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BARR

December 6, 2023

Mr. John Sager
Wisconsin Department of Natural Resources
1701 N 4th Street
Superior, WI 54880

**Re: Facility-Wide Continuing Obligations Package Update - 2023**
**Enbridge Energy Superior Terminal, Superior, WI**
**WDNR BRRTS Activity #: 16-16-560657**

Dear Mr. Sager:

On behalf of Enbridge Energy, Limited Partnership (Enbridge), the attached documents are provided as an update to the *Continuing Obligations (CO) Package* for the Enbridge Superior Terminal Facility-Wide BRRTS site. The Updated CO package contains the following new or updated documents:

| Doc # | Document Description | Description of Change | # of pages | CO Pages to Replace |
|---|---|---|---|---|
| 1 | Table A.7.1 | Updated to include Line 1 PVC closed BRRTS site 02-16-589076. | 1 | Page 40 |
| 2 | Figure C.4 | Updated to show location and extent of residual contamination associated with Line 1 PVC closed BRRTS site 02-16-589076. | 1 | Page 323 |
| 3 | Site Summary Manifold Corridor | Manifold Corridor is an existing facility-wide transfer site. The site summary was updated to include documentation associated with the 2023 Manifold 213 project that occurred within the previously defined corridor area. No evidence of a new release was encountered, and the extent of residual contamination remains the same. The site summary includes updates to the site investigation field sampling and screening logs, soil sample analytical results table, and site layout figure. | 13 | Pages 167-184 |

In accordance with NR 749, the WDNR fee for modification of a database site is $1050. This CO database

modification request will include a WDNR database fee of $1050 under separate cover. If you have any questions, please contact me at 218-529-7141 or lcarney@barr.com.

Sincerely,

Barr Engineering Company Inc.

Lynette Carney

Enclosures: Updated Facility-Wide Continuing Obligations Documents (as listed above)
cc: Karl Beaster, Enbridge Energy
Nick Larabel, Enbridge Energy

**Table A.7.1**

Table A.7.1
Historical Closed Terminal Release Sites (Non- Facility Wide)
Enbridge Superior Terminal
Superior, Wisconsin

