



Explanation of Significant Differences Wausau Groundwater Contamination Superfund Site

Site Name:	Wausau Groundwater Contamination Superfund Site
CERCLA ID #:	0505186
Site Location:	S24 & 25 T29N R7E
Lead Agency:	United States Environmental Protection Agency (EPA), Region 5
Support Agency:	Wisconsin of Department of Natural Resources (WDNR)



EPA Region 5

Serving Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin and 35 Tribes

I. Introduction

This decision document presents an Explanation of Significant Differences (ESD) for the Wausau Groundwater Contamination Superfund Site (Site), located in Marathon County, Wisconsin. The Record of Decision (ROD) addressed by this ESD for the Site was completed on September 1st, 1989.

This ESD is issued in accordance with § 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), § 300.435(c)(2)(i). The Director of the Superfund & Emergency Management Division has been delegated the authority to sign this ESD.

This ESD will become part of the Administrative Record (AR) for the Wausau Groundwater Contamination Superfund Site (NCP § 300.825(a)(2)), which has been developed in

accordance with § 113(k) of CERCLA, 42 U.S.C. § 9613(k).

The AR is available for review online at <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0505186#AR> and at U.S. EPA Region 5 Library, 16th Floor, 77 W. Jackson Blvd., Chicago, IL 60604, Monday - Friday, 8:30 a.m. to 3:00 p.m.

II. Statement of Purpose

The U.S. Environmental Protection Agency (EPA or Agency) prepares an ESD when it is determined by the Agency that changes to the original selected remedy are significant, but do not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost. The purpose of this ESD is to document significant changes to the Site remedy by documenting the requirement to implement Institutional Controls (ICs) to prevent exposures to contaminated groundwater, soil, and vapors so that the remedy remains protective of human health and the environment.

ICs are defined as non-engineered instruments, such as administrative and legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a response action by limiting land and/or resource use. ICs are typically used in conjunction with, or as a supplement to, other measures, such as waste treatment or containment, especially when contaminants remain at the Site above levels that allow unlimited use and unrestricted exposure (UU/UE).

All the components of the final remedy selection, embodied in the ROD, have been successfully constructed; however, groundwater cleanup standards have not yet been achieved and contaminated soils remain onsite. Because groundwater is still contaminated by Site-related contaminants above health-based levels, potable use of groundwater poses a potential public health risk. Onsite soils contaminated with volatile organic compounds (VOCs) present a potential vapor intrusion risk to onsite buildings and enclosed structures. Furthermore, soils contaminated with other organic and inorganic contaminants prevent UU/UE in some locations onsite.

This ESD documents groundwater, soil, and land use restrictions in the form of ICs, which are intended to prevent unacceptable human exposures to contamination. The ICs presented in this document represent a significant, but not fundamental, change from the selected remedy for the Site, and so shall be recorded in the Site Record as an ESD.

III. Site History and Contamination

Site History

The Site is located along the Wisconsin River in the City of Wausau (City), Marathon County,

Wisconsin. The Site is in proximity to six of the City's drinking water production/supply wells. In 1982, three of the City's municipal wells were found to be contaminated with high levels of VOCs. Historically, there were two areas of concern at the Site. The first is a Rexnord (formerly Marathon Electric Corporation) facility along the west bank of the Wisconsin River (West Bank), which includes a closed municipal landfill. The second is the Wausau Chemical facility located along the east bank of the Wisconsin River (East Bank). The current land use remains mixed use consisting of commercial and industrial uses. However, the City is considering converting all or portions of the East Bank to residential use. In 1986, EPA added the Site to the National Priorities List (NPL).

In 1985, and prior to completion of the Site Remedial Investigation (RI) and Feasibility Study (FS), the State of Wisconsin required the City to take an initial response action. This initial response action consisted of groundwater extraction with air stripping treatment. The groundwater extraction wells were located at the municipal wells City Well 3 and 4 (CW3 and CW4) near the Wausau Chemical facility. The Site's potentially responsible parties (PRPs) funded an RI/FS for the Site between 1987 and 1988 that identified groundwater and soil contamination. The contamination included VOCs, semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs) that were due to historical operations at the Site. EPA issued an interim ROD in 1988 and a final ROD on September 1st, 1989. The two RODs contained the selected remedies and enabled the initiation of remedial action at the Site. EPA determined that the Site would be managed as two Operable Units (OUs) as determined by the two RODs, which are discussed in more detail herein (page 5).

EPA and Wisconsin Department of Natural Resources (WDNR) entered judicial settlements with the PRPs to fund the Site's remediation. The judicial settlements are described in Consent

Decrees (CDs) entered in 1989 and 1991. The CDs required the PRPs to design, implement, and operate the required remedy outlined in the ROD, which consists of air stripping of municipal groundwater wells City Wells 6 and 3 (CW6 and CW3) to remove chlorinated solvents, and source soil remediation via soil vapor extraction (SVE). The CDs also required the installation and operation of an additional extraction well (EW1) with air stripping south of CW6 to prevent movement of VOC-contaminated groundwater north towards CW6 and east beneath the Wisconsin River to CW3.

Site Contamination

The hydrogeology at the Site consists of a natural groundwater flow towards the Wisconsin River. The natural groundwater flow is disrupted by the City's drinking water supply wells (CWs), which create an artificial groundwater flow towards the CWs with a drawdown radius of approximately 2,000 feet.

A map showing the location of the Site is provided in Figure 1 of Attachment 1 of this ESD. A map of the Site monitoring well network and figures showing the estimated current extent of groundwater contamination are attached in Figure 2 and Figures 3-7, respectively, in Attachment 1.

The RI determined that the primary contaminants of concern (COCs) affecting both the soil and groundwater are VOCs. Two separate sources of contamination were identified within the zone of influence of the City's drinking water wells. The first source was found to be a former municipal landfill on the Rexnord property on the West Bank and located south of a municipal drinking water supply well, CW6. The second source was found to be the Wausau Chemical facility located between municipal drinking water supply wells CW3 and CW4 on the East Bank.

Historically, three contaminated groundwater plumes were found within the zone of the City's drinking water supply wells. The first plume was composed of trichloroethylene (TCE) and was emanating from the former municipal landfill. This plume was found to split at the boundary of the source area with one segment migrating north to CW6 and the second segment migrating east under the Wisconsin River to CW3. The second plume originated from the southern boundary of the Wausau Chemical facility and impacted both CW3 and CW4. This plume was comprised primarily of tetrachloroethylene, also known as perchloroethylene (PCE), and contained other VOCs as well. The third plume originated from the northern boundary of the Wausau Chemical facility and was primarily comprised of PCE and impacted CW3.

The contaminants identified are hazardous substances as defined in § 104(14) of CERCLA, 42, U.S.C. § 9601(14), and 40 C.F.R. § 302.4.

The risk assessment for the Site during the RI indicated that exposure to chemicals in groundwater, surface water, and soil may be sources of risk to human health and the environment. Groundwater use is the primary potential exposure pathway, and the contaminant concentrations in each of the identified groundwater contaminant plumes could present an unacceptable risk to human health. Several other important potential exposure pathways were also identified for the Site. Potential health risks were evaluated for the following exposure pathways and potentially exposed populations: (1) residents using municipal water exposed to VOC contaminants; and (2) hypothetical, future users of a private well installed within the contaminated aquifer. Other potential pathways include dermal exposure to contaminated soils and inhalation exposure to COC vapors.

The groundwater cleanup standards for the Site are either the EPA’s drinking water standards (MCLs) or the WDNR’s groundwater enforcement standards (ESs) (WDNR Chapter NR 140), whichever is more conservative. These standards are shown below in Table 1.

Current Conditions

Groundwater VOC contamination remains above cleanup standards on- and off-site. See Figures 4-7 of Attachment 1 for detailed graphical and numerical presentations of the most recent (2022) sampling results for VOCs, including a plume map that approximately delineates the area of groundwater that exceeds cleanup standards.

The primary chlorinated VOC found in the West Bank groundwater is TCE, which was detected at 11 of the 13 West Bank monitoring wells, plus City well CW6. Neither PCE nor vinyl chloride (VC) were detected in West Bank well samples.

Table 1: Groundwater Cleanup Standards

COCs	MCL (µg/L)	ES (µg/L)
cis-1,2-Dichloroethene (c12DCE)	70	70
Tetrachloroethylene (PCE)	5	5
Trichloroethylene (TCE)	5	5
Vinyl chloride (VC)	2	0.2

At the East Bank, at least one or more VOCs are present at five monitoring wells at concentrations that exceed the MCL and/or WDNR ES. East Bank groundwater contaminant concentrations continue to fluctuate, with generally increased concentrations in wells at or near the Wausau Chemical facility source and lower concentrations towards CW3.

With respect to soil contamination, subsurface heavy metal, polycyclic aromatic hydrocarbons

(PAHs), and VOC soil contamination on the West and East Banks were discovered during the Site’s 1989 RI. The Final ROD did not establish a soil remedy, soil cleanup levels, or institutional controls due to the low risk of exposure identified at the time. However, soil VOC contamination was treated on both the East and West Banks via SVE to mitigate soil as a source of groundwater contamination. More recently, a soil and soil gas sampling event in 2016 performed by the PRPs on the East Bank found that soil concentrations of VOCs surrounding and underneath the Wausau Chemical building are below EPA’s Regional Screening Level (RSL) for resident soil, but were still above the Site’s SVE source soil cleanup standards (Table 2). On the West Bank, the 1989 RI identified several locations with lead, arsenic, and PAH concentrations greater than residential soil RSLs, preventing UU/UE and requiring ICs to ensure the remedy remains protective of human health.

Table 2: SVE Soil Cleanup Standards

COCs	(µg/kg)
cis-1,2-Dichloroethene (c1,2DCE)	12
Tetrachloroethylene (PCE)	10
Trichloroethylene (TCE)	10
Vinyl chloride (VC)	5
Acetone	20
Benzene	5
Chloroform	5
1,1-Dichloroethene	5
Ethylbenzene	331
Methylene chloride	10
Toluene	28
1,1,2-Trichloroethane	10
Xylenes	44

Vapor intrusion (VI), which is the migration of vapors from subsurface soil or groundwater contamination into overlying buildings or enclosed spaces, is currently being investigated at the Site. Since 2017, the PRPs have performed field work to better understand the potential for VI in areas

surrounding soil and groundwater contamination at and near the Site. For more details, including locations and concentrations of vapor samples, see excerpts from Vapor Intrusion Evaluation Summary Report March 2023 and Vapor Intrusion Evaluation Summary Report September 2023 (Attachments 2 and 3, respectively).

Sub-slab (below a building's foundation) vapor sampling on the West Bank began in 2017. Recent sampling was performed in September 2023 at nine locations in the two Rexnord buildings closest to the former landfill. The vapor data were compared to the EPA industrial building vapor intrusion screening levels (VISLs) for sub-slab and indoor air. The sub-slab TCE concentrations beneath Building A (northern building) and Building B (southern building) exceeded the EPA sub-slab VISL. The concentrations beneath Building B in 2023 are significantly higher than the concentrations identified during the fall sampling event in 2017. The higher concentrations found in 2023 suggest that sub-slab chlorinated solvents are migrating and/or mobilizing in such a way that sub-slab vapor concentrations are increasing over time. Consequently, Building A and Building B were sampled for indoor air. TCE was detected in three of four indoor air samples, but no indoor air sample exceeded the EPA indoor air industrial action level that indicates human health may be at risk. VI studies on the West Bank will continue in order to delineate the sub-slab exceedances and monitor indoor air in overlying or nearby structures to ensure the remedy remains protective of human health and evaluate the potential for VI. Actions to address the sub-slab vapor sources including routine VI monitoring may be implemented depending on future sampling results and whether human health or the remedial action objectives are threatened.

On the East Bank between 2017 and 2023, several sub-slab and indoor air investigations were completed at two small commercial properties

adjacent to the Wausau Chemical facility and CW3. No sub-slab or indoor air concentrations exceeded the EPA commercial building VISLs, indicating the current remedy is protective of human health at these East Bank locations. Further East Bank VI sampling will continue if use at or nearby the Site changes, other areas with VI concerns are identified, or contaminant fate and transport change in a way that alters VI risk.

