

March 12, 2021

Mr. John Hunt
Wisconsin Dept. of Natural Resources
223 E Steinfest Road
Antigo, WI 54409

Subject: Well Abandonment Work Plan
Attachment to Request to Manage Materials Form 4400-315
FedEx Ground Package System
2929 Halvor Lane
Superior, Wisconsin

Dear Mr. Hunt:

FedEx Ground Package System (FedEx) at 2929 Halvor Lane in Superior, Wisconsin has proposed an expansion of the existing facility to include additional semi-truck and auto parking spaces. A preliminary design for the facility expansion is included in the attached **Figure 1** and includes expansion of the existing facility to the east (to Maryland Avenue), and expansion to the north (to Lake City Towing). Development is scheduled to begin in early summer 2021, and a work plan and request to manage material for the site during development, including contaminated soil, will be submitted as Form 4400-315 by BBJ Group. This Well Abandonment Work Plan serves as an attachment to Form 4400-315 and includes a request to abandon existing monitoring and recovery wells installed by Antea Group on behalf of BP Products North America Inc. (BP). The abandonment of the monitoring and recovery wells is required to be completed before soil handling and redevelopment takes place.

In order to accommodate the proposed expansion plans and redevelopment for the FedEx facility, BBJ Group has requested that existing monitoring and recovery wells MW-3, MW-23, and RW-6 be abandoned. These wells have been used to delineate the extent of the releases associated with the Former Amoco Terminal (BRRTS #02-16-000331) and are located to the east of the existing FedEx building (**Figure 2**). Well MW-3 is upgradient of defined light non-aqueous liquid (LNAPL) identified at the Terminal, and wells MW-23 and RW-06 are located in identified LNAPL area of concern 5 (AOC 5). The history and conditions of these wells are detailed in the contents of this memorandum. Due to the extensive investigation, delineation and stability of the extent of LNAPL, dissolved-phase benzene, and direct contact soil contamination, these wells are proposed to be abandoned without replacement.

EXTENT OF LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL)

The LNAPL identified in wells MW-23 and RW-06 originated from releases that occurred during the operation of the Terminal. Product type and composition have been identified through historical product “fingerprinting”; otherwise known as chromatographic analysis. The Delta Site Investigation and Interim Response Actions Report dated June 17, 1999 presents the LNAPL fingerprinting results and interpretations for all product samples collected at the Terminal. The extent of LNAPL within these wells, as defined as AOC 5, has been determined by investigation with UVF/LIF (Ultraviolet Fluorescence/Laser-Induced Fluorescence) borings, through soil and hand

auger borings, and an extensive history of monitoring for the presence of LNAPL in the network of monitoring and recovery wells.

LNAPL EXTENT

AOC 5 as shown in **Figure 2** includes two active wells (RW-6 and MW-23) and one abandoned well (MW-2). Monitor well MW-2 was abandoned in September 2007. Recovery well RW-6 is constructed of 6-inch-diameter casing and screen and is screened from 20.2 to 45.2 feet bgs. The well was installed in May 1990 and has been gauged 148 times since installation. Monitor well MW-23 is constructed of 2-inch-diameter PVC casing and screen and is screened from 9.2 to 24.2 feet bgs. It was installed in June 1989 and has been gauged 138 times since installation. The thicknesses of LNAPL in wells RW-6 and MW-23 is influenced by groundwater elevation variations and precipitation. As the groundwater elevation increases, the water table pushes the water table up against the clay/sand interface and causes LNAPL to accumulate at higher thicknesses. Through the extensive gauging history of the wells as shown in **Table 1**, LNAPL thicknesses are predictable and stable, varying only due to the change in water table.

The extent of LNAPL within AOC 5 has been defined based on LIF and UVF borings, soil logs for wells, and laboratory analysis of soil samples for petroleum constituents. As shown in **Figure 2**, the LNAPL extent is defined by the minimal or absence of LIF response at CPT/LIF (Cone Penetrometer/Laser-Induced Fluorescence) borings LIF-36 to the north, LIF-38 to the east, LIF-42 to the west, and T-28 to the south. Hydraulically downgradient of AOC 5, LNAPL within AOC 4 to the north is defined based on LNAPL fingerprinting and analysis, and is bounded by the minimal or absence of LIF response at CPT/LIF borings LIF-36 to the south, LIF-37 to the west, and LIF-47 to the east (**Figure 2**), as well as a lack of LNAPL present in EW-3 to the east, EW-9 to the west, or EW-10 to the southwest since installation. The lack of measurable LNAPL in extraction well EW-3, the minimal LIF response at CPT/LIF boring LIF-47, and the distinctly different product type at monitor well MW-24 are key factors for constraining AOC 4 to the former Terminal property. Since groundwater flow has consistently been gauged to the north-northwest, LNAPL within AOCs 4 and 5 is further delineated through gauging at EW-09 and MW-10. Measurable LNAPL has not been observed in EW-09 over the 9 years of gauging data, and measurable LNAPL has only been observed once in MW-10 (0.01 feet in 3/13/1996) over the 32 years of gauging data (**Table 1**).

LNAPL IMMOBILITY AND PLUME STABILITY

The potential LNAPL velocities within AOC 5 were analyzed at monitor well MW-23. Based on the LNAPL thickness, a potential LNAPL velocity at monitor well MW-23 was calculated as $5.64 * 10^{-8}$ cm/second, or 0.06 feet/year (using the maximum LNAPL saturation) and $2.30 * 10^{-8}$ cm/second, or 0.02 feet/year (using the average LNAPL saturation through the smear zone). ASTM standard E2531-06 suggests that an LNAPL plume is stable when the potential velocity is less than 1 foot per year. Based on the calculated values for monitoring well MW-23, which is located at the center of AOC 5, the LNAPL plume is not expanding or migrating.

LNAPL TRANSMISSIVITIES

An additional indicator of LNAPL stability within AOC 5 and throughout the Terminal has been shown through LNAPL transmissivity testing. A manual skimmer test was performed at monitor well MW-23 in August 2011 in AOC 5. The LNAPL transmissivity was determined to be 0.37 ft²/day. Research published by the ITRC (*Evaluating LNAPL Remedial Technologies for Achieving Project Goals*; 2009, p.14) suggests that physical recovery (hydraulic or pneumatic pumping) is capable of removing LNAPL and reducing transmissivity to a practical limit of between 0.1 and 0.8 ft²/day. Since the calculated transmissivity value in MW-23 has already been reduced to this range, additional LNAPL recovery would be minimal through physical recovery.

LNAPL VISCOSITIES AND CHEMICAL SIGNATURES

Samples of LNAPL from monitoring well MW-23 and recovery well RW-6 have been collected and analyzed numerous times through the investigation history of the Terminal, with the first LNAPL samples collected from both wells in 1995. An additional LNAPL sample was collected from recovery well RW-6 on April 23, 2004, and sampling analysis further supported that the LNAPL was an older vintage, characterized within the gasoline, naphtha, diesel fuel, and No. 2 fuel oil ranges.

LNAPL samples were again collected for geochemical property characterization at RW-6 on July 16, 2019. The LNAPL sample was used to evaluate the changes in LNAPL mass based on the changes in LNAPL chemical concentrations and ratios, and a technical memorandum evaluating those changes was submitted as a technical memo titled *Evidence for and Quantification of LNAPL Mass Depletion*, Antea Group, October 30, 2019.

Since the initial volume or mass of LNAPL at the Site is not available, the use of diagnostic ratios for estimation of petroleum mass depletion were calculated. These diagnostic ratios included "Evaporation", "Waterwashing", and "Biodegradation". These ratios were then compared to a standard petroleum diagnostic ratio for 87 Octane Gasoline to evaluate changes in LNAPL composition over time at the Site.

For the Terminal property specifically, the diagnostic ratios developed for LNAPL samples collected from monitor wells throughout the site indicated significant reductions in contaminant concentrations as a result of Evaporation and Waterwashing. A comparison of the LNAPL samples collected from RW-6 in 2004 and 2019 indicates that Waterwashing has reduced the benzene mass by 80% in 2004 and further to 91% in 2019 (**Table 5**). This analysis supports the conclusion that limited benzene contaminant mass remains in the residual LNAPL in AOC 5, as the mass has been depleted through several processes: predominantly Waterwashing and Evaporation.

DISSOLVED-PHASE CONTAMINATION

EXTENT OF DISSOLVED-PHASE CONTAMINATION

The extent of dissolved-phase hydrocarbons in groundwater at the Terminal is monitored with a network of monitoring wells with shallow well screens bisecting the unconfined water table and deeper monitoring wells (piezometers) with wells screens submerged below the water table. Benzene is the primary contaminant of concern in the dissolved phase, and since the benzene mass in a majority of the Terminal LNAPL wells shows significant depletion through waterwashing and degradation (**Evidence for and Quantification of LNAPL Mass Depletion, Antea Group**, October 30, 2019), dissolved-phase benzene concentrations that exceed NR 140 ES are limited to monitoring wells within or adjacent to the LNAPL AOCs. Non-LNAPL wells downgradient of AOCs 4 and 5 include EW-10, EW-09, and MW-10 (Figure 2). Upgradient wells from AOC 5 include MW-3 and MW-35.

Benzene concentrations in upgradient and downgradient wells from AOCs 4 and 5 have decreasing or stable trends as shown in the hydrographs in **Appendix A**. Upgradient well MW-35 has not had any exceedances of the NR 140 ES since the well was initially sampled in 1991 (**Table 2**). The percent reduction from the historical high benzene concentrations to the most recently sampled benzene concentration (October 2016) for the upgradient and downgradient monitoring wells is presented below:

Well	Number of Well Sampling Events	Number of Sampling Events exceeding NR 140 ES	October 2016 Benzene Concentration (µg/L)	Historical High Benzene Concentration (µg/L)	Date of Historical High Benzene Concentration	% Reduction From Historical High Benzene Concentration
MW-3	20	8	7.6	230	October 2003	96.69%
EW-10	7	6	1.4	3,970	October 2011	99.96%
MW-10	30	22	3.1	400	April 2004	99.23%
EW-9	7	7	28.1	374	October 2011	92.49%

Wells adjacent to AOCs 4 and 5 (MW-10, EW-10, and MW-35), show that dissolved-phase benzene is not migrating laterally to the east and west of the defined plume boundaries. Migration follows groundwater flow through the unconfined layer to the northwest and is delineated by a comprehensive network of multi-level vertical delineation wells north of Winter Street and the rail corridor. Well MW-3 exhibits low level benzene impact and is no longer required as an upgradient delineation well due to the consistent sampling results and downgradient delineation of dissolved-phase impact at the Terminal.

SOIL CONTAMINATION

EXTENT OF SOIL CONTAMINATION

Soil considered a potential direct contact risk (0-4 feet bgs) within the area of MW-3, MW-23, and RW-06 was addressed and removed through five rounds of delineation from 2013 to 2014. Work included the delineation of two soil excavation limits at soil boring SB-24 (southern portion of former Parcel B, **Figure 4**), and at soil borings SB-23, SB-39, and SB-40 (northern portion of former Parcel B, **Figure 5**). A total of 5,271 tons of impacted soil were removed from these two excavation areas. Individual excavation area results for South B and North B are summarized below:

- **South B (former Parcel B, north of Halvor Lane)**

The South B area included excavation surrounding soil borings SB-24, SB-25 and SB-32, which were defined as containing exceedances to industrial direct contact standards (**Table 3**). The excavation area was delineated on June 18 and July 28, 2014 through additional soil borings until soil samples did not exceed industrial direct contact standards (**Table 3**). Excavation was completed to a depth of 4 feet bgs on November 7-14, 2014, and a total of 2,076.71 tons of soil was removed. The area was backfilled with clean soil on November 18, 2014.

- **North B (former Parcel B, north of Halvor Lane)**

The North B area included excavation surrounding soil borings SB-22, SB-23, SB-39, SB-40 and SB-48, which were defined as containing exceedances to industrial direct contact standards (**Table 3**). The excavation area was delineated on June 17, July 28 and August 21, 2014 through additional soil borings until soil samples did not exceed industrial direct contact standards (**Table 3**). Excavation was completed to a depth of 4 ft bgs on November 14-21, 2014, and a total of 3,194.29 tons of soil was removed. The area was backfilled with clean soil on December 3, 2014.

Additional soil samples within and around AOCs 4 and 5 were collected during soil boring and delineation work as shown in **Figure 3**, and additional direct contact soil exceedances were not observed. Soil samples collected within and around AOC 5 (SB-21, SB-46, SB-47, and SB-44) did not contain any exceedances of the Industrial Direct Contact RCLs (Residual Contaminant Levels).

SUMMARY AND CONCLUSIONS

To accommodate redevelopment and expansion of the FedEx facility at 2929 Halvor Lane to the east and northeast of the existing facility, Antea Group proposes abandonment of monitoring wells MW-3, MW-23, and RW-6. The area will be redeveloped into additional truck and auto parking spaces, allowing for utilization of the Brownfield site with no additional risk to human health or the environment. Based on the below conclusions, Antea Group recommends that the wells be abandoned without replacement:

- The LNAPL extent of AOC 5, which includes monitoring and recovery wells RW-6 and MW-23, has been fully delineated through the advancement of CPT/LIF soil borings, soil logs or wells, and analysis of soil samples for petroleum constituents.
- The LNAPL within AOC 5 is stable as defined through the calculation of LNAPL velocity and transmissivity at monitoring well MW-23, located within the center of AOC 5.
- The residual LNAPL mass contains limited residual benzene contaminant mass, and LNAPL samples from RW-06 collected in 2004 and 2019 indicate that the benzene mass has been depleted through evaporation and Waterwashing. Calculations indicate that 91% of the benzene within RW-6 has been removed through Waterwashing.
- Groundwater samples collected from monitoring wells adjacent and downgradient of AOCs 4 and 5 indicate that the dissolved-phase benzene concentrations are stable or decreasing. Recent dissolved-phase benzene concentrations within wells that have historically had NR 140 ES exceedances for benzene have been reduced 92-99% from the historical high concentrations.
- MW-3 is no longer required as an upgradient delineator well due to the consistent sampling results and downgradient delineation of dissolved-phase groundwater impact at the Terminal.
- The potential for direct contact exceedances within soil was investigated through the advancement of numerous soil borings and collection of soil samples during 2013 and 2014. Two areas with shallow soil impact were excavated within former Parcel B to the south of MW-23, and a total of 5,270 tons of soil within the direct contact interval was removed and backfilled with clean soil. Additional soil borings collected within and around AOC 5 did not contain exceedances of the Industrial Direct Contact RCLs.

Antea Group requests the review and response to this work plan, along with the soil handling plan submitted for the FedEx facility (Form 4400-315 and fee, submitted under separate cover) to include a written response indicating the Wisconsin Department of Natural Resources approval for abandonment of monitoring and recovery wells MW-3, MW-23, and RW-06 without replacement. Redevelopment and expansion of the FedEx facility is anticipated to begin in June 2021.

John Hunt
Wisconsin Department of Natural Resources
March 12, 2021



Questions regarding this memorandum can be directed to Layne Kortbein at the phone number and email listed below.

Sincerely,

A handwritten signature in black ink that reads "Layne Kortbein".

Layne Kortbein
Project Professional
+1 651 697 5117
Layne.Kortbein@anteagroup.us
Antea Group

ATTACHMENTS

FIGURES

- Figure 1 – Preliminary FedEx Expansion Plans
- Figure 2 – Terminal LNAPL Extent Map
- Figure 3 – Comprehensive Site Investigation Map
- Figure 4 – Excavation Map Surrounding SB-24
- Figure 5 – Excavation Map Surrounding SB-23, SB-39, and SB-40

TABLES

- Table 1 – Groundwater and LNAPL Gauging Data
- Table 2 – Groundwater Analytical Results
- Table 3 – Shallow Soil Analytical Results
- Table 4 – Terminal LNAPL Degradation Ratios

APPENDIX

- Appendix A – Dissolved-Phase Benzene Hydrographs



Figure 1
SITE PLAN
 SCALE: 1"=40'-0"

SITE LAYOUT SUMMARY

ITEM	EXISTING	REQ'D.	PROV.
ACREAGE			
TOTAL	5.87	9.91	9.91
PARKING (SPACES)			
AUTOMOBILE TOTAL	140	223	223
STANDARD	135	216	216
HANDICAP	5	7	7
TRAILER TOTAL	16	55	60
28' TRAILER	14	14	22
LONG TRAILER	2	2	2
LONG TRAILER EQUIVALENT SPACE	0	39	36
TRACTOR	5	6	6
DOLLY STORAGE	0	6	6
VAN	5	84	84

- LEGEND**
- NEW ASPHALT PAVEMENT TYPE I
 - NEW ASPHALT PAVEMENT TYPE II
 - NEW ASPHALT PAVEMENT TYPE I (W/ SEALCOAT)
 - NEW CONCRETE PAD
 - NEW FENCE
 - REMOVE FENCE
 - EXISTING FENCE
 - REMOVED
 - NEW STRIPE
 - EXISTING STRIPE

- DESIGN DETAILS**
1. ASPHALT PAVEMENT TYPE I USED IN TRAILER/TRACTOR/VAN AREAS REFER FXG SPECS AND STD. DETAIL 02510-001
 2. ASPHALT PAVEMENT TYPE II USED IN AUTO PARKING LOT ONLY REFER FXG SPECS AND STD. DETAIL 02510-001
 3. CONCRETE PAVEMENT REFER FXG SPECS AND STD DETAIL 02510-007
 4. CONCRETE CURB AT REAR OF TRACTOR AND DOLLY PARKING REFER FXG SPECS AND STD. DETAIL 02522-002
 5. TRAILER PARKING BACK-IN REFER FXG STD. DETAIL 02002-006
 6. TRAILER PARKING BACK-TO-BACK LONGS REFER FXG STD. DETAIL 02002-008
 7. TRACTOR PARKING TO HAVE SEALCOAT REFER FXG SPECS.
 8. CHAIN LINK FENCE REFER FXG SPECS AND STD. DETAIL 02830-006
 9. BLOCK HEATER RECEPTACLES (IF SHOWN ON DRAWING) REFER FXG STD DETAIL 16601-001

- GENERAL NOTES**
1. VERIFY DISTANCE REQUIRED FOR LOCAL SETBACKS, STORM WATER MANAGEMENT REQUIREMENTS AND TOPOGRAPHICAL ADJUSTMENTS.

