$286.54	$2,392.53	$2,196.58	$1,202.72	$26,045.25	$3,301.79	$938.16
Fiscal Year 2007						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$290.11	$1,902.10	$1,876.43	$2,820.20	$60,168.41	$588.00	$1,679.16
Fiscal Year 2008						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$320.39	$1,787.45	$1,844.76	$3,161.07	$369.76	$315.00	$7,650.64
Fiscal Year 2009						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$338.70	$1,721.99	$2,007.59	$2,864.25	$0.00	$1,281.00	$24,831.52
Fiscal Year 2010						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$370.22	$1,653.65	$1,224.16	$2,674.51	$0.00	$835.00	$5,930.90
Fiscal Year 2011						
Phone	*Electric*	*Gas*	*Storm Water*	*Prof Serv Contract*	*POTW Sampling*	*Above O&M*
$253.04	$786.37	$399.88	$2,029.50	$0.00	$0.00	$0.00

V. ACCESS AND INSTITUTIONAL CONTROLS ✓**Applicable** N/A

A. Fencing

1. Fencing damaged Location shown on site map ✓**Gates secured** N/A
Remarks Chain link fence installed at Mauthe property in 1991 and/or 1996 in good condition. Purpose of site fence unclear since clay cap installed and treatment building locked. However, fence serves as visual marker to spur notice to coordinate with WDNR on any utility work. Gate for fence installed by WDNR in June 2005. If fence deteriorates or is damaged, consider removing fence with EPA approval. The wooden fence present in the neighborhood was installed by EPA during construction; however, it is not required as part of the remedy and maintenance is the responsibility of the property owners.

B. Other Access Restrictions

1. **Signs and other security measures** Location shown on site map N/A
Remarks No signs posted. No building identification posted.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented	Yes	✓**No**	N/A
Site conditions imply ICs not being fully enforced	Yes	✓**No**	N/A

Type of monitoring (*e.g.*, self-reporting, drive by) O&M operator and APR observations
Frequency daily site visits for APR and bimonthly O&M operator (minimum)
Responsible party/agency O&M contractor, currently OMNNI
Contact Brian Wayner O&M operator 920-735-6900
Name Title Phone no.

Reporting is up-to-date	Yes	No	✓**N/A**
Reports are verified by the lead agency	Yes	No	✓**N/A**
Specific requirements in deed or decision documents have been met	Yes	No	N/A
Violations have been reported	Yes	No	✓**N/A**

Other problems or suggestions:
Remarks: Clay cap and fencing are inspected and maintained by O&M operator, however, it is unknown if the chain link fence at the Mauthe property is an IC for the purpose of preventing access to clay cap. Post RA reports do not include discussion of ICs (e.g. whether in place or documented). Future O&M reports will reference April 2010 entry on GIS Registry for ICs. Formal restrictions to properties still needed.

2. **Adequacy** ICs are adequate ✓**ICs are inadequate** N/A
Remarks ICs being evaluated. See remarks under C.1. above.

D. General

1. **Vandalism/trespassing** Location shown on site map ✓**No vandalism evident**
Remarks

2. **Land use changes on site**
Remarks Site utilized as satellite work station for APR under Cooperative Agreement with WDNR

3. **Land use changes off site** ✓**N/A**
Remarks land use at all neighboring properties same as time of remedy in 1995/1996

VI. GENERAL SITE CONDITIONS

A. Roads Applicable **✓ N/A**

1. **Roads damaged** Location shown on site map Roads adequate N/A
Remarks_____
_____

B. Other Site Conditions

Remarks _____
_____

VII. LANDFILL COVERS **✓Applicable** N/A

A. Landfill Surface

1. **Settlement** (Low spots) Location shown on site map **✓Settlement not evident**
Areal extent_____ Depth__ ___
Remarks_____
_____

2. **Cracks** Location shown on site map **✓ Cracking not evident**
Lengths_____ Widths_____ Depths_____
Remarks_____
_____

3. **Erosion** Location shown on site map **✓ Erosion not evident**
Areal extent_____ Depth_____
Remarks_____
_____

4. **Holes** Location shown on site map **✓ Holes not evident**
Areal extent_____ Depth_____
Remarks_____
_____

5. **Vegetative Cover** **✓ Grass** Cover properly established **✓No signs of stress**
✓ Trees/Shrubs (indicate size and locations on a diagram)
Remarks No signs of stress to vegetative grass cover over clay cap. Presence of trees assumed to be aesthetic only. Any visible stress to trees likely due to inadequate precipitation and/or compacted clay cap. Any stressed tree is chipped and mulched on-site.

6. **Alternative Cover (armored rock, concrete, etc.)** **✓ N/A**
Remarks_____
_____

7. **Bulges** Location shown on site map **✓ Bulges not evident**
Areal extent_____ Height_____
Remarks_____
_____

8. **Wet Areas/Water Damage** ✓ **Wet areas/water damage not evident**

Wet areas	Location shown on site map	Areal extent_____
Ponding	Location shown on site map	Areal extent_____
Seeps	Location shown on site map	Areal extent_____
Soft subgrade	Location shown on site map	Areal extent_____

Remarks_____

9. **Slope Instability** Slides Location shown on site map ✓**No evidence of slope instability**
Areal extent_____
Remarks_____

B. Benches Applicable ✓ **N/A**

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** Location shown on site map N/A or okay
Remarks_____

2. **Bench Breached** Location shown on site map N/A or okay
Remarks_____

3. **Bench Overtopped** Location shown on site map N/A or okay
Remarks_____

C. Letdown Channels Applicable ✓ **N/A**

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** Location shown on site map No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** Location shown on site map No evidence of degradation
Material type_____ Areal extent_____
Remarks_____

3. **Erosion** Location shown on site map No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** Location shown on site map No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____

5. **Obstructions** Type_____ No obstructions
Location shown on site map Areal extent_____
Size_____
Remarks_____
_____

6. **Excessive Vegetative Growth** Type_____
No evidence of excessive growth
Vegetation in channels does not obstruct flow
Location shown on site map Areal extent_____
Remarks_____
_____

D. Cover Penetrations ✓**Applicable** N/A

1. **Gas Vents** Active Passive
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance
✓**N/A**
Remarks_____
_____

2. **Gas Monitoring Probes**
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance ✓ **N/A**
Remarks_____
_____

3. **Monitoring Wells** (within surface area of landfill)
✓**Properly secured/locked or fenced** ✓**Functioning** ✓**Routinely sampled** ✓**Good condition**
Evidence of leakage at penetration Needs Maintenance N/A
Remarks The flush mount well covers are secured with bolts and monitoring well PVC pipe is capped with orange screw-on caps with the potential to be locked.