| WDNR Site No. | Site Name | Facility ID | Report Date | Closed Date |
|---|---|---|---|---|
| **1980 - 1989** | | | | |
| 02-16-000512 | LAKEHEAD PIPELINE - PUMP ST | NONE | January 11, 1988 | December 1, 1997 |
| **1990 - 1999** | | | | |
| 03-16-000168 | LAKEHEAD PIPE LINE CO | 816012450 | April 20, 1990 | September 18, 1996 |
| 02-16-000027 | LAKEHEAD PIPELINE - PLM TOOL SHOP | 816012450 | July 13, 1992 | November 8, 1999 |
| 02-16-178165 | LAKEHEAD PIPELINE - TANK 21 CRUDE OIL | 816010580 | August 13, 1997 | March 16, 1998 |
| 02-16-176579 | LAKEHEAD PIPELINE CO L P | 816010580 | November 18, 1997 | October 23, 2003 |
| 02-16-183249 | LAKEHEAD PIPELINE - MANIFOLD 3 | 816010580 | February 2, 1998 | April 15, 2004 |
| 02-16-275090 | ENBRIDGE SUPERIOR TERMINAL | 816066130 | January 19, 1999 | January 11, 2010 |
| 02-16-220009 | LAKEHEAD PIPELINE - CRUDE OIL TANK 22 | 816010580 | May 12, 1999 | October 23, 2003 |
| 02-16-275130 | LAKEHEAD PIPELINE - TANK 23 | 816012450 | August 6, 1999 | February 21, 2007 |
| 02-16-275100 | LAKEHEAD PIPELINE - TANK 24 | 816010580 | August 30, 1999 | February 2, 2004 |
| **2000 - 2010** | | | | |
| 02-16-240727 | LAKEHEAD PIPELINE - NEMADJI RIVER | NONE | January 4, 2000 | November 11, 2003 |
| 02-16-279246 | LAKEHEAD PIPELINE CO L P | 816010580 | July 27, 2000 | August 16, 2005 |
| 02-16-338051 | LAKEHEAD PIPELINE - BOOSTER PUMP #56 | 816010580 | January 20, 2002 | July 14, 2006 |
| 02-16-513788 | ENBRIDGE ENERGY - NEMADJI RIVER | 816010580 | January 25, 2003 | March 24, 2010 |
| 02-16-552700 | ENBRIDGE ENERGY - TANK 9 PRESSURE LINE | 816010580 | October 1, 2008 | November 18, 2008 |
| 02-16-556786 | ENBRIDGE ENERGY - TANK 22 | 816010580 | October 9, 2009 | September 19, 2011 |
| **2010 - 2019** | | | | |
| 02-16-558329 | ENBRIDGE ENERGY - TANK 12 | 816010580 | August 18, 2011 | December 3, 2012 |
| 02-16-558649 | ENBRIDGE ENERGY - LINE 14 BOOSTER PUMP | 816010580 | September 25, 2011 | December 27, 2012 |
| 02-16-558989 | ENBRIDGE ENERGY - TANK 23 | 816010580 | May 31, 2012 | November 18, 2013 |
| 02-16-558990 | ENBRIDGE ENERGY - TANK 19 | 816010580 | May 31, 2012 | September 4, 2012 |
| 02-16-558992 | ENBRIDGE ENERGY - TANK 20 VALVE | 816010580 | May 31, 2012 | September 4, 2012 |
| 02-16-558988 | ENBRIDGE ENERGY - OFFICE EXCAVATION | 816010580 | June 4, 2012 | September 4, 2012 |
| 02-16-558987 | ENBRIDGE ENERGY - TANK 9 | 816010580 | July 2, 2012 | September 4, 2012 |
| 02-16-560841 | Enbridge Energy - Line 5 Pig Trap | 816010580 | April 22, 2013 | September 3, 2013 |
| 02-16-561635 | Valve 2515-2605 | 816010580 | January 2, 2014 | January 29, 2014 |
| 02-16-560716 | Enbridge Energy - Tank 8 | 816010580 | July 18, 2013 | January 28, 2014 |
| 02-16-561635 | ENBRIDGE ENERGY - VLAVE 2515 & 2605 MAINT EX | 816010580 | January 2, 2014 | January 29, 2014 |
| 02-16-563708 | ENBRIDGE SUPERIOR TERMINAL - TIMBER PILINGS | 816010580 | May 20, 2015 | November 17, 2015 |
| 02-16-577548 | ENBRIDGE SUPERIOR TERMINAL - LINE 5 VALVE | 816010580 | July 7, 2016 | September 1, 2016 |
| 02-16-579606 | ENBRIDGE SUPERIOR - TANK 12 STEP | 816010580 | June 19, 2017 | November 16, 2017 |
| 02-16-579604 | ENBRDIGE SUPERIOR - FIELD BOOSTER 23 | 816010580 | June 19, 2017 | November 16, 2017 |
| 02-16-579607 | ENBRIDGE SUPERIOR - TANK 2 STEP | 816010580 | June 19, 2017 | November 16, 2017 |
| 02-16-583048 | TANK 9 BASIN | 816010580 | January 30, 2019 | March 14, 2019 |
| **2020 -** | | | | |
| 02-16-586743 | Tank 2 Ring Road | 816010580 | October 30, 2020 | February 5, 2021 |
| 02-16-589076 | Enbridge Terminal - Line 1 PCV | 816010580 | July 20, 2021 | March 17, 2022 |