DISCLAIMER:
 THIS SURVEY IS NOT 100% ACCURATE AND WAS DERIVED FROM ESTIMATED DATA. A FIELD SURVEY IS REQUIRED FOR ACCURACY.
 AERIAL IMAGERY CONTAINED HEREIN HAS BEEN GENERATED BY BING MAPS. IMAGERY SHOULD BE FIELD VERIFIED FOR ACCURACY.

Surveyors Note:
 A difference in actual and record measurements existed between the location of the irons as found on site as compared to the location of the section corners. The irons on site were held more specifically, the southeast corner of Lot 1, CSM 955 and the southwest corner of Halvor Lane, CSM 955. Section corner locations as found are noted.

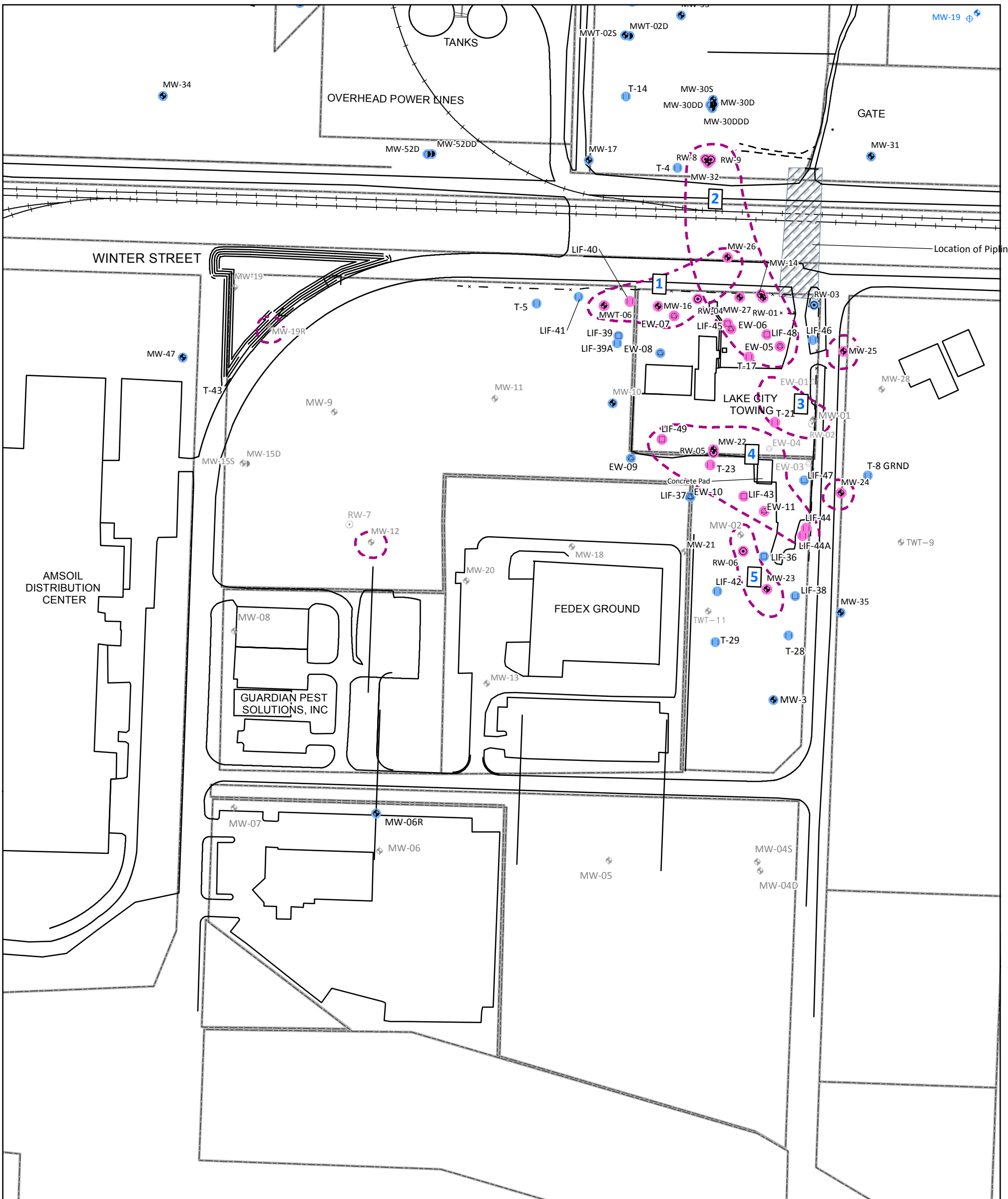
Note: Underground Telephone, Gas, and Electric shown based on field location of marker flags and record documents (ALTA Survey dated 7/09/07)

Note: Underground Water shown based on field location of visible features (valves & hydrants) and record documents (Utility Plan dated 9/28/06)

BENCHMARK: $\text{chm} \text{ TOP OF } \text{TOP NUT OF HYDRANT} = 639.43$
 $\text{Hydrant} = 639.43$

REVISIONS
 JOB # 06.02.2020
 DATE 06.02.2020
 DRAWN BY: KEN
 CHECKED BY:
 FOR INFORMATION PURPOSES ONLY
 NOT FOR CONSTRUCTION
FISCHER
 DULUTH, MN
 SITE LAYOUT
SDI.01C
 SHEET NO.
 FILE NO. DULUTH_SDI.01c.dwg

© 2020 HERE



Legend

- ◆ Monitoring Well Location
- ◆ Abandoned Monitoring Well Location
- Deep Monitoring Well Location
- Abandoned Deep Monitoring Well Location
- ⊙ Recovery Well Location
- ⊙ Abandoned Recovery Well Location
- ⊕ Extraction Well
- ⊕ Abandoned Extraction Well Location
- CPT-LIF Boring Location
- ◆ ABC Rail Monitoring Well
- ◆ ABC Rail Piezometer
- Points with LNAPL
- No LNAPL
- LNAPL Extent
- - - Gravel Access Road
- x - Fence
- ▨ Location of Pipelines Abandoned in Place
- + - Railroad
- ▭ Property Boundary

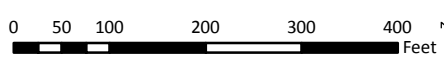
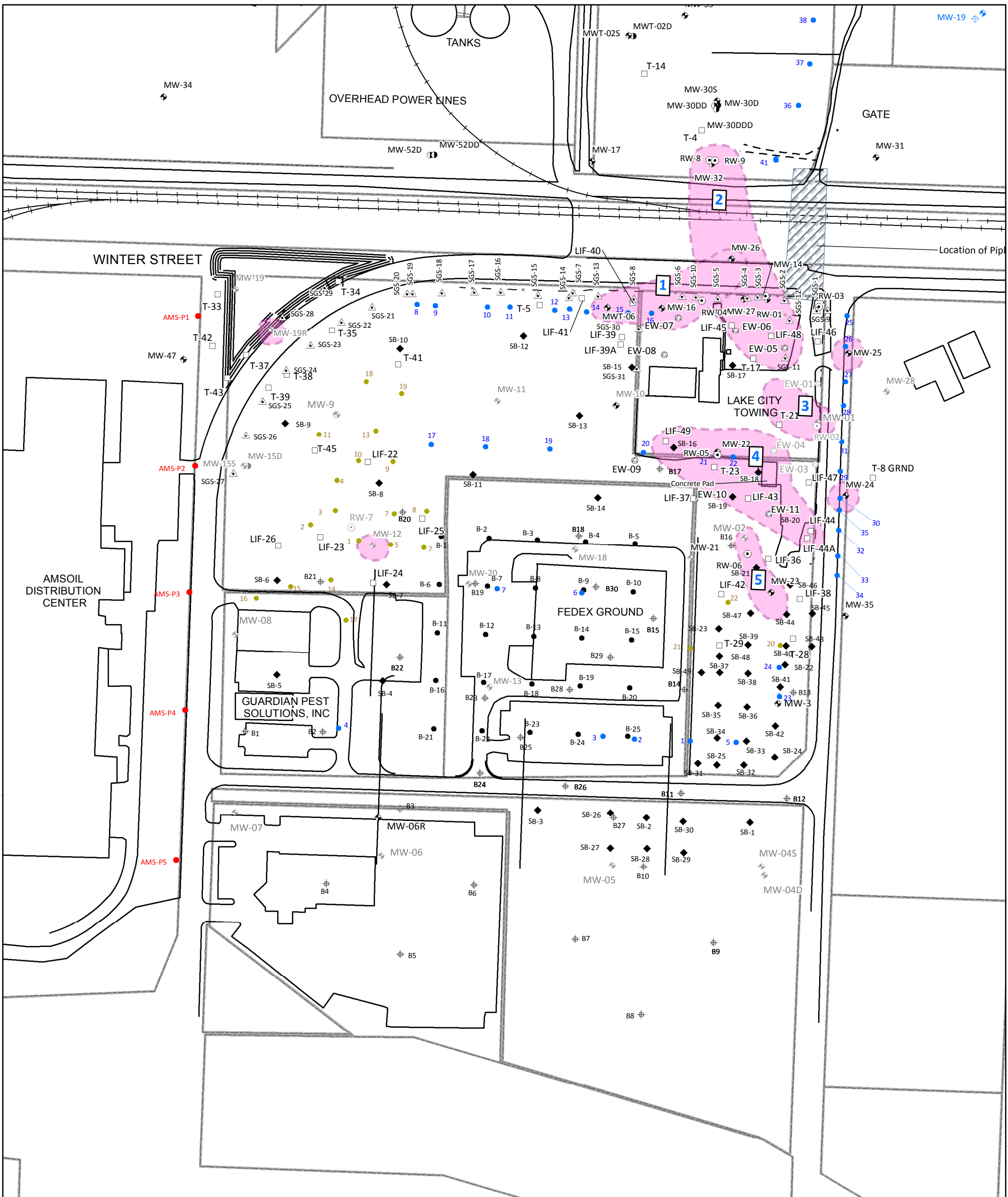


FIGURE 2
LNAPL EXTENT MAP
TERMINAL DETAIL
FORMER AMOCO TERMINAL
SUPERIOR, WISCONSIN

PROJECT NO. WISUP191	PREPARED BY SAA/MB	REF SCALE 1:2,400
DATE 3/3/2021	REVIEWED BY JZ	MAP SCALE 1 INCH = 200 FEET





Legend

- ◆ Monitoring Well Location
- ◆ Abandoned Monitoring Well Location
- Deep Monitoring Well Location
- Abandoned Deep Monitoring Well Location
- ⊙ Recovery Well Location
- ⊙ Abandoned Recovery Well Location
- ⊕ Extraction Well
- ⊕ Abandoned Extraction Well Location
- CPT-LIF Boring Location
- ◆ ABC Rail Monitoring Well
- ⊕ ABC Rail Piezometer
- ◆ Soil Boring Location (Vinje Industrial Park Area) (2003 Soil Borings- TPT Geotech Soil Report 2004)
- Hand Auger Boring (1990)
- Soil Borings (December 1994)
- Amsoil Temporary Well (2004 Data)
- ◆ Hand Auger Sampling Location
- △ SGS Sampling Location
- Soil Sampling Location
- LNAPL Extent
- - - Gravel Access Road
- × - - Fence
- ▨ Location of Pipelines Abandoned in Place
- +— Railroad
- ▭ Property Boundary