4. **Leachate Extraction Wells**
Properly secured/locked Functioning Routinely sampled Good condition
Evidence of leakage at penetration Needs Maintenance ✓**N/A**
Remarks_____
_____

5. **Settlement Monuments** Located Routinely surveyed ✓**N/A**
Remarks_____
_____

E. Gas Collection and Treatment Applicable ✓ **N/A**

1. **Gas Treatment Facilities**
Flaring Thermal destruction Collection for reuse
Good condition Needs Maintenance
Remarks_____
_____

2. **Gas Collection Wells, Manifolds and Piping**
Good condition Needs Maintenance
Remarks_____
_____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
Good condition Needs Maintenance N/A
Remarks_____
_____

F. Cover Drainage Layer Applicable ✓ **N/A**

1. **Outlet Pipes Inspected** Functioning N/A
Remarks_____
_____

2. **Outlet Rock Inspected** Functioning N/A
Remarks_____
_____

G. Detention/Sedimentation Ponds Applicable ✓ **N/A**

1. **Siltation** Areal extent_____ Depth_____ N/A
Siltation not evident
Remarks_____
_____

2. **Erosion** Areal extent_____ Depth_____
Erosion not evident
Remarks_____
_____

3. **Outlet Works** Functioning N/A
Remarks_____
_____

4. **Dam** Functioning N/A
Remarks_____
_____

H. Retaining Walls Applicable ✓ **N/A**

1. **Deformations** Location shown on site map Deformation not evident
Horizontal displacement_____ Vertical displacement_____
Rotational displacement_____
Remarks_____
_____

2. **Degradation** Location shown on site map Degradation not evident
Remarks_____
_____

I. Perimeter Ditches/Off-Site Discharge Applicable ✓ **N/A**

1. **Siltation** Location shown on site map Siltation not evident
Areal extent_____ Depth_____
Remarks_____
_____

2. **Vegetative Growth** Location shown on site map N/A
Vegetation does not impede flow
Areal extent_____ Type_____
Remarks_____
_____

3. **Erosion** Location shown on site map Erosion not evident
Areal extent_____ Depth_____
Remarks_____
_____

4. **Discharge Structure** Functioning N/A
Remarks_____
_____

VIII. VERTICAL BARRIER WALLS Applicable ✓ **N/A**

1. **Settlement** Location shown on site map Settlement not evident
Areal extent_____ Depth_____
Remarks_____
_____

2. **Performance Monitoring** Type of monitoring_____
Performance not monitored
Frequency_____ Evidence of breaching
Head differential_____
Remarks_____
_____

IX. GROUNDWATER/SURFACE WATER REMEDIES ✓ **Applicable** N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ✓ **Applicable** N/A

1. Pumps, Wellhead Plumbing, and Electrical

Good condition ✓**All required wells properly operating** ✓ **Needs Maintenance** N/A

Remarks Manholes #1 & #2 had disconnect switch wires corroded and were removed. Manhole #1 & #2 pumps need replacing. Damage due to hydrogen sulfide and sulfuric acid. Pumps in manholes originals from EPA installation.

2. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances

✓**Good condition** Needs Maintenance

Remarks_____
_____

3. Spare Parts and Equipment

✓**Readily available on internet** Good condition Requires upgrade Needs to be provided

Remarks No spare parts for extraction on site. Local plumber accessible and parts readily accessible on internet.

B. Surface Water Collection Structures, Pumps, and Pipelines Applicable **✓ N/A**

1. Collection Structures, Pumps, and Electrical

Good condition Needs Maintenance

Remarks_____

_____

2. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances

Good condition Needs Maintenance

Remarks_____

_____

3. Spare Parts and Equipment

Readily available Good condition Requires upgrade Needs to be provided

Remarks_____

_____

C. Treatment System **✓ Applicable** N/A

1. **Treatment Train** (Check components that apply)
   Metals removal Oil/water separation Bioremediation
   Air stripping Carbon adsorbers
   Filters_____
   Additive (e.g., chelation agent, flocculent)
   Others Not utilized – direct discharge to POTW in 2006.
   Good condition Needs Maintenance
   Sampling ports properly marked as sample ports and **✓functional**
   ✓Sampling/maintenance log displayed and up to date
   ✓Equipment properly identified
   Quantity of groundwater removed annually average of 750,000 gallons influent removed annually from 2006-2010.
   Quantity of surface water treated annually none
   Remarks Ferrous sulfate treatment equipment needs decommissioning. Need back-up treatment plan if cannot meet discharge limits without treatment. There are more effective and cost efficient treatment options available. Tanks in good condition for storage capacity.

2. **Electrical Enclosures and Panels** (properly rated and functional)
   N/A **✓ Good condition** Needs Maintenance
   Remarks_____
   _____

3. **Tanks, Vaults, Storage Vessels**
   N/A **✓ Good condition** **✓ Proper secondary containment** Needs Maintenance
   Remarks secondary containment is the building

4. **Discharge Structure and Appurtenances**
   N/A **✓ Good condition** Needs Maintenance
   Remarks discharge is single pipe lateral to City sewer

5. **Treatment Building(s)**
N/A ✓ **Good condition** Needs repair
Remarks Building repairs include replaced doors, painted exterior overhead & man doors, upgraded exterior lights, replaced four heaters in the treatment building and two heaters in the truck bay and the A/C unit is scheduled for replacement in summer 2011.. Repairs tracked on checklist. Also installed flow totalizers on influent lines.

6. **Monitoring Wells** (pump and treatment remedy)
✓ **Properly secured/locked** ✓ **Functioning** ✓ **Routinely sampled** ✓ **Good condition**
✓ **All required wells located** Needs Maintenance N/A
Remarks

D. Monitoring Data

1. Monitoring Data
Is routinely submitted on time - Yes ✓ **Is of acceptable quality**

2. Monitoring data suggests:
✓ **Groundwater plume is effectively contained** ✓**Contaminant concentrations are declining**
exceptions: chromium and VOCs at MW-107 are relatively stable; chromium at new wells, MW-109-MW-113 appear unstable likely due to fluctuations in precipitation;

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
Properly secured/locked Functioning Routinely sampled Good condition
All required wells located Needs Maintenance ✓ **N/A**
Remarks_____
_____

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).
According to the ROD, signed 3/31/1994, the remedy selected is intended to "…contain and/or control groundwater contamination with ultimate compliance with groundwater ARARs… installation of foundation drain systems…to prevent seepage of contaminated water into the buildings…institutional controls… that are intended to prevent access, excavation, disturbance of the newly constructed cap, future soil excavation in the railroad corridor for areas in the corridor where contaminated soils will remain and installation of drinking water wells…" The existing containment system is effectively containing the contaminated groundwater, however, ultimate compliance with groundwater cleanup goals does not appear achievable in a reasonable period of time. Installation of the foundation drain systems appears to have prevented further seepage of contaminated water into basements.

B.	Adequacy of O&M
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. The collected groundwater is currently direct discharged to the POTW under permit without pre-treatment. Alternative options to meet the intended RA goals are currently being evaluated. O&M of the collection trenches is proving to be difficult. The WDNR is evaluating options for an exit strategy for the foundation drain systems and collection trenches, specifically the West Trench, but do not have the capability to sample water from individual trenches or manually disconnect individual trenches. The WDNR is also evaluating options for maintenance on manhole no. 2. The inability to sample individual trenches or temporarily shut down collection trenches is adding to the difficulty. WDNR annually verifies property ownership and individual access agreements are maintained. Long-term environmental easements are necessary to eliminate the need for access agreements and to assure notification of the system to prospective purchasers.