IV. Selected Remedy

In 1985, while the RI/FS was underway, an initial response action was taken by the City of Wausau. This response action consisted of a groundwater extraction system with air stripping treatment near the Wausau Chemical facility, as required by the State of Wisconsin. The system consisted of extraction wells and operated until 1996 when it was shut down and abandoned.

The two primary Remedial Action Objectives (RAOs) of the 1988 Interim ROD for OU1 (Interim Action ROD) addressing TCE in the West Well Field area were as follows:

- Protection from long-term exposure to low levels of TCE from ingestion of drinking water; and
- Protection from future increased levels of contamination to the West Well Field.

The response actions outlined for the Site in the Interim Action ROD included the following remedial components:

- Installation of a groundwater extraction well located in the southern portion of the contaminant plume;
- Implementation of a treatment system for removal of contaminants;
- Installation of an additional extraction well, as necessary; and
- Preparation of an operation and maintenance (O&M) monitoring program.

The RAOs of the 1989 Final ROD for OU2 (Final ROD) were to address the remaining concerns at the Site following implementation of the Interim Action as follows:

- Reduction of long-term exposure to low levels of VOCs from ingestion of drinking water;
- Protection from potential future use of private wells in contaminated groundwater; and
- Protection from emissions of contaminants from proposed water treatment systems that release VOCs to the atmosphere.

The response actions outlined for the Site in the Final ROD included the following additional remedial components:

- Installation of SVE systems to remove VOC contaminants from soils at each of the identified source areas;
- Treatment of off-gases from the SVE system using vapor phase carbon units (the carbon was to be regenerated off-site); and
- Groundwater remediation utilizing the municipal wells and existing air strippers for expedited removal of contaminant plumes.

The status of the groundwater and soil portions of the remedy are presented below.

Groundwater and Soil Vapor Extraction & Treatment Systems

As required by the Interim and Final RODs, the groundwater cleanup standards for the Site are determined by EPA's MCLs and WDNR's ESs, whichever is more conservative. The relevant groundwater cleanup standards for the main COCs at the Site are shown above in Table 1. Source soil cleanup standards when performing SVE consist of attaining WDNR groundwater standards for PCE and TCE at the source boundary. Soil cleanup

standards/levels were selected for VOCs to achieve this goal and are listed above in Table 2.

The municipal drinking water treatment system as part of the interim response action was installed in 1985. The final remedial action at the Site consisted of two SVE systems to address source area soils and groundwater extraction and treatment systems utilizing existing municipal production wells (CW3 and CW6) along with an additional extraction and treatment well, EW1. The Site's extraction and monitoring well locations are shown in Figure 2 of Attachment 1.

EW1 began operation in 1990 to remove contaminants from the south end of the groundwater plume and to create a hydraulic flow barrier between the source area and CW6. CW3 and CW6 captured and treated all other groundwater contaminant plumes.

The SVE systems began operating in January 1994. The Preliminary Close-Out Report, which documents the completion of construction, was finalized in March 1994. The West Bank SVE system was shut down in April 1996 and the East Bank SVE system was shut down in January 2001. In April 2007, deed restrictions were implemented on the East Bank. Deed restrictions were planned for the West Bank but were not implemented on the West Bank for the treated areas in accordance with WDNRs closure requirements (see Attachment 4). The controls include prohibiting water supply well installation, maintaining a pavement cap, and only using the property for industrial purposes, among other provisions.

In 2011, EW1 became inoperable and the PRPs requested that it be permanently shut down. In 2012 EPA and WDNR approved a pilot study to evaluate the effect of EW1 shutdown on CVOC fate and transport. Initial results show a steady rebound of CVOC concentrations in wells surrounding the City Landfill, but not further north towards

residential areas. It remains unknown whether this rebound is temporary due to back diffusion from low permeability soils, or permanent due to previously unknown and untreated source soils. The study to evaluate the effect of EW1 shutdown on CVOC fate and transport remains ongoing.

In 2021, the City constructed a new water treatment plant for the extracted groundwater that went on-line in 2022. The treatment process contains air stripping, as required by the remedy, along with ion exchange resin and granular activated carbon to address perfluorinated alkyl substances (PFAS) detected in the municipal supply wells at concentrations greater than EPA's proposed MCLs.¹ It is unknown at this time whether the Site is a source of groundwater PFAS.

Ongoing groundwater monitoring is completed on a yearly basis to measure changes in contaminant concentrations and evaluate the remedy's effectiveness pursuant to an approved Groundwater Monitoring Plan and Operations & Maintenance (O&M) Plan. Monitoring well results to date confirm that COCs remain above cleanup standards and that extracted groundwater COCs are being properly treated. Groundwater monitoring will continue to be performed until groundwater contaminant concentrations meet the ROD-required cleanup standards.

V. Description of Significant Differences and Basis for the ESD

As discussed above, the remedial action provided in the ROD does not include ICs. ICs are required to

¹ EPA proposed a National Primary Drinking Water Regulation (NPDWR) for several PFAS chemicals in March 2023. The proposed Maximum Contaminant Level (MCL) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are 4 ng/L. This regulation has not been finalized as of March 14th, 2024.

ensure the remedy is protective of human health and the environment because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for UU/UE.

Based on EPA and WDNR reviews, the existing City ordinance and State-enforced East Bank deed restrictions provide some of the necessary protections on portions of the Site or for certain media/uses. Therefore, this ESD incorporates the ordinance and deed restrictions as part of the groundwater remedy for the Site. However, these restrictions do not protect all necessary locations, media, and/or uses at and surrounding the Site. Thus, EPA requires additional ICs to ensure the remedy remains fully protective of human health.

Groundwater at the Site does not meet MCLs and ESs. Therefore, EPA and WDNR have determined that groundwater ICs in areas outside of the areas covered by the existing deed restrictions are necessary to ensure the protectiveness of the remedy unless and until groundwater at the Site meets MCLs and ESs. Due to the groundwater contamination, wells should not be installed at the Site for any purpose except monitoring and remediation. Wisconsin Continuing Obligations (COs) and the existing local groundwater ordinance can be used to provide the needed restrictions on well installations.² COs are legal requirements under s. 292.12 of the Wisconsin Statutes designed to protect public health and the environment when contamination remains on a property. COs still apply after a property is sold and require each new owner to comply with the COs.

In addition to groundwater, soil contamination is present above UU/UE in several locations. These

² Existing Wausau Municipal Code contains a Wellhead Protection ordinance in Chapter 23.54, along with a provision to regulate Private Water Wells in Chapter 19.30. under Wausau's City Code.

locations include, but are not limited to, the former City landfill and Wausau Chemical facility loading dock (West Bank). A more detailed evaluation of historical soil sampling results, and collection and analysis of additional soil samples, will be carried out to determine the precise locations where exposure to soils presents a threat to human health or the environment or are above levels that allow for UU/UE. The ICs will include notification systems as well as restrictions on activities (e.g., prohibition of digging or grading) that pose the risk of human exposure to subterranean contamination. These restrictions are contingent upon the COC concentrations in soil. EPA and WDNR may waive the requirement for these restrictions if soil remediation is performed, which results in remaining COC concentrations that do not pose a risk to human health for a given activity (e.g., digging to a depth of 2 feet). These restrictions will not be removed until soil COC concentrations allow for UU/UE.

ICs are also required to ensure any enclosed spaces or buildings within the vicinity of contaminated soils or groundwater protect occupants from risks associated with VI. These ICs will include requirements that all proposed or newly constructed structures or buildings be sampled and assessed for vapor intrusion risk as generally described in the EPA Region 5 Vapor Intrusion Handbook (2020). All structures or buildings with unacceptable VI risk must include VI mitigation systems that are fully protective. The ICs will also restrict building use (i.e. no residential use) in specific areas of the Site or may require further active remediation of contamination before any enclosed space or building can be erected. Similar to soil ICs, the precise VI IC locations will be determined after an extensive review of all current and future environmental sampling reports. Overall, the VI ICs will ensure that no buildings or enclosed spaces are occupied until the property owner has properly evaluated VI and addressed any possible risks to human health.

Lastly, long-term stewardship (LTS) of the Site is critical to ensure that ICs are maintained, monitored, and enforced. The LTS plan for the Site will include a communications plan to establish communication between the EPA, WDNR, City of Wausau, and County Health Department. LTS procedures will include regular inspections of the area to ensure that the ICs are in place and are effective. Additionally, the Site will be listed in the Wisconsin Remediation and Redevelopment Database (WRRD), a public database that contains information on contaminated properties with residual contamination. An Institutional Controls Implementation and Assurance Plan (ICIAP),³ which includes LTS components, will be required and finalized. The ICIAP will include the WDNR CO requirements that are identified as ICs for the Site.

In addition, CO letters will be issued by the WDNR. The CO letters will identify the specific conditions that apply to each affected parcel that are necessary to ensure long-term protectiveness.

In some cases, it may be appropriate to reinforce or expand existing ICs or implement additional ICs to ensure long-term protectiveness at a Site. Such additional ICs will continue to be evaluated and implemented, as necessary, based on Site conditions to ensure that the remedy remains protective.

VI. Support Agency Comments

EPA consulted with WDNR and provided it the opportunity to comment on this ESD in accordance with NCP § 300.435(c)(2) and § 300.435(c)(2)(i) and CERCLA § 121(f). WDNR concurred with this ESD in a letter dated March 5th, 2024. That letter is found as Attachment 5 to this ESD.

³ Guidance on completing the ICIAP can be found at EPA's guidance titled *Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites*, dated December 2012.

VII. Statutory Determinations

EPA has determined that these significant changes comply with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining on Site above levels that allow for UU/UE, a statutory review will continue to be conducted no less often than every five years after the initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

VIII. Public Participation

The public participation requirements set out in NCP § 300.435(c)(2) will be met by publishing this ESD, making it available to the public in the AR, posting Site information on EPA's website at <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0505186> and publishing a notice summarizing the ESD in a major local newspaper after the ESD is signed.

IX. Authorizing Signature

I have determined the remedy for the Site, as modified by this ESD, is protective of human health and the environment, and will remain so provided the actions presented in this report are implemented as described above.

This ESD documents the significant changes related to the remedy at the Site. EPA selected these changes with the concurrence of the WDNR.

U.S. Environmental Protection Agency

By:

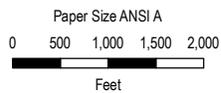
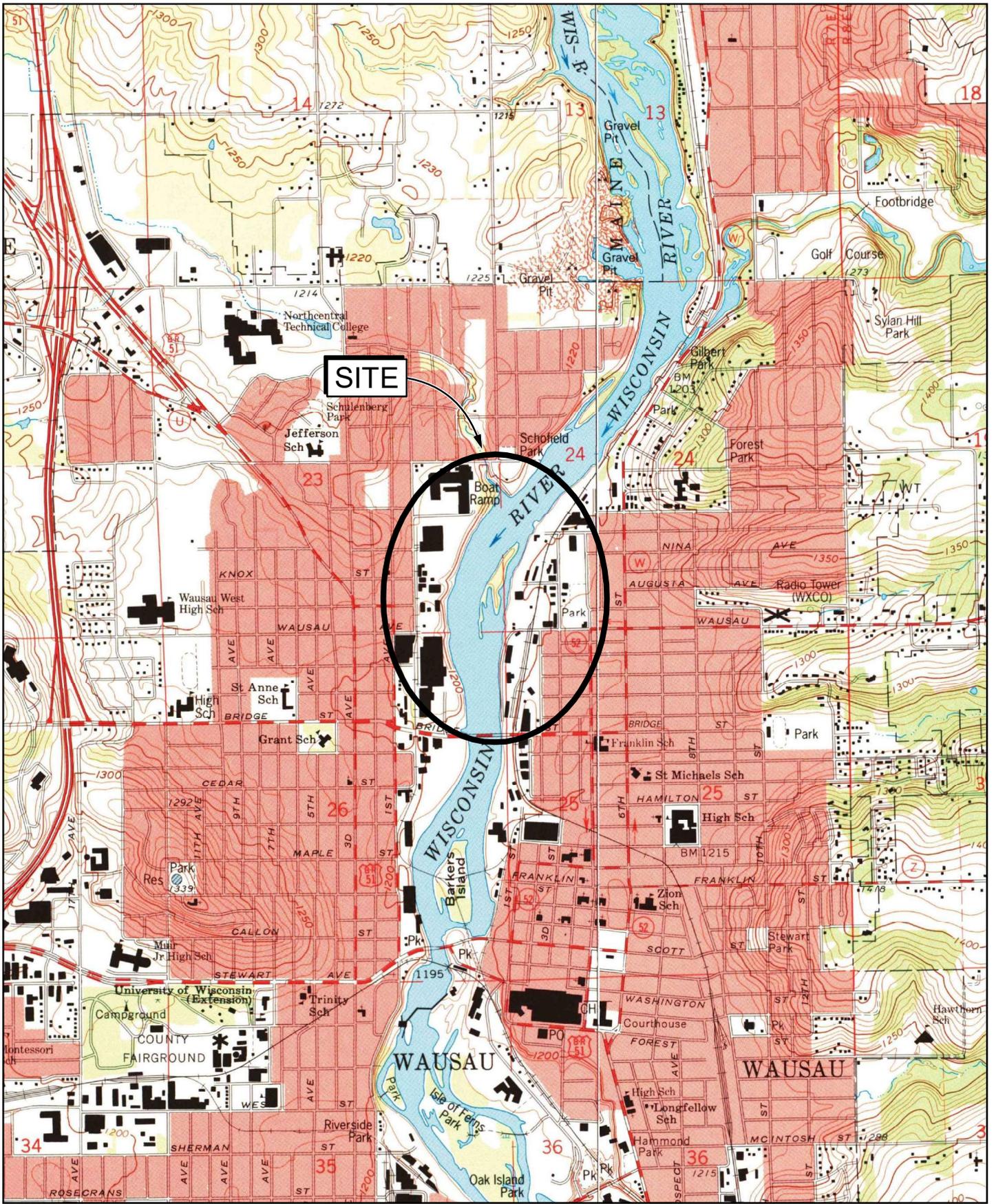
X Douglas Ballotti

Douglas Ballotti, Director
Superfund & Emergency Management Division
Signed by: DOUGLAS BALLOTTI

Date: March 15, 2024

Attachment 1

Site Description



Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

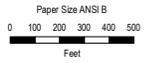
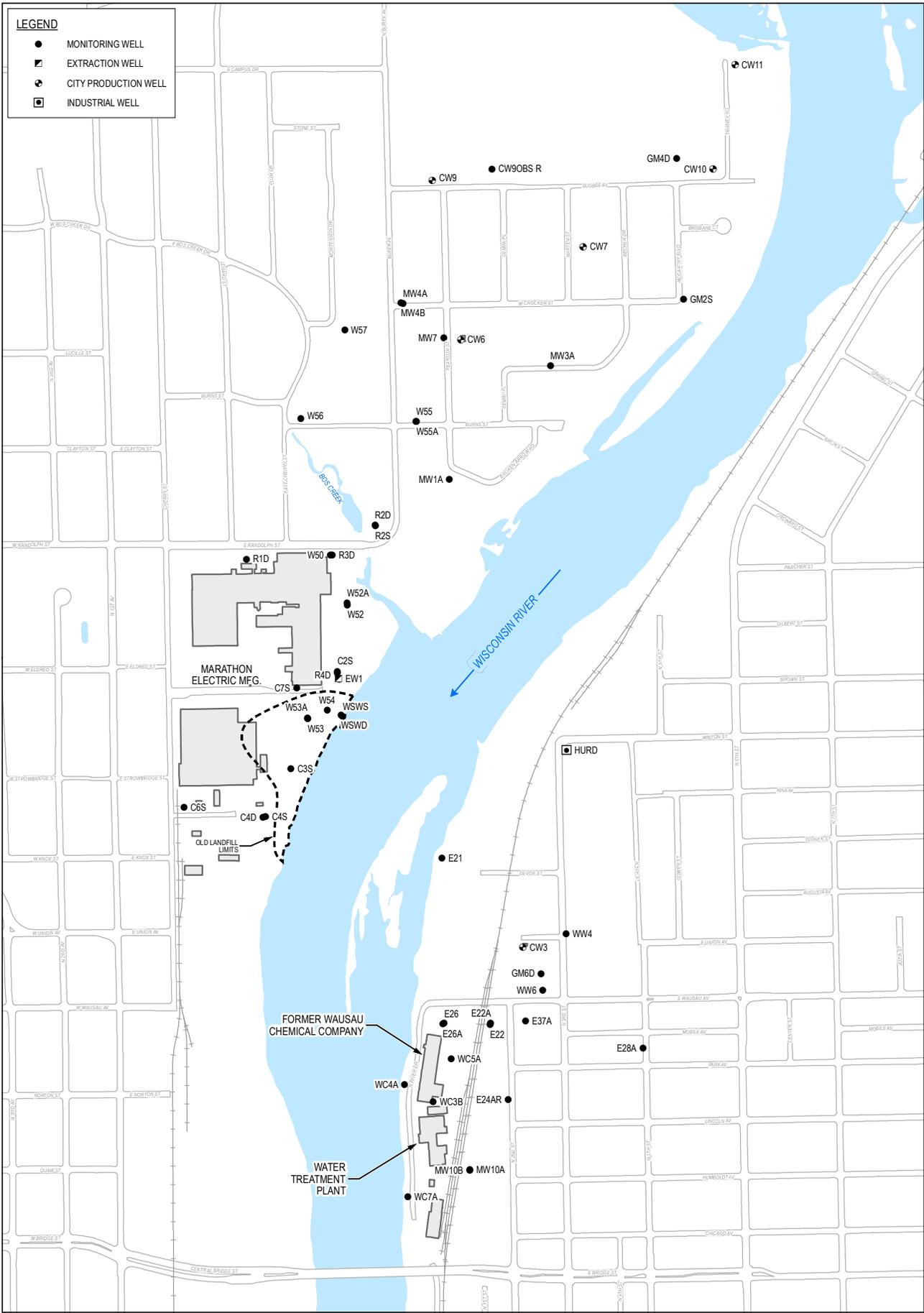
Project No. 003978-00
Revision No. -
Date 12/15/2022

SITE LOCATION

FIGURE 1

LEGEND

- MONITORING WELL
- ⊠ EXTRACTION WELL
- ⊕ CITY PRODUCTION WELL
- ⊠ INDUSTRIAL WELL



WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

Project No. 003978-00
Revision No. -
Date 01/30/2023

SITE PLAN

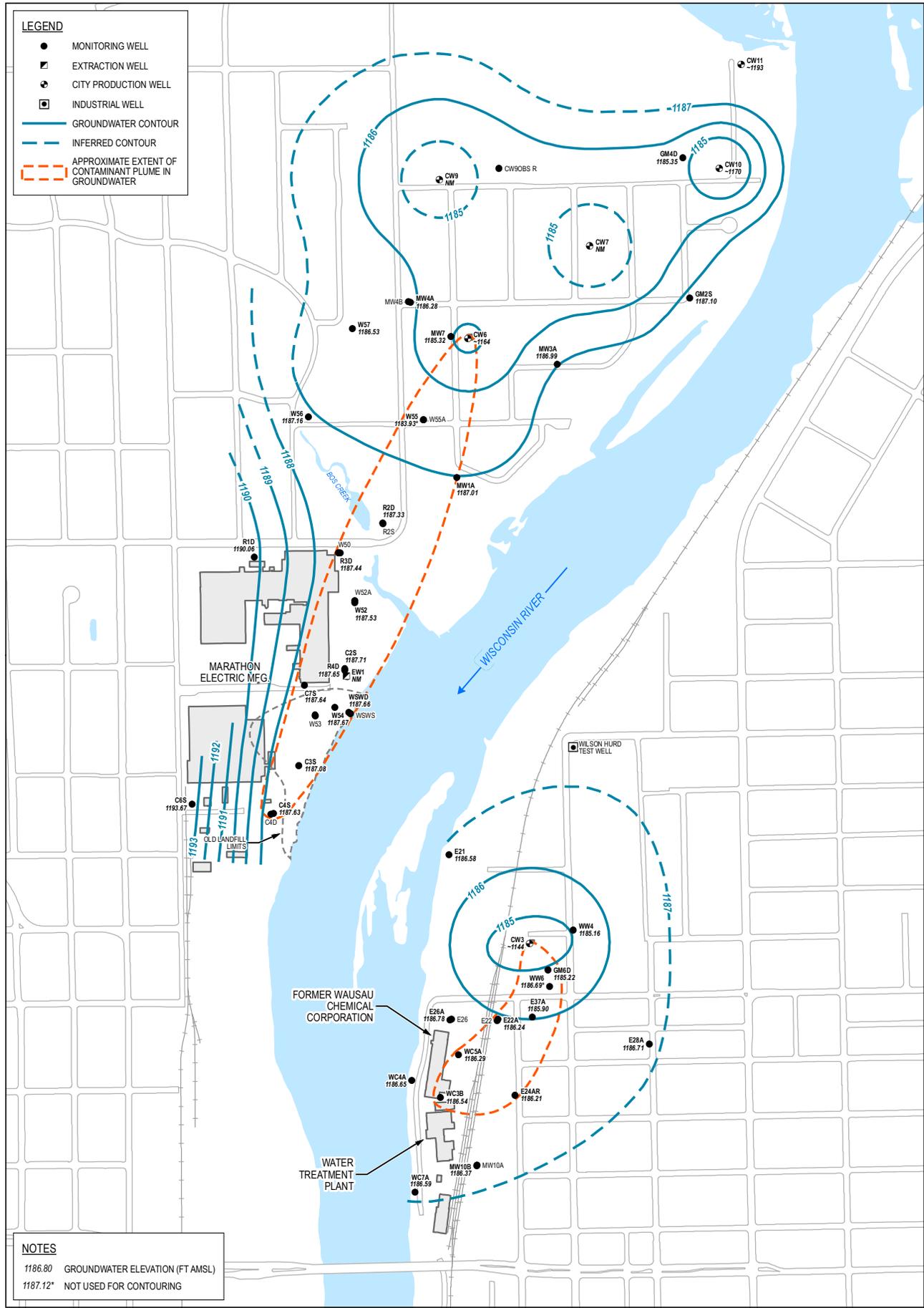
FIGURE 2

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCONSIN Marathon County Feet
Print Date: 30 Jan 2023 - 16:48

Data source: Marathon County. Created by: spay

LEGEND

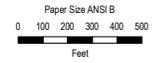
- MONITORING WELL
- EXTRACTION WELL
- ⊙ CITY PRODUCTION WELL
- INDUSTRIAL WELL
- GROUNDWATER CONTOUR
- - - INFERRED CONTOUR
- - - APPROXIMATE EXTENT OF CONTAMINANT PLUME IN GROUNDWATER