**Figure C.4**

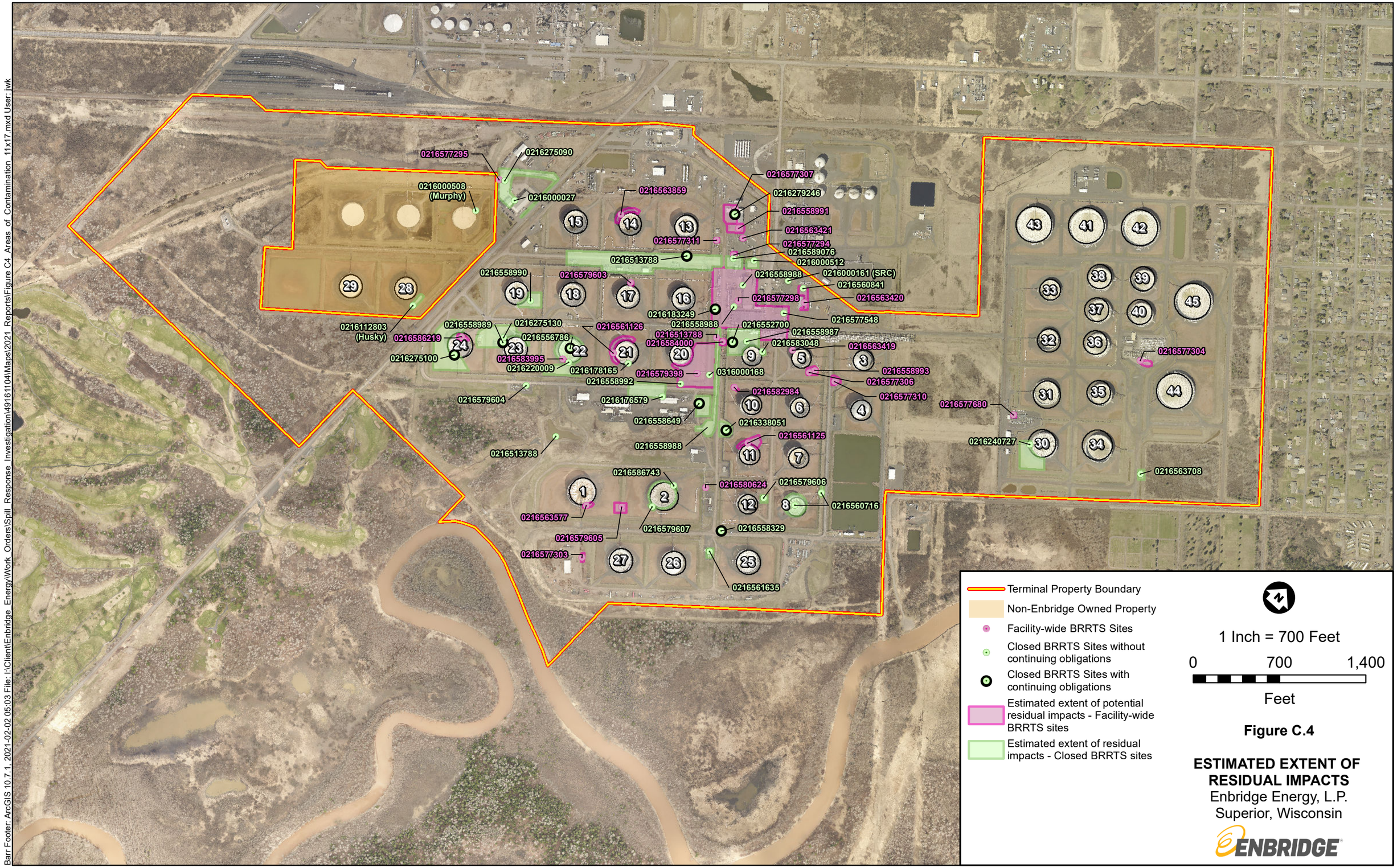


**Figure C.4**

**ESTIMATED EXTENT OF RESIDUAL IMPACTS**
Enbridge Energy, L.P.
Superior, Wisconsin

ENBRIDGE

# Site Summary Manifold Corridor

# Enbridge Superior Terminal
# Facility-Wide Continuing Obligations
# GIS Registry Update BRRTS#: 01-16-560657

**SUBMITTAL DATE:** **November 22, 2023** ***(original submittal May 31, 2019)***

**RELEASE OR ACTIVITY NAME:** **ENBRIDGE TERMINAL – MANIFOLD CORRIDOR**

**ORIGINAL BRRTS / SRRTS # (*if applicable*): 02-16-577298 Manifold Corridor**

**Continuing Obligation (CO) or Closed BRRTS #'s within Manifold Corridor Area:**
**02-16-183249 Manifold 3 (CO); 02-16-513788 Nemadji River (CO); 02-16-558988 Office Excavation (closed); 02-16-577548 Line 5 Valve.**

| SITE INFORMATION | | | |
|---|---|---|---|
| **Date of Discovery *(if applicable)*** | NA | **Date of Rediscovery** *(if applicable)* | Multiple Dates, see below |
| **WDNR Notification/ Start Date** | 2/5/2014 | **WDNR Closure Date** *(if applicable)* | 3/10/2022 |
| **Coordinates of Current Activity *(decimal degrees)*** | Lat: 46.688267<br>Lon: -92.05814 | **Coordinates of Current Activity *(WTM91)*** | X: 362522.20809<br>Y: 692583.78245 |
