From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Monday, March 10, 2025 2:55 PM
To: Beggs, Tauren R - DNR; Adam Tegen
Cc: Carey, Angela J - DNR; Graczyk, Lisa (she/her/hers); Kim.Jay@epa.gov; Knapke.Eric@epa.gov
Subject: RE: Additional Documentation Needed for Review of Proposed Remedial Action of PCBs for Mirro Plt 9 (Former), BRRTS # 02-36-545108
Attachments: 1512 Washington Street - Post-Remediation Groundwater Monitoring Plan.pdf

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Team:

Thank you for your comments to strengthen the upcoming cleanup in Manitowoc.

We will work with the remediation contractor as they prepare their PLANS and will submit to this team as soon as possible.

In the interim, attached is a post-remediation groundwater monitoring plan for your concurrence.

Turen – I will send a copy of the attached to you through the portal.

Sincerely,

Harris Byers, Ph.D.
Sr. Brownfields Project Manager
Contaminant Hydrogeologist / Urban Geochemist

Direct: 414 581-6476
Harris.Byers@stantec.com

Stantec
12080 Corporate Parkway Suite 200
Mequon WI 53092-2649

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From: Beggs, Tauren R - DNR <Tauren.Beggs@wisconsin.gov>
Sent: Thursday, March 6, 2025 12:39 PM
To: Byers, Harris <Harris.Byers@stantec.com>; Adam Tegen <ategen@manitowoc.org>
Cc: Carey, Angela J - DNR <Angela.Carey@wisconsin.gov>; Graczyk, Lisa (she/her/hers) <graczyk.lisa@epa.gov>; Kim.Jay@epa.gov
Subject: Additional Documentation Needed for Review of Proposed Remedial Action of PCBs for Mirro Plt 9 (Former), BRRTS # 02-36-545108

Hi Harris and Adam,

The DNR and USEPA have reviewed the *Remedial Action Plan & Materials Management Plan, Remedial Design Sampling and Supplemental Site Investigation Report*, and the *Supplemental Remedial Design Sampling to Further Delineate PCB Impacts to Soil Beneath the former Loading Dock*.

The DNR and USEPA have the following comments and additional conditions that need to be met prior to being able to provide coordinated approval of the proposed remedial action for PCBs:

- The focus of the Remedial Action Plan (RAP) and additional supporting documentation was to further characterize the two source areas (known as the Loading Dock and Area 8) for removal of PCBs greater than 50 parts per million (ppm) and between 10-50ppm. The proposed actions in the RAP are considered interim actions since the overall site investigation (which includes contaminants other than PCBs) at the site is not fully completed.
- Pre-characterization sampling, along with previous data collected at the site, has mostly characterized the two source areas of PCBs (Loading Dock and Area 8) vertically and horizontally to show Bulk PCB Remediation Waste to be excavated (greater than 50ppm and between 10-50ppm) and areas that meet both the DNR's residual contaminant levels (RCLs) and TSCA standard of less than 1 ppm. Post-excavation verification sampling must be conducted at the Loading Dock and Area 8 in any areas previously undelineated to both TSCA and WI soil RCL standards:
    - Due to the unknown void that has prevented complete characterization in Area 8, additional sampling needs to occur horizontally and vertically around SB-281 to properly segregate TSCA waste from soil with PCBs less than 50ppm. Alternatively, the soil could all be managed as TSCA waste.
        - For Example: Figure 6b shows a lack of soil samples between SB-299 to SB64 to properly characterize the horizontal and vertical extent of PCBs. This information will inform how soils will be segregated for disposal purposes and extent to which an engineered barrier is needed.
    - Cementitious materials (concrete slabs, footings, former utility tunnels, buried debris, and possible basement floors) that may be encountered during remedial excavations need to be sampled for proper characterization and disposal, unless conservatively considering the materials to be TSCA waste.
        - While it may not be technically practical to demolish and remove structural components which contain >50 mg/kg of PCBs that are below the water table, it must be demonstrated that these structures are not contributing PCBs to groundwater. This is critical since there are VOC's present at the site that may cause PCBs to mobilize via co-solvency into the groundwater.
- While the RAP provides a good general description of the proposed PCB remediation for the site, there are insufficient specific details about the PCB remediation to fully approve the remediation work. The RAP references a contractor will be selected through a bidding process and that contractor will prepare a cleanup plan that will include their approach for excavation/handling/transportation of PCB-impacted material, a decontamination plan, transportation routing plan, a health and safety plan, a dewatering plan, and a summary of stormwater best management practices to be used during cleanup work, collectively referred to as the PLANS. The PLANS will need to be submitted to DNR and USEPA for review and approval prior to starting work to ensure contaminated soil, groundwater, and surface water is characterized and managed appropriately by the contractor.

