



414 Nicollet Mall
Minneapolis, Minnesota 55401-1993

October 17, 2018

Scott Hansen
EPA Project Coordinator
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590
(312) 886-1999
Hansen.Scott@epa.gov

Re: Ashland/NSP Lakefront Site – Long-Term Monitoring Optimization and Limited Groundwater Investigation

Dear Mr. Hansen:

This letter is in response to the letter from the US EPA, dated April 13, 2018.

Xcel Energy is proposing to install additional groundwater monitoring wells to further delineate, as well as refine the understanding of lithologic continuity and connectivity between certain areas in the Upper Bluff and Kreher Park areas of the site. In addition, a few groundwater monitoring well have been damaged and will be replaced with new wells as part of a limited additional groundwater investigation. The locations of new wells are shown in the Long-Term Monitoring Optimization Report (O&M, Inc., October 2018). The number and locations of new wells has previously been discussed and previewed with the Wisconsin Department of Natural Resources' (WDNR) Jamie Dunn.

X-sections and site maps are helpful to visualize the vertical and horizontal lithologic changes as well as the vertical and horizontal distribution of contaminants and NAPL. Several X-Sections are attached that run roughly from east to west through Areas A and B. These appear to show interconnectedness between the two Areas. There has been much discussion as to the presence and mobile/recoverable nature of the NAPL in Area B.

The Subsurface NAPL Architecture and Mobility Report – Figures 3-1 thru 3-6 indicate NAPL thickness in Area B of up to 6 feet in the Copper Falls Unit. It should be noted that this assumption of NAPL presence is based on the data generated by the TarGost soil study performed in July 2013 and observations made during the logging of soil in historic soil borings, not direct NAPL measurements. It is unclear from review of the TarGOST data how the “NAPL Thicknesses” shown on the Figures were determined. There seems to be no consistent %RE used as an indication of NAPL presence. There is no prescribed RE% that consistently indicated the potential for NAPL presence. It is recommended that the consultant determine this % based on RE% and actual direct NAPL measurement in the same location and at the same depth. Several TarGOST investigations by others have used 50% RE as a low end indication

of contaminated soil for MGP sites. A % reading higher than 50% would likely be expected for soil that would produce NAPL. In addition, some of the Figures misrepresent the thickness of NAPL measured by the TarGOST investigation. For example, the TarGOST data from DSB-12T indicated no RE% greater than 50%, however, Figure 3-6 indicates a 6 foot thickness of NAPL associated with DSB-12T.

This soil data has been shown to not correlate well with the actual, direct measured, NAPL present in wells. Figure 3-6 indicates a NAPL layer thickness of 15 feet in MW-21B based on observations made during the logging of the soil boring. However, gauging of monitoring well MW-21B since June 2013 has not indicated the presence of NAPL. It should be noted that DSB-12T and MW-21B are adjacent to each other. The lack of directly measured NAPL in MW-21B is further indication that NAPL is also not present at location DSB-12T.

Similarly Figure 3-6 indicates a NAPL thickness in monitoring well MW-22B of 4 feet. However, gauging of monitoring well MW-22B since June 2013 has not indicated the presence of NAPL.

The TarGOST Figures appear to have erroneous information and are misleading by presenting the measurements as NAPL thickness. This is a screening tool and is not a direct indication of NAPL presence or thickness. Data indicate that less NAPL is present in Area B than is indicated by the Subsurface NAPL Architecture and Mobility Report.

The contaminant plumes at the site are adequately bounded, with the exception of the Water Table, Miller Creek, and Upper Copper falls hydrostratigraphic units in the area east of MW-37 and MW-38 well nest; and the Upper Copper falls in the area south of the MW-10 well nest. Monitoring wells at these locations have COCs, mainly VOCs and SVOCs, above the site Cleanup Standard and are currently unbounded to the east of MW-37 and unbounded to the southwest of MW-22L&T. It is recommended that a monitoring well cluster which includes wells in the Water Table (Screened 15 to 20'), Miller Creek (Screened 22 to 27'), and Upper Copper Falls (Screened 30 to 35') units, be installed east of the MW-37 and MW-38 well nest (FEJV X-Section C-C'). Installation of a monitoring well in the Upper Copper Falls (Screened 26 to 31') units is also recommended south of the MW-10/west of MW-22 well nests (X-Section. Although Area B is delineated to the west by the MW-49 nest of wells, a data gap exists between the MW-21 nest and the MW-49 nest near the top of the Upper Copper Falls unit. Installation of a monitoring well midway between MW-21 and MW-49 in the Upper Copper Falls (Screened 34 to 44') is recommended. These additions to the monitoring well network will adequately bound and refine the delineation of the contaminant plumes in these units. The locations of new wells are shown in the Long-Term Monitoring Optimization Report (O&M, Inc., October 2018).