| **Enbridge Contact and Email** | Karl Beaster<br>Karl.Beaster@enbridge.com | **Consultant Contact and Email** | Ryan Erickson<br>rerickson@barr.com |
| **Previous Report and Memorandum References *(if applicable)*** | *Enbridge Energy – Manifold 3 Continuing Obligations Package*, WDNR BRRTS on the Web document dated March 24, 2010 (BRRTS 0216183248).<br>*Enbridge Energy – Nemadji River Continuing Obligations Package*, WDNR BRRTS on the Web document dated April 15, 2004 (BRRTS 0216513788).<br>*Superior Terminal Office Electrical Rack Excavation - Historical Crude Oil Impacts*, Barr Engineering Technical Memorandum, January 24, 2014 (BRRTS 0216558988).<br>*Superior Terminal Historical Contamination: Office Excavation Historical Impacts*, Barr Engineering Technical Memorandum, December 28, 2016 (BRRTS 0216558988).<br>*Superior Terminal Pipe Rack Associated Projects – Historical Crude Oil Impacts*, Barr Engineering Technical Memorandum, February 5, 2014 (BRRTS 0216557298).<br>*Superior Terminal Line 5 Valve Historical Contamination Response*, Barr Engineering Technical Memorandum, August 9, 2016 (BRRTS 0216577548).<br>*Superior Terminal Historical Contamination: Office Excavation Historical Impacts,* Barr Engineering Technical Memorandum, December 28, 2016 (BRRTS 0216558988). | | |