- A post-excavation PCB groundwater monitoring plan must be submitted. This plan will need to include what monitoring wells will be abandoned for excavation purposes and what wells are proposed to be re-installed. At minimum, a subset of monitoring wells will need to be re-installed to monitor concentrations of PCBs in groundwater post-excavation since there are concentrations above the enforcement standard (ES).
- While it is understood a future RAP will be submitted to facilitate redevelopment in the Phase 1 Redevelopment Area, provide information on and establish continuing obligations for the engineered barriers, and propose other actions to protect human health and the environment, it should be explained what controls will be in place to secure the site and indicate how the interim barriers will minimize exposure of PCBs to receptors such as construction workers and trespassers until the permanent engineered barriers are constructed (such as proper warning signage/markings around the barriers, fencing, etc.). TSCA regulations require a deed restriction where residual PCB concentrations exceed 1 ppm. USEPA and DNR understand that the permanent engineered cap will be constructed as a part of the development and prior to site occupancy.

If you have any questions, please let me know.

Regards,
Tauren

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Tauren R. Beggs
Hydrogeologist & Northeast Region Land Recycling Expert
Remediation and Redevelopment Program
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Stantec Consulting Services Inc.
12080 Corporate Parkway, Suite 200
Mequon WI 53092-2661

March 10, 2025

Project/File: 193709867

Attention: Mr. Tauren Beggs
Hydrogeologist, Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Northeast Region, Green Bay Service Center
2984 Shawano Ave
Green Bay, WI 54313-6727

Reference: Post-Remediation Groundwater Monitoring Plan
Phase I Redevelopment Area at the Former Mirro Plant #9
1512 Washington Street, Manitowoc, Wisconsin
BRRTS # 02-36-545108 (Open ERP)

Dear Mr. Beggs:

The Post-Remediation Groundwater Monitoring Plan described herein (the Plan) was prepared on behalf of the City of Manitowoc and the Community Development Authority of the City of Manitowoc (CDA; current Property owner and grantee) by Stantec Consulting Services Inc. (Stantec). The purpose of this Plan is to outline a monitoring plan to confirm groundwater quality following active remediation of subsurface polychlorinated biphenyl (PCB) impacts described in the Stantec (2024b) *Remedial Action Plan and Material Management Plan* (RAP/MMP) for the Phase I Redevelopment Area located at 1512 Washington Street in Manitowoc, Wisconsin (herein referred to as "the Property"). The Property (area outlined in green) and the Phase I Redevelopment Area (shaded in purple) relative to regional topography are illustrated on **Figure 1**. A 2020 orthophotograph of the Property and Phase I Redevelopment Area is attached as **Figure 2**.

This Plan was completed using funds from a brownfield cleanup grant awarded to the CDA by the United States Environmental Protection Agency (USEPA) in Fiscal Year 2024 under Cooperative Agreement Number 4B-00E03876-0. The USEPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) identification number associated with the Site is 169132. Wisconsin Department of Natural Resources (WDNR) Bureau for Remediation and Redevelopment Tracking System (BRRTS) Environmental Repair Program (ERP) case number for the project is 02-36-545108.