The mobility/recoverability of NAPL in Area B may be a moot point if a very limited amount of NAPL is present in Area B. This will be determined by gauging the proposed monitoring wells, once installed. At that time, the degree of NAPL presence in Area B and the mobility/recoverability will be further assessed. We would propose to install the monitoring wells in October 2018, however, the schedule will be dependent on feedback and timing of feedback from the EPA and WDNR regarding the proposed monitoring wells and limited groundwater investigation.

Sincerely,



Eric Ealy

Environmental Analyst - Project Coordinator

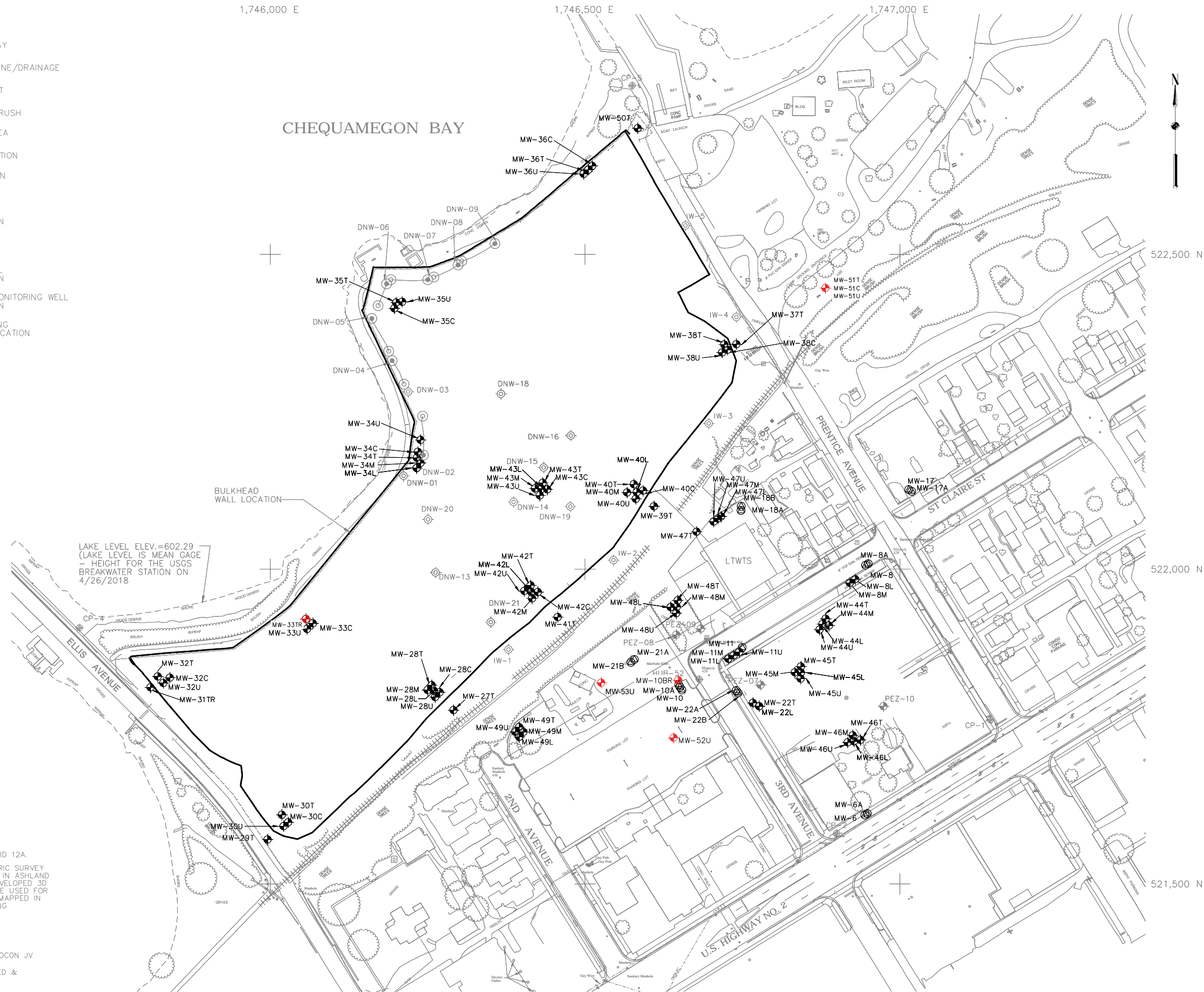
cc: Jamie Dunn - WDNR (w/ attachments)
John Sager – WDNR (w/attachments)

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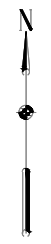
LEGEND