C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. Corrosion within manhole no. 2, if not addressed, will result in further degradation of the pump and may impact the overall collection system. The pumps in manholes #1 & #2 need to be replaced.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. WDNR contracted with AECOM to prepare a sustainable cleanup guide for Wisconsin and also a site-specific optimization analysis at the Mauthe site. These documents are currently in draft and will be evaluated once finalized.

Appendix G – Interview Records

Brian Wayner, OMNNI Associates, Inc.
Oscar Rodriguez, Private Resident at 1410 W Second St, Appleton, WI
Carol Mauthe, Source Property Owner of 725 S. Outagamie St., Appleton, WI
Bill Lecker and Tim McGuire, City of Appleton Parks and Recreation Department, Appleton, WI
Rick Drewa, Options in Housing, LLC, Property Owner of 715 S. Outagamie St., Appleton, WI
Kurt Eggebrecht, City of Appleton Health Officer and Tim Mirkes, City of Appleton Health Sanitarian
Carol Mauthe and Mark Mauthe, Source Property Owner of 725 S. Outagamie St., Appleton, WI and son
David Lease, Facilities Manager for Miller Electric, Property Owner of 1515 W. Melvin St, Appleton, WI

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INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site	**EPA ID No.: WID083290981**	
Subject: Five Year Review Interview	**Time: 1:40-2:50 PM**	**Date: 1/18/11**
Type: ✓Telephone Visit Other **Location:**	Incoming Outgoing	

Contact Made By:

Name: Jennifer Borski	**Title: Adv. Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:

Name: Brian Wayner	**Title: Engineer**	**Organization: OMNNI Associates**
Telephone No: 920-735-6900 **Fax No: 902-830-6100** **E-Mail Address: brian.wayner@omnni.com**	**Street Address: One System Drive** **City, State, Zip: Appleton, WI 54914**	

Summary Of Conversation

The following questions were asked by Borski and answered by Wayner:

In 2006 we switched from batch treatment to direct discharge without treatment. What issues / overall concerns have you, as O&M operator, noted regarding the direct discharge to the sanitary sewer?

The treatment system has not been used since 2006 so if an exceedance [of permit limitations] is verified and the city requires treatment, we are not in a position to start the system immediately. The condition of the connection between the neighbors and the collection trench and condition of their sump pumps and drains is unknown as is the capacity. The time frame to address any violation of permit is unknown.

Since 2006, maintenance needs of the on-site building have increased, including upgrading exterior doors for heating efficiency, replacing burnt out exterior bulbs with LED fixtures and lights, exterior painting up-keep, replacement of ice-breakers on roof, replacing cracked heating units, replacing failed A/C, etc. Regarding the treatment building, what other failures or complications do you anticipate may occur in the next five years?

Snowguards do not seem to stay on the roof. Heavy snowfall can then impact gutters and downspouts. Interior lights life expectancy unknown and in place about 10 yrs. Maintenance and utility costs a concern. Cross-connection valve needs annual inspection by certified plumber and report sent to DCOMM but will need to be rebuilt. Purpose of it is unknown. Is it still a requirement under current operations? Heater / A/C will need to be replaced. Water heater is 10+ yrs old and life expectancy is usually around 10-12 yrs. All heaters in treatment building replaced. Two of three heaters in truck bay need replacing, anticipate third will need to be replaced as well. Without occupancy by Appleton Parks & Recreation (APR) Department, heating of the truck bay is not necessary if we remove the water line. Truck bay can be heated for APR with two heaters – may not need any heat. Third heater will likely fail in near future. Ceiling fans need to be cleaned but need a scissors truck with fall protection to reach them. Blades are white and coated in dust and grime. Compressor is not utilized and could be sold. Roof is fine with exception of snow guards. Wiring of control panel is fine but "contacts" may go at some point. Old technology. Should be updated with telemetry.

In 2006, we identified that the pump in manhole no. 2 needs to be replaced prior to failure, along with associated piping and connections. The piping and connections were replaced in November 2008. Since replacement of the pump also requires H_2S monitoring and WDNR resources are limited, this has not yet occurred but must be addressed. In addition to the needs already identified in manhole no. 2, what other failures or complications do you anticipate may occur with the collection system in the next five years?

Manhole No 1 pump needs to be replaced as well. H_2S present in both manholes so explosion-proof pumps needed. Odor issue remains. We replaced wiring and piping. Manhole cover at no. 2 may need maintenance and/or replacement. A support was put in around the time of the wiring. Not a concern with the HDPE piping for collection.

Continued on page 2 of 2

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site	**EPA ID No.: WID083290981**	
Subject: Five Year Review Interview	**Time: 1:40-2:50 PM**	**Date: 1/18/11**
Type: ✓**Telephone** Visit Other **Location:**	Incoming Outgoing	

Contact Made By:

Name: Jennifer Borski	**Title: Adv. Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:

Name: Brian Wayner	**Title: Engineer**	**Organization: OMNNI Associates**
Telephone No: 920-735-6900 **Fax No: 902-830-6100** **E-Mail Address: brian.wayner@omnni.com**	**Street Address: One System Drive** **City, State, Zip: Appleton, WI 54914**	

Summary Of Conversation

Continued from Page 1 of 2

Any issues anticipated with the collection system within the treatment building? No issue with current operation.

Since installation of the source area wells in 2006, MW-109 through MW-113, it is clear that hexavalent chromium remains in groundwater at the source area well above the ARAR. In addition, cyanide is present at MW-112. Based on your knowledge of the site, what supplemental remedy or remedies do you recommend the WDNR consider to more aggressively address this plume?

Excavation – unknown extent followed by sump with on-site treatment. Wells are shallow. Very high concentrations found in groundwater at Miller parking lot which was supposed to be the edge. Demolish building and excavate on-site soils. Phytoremediation. Clay environment would not be conducive for injection and limits remedial options. Cut-off walls potentially.

What is your evaluation of the <u>chromium</u> trends in groundwater at MW-110, MW-112 & MW-113 from 2007 – present?

Likely viewing variability in chrome based on precipitation and water elevations as opposed to removal of chromium. Variables are limited – same sampler, same sample method, same lab used over this time period.

What is your evaluation of the trends in <u>VOCs</u> in groundwater at MW-110, MW-112 & MW-113 from 2007 – present?

Same comment as above (for chromium). When chromium concentrations increase, all parameters go up, when chromium concentrations go down, all parameters go down. Indicative of precipitation issue.

How do you believe the security and maintenance of the facility have benefitted in result of the Cooperative Agreement between WDNR and City of Appleton Parks and Recreation Department?

Increased. Someone on site nearly daily. Otherwise, contractor would be there only twice a month. Doug (now retired) worked on lawn on weekends. Nick calls Wayner right away when lights are out on control panel.

Have you noted any issues with the Cooperative Agreement?

No – APR keeps up maintenance of grass and snow very well.

Do you have any other observations or recommendations?

Big concerns are treatment system if we need it again and time to achieve ARARs. No As-Builts is challenging when trouble-shooting. Currently a good network of plumbers and electricians on call with OMNNI that have become familiar with the site and can assist with quick trouble-shooting. Turnover of O&M consultant with required bidding will always be an issue. Driveway likely not seal-coated but not needed. Fence and wells in good condition.

