SUMMARY OF CURRENT ENVIRONMENTAL CONDITIONS

FORMER MERCURY MARINE PLANT No. 1

N49W6337 Western Avenue & N47W6300 Jackson Street, Cedarburg, Wisconsin 53012 | May 2022

Prepared For:

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&
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LIST OF ABBREVIATIONS

bgs	Below Ground Surface
CVOC	Chlorinated Volatile Organic Compounds
DCE	1,2-Dichloroethene
DRO	Diesel Range Organics
ERP	Environmental Repair Program
ESA	Environmental Site Assessment
FIM	Fire Insurance Map
ft	feet
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
LDL	Laboratory Detection Limit
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MRL	Method Reporting Limit
MSL	Mean Sea Level
PAH	Polynuclear Aromatic Hydrocarbons
PID	Photoionization Detector
ppb	Parts Per Billion
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
RCL	Residual Contaminant Level
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Concern
SI	Site Investigation
SIWP	Site Investigation Work Plan
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leachate Procedure
ug/l	micrograms per liter
USGS	United States Geological Survey
VC	Vinyl Chloride
VOC	Volatile Organic Compound
WAC	Wisconsin Administrative Code
WDNR	Wisconsin Department of Natural Resources

1.0 INTRODUCTION

This report provides a summary of the current environmental conditions at the Former Mercury Marine Plant No. 1 located at N49 W6337 Western Avenue and N47W6300 Jackson Street in the City of Cedarburg, Ozaukee County, Wisconsin (hereafter called the site) based on the results of the most recent environmental assessment activities conducted in 2022. Phase I and Phase II Environmental Site Assessment (ESA) reports were previously completed for the site by Kapur in 2021. The information contained in those ESA reports, as well as other prior reports by others along with correspondence from the WDNR have been referenced and incorporated within this report.

The WDNR maintains a file of information regarding this site on the Bureau for Remediation and Redevelopment Tracking System's (BRRTS) website. The WDNR recently assigned a BRRTS tracking number of 02-46-588930 for this Environmental Repair Program (ERP) site and the BRRTS file contains information regarding the discovery of contamination at this site approximately 35-40 years ago and their subsequent receipt of a Remedial Site Investigation Report in 1993. The file also includes an attachment of what the WDNR has indicated as "Relevant records from Drinking Water Program." The BRRTS system also indicates the WDNR is in receipt of Kapur's previously completed Phase I and Phase II ESA's.

1.1 Project Description

The Former Mercury Marine Plant No. 1 site is located at N49W6337 Western Avenue and N47W6300 Jackson Street in the Northeast 1/4 of the Northeast 1/4 of Section 34, Township 10N, Range 21E. The subject property consists of one (1) parcel with Tax Key ID Number: 13-050-19-01-001 totaling 12.93 acres. The site is located on the south side of Western Avenue approximately 370 feet west of the intersection of Western Avenue and Washington Avenue in the City of Cedarburg, Ozaukee County, Wisconsin.

As the WDNR is aware, P2 Development of Saukville is in the process of completing a residential-use brownfield redevelopment project at this former industrial site. The planned redevelopment activities for the Fox Run Project will involve the conversion of the approximate 13-acre former industrial site into a residential complex consisting of two connected multi-story apartment buildings with underground parking along the eastern portion of the site, multiple townhomes/rowhouses to be located throughout the northern and western portions of the site and single-family residential structures to be constructed at the southern portion of the property. The planned residential redevelopment of the site is expected to result in the creation of approximately

230 residential units within the project boundaries. The City of Cedarburg intends to construct a public street (an extension of Hanover Avenue) through the brownfield project site so as to connect Western Avenue and Jackson Street and the various residential structures will be serviced via the extension of Hanover Avenue and adjoining private drives/parking areas. The proposed future brownfield redevelopment of the site with the planned extension of Hanover Avenue was incorporated into numerous planning and future use documents created by the City of Cedarburg and the site was identified as a "smart growth" site in the City's Smart Growth Plan as early as 2008.

In order to accommodate the proposed brownfield redevelopment contemplated by P2 Development, the City has re-zoned the site to accommodate the planned brownfield redevelopment residential usages encouraged by the City and has worked with the Developer to create a tax incremental financing district (TIF) to assist in the removal of the blighted conditions currently present of the site (the underutilized and outdated former industrial buildings) and to provide for the planned extension of Hanover Avenue which will benefit the City.

A copy of the proposed site plan for the residential redevelopment of this brownfield site and the extension of Hanover Avenue is attached to this report in Attachment A.

In an effort to provide all interested parties to this planned brownfield redevelopment with current information regarding the environmental conditions present at this site, Kapur has prepared this Summary of Current Environmental Conditions report which contains information regarding additional soil, groundwater and vapor sampling which was performed at the site in early 2022, prior to the recent acquisition of the site in May 2022 by the new landowner JB Properties 8, LLC.

The additional work at the site included the advancement of seven soil borings (which were converted to monitoring wells MW-20 through MW-26) in February 2022, the installation of two bedrock piezometers (PZ-23 and PZ-24, nested with MW-23 and MW-24 respectively) in March 2022, and the installation of sub-slab vapor sample points VP-1 through VP-12 in March 2022.

Soil samples were submitted for laboratory analysis of select soil samples obtained from MW-20 through MW-26 and groundwater samples were submitted for laboratory analysis from MW-20 through MW-26, PZ-23 & PZ-24 and MW-2 (aka MSB6). Vapor samples were submitted for laboratory analysis from sub-slab vapor sample points VP-1 through VP-12. The results of these findings have been evaluated in conjunction with prior environmental findings by Kapur and others to provide a generalized understanding of the current environmental conditions at the site as they relate to the proposed residential brownfield redevelopment of this site.

Figure 1 in Attachment A depicts the locations of soil borings, abandoned temporary monitoring wells, existing monitoring wells, piezometers and vapor point sampling locations overlain on a site survey figure that depicts the currently existing industrial buildings & former foundations/slabs, drives, parking lots, etc. at the redevelopment site.

Figure 2 in Attachment A depicts the locations of soil borings, abandoned temporary monitoring wells, existing monitoring wells, piezometers and vapor point sampling locations overlain on a figure depicting the planned future residential redevelopment of the site and the extension of Hanover Avenue.

A summary of the results of the recent soil, groundwater and vapor sampling efforts along with a discussion of prior results is provided in Section 2 of this Summary of Environmental Conditions.

The following section provides a general overview of the history of the site and other brownfield redevelopment-related information, including a brief discussion of prior reports and regulatory correspondence.

1.2 Site Background

According to the information obtained during the Phase I ESA, the property was developed as early as 1927. Some of the current onsite buildings were noted to be present in 1937. According to the April 8, 1993, CH2M Hill, *Remedial Investigation Report: Former Mercury Marine Plant No. 1, Cedarburg, Wisconsin*, the property was developed by the predecessor to Mercury Marine (Kiekhaefer Corporation) and operations at the plant began in 1939. Mercury Marine sold the plant to Scot Pump (a Wilo Company) in the early 1980s. The site was occupied by Wilo until early May 2022 and is currently vacant. The current owner of the property is JB Holdings 8, LLC.

WDNR file information indicated that the WDNR became aware of the presence of volatile organic chemicals within the City of Cedarburg public water supply system in 1982.

February 1990 Strand Associates, Inc. Environmental Repair Fund Study Report

In 1989, the WDNR reportedly authorized an "Environmental Repair Fund" study to investigate the source of contamination at the City's water supply wells #3 and #5. Kapur understands that the Environmental Repair Fund study was conducted by Strand Associates, Inc. and that certain aquifer pumping tests were conducted directly by WDNR personnel. The Environmental Repair Fund study included the installation and sampling of soil gas monitoring probes, soil borings and groundwater monitoring wells. The activities conducted during the Environmental Repair Fund

study were summarized in the February 1990 Strand Associates, Inc. Report entitled, "Wisconsin DNR Cedarburg Groundwater Investigation – Existing Conditions Report."

Major findings of this study indicated the presence of chlorinated solvent contamination in the vicinity of the Mercury Marine Plant 1 site (which at that time reportedly housed two industrial occupants - Scot Pump Division of Ardox Company and Karak Machine Shop), the Mercury Marine Plant 2 site (which was reported to be the location of a former aluminum die cast facility and which was reportedly owned by Madison Avenue Joint Venture of Grafton, Wisconsin), contamination within the City's water supply wells #3 and #5, and the documentation of two dry-cleaning facilities (Cedarburg Dry Cleaners and One Hour Martinizing) which are located in close proximity to wells #3 and/or #5. The soil gas investigation conducted by Strand detected perchloroethylene at soil gas point 39, in the parking lot just west of the One Hour Martinizing site. The study also identified the presence of an on-site well at the Mercury Marine Plant #1 site that was reported by Strand to have been "constructed such that it was open to the Sandstone Aquifer only. This well has not yet been properly abandoned. Its condition is unknown."

A review of the Strand report also indicates that perchloroethylene was detected in the groundwater samples collected from MW-1 in September through November 1989 at concentrations ranging from 1.9 ug/l to 12.2 ug/l. However, no reported detections of perchloroethylene were identified in the on-site Mercury Marine Plant #1 site wells of MW-6 or P-6 or the City water supply wells #3 or #5. With regard to the documented presence of PCE in the groundwater at MW-1 (near the dry cleaner site), the Strand report stated that it was "interesting to note that PER (perchloroethylene) was detected at concentrations averaging around 8 ug/l in this well, and PER was also detected in the soil gas down-gradient from MW-1, at the dry cleaner." The Strand report also appeared to discount the One Hour Martinizing Dry Cleaner site in portions of its report as being the source of TCE impacts in the municipal wells when they indicated that MW-3 had not indicated shallow VOC contamination, but then appeared to contradict that evidence when they went on to state that, "PER has never been detected in the city wells, except for one detect of 0.8 ug/l in well 5." It would seem that the detection of perchloroethylene at such a concentration in well 5, along with the presence of a positive soil gas vapor sample would not have resulted in the discounting of the dry cleaner site as a potential source of the PCE or the PCE daughter compounds that have been detected in the groundwater in the area, including at City Well #5.

The Strand report also provided a review of previous studies, including a study conducted by Donohue and Associates, Inc. in 1987 for the City of Cedarburg Light & Water Commission on "remedial action for the VOC contamination in wells 3 and 5." City well #3 was reported to have been constructed in 1956 to a depth of 1,002 feet and reportedly draws water from both the Niagara and Sandstone aquifers with a static water depth of 718 feet at the time of completion. City well #5 was reported have been constructed in 1967 to a depth of 965 feet and reportedly draws water

from both the Niagara and Sandstone aquifers with a static water depth of 715 at the time of completion.

In Section 5.03 of the Strand report, Strand states that, "The City of Cedarburg has chosen a remedial action to protect its customers from continuing use of a contaminated water supply. The City will be treating water from well 3 and well 5 by air stripping of VOCs prior to distribution." The report then goes on to state that "there are several remedial actions that could be considered to limit further degradation of the aquifer. These could include: A) in-situ treatment of the contaminated groundwater or soils, B) creation of aquifer barriers to prevent or lessen further migration of contamination, C) removal or containment of contaminated soils to prevent further elution of contaminants into the aquifer, and D) pumping and treating of groundwater by either granulated activated carbon or air stripping."

Following their discussion of the merits and drawbacks of each of the above additional remedial actions, Strand indicated that "pumping and treating of deeper portions of the Niagara Aquifer would probably not be feasible, due to the more dilute nature of the contamination and the difficulty in locating contaminated fractures in the bedrock. The need for remediating the deeper groundwater is also lessened by the fact that this groundwater will be drawn toward the city wells and treated by air stripping in the future." On page 5-7 of their report, Stand states, "In summary, there would appear to be no immediate danger to public health from the contamination once air stripping treatment of the water from wells 3 and 5 is commenced." Strand also states that "the relatively high level of contamination found at the Scot Pump site and former Mercury Marine Plant 2 site may warrant remediation or careful monitoring to ensure that activities carried out at the sites do not endanger persons coming in contact with the contaminated groundwater or vapors."

In Section 5.04, Strand reiterates that, "the city has chosen a remedial action for their water supply which will reduce the threat to the health and welfare of water consumers. Therefore, further investigation would only be desirable if the city wished to recover or lessen costs of remediation by identifying the responsible party or remediating the source."

In their conclusions, Strand wrote "the results of this investigation indicate that further remedial action may be justified, due to the potential for further degradation of the aquifers. It may be desirable to pursue remediation at the Scot Pump site whether or not this site is the source of well 3 and 5 contamination due to the high concentrations of contaminants at this location. The extent of shallow and deep contamination in the vicinity of the city wells should be further investigated and a cost-benefit analysis of remediation performed prior to implementing remedial actions."

WDNR November 14, 1991 Letter

On November 14, 1991, the WDNR issued a letter referencing "Public Water Supply Contamination, Well No. 3 Cedarburg, WI" to Mr. Tom Baumgartner of Mercury Marine. The letter indicated that the WDNR had discovered a problem with the City of Cedarburg public water supply in 1982 through a "volatile organic chemical sampling program of municipal wells." Information contained within the letter indicated that "water quality monitoring by the City of Cedarburg and the WDNR has found trichloroethylene in city wells 3 and 5 at levels which range from no detection to 89 micrograms per liter." The letter also indicated that, "in 1989, the Department of Natural Resources authorized an Environmental Repair Funded study to investigate the source of contamination at wells 3 and 5. This study used soil gas monitoring, soil borings, and groundwater monitoring wells. Volatile organic chemical contamination was found in two locations: the former Mercury Marine Plants 1 and 2." We would note that this letter did not inform Mercury Marine of the WDNR's discovery of PCE and/or other chlorinated solvents during the conduct of their Environmental Repair Funded study at locations other than at the Mercury Marine Plants 1 & 2 despite the Strand report's documentation of such impacts at the MW-1 location and in the soil gas sample obtained near a dry cleaner site.

The stated purpose of the letter to Mercury Marine was to "inform you of your legal responsibilities to address this situation." The letter also stated that it was Mercury Marine's responsibility to: "1) Determine the horizontal and vertical extent of contamination; 2) Cleaning up the contaminants; and 3) Proper disposal of all contaminants."

February 1992 CH2M Work Plan for Remedial Investigation

Based on our review of the WDNR file information, it appeared that Mercury Marine responded to the November 14, 1991 WDNR letter with the submittal of a Work Plan for Remedial Investigation at the former Mercury Marine Plant No. 1 site in February 1992 which was prepared by CH2M Hill.

WDNR April 15, 1992 Letter

In their April 15, 1992 correspondence to Attorney Thomas McElligot (Mercury Marine's attorney), the WDNR indicated that it had reviewed the previously submitted CH2M Hill Work Plan.

The WDNR's April 1992 Work Plan response letter indicated that the previously completed Environmental Repair Fund study had found contaminated groundwater in two locations, MW-6 and P-6, at the former Mercury Marine Plant 1 site. The letter went on to state that, "The highest level of trichloroethylene found in the shallow monitoring well, MW-6 was 4,960 ug/l which is

approximately 1,000 times greater than the enforcement standard of 5 ug/l for trichloroethylene." The 1992 correspondence also indicated that "the highest level of trichloroethylene found in the piezometer, P-6, was 280 ug/l which is 56 times greater than the enforcement standard." It was the WDNR's position that "the presence of these contaminants in these groundwater samples indicates that a discharge of a hazardous substance has occurred."

The WDNR's Work Plan Approval letter indicated that the "first purpose of this investigation is to determine the degree and extent of contamination at the former Mercury Marine Plant 1."

The WDNR's letter indicated that the City of Cedarburg Well 3 is located approximately 150 feet to the north and west of MW-6 and P-6 and that trichloroethylene had been found in Well 3 at levels that are greater than the enforcement standard and the maximum contaminant level contained in Wisconsin Administrative Code NR 109 Safe Drinking Water, March 1991.

The letter also indicated that the second purpose of this investigation is to evaluate the relationship between the TCE contamination present at the former plant and the TCE contamination found in City of Cedarburg Well 3.

In the latter part of their April 1992 letter, the Department requested that Mercury Marine proceed with Tasks 1 & 2 in the proposed work plan and provide the Department with an Interim Report of this phase of the Remedial Investigation by June 16, 1992. The letter indicated that after the Department had reviewed the Interim Report, it would then approve the completion of the remaining tasks (Tasks 3 through 6) to complete the investigation. The attachment to this correspondence also indicated that Tasks 3 through 6 would be reviewed in more detail after submittal of the Interim Report.

WDNR Requested Interim Report

The WDNR BRRTS file does not appear to contain copies of any WDNR requested Interim Report as described in their April 1992 letter.

April 8, 1993 CH2M Hill Remedial Investigation Report

The April 8, 1993 CH2M Hill *Remedial Investigation Report* was prepared in response to the WDNR request that Mercury Marine investigate potential releases of chlorinated solvents on the property from its former plant, as VOCs had been detected in nearby municipal wells. Chlorinated VOCS (CVOCs) were detected in soil and groundwater during this investigation, with impacts extending into the bedrock at the site. The highest concentrations were detected on the western side of the property, near the area of the two former vapor degreaser areas (one of which was formerly located near the northwest corner of the previously demolished building and one of which

was formerly located near the northwest corner of the existing industrial building as depicted in Figure 1-2 of the CH2M RI Report). In addition to the former Mercury Marine Plant No.1 site, numerous other potential sources of chlorinated solvent releases were identified during initial investigation activities performed by the WDNR's consultant (Strand) in the 1980's and during the performance of CH2M's investigation activities. No ERP site was ever opened for this property, although the contaminants had been identified and reported to the WDNR and the City as a result of the use of WDNR ERP funds.

September 1993 CH2M Hill Groundwater Sampling & Analysis Report

In September 1993, CH2M Hill provided the WDNR with the results of the July 1993 Groundwater Sampling and Analysis. Monitoring wells MW-1 through MW-6 and P-6 were sampled during this event. TCE was detected at MW-1, MW-3, MW-4 and MW-6 and at P-6 . At MW-2 (located on the eastern portion of the site), PCE was detected at a concentration of 140 ug/l and CH2M concluded that "the result from MW-2 suggests the possibility of VOC contamination from offsite since PCE has not been found in the samples taken from the former degreaser area."

December 1993 CH2M Hill Revised Work Plan for Remedial Investigation – Former Mercury Marine Plant No. 2

In their December 1993 Revised Work Plan for Remedial Investigation – Former Mercury Marine Plant No. 2, CH2M stated that they had "conducted a remedial investigation at the former Mercury Marine Plant No. 1 in January and February 1992 in which one of the objectives of the study was to determine the radius of influence of city water supply wells CW-3 and CW-5. The purpose of this exercise was to address DNR's allegation that releases from Plant No. 1 were the source of chlorinated VOCs observed in both of the city production wells." CH2M indicated that they felt it was "difficult to support the allegation that the chlorinated VOCs present locally in the till/upper bedrock groundwater are the source of chlorinated VOCs observed in city well CW-3." CH2M also indicated that "the radius of influence of city well CW-5 is as much as 2,400 feet from the pumping well" and went on to state that "VOCs from elsewhere within the influence of either of these two wells could be causing or contributing to the contamination reported at these wells."

September 1995 Weil Pump Company, Inc. Inquiry to WDNR

On September 22, 1995, Weil Pump Company, Inc. inquired about the status of the remediation of Mercury Marine Old Plant No. 1 in a letter to Sharon Shaver, Hydrogeologist at the WDNR.

No response appears to have been provided/addressed to Weil Pump Company, Inc. following their inquiry.

WDNR November 30, 1995 Letter

In a November 30, 1995 WDNR letter to Mercury Marine – Division of Brunswick Corporation, the WDNR requested an update on the current status of the remedial investigation performed at the Mercury Marine Plant No. 1 site. Kapur understands that prior to the issuance of this letter, the WDNR was supplied with the analytical results from the July 1993 Groundwater Sampling

Mercury Marine January 31, 1996 Letter to WDNR

On January 31, 1996, Mercury Marine issued a letter to Margaret Graefe of the WDNR which indicated that Mercury Marine was involved with a number of environmental projects in the Cedarburg area, including the former Plant 1, former Plant 2, the Prochnow Landfill, the Blank property and the Cedar Creek cleanup. As regards former Plant 1, the letter indicated that "during the last few months, we have been in contact with Weil Pump Company, Inc. owners of our former Plant 1. Weil Pump Company, Inc. is planning a facility expansion this year. To accommodate their expansion, we are currently reviewing their plans and potential remedial options per NR 700. We anticipate this review will be completed during the next few months. If deemed necessary, we will then submit a work plan to the Department for approval so we can coordinate our activities with that of Weil Pump Company, Inc."

Kapur is not aware of any additional environmental reports or file entries following the above-referenced 1996 Mercury Marine letter to the WDNR until 2021. Available information indicates that sometime prior to 1996, an air stripper device had been added to the public water supply system in order to remediate and address the presence of contaminants identified within the groundwater samples obtained from Well No. 3 and Well No. 5 and that the air stripper was performing effectively to prevent any harmful impacts due to the presence of contamination within the groundwater that supplied these wells. This remedial strategy appears to have met the objective identified on Page 5-7 of the Strand Report which stated, "In summary, there would appear to be no immediate danger to public health from the contamination once air stripping treatment of the water from wells 3 and 5 is commenced."

2021 Kapur Phase I and Phase II ESA Reports

In 2021, a Phase I Environmental Site Assessment Report was prepared for a prospective purchaser/developer of this brownfield site and Phase II Environmental Site Assessment activities were subsequently conducted at this site on behalf of the prospective purchaser/developer. Copies of the Phase I and II ESA's were provided to the WDNR in November 2021.

2022 Kapur Evaluation of Current Environmental Conditions

In 2022, Kapur conducted an evaluation of current environmental conditions which included soil boring advancement, monitoring well and bedrock piezometer installation, and sub-slab vapor sampling. The results of this evaluation are summarized in this report.

1.3 Owner, Consultant and Subcontractors List

The following section summarizes the names, addresses, and telephone numbers of the property owner, client, consultant, and subcontractors:

Prior Owner	Jackson Western LLC PO Box 727, Cedarburg, WI 53012
Current Owner	JB Properties 8, LLC Cedarburg, WI 53012
Report Users	JB Properties 8, LLC & Mr. Robert Bach P2 Development Company 524 Technology Way, Saukville WI 53080 Contact Phone: (414) 573-1147
Consultant	Kapur Inc. 7711 North Port Washington Road, Milwaukee, WI 53217 Phone: (414) 751-7279 Contact: Travis Peterson
Drilling Subcontractor	Horizon Construction and Exploration 764 Tower Drive Fredonia, Wisconsin 53021 Phone: (262) 692-3374 Contact: Adam Sweet

Analytical Testing	Pace Analytical 1241 Bellevue Street, Suite 9, Green Bay, WI 54302 Phone: (920) 469-2436 Contact: Christopher Hyska

1.4 Regional and Local Geology and Hydrogeology

Based on the USGS Cedarburg, WI Quadrangle topographic map (Ref. 3), the subject site is relatively flat with an approximate elevation of 789 feet above the Mean Sea Level (MSL). The surrounding topography slopes generally towards the east. Based upon the CH2M Hill Site Investigation data, groundwater was between 10 and 45 ft bgs and groundwater flow is to the south/southeast. During the Phase II ESA, bedrock was encountered in all soil borings, at depths of approximately 12 to 40 feet bgs. Shallow bedrock was identified in the north, and deeper bedrock in the south. During the additional assessment activities to determine current site conditions, bedrock was encountered on the northern portion of the site at approximately 12 feet bgs.