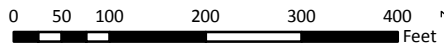


FIGURE 3
SITE MAP
TERMINAL DETAIL
FORMER AMOCO TERMINAL
SUPERIOR, WISCONSIN

PROJECT NO. WISUP191	PREPARED BY SAA/MB	REF SCALE 1:2,400
DATE 3/3/2021	REVIEWED BY JZ	MAP SCALE 1 INCH = 200 FEET



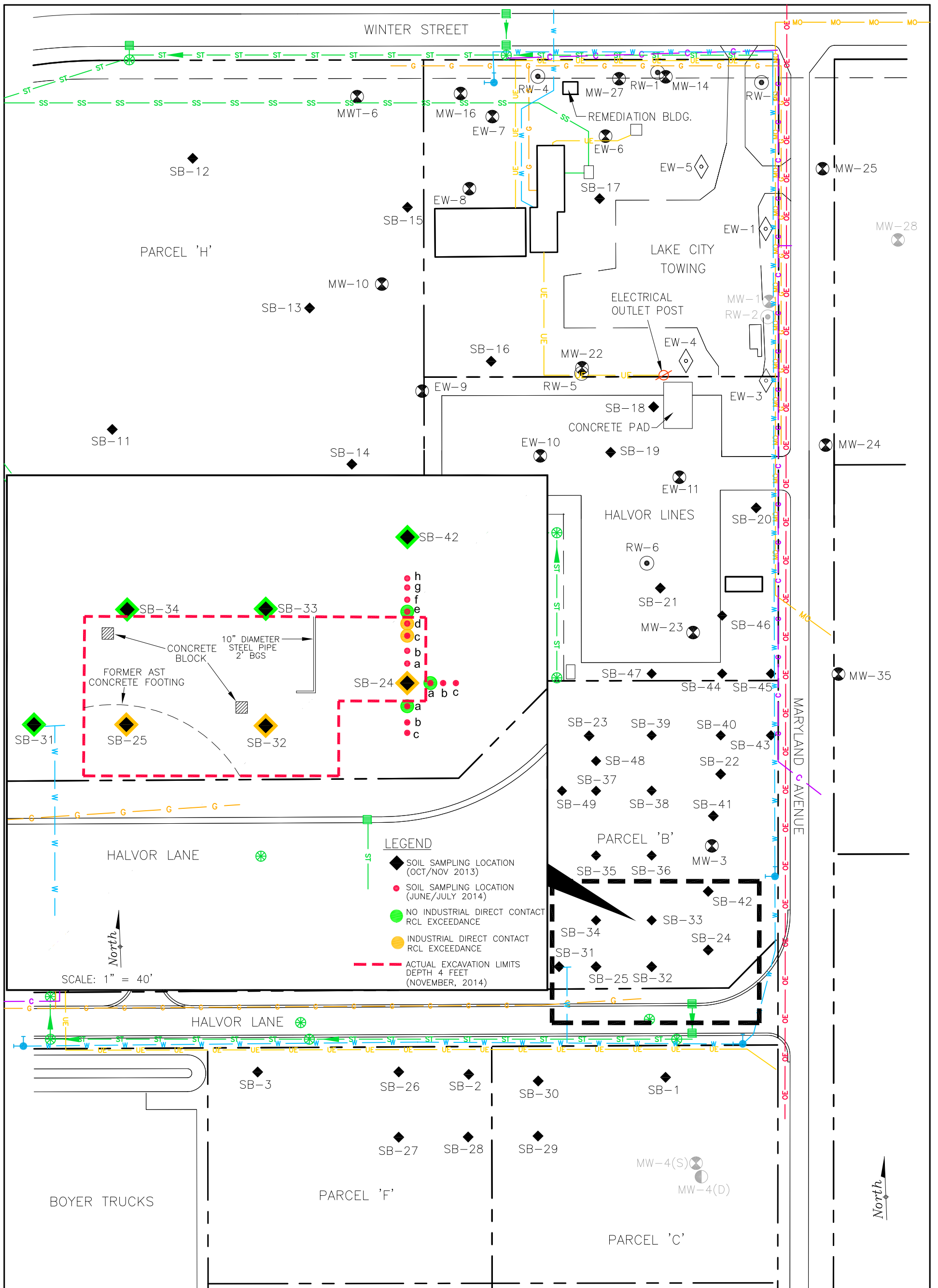


FIGURE 4
SB-24 EXCAVATION MAP
FORMER AMOCO TERMINAL
SUPERIOR, WISCONSIN

PROJECT NO. WISUPERIOR	PREPARED BY AT	DRAWN BY DD
DATE 01/07/15	REVIEWED BY PMP	FILE NAME Superior-100F



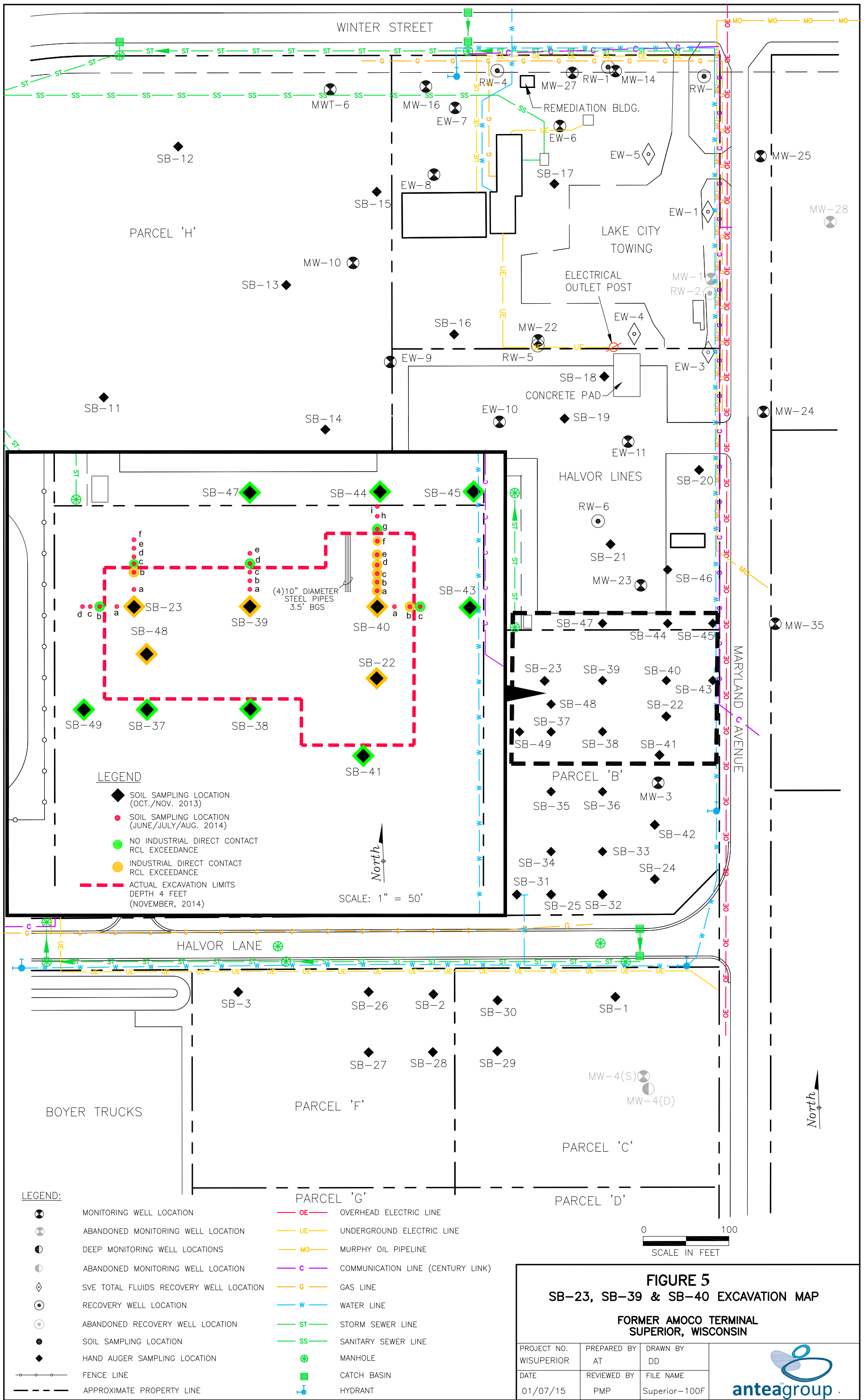


Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-03	03/23/88	633.90	636.17	618.60	609.60	NP	0.00	18.15	15.88	618.02	No	
MW-03	09/08/88	633.90	636.17	618.60	609.60	NP	0.00	17.89	15.62	618.28	No	
MW-03	09/20/88	633.90	636.17	618.60	609.60	NP	0.00	17.38	15.11	618.79	Yes	
MW-03	04/27/89	633.90	636.17	618.60	609.60	NP	0.00	16.37	14.10	619.80	Yes	
MW-03	05/18/89	633.90	636.17	618.60	609.60	NP	0.00	15.80	13.53	620.37	Yes	
MW-03	06/30/89	633.90	636.17	618.60	609.60	NP	0.00	16.33	14.06	619.84	Yes	
MW-03	07/12/89	633.90	636.17	618.60	609.60	NP	0.00	17.07	14.80	619.10	Yes	
MW-03	07/26/89	633.90	636.17	618.60	609.60	NP	0.00	17.38	15.11	618.79	Yes	
MW-03	07/27/89	633.90	636.17	618.60	609.60	NP	0.00	17.60	15.33	618.57	No	
MW-03	09/03/89	633.90	636.17	618.60	609.60	NP	0.00	17.76	15.49	618.41	No	
MW-03	11/16/89	633.90	636.17	618.60	609.60	NP	0.00	17.72	15.45	618.45	No	
MW-03	11/28/89	633.90	636.17	618.60	609.60	NP	0.00	18.15	15.88	618.02	No	
MW-03	06/01/90	633.90	636.17	618.60	609.60	NP	0.00	13.42	11.15	622.75	Yes	
MW-03	06/19/90	633.90	636.17	618.60	609.60	NP	0.00	16.35	14.08	619.82	Yes	
MW-03	06/27/90	633.90	636.17	618.60	609.60	NP	0.00	17.23	14.96	618.94	Yes	
MW-03	07/05/90	633.90	636.17	618.60	609.60	NP	0.00	17.81	15.54	618.36	No	
MW-03	07/13/90	633.90	636.17	618.60	609.60	NP	0.00	18.11	15.84	618.06	No	
MW-03	07/17/90	633.90	636.17	618.60	609.60	NP	0.00	17.72	15.45	618.45	No	
MW-03	07/25/90	633.90	636.17	618.60	609.60	NP	0.00	18.26	15.99	617.91	No	
MW-03	08/09/90	633.90	636.17	618.60	609.60	NP	0.00	18.14	15.87	618.03	No	
MW-03	08/14/90	633.90	636.17	618.60	609.60	NP	0.00	18.23	15.96	617.94	No	
MW-03	08/27/90	633.90	636.17	618.60	609.60	NP	0.00	17.51	15.24	618.66	Yes	
MW-03	09/06/90	633.90	636.17	618.60	609.60	NP	0.00	17.02	14.75	619.15	Yes	
MW-03	01/04/91	633.90	636.17	618.60	609.60	NP	0.00	17.51	15.24	618.66	Yes	
MW-03	01/30/91	633.90	636.17	618.60	609.60	NP	0.00	17.96	15.69	618.21	No	
MW-03	04/24/91	633.90	636.17	618.60	609.60	NP	0.00	15.96	13.69	620.21	Yes	
MW-03	07/09/91	633.90	636.17	618.60	609.60	NP	0.00	13.77	11.50	622.40	Yes	
MW-03	10/08/91	633.90	636.17	618.60	609.60	NP	0.00	13.44	11.17	622.73	Yes	
MW-03	01/07/92	633.90	636.17	618.60	609.60	NP	0.00	13.42	11.15	622.75	Yes	
MW-03	10/14/92	633.90	636.17	618.60	609.60	NP	0.00	7.53	5.26	628.64	Yes	
MW-03	01/29/94	633.90	636.17	618.60	609.60	NP	0.00	15.95	13.68	620.22	Yes	
MW-03	04/27/94	633.90	636.17	618.60	609.60	NP	0.00	12.84	10.57	623.33	Yes	
MW-03	07/21/94	633.90	636.17	618.60	609.60	NP	0.00	13.99	11.72	622.18	Yes	
MW-03	10/25/94	633.90	636.17	618.60	609.60	NP	0.00	6.76	4.49	629.41	Yes	
MW-03	10/27/94	633.90	636.17	618.60	609.60	NP	0.00	6.68	4.41	629.49	Yes	
MW-03	11/02/94	633.90	636.17	618.60	609.60	17.50	0.70	18.20	15.39	618.51	No	
MW-03	02/01/95	633.90	636.17	618.60	609.60	NP	0.00	15.45	13.18	620.72	Yes	
MW-03	04/04/95	633.90	636.17	618.60	609.60	NP	0.00	16.94	14.67	619.23	Yes	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-03	07/12/95	633.90	636.17	618.60	609.60	NP	0.00	15.41	13.14	620.76	Yes	
MW-03	11/13/95	633.90	636.17	618.60	609.60	13.45	0.01	13.46	11.18	622.72	Yes	
MW-03	03/13/96	633.90	636.17	618.60	609.60	16.64	0.01	16.65	14.37	619.53	Yes	
MW-03	10/08/96	633.90	636.17	618.60	609.60	NP	0.00	13.32	11.05	622.85	Yes	
MW-03	04/29/97	633.90	636.17	618.60	609.60	NP	0.00	10.22	7.95	625.95	Yes	
MW-03	11/03/98	633.90	636.17	618.60	609.60	NP	0.00	16.55	14.28	619.62	Yes	
MW-03	03/02/99	633.90	636.17	618.60	609.60	NP	0.00	16.94	14.67	619.23	Yes	
MW-03	04/26/00	633.90	636.17	618.60	609.60	NP	0.00	6.72	4.45	629.45	Yes	
MW-03	08/18/00	633.90	636.17	618.60	609.60	NP	0.00	16.31	14.04	619.86	Yes	
MW-03	03/20/02	633.90	636.17	618.60	609.60	NP	0.00	18.14	15.87	618.03	No	
MW-03	05/15/02	633.90	636.17	618.60	609.60	NP	0.00	6.84	4.57	629.33	Yes	very silty
MW-03	08/20/02	633.90	636.17	618.60	609.60	NP	0.00	6.59	4.32	629.58	Yes	
MW-03	11/05/02	633.90	636.17	618.60	609.60	NP	0.00	6.52	4.25	629.65	Yes	
MW-03	12/23/02	633.90	636.17	618.60	609.60	NP	0.00	17.07	14.80	619.10	Yes	
MW-03	01/28/03	633.90	636.17	618.60	609.60	NP	0.00	17.75	15.48	618.42	No	
MW-03	02/19/03	633.90	636.17	618.60	609.60	NP	0.00	18.02	15.75	618.15	No	
MW-03	04/17/03	633.90	636.17	618.60	609.60	NP	0.00	17.60	15.33	618.57	No	
MW-03	06/10/03	633.90	636.17	618.60	609.60	NP	0.00	17.60	15.33	618.57	No	
MW-03	10/20/03	633.90	636.17	618.60	609.60	NP	0.00	17.98	15.71	618.19	No	
MW-03	12/03/03	633.90	636.17	618.60	609.60	NP	0.00	18.30	16.03	617.87	No	
MW-03	04/19/04	634.51	635.97	618.60	609.60	NP	0.00	17.79	16.33	618.18	No	
MW-03	07/28/04	634.51	635.97	618.60	609.60	NP	0.00	16.80	15.34	619.17	Yes	
MW-03	11/16/04	634.51	635.97	618.60	609.60	NP	0.00	15.69	14.23	620.28	Yes	
MW-03	04/18/05	634.51	635.97	618.60	609.60	NP	0.00	15.78	14.32	620.19	Yes	
MW-03	10/11/05	634.51	635.97	618.60	609.60	NP	0.00	15.30	13.84	620.67	Yes	
MW-03	05/23/06	634.51	635.97	618.60	609.60	NP	0.00	12.72	11.26	623.25	Yes	
MW-03	10/16/06	634.51	635.97	618.60	609.60	NP	0.00	16.78	15.32	619.19	Yes	
MW-03	04/23/07	634.51	635.97	618.60	609.60	NP	0.00	10.32	8.86	625.65	Yes	
MW-03	09/25/07	634.51	636.63	618.60	609.60	NP	0.00	13.97	11.85	622.66	Yes	
MW-03	05/01/08	634.51	636.63	618.60	609.60	NP	0.00	12.15	10.03	624.48	Yes	
MW-03	10/20/08	634.51	636.63	618.60	609.60	NP	0.00	6.93	4.81	629.70	Yes	
MW-03	04/18/09	634.51	636.63	618.60	609.60	NP	0.00	8.48	6.36	628.15	Yes	
MW-03	10/11/09	634.51	636.63	618.60	609.60	NP	0.00	16.87	14.75	619.76	Yes	
MW-03	04/28/10	634.51	636.63	618.60	609.60	NP	0.00	15.46	13.34	621.17	Yes	
MW-03	10/25/10	634.51	636.63	618.60	609.60	NP	0.00	7.57	5.45	629.06	Yes	
MW-03	04/25/11	634.51	636.63	618.60	609.60	NP	0.00	7.42	5.30	629.21	Yes	
MW-03	10/10/11	634.51	636.63	618.60	609.60	NP	0.00	16.11	13.99	620.52	Yes	
MW-03	01/04/12	634.51	636.63	618.60	609.60	NP	0.00	17.37	15.25	619.26	Yes	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-03	04/16/12	634.51	636.63	618.60	609.60	NP	0.00	15.80	13.68	620.83	Yes	
MW-03	06/26/12	634.51	636.63	618.60	609.60	NP	0.00	7.02	4.90	629.61	Yes	
MW-03	09/30/12	634.51	636.63	618.60	609.60	NP	0.00	17.49	15.37	619.14	Yes	
MW-03	12/17/12	634.51	636.63	618.60	609.60	NP	0.00	17.83	15.71	618.80	Yes	
MW-03	03/25/13	634.51	636.63	618.60	609.60	NP	0.00	19.01	16.89	617.62	No	
MW-03	05/05/13	634.51	636.63	618.60	609.60	NP	0.00	9.33	7.21	627.30	Yes	
MW-03	10/01/13	634.51	636.63	618.60	609.60	NP	0.00	17.44	15.32	619.19	Yes	
MW-03	05/21/14	634.51	636.63	618.60	609.60	NP	0.00	5.87	3.75	630.76	Yes	
MW-03	10/30/14	634.51	636.63	618.60	609.60	NP	0.00	8.74	6.62	627.89	Yes	
MW-03	05/06/15	634.51	636.63	618.60	609.60	NP	0.00	15.09	12.97	621.54	Yes	
MW-03	10/06/15	634.51	636.63	618.60	609.60	NP	0.00	8.09	5.97	628.54	Yes	
MW-03	05/23/16	634.51	636.63	618.60	609.60	NP	0.00	6.92	4.80	629.71	Yes	
MW-03	10/03/16	634.51	636.63	618.60	609.60	NP	0.00	6.70	4.58	629.93	Yes	
MW-03	06/29/17	634.51	636.63	618.60	609.60	NP	0.00	7.73	5.61	628.90	Yes	
MW-03	05/26/20	634.51	636.63	618.60	609.60	NP	0.00	7.34	5.22	629.29	Yes	
MW-10	03/23/88	631.40	633.77	615.90	606.90	NP	0.00	18.01	15.64	615.76	No	
MW-10	09/08/88	631.40	633.77	615.90	606.90	NP	0.00	18.38	16.01	615.39	No	
MW-10	09/20/88	631.40	633.77	615.90	606.90	NP	0.00	18.60	16.23	615.17	No	
MW-10	04/27/89	631.40	633.77	615.90	606.90	NP	0.00	18.37	16.00	615.40	No	
MW-10	05/18/89	631.40	633.77	615.90	606.90	NP	0.00	18.10	15.73	615.67	No	
MW-10	06/30/89	631.40	633.77	615.90	606.90	NP	0.00	17.55	15.18	616.22	Yes	
MW-10	07/12/89	631.40	633.77	615.90	606.90	NP	0.00	17.66	15.29	616.11	Yes	
MW-10	07/26/89	631.40	633.77	615.90	606.90	NP	0.00	17.61	15.24	616.16	Yes	
MW-10	07/27/89	631.40	633.77	615.90	606.90	NP	0.00	17.68	15.31	616.09	Yes	
MW-10	09/03/89	631.40	633.77	615.90	606.90	NP	0.00	17.73	15.36	616.04	Yes	
MW-10	11/16/89	631.40	633.77	615.90	606.90	NP	0.00	17.94	15.57	615.83	No	
MW-10	11/28/89	631.40	633.77	615.90	606.90	NP	0.00	18.20	15.83	615.57	No	
MW-10	06/01/90	631.40	633.77	615.90	606.90	NP	0.00	18.34	15.97	615.43	No	
MW-10	06/19/90	631.40	633.77	615.90	606.90	NP	0.00	18.14	15.77	615.63	No	
MW-10	06/27/90	631.40	633.77	615.90	606.90	NP	0.00	18.28	15.91	615.49	No	
MW-10	07/05/90	631.40	633.77	615.90	606.90	NP	0.00	18.50	16.13	615.27	No	
MW-10	07/13/90	631.40	633.77	615.90	606.90	NP	0.00	18.40	16.03	615.37	No	
MW-10	07/17/90	631.40	633.77	615.90	606.90	NP	0.00	18.23	15.86	615.54	No	
MW-10	07/25/90	631.40	633.77	615.90	606.90	NP	0.00	18.36	15.99	615.41	No	
MW-10	08/09/90	631.40	633.77	615.90	606.90	NP	0.00	18.28	15.91	615.49	No	
MW-10	08/14/90	631.40	633.77	615.90	606.90	NP	0.00	18.39	16.02	615.38	No	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-10	08/27/90	631.40	633.77	615.90	606.90	NP	0.00	18.09	15.72	615.68	No	
MW-10	09/06/90	631.40	633.77	615.90	606.90	NP	0.00	18.02	15.65	615.75	No	
MW-10	01/04/91	631.40	633.77	615.90	606.90	NP	0.00	17.44	15.07	616.33	Yes	
MW-10	01/30/91	631.40	633.77	615.90	606.90	NP	0.00	17.57	15.20	616.20	Yes	
MW-10	04/24/91	631.40	633.77	615.90	606.90	NP	0.00	18.19	15.82	615.58	No	
MW-10	07/09/91	631.40	633.77	615.90	606.90	NP	0.00	16.16	13.79	617.61	Yes	
MW-10	10/08/91	631.40	633.77	615.90	606.90	NP	0.00	14.89	12.52	618.88	Yes	
MW-10	01/07/92	631.40	633.77	615.90	606.90	NP	0.00	14.88	12.51	618.89	Yes	
MW-10	10/14/92	631.40	633.77	615.90	606.90	NP	0.00	14.87	12.50	618.90	Yes	
MW-10	01/29/94	631.40	633.77	615.90	606.90	NP	0.00	16.01	13.64	617.76	Yes	
MW-10	04/27/94	631.40	633.77	615.90	606.90	NP	0.00	16.13	13.76	617.64	Yes	
MW-10	07/21/94	631.40	633.77	615.90	606.90	NP	0.00	14.78	12.41	618.99	Yes	
MW-10	10/25/94	631.40	633.77	615.90	606.90	NP	0.00	15.25	12.88	618.52	Yes	
MW-10	10/27/94	631.40	633.77	615.90	606.90	NP	0.00	14.70	12.33	619.07	Yes	
MW-10	11/02/94	631.40	633.77	615.90	606.90	NP	0.00	17.20	14.83	616.57	Yes	
MW-10	02/01/95	631.40	633.77	615.90	606.90	NP	0.00	16.96	14.59	616.81	Yes	
MW-10	04/04/95	631.40	633.77	615.90	606.90	NP	0.00	17.12	14.75	616.65	Yes	
MW-10	07/12/95	631.40	633.77	615.90	606.90	NP	0.00	16.15	13.78	617.62	Yes	
MW-10	11/13/95	631.40	633.77	615.90	606.90	NP	0.00	14.88	12.51	618.89	Yes	
MW-10	03/13/96	631.40	633.77	615.90	606.90	16.67	0.01	16.68	14.30	617.10	Yes	
MW-10	10/08/96	631.40	633.77	615.90	606.90	NP	0.00	14.02	11.65	619.75	Yes	
MW-10	04/29/97	631.40	633.77	615.90	606.90	NP	0.00	13.30	10.93	620.47	Yes	
MW-10	11/03/98	631.40	633.77	615.90	606.90	NP	0.00	17.01	14.64	616.76	Yes	
MW-10	03/02/99	631.40	633.77	615.90	606.90	NP	0.00	17.01	14.64	616.76	Yes	
MW-10	04/26/00	631.40	633.77	615.90	606.90	NP	0.00	16.18	13.81	617.59	Yes	
MW-10	08/18/00	631.40	633.77	615.90	606.90	NP	0.00	16.62	14.25	617.15	Yes	
MW-10	10/10/00	631.40	633.77	615.90	606.90	NP	0.00	16.80	14.43	616.97	Yes	
MW-10	09/30/02	631.40	633.77	615.90	606.90	NP	0.00	17.09	14.72	616.68	Yes	
MW-10	11/05/02	631.40	633.77	615.90	606.90	NP	0.00	16.34	13.97	617.43	Yes	
MW-10	06/10/03	631.40	633.77	615.90	606.90	NP	0.00	17.85	15.48	615.92	Yes	
MW-10	10/20/03	631.40	633.77	615.90	606.90	NP	0.00	17.97	15.60	615.80	No	
MW-10	12/03/03	631.40	633.77	615.90	606.90	NP	0.00	18.31	15.94	615.46	No	
MW-10	04/19/04	634.75	633.83	615.90	606.90	NP	0.00	18.39	19.31	615.44	No	
MW-10	07/28/04	634.75	633.83	615.90	606.90	NP	0.00	17.74	18.66	616.09	Yes	
MW-10	11/16/04	634.75	633.83	615.90	606.90	NP	0.00	17.17	18.09	616.66	Yes	
MW-10	04/18/05	634.75	633.83	615.90	606.90	NP	0.00	17.39	18.31	616.44	Yes	
MW-10	10/11/05	634.75	633.83	615.90	606.90	NP	0.00	16.62	17.54	617.21	Yes	
MW-10	05/23/06	634.75	633.83	615.90	606.90	NP	0.00	15.91	16.83	617.92	Yes	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-10	10/16/06	634.75	633.83	615.90	606.90	NP	0.00	16.81	17.73	617.02	Yes	
MW-10	04/23/07	634.75	633.83	615.90	606.90	NP	0.00	17.69	18.61	616.14	Yes	
MW-10	09/25/07	634.75	635.95	615.90	606.90	NP	0.00	19.56	18.36	616.39	Yes	
MW-10	05/01/08	634.75	635.95	615.90	606.90	NP	0.00	18.35	17.15	617.60	Yes	
MW-10	10/20/08	634.75	635.95	615.90	606.90	NP	0.00	17.26	16.06	618.69	Yes	
MW-10	04/18/09	634.75	635.95	615.90	606.90	NP	0.00	18.33	17.13	617.62	Yes	
MW-10	10/11/09	634.75	635.95	615.90	606.90	NP	0.00	18.79	17.59	617.16	Yes	
MW-10	04/28/10	634.75	635.95	615.90	606.90	NP	0.00	18.91	17.71	617.04	Yes	
MW-10	10/25/10	634.75	635.95	615.90	606.90	NP	0.00	16.70	15.50	619.25	Yes	
MW-10	04/25/11	634.75	635.95	615.90	606.90	NP	0.00	17.92	16.72	618.03	Yes	
MW-10	10/10/11	634.75	635.95	615.90	606.90	NP	0.00	17.48	16.28	618.47	Yes	
MW-10	01/04/12	634.75	635.95	615.90	606.90	NP	0.00	18.78	17.58	617.17	Yes	
MW-10	04/16/12	634.75	635.95	615.90	606.90	NP	0.00	19.57	18.37	616.38	Yes	
MW-10	06/26/12	634.75	635.95	615.90	606.90	NP	0.00	17.18	15.98	618.77	Yes	
MW-10	09/30/12	634.75	635.95	615.90	606.90	NP	0.00	18.61	17.41	617.34	Yes	
MW-10	12/17/12	634.75	635.95	615.90	606.90	NP	0.00	19.21	18.01	616.74	Yes	
MW-10	03/25/13	634.75	635.95	615.90	606.90	NP	0.00	19.97	18.77	615.98	Yes	
MW-10	05/05/13	634.75	635.95	615.90	606.90	NP	0.00	19.76	18.56	616.19	Yes	
MW-10	10/03/13	634.75	635.95	615.90	606.90	NP	0.00	19.31	18.11	616.64	Yes	
MW-10	05/21/14	634.75	635.95	615.90	606.90	NP	0.00	17.85	16.65	618.10	Yes	
MW-10	10/31/14	634.75	635.95	615.90	606.90	NP	0.00	17.43	16.23	618.52	Yes	
MW-10	05/05/15	634.75	635.95	615.90	606.90	NP	0.00	19.14	17.94	616.81	Yes	
MW-10	10/05/15	634.75	635.95	615.90	606.90	NP	0.00	17.08	15.88	618.87	Yes	
MW-10	05/23/16	634.75	635.95	615.90	606.90	NP	0.00	15.15	13.95	620.80	Yes	
MW-10	10/03/16	634.75	635.95	615.90	606.90	NP	0.00	16.22	15.02	619.73	Yes	
MW-10	06/29/17	634.75	635.95	615.90	606.90	NP	0.00	15.75	14.55	620.20	Yes	
MW-10	05/26/20	634.75	635.95	615.90	606.90	NP	0.00	15.05	13.85	620.90	Yes	
MW-23	06/30/89	633.90	636.81	624.70	609.70	17.07	3.20	20.27	14.88	619.02	No	
MW-23	07/12/89	633.90	636.81	624.70	609.70	15.08	2.50	17.58	12.73	621.17	No	
MW-23	07/26/89	633.90	636.81	624.70	609.70	17.81	2.73	20.54	15.52	618.38	No	
MW-23	07/27/89	633.90	636.81	624.70	609.70	17.83	2.77	20.60	15.55	618.35	No	
MW-23	09/03/89	633.90	636.81	624.70	609.70	17.95	3.72	21.67	15.88	618.02	No	
MW-23	11/16/89	633.90	636.81	624.70	609.70	17.20	5.15	22.35	15.45	618.45	No	
MW-23	11/29/89	633.90	636.81	624.70	609.70	17.55	3.98	21.53	15.54	618.36	No	
MW-23	12/01/89	633.90	636.81	624.70	609.70	18.20	2.27	20.47	15.80	618.10	No	
MW-23	12/02/89	633.90	636.81	624.70	609.70	18.41	1.41	19.82	15.82	618.08	No	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-23	05/04/90	633.90	636.81	624.70	609.70	18.03	4.26	22.29	16.08	617.82	No	
MW-23	06/01/90	633.90	636.81	624.70	609.70	17.35	3.65	21.00	15.26	618.64	No	
MW-23	06/19/90	633.90	636.81	624.70	609.70	17.49	3.37	20.86	15.34	618.56	No	
MW-23	06/27/90	633.90	636.81	624.70	609.70	17.78	3.28	21.06	15.61	618.29	No	
MW-23	07/05/90	633.90	636.81	624.70	609.70	18.10	3.43	21.53	15.96	617.94	No	
MW-23	07/13/90	633.90	636.81	624.70	609.70	18.02	3.65	21.67	15.93	617.97	No	
MW-23	07/17/90	633.90	636.81	624.70	609.70	17.78	3.57	21.35	15.68	618.22	No	
MW-23	07/25/90	633.90	636.81	624.70	609.70	18.10	3.79	21.89	16.05	617.85	No	
MW-23	08/09/90	633.90	636.81	624.70	609.70	20.68	2.65	23.33	18.37	615.53	No	
MW-23	08/27/90	633.90	636.81	624.70	609.70	18.29	3.71	22.00	16.22	617.68	No	
MW-23	09/06/90	633.90	636.81	624.70	609.70	17.75	3.07	20.82	15.53	618.37	No	
MW-23	01/04/91	633.90	636.81	624.70	609.70	17.84	2.56	20.40	15.51	618.39	No	
MW-23	01/30/91	633.90	636.81	624.70	609.70	18.05	3.18	21.23	15.86	618.04	No	
MW-23	04/24/91	633.90	636.81	624.70	609.70	17.18	3.78	20.96	15.12	618.78	No	
MW-23	06/06/91	633.90	636.81	624.70	609.70	15.11	4.67	19.78	13.25	620.65	No	
MW-23	07/09/91	633.90	636.81	624.70	609.70	13.76	5.93	19.69	12.19	621.71	No	
MW-23	08/06/91	633.90	636.81	624.70	609.70	12.87	7.10	19.97	11.56	622.34	No	
MW-23	09/04/91	633.90	636.81	624.70	609.70	13.93	6.02	19.95	12.38	621.52	No	
MW-23	10/08/91	633.90	636.81	624.70	609.70	13.10	6.60	19.70	11.68	622.22	No	
MW-23	11/08/91	633.90	636.81	624.70	609.70	14.32	5.15	19.47	12.57	621.33	No	
MW-23	12/03/91	633.90	636.81	624.70	609.70	10.40	10.15	20.55	9.78	624.12	No	
MW-23	01/07/92	633.90	636.81	624.70	609.70	13.27	7.60	20.87	12.08	621.82	No	
MW-23	02/04/92	633.90	636.81	624.70	609.70	15.40	4.54	19.94	13.52	620.38	No	
MW-23	03/03/92	633.90	636.81	624.70	609.70	15.45	5.75	21.20	13.84	620.06	No	
MW-23	09/24/92	633.90	636.81	624.70	609.70	13.02	6.61	19.63	11.60	622.30	No	
MW-23	10/14/92	633.90	636.81	624.70	609.70	14.23	5.64	19.87	12.59	621.31	No	
MW-23	06/25/93	633.90	636.81	624.70	609.70	9.77	9.74	19.51	9.06	624.84	Yes	
MW-23	10/28/93	633.90	636.81	624.70	609.70	15.31	4.55	19.86	13.43	620.47	No	
MW-23	01/29/94	633.90	636.81	624.70	609.70	16.32	3.70	20.02	14.25	619.65	No	
MW-23	04/27/94	633.90	636.81	624.70	609.70	13.99	6.34	20.33	12.51	621.39	No	
MW-23	07/21/94	633.90	636.81	624.70	609.70	13.72	5.86	19.58	12.13	621.77	No	
MW-23	10/25/94	633.90	636.81	624.70	609.70	13.84	6.49	20.33	12.40	621.50	No	
MW-23	02/01/95	633.90	636.81	624.70	609.70	17.28	2.53	19.81	14.94	618.96	No	
MW-23	04/04/95	633.90	636.81	624.70	609.70	17.60	2.65	20.25	15.29	618.61	No	
MW-23	11/13/95	633.90	636.81	624.70	609.70	13.05	6.90	19.95	11.70	622.20	No	
MW-23	10/08/96	633.90	636.81	624.70	609.70	12.78	6.47	19.25	11.33	622.57	No	
MW-23	04/29/97	633.90	636.81	624.70	609.70	10.25	9.20	19.45	9.42	624.48	No	
MW-23	06/10/97	633.90	636.81	624.70	609.70	13.45	5.40	18.85	11.76	622.14	No	FP bailed 5/22/97