- PRE-EXISTING ROADWAY
- PRE-EXISTING SHORELINE/DRAINAGE
- PRE-EXISTING CULVERT
- PRE-EXISTING TREE/BRUSH
- PHASE 1 PROJECT AREA
- BULKHEAD WALL LOCATION
- CUTOFF WALL LOCATION
- PERIMETER FENCE
- CP-4 CONTROL POINT NUMBER AND LOCATION
- MW-32C 2015 MONITORING WELL NUMBER AND LOCATION
- MW-21A EXISTING PRE-2015 MONITORING WELL NUMBER AND LOCATION
- PEZ-10 PIEZOMETER MONITORING WELL NUMBER AND LOCATION
- PROPOSED ADDITIONAL MONITORING POINTS
- LONG-TERM WATER TREATMENT SYSTEM

CHEQUAMEGON BAY



LAKE LEVEL ELEV.=602.29
(LAKE LEVEL IS MEAN GAGE
HEIGHT FOR THE USGS
BREAKWATER STATION ON
4/26/2018)



522,500 N

522,000 N

521,500 N

NOTES:

1. COORDINATE SYSTEM - W83-NF, HORIZONTAL DATUM IS NAD83, VERTICAL DATUM IS NAVD88 USING GEOID 12A.
THIS DRAWING IS A 3D PHOTOGRAMMETRIC SURVEY OF THE ASHLAND NSP LAKEFRONT SITE IN ASHLAND WISCONSIN. IT IS A COMPILATION OF DEVELOPED 3D GIS LAYERS, RECORDS, AND DATA TO BE USED FOR SITE ANALYSIS. DEVELOPED DATA WAS MAPPED IN ACCORDANCE WITH THE AC-18B MAPPING STANDARDS.
2. TOPOGRAPHY DEVELOPED FROM DECEMBER 22, 2015 IMAGERY.
3. MAPPING COMPLETED BY FOTH / ENVIROCON JV
4. MW-10B & MW-33T WILL BE ABANDONED & REPLACED WITH MW-10BR & MW-33TR

NO.	DATE	APVD	REVISION

800-472-7372
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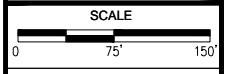
Cedar Corporation