2.0 SUBSURFACE INVESTIGATION

2.1 Soil Investigation Findings

During the Phase II ESA activities conducted on October 21 and October 22, 2021, Kapur supervised the installation of fourteen (14) soil borings, SB-1 through SB-14, by Horizon Construction and Exploration (Horizon) of Fredonia, Wisconsin. The borings were advanced using direct push (Geoprobe) methods to a maximum depth of forty (40) ft bgs. Select soil samples were collected and submitted to Pace Analytical (Pace) of Green Bay, Wisconsin (WDNR Certification #: 405132750) for laboratory analysis. Field sampling locations were chosen to confirm and delineate contamination reported in the 1993 CH2M Hill Report. Field observations and laboratory analytical results of the soil investigation indicated:

- The soils located at the site generally include asphalt or concrete to a depth of approximately one (1) foot bgs over sand and gravel fill, over silty clay fill, over native silty clay, silt, sand, silty sand, and clay to a maximum boring depth of forty (40) feet bgs.
- Bedrock was encountered in all soil borings, at depths of approximately 12 to 40 feet bgs, except in SB-7 and SB-13. Shallow bedrock was identified in the north, and deeper bedrock in the south.

    - Soil boring SB-7 was not extended to bedrock because the soil boring was used for a soil sample only as MSB6/MW-2 from the CH2M Hill Investigation was available for collection of a groundwater sample.
    - Soil boring SB-13 was not extended to bedrock as the GeoProbe could not drill through the silty clay.
- An unidentified odor was identified in SB-1 (2-4).
- Strong petroleum odors and staining were identified in SB-9 (7-10 ft bgs), and SB-10 (3.0-12.5 ft bgs). No obvious odor or staining was noted during the remaining soil boring activities.
- PID readings remained below background levels (<10 parts per million by volume in air (ppmv)) during soil boring activities in all soil borings except SB-7, SB-9, and SB-10.
    - The greatest PID readings were observed in soil boring SB-10, with the greatest reading observed in the 4-6 ft bgs interval (181.5 ppm). PID readings decreased in the 8-10 ft bgs sample interval and deeper.
- Bedrock was not investigated as part of the Phase II ESA scope of work.
- Laboratory analysis indicated:
    - Of the VOCs:
        - 1,2,4-Trimethylbenzene was detected above the applicable ch. NR 720 Soil to Groundwater Pathway RCLs.
        - Trichloroethene was detected above the applicable ch. NR 720 Industrial Direct Contact RCLs.
            - Trichloroethene Toxicity Characteristic Leachate Procedure (TCLP) results was below 0.50 mg/L.
    - Of the RCRA metals:
        - Arsenic was detected above the applicable ch. NR 720 Industrial Direct Contact RCL and above the applicable background threshold value (BTV).
        - Lead was detected above the applicable ch. NR 720 Soil to Groundwater Pathway RCL and above the BTV.
    - Of the PAHs:
        - Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected above the applicable ch. NR 720 Non-Industrial Direct Contact RCLs.
        - Chrysene was detected above the applicable ch. NR 720 Soil to Groundwater Pathway RCL.

- Of the DROs:
  - DRO was detected at a maximum concentration of 1,110 mg/kg. There is no established standard for DRO however, the detection does confirm petroleum contamination.

During the recently completed assessment of existing site conditions, the additional work at the site included the advancement of seven soil borings (which were converted to monitoring wells MW-20 through MW-26) in February 2022 and the installation of two bedrock piezometers (PZ-23 and PZ-24, nested with MW-23 and MW-24 respectively) in March 2022. Soil samples were submitted for laboratory analysis of select soil samples obtained from MW-20 through MW-26.

Tabulated laboratory analytical results for the soil samples are presented in Attachment B. The laboratory analytical results from the recently installed soil borings indicated generally similar contaminant concentrations as those reported during the Phase II ESA activities.

The planned redevelopment of the site is anticipated to provide for a means to address residual soil impacts present at the site via capping of direct contact soils through planned grading or the construction of buildings and/or roadways, and by minimizing the presence of on-site soil impacts via planned hot-spot excavation of certain soil (some of which is anticipated to require out of state disposal due to reported contaminant concentrations) and off-site disposal or on-site contaminated soil management.

2.2 Groundwater Investigation Findings

During Phase II ESA activities, after completing soil borings SB-1 through SB-4, SB-8 through SB-12, and SB-14, Kapur supervised the conversion of ten (10) soil borings to temporary monitoring wells (TW-1 through TW-4, TW-8 through TW-12, and TW-14). Each temporary monitoring well was completed with a 10-foot screened section, PVC riser to the surface and set with filter pack material. On October 26, 2021, a peristaltic pump and dedicated, low density polyethylene (LDPE) tubing was used to develop the wells and to collect samples. Groundwater samples were submitted to Pace for laboratory analysis of RCRA Metals, PAHs, VOCs and 1,4-dioxane. Field observations of the groundwater investigation indicated:

- No well was installed at SB-5, as the water table was not encountered during drilling, or at TW-13 due to the difficult drilling conditions in the area.
- A water sample was not obtained from TW-6 as the well was dry.

- The groundwater recovered from the monitoring wells were clear in color, and turbidity generally improved after development of the well. Temporary monitoring wells, TW-4, TW-9 and TW-11 were tan in color and turbid.
- Water levels ranged from 6.31 ft bgs (TW-11) to 24.10 feet bgs (TW-14).
- Elevation of the ground or wells was not measured.
- The pH ranged from 6.89 (TW-12) to 7.46 (TW-8).
- The specific conductivity ranged from 735 uS/cm (TW-14) to 3,799 uS/cm (TW-12).
- CH2M Hill monitoring well, MSB6/MW-2 was installed during the 1993 investigation. The well was located and appeared in sound condition. This well was completed in bedrock with a 15-foot well screen. It was purged using a clean submersible pump with dedicated poly tubing. This is the only location where a sample was obtained from within bedrock.
- Laboratory analysis indicated:
    - Of the PAHs
        - Benzo(b)fluoranthene and chrysene were detected above the applicable ch. NR 140 Preventive Action Limits (PALs).
    - Of the RCRA metals
        - Barium, chromium, and lead were detected above the applicable ch. NR 140 PAL.
    - Of the VOCs
        - 1,1,1-Trichloroethane, and 1,1-dichloroethene were detected above the applicable ch. NR 140 PAL.
        - Trichloroethene (TCE), vinyl chloride (VC), and cis 1,2-dichloroethene (cis-DCE) were detected above the applicable ch. NR 140 Enforcement Standards (ES).

Figures 1 & 2 attached to this report provide the locations of the Phase II ESA and current site condition sampling locations. The attached tables provide a summary of the Phase II and current site condition soil and groundwater analytical results.

During the recently completed assessment of existing site conditions, the additional work at the site included the advancement of seven soil borings (which were converted to monitoring wells MW-20 through MW-26) in February 2022, the installation of two bedrock piezometers (PZ-23 and PZ-24, nested with MW-23 and MW-24 respectively) in March 2022. Groundwater samples

were submitted for laboratory analysis from MW-20 through MW-26, PZ-23 & PZ-24 and MW-2 (aka MSB6).

- Laboratory analysis indicated:
  - Of the PAHs
    - MW-20, MW-21 and MW-22 exhibited detections above NR 140 Enforcement Standards (ESs).
  - Of the RCRA metals
    - MW-24 & MW-26 exhibited detections above NR 140 ESs.
  - Of the VOCs
    - MW-2, MW-23, MW-24, MW-26 and PZ-23 and PZ-24 exhibited detections above NR 140 ESs.

A review of previously detected trichloroethylene concentrations in groundwater at and near the site indicated that a significant reduction in trichloroethylene concentrations over the past 25 years or so has occurred.

As the Strand report indicated, TCE concentrations at MW-6 and P-6 were reported to be 4,960 ug/l (ppb) and 280 ug/l (ppb) in September 1989, well above the 1.8 ppb ES. Within the samples obtained from Well No. 3 during the time period from 1982 to 1989, the reported TCE concentrations in the drinking water supply samples from Well No. 3 exhibited concentrations that ranged from 2.7 ppb to 4.0 ppb in 1982 to between 1.0 ppb and 71 ppb in 1989. During the same 1982 to 1989 time period, the reported TCE concentrations in the drinking water supply samples from Well No.5 exhibited concentrations that ranged from 2.5 ppb to 5.4 ppb in 1982 to between 0 ppb to 89 ppb in 1989.

A review of the groundwater "grab" samples obtained from the borings installed by CH2M in 1993 indicated that the reported TCE concentrations ranged from <1 ppb at MSB10 and MSB 12 to 2,300 ppb at MSB09, which was located near the former location of the northern vapor degreaser. Based on the type of groundwater samples obtained from these soil borings ("grab" samples versus samples obtained from NR 141 compliant monitoring wells and/or piezometers), Kapur understands that these reported concentrations may represent artificially elevated levels but would note that these observed concentrations of TCE are less than the 4,960 ppb TCE concentration reported by Strand at MW-6 in 1989.

A review of the July 13, 2003 monitoring well and piezometer sampling results obtained from MW01 through MW06 and P6 by CH2M which were reported in their September 1, 1993 Groundwater Sampling and Analysis Report indicated that the observed concentrations for TCE

at MW02 and MW05 were both less than 1 ppb, MW03 was less than 2.7 ppb, MW01 was 420 ppb, MW04 was 1,000 ppb, and MW06 was 1,600 ppb and P6 was 84 ppb. The monitoring well samples obtained by CH2M in July 1993 were all significantly lower than the 4,960 ppb TCE concentration at MW-6 in 1989 and the TCE concentration of 84 ppb in P6 was significantly lower than the 280 ppb concentration observed at this location in 1989.

A review of the groundwater sample analytical results obtained from MW-2, MW-20 through MW26, and PZ-23 and PZ-24 indicate a significant reduction in the amount of TCE observed in groundwater in the vicinity of the former Mercury Marine Plant No. 1 site. The reported concentration of TCE was above the ES at MW-2, MW-23, MW-24, MW-26 and these ES exceedances ranged from 8.9 ppb to 203 ppb, well below the 4,960 ppb concentration reported at MW-6 in 1989. The reported TCE concentrations at PZ-23 and PZ-24 of 120 ppb and 52.6 ppb respectively are also well below the previously observed 1989 P6 TCE concentration of 280 ppb.

With regard to the continued presence of residual groundwater contamination identified at this brownfield redevelopment site, as well as within the community at large, it is expected that the planned redevelopment will comply with City of Cedarburg ordinances regarding the prohibition of the installation of any private potable water supply systems (i.e. the proposed development will be hooked-up to the available municipal water supply system which has been reported to have been successful in providing safe drinking water to area residents via the use of air strippers/scrubbers and/or other remedial technologies). It is anticipated that following the planned redevelopment of the site, additional groundwater monitoring of the existing monitoring well/piezometer network may be conducted for at two quarters to evaluate any effects of the redevelopment activities on the groundwater conditions in the vicinity of the site. The additional groundwater monitoring may serve an additional purpose in assisting in the identification of potential sources of PCE and/or other contaminants from off-site sources that were identified in prior environmental reports.

2.3 Contaminant Migration/Vapor Assessment

During the recently completed assessment of existing site conditions, the additional work at the site included the installation of sub-slab vapor sample points VP-1 through VP-12 in March 2022. Vapor samples were collected on March 7th from VP-1 through VP-8 and on March 8th from VP-9 through VP-12 and were submitted for laboratory analysis of VOCs.

The analytical results for the vapor samples were compared against the Residential Sub-Slab Vapor Risk Screening Levels (RSVRSLs) contained in WDNR Publication RR-0136 dated February 2022. Of the 12 vapor samples submitted for laboratory analysis, only one vapor sample location (VP-9) exhibited a vapor concentration greater than the published RSVRSLs. The laboratory reported trichloroethylene concentration of 1,530 micrograms per cubic meter at VP-9 was greater

than the RSVRSL of 70 micrograms per cubic meter. As a result of this finding, Kapur recommends that the proposed redevelopment of the site incorporate some form of passive or active vapor mitigation measures in the vicinity of VP-9 (which is reported to have been the location of one of the former vapor degreasers at the site).

3.0 CONCLUSIONS

Based on field observations and the laboratory analytical results of the Phase II ESA activities and recently completed assessment of existing site conditions, Kapur has reached the following conclusions regarding the Former Mercury Marine Plant No. 1 site:

Soil

The soils located at the site generally include asphalt or concrete to a depth of approximately one (1) foot bgs over sand and gravel fill over silty clay fill to depths of approximately 0.5 to 5 ft bgs, over native silty clay, silt, sand, silty sand, and clay to a maximum boring depth of forty (40) feet bgs. Bedrock was encountered in all soil borings, at depths of approximately 12 to 40 feet bgs. Shallow bedrock was identified in the north and deeper bedrock in the south.

Contaminant impacts in the soil samples collected and analyzed for VOCs, PAHs, and RCRA metals exceeded the applicable ch. NR 720 standards. Contaminant impacts appear at various locations throughout the approximate 13-acre site but tend to be concentrated near the former locations of the vapor degreasers and are consistent with the known historical industrial land use. Prior studies have indicated the potential for site soils overlying the bedrock (as well as groundwater) to be impacted by nearby off-site sources (dry cleaners, industrial sites, etc.). The presence of PCE in the soil and groundwater at, and or near the site (including within the public water supply well system), may be the result of such off-site contaminant migration onto the Former Mercury Marine Plant No. 1 site.

In the western portion of the site, soil borings SB-10 and SB-12 contain PAHs exceeding ch. NR 720 Non-Industrial Direct Contact RCLs at depths of 0 to 8 ft bgs. Soil boring, SB-12 also contained lead exceeding the applicable ch. NR Soil to Groundwater Pathway RCL at a depth of 0-5 ft bgs.

In the northern portion of the site, soil boring SB-2 contained arsenic exceeding the applicable ch. NR 720 Direct Contact Industrial RCL at a depth of 4 to 6 ft bgs and lead impacts exceeding the applicable ch. NR 720 Soil to Groundwater Pathway RCL at a depth of 0 to 2 ft bgs.

On the west-central portion of the Site, soil borings SB-3 through SB-5 and SB-9 contain trichloroethene (TCE) exceeding ch. NR 720 standards. These borings were in an area of native silt and silty clay and are located in the vicinity of the former vapor degreasers, where elevated impacts were identified during the 1993 investigation. The TCE exceedance in SB-4 at a depth of 10-12 ft bgs was further analyzed via the Toxicity Characteristic Leachate Procedure (TCLP) to determine whether a hazardous designation would be necessary and proper landfill disposal requirements. The TCLP resulted in a concentration of 0.15 mg/L for SB-4, which is below the toxicity limit of 0.50 mg/L. However, additional soil sampling conducted during the evaluation of current conditions indicated that a portion of the impacted soil in the vicinity of the former vapor degreasers would likely need to be disposed of at a licensed out-of-state landfill facility if it were to be excavated during the planned brownfield redevelopment of the site.

DRO was detected at a concentration of 1,110 mg/kg at SB-10 (4-8') and at a concentration of 22.4 mg/kg at SB-9 (7-9'). Soil boring SB-9 also contained 1,2,4-trimethybenzene (1,2,4-TMB) exceeding the applicable ch. NR 720 Soil to Groundwater Pathway RCL at a depth of 7-9 ft bgs. No other petroleum VOCs (PVOCs) were detected above ch. NR 720 standards.

It is anticipated that the planned brownfield redevelopment activities will aid in addressing any potential impacts of the residually impacted soils at the site.

Groundwater

Depth to groundwater observed in the monitoring wells at the site was approximately 6 ft bgs to 24 ft bgs. Based upon local geology, the general local groundwater flow is to the south/southeast. Regional groundwater flow is expected to be east toward Cedar Creek.

Groundwater impacted with PAHs (benzo(a)fluoranthene and chrysene) exceeding the applicable ch. NR 140 Preventive Action Limits (PALs) is located on the northwest, west-central, and southern portions of the property.

Groundwater impacted with RCRA metals exceeding the applicable ch. NR 140 PALs is located on the west-central portion of the property. The impacts include lead, chromium and barium.

Groundwater impacted with CVOCs exceeding applicable ch. NR 140 standards was identified site-wide and at numerous locations off the site in the vicinity of suspected off-site source locations. Impacts exceeding ch. NR 140 standards were identified near the northern, western and eastern property boundaries, and likely extend beyond these property boundaries.

TCE and its daughter products, VC and cis-DCE, were identified exceeding ch. NR 140 PALs and Enforcement Standards (ESs) across the central portion of the site in the vicinity of the former vapor degreasers and were also identified at numerous locations off the site in the vicinity of suspected off-site source locations.

Available information indicates that sometime prior to 1996, an air stripper device had been added to the public water supply system in order to remediate and address the presence of contaminants identified within the groundwater samples obtained from Well No. 3 and Well No. 5 and that the air stripper was performing effectively to prevent any harmful impacts due to the presence of contamination within the groundwater that supplied these wells. This remedial strategy appears to have met the objective identified on Page 5-7 of the Strand Report which stated, "In summary, there would appear to be no immediate danger to public health from the contamination once air stripping treatment of the water from wells 3 and 5 is commenced."

Kapur understands that in addition to the discovery of CVOCs in City of Cedarburg Water Supply Well No. 3 and No. 5 dating back to the 1980s, CVOCs have been reported to be present within Well No. 4, which is in close proximity to the Former Prochnow Landfill site and Former Mercury Marine Plant No. 2. Kapur understands that as a result of the discovery of CVOCs at Well No. 4, an air stripper system and/or other remedial equipment has been added at that location.

Vapor

Based on the work conducted to date at the site, Kapur recommends that the proposed redevelopment of the site incorporate some form of passive and/or active vapor mitigation measures within structures located in the vicinity of VP-9 (which is reported to have been the location of one of the former vapor degreasers at the site). It is further recommended that no basement structures be constructed within 50 feet of the centerpoint of the location of the former vapor degreaser near VP-9. In the event that hot-spot soil excavation is accomplished in the vicinity of the former vapor degreasers, this recommendation to eliminate basement structures and provide vapor mitigation measures may be withdrawn by Kapur after further evaluation and testing of the site conditions.

ATTACHMENT A

PROPOSED DEVELOPMENT SITE PLAN

SITE STATISTICS

UNIT MIX & COUNT

A: TOWNHOMES 2 STORY / 2 BED	18 UNITS
B: TOWNHOMES 3 STORY / 3 BED	26 UNITS
C1: POCKET NEIGHBORHOOD 2 STORY / 3 BED	14 UNITS
C2: POCKET NEIGHBORHOOD 2 STORY / 3 BED	12 UNITS
SUB TOTAL "A":	**70 UNITS**
D: APARTMENT BUILDING 3 STORY	110 UNITS
E: APARTMENT BUILDING 2 STORY	50 UNITS
SUBTOTAL "B"	**160 UNITS**
TOTAL	**230 UNITS**

NORTH

1 / A002 ARCHITECTURAL SITE PLAN
SCALE: 1" = 50'

GALBRAITH CARNAHAN ARCHITECTS
6404 West North Avenue
Milwaukee, Wisconsin 53213
(414) 291-0772 phone
www.galbraithcarnahan.com

P2 DEVELOPMENT & PROPERTY MANAGEMENT
524 Technology Way
Saukville, WI 53080-1677
www.p2development.com
(262) 377-7259

FOX RUN DEVELOPMENT

N49 W6337 WESTERN ROAD,
CEDARBURG, WI 53012

DRAWING ISSUE	DATE
SITE PLAN	11.16.21

PROJECT # 21.37

ARCHITECTURAL SITE PLAN

A002

ATTACHMENT B

FIGURES

LEGEND:

896	– EXISTING MINOR CONTOUR.
895	– EXISTING MAJOR CONTOUR.
OHEL	– OVERHEAD ELECTRIC LINE.
BuEl	– BURIED ELECTRIC LINE.
BuTel	– BURIED TELEPHONE LINE.
FO	– FIBER OPTIC LINE.
GAS	– GAS LINE.
SAN	– SANITARY SEWER MAIN OR LATERAL.
WAT	– WATER MAIN OR SERVICE.
	– STORM SEWER LINE.
ELEC	– ELECTRIC METER.
GAS	– GAS METER.
	– GAS VALVE.
	– FIRE HYDRANT.
E	– POWER POLE.
SN	– SANITARY SEWER MANHOLE.
ST	– STORM SEWER MANHOLE.
	– STORM SEWER INLET.
T	– TELEPHONE PEDESTAL.
TRAN	– TRANSFORMER.
W	– WATER VALVE.
	– PIEZOMETER & VAPOR SAMPLE LOCATIONS.