BACKGROUND

As described in the Stantec (2024b) RAP/MMP, Stantec proposes excavation and offsite disposal of impacted subsurface material at the Loading Dock and Area 8 as an interim active remedial action to reduce subsurface PCB impacts at the Property. The proposed bottom (illustrated as dashed pink lines) and top (illustrated as dashed black lines) of the excavations are illustrated on **Figure 3** and **Figure 4**.

In addition to soil impacts, the Stantec (2020) Phase II Environmental Site Assessment (ESA) and the subsequent phases of assessment completed by Ramboll (2022 and 2024) describe the delineation of PCB impacts to groundwater in two apparent release areas at the Property (referred to as the "Loading Dock" and "Area 8"). Specifically, PCBs were consistently detected in groundwater sampled from source area monitoring wells MW-17, MW-19, MW-37, MW-60, and MW-67 at concentrations greater than NR 140 groundwater

Reference: Post-Remediation Groundwater Monitoring Plan; Phase I Redevelopment Area at the Former Mirro Plant #9; 1512 Washington Street, Manitowoc, Wisconsin; BRRTS # 02-36-545108 (Open ERP)

quality standards. However, PCBs were not detected in piezometers installed by Ramboll (2022). Monitoring well and piezometer locations relative to the proposed excavations are illustrated on **Figure 3** and **Figure 4**.

Given that persistent shallow groundwater impacts are present, post-remediation monitoring is warranted to confirm the effectiveness of the remedial action in reducing the presumed source of PCB impacts to groundwater.

MONITORING WELL ABANDONMENT

To facilitate completion of the proposed excavations, Stantec will abandon seven monitoring wells at the Loading Dock (**Figure 3**) and three wells and a piezometer in Area 8 (**Figure 4**) per the requirements of ch. NR 141 of the Wisconsin Administrative Code (WAC). Abandonment forms will be provided in the Construction Documentation Report (CDR).

MONITORING WELL REINSTALLATION

Following completion of the remedial action, all abandoned monitoring wells/piezometers will be reinstalled adjacent to their original locations per the requirements of ch. NR 141 WAC and Stantec SOP-30. Well construction forms will be provided in the CDR.

POST REMEDIATION GROUNDWATER MONITORING

Following installation, Stantec will develop and collect quarterly groundwater samples for one year from monitoring wells MW-17, MW-19, MW-37, MW-60, and MW-67 per Stantec SOP-04 and SOP-29. Groundwater samples will be submitted to Eurofins following chain of custody procedures and analyzed for PCBs (Method 8082A).

Continued groundwater monitoring outside of the two PCB remediation areas will be completed by the responsible party.

REPORTING

Stantec will submit quarterly letter reports summarizing the groundwater analytical results following each sampling event.

We trust this submittal meets your needs and request concurrence from the WDNR and USEPA under a coordinated review the Plan is appropriate. We look forward to working with you on this upcoming remediation project.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Jiyan Hatami
Hydrogeologic Specialist
(262) 278-9154
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Joey Hahn, PE
Environmental Engineer
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Reference: Post-Remediation Groundwater Monitoring Plan; Phase I Redevelopment Area at the Former Mirro Plant #9; 1512 Washington Street, Manitowoc, Wisconsin; BRRTS # 02-36-545108 (Open ERP)

Enclosures:
Figures

SELECT REFERENCES

Stantec, 2020, Phase II Environmental Site Assessment, March 19, 2020.

Ramboll, 2024, NR 716 Site Investigation Report Addendum, February 7, 2024.

Stantec, 2024a, Remedial Design Sampling and Supplemental Site Investigation Report, Phase 1 Redevelopment Area, Former Mirro Plant #9, 1512 Washington Street, Manitowoc, Wisconsin, December 10, 2024.