PROPRIETARY DOCUMENT FOR
SPECIFIC USE OF XCEL ENERGY
AND ITS PARTNERS

ASHLAND/NSP LAKEFRONT SITE
LONG-TERM GROUNDWATER MONITORING OPTIMIZATION
JUNE 2018
ASHLAND, WISCONSIN

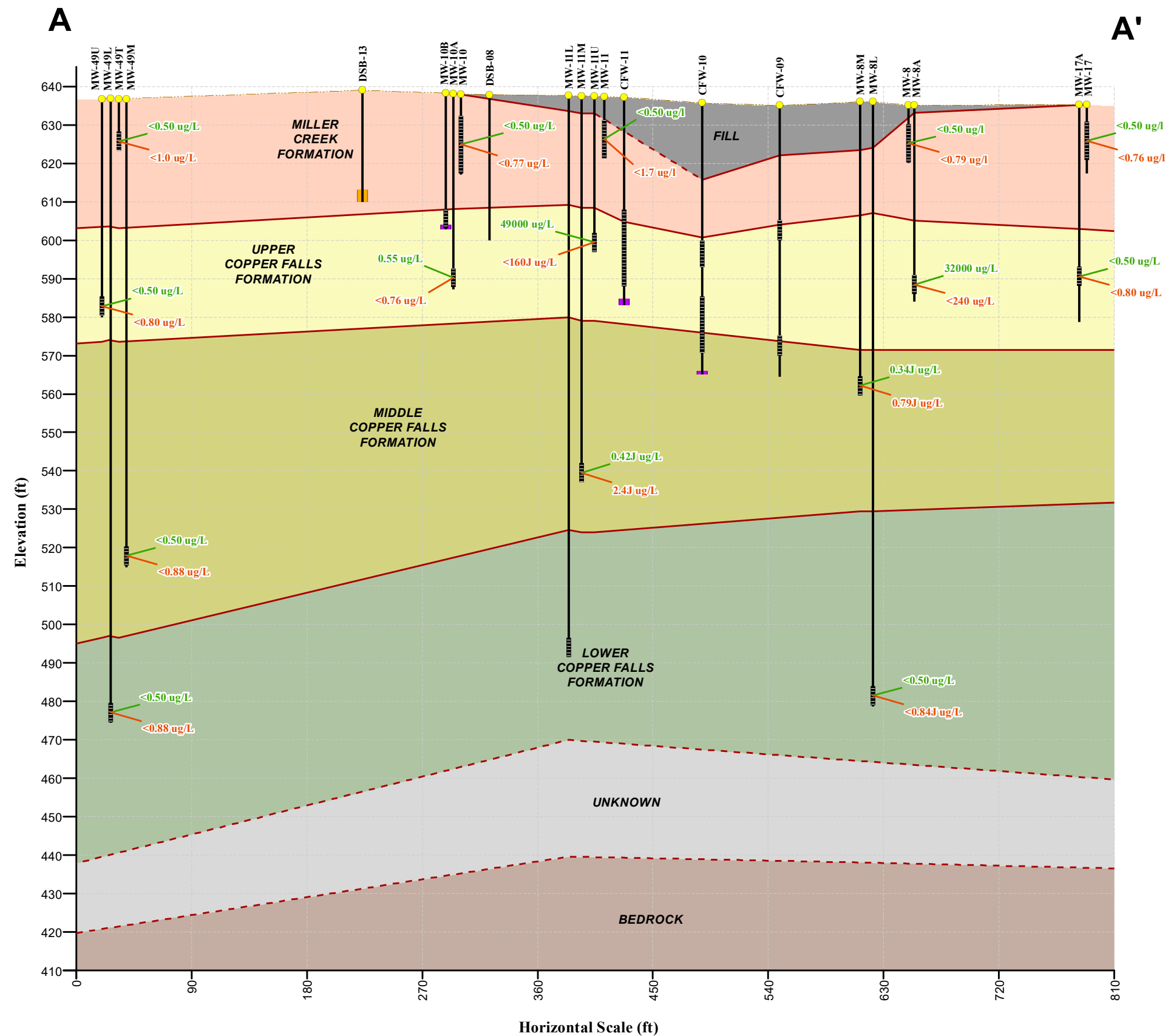
JOB NO. X3059-058
DRAWN BY MLW
CHECKED BY JAL
DATE JUNE 2018
SET TYPE FINAL

**PROPOSED
ADDITIONAL
MONITORING
LOCATIONS**



Cross Section A - A'

Ashland Wisconsin



- Legend**
- Well Location
 - Benzene/GW Concentration (ug/L) (Oct. 2017)*
 - Naphthalene/GW Concentration (ug/L) (Oct. 2017)*
 - DNAPL Detected (2017)
 - TarGOST DNAPL Detected (2013)**
 - Well Screen
 - Ground Surface
 - Geologic Contact
 - Inferred Geologic Contact
 - Miller Creek Formation
 - Upper Copper Falls Formation
 - Middle Copper Falls Formation
 - Lower Copper Falls Formation
 - Bedrock
 - Fill
 - Unknown

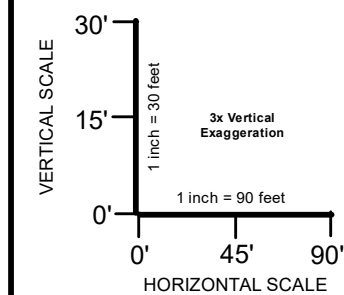
*J = Indicates an estimated concentration

**Note: Measurements estimated from NAPL Architecture Report Fig

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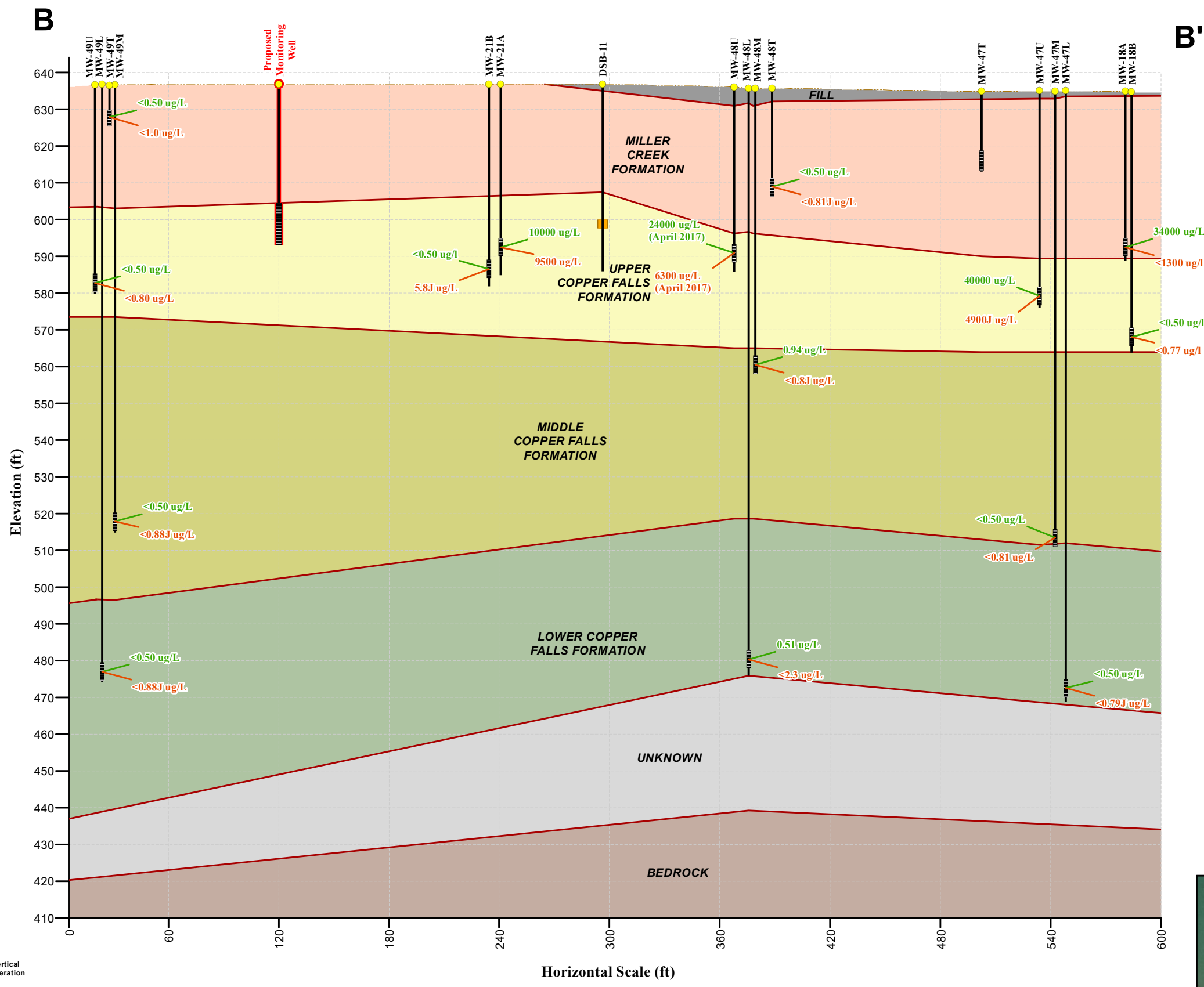