MONITORING WELL & SOIL BORING INFORMATION

Map Dot	PIT NO.	BEDROCK EL.	GW EL.
	SB-1/TW-1	773.80	N/A
	SB-2/TW-2	774.26	N/A
	SB-3/TW-3	772.4	N/A
	SB-4/TW-4	771.5	N/A
	SB-5	772.43	N/A
	SB-6	775.44	N/A
	SB-7	NO BEDROCK ENCOUNTERED	N/A
	SB-8/TW-8	775.38	N/A
	SB-9/TW-9	775.83	N/A
	SB-10/TW-10	770.50	N/A
	SB-11/TW-11	773.77	N/A
	SB-12/TW-12	768.42	N/A
	SB-13	NO BEDROCK ENCOUNTERED	N/A
	SB-14/TW-14	759.42	N/A
	MSB 6	EX. GW MONITORING WELL	
	MW 2	EX. GW MONITORING WELL	
	MW 20	777.71	778.81
	MW 21	772.21	771.71
	MW 22	773.69	773.99
	MW 23	772.59	778.09
	MW 24	772.49	777.99
	MW 25	NO BEDROCK ENCOUNTERED	784.52
	MW 26	NO BEDROCK ENCOUNTERED	768.95

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
kparish@parishse.com

PROJECT TITLE:
FOX RUN DEVELOPMENT
HANOVER AVE
CEDARBURG, WI 53012

PLAN TITLE:
FIGURE 1

DRAWN BY:
M.SWARTWOUT

DESIGNED BY:

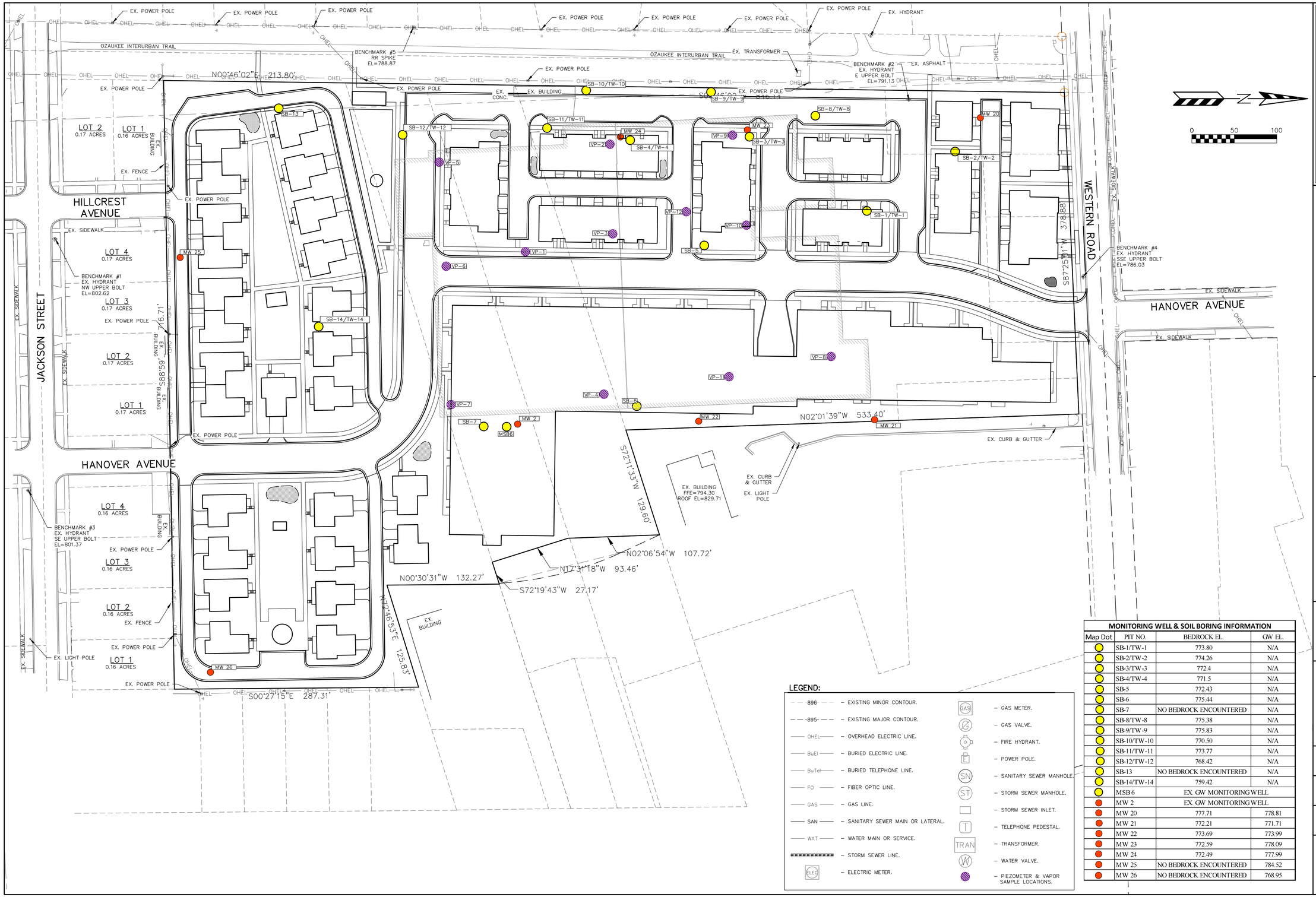
CHECKED BY:
K.PARISH

PLAN DATE:
5-16-2022

PROJECT NO:
\PD-09-21\

BID SET

SHEET NO:
C5.01



LEGEND:

896	– EXISTING MINOR CONTOUR.
895	– EXISTING MAJOR CONTOUR.
OHEL	– OVERHEAD ELECTRIC LINE.
BuEl	– BURIED ELECTRIC LINE.
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W	– WATER VALVE.
	– PIEZOMETER & VAPOR SAMPLE LOCATIONS.

MONITORING WELL & SOIL BORING INFORMATION

Map Dot	PIT NO.	BEDROCK EL.	GW EL.
	SB-1/TW-1	773.80	N/A
	SB-2/TW-2	774.26	N/A
	SB-3/TW-3	772.4	N/A
	SB-4/TW-4	771.5	N/A
	SB-5	772.43	N/A
	SB-6	775.44	N/A
	SB-7	NO BEDROCK ENCOUNTERED	N/A
	SB-8/TW-8	775.38	N/A
	SB-9/TW-9	775.83	N/A
	SB-10/TW-10	770.50	N/A
	SB-11/TW-11	773.77	N/A
	SB-12/TW-12	768.42	N/A
	SB-13	NO BEDROCK ENCOUNTERED	N/A
	SB-14/TW-14	759.42	N/A
	MSB 6	EX. GW MONITORING WELL	
	MW 2	EX. GW MONITORING WELL	
	MW 20	777.71	778.81
	MW 21	772.21	771.71
	MW 22	773.69	773.99
	MW 23	772.59	778.09
	MW 24	772.49	777.99
	MW 25	NO BEDROCK ENCOUNTERED	784.52
	MW 26	NO BEDROCK ENCOUNTERED	768.95

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
kparish@parishse.com

PROJECT TITLE:
FOX RUN DEVELOPMENT
HANOVER AVE
CEDARBURG, WI 53012

PLAN TITLE:
FIGURE 2

DRAWN BY:
M.SWARTWOUT

DESIGNED BY:

CHECKED BY:
K.PARISH

PLAN DATE:
5-16-2022

PROJECT NO:
\PD-09-21\

BID SET

SHEET NO:
C5.02

ATTACHMENT C

TABLES

Table A.1: Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCL' s	ch. NR 720 Direct Contact Non-Industrial RCL' s	ch. NR 720 Soil to Groundwater Pathway RCL's	Background Threshold Value	SB-1		SB-2		SB-3			SB-4		
					Sample Date:	10/21/2021		10/21/2021		10/21/2021			10/21/2021		
					Soil Type:	FILL	FILL	FILL	CL/ML	CL/ML	GW	GW	CL/ML	CL/ML	CL
					Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U	U
					Sample Depth:	2-4'	4-6'	0-2'	4-6'	2-4'	8-10'	10-12'	6-8'	8-10'	10-12'
Polynuclear Aromatic Hydrocarbons (PAHs)															
1,4-Dioxane (p-Dioxane)	mg/kg	26.5	5.7	0.0012		<0.10	<0.10	<0.11	<0.10	<0.30	<0.10	<0.099	<0.11	<0.10	<0.10
1-Methylnaphthalene	mg/kg	72.7	17.6			<0.054	<0.054	<0.058	<0.054	<0.16	<0.055	<0.052	<0.055	<0.055	<0.054
2-Methylnaphthalene	mg/kg	3,010	239			<0.050	<0.049	<0.053	<0.049	<0.15	<0.050	<0.048	<0.051	<0.050	<0.050
Acenaphthene	mg/kg	45,200	3,590			<0.068	<0.067	<0.073	<0.067	<0.20	<0.068	<0.065	<0.069	<0.069	<0.068
Acenaphthylene	mg/kg					<0.068	<0.068	<0.073	<0.068	<0.20	<0.068	<0.065	<0.069	<0.069	<0.068
Anthracene	mg/kg	100,000	17,900	196.9492		<0.031	<0.030	<0.033	<0.030	<0.089	<0.031	<0.029	<0.031	<0.031	<0.031
Benzo(a)anthracene	mg/kg	20.8	1.14			<0.030	<0.029	0.035 J	<0.029	<0.087	<0.030	<0.028	<0.030	<0.030	<0.030
Benzo(a)pyrene	mg/kg	2.11	0.115	0.47		<0.029	<0.029	0.038 J	<0.029	<0.084	<0.029	<0.028	<0.029	<0.029	<0.029
Benzo(b)fluoranthene	mg/kg	21.1	1.15	0.4793		<0.033	<0.033	0.055 J	<0.033	<0.096	<0.033	<0.031	<0.033	<0.033	<0.033
Benzo(g,h,i)perylene	mg/kg					<0.050	<0.050	0.060 J	<0.050	<0.15	0.072 J	<0.048	<0.051	<0.051	<0.050
Benzo(k)fluoranthene	mg/kg	211	11.5			<0.046	<0.046	<0.049	<0.045	<0.13	<0.046	<0.044	<0.047	<0.046	<0.046
Chrysene	mg/kg	2,110	115	0.1446		<0.029	<0.028	0.047 J	<0.028	<0.084	<0.029	<0.027	<0.029	<0.029	<0.029
Dibenz(a,h)anthracene	mg/kg	2.11	0.115			<0.052	<0.052	<0.056	<0.052	<0.15	<0.052	<0.050	<0.053	<0.052	<0.052
Fluoranthene	mg/kg	30,100	2,390	88.8778		<0.027	<0.027	0.11	<0.027	<0.079	<0.027	<0.026	<0.028	<0.027	<0.027
Fluorene	mg/kg	30,100	2,390	14.8299		<0.022	<0.022	<0.024	<0.022	<0.065	<0.022	<0.021	<0.023	<0.023	<0.022
Indeno(1,2,3-cd)pyrene	mg/kg	21.1	1.15			<0.041	<0.041	0.055 J	<0.041	<0.12	0.060 J	<0.040	<0.042	<0.042	<0.041
Naphthalene	mg/kg	26.0	5.2	0.66		<0.067	<0.067	<0.072	<0.066	<0.20	<0.067	<0.064	<0.068	<0.068	<0.067
Phenanthrene	mg/kg					<0.025	<0.024	0.088	<0.024	<0.072	<0.025	<0.023	<0.025	<0.025	<0.025
Pyrene	mg/kg	22,600	1,790	54.5455		<0.042	<0.042	0.095 J	<0.042	<0.12	<0.042	<0.041	<0.043	<0.043	<0.042
RCRA Metals															
Arsenic	mg/kg	3.0	0.677	0.5484	8.3	2.7 J*	2.5 J*	7.0*	[24.5]	2.6 J*	<1.5	<1.5	3.1*	1.8 J*	2.3 J*
Barium	mg/kg	100,000	15,300	164.8	364	44.9	33.4	108	59.6	34.6	43.6	10.5	55.0	56.3	65.3
Cadmium	mg/kg	985	71.1	0.752	1.07	<0.15	<0.15	0.37 J	0.34 J	0.22 J	0.22 J	0.18 J	0.22 J	0.31 J	0.22 J
Chromium	mg/kg			360,000	43.5	13.9	9.6	23.5	15.2	11.5	19.5	6.6	12.4	14.5	16.5
Lead	mg/kg	800	400	27.0	51.6	5.3	4.8	[55.7]	6.7	5.1	6.3	4.0	5.3	6.5	8.4
Selenium	mg/kg	5,840	391	0.52		<1.5	<1.4	<1.5	<1.5	<1.4	<1.4	<1.4	<1.5	<1.5	<1.5
Silver	mg/kg	5840	391	0.85		<0.35	<0.34	<0.35	<0.34	<0.33	<0.32	<0.32	<0.35	<0.35	<0.35
Mercury	mg/kg	3.13	3.13	0.208		0.035 J	0.016 J	0.078	0.018 J	0.014 J	<0.011	0.012 J	0.014 J	<0.011	<0.011
Volatile Organic Compounds (VOCs)															
1,1,1,2-Tetrachloroethane	mg/kg	12.3	2.8	0.053		<0.016	<0.015	<0.017	<0.015	<0.015	<0.016	<0.014	<0.016	<0.016	<0.016
1,1,1-Trichloroethane	mg/kg	640	640	0.14		<0.017	<0.016	<0.019	<0.016	<0.016	<0.017	<0.015	<0.017	0.065 J	<0.017
1,1,2,2-Tetrachloroethane	mg/kg	3.6	0.81	0.0002		<0.023	<0.023	<0.026	<0.023	<0.022	<0.023	<0.022	<0.024	<0.024	<0.023
1,1,2-Trichloroethane	mg/kg	7.0	1.6	0.0032		<0.024	<0.023	<0.026	<0.023	<0.022	<0.024	<0.022	<0.024	<0.024	<0.024
1,1-Dichloroethane	mg/kg	22.2	5.1	0.48		<0.017	<0.016	<0.019	<0.016	<0.016	<0.017	<0.015	<0.017	<0.017	<0.017
1,1-Dichloroethene	mg/kg		320	0.005		<0.021	<0.021	<0.024	<0.021	<0.020	<0.021	<0.020	<0.022	<0.022	<0.021
1,2,3-Trichlorobenzene	mg/kg	934	62.6			<0.072	<0.071	<0.081	<0.071	<0.069	<0.072	<0.066	<0.074	<0.073	<0.072
1,2,3-Trichloropropane	mg/kg	0.11	0.005	0.052		<0.031	<0.031	<0.035	<0.031	<0.030	<0.031	<0.029	<0.032	<0.032	<0.031
1,2,4-Trichlorobenzene	mg/kg	113	24	0.41		<0.053	<0.053	<0.060	<0.052	<0.051	<0.053	<0.049	<0.055	<0.054	<0.053
1,2,4-Trimethylbenzene	mg/kg	219	219	1.4		<0.019	<0.019	<0.022	<0.019	<0.018	<0.019	<0.018	<0.020	<0.020	<0.019
1,2-Dibromo-3-chloropropane	mg/kg	0.092	0.008	0.0002		<0.050	<0.050	<0.056	<0.049	<0.048	<0.050	<0.046	<0.052	<0.051	<0.050
1,2-Dibromoethane (EDB)	mg/kg		0.05	0.000028		<0.018	<0.018	<0.020	<0.017	<0.017	<0.018	<0.016	<0.018	<0.018	<0.018
1,2-Dichlorobenzene	mg/kg	376	376	1.2		<0.020	<0.020	<0.022	<0.020	<0.019	<0.020	<0.018	<0.021	<0.020	<0.020
1,2-Dichloroethane	mg/kg	2.9	0.65	0.0028		<0.015	<0.015	<0.017	<0.015	<0.014	<0.015	<0.014	<0.015	<0.015	<0.015
1,2-Dichloropropane	mg/kg	15	3.4	0.0033		<0.015	<0.015	<0.017	<0.015	<0.015	<0.015	<0.014	<0.016	<0.016	<0.015
1,3,5-Trimethylbenzene	mg/kg	182	182	1.4		<0.021	<0.021	<0.023	<0.021	<0.020	<0.021	<0.019	<0.021	<0.021	<0.021
1,3-Dichlorobenzene	mg/kg	297	297	1.2		<0.018	<0.018	<0.020	<0.017	<0.017	<0.018	<0.016	<0.018	<0.018	<0.018
1,3-Dichloropropane	mg/kg	1,490	1,490			<0.014	<0.014	<0.016	<0.014	<0.013	<0.014	<0.013	<0.015	<0.014	<0.014
1,4-Dichlorobenzene	mg/kg		3.7	0.14		<0.018	<0.018	<0.020	<0.017	<0.017	<0.018	<0.016	<0.018	<0.018	<0.018
2,2-Dichloropropane	mg/kg	191	527			<0.017	<0.017	<0.020	<0.017	<0.017	<0.017	<0.016	<0.018	<0.018	<0.017
2-Chlorotoluene	mg/kg	907	907			<0.021	<0.021	<0.024	<0.021	<0.020	<0.021	<0.019	<0.022	<0.021	<0.021
4-Chlorotoluene	mg/kg	253	253			<0.025	<0.024	<0.028	<0.024	<0.023	<0.025	<0.023	<0.025	<0.025	<0.025
Benzene	mg/kg	7.1	1.6	0.0052		<0.015	<0.015	<0.017	<0.015	<0.015	<0.015	<0.014	<0.016	<0.016	<0.015
Bromobenzene	mg/kg	679	342			<0.025	<0.025	<0.028	<0.025	<0.024	<0.025	<0.023	<0.026	<0.026	<0.025
Bromochloromethane	mg/kg	906	216			<0.018	<0.018	<0.020	<0.017	<0.017	<0.018	<0.016	<0.018	<0.018	<0.018
Bromodichloromethane	mg/kg	1.8	0.42	0.0004		<0.015	<0.015	<0.017	<0.015	<0.015	<0.015	<0.014	<0.016	<0.016	<0.015
Bromoform	mg/kg	113	25.4	0.0024		<0.28	<0.28	<0.32	<0.28	<0.27	<0.28	<0.26	<0.29	<0.29	<0.28
Bromomethane	mg/kg	43	9.6	0.005		<0.091	<0.090	<0.10	<0.089	<0.086	<0.091	<0.084	<0.093	<0.092	<0.091
Carbon tetrachloride	mg/kg	4.0	0.92	0.0038		<0.014	<0.014	<0.016	<0.014	<0.014	<0.014	<0.013	<0.015	<0.014	<0.014
Chlorobenzene	mg/kg	761	370	0.14		<0.0078	<0.0077	<0.0087	<0.0076	<0.0074	<0.0077	<0.0071	<0.0080	<0.0079	<0.0077
Chloroethane	mg/kg	2120	2,120	0.23		<0.027	<0.027	<0.031	<0.027	<0.026	<0.027	<0.025	<0.028	<0.028	<0.027
Chloroform	mg/kg	2.0	0.45	0.0034		<0.046	<0.046	<0.052	<0.046	<0.044	<0.046	<0.043	<0.048	<0.047	<0.046
Chloromethane	mg/kg	669	159	0.016		<0.025	<0.024	<0.028	<0.024	<0.023	<0.025	<0.023	<0.025	<0.025	<0.025
Dibromochloromethane	mg/kg	38.9	8.3	0.032		<0.22	<0.22	<0.25	<0.22	<0.21	<0.22	<0.20	<0.23	<0.22	<0.22
Dibromomethane	mg/kg	143	34			<0.019	<0.019	<0.021	<0.019	<0.018	<0.019	<0.018	<0.020	<0.019	<0.019
Dichlorodifluoromethane	mg/kg	530	126	3.1		<0.028	<0.027	<0.031	<0.027	<0.026	<0.028	<0.026	<0.029	<0.028	<0.028
Diisopropyl ether	mg/kg	2,260	2,260			<0.016	<0.016	<0.018	<0.016	<0.015	<0.016	<0.015	<0.017	<0.016	<0.016
Ethylbenzene	mg/kg	35.4	8.0	1.6		<0.015	<0.015	<0.017	<0.015	<0.015	<0.015	<0.014	<0.016	<0.016	<0.015
Hexachloro-1,3-butadiene	mg/kg	7.2	1.6			<0.13	<0.13	<0.14	<0.13	<0.12	<0.13	<0.12	<0.13	<0.13	<0.13
Isopropylbenzene (Cumene)	mg/kg	268	268			<0.017	<0.017	<0.020	<0.017	<0.017	<0.017	<0.016	<0.018	<0.018	<0.017
Methyl-tert-butyl ether	mg/kg	282	63.8	0.027		<0.019	<0.019	<0.021	<0.019	<0.018	<0.019	<0.018	<0.020	<0.019	<0.019
Methylene Chloride	mg/kg	1,150	61.8	0.0026		<0.018	<0.018	<0.020	<0.018	<0.017	<0.018	<0.017	<0.019	<0.018	<0.018
Naphthalene	mg/kg	24.1	5.5	0.66		<0.020	<0.020	<0.023	<0.020	<0.019	<0.020	<0.019	<0.021	<0.021	<0.020
Styrene	mg/kg	867	867	0.22		<0.017	<0.016	<0.019	<0.016	<0.016	<0.017	<0.015	<0.017	<0.017	<0.017
Tetrachloroethene	mg/kg	153	33.0	0.0046		<0.025	<0.025	<0.028	<0.025	<0.024	<0.025	<0.023	<0.026	<0.026	<0.025
Toluene	mg/kg	818	818	1.1		<0.016	<0.016	<0.018	<0.016	<0.016	<0.016	<0.015	<0.017	<0.017	<0.016
Trichloroethene	mg/kg	8.8	1.3	0.0036		<0.024	<0.024	<0.027	<0.024	<0.023	[2.5]	[1.0]	<0.025	[1.6]	[14.6]
Trichlorofluoromethane	mg/kg	1,230	1,120	4.5		<0.019	<0.019	<0.021	<0.018	<0.018	<0.019	<0.017	<0.019	<0.019	<0.019
Vinyl chloride	mg/kg	2.0	0.067	0.00014		<0.013	<0.013	<0.015	<0.013	<0.012	<0.013	<0.012	<0.013	<0.013	<0.013
cis-1,2-Dichloroethene	mg/kg	2,340	156	0.041		<0.014	<0.014	<0.016	<0.014	<0.013	<0.014	<0.013	<0.014	<0.014	<0.014
cis-1,3-Dichloropropene	mg/kg	1,210	1,220			<0.043	<0.042	<0.048	<0.042	<0.041	<0.043	<0.039	<0.044	<0.043	<0.043
m&p-Xylene	mg/kg					<0.027	<0.027	<0.031	<0.027	<0.026	<0.027	<0.025	<0.028	<0.028	<0.027
n-Butylbenzene	mg/kg	108	108			<0.030	<0.029	<0.033	<0.029	<0.028	<0.030	<0.027	<0.031	<0.030	<0.030
n-Propylbenzene	mg/kg	264	264			<0.016	<0.015	<0.017	<0.015	<0.015	<0.016	<0.014	<0.016	<0.016	<0.016
o-Xylene	mg/kg	434	434			<0.019	<0.019	<0.022	<0.019	<0.018	<0.019	<0.018	<0.020	<0.020	<0.019
p-Isopropyltoluene	mg/kg	162	162			<0.020	<0.019	<0.022	<0.019	<0.019	<0.020	<0.018	<0.020	<0.020	<0.020
sec-Butylbenzene	mg/kg	145	145			<0.016	<0.016	<0.018	<0.016	<0.015	<0.016	<0.015	<0.016	<0.016	<0.016
tert-Butylbenzene	mg/kg	183	183			<0.020	<0.020	<0.023	<0.020	<0.019	<0.020	<0.019	<0.021	<0.021	<0.020
trans-1,2-Dichloroethene	mg/kg	976	1,560	0.063		<0.014	<0.014	<0.016	<0.014	<0.013	<0.014	<0.013	<0.014	<0.014	<0.014
trans-1,3-Dichloropropene	mg/kg	1,570	1,570			<0.19	<0.18	<0.21	<0.18	<0.18	<0.18	<0.17	<0.19	<0.19	<0.18
Diesel Range Organics															
DRO	mg/kg					NA		NA		NA			NA		
Percent Moisture	%					12.8	12.2	18.4	12.0	10.4	12.8	8.8	14.3	13.6	12.7
PID	ppmv					1.2	0.90	0.70	0.40	0.50	0.80	1.5	0.40	1.2	0.2

Only analytes with a detection in at least one sample are show
(2-3) = sample depth in feet below ground surface
PID - Photoionization Detector
ppmv = parts per million by volume in air
* = concentration is above RCL but below Background Threshold
Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are in **red bold**
Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are in **blue bold**
Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[brackets]**
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
NA = Not Analyzed