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview		**Time: 1:15 PM** **Date: 2/1/2011**
Type: ✓ **Telephone** Visit Other **Location of Visit:**		**Incoming** Outgoing
Contact Made By:		
Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**
Individual Contacted:		
Name: Oscar Rodriguez	**Title: Private Resident**	**Organization: N/A**
Telephone No: 920-205-3276 **Fax No: N/A** **E-Mail Address: N/A**		**Street Address: 1410 W Second St** **City, State, Zip: Appleton, WI 54914**

Summary Of Conversation

Rodriguez contacted Borski with questions regarding the site access agreement sent to his home. Rodriguez provided Borski with his phone number and stated that he purchased the property in about June 2009. Rodriguez stated he was not informed of the contamination, the location of the collection trench or that his sump system is tied into the collection trench prior to purchasing the property. Rodriguez learned of the contamination historically in the neighborhood through a relative of a friend but assumed it was since cleaned up. Rodriguez stated he has had problems with damp basement walls about three feet up from the bottom. Damp plaster and insulation needed to be removed from the north and west sides of the basement and discarded. Rodriguez stated that the walls on the northeast corner are also wet. Rodriguez had a contractor come out to the property and drill a hole in the basement floor. The contractor apparently drilled down about four feet and no water came in. Rodriguez and his son placed fill and plastic around the home to slope drainage away from the house. He also replaced the roof. He is now running a dehumidifier and the moisture seems to be gone. Rodriguez stated that he does not have a sump crock in his basement, only a floor drain. Borski will arrange for the O&M contractor to visit Rodriguez and look into the issue of water in the basement historically. Rodriguez stated he is not worried about the contamination as long as it is being taken care of. Rodriguez stated he will sign the access agreement right away and put it in the mail.

Rodriguez called back at 1:50 PM after speaking with his Realtor. The Realtor stated he did not know the property was contaminated. Rodriguez recalled that he believes, but is not certain, the previous property owners lost the home to foreclosure. This adds emphasis to the concern for notifying potential purchasers of the remaining contamination. Borski will continue to follow-up with EPA to determine if the entry as a contaminated property on the RR Sites Map in April 2010 is adequate notice. Borski will also pursue a permanent environmental easement for properties that include the collection trenches and monitoring wells.

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview	**Time: 3:30 PM**	**Date: 2/14/2011**
Type: Telephone Visit ✓ **Other** **Location of Visit: Appleton City Hall, Health Dept.**		Incoming Outgoing

Contact Made By:		
Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:		
Name: Carol Mauthe	**Title: Site Property Owner**	**Organization: N/A**
Name: Mark Mauthe	**Title: Son of Property Owner**	**Organization: N/A**

Telephone No: 920-734-0845 **Fax No: N/A** **E-Mail Address: N/A**	**Street Address: 941 C Southwest Ct** **City, State, Zip: Appleton, WI 54915**

Summary Of Conversation

After a phone interview by Borski of C. Mauthe, Borski recommended a face-to-face meeting to discuss the site. C. Mauthe attended with her son, M. Mauthe. Borski met the Mauthes at Appleton City Hall in the Health Department. Kurt Eggebrecht, Health Officer, and Tim Mirkes, Sanitarian, also attended.

Borski stated that the Record of Decision called for a "containment system" to be installed and summarized the work performed by EPA between 1995 and 1998 (e.g. excavation, installation of collection trenches, remediation building, etc.). Borski also shared the results of OMNNI's March 2007 *Simulation of Solute Movement at a Chromium-Contaminated Site*. In summary, the containment system installed by EPA is projected to need to operate for more than 500 years. C. Mauthe and M. Mauthe expressed that N. W. Mauthe passed away in 1988 and they had "no idea the property was not cleaned up by EPA". C. Mauthe and M. Mauthe were also not aware of the study performed by OMNNI or the results.

Borski then reviewed the existing access agreement with C. Mauthe that expires December 31, 2014. Due to the length of time the containment system is projected to run, Borski recommended C. Mauthe consider working out an environmental easement with WDNR and provided a copy of an easement finalized for another project as an example. C. Mauthe and M. Mauthe left the meeting at 4:10 PM and planned to discuss their options and get back to Borski.

[**UPDATE FEBRUARY 25, 2011** – M. Mauthe contacted Borski by phone and left a voice mail message to proceed with drafting an easement.]

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview		**Time: 9:30 AM** **Date: 2/2/2011**
Type: ✓ **Telephone** Visit Other **Location of Visit:**		Incoming Outgoing
Contact Made By:		
Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**
Individual Contacted:		
Names: Bill Lecker and Tim McGuire	**Titles: Director of Parks & Recreation Department and Park Foreman**	**Organization: City of Appleton**
Telephone No: 920-832-3915 **Fax No: N/A** **E-Mail Address: N/A**	**Street Address: 100 N Appleton St** **City, State, Zip: Appleton, WI 54911**	

Summary Of Conversation

The following questions were asked by Borski and answered by Lecker and McGuire:

Do you feel well informed about the activities and progress of the project? yes

Are there any concerns for safety at the facility by Appleton staff either by the collection process or general site maintenance? No pretty comfortable

What type of training is provided to Appleton Parks & Recreation Staff that work out of the facility? For example, any OSHA training? 8hr general city training. CPR & First Aid done. Regular member stationed with any short-term workers.

Are you aware of any community concerns? No

What types of issues or concerns have Appleton staff reported to the O&M consultant since the start of the Cooperative Agreement? Heaters in garage bay. Never any collection system issues. No switches or lights blinking.

Do you have any comments/suggestions/recommendations? Dean Gazza question. Facilities Grounds & Const responsible for all truck maintenance. On site staff now under Dean, not Bill. Curious on long-term prognosis. City willing to discuss option to possibly take over the building if and when that time comes. Works well as a satellite work station. Our needs are always changing.

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview		**Time: AM** **Date: 2/9/11**
Type: ✓ **Telephone** Visit Other **Location of Visit:**		Incoming Outgoing
Contact Made By:		
Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**
Individual Contacted:		
Name: Rick Drewa	**Title: President**	**Organization: Options In Housing, LLC**
Telephone No: 920-735-5590 **Fax No: N/A** **E-Mail Address: N/A**		**Street Address: 1007 E Glendale Ave** **City, State, Zip: Appleton, WI 54911**

Summary Of Conversation

Borski contacted Drewa after learning the property, 715 South Outagamie St., is now owned by Options in Housing, LLC. Drewa was not aware of the N. W. Mauthe Superfund site or the presence of W-2 on his property when purchased. Borski summarized the activities at the site and requested Drewa sign an access agreement for continued monitoring of W-2. Drewa stated that he has a contract or agreement with the Department of Corrections and will routinely be changing tenants. Drewa requested a copy of the July 2008 letter issued to the city of Appleton regarding the safety of employees operating at the site. Drewa intends to share the letter with DoC to maintain his contract due to the proximity to the Superfund site. Drewa had no other concerns.