NOTES

1186.80 GROUNDWATER ELEVATION (FT AMSL)

1187.12* NOT USED FOR CONTOURING



WAUSAU WATER SUPPLY NPL SITE
 WAUSAU, WISCONSIN

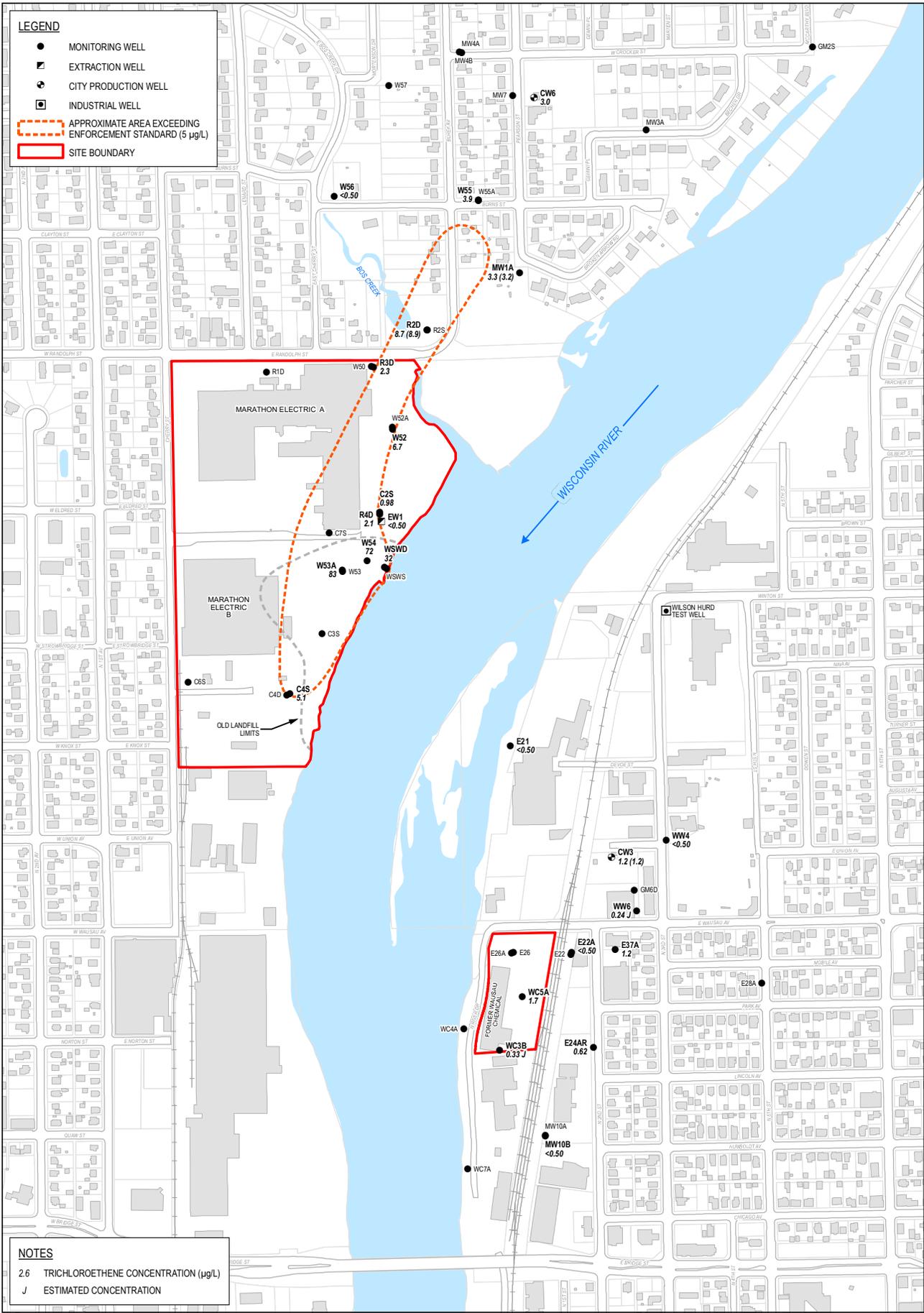
**GROUNDWATER ELEVATIONS
 AND CONTOURS
 AUGUST 2022**

Project No. 003978-00
 Revision No. -
 Date 02/10/2023

FIGURE 3

Q:\GIS\PROJECTS\030300\03978\MapDeliverables\RPT\1548\0303978-00\RPT1548\GIS-SP031.mxd
 Print date: 10 Feb 2023 - 12:25

Data source: Marathon County. Created by: spoy

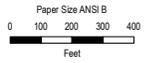


LEGEND

- MONITORING WELL
- EXTRACTION WELL
- CITY PRODUCTION WELL
- INDUSTRIAL WELL
- - - - - APPROXIMATE AREA EXCEEDING ENFORCEMENT STANDARD (5 µg/L)
- ▭ SITE BOUNDARY

NOTES

- 2.6 TRICHLOROETHENE CONCENTRATION (µg/L)
- J ESTIMATED CONCENTRATION



WAUSAU WATER SUPPLY NPL SITE
 WAUSAU, WISCONSIN

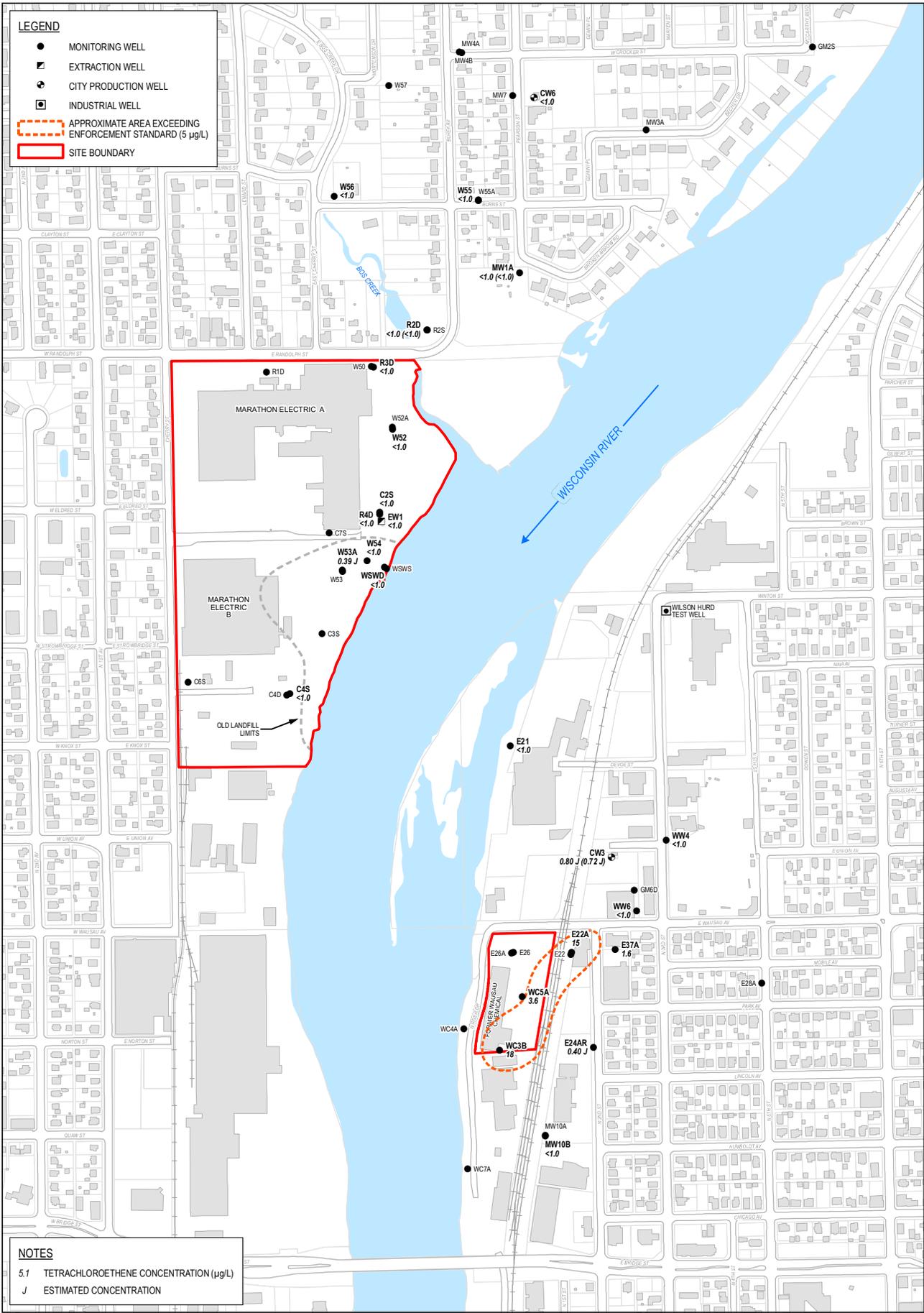
**TRICHLOROETHENE
 CONCENTRATIONS
 AUGUST 2022**

Project No. 003978-00
 Revision No. -
 Date 01/30/2023

FIGURE 4

Q:\GIS\PROJECTS\030300\03978\MapDeliverables\RPT\030300\03978-00\RPT046GIS-SP04.mxd
 Print date: 30 Jan 2023 - 16:57

Data source: Marathon County. Created by: gpy

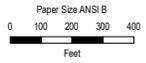


LEGEND

- MONITORING WELL
- EXTRACTION WELL
- CITY PRODUCTION WELL
- INDUSTRIAL WELL
- - - - - APPROXIMATE AREA EXCEEDING ENFORCEMENT STANDARD (5 µg/L)
- ▭ SITE BOUNDARY

NOTES

- 5.1 TETRACHLOROETHENE CONCENTRATION (µg/L)
- J ESTIMATED CONCENTRATION



WAUSAU WATER SUPPLY NPL SITE
 WAUSAU, WISCONSIN

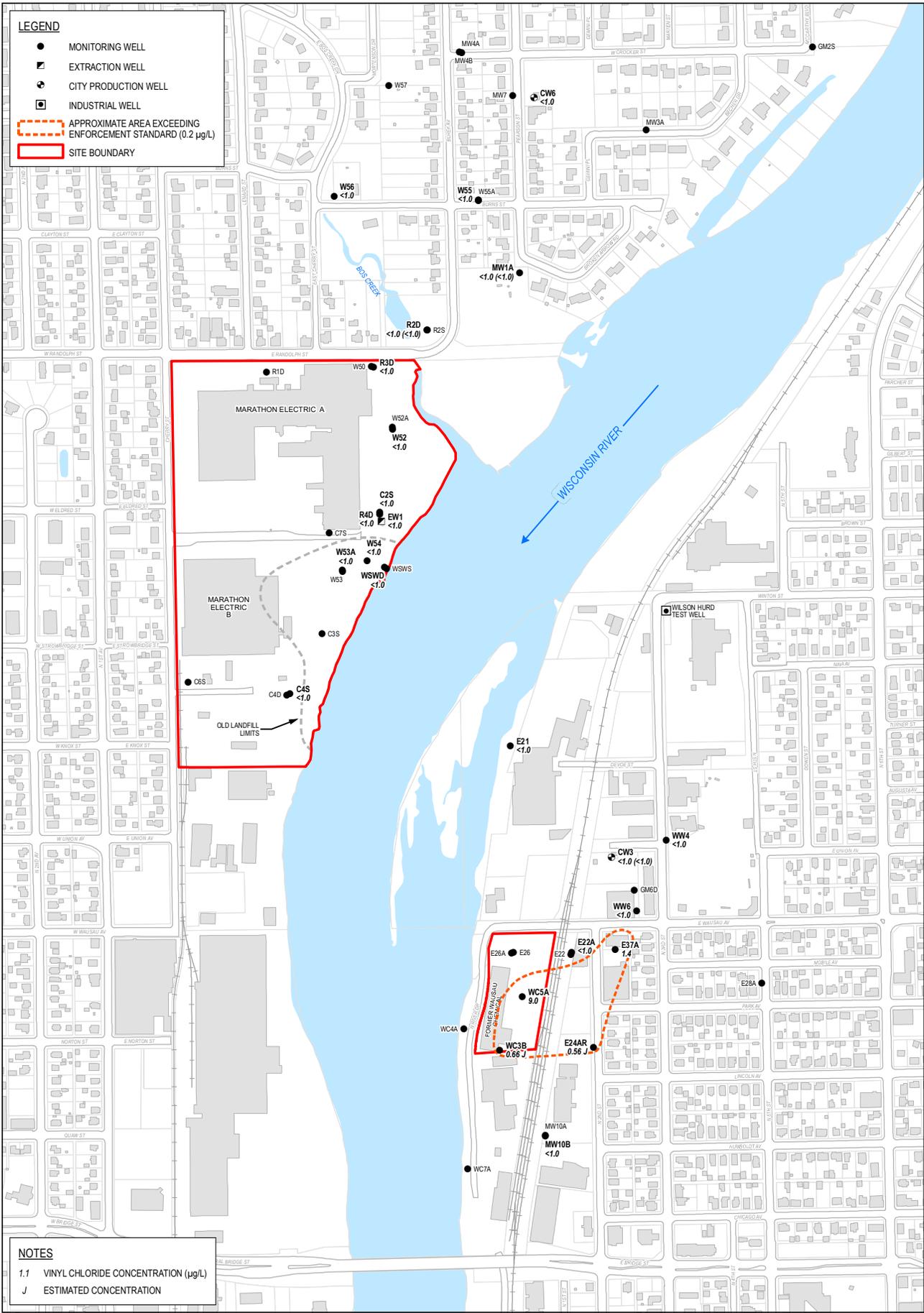
**TETRACHLOROETHENE
 CONCENTRATIONS
 AUGUST 2022**

Project No. 003978-00
 Revision No. -
 Date 01/30/2023

FIGURE 6

Q:\GIS\PROJECTS\0303000\3978\MapDeliverables\RPT\013023\00\RPT1046GIS-SP006.mxd
 Print date: 30 Jan 2023 - 17:51