Stantec, 2024b, Remedial Action Plan & Materials Management Plan, Removal of PCB Impacted Soil from Two Source Areas, Former Mirro Plant #9, 1512 Washington Street, Manitowoc, Wisconsin, December 13, 2024.

LIMITATIONS

The conclusions in this Plan are Stantec's professional opinion, as of the time of the Plan, and concerning the scope described in the Plan. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Plan relates solely to the specific project for which Stantec was retained and the stated purpose for which the Plan was prepared. The Plan is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from the City and CDA and third parties in the preparation of the Plan to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Plan is intended solely for use by the City and CDA in accordance with Stantec's contract with the City/CDA. While the Plan may be provided by the City and CDA to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

FIGURES

Figure No.
1

Title
Subject Property, Regional Topography, and Phase I Redevelopment Area

Client/Project
Former Mirro Plant #9
Post-Construction Groundwater Monitoring Plan
City of Manitowoc

0 550 1,100
Feet

N

Legend

- Subject Property
- Phase I Redevelopment Area

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet

Stantec

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C:\1724 Applications\Mirro\Figure 1 - Topo.mxd Revised: 2023-10-16 By: hbyers

Figure No.
2

Title
Subject Property and
2020 Orthophotograph

Client/Project
Former Mirro Plant #9
Post-Construction Groundwater Monitoring Plan
City of Manitowoc

0 45 90
Feet

N

Legend

- Subject Property
- Phase I Redevelopment Area

Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Proposed reuse features digitized from Enberg Anderson (2023)
3. Orthophotograph from the City of Manitowoc (2020)

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C:\25\24 Applications\Mirro\01-basemap.mxd Revised: 2023-10-16 By: hbyers