NR = Not Reported/Below Detection Limits
mg/kg = milligrams per kilogram equal to parts per million (ppm)
RCL = Residual Contaminant Level
NA = Not Analyzed

Soil Classification:
CL = Clay of low plasticity
MH = Elastic silt
ML = Silt
SC = Clayey sand
SM = Silty sand
SP = Poorly graded sand
SW = Well graded sand, fine to coarse

Table A.1: Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCL' s	ch. NR 720 Direct Contact Non-Industrial RCL' s	ch. NR 720 Soil to Groundwater Pathway RCL's	Background Threshold Value	SB-5			SB-6		SB-7		SB-8	
					Sample Date:	10/21/2021			10/21/2021		10/21/2021		10/21/2021	
					Soil Type:	ML	CL	SP/GW	FILL	CL/ML	ML	ML	ML	CL/ML
					Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U
					Sample Depth:	8-10'	10-12'	12-15'	0-5'	7-10'	4-6'	6-8'	0-5'	8-10'
Polynuclear Aromatic Hydrocarbons (PAHs)														
1,4-Dioxane (p-Dioxane)	mg/kg	**26.5**	5.7	**0.0012**		<0.11	<0.11	<0.097	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1-Methylnaphthalene	mg/kg	**72.7**	17.6			<0.057	<0.058	<0.051	<0.053	<0.055	<0.054	<0.054	<0.054	<0.053
2-Methylnaphthalene	mg/kg	**3,010**	239			<0.052	<0.053	<0.046	<0.049	<0.050	<0.049	<0.049	<0.049	<0.049
Acenaphthene	mg/kg	**45,200**	3,590			<0.071	<0.072	<0.063	<0.067	<0.068	<0.067	<0.067	<0.067	<0.066
Acenaphthylene	mg/kg					<0.071	<0.073	<0.064	<0.067	<0.069	<0.068	<0.067	<0.068	<0.067
Anthracene	mg/kg	**100,000**	17,900	**196.9492**		<0.032	<0.033	<0.029	<0.030	<0.031	<0.030	<0.030	<0.030	<0.030
Benzo(a)anthracene	mg/kg	**20.8**	1.14			<0.031	0.047 J	<0.028	<0.029	<0.030	<0.029	<0.029	<0.029	<0.029
Benzo(a)pyrene	mg/kg	**2.11**	0.115	**0.47**		<0.030	0.040 J	0.078 J	<0.028	<0.029	<0.029	<0.028	<0.028	<0.028
Benzo(b)fluoranthene	mg/kg	**21.1**	1.15	**0.4793**		<0.034	0.043 J	0.051 J	<0.032	<0.033	<0.033	<0.032	<0.033	<0.032
Benzo(g,h,i)perylene	mg/kg					<0.052	<0.053	0.087 J	<0.049	<0.050	<0.050	<0.049	<0.050	<0.049
Benzo(k)fluoranthene	mg/kg	**211**	11.5			<0.048	<0.049	0.050 J	<0.045	<0.046	<0.045	<0.045	<0.045	<0.045
Chrysene	mg/kg	**2,110**	115	**0.1446**		<0.030	0.052 J	<0.027	<0.028	<0.029	<0.028	<0.028	<0.028	<0.028
Dibenz(a,h)anthracene	mg/kg	**2.11**	0.115			<0.054	<0.055	0.081 J	<0.051	<0.052	<0.052	<0.051	<0.051	<0.051
Fluoranthene	mg/kg	**30,100**	2,390	**88.8778**		<0.028	0.11	<0.025	0.033 J	<0.027	<0.027	<0.027	<0.027	<0.027
Fluorene	mg/kg	**30,100**	2,390	**14.8299**		<0.023	<0.024	<0.021	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022
Indeno(1,2,3-cd)pyrene	mg/kg	**21.1**	1.15			<0.043	<0.044	0.12 J	<0.041	<0.042	<0.041	<0.041	<0.041	<0.041
Naphthalene	mg/kg	**26.0**	5.2	**0.66**		<0.070	<0.071	<0.062	<0.066	<0.067	<0.066	<0.066	<0.066	<0.065
Phenanthrene	mg/kg					<0.026	<0.026	<0.023	0.032 J	<0.025	<0.024	<0.024	<0.024	<0.024
Pyrene	mg/kg	**22,600**	1,790	**54.5455**		<0.044	0.11 J	<0.040	<0.042	<0.043	<0.042	<0.042	<0.042	<0.042
RCRA Metals														
Arsenic	mg/kg	**3.0**	0.677	**0.5484**	8.3	3.1*	6.7*	4.5*	2.3 J*	2.2 J*	2.0 J*	2.3 J*	<1.5	3.0*
Barium	mg/kg	**100,000**	15,300	**164.8**	364	64.8	89.1	13.1	28.2	35.1	33.4	29.3	45.5	49.3
Cadmium	mg/kg	**985**	71.1	**0.752**	1.07	0.21 J	0.20 J	<0.14	0.24 J	0.24 J	0.18 J	0.19 J	0.23 J	0.24 J
Chromium	mg/kg			**360,000**	43.5	16.8	15.3	6.4	9.6	10.0	9.8	8.8	13.5	14.1
Lead	mg/kg	**800**	400	**27.0**	51.6	6.6	7.4	5.6	6.3	5.7	4.8	4.5	4.7	5.8
Selenium	mg/kg	**5,840**	391	**0.52**		<1.5	<1.6	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Silver	mg/kg	**5840**	391	**0.85**		<0.36	<0.37	<0.32	<0.32	<0.33	<0.34	<0.34	<0.32	<0.34
Mercury	mg/kg	**3.13**	3.13	**0.208**		<0.011	<0.012	<0.0099	<0.010	<0.011	<0.011	<0.011	<0.011	<0.011
Volatile Organic Compounds (VOCs)														
1,1,1,2-Tetrachloroethane	mg/kg	**12.3**	2.8	**0.053**		<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
1,1,1-Trichloroethane	mg/kg	**640**	640	**0.14**		<0.018	<0.018	<0.015	<0.016	<0.017	<0.016	<0.016	<0.016	<0.016
1,1,2,2-Tetrachloroethane	mg/kg	**3.6**	0.81	**0.0002**		<0.025	<0.026	<0.021	<0.023	<0.024	<0.023	<0.023	<0.023	<0.023
1,1,2-Trichloroethane	mg/kg	**7.0**	1.6	**0.0032**		<0.025	<0.026	<0.021	<0.023	<0.024	<0.023	<0.023	<0.023	<0.023
1,1-Dichloroethane	mg/kg	**22.2**	5.1	**0.48**		<0.018	<0.018	<0.015	<0.016	<0.017	<0.016	<0.016	<0.016	<0.016
1,1-Dichloroethene	mg/kg		320	**0.005**		<0.023	<0.024	<0.019	<0.021	<0.022	<0.021	<0.021	<0.021	<0.021
1,2,3-Trichlorobenzene	mg/kg	**934**	62.6			<0.077	<0.080	<0.063	<0.069	<0.073	<0.071	<0.070	<0.071	<0.069
1,2,3-Trichloropropane	mg/kg	**0.11**	0.005	**0.052**		<0.034	<0.035	<0.028	<0.030	<0.032	<0.031	<0.031	<0.031	<0.030
1,2,4-Trichlorobenzene	mg/kg	**113**	24	**0.41**		<0.057	<0.059	<0.047	<0.051	<0.054	<0.052	<0.052	<0.052	<0.051
1,2,4-Trimethylbenzene	mg/kg	**219**	219	**1.4**		<0.021	<0.021	<0.017	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019
1,2-Dibromo-3-chloropropane	mg/kg	**0.092**	0.008	**0.0002**		<0.054	<0.056	<0.044	<0.048	<0.051	<0.049	<0.049	<0.049	<0.048
1,2-Dibromoethane (EDB)	mg/kg		0.05	**0.000028**		<0.019	<0.020	<0.016	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
1,2-Dichlorobenzene	mg/kg	**376**	376	**1.2**		<0.022	<0.022	<0.018	<0.019	<0.020	<0.020	<0.019	<0.020	<0.019
1,2-Dichloroethane	mg/kg	**2.9**	0.65	**0.0028**		<0.016	<0.017	<0.013	<0.014	<0.015	<0.015	<0.014	<0.015	<0.014
1,2-Dichloropropane	mg/kg	**15**	3.4	**0.0033**		<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
1,3,5-Trimethylbenzene	mg/kg	**182**	182	**1.4**		<0.022	<0.023	<0.018	<0.020	<0.021	<0.020	<0.020	<0.020	<0.020
1,3-Dichlorobenzene	mg/kg	**297**	297	**1.2**		<0.019	<0.020	<0.016	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
1,3-Dichloropropane	mg/kg	**1,490**	1,490			<0.015	<0.016	<0.012	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
1,4-Dichlorobenzene	mg/kg		3.7	**0.14**		<0.019	<0.020	<0.016	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
2,2-Dichloropropane	mg/kg	**191**	527			<0.019	<0.019	<0.015	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
2-Chlorotoluene	mg/kg	**907**	907			<0.023	<0.023	<0.018	<0.020	<0.021	<0.021	<0.020	<0.021	<0.020
4-Chlorotoluene	mg/kg	**253**	253			<0.026	<0.027	<0.022	<0.024	<0.025	<0.024	<0.024	<0.024	<0.024
Benzene	mg/kg	**7.1**	1.6	**0.0052**		<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
Bromobenzene	mg/kg	**679**	342			<0.027	<0.028	<0.022	<0.024	<0.025	<0.025	<0.024	<0.025	<0.024
Bromochloromethane	mg/kg	**906**	216			<0.019	<0.020	<0.016	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
Bromodichloromethane	mg/kg	**1.8**	0.42	**0.0004**		<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
Bromoform	mg/kg	**113**	25.4	**0.0024**		<0.31	<0.32	<0.25	<0.27	<0.29	<0.28	<0.28	<0.28	<0.27
Bromomethane	mg/kg	**43**	9.6	**0.005**		<0.097	<0.10	<0.080	<0.087	<0.091	<0.089	<0.088	<0.089	<0.087
Carbon tetrachloride	mg/kg	**4.0**	0.92	**0.0038**		<0.015	<0.016	<0.013	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
Chlorobenzene	mg/kg	**761**	370	**0.14**		<0.0083	<0.0086	<0.0068	<0.0075	<0.0078	<0.0076	<0.0075	<0.0076	<0.0075
Chloroethane	mg/kg	**2120**	2,120	**0.23**		<0.029	<0.030	<0.024	<0.026	<0.028	<0.027	<0.026	<0.027	<0.026
Chloroform	mg/kg	**2.0**	0.45	**0.0034**		<0.050	<0.051	<0.041	<0.045	<0.047	<0.046	<0.045	<0.045	<0.045
Chloromethane	mg/kg	**669**	159	**0.016**		<0.026	<0.027	<0.022	<0.024	<0.025	<0.024	<0.024	<0.024	<0.024
Dibromochloromethane	mg/kg	**38.9**	8.3	**0.032**		<0.24	<0.25	<0.19	<0.21	<0.22	<0.22	<0.21	<0.22	<0.21
Dibromomethane	mg/kg	**143**	34			<0.021	<0.021	<0.017	<0.018	<0.019	<0.019	<0.019	<0.019	<0.018
Dichlorodifluoromethane	mg/kg	**530**	126	**3.1**		<0.030	<0.031	<0.024	<0.027	<0.028	<0.027	<0.027	<0.027	<0.027
Diisopropyl ether	mg/kg	**2,260**	2,260			<0.017	<0.018	<0.014	<0.015	<0.016	<0.016	<0.016	<0.016	<0.015
Ethylbenzene	mg/kg	**35.4**	8.0	**1.6**		<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
Hexachloro-1,3-butadiene	mg/kg	**7.2**	1.6			<0.14	<0.14	<0.11	<0.12	<0.13	<0.13	<0.12	<0.13	<0.12
Isopropylbenzene (Cumene)	mg/kg	**268**	268			<0.019	<0.019	<0.015	<0.017	<0.018	<0.017	<0.017	<0.017	<0.017
Methyl-tert-butyl ether	mg/kg	**282**	63.8	**0.027**		<0.020	<0.021	<0.017	<0.018	<0.019	<0.019	<0.018	<0.019	<0.018
Methylene Chloride	mg/kg	**1,150**	61.8	**0.0026**		<0.019	<0.020	<0.016	<0.017	<0.018	<0.018	<0.017	<0.018	<0.017
Naphthalene	mg/kg	**24.1**	5.5	**0.66**		<0.022	<0.022	<0.018	<0.019	<0.020	<0.020	<0.020	<0.020	<0.020
Styrene	mg/kg	**867**	867	**0.22**		<0.018	<0.018	<0.015	<0.016	<0.017	<0.016	<0.016	<0.016	<0.016
Tetrachloroethene	mg/kg	**153**	33.0	**0.0046**		<0.027	<0.028	<0.022	<0.024	<0.025	<0.025	<0.024	<0.025	<0.024
Toluene	mg/kg	**818**	818	**1.1**		<0.018	<0.018	<0.014	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Trichloroethene	mg/kg	**8.8**	1.3	**0.0036**		<0.026	**[0.08]**	**[0.23]**	<0.023	<0.024	<0.024	<0.023	<0.024	<0.023
Trichlorofluoromethane	mg/kg	**1,230**	1,120	**4.5**		<0.020	<0.021	<0.017	<0.018	<0.019	<0.018	<0.018	<0.018	<0.018
Vinyl chloride	mg/kg	**2.0**	0.067	**0.00014**		<0.014	<0.015	<0.011	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
cis-1,2-Dichloroethene	mg/kg	**2,340**	156	**0.041**		<0.015	<0.015	<0.012	<0.013	<0.014	<0.014	<0.013	<0.014	<0.013
cis-1,3-Dichloropropene	mg/kg	**1,210**	1,220			<0.046	<0.047	<0.038	<0.041	<0.043	<0.042	<0.041	<0.042	<0.041
m&p-Xylene	mg/kg					<0.029	<0.030	<0.024	<0.026	<0.028	<0.027	<0.026	<0.027	<0.026
n-Butylbenzene	mg/kg	**108**	108			<0.032	<0.033	<0.026	<0.029	<0.030	<0.029	<0.029	<0.029	<0.029
n-Propylbenzene	mg/kg	**264**	264			<0.017	<0.017	<0.014	<0.015	<0.016	<0.015	<0.015	<0.015	<0.015
o-Xylene	mg/kg	**434**	434			<0.021	<0.022	<0.017	<0.019	<0.020	<0.019	<0.019	<0.019	<0.019
p-Isopropyltoluene	mg/kg	**162**	162			<0.021	<0.022	<0.017	<0.019	<0.020	<0.019	<0.019	<0.019	<0.019
sec-Butylbenzene	mg/kg	**145**	145			<0.017	<0.018	<0.014	<0.015	<0.016	<0.016	<0.015	<0.015	<0.015
tert-Butylbenzene	mg/kg	**183**	183			<0.022	<0.023	<0.018	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
trans-1,2-Dichloroethene	mg/kg	**976**	1,560	**0.063**		<0.015	<0.016	<0.012	<0.013	<0.014	<0.014	<0.014	<0.014	<0.013
trans-1,3-Dichloropropene	mg/kg	**1,570**	1,570			<0.20	<0.21	<0.16	<0.18	<0.19	<0.18	<0.18	<0.18	<0.18
Diesel Range Organics														
DRO	mg/kg						NA		NA		NA		NA	
Percent Moisture	%					16.3	18.0	6.5	10.9	13.2	11.9	11.3	11.8	10.9
PID	ppmv					1.2	0.90	2.3	4.2	0.10	10.7	18.5	3.0	2.0

Only analytes with a detection in at least one sample are sho NR = Not Reported/Below Detection Limits

(2-3) = sample depth in feet below ground surface

mg/kg = milligrams per kilogram equal to parts per million (ppm)

PID - Photoionization Detector

RCL = Residual Contaminant Level

ppmv = parts per million by volume in air

NA = Not Analyzed

* = concentration is above RCL but below Background Threshold

Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are in **red bold**

Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are in **blue bold**

Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[brackets]**

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

NA = Not Analyzed

Soil Classification:

CL = Clay of low plasticity

MH = Elastic silt

ML = Silt

SC = Clayey sand

SM = Silty sand

SP = Poorly graded sand

SW = Well graded sand, fine to coars

Table A.1: Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCL' s	ch. NR 720 Direct Contact Non-Industrial RCL' s	ch. NR 720 Soil to Groundwater Pathway RCL's	Background Threshold Value	SB-9			SB-10		SB-11		SB-12	
					Sample Date:	10/21/2021			10/21/2021		10/21/2021		10/22/2021	
					Soil Type:	ML	GW	GW	ML	ML	GP	CL	GP/SC	ML
					Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U
					Sample Depth:	2-4'	7-9'	9-10'	4-8'	8-10'	2-4'	8-10'	0-5'	15-18'
Polynuclear Aromatic Hydrocarbons (PAHs)														
1,4-Dioxane (p-Dioxane)	mg/kg	**26.5**	**5.7**	**0.0012**		<0.11	<0.11	<0.10	<0.40	<0.10	<0.11	<0.10	<0.21	<0.11
1-Methylnaphthalene	mg/kg	**72.7**	**17.6**			<0.057	<0.055	<0.054	<0.21	<0.053	<0.057	<0.053	<0.11	<0.056
2-Methylnaphthalene	mg/kg	**3,010**	**239**			<0.052	<0.050	<0.049	<0.19	<0.048	<0.052	<0.048	<0.10	<0.051
Acenaphthene	mg/kg	**45,200**	**3,590**			<0.071	<0.069	<0.067	<0.26	<0.066	<0.071	<0.066	<0.14	<0.070
Acenaphthylene	mg/kg					<0.072	<0.069	<0.068	<0.27	<0.066	<0.072	<0.066	<0.14	<0.070
Anthracene	mg/kg	**100,000**	**17,900**	**196.9492**		<0.032	<0.031	<0.030	<0.12	<0.030	<0.032	<0.030	0.083 J	<0.031
Benzo(a)anthracene	mg/kg	**20.8**	**1.14**			<0.031	0.042 J	<0.029	<0.12	<0.029	<0.031	<0.029	0.87	<0.030
Benzo(a)pyrene	mg/kg	**2.11**	**0.115**	**0.47**		<0.030	0.044 J	<0.028	**0.30 J**	<0.028	<0.030	<0.028	**[1.3]**	<0.030
Benzo(b)fluoranthene	mg/kg	**21.1**	**1.15**	**0.4793**		<0.035	0.041 J	<0.033	0.21 J	<0.032	<0.034	<0.032	**[2.1]**	<0.034
Benzo(g,h,i)perylene	mg/kg					<0.053	0.068 J	<0.050	0.48 J	<0.048	<0.052	<0.049	1.6	<0.051
Benzo(k)fluoranthene	mg/kg	**211**	**11.5**			<0.048	0.083 J	<0.045	0.19 J	<0.044	<0.048	<0.044	0.78	<0.047
Chrysene	mg/kg	**2,110**	**115**	**0.1446**		<0.030	0.067 J	<0.028	<0.11	<0.028	<0.030	<0.028	**[1.4]**	<0.029
Dibenz(a,h)anthracene	mg/kg	**2.11**	**0.115**			<0.055	<0.053	<0.051	**0.51 J**	<0.050	<0.054	<0.050	**0.24 J**	<0.053
Fluoranthene	mg/kg	**30,100**	**2,390**	**88.8778**		<0.028	0.13	<0.027	<0.11	<0.026	<0.028	<0.026	2.7	<0.028
Fluorene	mg/kg	**30,100**	**2,390**	**14.8299**		<0.023	<0.023	<0.022	<0.087	<0.022	<0.023	<0.022	<0.046	<0.023
Indeno(1,2,3-cd)pyrene	mg/kg	**21.1**	**1.15**			<0.044	0.061 J	<0.041	0.60	<0.040	<0.043	<0.040	**1.4**	<0.042
Naphthalene	mg/kg	**26.0**	**5.2**	**0.66**		<0.070	0.078 J	<0.066	<0.26	<0.065	<0.070	<0.065	<0.14	<0.069
Phenanthrene	mg/kg					<0.026	0.079 J	<0.024	<0.095	<0.024	<0.026	<0.024	0.99	<0.025
Pyrene	mg/kg	**22,600**	**1,790**	**54.5455**		<0.045	0.13 J	<0.042	<0.16	<0.041	<0.044	<0.041	2.5	<0.044
RCRA Metals														
Arsenic	mg/kg	**3.0**	**0.677**	**0.5484**	8.3	3.2*	2.5 J*	2.1 J*	3.0*	2.7 J*	4.3*	2.7*	2.9*	1.9 J*
Barium	mg/kg	**100,000**	**15,300**	**164.8**	364	80.7	35.1	11.4	33.7	31.5	102	36.5	31.0	44.0
Cadmium	mg/kg	**985**	**71.1**	**0.752**	1.07	0.29 J	<0.15	0.24 J	<0.14	0.21 J	0.35 J	0.24 J	0.49 J	0.20 J
Chromium	mg/kg			**360,000**	43.5	19.9	11.4	5.9	11.2	8.3	24.2	8.4	38.2	26.3
Lead	mg/kg	**800**	**400**	**27.0**	51.6	6.3	5.1	4.0	5.3	7.5	13.1	6.0	**[60.6]**	5.0
Selenium	mg/kg	**5,840**	**391**	**0.52**		<1.6	<1.5	<1.4	<1.4	<1.4	<1.6	<1.4	<1.5	<1.5
Silver	mg/kg	**5840**	**391**	**0.85**		<0.37	<0.36	<0.34	<0.33	<0.33	<0.37	<0.32	0.37 J	<0.36
Mercury	mg/kg	**3.13**	**3.13**	**0.208**		<0.012	<0.012	<0.011	<0.010	<0.011	0.035 J	<0.011	<0.011	<0.011
Volatile Organic Compounds (VOCs)														
1,1,1,2-Tetrachloroethane	mg/kg	**12.3**	**2.8**	**0.053**		<0.017	<0.016	<0.015	<0.015	<0.015	<0.017	<0.015	<0.016	<0.016
1,1,1-Trichloroethane	mg/kg	**640**	**640**	**0.14**		<0.018	<0.017	<0.016	<0.016	<0.016	<0.018	<0.016	<0.017	<0.017
1,1,2,2-Tetrachloroethane	mg/kg	**3.6**	**0.81**	**0.0002**		<0.026	<0.024	<0.023	<0.022	<0.022	<0.025	<0.022	<0.024	<0.025
1,1,2-Trichloroethane	mg/kg	**7.0**	**1.6**	**0.0032**		<0.026	<0.024	<0.023	<0.022	<0.022	<0.026	<0.022	<0.024	<0.025
1,1-Dichloroethane	mg/kg	**22.2**	**5.1**	**0.48**		<0.018	<0.017	<0.016	<0.016	<0.016	<0.018	0.073	<0.017	<0.017
1,1-Dichloroethene	mg/kg		**320**	**0.005**		<0.023	<0.022	<0.021	<0.020	<0.020	<0.023	<0.020	<0.022	<0.022
1,2,3-Trichlorobenzene	mg/kg	**934**	**62.6**			<0.079	<0.074	<0.071	<0.069	<0.068	<0.078	<0.068	<0.074	<0.075
1,2,3-Trichloropropane	mg/kg	**0.11**	**0.005**	**0.052**		<0.034	<0.032	<0.031	<0.030	<0.029	<0.034	<0.030	<0.032	<0.033
1,2,4-Trichlorobenzene	mg/kg	**113**	**24**	**0.41**		<0.058	<0.055	<0.052	<0.051	<0.050	<0.058	<0.051	<0.055	<0.056
1,2,4-Trimethylbenzene	mg/kg	**219**	**219**	**1.4**		<0.021	**[2.7]**	0.027 J	1.2	0.086	<0.021	<0.018	<0.020	<0.020
1,2-Dibromo-3-chloropropane	mg/kg	**0.092**	**0.008**	**0.0002**		<0.055	<0.052	<0.049	<0.048	<0.047	<0.054	<0.048	<0.052	<0.053
1,2-Dibromoethane (EDB)	mg/kg		**0.05**	**0.000028**		<0.019	<0.018	<0.017	<0.017	<0.017	<0.019	<0.017	<0.018	<0.019
1,2-Dichlorobenzene	mg/kg	**376**	**376**	**1.2**		<0.022	<0.021	<0.020	<0.019	<0.019	<0.022	<0.019	<0.021	<0.021
1,2-Dichloroethane	mg/kg	**2.9**	**0.65**	**0.0028**		<0.016	<0.015	<0.015	<0.014	<0.014	<0.016	<0.014	<0.015	<0.016
1,2-Dichloropropane	mg/kg	**15**	**3.4**	**0.0033**		<0.017	<0.016	<0.015	<0.015	<0.014	<0.017	<0.015	<0.016	<0.016
1,3,5-Trimethylbenzene	mg/kg	**182**	**182**	**1.4**		<0.023	1.1	<0.020	0.43	<0.020	<0.023	<0.020	<0.021	<0.022
1,3-Dichlorobenzene	mg/kg	**297**	**297**	**1.2**		<0.019	<0.018	<0.017	<0.017	<0.017	<0.019	<0.017	<0.018	<0.019
1,3-Dichloropropane	mg/kg	**1,490**	**1,490**			<0.015	<0.014	<0.014	<0.013	<0.013	<0.015	<0.013	<0.015	<0.015
1,4-Dichlorobenzene	mg/kg		**3.7**	**0.14**		<0.019	<0.018	<0.017	<0.017	<0.017	<0.019	<0.017	<0.018	<0.019
2,2-Dichloropropane	mg/kg	**191**	**527**			<0.019	<0.018	<0.017	<0.017	<0.016	<0.019	<0.017	<0.018	<0.018
2-Chlorotoluene	mg/kg	**907**	**907**			<0.023	<0.022	<0.021	<0.020	<0.020	<0.023	<0.020	<0.022	<0.022
4-Chlorotoluene	mg/kg	**253**	**253**			<0.027	<0.025	<0.024	<0.023	<0.023	<0.027	<0.023	<0.025	<0.026
Benzene	mg/kg	**7.1**	**1.6**	**0.0052**		<0.017	<0.016	<0.015	<0.015	<0.014	<0.017	<0.015	<0.016	<0.016
Bromobenzene	mg/kg	**679**	**342**			<0.028	<0.026	<0.025	<0.024	<0.024	<0.027	<0.024	<0.026	<0.026
Bromochloromethane	mg/kg	**906**	**216**			<0.019	<0.018	<0.017	<0.017	<0.017	<0.019	<0.017	<0.018	<0.019
Bromodichloromethane	mg/kg	**1.8**	**0.42**	**0.0004**		<0.017	<0.016	<0.015	<0.015	<0.014	<0.017	<0.015	<0.016	<0.016
Bromoform	mg/kg	**113**	**25.4**	**0.0024**		<0.31	<0.29	<0.28	<0.27	<0.27	<0.31	<0.27	<0.29	<0.30
Bromomethane	mg/kg	**43**	**9.6**	**0.005**		<0.099	<0.093	<0.089	<0.086	<0.085	<0.098	<0.086	<0.094	<0.095
Carbon tetrachloride	mg/kg	**4.0**	**0.92**	**0.0038**		<0.016	<0.015	<0.014	<0.014	<0.013	<0.015	<0.013	<0.015	<0.015
Chlorobenzene	mg/kg	**761**	**370**	**0.14**		<0.0085	<0.0080	<0.0076	<0.0074	<0.0073	<0.0084	<0.0074	<0.0080	<0.0081
Chloroethane	mg/kg	**2120**	**2,120**	**0.23**		<0.030	<0.028	<0.027	<0.026	<0.026	<0.030	<0.026	<0.028	<0.029
Chloroform	mg/kg	**2.0**	**0.45**	**0.0034**		<0.051	<0.048	<0.045	<0.044	<0.043	<0.050	<0.044	<0.048	<0.048
Chloromethane	mg/kg	**669**	**159**	**0.016**		<0.027	<0.025	<0.024	<0.023	<0.023	<0.027	<0.023	<0.025	<0.026
Dibromochloromethane	mg/kg	**38.9**	**8.3**	**0.032**		<0.24	<0.23	<0.22	<0.21	<0.21	<0.24	<0.21	<0.23	<0.23
Dibromomethane	mg/kg	**143**	**34**			<0.021	<0.020	<0.019	<0.018	<0.018	<0.021	<0.018	<0.020	<0.020
Dichlorodifluoromethane	mg/kg	**530**	**126**	**3.1**		<0.030	<0.029	<0.027	<0.026	<0.026	<0.030	<0.026	<0.029	<0.029
Diisopropyl ether	mg/kg	**2,260**	**2,260**			<0.018	<0.016	<0.016	<0.015	<0.015	<0.017	<0.015	<0.017	<0.017
Ethylbenzene	mg/kg	**35.4**	**8.0**	**1.6**		<0.017	0.045 J	<0.015	<0.015	0.021 J	<0.017	<0.015	<0.016	<0.016
Hexachloro-1,3-butadiene	mg/kg	**7.2**	**1.6**			<0.14	<0.13	<0.13	<0.12	<0.12	<0.14	<0.12	<0.13	<0.13
Isopropylbenzene (Cumene)	mg/kg	**268**	**268**			<0.019	0.17	<0.017	0.052 J	0.020 J	<0.019	<0.017	<0.018	<0.018
Methyl-tert-butyl ether	mg/kg	**282**	**63.8**	**0.027**		<0.021	<0.020	<0.019	<0.018	<0.018	<0.021	<0.018	<0.020	<0.020
Methylene Chloride	mg/kg	**1,150**	**61.8**	**0.0026**		<0.020	<0.018	<0.018	<0.017	<0.017	<0.019	<0.017	<0.019	<0.019
Naphthalene	mg/kg	**24.1**	**5.5**	**0.66**		<0.022	0.56	<0.020	0.089 J	<0.019	<0.022	<0.019	<0.021	<0.021
Styrene	mg/kg	**867**	**867**	**0.22**		<0.018	<0.017	<0.016	<0.016	<0.016	<0.018	<0.016	<0.017	<0.017
Tetrachloroethene	mg/kg	**153**	**33.0**	**0.0046**		<0.027	<0.026	<0.025	<0.024	<0.024	<0.027	<0.024	<0.026	<0.026
Toluene	mg/kg	**818**	**818**	**1.1**		<0.018	<0.017	<0.016	<0.016	<0.015	<0.018	<0.015	<0.017	<0.017
Trichloroethene	mg/kg	**8.8**	**1.3**	**0.0036**		<0.026	**[0.33]**	<0.024	<0.023	<0.023	<0.026	<0.023	<0.025	<0.025
Trichlorofluoromethane	mg/kg	**1,230**	**1,120**	**4.5**		<0.020	<0.019	<0.018	<0.018	<0.018	<0.020	<0.018	<0.019	<0.020
Vinyl chloride	mg/kg	**2.0**	**0.067**	**0.00014**		<0.014	<0.013	<0.013	<0.012	<0.012	<0.014	<0.012	<0.013	<0.014
cis-1,2-Dichloroethene	mg/kg	**2,340**	**156**	**0.041**		<0.015	<0.014	<0.014	<0.013	<0.013	<0.015	0.020 J	<0.014	<0.014
cis-1,3-Dichloropropene	mg/kg	**1,210**	**1,220**			<0.047	<0.044	<0.042	<0.041	<0.040	<0.046	<0.040	<0.044	<0.045
m&p-Xylene	mg/kg					<0.030	0.065 J	<0.027	0.027 J	<0.026	<0.030	<0.026	<0.028	<0.029
n-Butylbenzene	mg/kg	**108**	**108**			<0.032	0.33	<0.029	0.23	<0.028	<0.032	<0.028	<0.031	<0.031
n-Propylbenzene	mg/kg	**264**	**264**			<0.017	0.28	<0.015	0.18	0.083	<0.017	<0.015	<0.016	<0.016
o-Xylene	mg/kg	**434**	**434**			<0.021	0.022 J	<0.019	<0.018	<0.018	<0.021	<0.018	<0.020	<0.020
p-Isopropyltoluene	mg/kg	**162**	**162**			<0.021	0.31	<0.019	0.089	<0.018	<0.021	<0.019	<0.020	<0.021
sec-Butylbenzene	mg/kg	**145**	**145**			<0.017	0.29	<0.015	0.10	0.027 J	<0.017	<0.015	<0.016	<0.017
tert-Butylbenzene	mg/kg	**183**	**183**			<0.022	0.12	<0.020	<0.019	<0.019	<0.022	<0.019	<0.021	<0.021
trans-1,2-Dichloroethene	mg/kg	**976**	**1,560**	**0.063**		<0.015	<0.014	<0.014	<0.013	<0.013	<0.015	<0.013	<0.014	<0.015
trans-1,3-Dichloropropene	mg/kg	**1,570**	**1,570**			<0.20	<0.19	<0.18	<0.18	<0.17	<0.20	<0.18	<0.19	<0.19
Diesel Range Organics														
DRO	mg/kg					2.1 J	22.4	NA	1,110	4.3	NA		NA	
Percent Moisture	%					17.1	14.1	11.8	10.3	9.6	16.7	10.2	14.4	15.0
PID	ppmv					13.3	4.5	9.1	181.5	8.2	9.8	3.4	1.7	4.8

Only analytes with a detection in at least one sample are sho

(2-3) = sample depth in feet below ground surface

PID - Photoionization Detector

ppmv = parts per million by volume in air

* = concentration is above RCL but below Background Threshold

Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are in **red bold**

Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are in **blue bold**

Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[brackets]**

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

NA = Not Analyzed

NR = Not Reported/Below Detection Limits

mg/kg = milligrams per kilogram equal to parts per million (ppm)

RCL = Residual Contaminant Level

NA = Not Analyzed

Soil Classification:

CL = Clay of low plasticity

MH = Elastic silt

ML = Silt

SC = Clayey sand

SM = Silty sand

SP = Poorly graded sand

SW = Well graded sand, fine to coars

Table A.1: Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCL' s	ch. NR 720 Direct Contact Non-Industrial RCL' s	ch. NR 720 Soil to Groundwater Pathway RCL's	Background Threshold Value	SB-13		SB-14		B-20		B-21		B-22	
					Sample Date:	10/21/2021		10/21/2021		2/3/2022		2/3/2022		2/3/2022	
					Soil Type:	CL/ML	CL/ML	ML	CL/ML	FILL	FILL	FILL	CL/ML	CL/ML	GW
					Saturated/Unsaturated:	U	U	U	U	U	U	U	U	U	U
					Sample Depth:	5-10'	10-15'	0-5'	15-20'	0-2'	8-10'	0-2'	8-10'	0-2'	8-10'
Polynuclear Aromatic Hydrocarbons (PAHs)															
1,4-Dioxane (p-Dioxane)	mg/kg	26.5	5.7	0.0012		<0.11	<0.11	<0.10	<0.10	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	mg/kg	72.7	17.6			<0.059	<0.055	<0.053	<0.054	<0.0028	<0.0028	<0.0029	<0.0029	0.0085J	<0.0028
2-Methylnaphthalene	mg/kg	3,010	239			<0.053	<0.050	<0.048	<0.049	<0.0028	<0.0028	<0.0029	<0.0029	0.0089J	<0.0029
Acenaphthene	mg/kg	45,200	3,590			<0.073	<0.069	<0.066	<0.067	<0.0025	<0.0025	<0.0026	<0.0026	<0.0025	<0.0025
Acenaphthylene	mg/kg					<0.073	<0.069	<0.066	<0.067	<0.0024	<0.0025	<0.0025	<0.0025	<0.0024	<0.0025
Anthracene	mg/kg	100,000	17,900	196.9492		<0.033	<0.031	<0.030	<0.030	<0.0024	<0.0024	<0.0024	<0.0025	<0.0024	<0.0024
Benzo(a)anthracene	mg/kg	20.8	1.14			<0.032	<0.030	<0.029	<0.029	<0.0025	<0.0025	<0.0025	<0.0026	0.0029J	<0.0025
Benzo(a)pyrene	mg/kg	2.11	0.115	0.47		<0.031	<0.029	<0.028	<0.028	<0.0022	<0.0022	<0.0022	<0.0023	0.0023J	<0.0022
Benzo(b)fluoranthene	mg/kg	21.1	1.15	0.4793		<0.035	<0.033	<0.032	<0.032	<0.0027	<0.0027	<0.0027	<0.0028	0.0036J	<0.0027
Benzo(g,h,i)perylene	mg/kg					<0.054	<0.051	<0.049	<0.049	<0.0034	<0.0034	<0.0035	<0.0035	<0.0033	<0.0034
Benzo(k)fluoranthene	mg/kg	211	11.5			<0.049	<0.046	<0.045	<0.045	<0.0025	<0.0025	<0.0025	<0.0025	<0.0024	<0.0025
Chrysene	mg/kg	2,110	115	0.1446		<0.031	<0.029	<0.028	<0.028	<0.0036	<0.0037	<0.0037	<0.0038	<0.0036	<0.0037
Dibenz(a,h)anthracene	mg/kg	2.11	0.115			<0.056	<0.053	<0.051	<0.051	<0.0027	<0.0027	<0.0027	<0.0028	<0.0026	<0.0027
Fluoranthene	mg/kg	30,100	2,390	88.8778		<0.029	<0.027	<0.026	<0.027	<0.0023	<0.0023	<0.0023	<0.0024	0.0058J	<0.0023
Fluorene	mg/kg	30,100	2,390	14.8299		<0.024	<0.023	<0.022	<0.022	<0.0023	<0.0023	<0.0024	<0.0024	<0.0023	<0.0023
Indeno(1,2,3-cd)pyrene	mg/kg	21.1	1.15			<0.045	<0.042	<0.040	<0.041	<0.0040	<0.0041	<0.0041	<0.0042	<0.0039	<0.0041
Naphthalene	mg/kg	26.0	5.2	0.66		<0.072	<0.068	<0.065	<0.066	<0.0019	<0.0019	<0.0019	<0.0019	0.0039J	<0.0019
Phenanthrene	mg/kg					<0.026	<0.025	<0.024	<0.024	<0.0022	<0.0022	<0.0023	<0.0023	0.0048J	<0.0022
Pyrene	mg/kg	22,600	1,790	54.5455		<0.046	<0.043	<0.041	<0.042	<0.0028	<0.0029	<0.0029	<0.0029	0.0048J	<0.0029
RCRA Metals															
Arsenic	mg/kg	3.0	0.677	0.5484	8.3	6.0*	4.0*	2.8*	2.0 J*	<3.4	<3.1	<4.7	**<3.5**	4.1J	<3.3
Barium	mg/kg	100,000	15,300	164.8	364	68.3	42.6	34.6	38.2	56.7	62.4	76.7	55.9	29.6	38.5
Cadmium	mg/kg	985	71.1	0.752	1.07	<0.16	0.19 J	0.24 J	0.17 J	<0.31	<0.28	0.36J	<0.32	0.55J	0.33J
Chromium	mg/kg			360,000	43.5	24.9	13.0	10.5	12.1	16	14.9	30.2	14.2	15	10.4
Lead	mg/kg	800	400	27.0	51.6	12.4	10.0	6.0	4.9	5.9	5.5	[10.9]	6.3	7.8	5.6
Selenium	mg/kg	5,840	391	0.52		<1.6	<1.4	<1.4	<1.4	<3.0	<2.8	<1.5	<3.1	<2.8	<2.9
Silver	mg/kg	5840	391	0.85		<0.38	<0.34	<0.33	<0.33	<0.71	<0.66	<0.35	<0.73	<0.65	<0.69
Mercury	mg/kg	3.13	3.13	0.208		0.039 J	<0.011	<0.010	<0.010	0.013J	<0.011	0.036J	<0.012	0.011J	<0.011
Volatile Organic Compounds (VOCs)															
1,1,1,2-Tetrachloroethane	mg/kg	12.3	2.8	0.053		<0.018	<0.016	<0.015	<0.015	<0.0157	<0.0159	<0.0163	<0.0166	<0.0152	<0.016
1,1,1-Trichloroethane	mg/kg	640	640	0.14		<0.019	<0.017	<0.016	<0.016	<0.0168	<0.017	<0.0174	<0.0178	<0.0162	<0.0171
1,1,2,2-Tetrachloroethane	mg/kg	3.6	0.81	0.0002		<0.027	<0.024	<0.022	<0.023	<0.0237	<0.0241	<0.0246	<0.0251	<0.023	<0.0242
1,1,2-Trichloroethane	mg/kg	7.0	1.6	0.0032		<0.027	<0.024	<0.022	<0.023	<0.0239	<0.0242	<0.0247	<0.0252	<0.0231	<0.0243
1,1-Dichloroethane	mg/kg	22.2	5.1	0.48		<0.019	<0.017	<0.016	<0.016	<0.0168	<0.017	<0.0174	<0.0178	<0.0162	<0.0171
1,1-Dichloroethene	mg/kg		320	0.005		<0.024	<0.022	<0.020	<0.021	<0.0218	<0.0221	<0.0226	<0.023	<0.0211	<0.0222
1,2,3-Trichlorobenzene	mg/kg	934	62.6			<0.082	<0.074	<0.069	<0.070	<0.073	<0.074	<0.0757	<0.0773	<0.0707	<0.0744
1,2,3-Trichloropropane	mg/kg	0.11	0.005	0.052		<0.036	<0.032	<0.030	<0.030	<0.0318	<0.0323	<0.033	<0.0337	<0.0308	<0.0324
1,2,4-Trichlorobenzene	mg/kg	113	24	0.41		<0.060	<0.055	<0.051	<0.052	<0.054	<0.0547	<0.056	<0.0571	<0.0523	<0.055
1,2,4-Trimethylbenzene	mg/kg	219	219	1.4		<0.022	<0.020	<0.018	<0.019	<0.0195	<0.0198	<0.0203	<0.0207	<0.0189	<0.0199
1,2-Dibromo-3-chloropropane	mg/kg	0.092	0.008	0.0002		<0.057	<0.051	<0.048	<0.049	<0.0509	<0.0516	<0.0527	<0.0538	<0.0492	<0.0518
1,2-Dibromoethane (EDB)	mg/kg		0.05	0.000028		<0.020	<0.018	<0.017	<0.017	<0.018	<0.0182	<0.0186	<0.019	<0.0174	<0.0183
1,2-Dichlorobenzene	mg/kg	376	376	1.2		<0.023	<0.021	<0.019	<0.019	<0.0203	<0.0206	<0.0211	<0.0215	<0.0197	<0.0207
1,2-Dichloroethane	mg/kg	2.9	0.65	0.0028		<0.017	<0.015	<0.014	<0.014	<0.0151	<0.0153	<0.0156	<0.016	<0.0146	<0.0154
1,2-Dichloropropane	mg/kg	15	3.4	0.0033		<0.017	<0.016	<0.015	<0.015	<0.0156	<0.0158	<0.0162	<0.0165	<0.0151	<0.0159
1,3,5-Trimethylbenzene	mg/kg	182	182	1.4		<0.024	<0.021	<0.020	<0.020	<0.0211	<0.0214	<0.0219	<0.0223	<0.0204	<0.0215
1,3-Dichlorobenzene	mg/kg	297	297	1.2		<0.020	<0.018	<0.017	<0.017	<0.0180	<0.0182	<0.0186	<0.019	<0.0174	<0.0183
1,3-Dichloropropane	mg/kg	1,490	1,490			<0.016	<0.014	<0.013	<0.014	<0.0143	<0.0145	<0.0148	<0.0151	<0.0138	<0.0146
1,4-Dichlorobenzene	mg/kg		3.7	0.14		<0.020	<0.018	<0.017	<0.017	<0.018	<0.0182	<0.0186	<0.019	<0.0174	<0.0183
2,2-Dichloropropane	mg/kg	191	527			<0.020	<0.018	<0.017	<0.017	<0.0177	<0.0179	<0.0183	<0.0187	<0.0171	<0.018
2-Chlorotoluene	mg/kg	907	907			<0.024	<0.021	<0.020	<0.020	<0.0212	<0.0215	<0.022	<0.0225	<0.0205	<0.0216
4-Chlorotoluene	mg/kg	253	253			<0.028	<0.025	<0.023	<0.024	<0.0249	<0.0252	<0.0258	<0.0264	<0.0241	<0.0254
Benzene	mg/kg	7.1	1.6	0.0052		<0.017	<0.016	<0.015	<0.015	<0.0156	<0.0158	<0.0162	<0.0165	<0.0151	<0.0159
Bromobenzene	mg/kg	679	342			<0.029	<0.026	<0.024	<0.024	<0.0256	<0.0259	<0.0265	<0.027	<0.0247	<0.026
Bromochloromethane	mg/kg	906	216			<0.020	<0.018	<0.017	<0.017	<0.0180	<0.0182	<0.0186	<0.019	<0.0174	<0.0183
Bromodichloromethane	mg/kg	1.8	0.42	0.0004		<0.017	<0.016	<0.015	<0.015	<0.0156	<0.0158	<0.0162	<0.0165	<0.0151	<0.0159
Bromoform	mg/kg	113	25.4	0.0024		<0.32	<0.29	<0.27	<0.28	<0.288	<0.292	<0.299	<0.305	<0.279	<0.294
Bromomethane	mg/kg	43	9.6	0.005		<0.10	<0.093	<0.086	<0.088	<0.0919	<0.0931	<0.0953	<0.0972	<0.0889	<0.0936
Carbon tetrachloride	mg/kg	4.0	0.92	0.0038		<0.016	<0.015	<0.014	<0.014	<0.0144	<0.0146	<0.0149	<0.0153	<0.014	<0.147
Chlorobenzene	mg/kg	761	370	0.14		<0.0088	<0.0079	<0.0074	<0.0075	<0.0079	<0.008	<0.0081	<0.0083	<0.0076	<0.008
Chloroethane	mg/kg	2120	2,120	0.23		<0.031	<0.028	<0.026	<0.026	<0.0277	<0.028	<0.0287	<0.0293	<0.0268	<0.0282
Chloroform	mg/kg	2.0	0.45	0.0034		<0.053	<0.047	<0.044	<0.045	<0.0469	<0.0476	<0.0487	<0.0497	<0.04544	<0.0478
Chloromethane	mg/kg	669	159	0.016		<0.028	<0.025	<0.023	<0.024	<0.0249	<0.0252	<0.0258	<0.0264	<0.0241	<0.0254
Dibromochloromethane	mg/kg	38.9	8.3	0.032		<0.25	<0.23	<0.21	<0.21	<0.224	<0.227	<0.232	<0.237	<0.217	<0.228
Dibromomethane	mg/kg	143	34			<0.022	<0.020	<0.018	<0.019	<0.0194	<0.0197	<0.0201	<0.0205	<0.0188	<0.0198
Dichlorodifluoromethane	mg/kg	530	126	3.1		<0.032	<0.029	<0.026	<0.027	<0.0282	<0.0286	<0.0292	<0.0298	<0.0273	<0.0287
Diisopropyl ether	mg/kg	2,260	2,260			<0.018	<0.016	<0.015	<0.016	<0.0163	<0.0165	<0.0169	<0.0172	<0.0157	<0.0166
Ethylbenzene	mg/kg	35.4	8.0	1.6		<0.017	<0.016	<0.015	<0.015	<0.0156	<0.0158	<0.0162	<0.0165	<0.0151	<0.0159
Hexachloro-1,3-butadiene	mg/kg	7.2	1.6			<0.15	<0.13	<0.12	<0.12	<0.130	<0.132	<0.135	<0.138	<0.126	<0.133
Isopropylbenzene (Cumene)	mg/kg	268	268			<0.020	<0.018	<0.017	<0.017	<0.01.7	<0.0179	<0.0183	<0.0187	<0.0171	<0.018
Methyl-tert-butyl ether	mg/kg	282	63.8	0.027		<0.022	<0.020	<0.018	<0.018	<0.0193	<0.0195	<0.02	<0.0204	<0.0186	<0.0196
Methylene Chloride	mg/kg	1,150	61.8	0.0026		<0.020	<0.018	<0.017	<0.017	<0.0182	<0.0185	<0.0189	<0.0193	<0.0176	<0.0186
Naphthalene	mg/kg	24.1	5.5	0.66		<0.023	<0.021	<0.019	<0.020	<0.0204	<0.0207	<0.0212	<0.0216	<0.0198	<0.0208
Styrene	mg/kg	867	867	0.22		<0.019	<0.017	<0.016	<0.016	<0.0168	<0.0170	<0.0174	<0.0178	<0.0162	<0.0171
Tetrachloroethene	mg/kg	153	33.0	0.0046		<0.028	<0.026	<0.024	<0.024	<0.0254	<0.0258	<0.0264	<0.0269	<0.0246	<0.0259
Toluene	mg/kg	818	818	1.1		<0.018	<0.017	<0.016	<0.016	<0.0165	<0.0167	<0.0171	<0.0175	<0.016	<0.0168
Trichloroethene	mg/kg	8.8	1.3	0.0036		<0.027	<0.025	<0.023	<0.023	<0.0245	<0.0248	<0.0254	<0.0259	<0.0237	<0.025
Trichlorofluoromethane	mg/kg	1,230	1,120	4.5		<0.021	<0.019	<0.018	<0.018	<0.019	<0.0193	<0.0197	<0.0201	<0.0184	<0.0194
Vinyl chloride	mg/kg	2.0	0.067	0.00014		<0.015	<0.013	<0.012	<0.013	<0.0132	<0.0134	<0.0137	<0.014	<0.0128	<0.0135
cis-1,2-Dichloroethene	mg/kg	2,340	156	0.041		<0.016	<0.014	<0.013	<0.013	<0.014	<0.0142	<0.0145	<0.0148	<0.0136	<0.0143
cis-1,3-Dichloropropene	mg/kg	1,210	1,220			<0.048	<0.044	<0.041	<0.041	<0.0433	<0.0439	<0.0448	<0.0458	<0.0419	<0.0441
m&p-Xylene	mg/kg					<0.031	<0.028	<0.026	<0.026	<0.0277	<0.028	<0.0287	<0.0293	<0.0268	<0.0282
n-Butylbenzene	mg/kg	108	108			<0.034	<0.030	<0.028	<0.029	<0.03	<0.0304	<0.0311	<0.0318	<0.029	<0.0306
n-Propylbenzene	mg/kg	264	264			<0.018	<0.016	<0.015	<0.015	<0.0157	<0.0159	<0.0163	<0.0166	<0.0152	<0.016
o-Xylene	mg/kg	434	434			<0.022	<0.020	<0.018	<0.019	<0.0197	<0.0199	<0.0204	<0.0208	<0.019	<0.02
p-Isopropyltoluene	mg/kg	162	162			<0.022	<0.020	<0.019	<0.019	<0.0199	<0.0202	<0.0207	<0.0211	<0.0193	<0.0203
sec-Butylbenzene	mg/kg	145	145			<0.018	<0.016	<0.015	<0.015	<0.016	<0.0162	<0.0166	<0.0169	<0.0155	<0.0163
tert-Butylbenzene	mg/kg	183	183			<0.023	<0.021	<0.019	<0.020	<0.0206	<0.0209	<0.0213	<0.0218	<0.0199	<0.021
trans-1,2-Dichloroethene	mg/kg	976	1,560	0.063		<0.016	<0.014	<0.013	<0.014	<0.0142	<0.0144	<0.147	<0.015	<0.0137	<0.0144
trans-1,3-Dichloropropene	mg/kg	1,570	1,570			<0.21	<0.19	<0.18	<0.18	<0.187	<0.190	<0.194	<0.198	<0.181	<0.191
Diesel Range Organics															
DRO	mg/kg					NA		NA		NA		NA		NA	
Percent Moisture	%					18.9	14.0	10.4	11.1	13.4	14.1	15.2	16.2	11.8	14.3
PID	ppmv					4.3	2.3	4.0	3.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Only analytes with a detection in at least one sample are shov
(2-3) = sample depth in feet below ground surface
PID - Photoionization Detector
ppmv = parts per million by volume in air
* = concentration is above RCL but below Background Threshold
Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are in **red bold**
Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are in **blue bold**
Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[brackets]**
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
NA = Not Analyzed