Data source: Marathon County. Created by: gpy

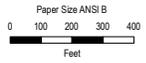


LEGEND

- MONITORING WELL
- EXTRACTION WELL
- CITY PRODUCTION WELL
- INDUSTRIAL WELL
- - - APPROXIMATE AREA EXCEEDING ENFORCEMENT STANDARD (0.2 µg/L)
- ▭ SITE BOUNDARY

NOTES

- 1.1 VINYL CHLORIDE CONCENTRATION (µg/L)
- J ESTIMATED CONCENTRATION



WAUSAU WATER SUPPLY NPL SITE
 WAUSAU, WISCONSIN
**VINYL CHLORIDE
 CONCENTRATIONS
 AUGUST 2022**

Project No. 003978-00
 Revision No. -
 Date 01/30/2023

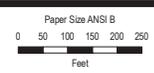
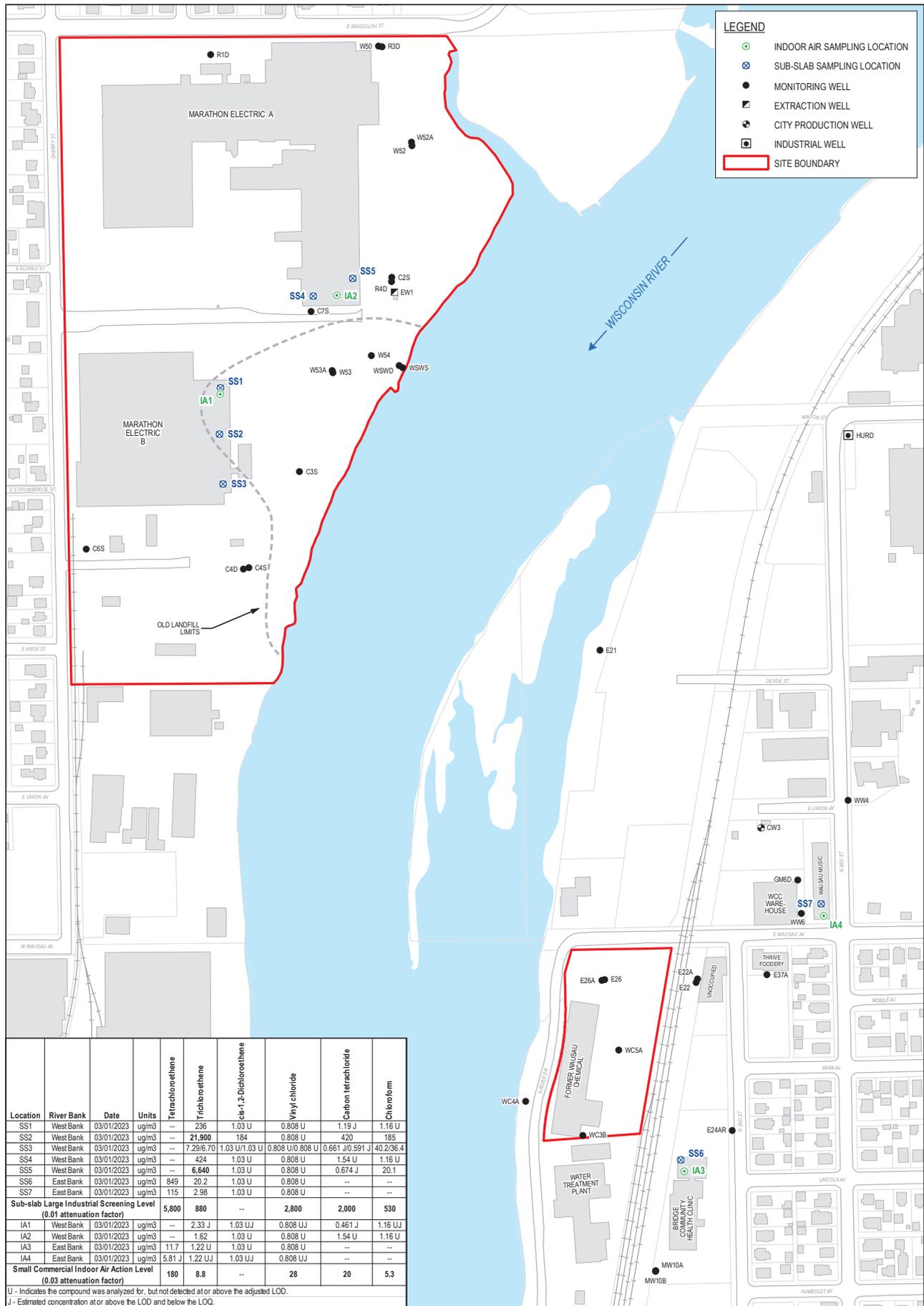
FIGURE 7

Q:\GIS\PROJECTS\0303000\3978\MapDeliverables\RPT\0148\003978-00\RPT048GIS-SP007.mxd
 Print date: 30 Jan 2023 - 17:53

Data source: Marathon County. Created by: gpy

Attachment 2

March 2023 Vapor Intrusion Data

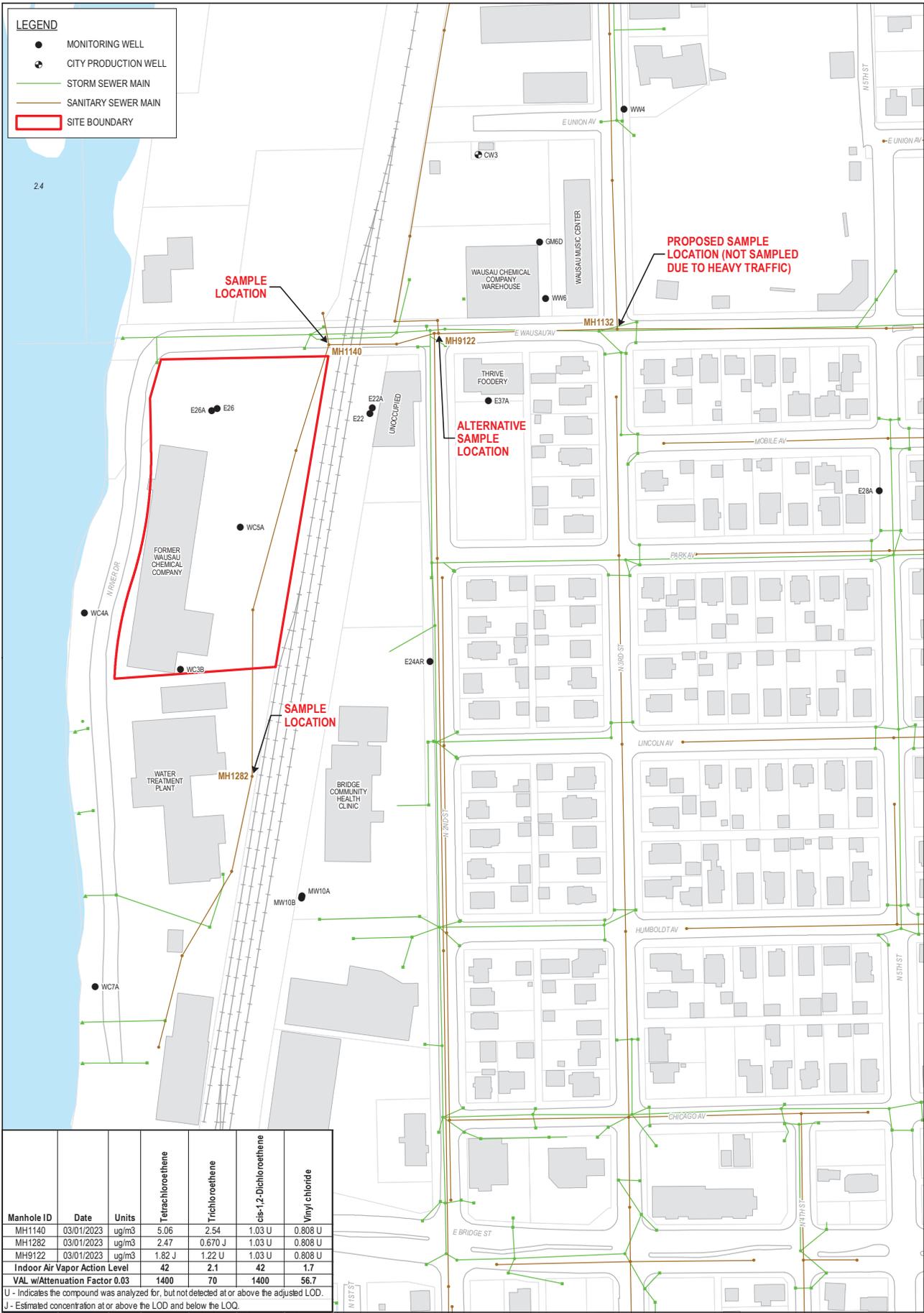


WAUSAU WATER SUPPLY NPL SITE
WAUSAU, WISCONSIN

**SUB-SLAB AND INDOOR
AIR SAMPLE LOCATIONS**

Project No. 003978-00
Revision No. -
Date 05/11/2023

FIGURE 2.1

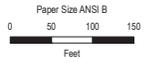


LEGEND

- MONITORING WELL
- CITY PRODUCTION WELL
- STORM SEWER MAIN
- SANITARY SEWER MAIN
- ▭ SITE BOUNDARY

Manhole ID	Date	Units	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Vinyl chloride
MH1140	03/01/2023	ug/m3	5.06	2.54	1.03 U	0.808 U
MH1282	03/01/2023	ug/m3	2.47	0.670 J	1.03 U	0.808 U
MH9122	03/01/2023	ug/m3	1.82 J	1.22 U	1.03 U	0.808 U
Indoor Air Vapor Action Level			42	2.1	42	1.7
VAL w/Attenuation Factor 0.03			1400	70	1400	56.7

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.
 J - Estimated concentration at or above the LOD and below the LOQ.



WAUSAU WATER SUPPLY NPL SITE
 WAUSAU, WISCONSIN
**PREFERENTIAL PATHWAY
 INVESTIGATION
 SAMPLING LOCATIONS**

Project No. 003978-00
 Revision No. -
 Date 05/11/2023

FIGURE 3.1

Tables

Table 1

**East Bank Subslab and Indoor Air Lab Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

SUB-SLAB						
Property Location	Date	Units	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
Bridge Comm. Clinic	4/4/2017	ug/m3	3,000	58	7.6 U	5.9 U
Bridge Comm. Clinic	7/31/2017	ug/m3	2,700	65	6.7 U	5.2 U
Bridge Comm. Clinic	3/1/2023	ug/m3	849	20.2	1.03 U	0.808 U
D&J Showroom	4/25/2019	ug/m3	740	25	0.095U	0.074U
D&J South Storage	4/25/2019	ug/m3	97	15	0.40 J	0.074U
D&J South Storage Dup.	4/25/2019	ug/m3	100	16	1.6 J	0.074U
D&J Showroom	9/24/2019	ug/m3	1,100	37	0.40U	0.66U
D&J South Storage	9/24/2019	ug/m3	240	11	1.1 J	0.074U
D&J South Storage Dup	9/24/2019	ug/m3	220	10	1.1 J	0.074U
D&J South Storage	3/1/2023	ug/m3	115	2.98	1.03 U	0.808 U
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			5,800	880	--	2,800

INDOOR AIR						
Commercial Properties	Date	Sample Location	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
Bridge Comm. Clinic	4/4/2017	Basement	16	0.44	0.095 U	0.074 U
Bridge Comm. Clinic	7/31/2017	Basement	2.1	0.34	0.095 U	0.074 U
Bridge Comm. Clinic	3/1/2023	Basement	11.7	1.22 U	1.03 U	0.808 U
D&J - Showroom	4/25/2019	Basement	0.68	0.098	0.95U	0.74U
D&J - Showroom	9/24/2019	Basement	2.2	0.088	0.04U	0.066U
D&J - Showroom	3/1/2023	Basement	5.81 J	1.22 UJ	1.03 UJ	0.808 UJ
Small Commercial Indoor Air Action Level (0.03 attenuation factor)			180	8.8	--	28

Note: All units µg/m3

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2022 U.S.EPA Regional Screening Levels.
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.
J - Estimated concentration at or above the LOD and below the LOQ.