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview	**Time: 3:00 PM**	**Date: 2/14/2011**
Type: Telephone Visit ✓ **Other** **Location of Visit: Appleton City Hall, Health Dept.**		Incoming Outgoing

Contact Made By:

Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:

Name: Kurt Eggebrecht	**Title: Health Officer**	**Organization: City of Appleton**
Name: Tim Mirkes	**Title: Sanitarian**	**Organization: City of Appleton**

Telephone No: 920-832-6429 **Fax No: 920-832-5853** **E-Mail Address: kurt.eggebrecht@appleton.org** **tim.mirkes@appleton.org**	**Street Address: 100 N. Appleton St.** **City, State, Zip: Appleton, WI 54911**

Summary Of Conversation

Borski met Eggebrecht and Mirkes at Appleton City Hall in the Health Department. Borski provided an update on the following items:

- Cooperative Agreement with Appleton Parks and Recreation Department (2008 & 2010);
- Change in property ownership at 715 S. Outagamie and 1400 and 1410 W. Second St since the last five-year review. Owners of 715 S. Outagamie and 1410 S. Second were not aware of the N. W. Mauthe Superfund Site in the neighborhood or the presence of a monitoring well (715 S. Outagamie) or drain tile tied into collection system (1400 W. Second) on their property prior to purchase.
- Placement of source site and all properties with the collection trench placed on GIS Registry layer of the RR Sites Map on internet in April 2010;
- Direct discharge of collected water occuring since July 2006 under permit by the city;
- Installation of piezometers by OMNNI in 2006;
- March 2010 concentrations in OMNNI monitoring wells in former source area;
- Plans to replace sump pumps in both manhole no. 1 and no. 2;
- Water damage in basement of 1410 W. Second St. that does not appear to be related to the containment system or groundwater but more investigation is needed.

Mirkes stated that there have been no public concerns regarding the property. In the past five years, the Health Department received one inquiry from a potential buyer of 1400 W. Second St. who Health refered to Borski. Borski did speak with the potential buyer prior to sale.

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview	**Time: 3:30 PM**	**Date: 2/14/2011**
Type: Telephone Visit ✓ **Other** **Location of Visit: Appleton City Hall, Health Dept.**		Incoming Outgoing

Contact Made By:		
Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:		
Name: Carol Mauthe	**Title: Site Property Owner**	**Organization: N/A**
Name: Mark Mauthe	**Title: Son of Property Owner**	**Organization: N/A**

Telephone No: 920-734-0845 **Fax No: N/A** **E-Mail Address: N/A**	**Street Address: 941 C Southwest Ct** **City, State, Zip: Appleton, WI 54915**

Summary Of Conversation

After a phone interview by Borski of C. Mauthe, Borski recommended a face-to-face meeting to discuss the site. C. Mauthe attended with her son, M. Mauthe. Borski met the Mauthes at Appleton City Hall in the Health Department. Kurt Eggebrecht, Health Officer, and Tim Mirkes, Sanitarian, also attended.

Borski stated that the Record of Decision called for a "containment system" to be installed and summarized the work performed by EPA between 1995 and 1998 (e.g. excavation, installation of collection trenches, remediation building, etc.). Borski also shared the results of OMNNI's March 2007 *Simulation of Solute Movement at a Chromium-Contaminated Site*. In summary, the containment system installed by EPA is projected to need to operate for more than 500 years. C. Mauthe and M. Mauthe expressed that N. W. Mauthe passed away in 1988 and they had "no idea the property was not cleaned up by EPA". C. Mauthe and M. Mauthe were also not aware of the study performed by OMNNI or the results.

Borski then reviewed the existing access agreement with C. Mauthe that expires December 31, 2014. Due to the length of time the containment system is projected to run, Borski recommended C. Mauthe consider working out an environmental easement with WDNR and provided a copy of an easement finalized for another project as an example. C. Mauthe and M. Mauthe left the meeting at 4:10 PM and planned to discuss their options and get back to Borski.

[**UPDATE FEBRUARY 25, 2011** – M. Mauthe contacted Borski by phone and left a voice mail message to proceed with drafting an easement.]

INTERVIEW RECORD

Site Name: N. W. Mauthe Superfund Site		**EPA ID No.: WID083290981**
Subject: Five Year Review Interview	**Time: 1:45 PM**	**Date: 3/30/2011**
Type: ✓ **Telephone** Visit Other **Location of Visit:**		Incoming Outgoing

Contact Made By:

Name: Jennifer Borski	**Title: Hydrogeologist, Proj. Mgr.**	**Organization: WDNR**

Individual Contacted:

Name: David Lease	**Title: Facility Manager**	**Organization: Miller Electric**
Telephone No: 920-735-4140 **Fax No: 920-831-4632** **E-Mail Address: dlease@millerwelds.com**	**Street Address: 1635 W Spencer St** **City, State, Zip: Appleton, WI 54914**	

Summary Of Conversation

Borski summarized the five-year review process and site inspection performed in January 2011. At the request of Lease, Borski reviewed the cooperative agreement with the Appleton Parks and Recreation Department as well as maintenance performed on the treatment facility over the past five years and potential issues with the collection system (e.g. manhole pump failure, residential drain tiles connected to collection system only, etc.) Lease stated he has had no issues regarding the site. Lease noted that Miller is a passive observer of the activities since their drainage system is not tied into the collection system and no activities are planned on Miller property at this time beyond maintenance of the collection system, manhole no. 1 and sampling of MW-101.

Borski informed Lease of cigarette butts found on the cement at manhole no. 1 during site inspection in January and the need to avoid smoking near the manhole or disposing of used cigarette butts at the manhole. Lease noted that there is a “no smoking on campus” policy and the presence of cigarette butts indicates there has been smoking on the premises. Lease stated he will increase surveillance of the parking lot area and address the smoking issue. Lease stated that he was initially concerned about the site when he received the notice of the five-year review but has no concerns or issues at this time.

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Appendix H – City of Appleton Cooperative Agreement

Co-op Agreement 2010

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Borski, Jennifer - DNR

From: Panzer, Timothy J - DNR
Sent: Friday, June 04, 2010 12:19 PM
To: Borski, Jennifer - DNR
Subject: RE: Reply requested: status of Cooperative Agreement approval for Appleton

I have the signed copies on my desk. Pat Henderson signed it for the Sec this morning.

From: Borski, Jennifer - DNR
Sent: Friday, June 04, 2010 09:57 AM
To: Panzer, Timothy J - DNR
Subject: Reply requested: status of Cooperative Agreement approval for Appleton

Tim,

Just checking in on the status of the Cooperative Agreement with Appleton at the Mauthe site. Did the question on whether or not Al Shea could sign in lieu of Sec. Frank get resolved? I realize we may be at the mercy of the Secretary's office but need to check since the last agreement expired 5/30/10. Thanks.

Jennifer Borski

Hydrogeologist
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
625 East County Road Y, STE. 700
Oshkosh, WI 54901-9731
(☎) phone: (920) 424-7887
(☎) fax: (920) 424-4404
(✉) e-mail: jennifer.borski@wisconsin.gov
Internet address: www.dnr.wi.gov/org/aw/rr

NOTE: Beginning **January 4, 2010**, the Oshkosh DNR Service Center will be open to the public **Wednesdays and Fridays only**, from **9:00-12:30** and **1:30-4:00**.