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Cross Section B-B'

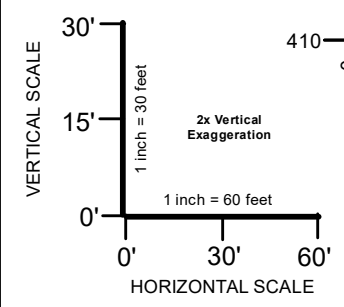
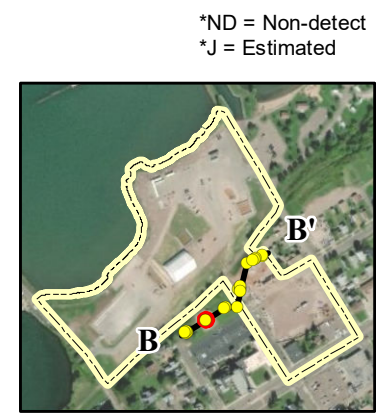
Ashland Wisconsin



- Legend**
- Well Location
 - Benzene/GW Concentration (ug/L) (Oct. 2017)*
 - Naphthalene/GW Concentration (ug/L) (Oct. 2017)*
 - TarGOST DNAPL Detected (2013)**
 - ▬ Well Screen
 - Ground Surface
 - Geologic Contact
 - Miller Creek Formation
 - Upper Copper Falls Formation
 - Middle Copper Falls Formation
 - Lower Copper Falls Formation
 - Bedrock
 - Fill
 - Unknown

*J = Indicates an estimated concentration
 **Note: Measurements estimated from NAPL Architecture Report Fig