Table 2

**West Bank Sub-slab Vapor and Indoor Air Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

			Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
Sub-slab Regal - March 2017	Date	Units					
SS-1 (north side Building B)	3/13/2017	ug/m3	270	1.3 J	0.37 U	0.47 U	0.40 J
SS-2 (middle Building B)	3/13/2017	ug/m3	9,400	150	21 U	1,200	220
SS-3 (south side Building B)	3/13/2017	ug/m3	0.78	0.95 U	0.74 U	0.62	0.17 J
SS-4 (southeast side Building A)	3/13/2017	ug/m3	220	0.99 J	0.25 U	5.3	1.5
SS-5 (southeast side Building A)	3/13/2017	ug/m3	4,800	17 U	13 U	17 U	41 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530

Indoor Air Regal - March 2017

Indoor Air - Building B	3/13/2017	ug/m3	1.6	0.095 U	0.074 U	0.44 J	0.15 J
Indoor Air - Building A	3/13/2017	ug/m3	0.82	0.095 U	0.074 U	0.42 J	0.14 J
Industrial Indoor Air Action Level			8.8	--	28	20	5.3

Outdoor Air near Building B	3/13/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.093 J
-----------------------------	-----------	-------	---------	---------	---------	--------	---------

Table 2

**West Bank Sub-slab Vapor and Indoor Air Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

			Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
Sub-slab Regal - August 2017	Date	Units					
SS-1 (north side Building B)	8/1/2017	ug/m3	280	1.3 J	0.74 U	0.94 U	0.73 U
SS-2 (middle Building B)	8/1/2017	ug/m3	15,000	260	43 U	1,800	470
SS-3 (south side Building B)	8/1/2017	ug/m3	0.75 U	0.95 U	0.74 U	5.5	0.73 U
SS-4 (southeast Building A)	8/2/2017	ug/m3	9.4	0.95 U	0.74 U	0.94 U	0.73 U
SS-5 (southeast Building A)	8/1/2017	ug/m3	4,900	15 U	12 U	15 U	50 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530

Indoor Air Regal - August 2017

Indoor Air - Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.15 J
Indoor Air - Building A	8/1/2017	ug/m3	0.17 J	0.095 U	0.074 U	0.45 J	0.14 J
Industrial Indoor Air Action Level (0.01 attenuation factor)		(0.01)	8.8	--	28	20	5.3
Outdoor Air near Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.44 J	0.14 J

Table 2

**West Bank Sub-slab Vapor and Indoor Air Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

			Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
Sub-slab Regal - March 2023							
	Date	Units					
SS-1 (north side Building B)	3/1/2023	ug/m3	236	1.03 U	0.808 U	1.19 J	1.16 U
SS-2 (middle Building B)	3/1/2023	ug/m3	21,900	184	0.808 U	420	185
SS-3 (south side Building B)	3/1/2023	ug/m3	7.29/6.70	1.03 U/1.03U	0.808 U/0.808 U	0.661 J/0.591J	40.2/36.4
SS-4 (southeast side Building A)	3/1/2023	ug/m3	424	1.03 U	0.808 U	1.54 U	1.16 U
SS-5 (southeast side Building A)	3/1/2023	ug/m3	6,640	1.03 U	0.808 U	0.674 J	20.1
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530
Indoor Air - March 2023							
Indoor Air - Building B	3/1/2023	ug/m3	2.33 J	1.03 UJ	0.808 UJ	0.461 J	1.16 UJ
Indoor Air - Building A	3/1/2023	ug/m3	1.62	1.03 U	0.808 U	1.54 U	1.16 U
Industrial Indoor Air Action Level (0.01 attenuation factor)			8.8	--	28	20	5.3

Notes:

4,800 - Result exceeded applicable screening level

Note: All units µg/m3

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2022 U.S.EPA Regional Screening Levels.

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

**Preferential Pathway Vapor Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

Manhole ID	Date	Units	Tetrachloroethene	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride
MH1140	3/1/2023	ug/m3	5.06	2.54	1.03 U	0.808 U
MH1282	3/1/2023	ug/m3	2.47	0.670 J	1.03 U	0.808 U
MH9122	3/1/2023	ug/m3	1.82 J	1.22 U	1.03 U	0.808 U
Indoor Air Vapor Action Level (VAL)			42.0	2.1	42	1.7
VAL w/Attenuation Factor 0.03			1400	70	1400	56.7

Note: All units µg/m3

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2022 U.S.EPA Regional Screening Levels.

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

Attachment 3

September 2023 Vapor Intrusion Data



Table 1

**West Bank Sub-slab, Indoor Air, and Soil Gas Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

Sub-slab Regal - March 2017	Date	Units	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
SS-1 (north side Building B)	3/13/2017	ug/m3	270	1.3 J	0.37 U	0.47 U	0.40 J
SS-2 (middle Building B)	3/13/2017	ug/m3	9,400	150	21 U	1,200	220
SS-3 (south side Building B)	3/13/2017	ug/m3	0.78	0.95 U	0.74 U	0.62	0.17 J
SS-4 (southeast side Building A)	3/13/2017	ug/m3	220	0.99 J	0.25 U	5.3	1.5
SS-5 (southeast side Building A)	3/13/2017	ug/m3	4,800	17 U	13 U	17 U	41 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530
Indoor Air Regal - March 2017							
Indoor Air - Building B	3/13/2017	ug/m3	1.6	0.095 U	0.074 U	0.44 J	0.15 J
Indoor Air - Building A	3/13/2017	ug/m3	0.82	0.095 U	0.074 U	0.42 J	0.14 J
Industrial Indoor Air Action Level			8.8	--	28	20	5.3
Outdoor Air near Building B	3/13/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.093 J

Table 1

**West Bank Sub-slab, Indoor Air, and Soil Gas Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

Sub-slab Regal - August 2017	Date	Units	Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
SS-1 (north side Building B)	8/1/2017	ug/m3	280	1.3 J	0.74 U	0.94 U	0.73 U
SS-2 (middle Building B)	8/1/2017	ug/m3	15,000	260	43 U	1,800	470
SS-3 (south side Building B)	8/1/2017	ug/m3	0.75 U	0.95 U	0.74 U	5.5	0.73 U
SS-4 (southeast Building A)	8/2/2017	ug/m3	9.4	0.95 U	0.74 U	0.94 U	0.73 U
SS-5 (southeast Building A)	8/1/2017	ug/m3	4,900	15 U	12 U	15 U	50 J
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530

Indoor Air Regal - August 2017

Indoor Air - Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.41 J	0.15 J
Indoor Air - Building A	8/1/2017	ug/m3	0.17 J	0.095 U	0.074 U	0.45 J	0.14 J
Industrial Indoor Air Action Level (0.01 attenuation factor)			8.8	--	28	20	5.3

Outdoor Air near Building B	8/1/2017	ug/m3	0.075 U	0.095 U	0.074 U	0.44 J	0.14 J
-----------------------------	----------	-------	---------	---------	---------	--------	--------

Table 1

**West Bank Sub-slab, Indoor Air, and Soil Gas Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

			Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
Sub-slab Regal - March 2023							
	Date	Units					
SS-1 (north side Building B)	3/1/2023	ug/m3	236	1.03 U	0.808 U	1.19 J	1.16 U
SS-2 (middle Building B)	3/1/2023	ug/m3	21,900	184	0.808 U	420	185
SS-3 (south side Building B)	3/1/2023	ug/m3	7.29/6.70	1.03 U/1.03U	0.808 U/0.808 U	0.661 J/0.591J	40.2/36.4
SS-4 (southeast side Building A)	3/1/2023	ug/m3	424	1.03 U	0.808 U	1.54 U	1.16 U
SS-5 (southeast side Building A)	3/1/2023	ug/m3	6,640	1.03 U	0.808 U	0.674 J	20.1
Sub-slab Large Industrial Screening Level (0.01 attenuation factor)			880	--	2,800	2,000	530
Indoor Air - March 2023							
Indoor Air - Building B	3/1/2023	ug/m3	2.33 J	1.03 UJ	0.808 UJ	0.461 J	1.16 UJ
Indoor Air - Building A	3/1/2023	ug/m3	1.62	1.03 U	0.808 U	1.54 U	1.16 U
Industrial Indoor Air Action Level (0.01 attenuation factor)			8.8	--	28	20	5.3

Table 1

**West Bank Sub-slab, Indoor Air, and Soil Gas Results
Wausau Water Supply NPL Site
Wausau, Wisconsin**

			Trichloroethene	c-1,2-Dichloroethene	Vinyl chloride	Carbon tetrachloride	Chloroform
Sub-slab Regal - September 2023							
	Date	Units					
SS-1 (north side Building B)	9/14/2023	ug/m3	1760	5.55	0.511 U	21.7	7.11
SS-2 (middle side Building B)	9/14/2023	ug/m3	30600	159	0.511 U	552	192
SS-3 (south side Building B)	9/14/2023	ug/m3	4.41	0.793 U	0.511 U	0.575J	28.1
SS-4 (southwest side Building A)	9/14/2023	ug/m3	140	0.793 U	0.511 U	1.26 U	1.62
SS-5 (southeast side Building A)	9/14/2023	ug/m3	3170	0.805	0.511 U	1.26 U	38.3
SS-8 (northwest side Building B)	9/14/2023	ug/m3	105	0.793 U	0.511 U	280	28.2
SS-9 (southwest side Building B)	9/14/2023	ug/m3	75	0.793 U	0.511 U	28.3	26.1
SS-11 (northwest side Building A)	9/14/2023	ug/m3	9540	2.5	0.511 U	0.542J	183
SS-12 (northeast side Building A)	9/14/2023	ug/m3	24.1	0.793 U	0.511 U	1.26 U	0.978
Sub-slab Large Industrial Screening Level			880	--	2,800	2,000	530
Indoor Air - September 2023							
IA-01 (north side Building B)	9/14/2023	ug/m3	0.852J	1.03 U	0.808 U	1.54 U	--
IA-02 (middle side Building B)	9/14/2023	ug/m3	2.74	1.03 U	0.808 U	1.54 U	1.16 U
*IA-05 (southeast side Building A)	9/14/2023	ug/m3	1.37	1.03 U	0.808 U	1.54 U	1.16 U
IA-11 (northwest side Building A)	9/14/2023	ug/m3	1.85	1.03 U	0.808 U	1.54 U	1.16 U
Industrial Indoor Air Action Level (0.01 attenuation factor)			8.8	--	28	20	5.3
Soil Gas Probes Outdoor - September 2023							
SG-1 (northwest side Building B)	9/13/2023	ug/m3	103	0.416 J	0.511 U	1.74	0.686J
SG-2 (southwest side Building B)	8/29/2023	ug/m3	21.4 U	15.9 U	10.2 U	25.2 U	19.5 U
Sub-slab Large Industrial Screening Level			880	--	2,800	2,000	530

Notes:

4,800

- Result exceeded applicable screening level

Note: All units µg/m3

Screening Levels and Action Levels are from Wisconsin DNR "WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels. Based on November 2022 U.S.EPA Regional Screening Levels.