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COOPERATIVE AGREEMENT FOR USE OF THE BUILDING AND FACILITIES AT THE N.W. MAUTHE CONTAMINATION REMEDIATION SITE LOCATED AT 725 SOUTH OUTAGAMIE ST., APPLETON, WISCONSIN

April 2010

This Cooperative Agreement ("the contract") is entered into by and between the State of Wisconsin, Department of Natural Resources ("the Department") and the City of Appleton ("the City") under the authority of section 66.0301, Wisconsin Statutes, which provides for intergovernmental cooperation. The Agreement is for the purpose of providing routine building and grounds maintenance in exchange for use of the on-site building and facilities, subject to the following terms and conditions;

1. PERIOD OF AGREEMENT: This contract shall be in effect from the date it is signed by both parties for a period of 24 months, subject to renewal upon mutual agreement of the parties.

2. CANCELLATION. The Department reserves the right to cancel this contract in whole or in part, without penalty, if the City fails to comply with the terms and conditions of this contract. Either the Department or the City may terminate this contract with six months written notice to the other party.

3. ENTIRE CONTRACT; AMENDMENTS. This contract, and referenced parts and attachments, shall constitute the entire agreement and previous communications or agreements pertaining to the subject matter of this contract are hereby superseded. Any contractual revisions including cost adjustments and time extensions may be made only by a written amendment to this contract, signed by both parties prior to the ending date of this contract.

4. ASSIGNMENT. Neither this contract nor any right or duty in whole or in part by the City under this contract may be assigned, delegated or subcontracted without the written consent of the Department.

5. SCOPE OF WORK. The Scope of Work for this contract is included in Attachment #1 and is incorporated by reference.

6. COMPENSATION. The Department agrees to allow the City the use of the building and facilities at the N.W. Mauthe site in exchange for the City providing routine maintenance of the building and grounds as described in the above Scope of Work.

7.INDEPENDENT CONTRACTOR. The City is an Independent Contractor for all purposes and is not an employee or agent of the Department. The Department agrees that the City shall have sole control of the method, hours worked, and time and manner of any performance under this contract other than as specifically provided in the scope of work. The Department takes no responsibility for supervision or direction of the City's employees or agents, and no responsibility for their safety. The City shall be responsible for taking adequate measures to protect the health and safety of its employees and agents and any other persons having access to the site. The Department further agrees that it will exercise no control over the selection and dismissal of the City's employees or agents.

8.LIABILITY IMPOSED BY LAW. Each party to this contract agrees that, as related to this cooperative agreement, any loss or expense (including costs and attorney fees) by reason of liability imposed by law, will be the responsibility of the party responsible for the officer, employee or agent whose activity caused the loss or expense.

9. WORKERS COMPENSATION & EMPLOYERS LIABILITY INSURANCE. The City shall maintain, during the term of this contract, worker's compensation insurance as required by Wisconsin Statute for all employees engaged in the work and public liability and property damage insurance against any claim(s) which might occur in carrying out the contract. Minimum coverage is $1,000,000 per accident for bodily injury or disease and $500,000 property damage.

10. GENERAL LIABILITY INSURANCE. The City shall maintain, during the term of this contract, general liability insurance at a minimum coverage of $1,000,000 per accident for bodily injury, personal injury and property damage. **The State must be named as an additional insured under the general liability policy. The City will provide a Certificate of Insurance to the state within 14 days of execution of this contract.**

11. NONDISCRIMINATION. In connection with the performance of work under this contract, the City agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in section 51.01(5), Wis. Stats., sexual orientation or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Except with respect to sexual orientation, the City further agrees to take affirmative action to ensure equal employment opportunities. The City agrees to post in conspicuous places, available for employees and applicants for employment, notices to be provided by the Department setting forth the provisions of this nondiscrimination clause. Failure to comply with the conditions of this clause may result in the termination of this contract.

12. APPLICABLE LAW. This contract shall be governed by the laws of the State of Wisconsin. The Contractor shall at all times comply with all federal, state and local laws, ordinances and regulations in effect during the period of this contract.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

Date _____ By: Matthew J. Frank, Secretary

Signature:
_____

CITY OF APPLETON

Date _____ By: _____

Title: _____

Signature: _____

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City of Appleton Cooperative Agreement
ATTACHMENT 1 – April 2010
N. W. Mauthe Contamination Remediation Site

City of Appleton (the "City") Responsibilities:

I. DOORS AND SECURITY

A. The City will provide a combination lock and chain for the security gate. The combination shall be communicated with the Department.
B. Keys provided to the City must be stamped "DO NOT COPY".
C. A list of City staff with keys assigned must be provided to the Department annually. One key will be stored in the City of Appleton Parks main office.
D. The front door should be shut and not propped open. Truck bay doors can be left open while on site.
E. All doors (pedestrian and overhead) will be closed and locked when the building is vacated.
F. An electronic key pad for entrance is not allowed.

II. HEALTH & SAFETY

A. There is no smoking in the building.
B. The City is responsible to provide signs necessary for their staff (e.g. no smoking, turn lights off, etc.)
C. The City is responsible to implement and fund recommendations by the Appleton Fire Department that are a result of City of Appleton occupancy and use.
D. The City will provide signs or notices of general guidelines for placement on the walls (e.g. Lock all doors before leaving.)
E. The City will stock, use and maintain the Morton Safety Kit located outside the control room.
F. City staff will immediately notify the operator or Department Project Manager of emergency issues (e. g. building maintenance needs, vandalism, etc.)

III. FACILITIES OPERATION & MAINTENANCE

A. The City will post a signed copy of the Cooperative Agreement and Attachment in the Truck Bay.
B. The City will maintain the grounds at their expense year-round in exchange for use of the truck bay, control room and bathroom (e.g. perform additional landscaping around the building including installing borders, raised vegetation beds and new vegetation, lawn, tree and shrub care, snow removal, daily litter pick-up, graffiti removal, etc).
C. City staff will walk the grounds and building daily to fill out a general grounds and facility checklist provided by the Department (e.g. all heaters/air conditioning is working; no water on the floor; not obvious leaking of roof or pipes; no vandalism, etc.). The City will notify the Department's operations contractor immediately if there are any issues to be addressed.
D. A microwave and stand is allowed in the control room for use by City staff during breaks and lunch.
E. City staff (not external cleaning crew) are responsible for cleaning and stocking the bathroom and providing cleaning tools and products. The City will sweep and clean the office and truck floors and walkways weekly. Daily cleaning of floors is necessary after heavy use (e.g. mud, slush, etc.)

F. All modifications to the building and grounds need pre-approval by the Department. In general, wall penetration is acceptable on exterior walls only but must be pre-approved. Clothes hooks and a punch clock may be installed in the control room with pre-approval. Wall penetration is not acceptable on the south wall in the control room.
G. The truck bay drain empties into the treatment system. Vehicle and machine washing in the truck bay is not allowed. Truck washing on the lawn within the fence is acceptable. The City will place and maintain a silt screen over the truck bay drain to prevent dirt, leaves, etc. from entering the drain that may fall from vehicles (e.g. snow and ice melt, mud off wheels, etc).
H. One trailer stored on site outside overnight is acceptable. No other equipment may be stored outside.
I. The City may place a picnic table within the fence for use by City staff.