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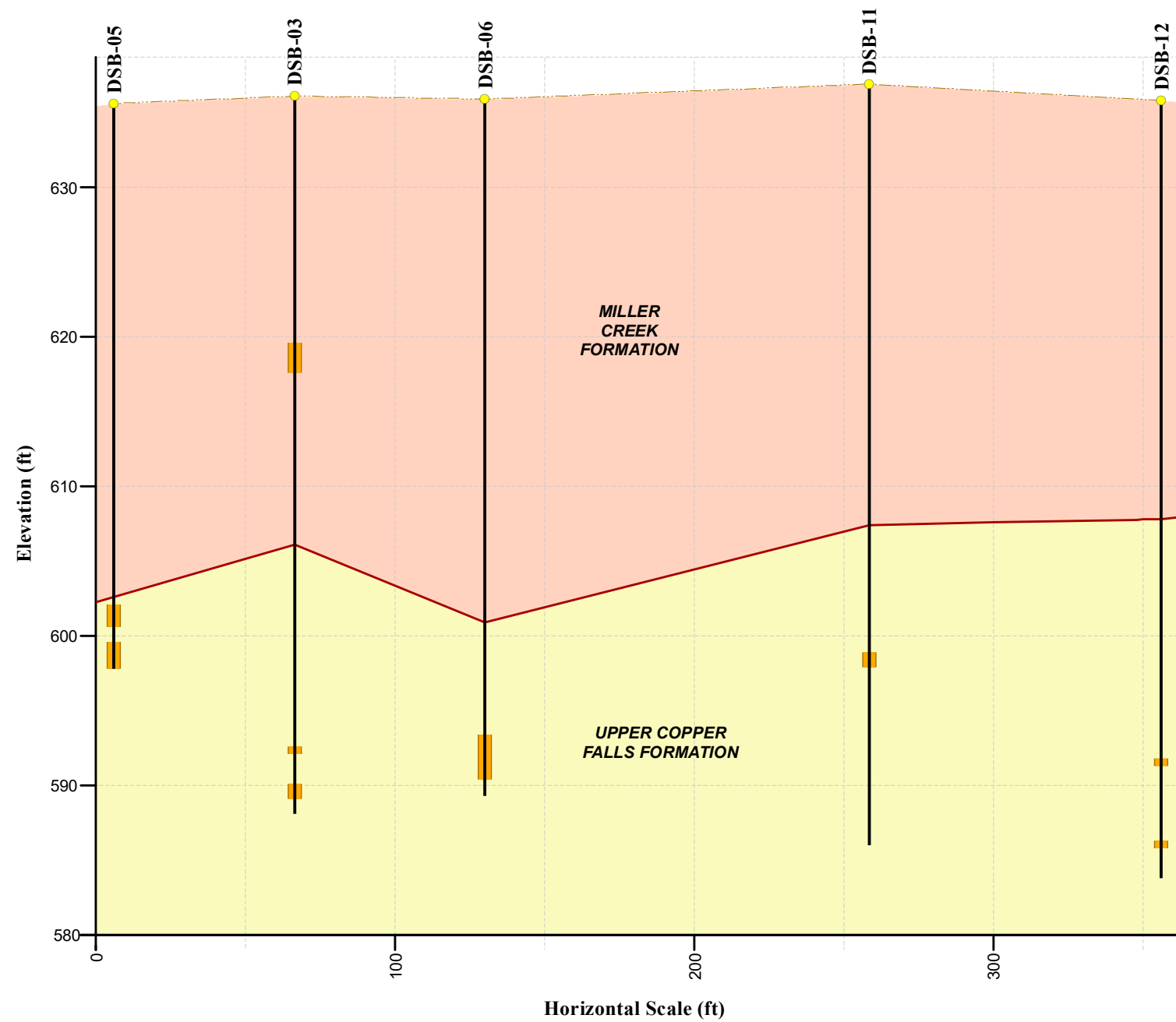
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Cross Section C-C'

Ashland Wisconsin

C

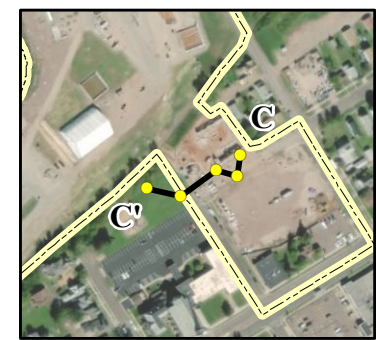
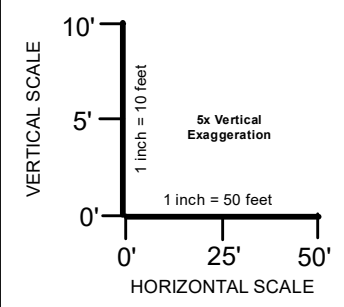
C'



- Legend**
- Well Location
 - TarGOST DNAPL Detected (2013)*
 - Ground Surface
 - Geologic Contact
 - Miller Creek Formation
 - Upper Copper Falls Formation

*Note: Measurements estimated from NAPL Architecture Report Fig 3-4 and TarGOST RE% readings.