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-23	11/03/98	633.90	636.81	624.70	609.70	16.05	5.16	21.21	14.31	619.59	No	
MW-23	03/02/99	633.90	636.81	624.70	609.70	16.91	4.04	20.95	14.91	618.99	No	
MW-23	10/07/99	633.90	636.81	624.70	609.70	12.44	5.61	18.05	10.80	623.10	No	
MW-23	11/09/99	633.90	636.81	624.70	609.70	11.95	6.75	18.70	10.56	623.34	No	bailed 3 gal. FP
MW-23	12/21/99	633.90	636.81	624.70	609.70	14.55	4.45	19.00	12.65	621.25	No	bailed 8 gal. FP
MW-23	01/27/00	633.90	636.81	624.70	609.70	17.32	1.58	18.90	14.77	619.13	No	bailed 0.4 gal. FP
MW-23	02/24/00	633.90	636.81	624.70	609.70	17.64	1.32	18.96	15.03	618.87	No	bailed 0.25 gal. FP
MW-23	03/31/00	633.90	636.81	624.70	609.70	15.70	4.07	19.77	13.71	620.19	No	bailed 2 gal. FP
MW-23	04/20/00	633.90	636.81	624.70	609.70	13.18	7.37	20.55	11.93	621.97	No	bailed 6 gal. FP
MW-23	04/26/00	633.90	636.81	624.70	609.70	15.82	3.18	19.00	13.63	620.27	No	bailed 2 gal. FP
MW-23	05/31/00	633.90	636.81	624.70	609.70	16.20	2.58	18.78	13.87	620.03	No	bailed 3 gal. FP
MW-23	06/29/00	633.90	636.81	624.70	609.70	15.15	3.60	18.75	13.05	620.85	No	bailed 1 gal. FP
MW-23	07/26/00	633.90	636.81	624.70	609.70	16.02	2.84	18.86	13.75	620.15	No	bailed 1 gal. FP
MW-23	08/18/00	633.90	636.81	624.70	609.70	16.55	2.50	19.05	14.20	619.70	No	bailed 1 gal. FP
MW-23	09/27/00	633.90	636.81	624.70	609.70	17.41	2.12	19.53	14.98	618.92	No	bailed 1.25 gal. FP
MW-23	10/11/00	633.90	636.81	624.70	609.70	17.60	1.75	19.35	15.09	618.81	No	bailed .25 gal. FP
MW-23	11/17/00	633.90	636.81	624.70	609.70	14.98	5.33	20.31	13.27	620.63	No	bailed 4.25 gal. FP
MW-23	12/12/00	633.90	636.81	624.70	609.70	15.11	4.98	20.09	13.32	620.58	No	bailed 2.5 gal. FP
MW-23	01/18/01	633.90	636.81	624.70	609.70	15.51	4.92	20.43	13.71	620.19	No	bailed 2.75 gal. FP
MW-23	04/24/01	633.90	636.81	624.70	609.70	16.16	3.46	19.62	14.03	619.87	No	product abated using vactruck
MW-23	05/23/01	633.90	636.81	624.70	609.70	13.73	5.82	19.55	12.13	621.77	No	no product bailed
MW-23	06/19/01	633.90	636.81	624.70	609.70	14.77	4.47	19.24	12.87	621.03	No	
MW-23	07/26/01	633.90	636.81	624.70	609.70	16.99	2.36	19.35	14.61	619.29	No	
MW-23	08/31/01	633.90	636.81	624.70	609.70	16.99	2.69	19.68	14.69	619.21	No	
MW-23	09/26/01	633.90	636.81	624.70	609.70	17.59	2.01	19.60	15.13	618.77	No	
MW-23	10/24/01	633.90	636.81	624.70	609.70	17.16	2.70	19.86	14.86	619.04	No	
MW-23	12/20/01	633.90	636.81	624.70	609.70	17.90	2.43	20.33	15.54	618.36	No	
MW-23	01/22/02	633.90	636.81	624.70	609.70	17.89	2.01	19.90	15.43	618.47	No	
MW-23	02/26/02	633.90	636.81	624.70	609.70	18.32	2.89	21.21	16.06	617.84	No	
MW-23	03/20/02	633.90	636.81	624.70	609.70	18.45	3.10	21.55	16.24	617.66	No	
MW-23	04/24/02	633.90	636.81	624.70	609.70	17.33	2.73	20.06	15.04	618.86	No	
MW-23	05/15/02	633.90	636.81	624.70	609.70	16.47	2.99	19.46	14.24	619.66	No	
MW-23	06/27/02	633.90	636.81	624.70	609.70	16.97	2.52	19.49	14.63	619.27	No	
MW-23	07/25/02	633.90	636.81	624.70	609.70	17.23	1.94	19.17	14.76	619.14	No	
MW-23	08/20/02	633.90	636.81	624.70	609.70	17.44	1.95	19.39	14.97	618.93	No	
MW-23	09/30/02	633.90	636.81	624.70	609.70	16.65	2.05	18.70	14.20	619.70	No	
MW-23	11/05/02	633.90	636.81	624.70	609.70	15.29	4.37	19.66	13.37	620.53	No	
MW-23	12/23/02	633.90	636.81	624.70	609.70	17.69	1.78	19.47	15.18	618.72	No	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-23	01/28/03	633.90	636.81	624.70	609.70	18.18	1.94	20.12	15.71	618.19	No	
MW-23	02/19/03	633.90	636.81	624.70	609.70	18.31	2.64	20.95	16.00	617.90	No	
MW-23	04/17/03	633.90	636.81	624.70	609.70	18.63	3.61	22.24	16.54	617.36	No	
MW-23	05/15/03	633.90	636.81	624.70	609.70	18.42	3.58	22.00	16.32	617.58	No	
MW-23	06/10/03	633.90	636.81	624.70	609.70	18.10	2.32	20.42	15.71	618.19	No	
MW-23	10/23/03	633.90	636.81	624.70	609.70	18.46	3.32	21.78	16.30	617.60	No	
MW-23	12/03/03	633.90	636.81	624.70	609.70	18.58	3.58	22.16	16.48	617.42	No	
MW-23	04/19/04	635.07	636.91	624.70	609.70	18.89	3.75	22.64	17.90	617.17	No	
MW-23	07/28/04	635.07	636.91	624.70	609.70	17.95	2.15	20.10	16.60	618.47	No	
MW-23	11/15/04	635.07	636.91	624.70	609.70	16.31	3.23	19.54	15.20	619.87	No	
MW-23	04/18/05	635.07	636.91	624.70	609.70	16.59	3.89	20.48	15.63	619.44	No	
MW-23	09/09/05	635.07	636.91	624.70	609.70	17.85	1.40	19.25	16.33	618.74	No	
MW-23	10/11/05	635.07	636.91	624.70	609.70	16.07	4.22	20.29	15.18	619.89	No	
MW-23	05/23/06	635.07	636.91	624.70	609.70	15.63	2.66	18.29	14.39	620.68	No	
MW-23	10/16/06	635.07	636.91	624.70	609.70	17.59	1.53	19.12	16.10	618.97	No	
MW-23	04/23/07	635.07	636.91	624.70	609.70	18.25	3.31	21.56	17.16	617.91	No	
MW-23	09/25/07	635.07	636.91	624.70	609.70	17.93	3.27	21.20	16.83	618.24	No	
MW-23	05/01/08	635.07	636.91	624.70	609.70	15.32	3.84	19.16	14.35	620.72	No	
MW-23	10/20/08	635.07	636.91	624.70	609.70	12.98	6.13	19.11	12.52	622.55	No	
MW-23	04/18/09	635.07	636.91	624.70	609.70	15.02	4.13	19.15	14.11	620.96	No	
MW-23	10/11/09	635.07	636.91	624.70	609.70	17.82	0.52	18.34	16.10	618.97	No	
MW-23	04/28/10	635.07	636.91	624.70	609.70	17.22	1.04	18.26	15.61	619.46	No	
MW-23	10/25/10	635.07	636.91	624.70	609.70	14.84	2.69	17.53	13.61	621.46	No	
MW-23	04/25/11	635.07	636.91	624.70	609.70	15.62	2.62	18.24	14.37	620.70	No	
MW-23	08/03/11	635.07	636.91	624.70	609.70	14.29	3.38	17.67	13.21	621.86	No	
MW-23	10/10/11	635.07	636.91	624.70	609.70	16.41	1.13	17.54	14.83	620.24	No	
MW-23	01/04/12	635.07	636.91	624.70	609.70	17.95	0.51	18.46	16.23	618.84	No	
MW-23	04/05/12	635.07	636.91	624.70	609.70	18.21	2.08	20.29	16.84	618.23	No	Spill Buddy Before Reading
MW-23	04/05/12	635.07	636.91	624.70	609.70	19.55	0.05	19.60	17.72	617.35	No	Spill Buddy After Reading
MW-23	04/16/12	635.07	636.91	624.70	609.70	17.88	1.73	19.61	16.43	618.64	No	
MW-23	06/26/12	635.07	636.91	624.70	609.70	14.11	3.82	17.93	13.13	621.94	No	
MW-23	07/11/12	635.07	636.91	624.70	609.70	13.95	3.90	17.85	12.99	622.08	No	Spill Buddy Before Reading
MW-23	07/11/12	635.07	636.91	624.70	609.70	17.00	0.23	17.23	15.21	619.86	No	Spill Buddy After Reading
MW-23	08/09/12	635.07	636.91	624.70	609.70	16.72	0.98	17.70	15.10	619.97	No	Spill Buddy Before Reading
MW-23	08/09/12	635.07	636.91	624.70	609.70	17.40	0.15	17.55	15.59	619.48	No	Spill Buddy After Reading
MW-23	09/29/12	635.07	636.91	624.70	609.70	17.95	0.50	18.45	16.22	618.85	No	Spill buddy not working
MW-23	09/30/12	635.07	636.91	624.70	609.70	17.88	0.50	18.38	16.15	618.92	No	
MW-23	11/17/12	635.07	636.91	624.70	609.70	18.18	1.35	19.53	16.64	618.43	No	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-23	03/25/13	635.07	636.91	624.70	609.70	18.68	3.09	21.77	17.54	617.53	No	
MW-23	05/05/13	635.07	636.91	624.70	609.70	18.23	2.33	20.56	16.92	618.15	No	
MW-23	10/03/13	635.07	636.91	624.70	609.70	18.13	1.48	19.61	16.62	618.45	No	
MW-23	05/22/14	635.07	636.91	624.70	609.70	14.01	2.18	16.19	12.66	622.41	No	
MW-23	10/31/14	635.07	636.91	624.70	609.70	15.17	3.74	18.91	14.17	620.90	No	
MW-23	05/06/15	635.07	636.91	624.70	609.70	17.86	1.04	18.90	16.25	618.82	No	
MW-23	10/05/15	635.07	636.91	624.70	609.70	13.50	5.10	18.60	12.81	622.26	No	
MW-23	05/23/16	635.07	636.91	624.70	609.70	11.52	6.40	17.92	11.13	623.94	No	
MW-23	10/03/16	635.07	636.91	624.70	609.70	13.55	4.30	17.85	12.68	622.39	No	
MW-23	06/14/17	635.07	636.91	624.70	609.70	11.45	6.51	17.96	11.08	623.99	No	
MW-23	06/21/17	635.07	636.91	624.70	609.70	12.22	5.72	17.94	11.67	623.40	No	
MW-23	06/22/17	635.07	636.91	624.70	609.70	12.10	5.80	17.90	11.57	623.50	No	
MW-23	06/23/17	635.07	636.91	624.70	609.70	13.06	2.19	15.25	11.71	623.36	No	
MW-23	10/26/17	635.07	636.91	624.70	609.70	9.42	8.29	17.71	9.45	625.62	Yes	
MW-23	05/26/20	635.07	636.91	624.70	609.70	11.41	8.18	19.59	11.42	623.65	No	
MW-35	08/06/91	637.20	639.58	619.08	609.08	NP	0.00	16.96	14.58	622.62	Yes	
MW-35	10/08/91	637.20	639.58	619.08	609.08	NP	0.00	16.85	14.47	622.73	Yes	
MW-35	01/07/92	637.20	639.58	619.08	609.08	NP	0.00	17.28	14.90	622.30	Yes	
MW-35	10/14/92	637.20	639.58	619.08	609.08	NP	0.00	17.59	15.21	621.99	Yes	
MW-35	06/25/93	637.20	639.58	619.08	609.08	NP	0.00	14.39	12.01	625.19	Yes	
MW-35	10/28/93	637.20	639.58	619.08	609.08	NP	0.00	18.09	15.71	621.49	Yes	
MW-35	01/29/94	637.20	639.58	619.08	609.08	NP	0.00	19.41	17.03	620.17	Yes	
MW-35	04/27/94	637.20	639.58	619.08	609.08	NP	0.00	17.43	15.05	622.15	Yes	
MW-35	07/21/94	637.20	639.58	619.08	609.08	NP	0.00	17.35	14.97	622.23	Yes	
MW-35	10/25/94	637.20	639.58	619.08	609.08	NP	0.00	17.35	14.97	622.23	Yes	
MW-35	10/28/94	637.20	639.58	619.08	609.08	NP	0.00	16.93	14.55	622.65	Yes	
MW-35	02/01/95	637.20	639.58	619.08	609.08	NP	0.00	19.91	17.53	619.67	Yes	
MW-35	04/04/95	637.20	639.58	619.08	609.08	NP	0.00	20.35	17.97	619.23	Yes	
MW-35	07/12/95	637.20	639.58	619.08	609.08	NP	0.00	18.88	16.50	620.70	Yes	
MW-35	11/13/95	637.20	639.58	619.08	609.08	NP	0.00	17.05	14.67	622.53	Yes	
MW-35	03/13/96	637.20	639.58	619.08	609.08	NP	0.00	20.22	17.84	619.36	Yes	
MW-35	04/22/96	637.20	639.58	619.08	609.08	NP	0.00	17.12	14.74	622.46	Yes	
MW-35	10/08/96	637.20	639.58	619.08	609.08	NP	0.00	16.83	14.45	622.75	Yes	
MW-35	04/29/97	637.20	639.58	619.08	609.08	NP	0.00	13.95	11.57	625.63	Yes	
MW-35	11/03/98	637.20	639.58	619.08	609.08	NP	0.00	19.91	17.53	619.67	Yes	
MW-35	03/02/99	637.20	639.58	619.08	609.08	NP	0.00	21.59	19.21	617.99	No	