IV. SITE ACCESS AND UTILITIES

A. The City is responsible to provide their own telephone services. The existing phone in the control room is designated for system alarms and must be available to call out 24 hrs/day, 7 days/week.
B. The City is responsible to maintain an access agreement with the property owner. The current access agreement expires December 31, 2014.

Department of Natural Resources (the "Department") Responsibilities:

A. The Department will hold a meeting with new or existing City staff upon request regarding the history of the site, safety concerns and on-going remediation operations.
B. The Department will provide updated fact sheets on the N. W. Mauthe Superfund site for City staff, as appropriate (e.g. after a Five-Year-Review with EPA). These fact sheets may be provided to interested citizens.
C. The Department will provide City staff with a short checklist for daily use (e.g. heaters/AC functional, no water on floor, no vandalism, etc.)
D. The Department will inform the City when there is a change of operations contractor. The operations contract is typically put out for bid every three to four years.
E. The Department will inform the City in advance of any additional investigative or remedial actions on the property that may temporarily affect their operations.
F. The Department will perform a biennial walk-through.
G. Either the Department or the City may terminate the agreement with six months written notice.

Appendix I – Routine Site Inspection Sheets

Inspection Sheet
Operator Log Sheet

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ENGINEERING
ARCHITECTURE
ENVIRONMENTAL

OMNNI ASSOCIATES, INC.
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
1-800-571-6677
920-735-6900
FAX 920-830-6100

Inspection Sheet
Groundwater Pretreatment System, N.W. Mauthe Superfund Site

This inspection record must be completed each month. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives "No" as an answer must be described.

Task	Y	N*	N/A	Description & Comments
Grounds				
Yard gates locked				
Fence in good condition				
Debris picked up				
Exterior building in good condition				
General grounds in good condition				
Garage				
Ceiling fan operational				
Heaters functional (seasonal)				
Lights operational				
Room temperature >50°F				
Overhead doors functional				
Overhead doors closed				
Fire extinguisher charged (1)				
Office Area				
Lights operational				
Phone has dial tone				
No alarms lights activated on control panel				
Controls appropriately set				
Heater/AC functional (seasonal)				
Waste basket emptied if needed				
Bathroom				
Light operational				
Fan operational				
Sink operational				
Toilet operational				
Toilet paper stocked				
Hand towels stocked				
Hand soap stocked				
Floor drain clear				
Treatment Process Area				
Two exterior doors auto lock and closed				
Heaters functional (seasonal)				
Room temperature >55°F				
Flow totalizers operational (3)				
Air intake vents closed				
Lights operational				
Ceiling fans operational				
Floor dry (excluding tank/pipe condensation)				
Treatment tanks in good condition				
Piping in good condition				

Pumps/valves/fittings in good condition				
Fire extinguishers charged (2)				
Sample Preparation Area				
Light operational				
Sink operational				
Hand towels stocked				
Hand soap stocked				
Waste basket emptied if needed				
Hot water heater in good condition				
Safety kit stocked				
Sampling containers stocked				
Chain of custody forms stocked				
Sampling supplies stocked				
Sampling equipment functional				

Date: _____ **Signature:** _____ *Rev. 09/07/10*

ENGINEERING
ARCHITECTURE
ENVIRONMENTAL

OMNNI ASSOCIATES, INC.
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
1-800-571-6677 / 920-735-6900
FAX 920-830-6100

Operator Log Sheet
Groundwater Pretreatment System, N.W. Mauthe Superfund Site

Data entered by:	Date:	Time:	Outfall 001 reading:	Total flow Manhole #1:	Total flow Manhole #2:

Operator: _____ Date: _____ Arrival time: _____ Departure time: _____

Plant, building and grounds check ☐ Outfall 001 reading _____ gallons

Outfall 001 flow meter inspection ☐ Total flow Manhole #1 _____ gallons

Close discharge valve ☐ Total flow Manhole #2 _____ gallons

Operator: _____ Date: _____ Arrival time: _____ Departure time: _____

Open discharge valve ☐ Total flow #1 _____ gal Total flow #2 _____ gal

Outfall 001 Hexavalent & Total Chromium samples collected Yes ☐ No ☐ pH _____

Manhole #1 Pump set to Manual ☐ Pump set to Auto ☐

Hexavalent Chromium concentration _____ mg/L pH _____

Dilution required Yes ☐ No ☐

[Calculation 1 part effluent ____ part(s) distilled water _____mg/L X _____ (dilution factor) = _____mg/L]

Manhole #2 Pump set to Manual ☐ Pump set to Auto ☐

Hexavalent Chromium concentration _____ mg/L pH _____

Dilution required Yes ☐ No ☐

[Calculation 1 part effluent ____ part(s) distilled water _____mg/L X _____ (dilution factor) = _____mg/L]

Comments: _____

Notes:

Manhole #1 and #2 influents samples are measured by Hach test kit, model Pocket Colorimeter II, for hexavalent chromium (unfiltered).
All samples collected for pH analysis are measured by Hach pH Pocket Pal Tester.
Hexavalent Chromium (unfiltered) submitted to Pace Analytical Services for laboratory analysis.
Total chromium (filtered) submitted to Pace Analytical Services for laboratory analysis.

Appendix J – WDNR RR Sites Map

RR Sites Map – GIS Registry Theme, Scale 1:5,000
RR Sites Map – GIS Registry Theme, Scale 1:1,456
On-going Cleanups with Continuing Obligations Cover Sheet – April 2010
GIS Registry Off-Site Report for 151 W. Melvin St.
GIS Registry Site Report for 725 S. Outagamie St.
GIS Registry Off-Site Report for 801 S. Outagamie St.
GIS Registry Off-Site Report for 1400 W. Second St.
GIS Registry Off-Site Report for 1410 W. Second St.
GIS Registry Off-Site Report for 1414 W. Second St.
GIS Registry Off-Site Report for 1428 W. Second St.

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Wisconsin Department of Natural Resources

RR Sites Map

What is RRSitesMap?

Themes | Find Location | Layers | Legend | Download Data | Print | Not All Sites Located | Help

Full State | Zoom In | Zoom Out | Zoom Last | Move | XY | Identify/Site Info | Air Photo On/Off | Advanced Tools

Enter Full or Partial Text

0245000127 Optional

County: Any County

City/Town: Any City/Town

Find Activity

Select one of the sites in the list boxes below and click on the 'Zoom to Activity' button

Contaminated and Cleaned Up Sites

0245000127 - N W MAUTHE (

Zoom to Activity

GIS Registry (Current active theme)

0245000127 - N W MAUTHE (

Scale: 1: 5,000 go Selected Map Tool: Identify/Site Info BRRTS Drill Down Identify

Wisconsin Department of Natural Resources

RR Sites Map — What is RRSitesMap?