NR = Not Reported/Below Detection Limits
mg/kg = milligrams per kilogram equal to parts per million (ppm)
RCL = Residual Contaminant Level
NA = Not Analyzed

Soil Classification:
CL = Clay of low plasticity
MH = Elastic silt
ML = Silt
SC = Clayey sand
SM = Silty sand
SP = Poorly graded sand
SW = Well graded sand, fine to coars

Table A.1: Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 720 Direct Contact Industrial RCL' s	ch. NR 720 Direct Contact Non-Industrial RCL' s	ch. NR 720 Soil to Groundwater Pathway RCL's	Background Threshold Value	B-23		B-24		B-25		B-26	
					Sample Date:	2/3/2022		2/3/2022		2/3/2022		2/3/2022	
					Soil Type:	CL/ML	CL/ML	ML	CL	FILL	CL/ML	ML	ML
					Saturated/Unsaturated:	U	U	U	U	U	U	U	U
					Sample Depth:	0-2'	8-10'	0-2'	8-10'	0-2'	10-12'	0-2'	20-22'
Polynuclear Aromatic Hydrocarbons (PAHs)													
1,4-Dioxane (p-Dioxane)	mg/kg	26.5	5.7	0.0012		NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	mg/kg	72.7	17.6			<0.0028	<0.0026	<0.0027	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029
2-Methylnaphthalene	mg/kg	3,010	239			<0.0028	<0.0026	<0.0027	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029
Acenaphthene	mg/kg	45,200	3,590			<0.0025	<0.0023	<0.0024	<0.0024	<0.0025	<0.0026	<0.0026	<0.0026
Acenaphthylene	mg/kg					<0.0024	<0.0022	<0.0024	<0.0024	<0.0024	<0.0025	<0.0025	<0.0025
Anthracene	mg/kg	100,000	17,900	196.9492		<0.0024	<0.0022	<0.0023	<0.0023	<0.0024	<0.0024	<0.0024	<0.0025
Benzo(a)anthracene	mg/kg	20.8	1.14			<0.0025	<0.0023	<0.0024	<0.0024	<0.0025	<0.0026	<0.0025	<0.0026
Benzo(a)pyrene	mg/kg	2.11	0.115	0.47		<0.0022	<0.0020	<0.0021	<0.0021	<0.0022	<0.0022	<0.0022	<0.0023
Benzo(b)fluoranthene	mg/kg	21.1	1.15	0.4793		<0.0027	<0.0024	<0.0026	<0.0026	<0.0026	<0.0027	<0.0027	<0.0028
Benzo(g,h,i)perylene	mg/kg					<0.0034	<0.0031	<0.0033	<0.0033	<0.0033	<0.0034	<0.0035	<0.0034
Benzo(k)fluoranthene	mg/kg	211	11.5			<0.0024	<0.0023	<0.0024	<0.0024	<0.0024	<0.0025	<0.0025	<0.0026
Chrysene	mg/kg	2,110	115	0.1446		<0.0036	<0.0033	<0.0035	<0.0035	<0.0036	<0.0037	<0.0037	<0.0038
Dibenz(a,h)anthracene	mg/kg	2.11	0.115			<0.0027	<0.0024	<0.0026	<0.0026	<0.0026	<0.0027	<0.0027	<0.0028
Fluoranthene	mg/kg	30,100	2,390	88.8778		<0.0023	<0.0021	<0.0022	<0.0022	<0.0023	<0.0023	<0.0023	<0.0024
Fluorene	mg/kg	30,100	2,390	14.8299		<0.0023	<0.0021	<0.0023	<0.0022	<0.0023	<0.0024	<0.0024	<0.0024
Indeno(1,2,3-cd)pyrene	mg/kg	21.1	1.15			<0.0040	<0.0037	<0.0039	<0.0039	<0.0040	<0.0041	<0.0041	<0.0041
Naphthalene	mg/kg	26.0	5.2	0.66		<0.0019	<0.0017	<0.0018	<0.0018	<0.0019	<0.0019	<0.0019	<0.0020
Phenanthrene	mg/kg					<0.0022	<0.0020	<0.0021	<0.0021	<0.0022	<0.0023	<0.0023	<0.0023
Pyrene	mg/kg	22,600	1,790	54.5455		<0.0028	<0.0026	<0.0028	<0.0027	<0.0028	<0.0029	<0.0029	<0.0029
RCRA Metals													
Arsenic	mg/kg	3.0	0.677	0.5484	8.3	3.8J	<7.4	4.0J	<3.0	4.1J	<3.5	4.9	<3.3
Barium	mg/kg	100,000	15,300	164.8	364	47.7	11.7	31.5	45.5	55.7	33.2	48	67.6
Cadmium	mg/kg	985	71.1	0.752	1.07	<0.30	<0.67	0.34J	0.33J	0.29J	0.33J	0.37J	0.34J
Chromium	mg/kg			360,000	43.5	16.7	13.5	10.3	12.4	17.4	9.0	15.3	17.9
Lead	mg/kg	800	400	27.0	51.6	7.6	12.9	4.4J	6.0	7.4	5.2	6.4	8.1
Selenium	mg/kg	5,840	391	0.52		<3.0	<6.6	<2.9	<2.7	<2.8	<3.1	<1.5	<2.9
Silver	mg/kg	5840	391	0.85		<0.70	<1.6	<0.68	<0.63	<0.67	<0.73	<0.36	<0.68
Mercury	mg/kg	3.13	3.13	0.208		0.016J	<0.010	<0.011	<0.011	0.017J	<0.012	<0.012	<0.012
Volatile Organic Compounds (VOCs)													
1,1,1,2-Tetrachloroethane	mg/kg	12.3	2.8	0.053		<0.0155	<0.0133	<0.015	<0.0148	<0.0154	<0.0164	<0.0163	<0.0168
1,1,1-Trichloroethane	mg/kg	640	640	0.14		<0.0165	<0.0142	<0.0159	<0.0158	<0.0164	<0.0175	<0.0174	<0.0179
1,1,2,2-Tetrachloroethane	mg/kg	3.6	0.81	0.0002		<0.0234	<0.0201	<0.0225	<0.0224	<0.0232	<0.0247	<0.0246	<0.0253
1,1,2-Trichloroethane	mg/kg	7.0	1.6	0.0032		<0.0235	<0.0202	<0.0227	<0.0225	<0.0233	<0.0248	<0.0248	<0.0254
1,1-Dichloroethane	mg/kg	22.2	5.1	0.48		<0.0165	<0.0142	<0.0159	<0.0158	<0.0164	<0.0175	<0.0174	<0.0179
1,1-Dichloroethene	mg/kg		320	0.005		<0.0214	<0.0184	<0.0207	<0.0205	<0.0212	<0.0226	<0.0226	<0.0232
1,2,3-Trichlorobenzene	mg/kg	934	62.6			<0.0719	<0.0619	<0.0694	<0.0688	<0.0713	<0.076	<0.0758	<0.0779
1,2,3-Trichloropropane	mg/kg	0.11	0.005	0.052		<0.0314	<0.027	<0.0303	<0.03	<0.0311	<0.0331	<0.0331	<0.034
1,2,4-Trichlorobenzene	mg/kg	113	24	0.41		<0.0532	<0.0458	<0.0513	<0.0509	<0.0527	<0.0562	<0.056	<0.0576
1,2,4-Trimethylbenzene	mg/kg	219	219	1.4		<0.0192	<0.0166	<0.0186	<0.0184	<0.0191	<0.0203	<0.0203	<0.0208
1,2-Dibromo-3-chloropropane	mg/kg	0.092	0.008	0.0002		<0.0501	<0.0431	<0.0483	<0.0479	<0.0497	<0.0529	<0.0528	<0.0542
1,2-Dibromoethane (EDB)	mg/kg		0.05	0.000028		<0.0177	<0.0152	<0.0171	<0.0169	<0.0175	<0.0187	<0.0186	<0.0191
1,2-Dichlorobenzene	mg/kg	376	376	1.2		<0.02	<0.0172	<0.0193	<0.0191	<0.0198	<0.0211	<0.0211	<0.0217
1,2-Dichloroethane	mg/kg	2.9	0.65	0.0028		<0.0149	<0.0128	<0.0143	<0.0142	<0.0147	<0.0157	<0.0156	<0.0161
1,2-Dichloropropane	mg/kg	15	3.4	0.0033		<0.0154	<0.0132	<0.0148	<0.0147	<0.0152	<0.0162	<0.0162	<0.0166
1,3,5-Trimethylbenzene	mg/kg	182	182	1.4		<0.0208	<0.0179	<0.0201	<0.0199	<0.0206	<0.022	<0.0219	<0.0225
1,3-Dichlorobenzene	mg/kg	297	297	1.2		<0.0177	<0.0152	<0.0171	<0.0169	<0.0175	<0.0187	<0.0186	<0.0191
1,3-Dichloropropane	mg/kg	1,490	1,490			<0.0141	<0.0121	<0.0136	<0.0135	<0.0139	<0.0149	<0.0148	<0.0152
1,4-Dichlorobenzene	mg/kg		3.7	0.14		<0.0177	<0.0152	<0.0171	<0.0169	<0.0175	<0.0187	<0.0186	<0.0191
2,2-Dichloropropane	mg/kg	191	527			<0.0174	<0.015	<0.0168	<0.0167	<0.0173	<0.0184	<0.0184	<0.0189
2-Chlorotoluene	mg/kg	907	907			<0.0209	<0.018	<0.0202	<0.02	<0.0207	<0.0221	<0.022	<0.0226
4-Chlorotoluene	mg/kg	253	253			<0.0245	<0.0211	<0.0237	<0.0235	<0.0243	<0.0259	<0.0258	<0.0266
Benzene	mg/kg	7.1	1.6	0.0052		<0.0154	<0.0132	<0.0148	<0.0147	<0.0152	<0.0162	<0.0162	<0.0166
Bromobenzene	mg/kg	679	342			<0.0252	<0.0217	<0.0243	<0.0241	<0.025	<0.0266	<0.0265	<0.0273
Bromochloromethane	mg/kg	906	216			<0.0177	<0.0152	<0.0171	<0.0169	<0.0175	<0.0187	<0.0186	<0.0191
Bromodichloromethane	mg/kg	1.8	0.42	0.0004		<0.0154	<0.0132	<0.0148	<0.0147	<0.0152	<0.0162	<0.0162	<0.0166
Bromoform	mg/kg	113	25.4	0.0024		<0.284	<0.244	<0.274	<0.272	<0.282	<0.3	<0.299	<0.308
Bromomethane	mg/kg	43	9.6	0.005		<0.0905	<0.0779	<0.0873	<0.0866	<0.0897	<0.0956	<0.0954	<0.098
Carbon tetrachloride	mg/kg	4.0	0.92	0.0038		<0.0142	<0.0122	<0.0137	<0.0136	<0.0141	<0.015	<0.015	<0.0154
Chlorobenzene	mg/kg	761	370	0.14		<0.077	<0.0067	<0.0075	<0.0074	<0.0077	<0.0082	<0.0081	<0.0084
Chloroethane	mg/kg	2120	2,120	0.23		<0.0273	<0.0234	<0.0263	<0.0261	<0.027	<0.0288	<0.0287	<0.0295
Chloroform	mg/kg	2.0	0.45	0.0034		<0.0462	<0.0398	<0.0446	<0.0442	<0.0458	<0.0488	<0.0487	<0.05
Chloromethane	mg/kg	669	159	0.016		<0.0245	<0.0211	<0.0237	<0.0235	<0.0243	<0.0259	<0.0258	<0.0266
Dibromochloromethane	mg/kg	38.9	8.3	0.032		<0.221	<0.19	<0.213	<0.211	<0.219	<0.233	<0.232	<0.239
Dibromomethane	mg/kg	143	34			<0.0191	<0.0164	<0.0184	<0.0183	<0.0189	<0.0202	<0.0201	<0.0207
Dichlorodifluoromethane	mg/kg	530	126	3.1		<0.0278	<0.0239	<0.0268	<0.0266	<0.0275	<0.0293	<0.0292	<0.0301
Diisopropyl ether	mg/kg	2,260	2,260			<0.016	<0.0138	<0.0154	<0.0153	<0.0159	<0.0169	<0.0169	<0.0173
Ethylbenzene	mg/kg	35.4	8.0	1.6		<0.0154	<0.0132	<0.0148	<0.147	<0.0152	<0.0162	<0.0162	<0.0166
Hexachloro-1,3-butadiene	mg/kg	7.2	1.6			<0.128	<0.11	<0.124	<0.123	<0.127	<0.136	<0.135	<0.139
Isopropylbenzene (Cumene)	mg/kg	268	268			<0.0174	<0.015	<0.0168	<0.0167	<0.0173	<0.0184	<0.0184	<0.0189
Methyl-tert-butyl ether	mg/kg	282	63.8	0.027		<0.019	<0.0163	<0.0183	<0.0182	<0.0188	<0.02	<0.02	<0.0205
Methylene Chloride	mg/kg	1,150	61.8	0.0026		<0.018	<0.0163	<0.0173	<0.0172	<0.0178	<0.019	<0.0189	<0.0194
Naphthalene	mg/kg	24.1	5.5	0.66		<0.0201	<0.0173	<0.0194	<0.0193	<0.02	<0.0213	<0.0212	<0.0218
Styrene	mg/kg	867	867	0.22		<0.0165	<0.0142	<0.0159	<0.0158	<0.0164	<0.0175	<0.0174	<0.0179
Tetrachloroethene	mg/kg	153	33.0	0.0046		<0.0251	<0.0216	<0.0242	<0.024	<0.0248	<0.0265	<0.0264	<0.0271
Toluene	mg/kg	818	818	1.1		<0.0163	<0.014	<0.0157	<0.0156	<0.0161	<0.0172	<0.0171	<0.0176
Trichloroethene	mg/kg	8.8	1.3	0.0036		**0.026J**	**[0.338]**	<0.0233	<0.0231	<0.0239	<0.0255	<0.0254	<0.0261
Trichlorofluoromethane	mg/kg	1,230	1,120	4.5		<0.0187	<0.0161	<0.0181	<0.0179	<0.0186	<0.0198	<0.0197	<0.0203
Vinyl chloride	mg/kg	2.0	0.067	0.00014		<0.013	<0.0112	<0.0126	<0.0125	<0.0129	<0.0138	<0.0137	<0.0141
cis-1,2-Dichloroethene	mg/kg	2,340	156	0.041		<0.0138	<0.0119	<0.0133	<0.0132	<0.0137	<0.0146	<0.0146	<0.015
cis-1,3-Dichloropropene	mg/kg	1,210	1,220			<0.0426	<0.0367	<0.0411	<0.0408	<0.0422	<0.045	<0.0449	<0.0461
m&p-Xylene	mg/kg					<0.0273	<0.0234	<0.0263	<0.0261	<0.027	<0.0288	<0.0287	<0.0295
n-Butylbenzene	mg/kg	108	108			<0.0296	<0.0254	<0.0285	<0.0283	<0.0293	<0.0312	<0.0312	<0.032
n-Propylbenzene	mg/kg	264	264			<0.0155	<0.0133	<0.015	<0.0148	<0.0154	<0.0164	<0.0163	<0.0168
o-Xylene	mg/kg	434	434			<0.0194	<0.0167	<0.0187	<0.0185	<0.0192	<0.0205	<0.0204	<0.021
p-Isopropyltoluene	mg/kg	162	162			<0.0196	<0.0167	<0.0189	<0.0188	<0.0195	<0.0207	<0.0207	<0.0212
sec-Butylbenzene	mg/kg	145	145			<0.0158	<0.0136	<0.0152	<0.0151	<0.0156	<0.0166	<0.0166	<0.0171
tert-Butylbenzene	mg/kg	183	183			<0.0203	<0.0174	<0.0196	<0.0194	<0.0201	<0.0214	<0.0214	<0.0219
trans-1,2-Dichloroethene	mg/kg	976	1,560	0.063		<0.0139	<0.012	<0.0135	<0.0133	<0.0138	<0.147	<0.147	<0.0151
trans-1,3-Dichloropropene	mg/kg	1,570	1,570			<0.185	<0.159	<0.178	<0.177	<0.183	<195	<0.195	<0.2
Diesel Range Organics													
DRO	mg/kg					NA		NA		NA		NA	
Percent Moisture	%					12.7	5.3	10.9	10.5	12.3	15.4	15.3	16.6
PID	ppmv					<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Only analytes with a detection in at least one sample are sho
(2-3) = sample depth in feet below ground surface
PID - Photoionization Detector
ppmv = parts per million by volume in air
* = concentration is above RCL but below Background Threshold
Concentrations equal to or exceeding the NR 720 Soil RCL Industrial Direct Contact Standards are in **red bold**
Concentrations equal to or exceeding the NR 720 Soil RCL Non-Industrial Direct Contact Standards are in **blue bold**
Concentrations equal to or exceeding the NR 720 Soil RCL (via EPA RSLs) Soil to Groundwater Standards are in **[brackets]**
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
NA = Not Analyzed