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Former Amoco Terminal
Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
MW-35	04/26/00	637.20	639.58	619.08	609.08	NP	0.00	18.59	16.21	620.99	Yes	
MW-35	10/10/00	637.20	639.58	619.08	609.08	NP	0.00	21.90	19.52	617.68	No	
MW-35	10/23/01	637.20	639.58	619.08	609.08	NP	0.00	20.22	17.84	619.36	Yes	
MW-35	01/22/02	637.20	641.16	619.08	609.08	NP	0.00	22.09	18.13	619.07	No	
MW-35	02/26/02	637.20	641.16	619.08	609.08	NP	0.00	22.85	18.89	618.31	No	
MW-35	03/20/02	637.20	641.16	619.08	609.08	NP	0.00	23.07	19.11	618.09	No	
MW-35	04/23/02	637.20	641.16	619.08	609.08	NP	0.00	21.59	17.63	619.57	Yes	
MW-35	05/15/02	637.20	639.58	619.08	609.08	NP	0.00	18.47	16.09	621.11	Yes	
MW-35	08/20/02	637.20	639.58	619.08	609.08	NP	0.00	19.30	16.92	620.28	Yes	
MW-35	09/30/02	637.20	639.58	619.08	609.08	NP	0.00	18.78	16.40	620.80	Yes	
MW-35	11/05/02	637.20	639.58	619.08	609.08	NP	0.00	19.82	17.44	619.76	Yes	
MW-35	12/23/02	637.20	639.58	619.08	609.08	NP	0.00	21.83	19.45	617.75	No	
MW-35	01/28/03	637.20	639.58	619.08	609.08	NP	0.00	22.56	20.18	617.02	No	
MW-35	02/19/03	637.20	639.58	619.08	609.08	NP	0.00	23.12	20.74	616.46	No	
MW-35	04/17/03	637.20	639.58	619.08	609.08	NP	0.00	21.72	19.34	617.86	No	
MW-35	06/10/03	637.20	641.16	619.08	609.08	NP	0.00	22.07	18.11	619.09	Yes	
MW-35	10/20/03	637.20	641.16	619.08	609.08	NP	0.00	21.27	17.31	619.89	Yes	
MW-35	12/03/03	637.20	641.16	619.08	609.08	NP	0.00	23.21	19.25	617.95	No	
MW-35	04/19/04	637.55	639.74	619.08	609.08	NP	0.00	23.41	21.22	616.33	No	
MW-35	07/28/04	637.55	639.74	619.08	609.08	NP	0.00	20.06	17.87	619.68	Yes	
MW-35	11/16/04	637.55	639.74	619.08	609.08	NP	0.00	20.68	18.49	619.06	No	
MW-35	04/18/05	637.55	639.74	619.08	609.08	NP	0.00	21.63	19.44	618.11	No	
MW-35	10/11/05	637.55	639.74	619.08	609.08	NP	0.00	19.12	16.93	620.62	Yes	
MW-35	05/23/06	637.55	639.74	619.08	609.08	NP	0.00	17.97	15.78	621.77	Yes	
MW-35	10/16/06	637.55	639.74	619.08	609.08	NP	0.00	19.97	17.78	619.77	Yes	
MW-35	04/23/07	637.55	639.74	619.08	609.08	NP	0.00	21.26	19.07	618.48	No	
MW-35	09/25/07	637.55	639.74	619.08	609.08	NP	0.00	20.70	18.51	619.04	No	
MW-35	05/01/08	637.55	639.74	619.08	609.08	NP	0.00	18.73	16.54	621.01	Yes	
MW-35	10/20/08	637.55	639.74	619.08	609.08	NP	0.00	17.16	14.97	622.58	Yes	
MW-35	04/18/09	637.55	639.74	619.08	609.08	NP	0.00	19.34	17.15	620.40	Yes	
MW-35	10/11/09	637.55	639.74	619.08	609.08	NP	0.00	20.20	18.01	619.54	Yes	
MW-35	04/28/10	637.55	639.74	619.08	609.08	NP	0.00	20.26	18.07	619.48	Yes	
MW-35	10/25/10	637.55	639.74	619.08	609.08	NP	0.00	18.24	16.05	621.50	Yes	
MW-35	04/25/11	637.55	639.74	619.08	609.08	NP	0.00	19.61	17.42	620.13	Yes	
MW-35	10/10/11	637.55	639.74	619.08	609.08	NP	0.00	19.75	17.56	619.99	Yes	
MW-35	01/04/12	637.55	639.74	619.08	609.08	NP	0.00	21.18	18.99	618.56	No	
MW-35	04/16/12	637.55	639.74	619.08	609.08	NP	0.00	21.24	19.05	618.50	No	
MW-35	06/26/12	637.55	639.74	619.08	609.08	NP	0.00	17.50	15.31	622.24	Yes	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

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MW-35	09/30/12	637.55	639.74	619.08	609.08	NP	0.00	21.04	18.85	618.70	No	
MW-35	12/17/12	637.55	639.74	619.08	609.08	NP	0.00	21.53	19.34	618.21	No	
MW-35	03/25/13	637.55	639.74	619.08	609.08	NP	0.00	22.92	20.73	616.82	No	
MW-35	05/05/13	637.55	639.74	619.08	609.08	NP	0.00	21.67	19.48	618.07	No	
MW-35	10/01/13	637.55	639.74	619.08	609.08	NP	0.00	21.10	18.91	618.64	No	
MW-35	05/20/14	637.55	639.74	619.08	609.08	NP	0.00	18.50	16.31	621.24	Yes	
MW-35	10/29/14	637.55	639.74	619.08	609.08	NP	0.00	19.17	16.98	620.57	Yes	
MW-35	05/06/15	637.55	639.74	619.08	609.08	NP	0.00	21.75	19.56	617.99	No	
MW-35	10/06/15	637.55	639.74	619.08	609.08	NP	0.00	18.80	16.61	620.94	Yes	
MW-35	05/23/16	637.55	639.74	619.08	609.08	NP	0.00	16.94	14.75	622.80	Yes	
MW-35	10/03/16	637.55	639.74	619.08	609.08	NP	0.00	18.34	16.15	621.40	Yes	
MW-35	06/29/17	637.55	639.74	619.08	609.08	NP	0.00	17.96	15.77	621.78	Yes	
MW-35	05/26/20	637.55	639.74	619.08	609.08	NP	0.00	17.58	15.39	622.16	Yes	
RW-06	06/01/90	635.20	637.96	615.00	590.00	20.50	4.70	25.20	18.80	616.33	Yes	
RW-06	01/30/91	635.20	637.96	615.00	590.00	20.47	6.14	26.61	19.10	616.02	Yes	
RW-06	04/24/91	635.20	637.96	615.00	590.00	22.22	3.22	25.44	20.19	614.97	No	
RW-06	06/06/91	635.20	637.96	615.00	590.00	20.51	2.75	23.26	18.37	616.79	Yes	
RW-06	07/09/91	635.20	637.96	615.00	590.00	19.32	3.60	22.92	17.37	617.78	Yes	
RW-06	08/06/91	635.20	637.96	615.00	590.00	18.64	3.40	22.04	16.65	618.50	Yes	
RW-06	09/04/91	635.20	637.96	615.00	590.00	18.66	3.28	21.94	16.64	618.51	Yes	
RW-06	10/08/91	635.20	637.96	615.00	590.00	19.73	1.75	21.48	17.37	617.81	Yes	
RW-06	11/08/91	635.20	637.96	615.00	590.00	20.02	1.95	21.97	17.70	617.47	Yes	
RW-06	12/03/91	635.20	637.96	615.00	590.00	16.40	4.19	20.59	14.59	620.55	Yes	
RW-06	01/07/92	635.20	637.96	615.00	590.00	18.41	2.06	20.47	16.12	619.06	Yes	
RW-06	02/04/92	635.20	637.96	615.00	590.00	19.80	2.05	21.85	17.50	617.67	Yes	
RW-06	03/03/92	635.20	637.96	615.00	590.00	19.67	2.45	22.12	17.46	617.70	Yes	
RW-06	09/24/92	635.20	637.96	615.00	590.00	17.32	3.23	20.55	15.29	619.87	Yes	
RW-06	06/25/93	635.20	637.96	615.00	590.00	15.67	2.58	18.25	13.49	621.67	Yes	
RW-06	07/21/93	635.20	637.96	615.00	590.00	16.52	1.82	18.34	14.17	621.00	Yes	
RW-06	08/17/93	635.20	637.96	615.00	590.00	18.14	2.11	20.25	15.86	619.31	Yes	
RW-06	09/09/93	635.20	637.96	615.00	590.00	19.02	2.11	21.13	16.74	618.43	Yes	
RW-06	10/28/93	635.20	637.96	615.00	590.00	19.53	1.68	21.21	17.15	618.03	Yes	
RW-06	11/24/93	635.20	637.96	615.00	590.00	19.87	1.48	21.35	17.44	617.73	Yes	
RW-06	12/17/93	635.20	637.96	615.00	590.00	19.92	1.10	21.02	17.41	617.78	Yes	
RW-06	01/29/94	635.20	637.96	615.00	590.00	19.83	1.72	21.55	17.46	617.72	Yes	
RW-06	02/25/94	635.20	637.96	615.00	590.00	20.06	2.07	22.13	17.77	617.40	Yes	