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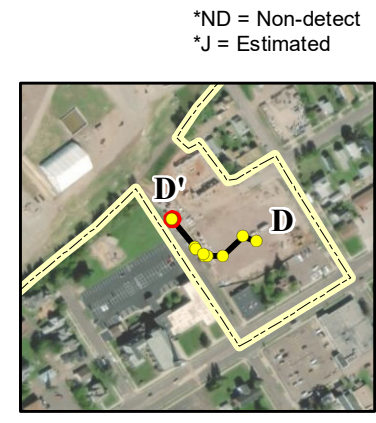
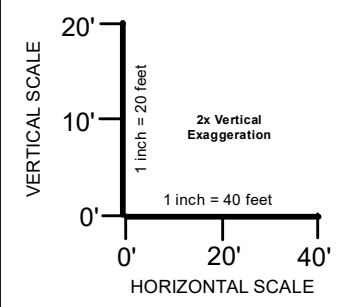
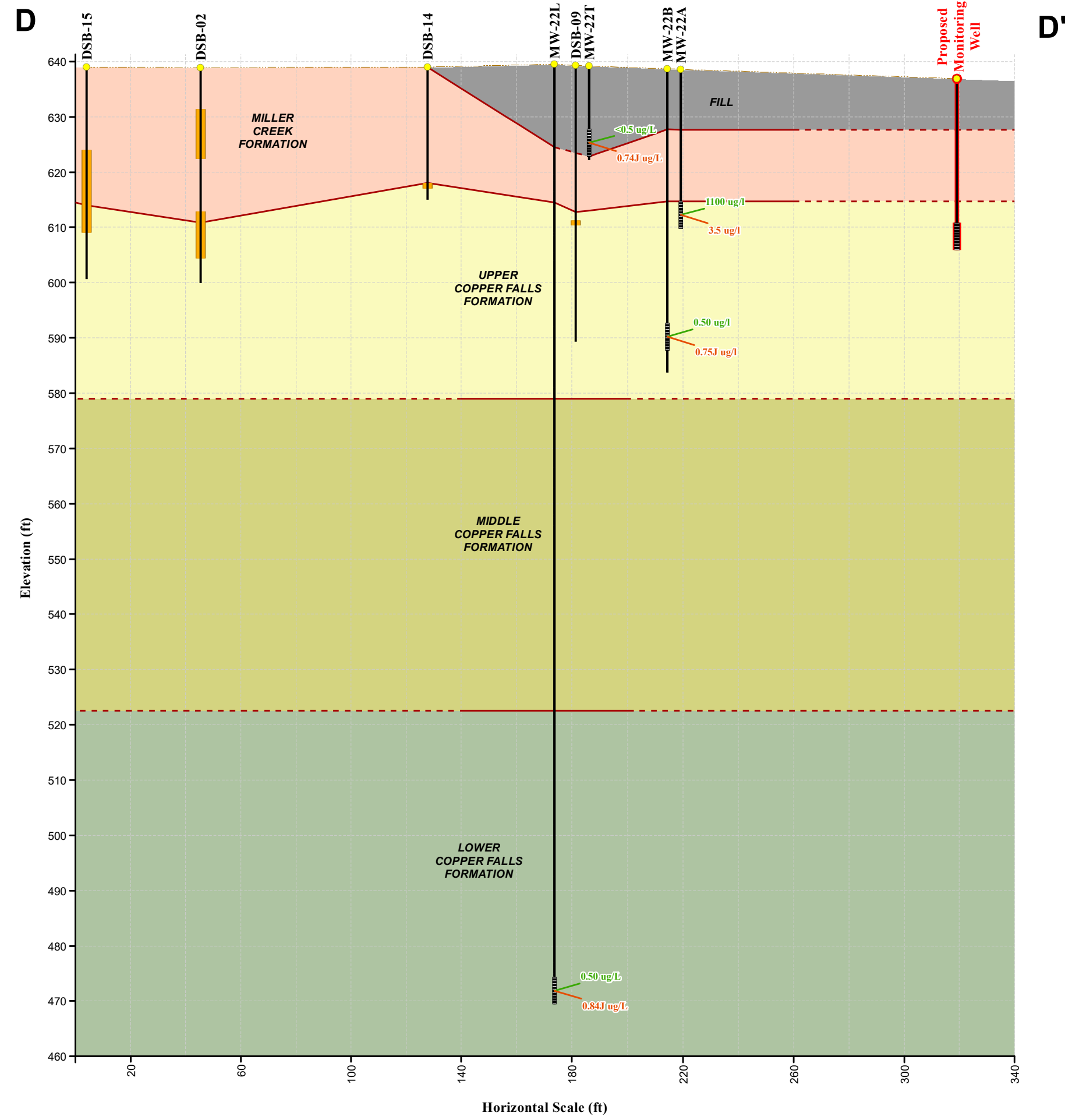
Cross Section D-D'

Ashland Wisconsin

- Legend**
- Well Location
 - B Benzene/GW Concentration (ug/L) (Oct. 2017)*
 - N Naphthalene/GW Concentration (ug/L) (Oct. 2017)*
 - TarGOST DNAPL Detected (2013)**
 - Well Screen
 - Ground Surface
 - Geologic Contact
 - Inferred Geologic Contact
 - Miller Creek Formation
 - Upper Copper Falls Formation
 - Middle Copper Falls Formation
 - Lower Copper Falls Formation
 - Fill

*J = Indicates an estimated concentration
 **Note: Measurements estimated from NAPL Architecture Report Fig