NR = Not Reported/Below Detection Limits
mg/kg = milligrams per kilogram equal to parts per million (ppm)
RCL = Residual Contaminant Level
NA = Not Analyzed

Soil Classification:
CL = Clay of low plasticity
MH = Elastic silt
ML = Silt
SC = Clayey sand
SM = Silty sand
SP = Poorly graded sand
SW = Well graded sand, fine to coars

Table A.1.i: TCLP Soil Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	TCLP Limit	SB-4 (10-12')
Trichloroethene	mg/L	0.5	0.15

NOTES:
Concentrations equal to or exceeding the TCLP Standards are in **bold**
TCLP= Toxicity Characteristic Leaching Procedure
mg/L=milligrams per Liter

Sample Date: October 21, 2021

Table A.2: Groundwater Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	TW-1	TW-2	TW-3	TW-4	TW-8	TW-9
			Sample Date:	10/26/2021					
Polynuclear Aromatic Hydrocarbons (PAHs)									
1-Methylnaphthalene	ug/L			0.028 J	0.036 J	0.049	0.05	0.021 J	1.2
2-Methylnaphthalene	ug/L			0.026 J	0.037 J	0.046 J	0.049	0.027 J	0.84
Acenaphthene	ug/L			<0.013	0.033 J	0.036 J	0.033 J	<0.013	0.022 J
Acenaphthylene	ug/L			<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Anthracene	ug/L	**3,000**	**600**	<0.017	0.019 J	<0.017	<0.018	<0.018	<0.018
Benzo(a)anthracene	ug/L			<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Benzo(a)pyrene	ug/L	**0.2**	**0.02**	<0.018	<0.019	<0.018	<0.019	<0.019	<0.019
Benzo(b)fluoranthene	ug/L	**0.2**	**0.02**	<0.018	0.019 J	<0.018	**0.023**	<0.019	<0.019
Benzo(g,h,i)perylene	ug/L			<0.022	<0.022	<0.022	<0.022	<0.023	<0.023
Benzo(k)fluoranthene	ug/L			<0.021	<0.021	<0.021	<0.021	<0.022	<0.022
Chrysene	ug/L	**0.2**	**0.02**	<0.025	**0.054**	<0.025	**0.032**	<0.026	<0.026
Dibenz(a,h)anthracene	ug/L			<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
Fluoranthene	ug/L	**400**	**80**	<0.024	0.07	<0.024	0.039 J	<0.025	<0.026
Fluorene	ug/L	**400**	**80**	<0.022	<0.022	<0.022	<0.022	<0.023	0.18
Indeno(1,2,3-cd)pyrene	ug/L			<0.014	<0.015	<0.014	<0.015	<0.015	<0.015
Naphthalene	ug/L	**100**	**10**	0.084	0.12	0.67	0.58	0.19	1.2
Phenanthrene	ug/L			0.026 J	0.12	<0.024	0.036 J	<0.025	0.08
Pyrene	ug/L	**250**	**50**	<0.021	0.047 J	<0.021	0.029 J	<0.022	<0.022
RCRA Metals									
Arsenic, Dissolved	ug/L	**10**	**1.0**	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3
Barium, Dissolved	ug/L	**2000**	**400**	75.8	64.1	83.2	66.3	53.8	194
Cadmium, Dissolved	ug/L	**5.0**	**0.5**	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Chromium, Dissolved	ug/L	**100**	**10**	<2.5	<2.5	<2.5	**36.6**	<2.5	<2.5
Lead, Dissolved	ug/L	**15**	**1.5**	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9
Selenium, Dissolved	ug/L	**50**	**10**	<12.2	<12.2	<12.2	<12.2	<12.2	<12.2
Silver, Dissolved	ug/L	**50**	**10**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
Mercury, Dissolved	ug/L	**2.0**	**0.2**	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066
Volatile Organic Compounds (VOCs)									
1,4-Dioxane (SIM)	ug/L	**3.0**	**0.3**	0.29 J*	<0.23	<0.23	<0.23	0.43 J*	0.31 J*
1,1,1,2-Tetrachloroethane	ug/L	**70**	**7.0**	<0.36	<0.36	<0.36	<0.89	<0.36	<0.36
1,1,1-Trichloroethane	ug/L	**200**	**40**	1.3	1.5	0.76 J	1.5 J	<0.30	**62.8**
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	**0.02**	<0.38	<0.38	<0.38	<0.94	<0.38	<0.38
1,1,2-Trichloroethane	ug/L	**5.0**	**0.5**	<0.34	<0.34	<0.34	<0.86	<0.34	<0.34
1,1-Dichloroethane	ug/L	**850**	**85**	<0.30	<0.30	<0.30	<0.74	<0.30	73.1
1,1-Dichloroethene	ug/L	**7.0**	**0.7**	<0.58	<0.58	<0.58	<1.5	<0.58	**1.3**
1,1-Dichloropropene	ug/L			<0.41	<0.41	<0.41	<1.0	<0.41	<0.41
1,2,3-Trichlorobenzene	ug/L			<1.0	<1.0	<1.0	<2.5	<1.0	<1.0
1,2,3-Trichloropropane	ug/L	**60**	**12**	<0.56	<0.56	<0.56	<1.4	<0.56	<0.56
1,2,4-Trichlorobenzene	ug/L	**70**	**14**	<0.95	<0.95	<0.95	<2.4	<0.95	<0.95
1,2,4-Trimethylbenzene	ug/L	**480**	**96**	<0.45	<0.45	<0.45	<1.1	<0.45	6.8
1,2-Dibromo-3-chloropropane	ug/L	**0.2**	**0.02**	<2.4	<2.4	<2.4	<5.9	<2.4	<2.4
1,2-Dibromoethane (EDB)	ug/L	**0.05**	**0.005**	<0.31	<0.31	<0.31	<0.77	<0.31	<0.31
1,2-Dichlorobenzene	ug/L	**600**	**60**	<0.33	<0.33	<0.33	<0.81	<0.33	<0.33
1,2-Dichloroethane	ug/L	**5.0**	**0.5**	<0.29	<0.29	<0.29	<0.73	<0.29	<0.29
1,2-Dichloropropane	ug/L	**5.0**	**0.5**	<0.45	<0.45	<0.45	<1.1	<0.45	<0.45
1,3,5-Trimethylbenzene	ug/L	**480**	**96**	<0.36	<0.36	<0.36	<0.89	<0.36	1.7
1,3-Dichlorobenzene	ug/L	**600**	**120**	<0.35	<0.35	<0.35	<0.88	<0.35	<0.35
1,3-Dichloropropane	ug/L			<0.30	<0.30	<0.30	<0.76	<0.30	<0.30
1,4-Dichlorobenzene	ug/L	**75**	**15**	<0.89	<0.89	<0.89	<2.2	<0.89	<0.89
2,2-Dichloropropane	ug/L			<4.2	<4.2	<4.2	<10.4	<4.2	<4.2
2-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<2.2	<0.89	<0.89
4-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<2.2	<0.89	<0.89
Benzene	ug/L	**5.0**	**0.5**	<0.30	<0.30	<0.30	<0.74	<0.30	<0.30
Bromobenzene	ug/L			<0.36	<0.36	<0.36	<0.90	<0.36	<0.36
Bromochloromethane	ug/L			<0.36	<0.36	<0.36	<0.89	<0.36	<0.36
Bromodichloromethane	ug/L	**0.6**	**0.06**	<0.42	<0.42	<0.42	<1.0	<0.42	<0.42
Bromoform	ug/L	**4.4**	**0.44**	<3.8	<3.8	<3.8	<9.5	<3.8	<3.8
Bromomethane	ug/L	**10**	**1.0**	<1.2	<1.2	<1.2	<3.0	<1.2	<1.2
Carbon tetrachloride	ug/L	**5.0**	**0.5**	<0.37	<0.37	<0.37	<0.92	<0.37	<0.37
Chlorobenzene	ug/L	**100**	**20**	<0.86	<0.86	<0.86	<2.1	<0.86	<0.86
Chloroethane	ug/L	**400**	**80**	<1.4	<1.4	<1.4	<3.4	<1.4	17.9
Chloroform	ug/L	**6.0**	**0.6**	<1.2	<1.2	<1.2	<3.0	<1.2	<1.2
Chloromethane	ug/L	**30**	**3.0**	<1.6	<1.6	<1.6	<4.1	<1.6	<1.6
Dibromochloromethane	ug/L	**60**	**6.0**	<2.6	<2.6	<2.6	<6.6	<2.6	<2.6
Dibromomethane	ug/L			<0.99	<0.99	<0.99	<2.5	<0.99	<0.99
Dichlorodifluoromethane	ug/L	**1,000**	**200**	<0.46	<0.46	<0.46	<1.1	<0.46	<0.46
Diisopropyl ether	ug/L			<1.1	<1.1	<1.1	<2.8	<1.1	<1.1
Ethylbenzene	ug/L	**700**	**140**	<0.33	<0.33	<0.33	<0.81	<0.33	0.88 J
Hexachloro-1,3-butadiene	ug/L			<2.7	<2.7	<2.7	<6.8	<2.7	<2.7
Isopropylbenzene (Cumene)	ug/L			<1.0	<1.0	<1.0	<2.5	<1.0	<1.0
Methyl-tert-butyl ether	ug/L	**60**	**12**	<1.1	<1.1	<1.1	<2.8	<1.1	<1.1
Methylene Chloride	ug/L	**5.0**	**0.5**	<0.32	<0.32	<0.32	<0.80	<0.32	<0.32
Naphthalene	ug/L	**100**	**10**	<1.1	<1.1	<1.1	<2.8	<1.1	<1.1
Styrene	ug/L	**100**	**10**	<0.36	<0.36	<0.36	<0.89	<0.36	<0.36
Tetrachloroethene	ug/L	**5.0**	**0.5**	<0.41	<0.41	<0.41	<1.0	<0.41	<0.41
Toluene	ug/L	**800**	**160**	<0.29	<0.29	<0.29	<0.72	<0.29	2.1
Trichloroethene	ug/L	**5.0**	**0.5**	**16.3**	**2.4**	**1.9**	**273**	<0.32	**0.83**
Trichlorofluoromethane	ug/L	**3,490**	**698**	<0.42	<0.42	<0.42	<1.0	<0.42	<0.42
Vinyl chloride	ug/L	**0.2**	**0.02**	<0.17	<0.17	<0.17	<0.44	<0.17	**24.5**
cis-1,2-Dichloroethene	ug/L	**70**	**7.0**	<0.47	<0.47	<0.47	<1.2	<0.47	**31.9**
cis-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<0.36	<0.36	<0.36	<0.90	<0.36	<0.36
m&p-Xylene	ug/L			<0.70	<0.70	<0.70	<1.8	<0.70	1.3 J
n-Butylbenzene	ug/L			<0.86	<0.86	<0.86	<2.1	<0.86	<0.86
n-Propylbenzene	ug/L			<0.35	<0.35	<0.35	<0.86	<0.35	1.0 J
o-Xylene	ug/L			<0.35	<0.35	<0.35	<0.87	<0.35	0.99 J
p-Isopropyltoluene	ug/L			<1.0	<1.0	<1.0	<2.6	<1.0	<1.0
sec-Butylbenzene	ug/L			<0.42	<0.42	<0.42	<1.1	<0.42	<0.42
tert-Butylbenzene	ug/L			<0.59	<0.59	<0.59	<1.5	<0.59	<0.59
trans-1,2-Dichloroethene	ug/L	**100**	**20**	<0.53	<0.53	<0.53	<1.3	<0.53	0.87 J
trans-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<3.5	<3.5	<3.5	<8.7	<3.5	<3.5

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

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

* ch. NR 140.14(3): if the preventive action limit or enforcement standard is between the limit of detection (LOD) and the limit of quantitation (LOQ), the regulatory agency shall consider the preventive action limit (PAL) or enforcement standard (ES) to be attained or exceeded if the concentration of a substance is reported at or above the LOQ. The PAL or ES is not exceeded as the value of the estimated concentration is below the LOQ.

Table A.2: Groundwater Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	TW-10	TW-11	TW-12	TW-14	MSB6
			Sample Date:	10/26/2021			10/26/2021	
Polynuclear Aromatic Hydrocarbons (PAHs)								
1-Methylnaphthalene	ug/L			<0.017	0.023 J	<0.017	<0.017	<0.017
2-Methylnaphthalene	ug/L			<0.013	0.024 J	<0.013	<0.013	0.022 J
Acenaphthene	ug/L			<0.013	<0.014	<0.013	<0.013	<0.013
Acenaphthylene	ug/L			<0.012	<0.012	<0.012	<0.012	<0.012
Anthracene	ug/L	**3,000**	**600**	<0.017	<0.018	<0.018	<0.018	<0.017
Benzo(a)anthracene	ug/L			<0.013	<0.013	<0.013	0.014 J	<0.013
Benzo(a)pyrene	ug/L	**0.2**	**0.02**	<0.018	<0.019	<0.019	<0.019	<0.018
Benzo(b)fluoranthene	ug/L	**0.2**	**0.02**	<0.018	<0.019	<0.019	**0.026**	<0.018
Benzo(g,h,i)perylene	ug/L			<0.022	<0.023	<0.022	<0.022	<0.022
Benzo(k)fluoranthene	ug/L			<0.021	<0.022	<0.021	<0.021	<0.021
Chrysene	ug/L	**0.2**	**0.02**	<0.025	<0.026	<0.025	**0.026**	<0.025
Dibenz(a,h)anthracene	ug/L			<0.017	<0.018	<0.017	<0.017	<0.016
Fluoranthene	ug/L	**400**	**80**	<0.024	<0.026	<0.025	0.056	<0.024
Fluorene	ug/L	**400**	**80**	<0.022	<0.023	<0.022	<0.023	<0.022
Indeno(1,2,3-cd)pyrene	ug/L			<0.014	<0.015	<0.015	<0.015	<0.014
Naphthalene	ug/L	**100**	**10**	<0.019	0.053	0.023 J	0.042 J	0.035 J
Phenanthrene	ug/L			<0.024	0.038 J	<0.024	0.036 J	<0.024
Pyrene	ug/L	**250**	**50**	<0.021	0.023 J	<0.022	0.042 J	<0.021
RCRA Metals								
Arsenic, Dissolved	ug/L	**10**	**1.0**	<8.3	<8.3	<8.3	<8.3	<8.3
Barium, Dissolved	ug/L	**2000**	**400**	315	125	**420**	40.5	53.5
Cadmium, Dissolved	ug/L	**5.0**	**0.5**	<1.3	<1.3	<1.3	<1.3	<1.3
Chromium, Dissolved	ug/L	**100**	**10**	<2.5	3.2 J	<2.5	<2.5	<2.5
Lead, Dissolved	ug/L	**15**	**1.5**	<5.9	**8.0**	<5.9	<5.9	<5.9
Selenium, Dissolved	ug/L	**50**	**10**	<12.2	<12.2	<12.2	<12.2	<12.2
Silver, Dissolved	ug/L	**50**	**10**	<3.2	<3.2	<3.2	<3.2	<3.2
Mercury, Dissolved	ug/L	**2.0**	**0.2**	<0.066	<0.066	<0.066	<0.066	<0.066
Volatile Organic Compounds (VOCs)								
1,4-Dioxane (SIM)	ug/L	**3.0**	**0.3**	<0.23	<0.23	0.44 J*	0.31 J*	0.28 J*
1,1,1,2-Tetrachloroethane	ug/L	**70**	**7.0**	<0.71	<0.36	<0.36	<0.36	<0.71
1,1,1-Trichloroethane	ug/L	**200**	**40**	3.0	<0.30	<0.30	<0.30	0.91 J
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	**0.02**	<0.76	<0.38	<0.38	<0.38	<0.76
1,1,2-Trichloroethane	ug/L	**5.0**	**0.5**	<0.69	<0.34	<0.34	<0.34	<0.69
1,1-Dichloroethane	ug/L	**850**	**85**	26.9	32.3	<0.30	<0.30	1.2 J
1,1-Dichloroethene	ug/L	**7.0**	**0.7**	**2.5**	<0.58	<0.58	<0.58	<1.2
1,1-Dichloropropene	ug/L			<0.82	<0.41	<0.41	<0.41	<0.82
1,2,3-Trichlorobenzene	ug/L			<2.0	<1.0	<1.0	<1.0	<2.0
1,2,3-Trichloropropane	ug/L	**60**	**12**	<1.1	<0.56	<0.56	<0.56	<1.1
1,2,4-Trichlorobenzene	ug/L	**70**	**14**	<1.9	<0.95	<0.95	<0.95	<1.9
1,2,4-Trimethylbenzene	ug/L	**480**	**96**	<0.90	<0.45	<0.45	<0.45	<0.90
1,2-Dibromo-3-chloropropane	ug/L	**0.2**	**0.02**	<4.7	<2.4	<2.4	<2.4	<4.7
1,2-Dibromoethane (EDB)	ug/L	**0.05**	**0.005**	<0.62	<0.31	<0.31	<0.31	<0.62
1,2-Dichlorobenzene	ug/L	**600**	**60**	<0.65	<0.33	<0.33	<0.33	<0.65
1,2-Dichloroethane	ug/L	**5.0**	**0.5**	<0.58	<0.29	<0.29	<0.29	<0.58
1,2-Dichloropropane	ug/L	**5.0**	**0.5**	<0.90	<0.45	<0.45	<0.45	<0.90
1,3,5-Trimethylbenzene	ug/L	**480**	**96**	<0.71	<0.36	<0.36	<0.36	<0.71
1,3-Dichlorobenzene	ug/L	**600**	**120**	<0.70	<0.35	<0.35	<0.35	<0.70
1,3-Dichloropropane	ug/L			<0.61	<0.30	<0.30	<0.30	<0.61
1,4-Dichlorobenzene	ug/L	**75**	**15**	<1.8	<0.89	<0.89	<0.89	<1.8
2,2-Dichloropropane	ug/L			<8.4	<4.2	<4.2	<4.2	<8.4
2-Chlorotoluene	ug/L			<1.8	<0.89	<0.89	<0.89	<1.8
4-Chlorotoluene	ug/L			<1.8	<0.89	<0.89	<0.89	<1.8
Benzene	ug/L	**5.0**	**0.5**	<0.59	<0.30	<0.30	<0.30	<0.59
Bromobenzene	ug/L			<0.72	<0.36	<0.36	<0.36	<0.72
Bromochloromethane	ug/L			<0.72	<0.36	<0.36	<0.36	<0.72
Bromodichloromethane	ug/L	**0.6**	**0.06**	<0.83	<0.42	<0.42	<0.42	<0.83
Bromoform	ug/L	**4.4**	**0.44**	<7.6	<3.8	<3.8	<3.8	<7.6
Bromomethane	ug/L	**10**	**1.0**	<2.4	<1.2	<1.2	<1.2	<2.4
Carbon tetrachloride	ug/L	**5.0**	**0.5**	<0.74	<0.37	<0.37	<0.37	<0.74
Chlorobenzene	ug/L	**100**	**20**	<1.7	<0.86	<0.86	<0.86	<1.7
Chloroethane	ug/L	**400**	**80**	<2.8	<1.4	<1.4	<1.4	<2.8
Chloroform	ug/L	**6.0**	**0.6**	<2.4	<1.2	<1.2	<1.2	<2.4
Chloromethane	ug/L	**30**	**3.0**	<3.3	<1.6	<1.6	<1.6	<3.3
Dibromochloromethane	ug/L	**60**	**6.0**	<5.3	<2.6	<2.6	<2.6	<5.3
Dibromomethane	ug/L			<2.0	<0.99	<0.99	<0.99	<2.0
Dichlorodifluoromethane	ug/L	**1,000**	**200**	<0.91	<0.46	<0.46	<0.46	<0.91
Diisopropyl ether	ug/L			<2.2	<1.1	<1.1	<1.1	<2.2
Ethylbenzene	ug/L	**700**	**140**	<0.65	<0.33	<0.33	<0.33	<0.65
Hexachloro-1,3-butadiene	ug/L			<5.5	<2.7	<2.7	<2.7	<5.5
Isopropylbenzene (Cumene)	ug/L			<2.0	<1.0	<1.0	<1.0	<2.0
Methyl-tert-butyl ether	ug/L	**60**	**12**	<2.3	<1.1	<1.1	<1.1	<2.3
Methylene Chloride	ug/L	**5.0**	**0.5**	<0.64	<0.32	<0.32	<0.32	<0.64
Naphthalene	ug/L	**100**	**10**	<2.3	<1.1	<1.1	<1.1	<2.3
Styrene	ug/L	**100**	**10**	<0.71	<0.36	<0.36	<0.36	<0.71
Tetrachloroethene	ug/L	**5.0**	**0.5**	<0.82	<0.41	<0.41	<0.41	<0.82
Toluene	ug/L	**800**	**160**	<0.58	<0.29	<0.29	<0.29	<0.58
Trichloroethene	ug/L	**5.0**	**0.5**	**206**	**2.2**	<0.32	<0.32	**259**
Trichlorofluoromethane	ug/L	**3,490**	**698**	<0.84	<0.42	<0.42	<0.42	<0.84
Vinyl chloride	ug/L	**0.2**	**0.02**	**134**	**1.9**	<0.17	<0.17	**1.0**
cis-1,2-Dichloroethene	ug/L	**70**	**7.0**	**284**	**24.5**	<0.47	<0.47	**14.5**
cis-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<0.72	<0.36	<0.36	<0.36	<0.72
m&p-Xylene	ug/L			<1.4	<0.70	<0.70	<0.70	<1.4
n-Butylbenzene	ug/L			<1.7	<0.86	<0.86	<0.86	<1.7
n-Propylbenzene	ug/L			<0.69	<0.35	<0.35	<0.35	<0.69
o-Xylene	ug/L			<0.70	<0.35	<0.35	<0.35	<0.70
p-Isopropyltoluene	ug/L			<2.1	<1.0	<1.0	<1.0	<2.1
sec-Butylbenzene	ug/L			<0.85	<0.42	<0.42	<0.42	<0.85
tert-Butylbenzene	ug/L			<1.2	<0.59	<0.59	<0.59	<1.2
trans-1,2-Dichloroethene	ug/L	**100**	**20**	10.2	2.5	<0.53	<0.53	3.8
trans-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<6.9	<3.5	<3.5	<3.5	<6.9