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Superior, Wisconsin

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RW-06	03/24/94	635.20	637.96	615.00	590.00	20.16	1.92	22.08	17.83	617.34	Yes	
RW-06	04/27/94	635.20	637.96	615.00	590.00	19.57	2.00	21.57	17.26	617.91	Yes	
RW-06	05/26/94	635.20	637.96	615.00	590.00	18.64	1.36	20.00	16.19	618.99	Yes	
RW-06	06/29/94	635.20	637.96	615.00	590.00	18.04	0.97	19.01	15.50	619.69	Yes	
RW-06	07/21/94	635.20	637.96	615.00	590.00	18.96	1.35	20.31	16.50	618.68	Yes	
RW-06	08/30/94	635.20	637.96	615.00	590.00	19.57	1.15	20.72	17.07	618.11	Yes	
RW-06	10/25/94	635.20	637.96	615.00	590.00	18.45	1.53	19.98	16.04	619.14	Yes	
RW-06	11/02/94	635.20	637.96	615.00	590.00	18.35	1.65	20.00	15.96	619.21	Yes	
RW-06	02/01/95	635.20	637.96	615.00	590.00	20.10	0.48	20.58	17.45	617.74	Yes	
RW-06	04/04/95	635.20	637.96	615.00	590.00	20.44	2.16	22.60	18.17	617.00	Yes	
RW-06	07/12/95	635.20	637.96	615.00	590.00	19.73	0.02	19.75	16.97	618.23	Yes	
RW-06	11/13/95	635.20	637.96	615.00	590.00	18.54	0.02	18.56	15.78	619.42	Yes	
RW-06	03/13/96	635.20	637.96	615.00	590.00	19.85	2.30	22.15	17.61	617.56	Yes	
RW-06	05/28/96	635.20	637.96	615.00	590.00	18.45	0.03	18.48	15.70	619.50	Yes	
RW-06	10/08/96	635.20	637.96	615.00	590.00	17.60	0.02	17.62	14.84	620.36	Yes	
RW-06	04/29/97	635.20	637.96	615.00	590.00	NP	0.00	16.62	13.86	621.34	Yes	
RW-06	06/10/97	635.20	637.96	615.00	590.00	NP	0.00	18.00	15.24	619.96	Yes	
RW-06	03/02/99	635.20	637.96	615.00	590.00	20.38	2.16	22.54	18.11	617.06	Yes	
RW-06	10/07/99	635.20	637.96	615.00	590.00	17.16	1.33	18.49	14.70	620.48	Yes	
RW-06	11/09/99	635.20	637.96	615.00	590.00	18.23	1.69	19.92	15.85	619.32	Yes	bailed 2 gal. FP
RW-06	12/21/99	635.20	637.96	615.00	590.00	18.76	0.12	18.88	16.03	619.17	Yes	
RW-06	01/27/00	635.20	637.96	615.00	590.00	19.95	0.12	20.07	17.22	617.98	Yes	
RW-06	02/24/00	635.20	637.96	615.00	590.00	19.87	1.65	21.52	17.48	617.69	Yes	bailed 2 gal. FP
RW-06	03/31/00	635.20	637.96	615.00	590.00	19.71	2.22	21.93	17.45	617.72	Yes	installed pump from MW-2
RW-06	04/20/00	635.20	637.96	615.00	590.00	18.92	2.96	21.88	16.83	618.33	Yes	bailed 4 gal. FP
RW-06	04/26/00	635.20	637.96	615.00	590.00	19.50	1.47	20.97	17.07	618.11	Yes	
RW-06	05/31/00	635.20	637.96	615.00	590.00	19.65	1.38	21.03	17.20	617.98	Yes	installed skimmer
RW-06	06/20/00	635.20	637.96	615.00	590.00	19.66	0.02	19.68	16.90	618.30	Yes	Skimmer operating
RW-06	07/26/00	635.20	637.96	615.00	590.00	19.86	0.02	19.88	17.10	618.10	Yes	Skimmer operating
RW-06	08/18/00	635.20	637.96	615.00	590.00	19.26	2.14	21.40	16.98	618.19	Yes	bailed 1 gal. FP-installed skimmer
RW-06	09/27/00	635.20	637.96	615.00	590.00	20.42	1.29	21.71	17.95	617.23	Yes	skimmer down-bailed 1.25 gal. FP
RW-06	10/11/00	635.20	637.96	615.00	590.00	20.11	1.88	21.99	17.77	617.40	Yes	skimmer down-bailed 3.75 gal. FP
RW-06	11/17/00	635.20	637.96	615.00	590.00	19.69	2.83	22.52	17.57	617.59	Yes	skimmer down-bailed 6 gal. FP
RW-06	12/12/00	635.20	637.96	615.00	590.00	19.94	1.59	21.53	17.54	617.64	Yes	skimmer down-bailed 3 gal. FP
RW-06	01/18/01	635.20	637.96	615.00	590.00	20.23	1.75	21.98	17.87	617.31	Yes	skimmer down-bailed 4 gal. FP
RW-06	04/24/01	635.20	637.96	615.00	590.00	20.21	3.01	23.22	18.13	617.03	Yes	product abated using vactruck
RW-06	05/23/01	635.20	637.96	615.00	590.00	19.22	1.30	20.52	16.75	618.43	Yes	skimmer down/no product bailed
RW-06	06/19/01	635.20	637.96	615.00	590.00	19.45	0.72	20.17	16.85	618.34	Yes	

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Superior, Wisconsin

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RW-06	07/26/01	635.20	637.96	615.00	590.00	20.22	0.99	21.21	17.68	617.50	Yes	
RW-06	08/31/01	635.20	637.96	615.00	590.00	20.41	0.01	20.42	17.65	617.55	Yes	
RW-06	09/26/01	635.20	637.96	615.00	590.00	20.41	0.24	20.65	17.70	617.49	Yes	
RW-06	10/24/01	635.20	637.96	615.00	590.00	20.00	1.45	21.45	17.57	617.61	Yes	
RW-06	12/20/01	635.20	637.96	615.00	590.00	20.58	1.84	22.42	18.24	616.94	Yes	
RW-06	01/22/02	635.20	637.96	615.00	590.00	20.53	1.88	22.41	18.19	616.98	Yes	
RW-06	02/26/02	635.20	637.96	615.00	590.00	21.22	0.89	22.11	18.66	616.53	Yes	
RW-06	03/20/02	635.20	637.96	615.00	590.00	21.60	0.14	21.74	18.87	616.33	Yes	
RW-06	04/24/02	635.20	637.96	615.00	590.00	20.32	2.54	22.86	18.13	617.03	Yes	
RW-06	05/15/02	635.20	637.96	615.00	590.00	20.04	2.29	22.33	17.80	617.37	Yes	
RW-06	06/27/02	635.20	637.96	615.00	590.00	20.44	1.53	21.97	18.03	617.15	Yes	
RW-06	07/25/02	635.20	637.96	615.00	590.00	20.57	0.04	20.61	17.82	617.38	Yes	
RW-06	08/20/02	635.20	637.96	615.00	590.00	20.73	0.15	20.88	18.00	617.19	Yes	
RW-06	09/30/02	635.20	637.96	615.00	590.00	NP	0.00	20.03	17.27	617.93	Yes	
RW-06	11/05/02	635.20	637.96	615.00	590.00	19.89	0.02	19.91	17.13	618.07	Yes	
RW-06	12/23/02	635.20	637.96	615.00	590.00	20.74	0.02	20.76	17.98	617.22	Yes	
RW-06	01/28/03	635.20	637.96	615.00	590.00	21.11	0.11	21.22	18.37	616.82	Yes	
RW-06	02/19/03	635.20	637.96	615.00	590.00	21.24	0.31	21.55	18.55	616.65	Yes	
RW-06	03/13/03	635.20	637.96	615.00	590.00	21.27	1.38	22.65	18.82	616.36	Yes	
RW-06	04/17/03	635.20	637.96	615.00	590.00	21.20	2.52	23.72	19.01	616.16	Yes	
RW-06	04/25/03	635.20	637.96	615.00	590.00	21.42	2.64	24.06	19.26	615.91	Yes	
RW-06	05/15/03	635.20	637.96	615.00	590.00	21.44	2.97	24.41	19.35	615.81	Yes	
RW-06	06/10/03	635.20	637.96	615.00	590.00	21.19	2.06	23.25	18.90	616.28	Yes	
RW-06	07/31/03	635.20	637.96	615.00	590.00	20.90	1.95	22.85	18.58	616.59	Yes	
RW-06	10/23/03	635.20	637.96	615.00	590.00	21.14	1.67	22.81	18.76	616.42	Yes	
RW-06	12/03/03	635.20	637.96	615.00	590.00	21.36	2.92	24.28	19.26	615.90	Yes	
RW-06	04/19/04	636.09	638.10	615.00	590.00	21.94	2.35	24.29	20.46	615.60	Yes	
RW-06	07/28/04	636.09	638.10	615.00	590.00	21.02	2.10	23.12	19.48	616.58	Yes	
RW-06	11/15/04	636.09	638.10	615.00	590.00	20.14	1.80	21.94	18.54	617.53	Yes	
RW-06	04/18/05	636.09	638.10	615.00	590.00	20.25	2.67	22.92	18.84	617.21	Yes	
RW-06	10/11/05	636.09	638.10	615.00	590.00	20.00	1.85	21.85	18.41	617.66	Yes	
RW-06	05/23/06	636.09	638.10	615.00	590.00	19.30	1.39	20.69	17.60	618.47	Yes	
RW-06	10/16/06	636.09	638.10	615.00	590.00	20.23	2.15	22.38	18.71	617.35	Yes	
RW-06	04/23/07	636.09	638.10	615.00	590.00	21.03	2.85	23.88	19.66	616.39	Yes	
RW-06	09/25/07	636.09	638.10	615.00	590.00	20.98	2.72	23.70	19.58	616.47	Yes	
RW-06	05/01/08	636.09	638.10	615.00	590.00	19.70	2.13	21.83	18.17	617.89	Yes	
RW-06	10/20/08	636.09	638.10	615.00	590.00	18.36	1.26	19.62	16.63	619.44	Yes	
RW-06	04/18/09	636.09	638.10	615.00	590.00	19.43	1.43	20.86	17.74	618.33	Yes	

Table 1
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Superior, Wisconsin

Well ID	Date	Ground Elevation	TOC Elevation	TOS Elevation	BOS Elevation	Depth to Product (feet BTOC)	Free Product Thickness (feet)	Depth to Water (feet BTOC)	Corrected DTW (feet bgs)	Corrected GW Elevation	Screen Submerged Below Water Table?	Comments/Observations
RW-06	04/28/10	636.09	638.10	615.00	590.00	19.99	1.80	21.79	18.39	617.68	Yes	
RW-06	10/25/10	636.09	638.10	615.00	590.00	17.95	1.11	19.06	16.19	619.88	Yes	
RW-06	04/25/11	636.09	638.10	615.00	590.00	19.24	0.99	20.23	17.45	618.62	Yes	
RW-06	09/14/11	636.09	638.10	615.00	590.00	18.48	0.97	19.45	16.69	619.39	Yes	
RW-06	09/23/11	636.09	638.10	615.00	590.00	18.69	0.95	19.64	16.89	619.18	Yes	
RW-06	09/29/11	636.09	638.10	615.00	590.00	18.55	0.98	19.53	16.76	619.31	Yes	
RW-06	10/07/11	636.09	638.10	615.00	590.00	18.68	0.97	19.65	16.89	619.19	Yes	
RW-06	10/11/11	636.09	638.10	615.00	590.00	19.03	0.96	19.99	17.24	618.84	Yes	
RW-06	10/21/11	636.09	638.10	615.00	590.00	19.14	0.98	20.12	17.35	618.72	Yes	
RW-06	10/27/11	636.09	638.10	615.00	590.00	19.24	0.98	20.22	17.45	618.62	Yes	
RW-06	11/04/11	636.09	638.10	615.00	590.00	19.49	0.96	20.45	17.70	618.38	Yes	
RW-06	11/09/11	636.09	638.10	615.00	590.00	19.38	0.92	20.30	17.58	618.50	Yes	
RW-06	11/18/11	636.09	638.10	615.00	590.00	19.46	0.96	20.42	17.67	618.41	Yes	
RW-06	11/22/11	636.09	638.10	615.00	590.00	19.62	0.99	20.61	17.83	618.24	Yes	
RW-06	12/01/11	636.09	638.10	615.00	590.00	20.09	0.98	21.07	18.30	617.77	Yes	
RW-06	01/04/12	636.09	638.10	615.00	590.00	20.01	1.82	21.83	18.41	617.65	Yes	
RW-06	02/16/12	636.09	638.10	615.00	590.00	20.46	2.32	22.78	18.97	617.08	Yes	
RW-06	03/13/12	636.09	638.10	615.00	590.00	21.74	1.44	23.18	20.06	616.01	Yes	
RW-06	04/05/12	636.09	638.10	615.00	590.00	20.73	2.48	23.21	19.28	616.78	Yes	Spill Buddy Before Reading
RW-06	04/05/12	636.09	638.10	615.00	590.00	21.76	1.19	22.95	20.02	616.05	Yes	Spill Buddy After Reading
RW-06	04/16/12	636.09	638.10	615.00	590.00	20.70	2.18	22.88	19.18	616.88	Yes	
RW-06	05/18/12	636.09	638.10	615.00	590.00	20.75	4.48	25.23	19.75	616.28	Yes	
RW-06	06/26/12	636.09	638.10	615.00	590.00	18.55	1.10	19.65	16.79	619.29	Yes	
RW-06	07/11/12	636.09	638.10	615.00	590.00	18.79	1.13	19.92	17.04	619.04	Yes	
RW-06	07/11/12	636.09	638.10	615.00	590.00	19.75	0.02	19.77	17.74	618.35	Yes	Spill Buddy Before Reading
RW-06	07/24/12	636.09	638.10	615.00	590.00	19.29	0.02	19.31	17.28	618.81	Yes	Spill Buddy After Reading
RW-06	08/09/12	636.09	638.10	615.00	590.00	19.51	0.03	19.54	17.51	618.58	Yes	
RW-06	08/17/12	636.09	638.10	615.00	590.00	19.68	0.03	19.71	17.68	618.41	Yes	
RW-06	09/17/12	636.09	638.10	615.00	590.00	20.07	0.02	20.09	18.06	618.03	Yes	
RW-06	09/30/12	636.09	638.10	615.00	590.00	20.30	0.04	20.34	18.30	617.79	Yes	
RW-06	11/21/12	636.09	638.10	615.00	590.00	20.20	1.99	22.19	18.64	617.42	Yes	
RW-06	12/17/12	636.09	638.10	615.00	590.00	20.45	2.09	22.54	18.91	617.15	Yes	
RW-06	03/25/13	636.09	638.10	615.00	590.00	21.08	2.90	23.98	19.73	616.32	Yes	
RW-06	05/05/13	636.09	638.10	615.00	590.00	20.83	2.74	23.57	19.44	616.61	Yes	
RW-06	05/16/13	636.09	638.10	615.00	590.00	20.90	2.33	23.23	19.42	616.64	Yes	Spill Buddy Before Reading
RW-06	05/16/13	636.09	638.10	615.00	590.00	22.92	0.05	22.97	20.92	615.17	Yes	Spill Buddy After Reading
RW-06	10/03/13	636.09	638.10	615.00	590.00	20.60	1.58	22.18	18.95	617.12	Yes	
RW-06	05/22/14	636.09	638.10	615.00	590.00	19.29	1.64	20.93	17.65	618.42	Yes	