Themes | Find Location | Layers | Legend | Download Data | Print | Not All Sites Located | Help

Full State | Zoom In | Zoom Out | Zoom Last | Move | XY | Identify/Site Info | Air Photo On/Off | Advanced Tools

Wisconsin DNR - Identify Results

Report Generated Mar 28, 2011 1:40:19 PM

Coordinate Position

Lat/Lon:	44° 15' 20.1" N, 88° 25' 44.9" W
Decimal Lon/Lat:	-88.429150, 44.255584
UTM 16N:	385912, 4901254
WTM91 (x,y):	645400, 421460
PLSS:	T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Groundwater and Soil contamination

Site Name:	N W MAUTHE (SF)
WDNR BRRTS #:	0245000127
WDNR Facility ID #:	445014460
Site Address:	725 S Outagamie St
Start Date:	Apr 26, 1989
Closed Date:	NA
Public Survey Unit:	NENW3421N17E
Contaminated Media:	Groundwater and Soil
Offsource Contamination:	Deeded

Scale: 1: 1,456 go | Selected Map Tool: Identify/Site Info | BRRTS Drill Down Identify

| Bureau for Remediation and Redevelopment | BRRTS on the Web | Contaminated Databases | Comments on this website |

Ongoing Cleanups with Continuing Obligations
Cover Sheet

April, 2010
(RR 5391)

Purpose

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

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

Learn more about continuing obligations at **http://dnr.wi.gov/org/aw/rr/cleanup/obligations.htm**

DNR Property Information:

DNR Approval Date: Mar 31, 1994

BRRTS #: **02-45-000127** FID #: 445014460

ACTIVITY NAME: N W Mauthe (SF)

PROPERTY ADDRESS: 725 S Outagamie St

MUNICIPALITY: Appleton

PARCEL ID #: 313011500

***WTM COORDINATES:**

X: **645400** Y: **421461**

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

WTM COORDINATES REPRESENT:

○ Approximate Center Of Continuing Obligations

◉ Approximate Source Parcel Center

Please use the CLEAN system at **http://dnr.wi.gov/org/aw/rr/clean.htm** for additional DNR site information.

EPA Superfund Information (*if applicable*):

EPA ID: **WID083290981** *To view more information click on the EPA ID.*

SITE NAME: N W MAUTHE CO INC

Requirements for *all* properties with Continuing Obligations

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

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

☒ A "cap" over the contaminated area must be: (222)
- ☐ Constructed & Maintained
- ☒ Maintained

☐ A vapor mitigation system must be: (226)
- ☐ Constructed & Maintained
- ☐ Maintained

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

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

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

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

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

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

Per the Record of Decision, the containment system must be operated and maintained. This includes foundation drain systems on neighboring properties, three groundwater collection trenches on neighboring properties, two collection sumps with pumps on neighboring properties and a groundwater treatment facility on the source property.

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

Impacted Off-Source Property Information

Form 4400-246 (R 3/08)

This fillable form is intended to provide a list of information that must be submitted for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request (Section H). The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 02-45-000127

ACTIVITY NAME: N W Mauthe (SF)

ID	Off-Source Property Address	Parcel Number	WTM X	WTM Y
A	1515 W Melvin St	313011400	645322	421446
B	801 S Outagamie St	313133000	645447	421442
C	1400 W Second St	313132900	645452	421414
D	1410 W Second St	313132800	645432	421413
E	1414 W Second St	313132700	645415	421414
F	1428 W Second St	313132600	645392	421408
G				
H				
I				

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 12:01:04 PM

Coordinate Position

Lat/Lon: 44° 15' 19.6" N, 88° 25' 48.4" W
Decimal Lon/Lat: -88.430124, 44.255463
UTM 16N: 385834, 4901242
WTM91 (x,y): 645322, 421445
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	151 W Melvin St
X Coordinate (WTM91):	645322
Y Coordinate (WTM91):	421446
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 12:04:32 PM

Coordinate Position

Lat/Lon: 44° 15' 20.1" N, 88° 25' 44.9" W
Decimal Lon/Lat: -88.429142, 44.255588
UTM 16N: 385913, 4901254
WTM91 (x,y): 645400, 421460
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Groundwater and Soil contamination

Site Name:	N W MAUTHE (SF)
WDNR BRRTS #:	0245000127
WDNR Facility ID #:	445014460
Site Address:	725 S Outagamie St
Start Date:	Apr 26, 1989
Closed Date:	NA
Public Survey Unit:	NENW3421N17E
Contaminated Media:	Groundwater and Soil
Offsource Contamination:	Deeded
X Coordinate (WTM91):	645400
Y Coordinate (WTM91):	421461
View Selected Docs (PDF)	*0245000127.pdf* more information
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 31, 2011 10:35:12 AM

Coordinate Position

Lat/Lon: 44° 15' 19.46" N, 88° 25' 42.81" W
Decimal Lon/Lat: -88.428559, 44.255406
UTM 16N: 385959, 4901233
WTM91 (x,y): 645447, 421441
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	801 S Outagamie St
X Coordinate (WTM91):	645447
Y Coordinate (WTM91):	421442
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries
Name: Outagamie
DNR Region: Northeast Region

Cities and Villages
Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info
USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 12:03:12 PM

Coordinate Position

Lat/Lon: 44° 15' 18.5" N, 88° 25' 42.5" W
Decimal Lon/Lat: -88.428495, 44.255152
UTM 16N: 385963, 4901205
WTM91 (x,y): 645453, 421413
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	1400 W Secont St
X Coordinate (WTM91):	645452
Y Coordinate (WTM91):	421414
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 12:02:33 PM

Coordinate Position

Lat/Lon: 44° 15' 18.5" N, 88° 25' 43.5" W
Decimal Lon/Lat: -88.428751, 44.255146
UTM 16N: 385943, 4901204
WTM91 (x,y): 645432, 421412
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	1410 W Second St
X Coordinate (WTM91):	645432
Y Coordinate (WTM91):	421413
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 11:59:37 AM

Coordinate Position

Lat/Lon: 44° 15' 18.5" N, 88° 25' 44.2" W
Decimal Lon/Lat: -88.428963, 44.255155
UTM 16N: 385926, 4901206
WTM91 (x,y): 645415, 421413
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	1414 W Second St
X Coordinate (WTM91):	645415
Y Coordinate (WTM91):	421414
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]

Wisconsin DNR - Identify Results

Report generated Mar 28, 2011 12:01:52 PM

Coordinate Position

Lat/Lon: 44° 15' 18.3" N, 88° 25' 45.3" W
Decimal Lon/Lat: -88.429255, 44.255108
UTM 16N: 385903, 4901201
WTM91 (x,y): 645392, 421407
PLSS: T21 R17E S34

Scroll to the closest requested site

GIS Registry Legend

Contamination came from another property

WDNR BRRTS #:	0245000127
Offsource Address:	1428 W Second St
X Coordinate (WTM91):	645392
Y Coordinate (WTM91):	421408
ACTIVITY_DETAIL_NAME:	N W MAUTHE (SF)
FID:	445014460
STREET_ADDR_2_TEXT:	NA
ORIG_HRZ_COLL_NAME:	sanchr
LAST_UPDATE_USER_ID:	sanchr
REGION_ABBR:	NE
REGION_OF_MANAGEMENT:	NE
PLSS_DESC:	NENW3421N17E
PLSS_DTRSQQ_CODE:	NA
View Database (BRRTS) Info	Info on activity

County Boundaries

Name: Outagamie
DNR Region: Northeast Region

Cities and Villages

Name: Appleton
Area (Sq. Miles): 24.62756942

NAIP 2008 Color Air Photo - Info

USGS Quarter Quadrangle name: APPLETON SE
Flight Date: 2008-07-05

[Close Report Window]