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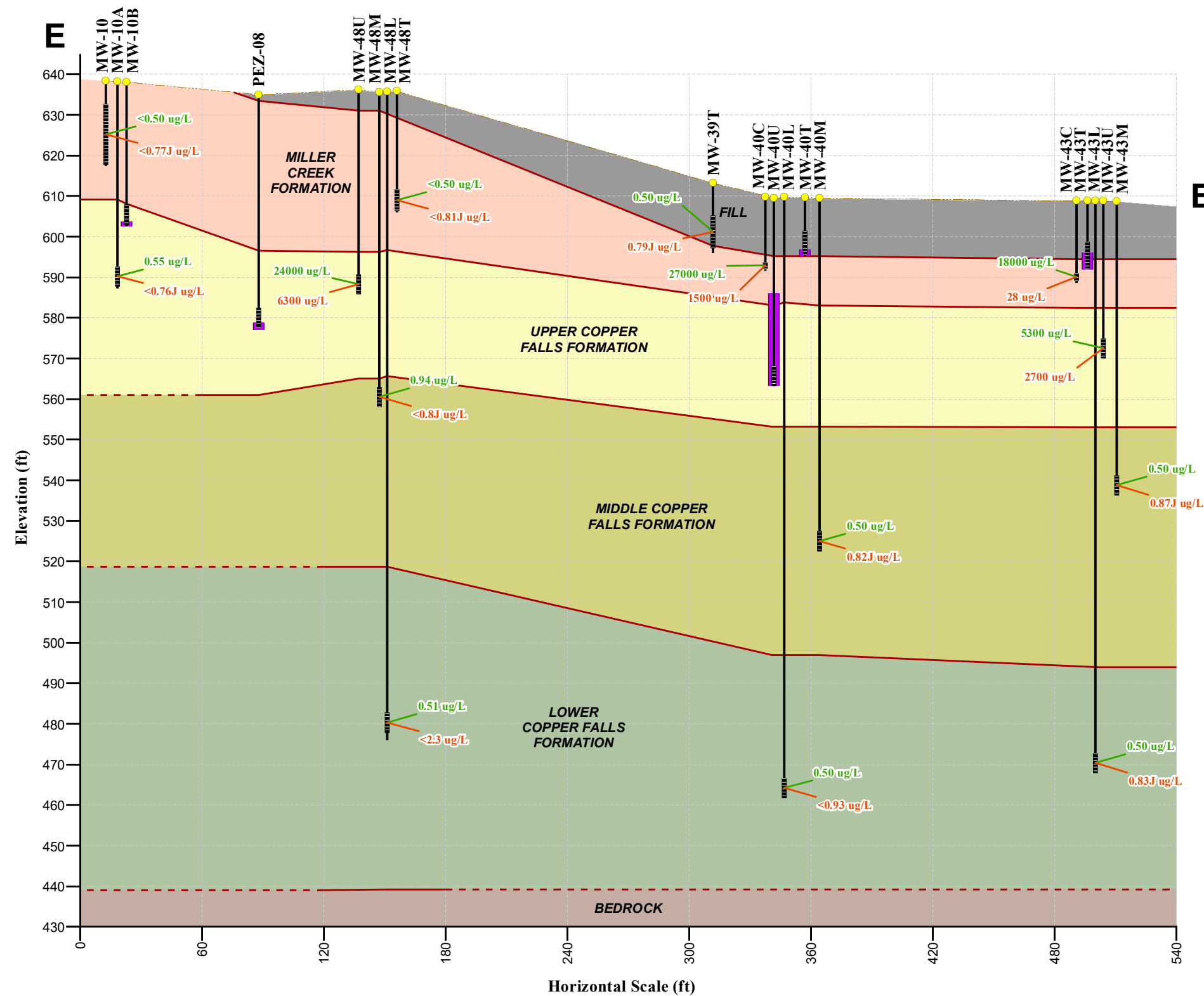


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Cross Section E-E'

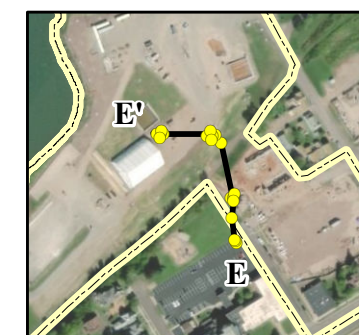
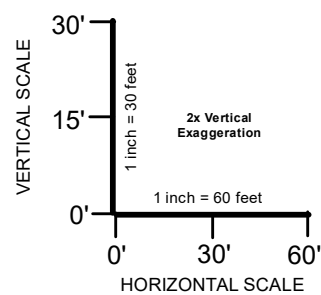
Ashland Wisconsin



- Legend**
- Well Location
 - Benzene/GW Concentration (ug/L) (2017)*
 - Naphthalene/GW Concentration (ug/L) (2017)*
 - DNAPL Detected (2017)
 - ▬ Well Screen
 - ▬ Ground Surface
 - ▬ Geologic Contact
 - - - Inferred Geologic Contact
 - Miller Creek Formation
 - Upper Copper Falls Formation
 - Middle Copper Falls Formation
 - Lower Copper Falls Formation
 - Bedrock
 - Fill

*J = Indicates an estimated concentration

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