Table 1
Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

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RW-06	10/31/14	636.09	638.10	615.00	590.00	18.71	1.58	20.29	17.06	619.01	Yes	
RW-06	05/06/15	636.09	638.10	615.00	590.00	20.21	2.01	22.22	18.65	617.41	Yes	
RW-06	10/05/15	636.09	638.10	615.00	590.00	18.38	1.50	19.88	16.71	619.36	Yes	
RW-06	10/03/16	636.09	638.10	615.00	590.00	17.35	1.35	18.70	15.64	620.43	Yes	
RW-06	06/14/17	636.09	638.10	615.00	590.00	16.40	1.26	17.66	14.67	621.40	Yes	
RW-06	06/21/17	636.09	638.10	615.00	590.00	16.81	1.25	18.06	15.08	620.99	Yes	
RW-06	06/22/17	636.09	638.10	615.00	590.00	16.77	0.64	17.41	14.90	621.18	Yes	
RW-06	06/23/17	636.09	638.10	615.00	590.00	16.85	0.66	17.51	14.99	621.09	Yes	
RW-06	10/26/17	636.09	638.10	615.00	590.00	14.85	0.64	15.49	12.98	623.10	Yes	
RW-06	07/16/19	636.09	638.10	615.00	590.00	17.25	1.39	18.64	15.55	620.52	Yes	
RW-06	05/26/20	636.09	638.10	615.00	590.00	16.27	0.52	16.79	14.38	621.71	Yes	
EW-09	07/25/11	635.20	637.34	620.20	600.20	NP	0.00	18.38	16.24	618.96	No	
EW-09	08/18/11	635.20	637.34	620.20	600.20	NP	0.00	17.96	15.82	619.38	No	
EW-09	08/25/11	635.20	637.34	620.20	600.20	NP	0.00	18.33	16.19	619.01	No	
EW-09	09/01/11	635.20	637.34	620.20	600.20	NP	0.00	18.45	16.31	618.89	No	
EW-09	09/08/11	635.20	637.34	620.20	600.20	NP	0.00	18.90	16.76	618.44	No	
EW-09	09/14/11	635.20	637.34	620.20	600.20	NP	0.00	19.24	17.10	618.10	No	
EW-09	09/23/11	635.20	637.34	620.20	600.20	NP	0.00	19.47	17.33	617.87	No	
EW-09	09/29/11	635.20	637.34	620.20	600.20	NP	0.00	19.46	17.32	617.88	No	
EW-09	10/07/11	635.20	637.34	620.20	600.20	NP	0.00	19.62	17.48	617.72	No	
EW-09	10/11/11	635.20	637.34	620.20	600.20	NP	0.00	19.74	17.60	617.60	No	
EW-09	10/21/11	635.20	637.34	620.20	600.20	NP	0.00	19.89	17.75	617.45	No	
EW-09	10/27/11	635.20	637.34	620.20	600.20	NP	0.00	20.14	18.00	617.20	No	
EW-09	11/04/11	635.20	637.34	620.20	600.20	NP	0.00	20.39	18.25	616.95	No	
EW-09	11/09/11	635.20	637.34	620.20	600.20	NP	0.00	20.35	18.21	616.99	No	
EW-09	11/18/11	635.20	637.34	620.20	600.20	NP	0.00	20.56	18.42	616.78	No	
EW-09	11/22/11	635.20	637.34	620.20	600.20	NP	0.00	20.28	18.14	617.06	No	
EW-09	12/01/11	635.20	637.34	620.20	600.20	NP	0.00	20.66	18.52	616.68	No	
EW-09	01/04/12	635.20	637.34	620.20	600.20	NP	0.00	21.37	19.23	615.97	No	
EW-09	02/16/12	635.20	637.34	620.20	600.20	NP	0.00	21.92	19.78	615.42	No	
EW-09	03/13/12	635.20	637.34	620.20	600.20	NP	0.00	22.20	20.06	615.14	No	
EW-09	04/16/12	635.20	637.34	620.20	600.20	NP	0.00	22.05	19.91	615.29	No	
EW-09	05/18/12	635.20	637.34	620.20	600.20	NP	0.00	21.08	18.94	616.26	No	
EW-09	06/26/12	635.20	637.34	620.20	600.20	NP	0.00	19.32	17.18	618.02	No	
EW-09	07/24/12	635.20	637.34	620.20	600.20	NP	0.00	19.89	17.75	617.45	No	
EW-09	08/19/12	635.20	637.34	620.20	600.20	NP	0.00	20.29	18.15	617.05	No	

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Former Amoco Terminal
Superior, Wisconsin

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EW-09	09/17/12	635.20	637.34	620.20	600.20	NP	0.00	20.78	18.64	616.56	No	
EW-09	09/30/12	635.20	637.34	620.20	600.20	NP	0.00	21.03	18.89	616.31	No	
EW-09	11/21/12	635.20	637.34	620.20	600.20	NP	0.00	21.38	19.24	615.96	No	
EW-09	12/17/12	635.20	637.34	620.20	600.20	NP	0.00	21.71	19.57	615.63	No	
EW-09	03/25/13	635.20	637.34	620.20	600.20	NP	0.00	22.57	20.43	614.77	No	
EW-09	05/05/13	635.20	637.34	620.20	600.20	NP	0.00	22.15	20.01	615.19	No	
EW-09	10/03/13	635.20	637.34	620.20	600.20	NP	0.00	21.58	19.44	615.76	No	
EW-09	05/21/14	635.20	637.34	620.20	600.20	NP	0.00	20.01	17.87	617.33	No	
EW-09	10/31/14	635.20	637.34	620.20	600.20	NP	0.00	19.57	17.43	617.77	No	
EW-09	05/05/15	635.20	637.34	620.20	600.20	NP	0.00	21.31	19.17	616.03	No	
EW-09	10/05/15	635.20	637.34	620.20	600.20	NP	0.00	19.23	17.09	618.11	No	
EW-09	05/23/16	635.20	637.34	620.20	600.20	NP	0.00	16.90	14.76	620.44	Yes	
EW-09	10/03/16	635.20	637.34	620.20	600.20	NP	0.00	17.90	15.76	619.44	No	
EW-09	06/29/17	635.20	637.34	620.20	600.20	NP	0.00	17.46	15.32	619.88	No	
EW-09	05/26/20	635.20	637.34	620.20	600.20	NP	0.00	16.60	14.46	620.74	Yes	
EW-10	07/25/11	635.90	637.83	620.90	600.90	NP	0.00	18.21	16.28	619.62	No	
EW-10	08/18/11	635.90	637.83	620.90	600.90	NP	0.00	17.74	15.81	620.09	No	
EW-10	08/25/11	635.90	637.83	620.90	600.90	NP	0.00	18.07	16.14	619.76	No	
EW-10	09/01/11	635.90	637.83	620.90	600.90	NP	0.00	18.03	16.10	619.80	No	
EW-10	09/08/11	635.90	637.83	620.90	600.90	NP	0.00	18.54	16.61	619.29	No	
EW-10	09/14/11	635.90	637.83	620.90	600.90	NP	0.00	18.93	17.00	618.90	No	
EW-10	09/23/11	635.90	637.83	620.90	600.90	NP	0.00	19.16	17.23	618.67	No	
EW-10	09/29/11	635.90	637.83	620.90	600.90	NP	0.00	19.10	17.17	618.73	No	
EW-10	10/07/11	635.90	637.83	620.90	600.90	NP	0.00	19.24	17.31	618.59	No	
EW-10	10/11/11	635.90	637.83	620.90	600.90	NP	0.00	19.38	17.45	618.45	No	
EW-10	10/21/11	635.90	637.83	620.90	600.90	NP	0.00	19.69	17.76	618.14	No	
EW-10	10/27/11	635.90	637.83	620.90	600.90	NP	0.00	19.83	17.90	618.00	No	
EW-10	11/04/11	635.90	637.83	620.90	600.90	NP	0.00	20.05	18.12	617.78	No	
EW-10	11/09/11	635.90	637.83	620.90	600.90	NP	0.00	19.95	18.02	617.88	No	
EW-10	11/18/11	635.90	637.83	620.90	600.90	NP	0.00	20.12	18.19	617.71	No	
EW-10	11/22/11	635.90	637.83	620.90	600.90	NP	0.00	20.20	18.27	617.63	No	
EW-10	12/01/11	635.90	637.83	620.90	600.90	NP	0.00	20.66	18.73	617.17	No	
EW-10	01/04/12	635.90	637.83	620.90	600.90	NP	0.00	20.85	18.92	616.98	No	
EW-10	02/16/12	635.90	637.83	620.90	600.90	NP	0.00	21.40	19.47	616.43	No	
EW-10	03/13/12	635.90	637.83	620.90	600.90	NP	0.00	21.65	19.72	616.18	No	
EW-10	04/16/12	635.90	637.83	620.90	600.90	NP	0.00	21.59	19.66	616.24	No	

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Groundwater and LNAPL Gauging Data - Terminal
Former Amoco Terminal
Superior, Wisconsin

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EW-10	05/18/12	635.90	637.83	620.90	600.90	NP	0.00	20.68	18.75	617.15	No	
EW-10	06/26/12	635.90	637.83	620.90	600.90	NP	0.00	19.19	17.26	618.64	No	
EW-10	07/24/12	635.90	637.83	620.90	600.90	NP	0.00	19.54	17.61	618.29	No	
EW-10	08/19/12	635.90	637.83	620.90	600.90	NP	0.00	19.93	18.00	617.90	No	
EW-10	09/17/12	635.90	637.83	620.90	600.90	NP	0.00	20.33	18.40	617.50	No	
EW-10	09/30/12	635.90	637.83	620.90	600.90	NP	0.00	20.55	18.62	617.28	No	
EW-10	11/21/12	635.90	637.83	620.90	600.90	NP	0.00	20.96	19.03	616.87	No	
EW-10	12/17/12	635.90	637.83	620.90	600.90	NP	0.00	21.19	19.26	616.64	No	
EW-10	03/25/13	635.90	637.83	620.90	600.90	NP	0.00	21.97	20.04	615.86	No	
EW-10	05/05/13	635.90	637.83	620.90	600.90	NP	0.00	21.72	19.79	616.11	No	
EW-10	10/13/13	635.90	637.83	620.90	600.90	NP	0.00	21.17	19.24	616.66	No	
EW-10	05/21/14	635.90	637.83	620.90	600.90	NP	0.00	19.97	18.04	617.86	No	
EW-10	10/31/14	635.90	637.83	620.90	600.90	NP	0.00	19.30	17.37	618.53	No	
EW-10	05/05/15	635.90	637.83	620.90	600.90	NP	0.00	21.05	19.12	616.78	No	
EW-10	10/05/15	635.90	637.83	620.90	600.90	NP	0.00	18.98	17.05	618.85	No	
EW-10	05/23/16	635.90	637.83	620.90	600.90	NP	0.00	16.60	14.67	621.23	Yes	
EW-10	10/03/16	635.90	637.83	620.90	600.90	NP	0.00	17.65	15.72	620.18	No	
EW-10	06/29/17	635.90	637.83	620.90	600.90	NP	0.00	17.31	15.38	620.52	No	
EW-10	05/26/20	635.90	637.83	620.90	600.90	NP	0.00	16.25	14.32	621.58	Yes	
EW-11	07/25/11	637.20	639.14	622.20	602.20	18.65	1.84	20.49	17.13	620.07	No	
EW-11	08/18/11	637.20	639.14	622.20	602.20	17.94	3.58	21.52	16.81	620.39	No	
EW-11	08/25/11	637.20	639.14	622.20	602.20	18.28	4.01	22.29	17.25	619.95	No	
EW-11	09/01/11	637.20	639.14	622.20	602.20	18.15	4.05	22.20	17.12	620.08	No	
EW-11	09/08/11	637.20	639.14	622.20	602.20	18.69	4.08	22.77	17.67	619.53	No	
EW-11	09/14/11	637.20	639.14	622.20	602.20	19.10	4.30	23.40	18.13	619.07	No	
EW-11	09/23/11	637.20	639.14	622.20	602.20	19.20	4.66	23.86	18.31	618.89	No	
EW-11	09/29/11	637.20	639.14	622.20	602.20	18.99	5.13	24.12	18.21	618.99	No	
EW-11	10/07/11	637.20	639.14	622.20	602.20	19.15	5.07	24.22	18.36	618.84	No	
EW-11	10/11/11	637.20	639.14	622.20	602.20	19.21	5.16	24.37	18.44	618.76	No	
EW-11	10/21/11	637.20	639.14	622.20	602.20	19.62	4.13	23.75	18.61	618.59	No	
EW-11	10/27/11	637.20	639.14	622.20	602.20	19.70	4.78	24.48	18.84	618.36	No	
EW-11	11/04/11	637.20	639.14	622.20	602.20	19.87	5.03	24.90	19.07	618.13	No	
EW-11	11/09/11	637.20	639.14	622.20	602.20	19.68	5.31	24.99	18.94	618.26	No	
EW-11	11/10/11	637.20	639.14	622.20	602.20	19.80	5.49	25.29	19.10	618.10	No	Before EFR
EW-11	11/10/11	637.20	639.14	622.20	602.20	21.71	0.11	21.82	19.79	617.41	No	After EFR
EW-11	11/13/11	637.20	639.14	622.20	602.20	19.99	2.76	22.75	18.67	618.53	No	EFR Check
EW-11	11/18/11	637.20	639.14	622.20	602.20	20.23	3.07	23.30	18.98	618.22	No	
EW-11	11/22/11	637.20	639.14	622.20	602.20	20.38	3.32	23.70	19.19	618.01	No	

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Superior, Wisconsin

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EW-11	12/01/11	637.20	639.14	622.20	602.20	20.71	3.88	24.59	19.65	617.55	No	
EW-11	01/04/12	637.20	639.14	622.20	602.20	20.67	4.96	25.63	19.85	617.35	No	
EW-11	02/16/12	637.20	639.14	622.20	602.20	21.31	4.87	26.18	20.47	616.73	No	
EW-11	03/13/12	637.20	639.14	622.20	602.20	21.68	4.34	26.02	20.72	616.48	No	
EW-11	04/12/12	637.20	639.14	622.20	602.20	21.61	4.06	25.67	20.59	616.61	No	Spill Buddy Before Reading
EW-11	04/12/12	637.20	639.14	622.20	602.20	22.65	0.17	22.82	20.75	616.45	No	Spill Buddy After Reading
EW-11	04/16/12	637.20	639.14	622.20	602.20	22.03	2.56	24.59	20.67	616.53	No	
EW-11	03/13/12	637.20	639.14	622.20	602.20	21.68	4.34	26.02	20.72	616.48	No	
EW-11	04/12/12	637.20	639.14	622.20	602.20	21.61	4.06	25.67	20.59	616.61	No	Spill Buddy Before Reading
EW-11	04/12/12	637.20	639.14	622.20	602.20	22.65	0.17	22.82	20.75	616.45	No	Spill Buddy After Reading
EW-11	04/16/12	637.20	639.14	622.20	602.20	22.03	2.56	24.59	20.67	616.53	No	
EW-11	05/18/12	637.20	639.14	622.20	602.20	19.93	1.75	21.68	18.39	618.81	No	
EW-11	06/26/12	637.20	639.14	622.20	602.20	19.44	3.31	22.75	18.25	618.95	No	
EW-11	06/27/12	637.20	639.14	622.20	602.20	19.44	3.31	22.75	18.25	618.95	No	Installed Portable system 1
EW-11	11/21/12	637.20	639.14	622.20	602.20	21.42	2.40	23.82	20.02	617.18	No	
EW-11	12/17/12	637.20	639.14	622.20	602.20	21.56	3.29	24.85	20.36	616.84	No	
EW-11	03/25/13	637.20	639.14	622.20	602.20	22.38	3.40	25.78	21.21	615.99	No	
EW-11	05/05/13	637.20	639.14	622.20	602.20	22.07	3.37	25.44	20.89	616.31	No	
EW-11	05/16/13	637.20	639.14	622.20	602.20	21.98	3.60	25.58	20.85	616.35	No	Spill Buddy Before Reading
EW-11	05/16/13	637.20	639.14	622.20	602.20	22.92	0.05	22.97	20.99	616.21	No	Spill Buddy After Reading
EW-11	10/03/13	637.20	639.14	622.20	602.20	21.28	4.69	25.97	20.40	616.80	No	
EW-11	05/22/14	637.20	639.14	622.20	602.20	19.96	5.07	25.03	19.17	618.03	No	
EW-11	10/31/14	637.20	639.14	622.20	602.20	19.25	5.11	24.36	18.46	618.74	No	
EW-11	05/06/15	637.20	639.14	622.20	602.20	21.02	4.70	25.72	20.14	617.06	No	
EW-11	10/05/15	637.20	639.14	622.20	602.20	19.29	3.63	22.92	18.17	619.03	No	
EW-11	05/23/16	637.20	639.14	622.20	602.20	16.07	7.92	23.99	15.92	621.28	No	
EW-11	10/03/16	637.20	639.14	622.20	602.20	17.65	5.78	23.43	17.02	620.18	No	
EW-11	06/14/17	637.20	639.14	622.20	602.20	16.42	7.04	23.46	16.07	621.13	No	
EW-11	06/21/17	637.20	639.14	622.20	602.20	16.93	6.39	23.32	16.43	620.77	No	
EW-11	06/22/17	637.20	639.14	622.20	602.20	17.66	1.78	19.44	16.12	621.08	No	
EW-11	06/23/17	637.20	639.14	622.20	602.20	17.78	1.90	19.68	16.27	620.93	No	
EW-11	10/26/17	637.20	639.14	622.20	602.20	14.43	8.41	22.84	14.39	622.81	Yes	
EW-11	07/25/19	637.20	639.14	622.20	602.20	18.34	4.61	22.95	17.44	619.76	No	
EW-11	05/26/20	637.20	639.14	622.20	602.20	15.54	9.99	25.53	15.86	621.34	No	