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

Attachment 4

2007 East Bank Deed Restrictions

Appendix F

Deed Restrictions Implemented on Wausau Chemical Property



DOC# 1475599

Document Number DEED RESTRICTION

Declaration of Restriction

Michael J. Sydow

In Re:

James E. Cherwinka Trust

Parcel 1:

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, County of Marathon, State of Wisconsin, described as follows:

Recording Area

Name and Return Address

Parcel 25-ene

James E. Cherwinka Trust
c/o Attorney James E. Wiederhoeft
Fowler and Wiederhoeft LLP
702 North Blackhawk Avenue
Madison, Wisconsin 53705-5326
and
Wausau Chemical Corp.
2001 North River Drive
Wausau, Wisconsin 54401

COPY

Beginning at a point on the South line of Wausau Avenue 227.75 feet West of the West line of Second Street; thence South perpendicular to the South line of Wausau Avenue, 70 feet; thence West, parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet Northwesterly of railroad siding track; thence Southwesterly on a curve parallel to and 15 feet distant Northwesterly from the center line of said railroad siding track, to a point 458 feet West of the West line of Second Street; thence North to the South line of Wausau

291-2907-252-0990 NW NW
291-2907-252-0997 NW NW

Parcel Identification Numbers (PIN)

Avenue at a point which is 458 feet West of the West line of Second Street; thence East along the South line of Wausau Avenue 230.25 feet, more or less, to the point of beginning.

Parcel 2:

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, Marathon County, State of Wisconsin, described as follows:

Commencing at a point on the South line of Wausau Avenue, 227.75 feet West of the West line of Second Street; thence South perpendicular to South line of Wausau Avenue, 70 feet; thence West parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet NW'y of railroad siding track, thence SW'y on a curve parallel to and 15 feet NW'y from the center line of said railroad siding track



DOC# 1475599

to a point, said point being 131 feet South of the South line of Wausau Avenue; thence at an azimuth of 180°, 23.05 feet to a point, said point being the P.C. of a reverse curve to the right; thence SW'y 224.05 feet along a curve having the following data, radius 675.11 feet, tangents 112.97 feet, I angle 19°, long chord 222.85 feet, curve length 224.05 feet, degree of curvature 8° 28.8', to a point said point being the point of reverse curvature; thence SW'y 166.90 feet along a curve to the left having the following data, radius 615.11 feet, tangents 120.77 feet, long chord 237.02 feet, curve length 238.5 feet, curvature 9° 18.6', I angle 22° 13' to a point, which point is the point of beginning of the excepted parcel hereafter described; thence at an azimuth of 87° 06' a distance of 273.95 feet to a point, said point being 50 feet perpendicular to and West of the center line of the main line track of the C. M. St. P. & P. R. R.; thence at an azimuth of 10° 40' a distance of 532.32 feet parallel with and 50 feet West of the center line of said railroad tracks to a point, said point being on the South line of Wausau Avenue and 155.60 feet West of the West line of Second Street; thence West along the South line of Wausau Avenue 72.15 feet to the point of beginning; excepting therefrom the following parcel; beginning at the point designated in the foregoing description as the point of beginning of the excepted parcel; thence N 83° 46' 30" E, 99.6 feet; thence NE'y, parallel with the centerline of the railroad siding track of the Chicago, Milwaukee, St. Paul & Pacific Railroad, 181.1 feet; thence Northwesterly, at a right angle, 89.6 feet; thence SW'y, along the East boundary of River Drive, and along the West line of the parcel conveyed in the foregoing description, 197 feet, more or less, to the point of beginning.

1309166

The above Parcels 1 and 2 are part of Parcel 1 of Certified Survey Map No. 12726 recorded in the office of the Register of Deeds for Marathon County, Wisconsin, in Volume 55 of Certified Survey Maps on page 44, a copy of which is attached hereto as Exhibit A. The above Parcels 1 and 2 are also identified as PIN 291-2907-252-0990.

And

Wausau Chemical Corporation

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, Marathon County, State of Wisconsin, designated as the excepted parcel, described as follows:

Commencing at a point on the South line of Wausau Avenue, 227.75 feet West of the West line of Second Street; thence South perpendicular to South line of Wausau Avenue, 70 feet; thence West parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet NW'y of railroad siding track, thence SW'y on a curve parallel to and 15 feet NW'y from the center line of said railroad siding track to a point, said point being 131 feet South of the South line of Wausau Avenue; thence at an azimuth of 180°, 23.05 feet to a point, said point being the P.C. of a reverse curve to the right; thence SW'y 224.05 feet along a curve having the following data, radius 675.11 feet, tangents 112.97 feet, I angle



DOC# 1475599

WHEREAS, sampling data on and about the property has demonstrated soil cleanup adequately protective of groundwater quality; however, residual soil contamination remains on the property.

WHEREAS, it is the desire and intention of the property owners to impose on the property restrictions that will make it unnecessary to conduct further soil remediation activities on the property at the present time.

NOW THEREFORE, the owners hereby declare that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

1. Construction or installation of any water supply well on the property is prohibited pursuant to this deed restriction.
2. Plowing or cultivation of agricultural crops on the property is prohibited pursuant to this deed restriction.
3. The existing Wausau Chemical Corporation building shown on Exhibit B makes complete remediation of soils beneath the building impractical. If the existing building is removed or modified, the property owner shall conduct an investigation to determine the degree and extent of soil contamination beneath the building. To the extent that soil contamination is found at that time, the Wisconsin Department of Natural Resources shall be immediately notified and the soil contamination shall be managed in accordance with applicable statutes and rules. If currently inaccessible soil contamination near or beneath the building is excavated in the future, the soil must be sampled and analyzed, may be considered solid or hazardous waste if residual contamination remains and must be stored, treated and disposed in compliance with applicable statutes and rules.
4. The existing pavement forms a barrier that will be maintained in accordance with the maintenance plan entitled "Pavement Cover and Building Barrier Maintenance Plan, Wausau Chemical Corporation", dated October 17, 2006. The existing pavement will minimize the infiltration of water which prevents additional groundwater contamination. The existing pavement shall be maintained on the property in the locations shown on Exhibit B. Such existing pavement shall not be removed without the approval of the Wisconsin Department of Natural Resources.
5. If construction or installation of buildings, structures or other improvements occur on grid points 19-4 or 35-7 shown on Exhibit B, then the affected soils at grid points 19-4 or 35-7 shall be sampled and managed in accordance with applicable statutes and rules.
6. The property shall be used only for industrial purposes.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise, purchase, or otherwise. This restriction inures to the benefit of and is enforceable by the Wisconsin Department of Natural Resources, its successors or assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons



DOC # 1476599

who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that one or more of the restrictions set forth in this covenant is no longer required. Upon the receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, attached to a copy of the Department's written determination, may be recorded by the property owner or other interested party to give notice that this deed restriction, or portions of this deed restriction, are no longer binding.

By signing this document, Rhona Vogel asserts that he or she is duly authorized to sign this document as a Trustee of the James E. Cherwinka Trust.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 13 day of April, 2007.

Signature: Rhona Vogel
Printed Name: Rhona Vogel
Trustee, James E. Cherwinka Trust

Subscribed and sworn to before me
this 13 day of April, 2007

Simon Herck
Notary Public, State of Wisconsin
My commission expires 7/22/07

By signing this document, Jeff Cherwinka asserts that he or she is duly authorized to sign this document as an officer of Wausau Chemical Corporation.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 19 day of April, 2007.

Signature: Jeff Cherwinka
Printed Name: Jeff Cherwinka
Officer of Wausau Chemical Corporation



DOC# 1475599

Subscribed and sworn to before me
this 24 day of April, 2007

John M. Scott
Notary Public, State of Wisconsin
My Commission: 08-05-07

This document was drafted by Michael Best & Friedrich LLP and Conestoga-Rovers and Associates, Inc.

X:\CLIENTS\094167\0001\A1844250.1



DOC# 1507947

Document Number DEED RESTRICTION

Declaration of Restriction

In Re:
James E. Cherwinka Trust

Parcel 1:

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, County of Marathon, State of Wisconsin, described as follows:

Beginning at a point on the South line of Wausau Avenue 227.75 feet West of the West line of Second Street; thence South perpendicular to the South line of Wausau Avenue, 70 feet; thence West, parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet Northwesterly of railroad siding track; thence Southwesterly on a curve parallel to and 15 feet distant Northwesterly from the center line of said railroad siding track, to a point 458 feet West of the West line of Second Street; thence North to the South line of Wausau Avenue at a point which is 458 feet West of the West line of Second Street; thence East along the South line of Wausau Avenue 230.25 feet, more or less, to the point of beginning; EXCEPTING that part thereof described in Deed recorded in the office of the Register of Deeds for Marathon County, Wisconsin, in Volume 257 of Micro-Records on page 356.

Michael J. Sydow

Recording Area

Name and Return Address

James E. Cherwinka Trust
c/o Thomas A. Strandberg, Esq.
McNally, Maloney & Peterson, S.C.
2600 N. Mayfair Road, Suite 1080
Milwaukee, WI 53226
and
Wausau Chemical Corp.
2001 North River Drive
Wausau, Wisconsin 54401

Chg Rates 25%
291-2907-252-0990 *NW NW*
291-2907-252-0997 *NW NW*

Parcel Identification Numbers (PIN)

Parcel 2:

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, Marathon County, State of Wisconsin, described as follows:

Commencing at a point on the South line of Wausau Avenue, 227.75 feet West of the West line of Second Street; thence South perpendicular to South line of Wausau Avenue, 70 feet; thence West parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet Northwesterly of railroad siding track, thence Southwesterly



DOC# 1507947

on a curve parallel to and 15 feet Northwesterly from the center line of said railroad siding track to a point, said point being 131 feet South of the South line of Wausau Avenue; thence at an azimuth of 180° , 23.05 feet to a point, said point being the P.C. of a reverse curve to the right; thence Southwesterly 224.05 feet along a curve having the following data, radius 675.11 feet, tangents 112.97 feet, I angle 19° , long chord 222.85 feet, curve length 224.05 feet, degree of curvature $8^\circ 28.8'$, to a point said point being the point of reverse curvature; thence Southwesterly 166.90 feet along a curve to the left having the following data, radius 615.11 feet, tangents 120.77 feet, long chord 237.02 feet, curve length 238.5 feet, curvature $9^\circ 18.6'$, I angle $22^\circ 13'$ to a point, which point is the point of beginning of the excepted parcel hereafter described; thence at an azimuth of $87^\circ 06'$ a distance of 273.95 feet to a point, said point being 50 feet perpendicular to and West of the center line of the main line track of the C. M. St. P. & P. R. R.; thence at an azimuth of $10^\circ 40'$ a distance of 532.32 feet parallel with and 50 feet West of the center line of said railroad tracks to a point, said point being on the South line of Wausau Avenue and 155.60 feet West of the West line of Second Street; thence West along the South line of Wausau Avenue 72.15 feet to the point of beginning; EXCEPTING therefrom the following parcel; beginning at the point designated in the foregoing description as the point of beginning of the excepted parcel; thence North $83^\circ 46' 30''$ East, 99.6 feet; thence Northeasterly, parallel with the centerline of the railroad siding track of the Chicago, Milwaukee, St. Paul & Pacific Railroad, 181.1 feet; thence Northwesterly, at a right angle, 89.6 feet; thence Southwesterly, along the East boundary of River Drive, and along the West line of the parcel conveyed in the foregoing description, 197 feet, more or less, to the point of beginning.

The above Parcels 1 and 2 are part of Parcel 1 of Certified Survey Map No. 12726 recorded in the office of the Register of Deeds for Marathon County, Wisconsin, in Volume 55 of Certified Survey Maps on page 44, a copy of which is attached hereto as Exhibit A. The above Parcels 1 and 2 are also identified as PIN 291-2907-252-0990.

And

Wausau Chemical Corporation

Part of the Northwest quarter (NW1/4) of the Northwest quarter (NW1/4) of Section twenty-five (25), Township twenty-nine (29) North, Range seven (7) East, in the City of Wausau, Marathon County, State of Wisconsin, designated as the excepted parcel, described as follows:

Commencing at a point on the South line of Wausau Avenue, 227.75 feet West of the West line of Second Street; thence South perpendicular to South line of Wausau Avenue, 70 feet; thence West parallel with and 70 feet South of the South line of Wausau Avenue, 147.60 feet, more or less, to a point which is 15 feet Northwesterly of railroad siding track, thence Southwesterly on a curve parallel to and 15 feet Northwesterly from the center line of said railroad siding track to a point, said point being 131 feet South of the South line of Wausau Avenue; thence at an azimuth of 180° , 23.05 feet to a point,



DOC# 1507947

WHEREAS, the existing building and pavement on the property provide a partial barrier, minimizing infiltration, and the depth of the remaining contaminants prevents direct contact with the residual soil contamination.