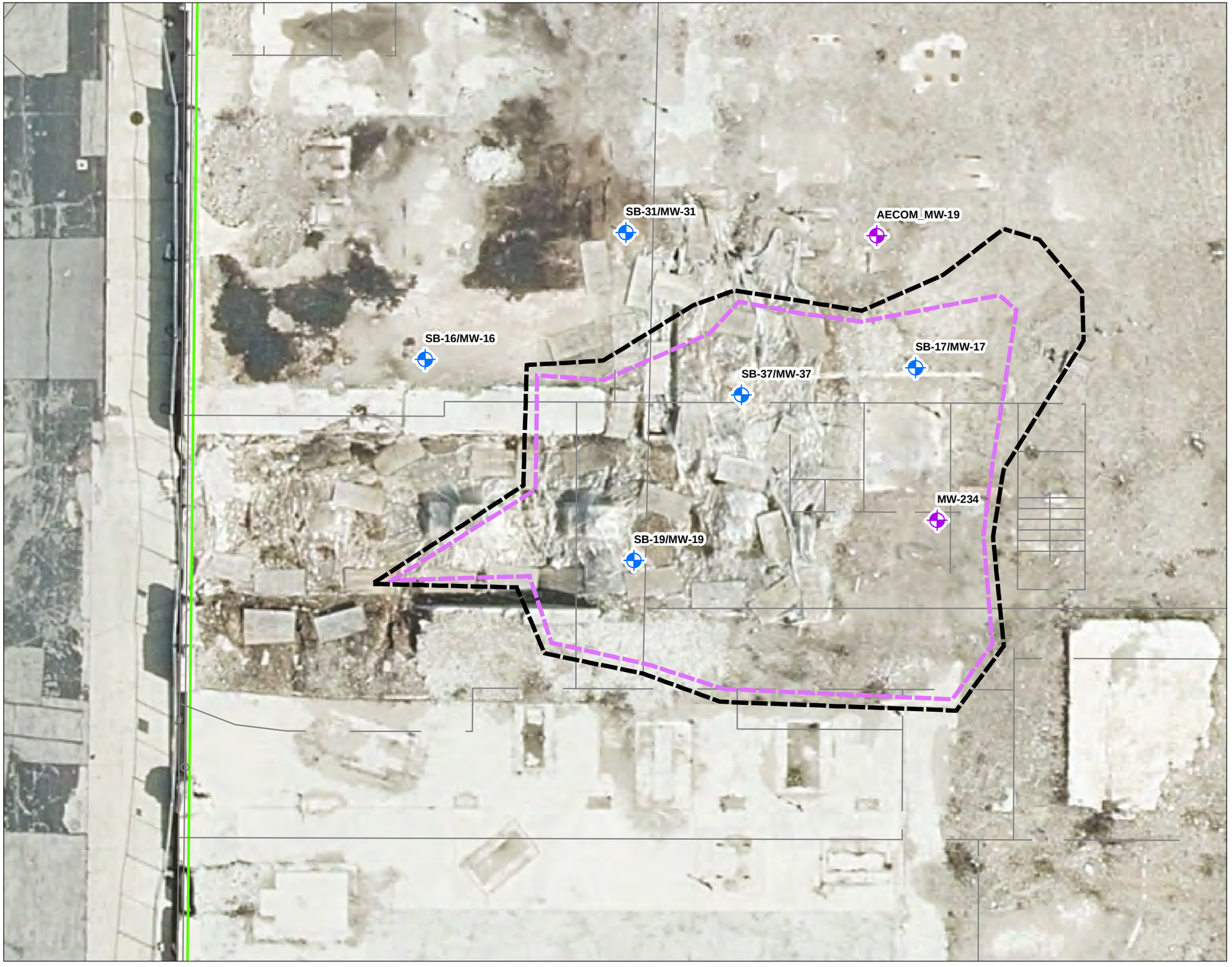

Figure No.
3

Title
Proposed **Remedial** Excavation and Monitoring Wells **a**t the Former Loading Dock

Client/Project
Former Mirro Plant #9
Post-Construction Groundwater Monitoring Plan
City of Manitowoc

0 10 20 Feet

193709867
Prepared by JLH on 2/13/2025

N

Legend

- Top of the Proposed Remedial Excavation
- Bottom of the Proposed Remedial Excavation
- Monitoring Well (Ramboll, 2021) (2)
- Soil Boring / Monitoring Well (Stantec, 2020a) (5)
- Former Building Walls
- The Property

Notes
1. Coordinate System: NAD 1983 HARN WISCRS Manitowoc County Feet
2. PCBs = Polychlorinated biphenyls
3. > = Greater than
4. mg/kg = Milligrams per kilogram
5. Model results illustrated represent the maximum horizontal extent of total PCB impacts to soil. Analytical data were interpolated using the Leapfrog Geo ver. 2023.2.3 model.
6. OSHA = United States Occupational Safety & Health Administration

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C:\GIS\GIS Manitowoc\1512 Washington St - Mirro (2024)\Mirro July2024\Figure 9 - Loading Dockwells to abandon.mxd Revised: 2025-02-13 By: jhatami

Figure No.
4

Title
Proposed Remedial Excavation and Monitoring Wells at Area 8

Client/Project
Former Mirro Plant #9
Post-Construction Groundwater Monitoring Plan
City of Manitowoc

0 5 10 Feet

193709867
Prepared by JLH on 2/13/2025

N

Legend

- Top of the Proposed Remedial Excavation
- Bottom of the Proposed Remedial Excavation
- Soil Boring / Monitoring Well (Stantec, 2020a) (2)
- Monitoring Wells (Ramboll, 2022b) (1)
- Piezometer (Ramboll, 2022b) (1)
- Former Building Walls
- Apparent Void Space

Notes

1. Coordinate System: NAD 1983 HARN WISCRS Manitowoc County Feet

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C:\GIS\GIS Manitowoc\1512 Washington St - Mirro (2024)\Mirro_July2024 Area8 Wallstoabandon.mxd Revised: 2025-02-13 By: jhatami