Notes:
 NM = Not Measured
 NP = No Product
 BTOC = Below Top of Casing
 AMSL = Above Mean Sea Level
 * Corrections for free product made using: TOC elevation-[depth to ground water-(product thickness * product density)]
 Average Product Density = 0.77 g/cm3 based on average of 4 NE terminal wells (Table 8) - MW-32, RW-2, RW-4 and RW-6

Table 2
Groundwater Analytical Results - Terminal
Former Amoco Terminal
Superior, Wisconsin

Sample ID	Sample Date	Duplicate (D) or Split (S)	Benzene	Toluene	Ethylbenzene	Xylenes	Total TMBs	MTBE	Naphthalene	1,2-DCA	GRO	DRO	THC	DO	REDOX	Temp	Specific Conductance	Conductivity	pH	Alkalinity (ppm CaCO3)	Soluble Iron
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ppm	milli Volts	°C	µs/cm	µmhos/cm	pH units		ppm
NR 140 ES -->			5	800	700	2000	480	60	100	5	--	--	--	--	--	--	--	--	--	--	--
EW-10	7/28/2011		3430	<20.0	<20.0	<60.0	<20.0	<20.0	<80.0	2.28	-143	8.93	NM	1190	7.73	NM	NM	NM	NM	NM	NM
EW-10	10/19/2011		3970	<1.0	2.6	<3.0	<1.0	<1.0	<4.0	0.32	-162	8.45	NM	1130	7.99	NM	NM	NM	NM	NM	NM
EW-10	4/18/2012		1510	<1.0	1.0	<3.0	<1.0	<1.0	NA	1.06	91.4	7.6	NM	1437	7.17	NM	NM	NM	NM	NM	NM
EW-10	5/7/2013		18.3	<1.0	6.0	44.4	48.9	<1.0	4.9	0.93	167.1	8.2	NM	1225	7	NM	NM	NM	NM	NM	NM
EW-10	5/7/2013	D	16.0	<1.0	4.4	34.0	38.7	<1.0	<4.0	0.93	167.1	8.2	NM	1225	7	NM	NM	NM	NM	NM	NM
EW-10	5/21/2014		18.6	<1.0	<1.0	<3.0	<2.0	1.3	<4.0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	5/4/2015		7.2	<0.39	<0.39	<1.2	<0.84	2.0	<0.42	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	10/5/2016		1.4	<0.39	<0.39	<1.2	<0.84	2.6	<0.42	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EW-11	07/25/2011 to present - The well was not sampled due to the presence of free product.																				

Notes:

- µg/L = micrograms per liter (equivalent to parts per billion)
- D = Duplicate sample
- 1,2-DCA = 1,2-Dichloroethane
- DRO = Diesel Range Organics
- GRO = Gasoline Range Organics
- FP = The well was not sampled due to the presence of free product
- THC = Total hydrocarbons or total petroleum hydrocarbons as gasoline
- MTBE = Methyl Tertiary Butyl Ether
- NA = Not Analyzed for indicated parameter
- NM = Not Measured
- NR 140 ES = Wisconsin Administrative Code Chapter NR 140 Enforcement Standard
- NS = Not Sampled on indicated date
- TMBs = Trimethylbenzenes
- "BOLD TYPE"** = The indicated concentration exceeds the NR 140 ES
- J = Laboratory flag. Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

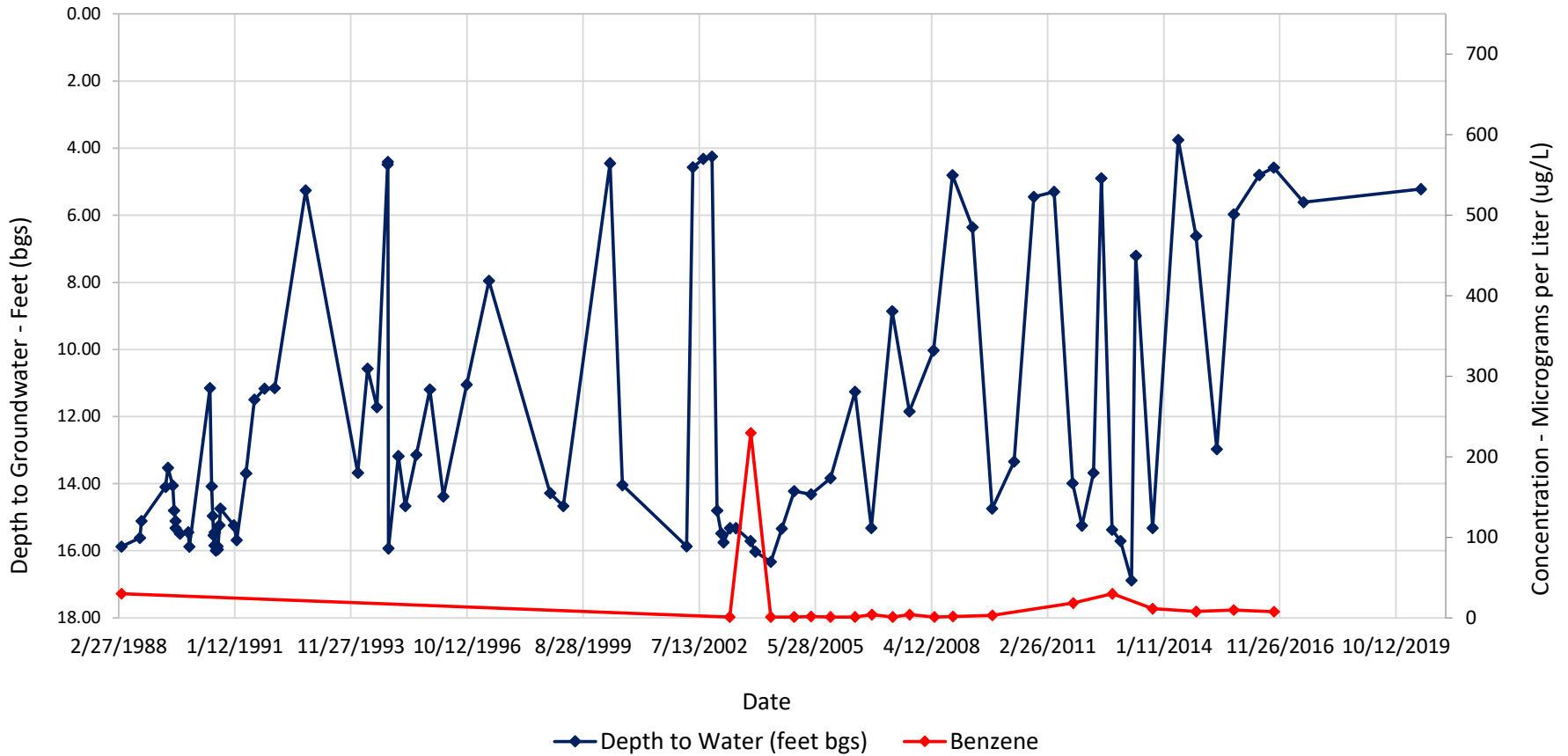
Table 4: Hydrocarbon Ratios Related to Degradation and Mass Reduction
 LNAPL Samples Collected From Terminal Wells RW -5 and RW-6 (AOCs 4 & 5)
 Former Amoco Terminal 00406 (Superior, WI)

			AOC 4	AOC 5	AOC 5
Lab	87 Octane	Std (G/D/W)	RW-5	RW-6	RW-6
Date of analysis		Torkelson	Pace Energy	Torkelson	Pace Energy
		TGI # 04115	7/26/2019	4/30/2004	7/26/2019
Evaporation					
n-Pentane/n-Heptane	2.1	2.28	0.01	0.65	0.60
Waterwashing					
Benzene/Cyclohexane	4.3	4.16	0.94	0.87	0.39
Toluene/Methylcyclohexane	10.8	6.09	0.20	0.82	0.73
Biodegradation					
3-Methylhexane/n-Heptane	1.6	1.15	0.39	0.40	0.36
Methylcyclohexane/n-Heptane	0.6	0.71	0.38	0.89	0.79

% Reduction in Mass Compared	87 Octane	Std (G/D/W)	RW-5	RW-6	RW-6
87 Octane Ratios		Torkelson	Pace Energy	Torkelson	Pace Energy
		TGI # 04115	7/26/2019	4/30/2004	7/26/2019
Evaporation					
n-Pentane/n-Heptane	2.1		99.29	69.05	71.30
Waterwashing					
Benzene/Cyclohexane	4.3		78.11	79.77	90.98
Toluene/Methylcyclohexane	10.8		98.19	92.41	93.21
Biodegradation					
3-Methylhexane/n-Heptane	1.6		75.90	75.00	77.77
Methylcyclohexane/n-Heptane	0.6		37.25	-48.33	-31.77

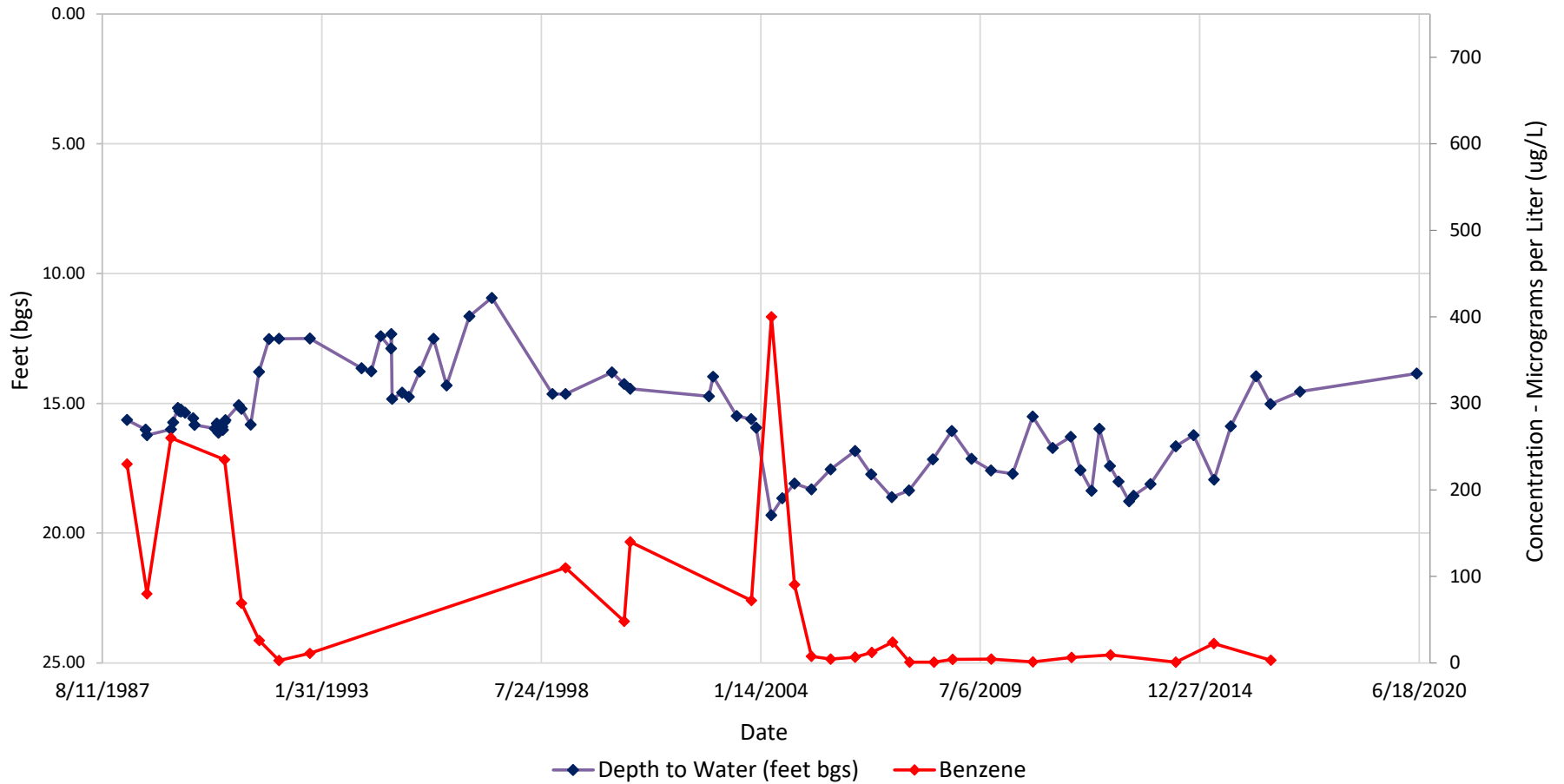
Appendix A

MW-3
Benzene/Groundwater Hydrograph
Former Amoco Terminal
Superior, Wisconsin



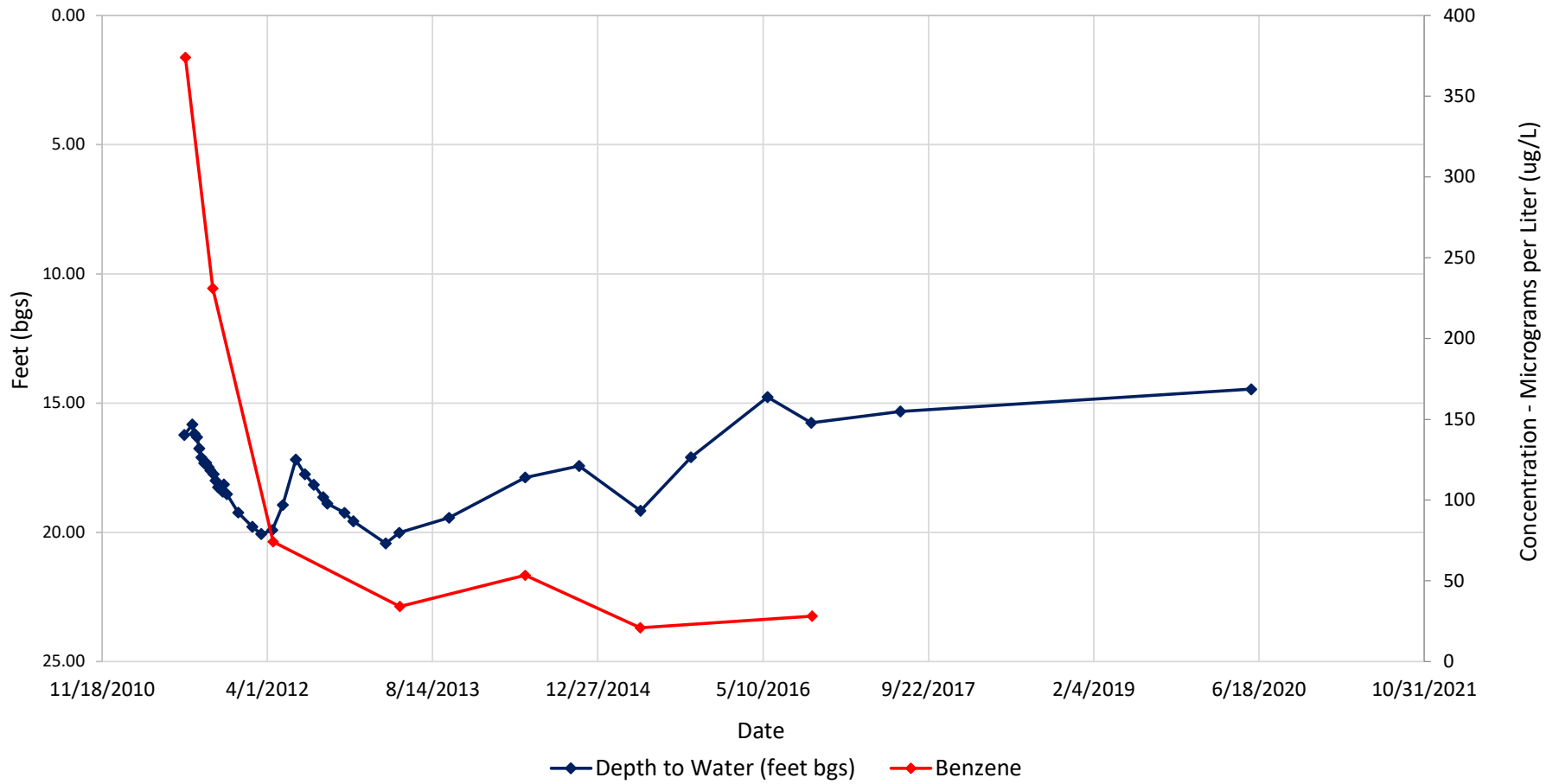
Appendix A

MW-10 Benzene/Groundwater Hydrograph Former Amoco Terminal Superior, Wisconsin



Appendix A

EW-9 Benzene/Groundwater Hydrograph Former Amoco Terminal Superior, Wisconsin



Appendix A

EW-10 Benzene/Groundwater Hydrograph Former Amoco Terminal Superior, Wisconsin