WHEREAS, sampling data on and about the property has demonstrated soil cleanup adequately protective of groundwater quality; however, residual soil contamination remains on the property.

WHEREAS, it is the desire and intention of the property owners to impose on the property restrictions that will make it unnecessary to conduct further soil remediation activities on the property at the present time.

NOW THEREFORE, the owners hereby declare that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

1. Construction or installation of any water supply well on the property is prohibited pursuant to this deed restriction.
2. Plowing or cultivation of agricultural crops on the property is prohibited pursuant to this deed restriction.
3. The existing Wausau Chemical Corporation building shown on Exhibit B makes complete remediation of soils beneath the building impractical. If the existing building is removed or modified, the property owner shall conduct an investigation to determine the degree and extent of soil contamination beneath the building. To the extent that soil contamination is found at that time, the Wisconsin Department of Natural Resources shall be immediately notified and the soil contamination shall be managed in accordance with applicable statutes and rules. If currently inaccessible soil contamination near or beneath the building is excavated in the future, the soil must be sampled and analyzed, may be considered solid or hazardous waste if residual contamination remains and must be stored, treated and disposed in compliance with applicable statutes and rules.
4. The existing pavement forms a barrier that will be maintained in accordance with the maintenance plan entitled "Pavement Cover and Building Barrier Maintenance Plan, Wausau Chemical Corporation", dated October 17, 2006. The existing pavement will minimize the infiltration of water which prevents additional groundwater contamination. The existing pavement shall be maintained on the property in the locations shown on Exhibit B. Such existing pavement shall not be removed without the approval of the Wisconsin Department of Natural Resources.
5. If construction or installation of buildings, structures or other improvements occur on grid points 19-4 or 35-7 shown on Exhibit B, then the affected soils at grid points 19-4 or 35-7 shall be sampled and managed in accordance with applicable statutes and rules.
6. The property shall be used only for industrial purposes.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise,



DOC# 1507947

purchase, or otherwise. This restriction inures to the benefit of and is enforceable by the Wisconsin Department of Natural Resources, its successors or assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that one or more of the restrictions set forth in this covenant is no longer required. Upon the receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, attached to a copy of the Department's written determination, may be recorded by the property owner or other interested party to give notice that this deed restriction, or portions of this deed restriction, are no longer binding.

By signing this document, Rhona E. Vogel asserts that he or she is duly authorized to sign this document as a Trustee of the James E. Cherwinka Trust.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 8th day of Jan, 2008.

Signature: Rhona E Vogel
Printed Name: Rhona E. Vogel
Trustee, James E. Cherwinka Trust

Subscribed and sworn to before me
this 8 day of JANUARY, 2008

Thomas A. Strandberg
Notary Public, State of WISCONSIN
My commission PERMANENT



By signing this document, John Becker asserts that he or she is duly authorized to sign this document as an officer of Wausau Chemical Corporation.

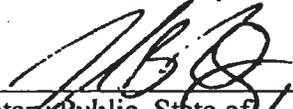
IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 18 day of April, 2008.

Signature: John Becker
Printed Name: John Becker
Officer of Wausau Chemical Corporation



DOC# 1507947

Subscribed and sworn to before me
this 15th day of April, 2005.



Notary Public, State of Wisconsin
My commission is Perennial

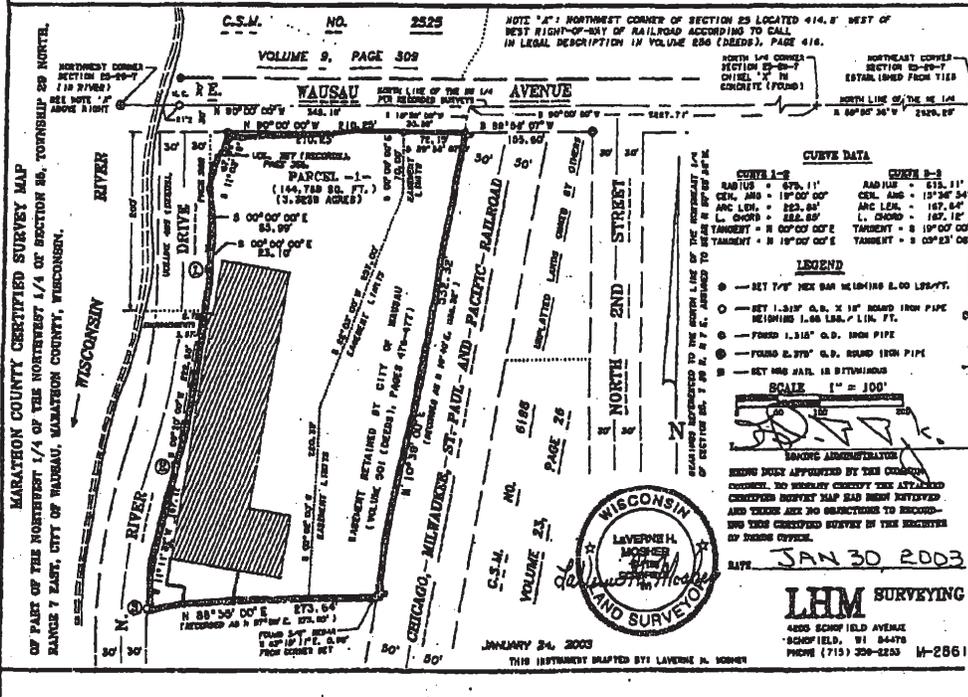
This document was drafted by Michael Best & Friedrich LLP; Conestoga-Rovers and Associates, Inc.; and McNally, Maloney & Peterson, S.C.

X:\CLIENT\B\094167\0001\A1844250.1

Doc# 1507947



12728



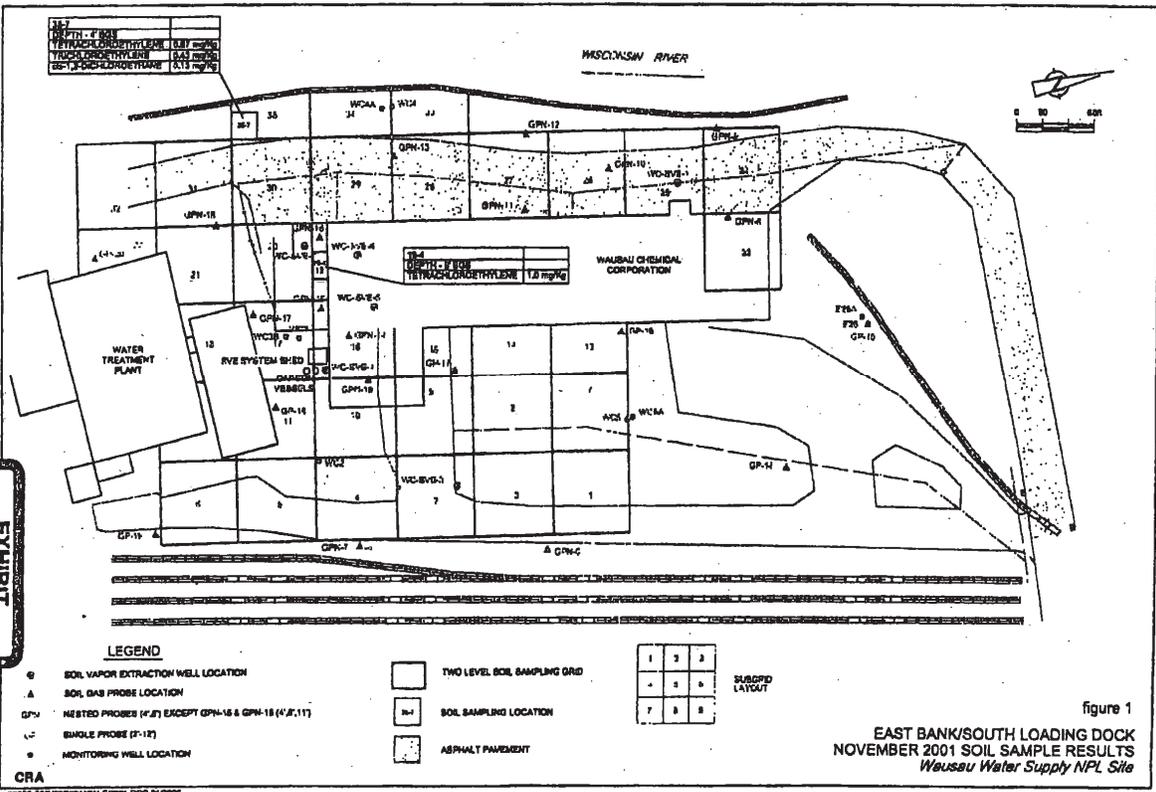


figure 1
 EAST BANK/SOUTH LOADING DOCK
 NOVEMBER 2001 SOIL SAMPLE RESULTS
 Weusau Water Supply NPL Site

EXHIBIT
 1507947

Attachment 5

WDNR ESD Concurrence Letter



March 5, 2024

Mr. Douglas Ballotti, Director
Superfund & Emergency Management Division
U.S. EPA – Region 5
77 West Jackson Street
Chicago, IL 60604

Subject: Concurrence on the Explanation of Significant Differences, Wausau Groundwater Contamination Superfund Site, Wausau, Wisconsin
DNR BRRTS Activity #02-37-000017, FID No. 737105820
EPA Site ID: WID980993521

Dear Mr. Ballotti:

The Wisconsin Department of Natural Resources (Department) is providing you with this letter to document the Department's concurrence with an Explanation of Significant Differences (ESD) to the September 1, 1989, Record of Decision (1989 ROD), Operable Unit 2 (OU2), for the Wausau Groundwater Contamination (WGC) Superfund site (Site). We believe the modifications to the remedy described in the draft 2024 ESD comply with Wisconsin statutes and Administrative Code requirements.

The final site-wide remedies were identified in the 1989 ROD for OU2 and are the subject of the ESD. The remedial action objectives selected in the 1989 ROD were:

- Reduction of long-term exposure to low levels of volatile organic compounds (VOCs) from ingestion of drinking water;
- Protection from potential future use of private wells in contaminated groundwater; and
- Protection from emissions of contaminants from proposed water treatment systems that release VOCs to the atmosphere.

All of the components of the final cleanup decision, embodied in the ROD, have been successfully constructed; however, the groundwater cleanup standards have not been met and contaminated soil remains onsite. EPA is proposing changes to the scope of the remedy selected in 1989 ROD to address potential public health risks due to potable use of groundwater and potential vapor intrusion in onsite buildings.

This ESD documents one significant change to the selected remedy for OU2 and indicates that Institutional Controls (ICs) will be implemented to ensure that the remedy is protective of human health and the environment.

The ICs incorporated into the Site remedy for the OU2 include:

- A local municipal ordinance that restricts installation of wells and access to the groundwater plumes,
- A deed restriction on the former Wausau Chemical facility, and
- Wisconsin Continuing Obligations (COs) to restrict groundwater use and potential soil exposure in accordance with Wis. Stat. § 292.12. The COs will be identified in the IC Implementation and Assurance Plan and will be imposed when the IC Plan is approved.

The proposed remedial actions to address the source areas have already been implemented or are in the process of being implemented. The municipal ordinance and deed restriction are already in place and are effective. The Department concurs with the modifications to the selected remedy at the Site, as described above and in the draft 2024 ESD.

Thank you for your support and cooperation in addressing the contamination at the Wausau Groundwater Contamination Superfund site. Should you have any questions regarding this matter please contact Judy Fassbender at (414) 507-5571.

Sincerely,

A handwritten signature in black ink that reads "Christine Sieger". The signature is written in a cursive, flowing style.

Christine Sieger, Director
Bureau for Remediation and Redevelopment

Cc: Matt Thompson, WDNR
Chris Saari, WDNR
Jeff Paddock, WDNR
Jeff Dewey, RPM, EPA Region 5