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

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

Table A.2: Groundwater Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	MW-2	MW-20	MW21	MW22	MW23
			Sample Date:					3/29/
Polynuclear Aromatic Hydrocarbons (PAHs)								
1-Methylnaphthalene	ug/L			<0.016	<0.047	0.12	<0.17	0.29
2-Methylnaphthalene	ug/L			<0.013	<0.089	0.2	<0.13	0.031J
Acenaphthene	ug/L			<0.013	<0.034J	0.05	<0.13	0.028J
Acenaphthylene	ug/L			<0.012	<0.011	0.012J	<0.12	0.013J
Anthracene	ug/L	**3,000**	**600**	<0.017	0.15	0.12	1.6	<0.017
Benzo(a)anthracene	ug/L			<0.012	0.096	0.21	<0.13	0.021J
Benzo(a)pyrene	ug/L	**0.2**	**0.02**	<0.018	**0.18**	**0.33**	<0.19	<0.018
Benzo(b)fluoranthene	ug/L	**0.2**	**0.02**	<0.020	**0.3**	**0.61**	<0.19	<0.018
Benzo(g,h,i)perylene	ug/L			<0.021	0.21	0.38	<0.23	<0.022
Benzo(k)fluoranthene	ug/L			<0.020	0.13	0.26	<0.22	<0.021
Chrysene	ug/L	**0.2**	**0.02**	<0.024	**0.38**	**0.6**	**1.2**	0.043J
Dibenz(a,h)anthracene	ug/L			<0.016	0.037J	0.071	<0.17	<0.016
Fluoranthene	ug/L	**400**	**80**	<0.024	0.65	1.2	<0.25	0.03J
Fluorene	ug/L	**400**	**80**	<0.022	0.039J	0.057	0.6	0.06
Indeno(1,2,3-cd)pyrene	ug/L			<0.014	0.15	0.28	<0.15	<0.014
Naphthalene	ug/L	**100**	**10**	<0.018	0.049	0.11	<0.19	0.024J
Phenanthrene	ug/L			<0.023	0.42	0.74	<0.25	0.087
Pyrene	ug/L	**250**	**50**	<0.021	0.5	0.89	0.35J	0.031J
RCRA Metals								
Arsenic, Dissolved	ug/L	**10**	**1.0**	<8.3	<8.3	<8.3	<8.3	<8.3
Barium, Dissolved	ug/L	**2000**	**400**	90	92.4	12.7	4.8J	161
Cadmium, Dissolved	ug/L	**5.0**	**0.5**	<1.3	<1.3	<1.3	<1.3	<1.3
Chromium, Dissolved	ug/L	**100**	**10**	9.3J	**23.3**	3.1J	<2.5	**31.2**
Lead, Dissolved	ug/L	**15**	**1.5**	<5.9	8.9J	<5.9	<5.9	6.4J
Selenium, Dissolved	ug/L	**50**	**10**	<12.2	<12.2	<12.2	<12.2	<12.2
Silver, Dissolved	ug/L	**50**	**10**	<3.2	<3.2	<3.2	<3.2	<3.2
Mercury, Dissolved	ug/L	**2.0**	**0.2**	<0.066	<0.066	<0.066	<0.066	<0.066
Volatile Organic Compounds (VOCs)								
1,4-Dioxane (SIM)	ug/L	**3.0**	**0.3**	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	ug/L	**70**	**7.0**	<0.36	<0.36	<0.36	<0.36	<0.36
1,1,1-Trichloroethane	ug/L	**200**	**40**	0.61J	<0.30	<0.30	<0.30	<0.30
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	**0.02**	<0.38	<0.38	<0.38	<0.38	<0.38
1,1,2-Trichloroethane	ug/L	**5.0**	**0.5**	<0.34	<0.34	<0.34	<0.34	<0.34
1,1-Dichloroethane	ug/L	**850**	**85**	0.55J	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	ug/L	**7.0**	**0.7**	<0.58	<0.58	<0.58	<0.58	<0.58
1,1-Dichloropropene	ug/L			<0.41	<0.41	<0.41	<0.41	<0.41
1,2,3-Trichlorobenzene	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	ug/L	**60**	**12**	<0.56	<0.56	<0.56	<0.56	<0.56
1,2,4-Trichlorobenzene	ug/L	**70**	**14**	<0.95	<0.95	<0.95	<0.95	<0.95
1,2,4-Trimethylbenzene	ug/L	**480**	**96**	<0.45	<0.45	<0.45	<0.45	0.51J
1,2-Dibromo-3-chloropropane	ug/L	**0.2**	**0.02**	<2.4	<2.4	<2.4	<2.4	<2.4
1,2-Dibromoethane (EDB)	ug/L	**0.05**	**0.005**	<0.31	<0.31	<0.31	<0.31	<0.31
1,2-Dichlorobenzene	ug/L	**600**	**60**	<0.33	<0.33	<0.33	<0.33	<0.33
1,2-Dichloroethane	ug/L	**5.0**	**0.5**	<0.29	<0.29	<0.29	<0.29	<0.29
1,2-Dichloropropane	ug/L	**5.0**	**0.5**	<0.45	<0.45	<0.45	<0.45	<0.45
1,3,5-Trimethylbenzene	ug/L	**480**	**96**	<0.36	<0.36	<0.36	<0.36	<0.36
1,3-Dichlorobenzene	ug/L	**600**	**120**	<0.35	<0.35	<0.35	<0.35	<0.35
1,3-Dichloropropane	ug/L			<0.30	<0.30	<0.30	<0.30	<0.30
1,4-Dichlorobenzene	ug/L	**75**	**15**	<0.89	<0.89	<0.89	<0.89	<0.89
2,2-Dichloropropane	ug/L			<4.2	<4.2	<4.2	<4.2	<4.2
2-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<0.89	<0.89
4-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<0.89	<0.89
Benzene	ug/L	**5.0**	**0.5**	<0.30	<0.30	<0.30	<0.30	0.37J
Bromobenzene	ug/L			<0.36	<0.36	<0.36	<0.36	<0.36
Bromochloromethane	ug/L			<0.36	<0.36	<0.36	<0.36	<0.36
Bromodichloromethane	ug/L	**0.6**	**0.06**	<0.42	<0.42	<0.42	<0.42	<0.42
Bromoform	ug/L	**4.4**	**0.44**	<3.8	<3.8	<3.8	<3.8	<3.8
Bromomethane	ug/L	**10**	**1.0**	<1.2	<1.2	<1.2	<1.2	<1.2
Carbon tetrachloride	ug/L	**5.0**	**0.5**	<0.37	<0.37	<0.37	<0.37	<0.37
Chlorobenzene	ug/L	**100**	**20**	<0.86	<0.86	<0.86	<0.86	<0.86
Chloroethane	ug/L	**400**	**80**	<1.4	<1.4	<1.4	<1.4	<1.4
Chloroform	ug/L	**6.0**	**0.6**	<1.2	<1.2	<1.2	<1.2	<1.2
Chloromethane	ug/L	**30**	**3.0**	<1.6	<1.6	<1.6	<1.6	<1.6
Dibromochloromethane	ug/L	**60**	**6.0**	<2.6	<2.6	<2.6	<2.6	<2.6
Dibromomethane	ug/L			<0.99	<0.99	<0.99	<0.99	<0.99
Dichlorodifluoromethane	ug/L	**1,000**	**200**	<0.46	<0.46	<0.46	<0.46	<0.46
Diisopropyl ether	ug/L			<1.1	<1.1	<1.1	<1.1	<1.1
Ethylbenzene	ug/L	**700**	**140**	<0.33	0.37J	0.35J	<0.33	0.56J
Hexachloro-1,3-butadiene	ug/L			<2.7	<2.7	<2.7	<2.7	<2.7
Isopropylbenzene (Cumene)	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
Methyl-tert-butyl ether	ug/L	**60**	**12**	<1.1	<1.1	<1.1	<1.1	<1.1
Methylene Chloride	ug/L	**5.0**	**0.5**	<0.32	<0.32	<0.32	<0.32	<0.32
Naphthalene	ug/L	**100**	**10**	<1.1	<1.1	<1.1	<1.1	<1.1
Styrene	ug/L	**100**	**10**	<0.36	<0.36	<0.36	<0.36	<0.36
Tetrachloroethene	ug/L	**5.0**	**0.5**	<0.41	<0.41	<0.41	<0.41	<0.41
Toluene	ug/L	**800**	**160**	<0.29	4.4	2.9	0.56J	5.6
Trichloroethene	ug/L	**5.0**	**0.5**	**203**	<0.32	0.88J	<0.32	**139**
Trichlorofluoromethane	ug/L	**3,490**	**698**	<0.42	<0.42	<0.42	<0.42	<0.42
Vinyl chloride	ug/L	**0.2**	**0.02**	<0.17	<0.17	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	ug/L	**70**	**7.0**	5.2	<0.47	<0.47	<0.47	2.5
cis-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<0.36	<0.36	<0.36	<0.36	<0.36
m&p-Xylene	ug/L			<0.70	0.72J	0.78J	<0.70	1.4J
n-Butylbenzene	ug/L			<0.86	<0.86	<0.86	<0.86	<0.86
n-Propylbenzene	ug/L			<0.35	<0.35	<0.35	<0.35	<0.35
o-Xylene	ug/L			<0.35	<0.35	0.44J	<0.35	0.78J
p-Isopropyltoluene	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene	ug/L			<0.42	<0.42	<0.42	<0.42	<0.42
tert-Butylbenzene	ug/L			<0.59	<0.59	<0.59	<0.59	<0.59
trans-1,2-Dichloroethene	ug/L	**100**	**20**	1.0J	<0.53	<0.53	<0.53	<0.53
trans-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<3.5	<3.5	<3.5	<3.5	<3.5

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

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

Table A.2: Groundwater Analytical Results
Former Mercury Marine
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Units	ch. NR 140 GW Quality Enforcement Standards	ch. NR 140 GW Quality Preventive Action Limits	MW24	MW25	MW26	PZ-23	PZ-24
			Sample Date:	2022				
Polynuclear Aromatic Hydrocarbons (PAHs)								
1-Methylnaphthalene	ug/L			0.16	0.23	0.022J	NA	NA
2-Methylnaphthalene	ug/L			0.17	0.44	0.032J	NA	NA
Acenaphthene	ug/L			<0.012	<0.013	<0.013	NA	NA
Acenaphthylene	ug/L			<0.011	<0.012	<0.012	NA	NA
Anthracene	ug/L	**3,000**	**600**	<0.016	<0.017	<0.017	NA	NA
Benzo(a)anthracene	ug/L			0.016J	0.013J	0.019J	NA	NA
Benzo(a)pyrene	ug/L	**0.2**	**0.02**	<0.017	<0.018	<0.018	NA	NA
Benzo(b)fluoranthene	ug/L	**0.2**	**0.02**	0.018J	<0.018	0.021J	NA	NA
Benzo(g,h,i)perylene	ug/L			<0.021	<0.022	<0.022	NA	NA
Benzo(k)fluoranthene	ug/L			<0.20	<0.021	<0.021	NA	NA
Chrysene	ug/L	**0.2**	**0.02**	0.041J	0.025J	0.046J	NA	NA
Dibenz(a,h)anthracene	ug/L			<0.016	<0.017	<0.017	NA	NA
Fluoranthene	ug/L	**400**	**80**	0.028J	0.034J	0.039J	NA	NA
Fluorene	ug/L	**400**	**80**	<0.021	0.023J	0.024J	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L			<0.014	<0.015	<0.014	NA	NA
Naphthalene	ug/L	**100**	**10**	0.19	0.32	0.039J	NA	NA
Phenanthrene	ug/L			0.033J	0.039J	0.031J	NA	NA
Pyrene	ug/L	**250**	**50**	0.033J	0.028J	0.037J	NA	NA
RCRA Metals								
Arsenic, Dissolved	ug/L	**10**	**1.0**	8.9J	<8.3	32.6J	NA	NA
Barium, Dissolved	ug/L	**2000**	**400**	**507**	207	**501**	NA	NA
Cadmium, Dissolved	ug/L	**5.0**	**0.5**	1.7J	<1.3	4.9J	NA	NA
Chromium, Dissolved	ug/L	**100**	**10**	**33.3**	**16.1**	**160**	NA	NA
Lead, Dissolved	ug/L	**15**	**1.5**	**20.5**	7.9J	**125**	NA	NA
Selenium, Dissolved	ug/L	**50**	**10**	<12.2	<12.2	<24.5	NA	NA
Silver, Dissolved	ug/L	**50**	**10**	<3.2	<3.2	<6.4	NA	NA
Mercury, Dissolved	ug/L	**2.0**	**0.2**	<0.066	<0.066	0.091J	NA	NA
Volatile Organic Compounds (VOCs)								
1,4-Dioxane (SIM)	ug/L	**3.0**	**0.3**	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	ug/L	**70**	**7.0**	<0.36	<0.36	<0.36	<0.36	<0.36
1,1,1-Trichloroethane	ug/L	**200**	**40**	1.2	<0.30	<0.30	<0.30	5.1
1,1,2,2-Tetrachloroethane	ug/L	**0.2**	**0.02**	<0.38	<0.38	<0.38	<0.38	<0.38
1,1,2-Trichloroethane	ug/L	**5.0**	**0.5**	<0.34	<0.34	<0.34	<0.34	<0.34
1,1-Dichloroethane	ug/L	**850**	**85**	18.2	<0.30	0.58J	<0.30	11.5
1,1-Dichloroethene	ug/L	**7.0**	**0.7**	1.1	<0.58	<0.58	<0.58	<0.58
1,1-Dichloropropene	ug/L			<0.41	<0.41	<0.41	<0.41	<0.41
1,2,3-Trichlorobenzene	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	ug/L	**60**	**12**	<0.56	<0.56	<0.56	<0.56	<0.56
1,2,4-Trichlorobenzene	ug/L	**70**	**14**	<0.95	<0.95	<0.95	<0.95	<0.95
1,2,4-Trimethylbenzene	ug/L	**480**	**96**	1.4	1.8	<0.45	1.2	<0.45
1,2-Dibromo-3-chloropropane	ug/L	**0.2**	**0.02**	<2.4	<2.4	<2.4	<2.4	<2.4
1,2-Dibromoethane (EDB)	ug/L	**0.05**	**0.005**	<0.31	<0.31	<0.31	<0.31	<0.31
1,2-Dichlorobenzene	ug/L	**600**	**60**	<0.33	<0.33	<0.33	<0.33	<0.33
1,2-Dichloroethane	ug/L	**5.0**	**0.5**	<0.29	<0.29	<0.29	<0.29	<0.29
1,2-Dichloropropane	ug/L	**5.0**	**0.5**	<0.45	<0.45	<0.45	<0.45	<0.45
1,3,5-Trimethylbenzene	ug/L	**480**	**96**	0.46J	0.60J	<0.36	<0.36	<0.36
1,3-Dichlorobenzene	ug/L	**600**	**120**	<0.35	<0.35	<0.35	<0.35	<0.35
1,3-Dichloropropane	ug/L			<0.30	<0.30	<0.30	<0.30	<0.30
1,4-Dichlorobenzene	ug/L	**75**	**15**	<0.89	<0.89	<0.89	<0.89	<0.89
2,2-Dichloropropane	ug/L			<4.2	<4.2	<4.2	<4.2	<4.2
2-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<0.89	<0.89
4-Chlorotoluene	ug/L			<0.89	<0.89	<0.89	<0.89	<0.89
Benzene	ug/L	**5.0**	**0.5**	**1.2**	0.33J	0.39J	<0.30	<0.30
Bromobenzene	ug/L			<0.36	<0.36	<0.36	<0.36	<0.36
Bromochloromethane	ug/L			<0.36	<0.36	<0.36	<0.36	<0.36
Bromodichloromethane	ug/L	**0.6**	**0.06**	<0.42	<0.42	<0.42	<0.42	<0.42
Bromoform	ug/L	**4.4**	**0.44**	<3.8	<3.8	<3.8	<3.8	<3.8
Bromomethane	ug/L	**10**	**1.0**	<1.2	<1.2	<1.2	<1.2	<1.2
Carbon tetrachloride	ug/L	**5.0**	**0.5**	<0.37	<0.37	<0.37	<0.37	<0.37
Chlorobenzene	ug/L	**100**	**20**	<0.86	<0.86	<0.86	<0.86	<0.86
Chloroethane	ug/L	**400**	**80**	<1.4	<1.4	<1.4	<1.4	1.8J
Chloroform	ug/L	**6.0**	**0.6**	<1.2	<1.2	<1.2	<1.2	<1.2
Chloromethane	ug/L	**30**	**3.0**	<1.6	<1.6	<1.6	<1.6	<1.6
Dibromochloromethane	ug/L	**60**	**6.0**	<2.6	<2.6	<2.6	<2.6	<2.6
Dibromomethane	ug/L			<0.99	<0.99	<0.99	<0.99	<0.99
Dichlorodifluoromethane	ug/L	**1,000**	**200**	<0.46	<0.46	<0.46	<0.46	<0.46
Diisopropyl ether	ug/L			<1.1	<1.1	<1.1	<1.1	<1.1
Ethylbenzene	ug/L	**700**	**140**	1.5	1.3	<0.33	0.51J	<0.33
Hexachloro-1,3-butadiene	ug/L			<2.7	<2.7	<2.7	<2.7	<2.7
Isopropylbenzene (Cumene)	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
Methyl-tert-butyl ether	ug/L	**60**	**12**	<1.1	<1.1	<1.1	<1.1	<1.1
Methylene Chloride	ug/L	**5.0**	**0.5**	<0.32	<0.32	<0.32	<0.32	<0.32
Naphthalene	ug/L	**100**	**10**	<1.1	<1.1	<1.1	<1.1	<1.1
Styrene	ug/L	**100**	**10**	<0.36	<0.36	<0.36	<0.36	<0.36
Tetrachloroethene	ug/L	**5.0**	**0.5**	<0.41	<0.41	<0.41	<0.41	<0.41
Toluene	ug/L	**800**	**160**	25.3	10.4	2.1	1.3	<0.29
Trichloroethene	ug/L	**5.0**	**0.5**	**8.9**	<0.32	**48.7**	**120**	**52.6**
Trichlorofluoromethane	ug/L	**3,490**	**698**	<0.42	<0.42	<0.42	<0.42	<0.42
Vinyl chloride	ug/L	**0.2**	**0.02**	**33.4**	<0.17	<0.17	<0.17	**95**
cis-1,2-Dichloroethene	ug/L	**70**	**7.0**	**58**	<0.47	2.5	1.9	**65**
cis-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<0.36	<0.36	<0.36	<0.36	<0.36
m&p-Xylene	ug/L			4.8	4	<0.70	1.6J	<0.70
n-Butylbenzene	ug/L			<0.86	<0.86	<0.86	<0.86	<0.86
n-Propylbenzene	ug/L			<0.35	0.45J	<0.35	<0.35	<0.35
o-Xylene	ug/L			2.6	1.6	<0.35	0.63J	<0.35
p-Isopropyltoluene	ug/L			<1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene	ug/L			<0.42	<0.42	<0.42	<0.42	<0.42
tert-Butylbenzene	ug/L			<0.59	<0.59	<0.59	<0.59	<0.59
trans-1,2-Dichloroethene	ug/L	**100**	**20**	2.8	<0.53	0.53J	<0.53	2.9
trans-1,3-Dichloropropene	ug/L	**0.4**	**0.04**	<3.5	<3.5	<3.5	<3.5	<3.5

NOTES:

Only analytes with a detection in at least one sample are shown

NA = Not Analyzed

ug/kg = micrograms per kilogram

Concentrations equal to or exceeding the WI NR 140 GW Quality Enforcement Standards are **bold faced**

Concentrations equal to or exceeding the WI NR 140 GW Quality Preventive Action Limits are **bold faced**

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

A.4: Vapor Analytical Results (Sub-Slab)
Former Mercury Marine Plant No. 1
N49W6337 Western Road, Cedarburg, Wisconsin

Parameter	Residential Sub-Slab Vapor Risk Screening Level (ug/m3)	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12
Attenuation Factor	0.03												
Date Sampled		3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/7/2022	3/8/2022	3/8/2022	3/8/2022	3/8/2022
Regulated Fill Time		30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min
Structure/Location Sampled		Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab	Sub-slab
Media		Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor	Vapor
1,1,1-Trichloroethane	170,000	2.10	2.0J	<0.35	<0.35	<0.34	<.69J	<1.7	<0.33	21.70	<0.33	<0.33	<0.35
1,1-Dichloroethane	600	<0.30	<0.30	<0.31	<0.31	<0.30	<.34	<1.5	<0.30	<2.9	<0.30	<0.30	<0.31
1,1-Dichloroethene	7,000	<0.25	<0.25	<0.26	<0.26	<0.25	<.28	<1.3	<0.25	<2.4	<0.25	<0.25	<0.26
1,2,4-Trimethylbenzene	2,100	24.50	38.00	23.70	26.40	18.60	28.20	25.50	7.40	13.4J	5.70	6.10	4.80
1,2-Dichloroethane	37	<0.35	<0.36	<0.36	<0.36	<0.36	<.40	<1.8	<0.35	<3.4	<0.35	<0.35	<0.36
1,3,5-Trimethylbenzene	2,100	8.00	11.50	7.50	9.10	5.60	8.60	9.60	2.60	7.8J	2.00	2.00	1.7J
Benzene	120	9.50	11.40	8.70	8.80	4.00	5.00	4.60	2.70	2.4J	1.80	2.10	4.10
Carbon tetrachloride	160	<0.50	<0.51	<0.52	<0.52	1.2J	<.58	<2.6	<0.50	13.7J	<0.50	<0.50	<0.52
Chloroform	40	<0.33	<0.33	<0.34	<0.34	<0.33	<.38	<1.7	<0.33	3.9J	<0.33	<0.33	<0.34
Chloromethane	3,100	<0.15	<0.16	<0.16	<0.16	<0.16	<.18	<.80	<0.15	<1.5	<0.15	<.59J	<0.16
Dichlorodifluoromethane	3,300	2.30	2.80	2.60	2.40	2.90	2.60	3.1J	2.60	3.4J	2.30	2.60	2.40
Ethylbenzene	370	36.90	49.20	31.50	35.30	26.70	30.50	29.70	10.80	12.1J	7.40	7.60	7.70
Methyl-tert-butyl ether	3,700	<0.23	<0.23	<0.24	6.2J	<.23	<.26	<1.2	<0.23	<2.2	<0.23	1.8J	3.8J
Methylene Chloride	21,000	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<5.5	<1.1	<10.5	<1.1	<1.1	<1.1
Naphthalene	28	7.0J	8.5J	5.7J	6.6J	4.4J	8.2J	<20.3	<3.9	*<38.4*	4.1J	<3.9	<4.1
Tetrachloroethene	1,400	1.60	1.70	1.1J	1.1J	1.30	3.00	<2.7	<0.52	<5.2	<0.52	<.52	<0.55
Toluene	170,000	410.00	584.00	401.00	620.00	315.00	461.00	442.00	216.00	115.00	114.00	123.00	122.00
Trichloroethene	70	0.75J	15.30	<0.37	<0.37	<0.36	3.10	<1.8	2.40	***1,530.00***	0.91J	0.77J	1.10
Vinyl chloride	57	<0.16	<0.16	<0.16	<0.16	<0.16	<.18	<.81	<0.16	<1.5	<0.16	<0.16	<0.16
o-Xylene	3,300	39.30	54.00	34.70	38.80	29.70	36.60	32.60	12.30	13.1J	8.60	8.70	8.30

NOTES:

All results are in micrograms per cubic meter ($\mu g/m^3$) unless noted otherwise
Concentrations exceeding the Residential Sub-Slab Vapor Risk Screening Levels are ***italicized***
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.