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|---|---|
| | *Superior Terminal Manifold Corridor Area Excavation*, Barr Engineering Technical Memorandum, February 19, 2019 (BRRTS 0216557298).<br><br>*Enbridge Terminal – Manifold 213 Response*, Barr Engineering Technical Memorandum, September 19, 2023 (BRRTS 0216557298). |
| **Release Description and Notification** | Soil and water with historical hydrocarbon impacts have been encountered within the Manifold Corridor Area (MCA) boundary in multiple locations (MCA Sites) during project excavation activities at the Enbridge Superior Terminal (Terminal) (Figures 1 and 2). Historical releases or project excavations where historical impacts have been identified within or near the MCA boundary include:<br><br>• *LAKEHEAD PIPELINE - MANIFOLD 3* ***(Closed-Continuing Obligation; 0216183249)***: Crude release of unidentified volume reported on February 2, 1998. The site is located in the south corner of the MCA.<br>• *ENBRIDGE ENERGY – NEMADJI RIVER* ***(Closed-Continuing Obligation; 0216513788)***: A 4,500 bbl crude oil release on January 24, 2003. The release location is 250 feet west of the Manifold Corridor Area; however, product from the release migrated through stormwater ditches located along the west side of the MCA.<br>• *Enbridge Energy – OFFICE EXCAVATION* ***(Closed; 0216558988)***: historical hydrocarbon impacts encountered in project excavations. Reported on June 4, 2012. The excavations are in the center of the MCA. Additional nearby historical impacts were encountered west of Manifold 223 and were reported to the Wisconsin Department of Natural Resources (WDNR) in 2016.<br>• *ENBRIDGE SUPERIOR TERMINAL – LINE 5 VALVE* ***(Closed; 0216577548):*** A Line 5, Valve 5-V-5531 crude oil release (< 1-gallon) was identified. Soil around the valve was excavated, the valve was repaired, and no residual impacts were identified in the final excavation.<br>• *Pipe Rack Project Sites* ***(MCA Site; 0216577298)***: Historical hydrocarbon impacts were identified in five Pipe Rack-associated project excavations in 2012 and 2013 on the east half of the MCA.<br>• *Manifold Corridor Area Excavations* ***(MCA Site; 0216577298)***: Historical hydrocarbon impacts identified in potholes and an excavation in 2018 in the west half of the MCA.<br>• *Manifold 213 Excavation* ***(MCA Site)***: Historical hydrocarbon impacts identified in an excavation in 2023 along the west side of the MCA.<br><br>Based on the number of potential sources of historical hydrocarbon impacts and the concentration of Terminal infrastructure (i.e. preferential pathways and structural impediments), identifying a specific historical release source within the MCA is not practical.<br><br>Hydrocarbon impacts observed in the MCA typically consist of excavation water with a hydrocarbon sheen or free-product and/or soil with evidence of hydrocarbon impacts (e.g. headspace reading > 10 ppm, hydrocarbon odor, hydrocarbon sheen or free-product, and/or discoloration). Conditions observed within the excavations vary by location and depth.<br><br>The WDNR is aware of the historical impacts within the MCA and of the MCA Site excavation activity. Based on conditions described above, the WDNR |

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| | agreed (December 19, 2018) to establish the MCA Bureau for Remediation and Redevelopment Tracking System (BRRTS) # and its boundaries (Figure 2) to simplify the reporting of historical impacts encountered during project activities. The MCA BRRTS # was previously associated with the *Pipe Rack Project* excavations. This Update focuses on conditions encountered in the two MCA Sites. |

## Response Action Summary

**Date of Excavation, extent and soil disposal**

The MCA Site projects described below: 1) had historical hydrocarbon impacts; 2) are located within the MCA boundary; and 3) have not been previously closed by the WDNR. The MCA Site excavation locations are shown on Figure 2:

**Pipe Rack Project (2012-2013):**

- ***LHB Investigation Borings*** *(August/October 2012):* Impacted soil identified by contractors at depth in potholes that were 2 feet wide by 10 feet deep.
- ***Water Valve Replacement Excavation*** *(November 2012) (Table 1-Sheet 1):* Impacted soil and water in an infrastructure excavation that was 8 feet wide by 8 feet long by 6 feet deep.
- ***Fire Hydrant Excavation*** *(November 2012) (Table 1-Sheet 2):* Impacted soil in an infrastructure excavation that was 10 feet wide by 8 feet long by 7 feet deep.
- ***Pipe Rack Footing Excavations*** *(July 2013) (Table 1-Sheet 3):* Impacted soil and water in three infrastructure construction excavations that were each 8 feet wide by 8 feet long by 8 feet deep.
- ***Central Manifold Expansion Excavation*** *(July-August 2013) (Table 1-Sheet 4):* Impacted soil in a Manifold construction excavation that was 100 feet wide by 100 feet long by 6 feet deep.

**Manifold Corridor Area Excavations (2018-2023):**

- ***Western Potholes*** *(November 2018) (Table 1-Sheet 5):* Impacted water (free-product, sheen) in potholes advanced for the pipeline infrastructure supports. Free-product was recovered by Enbridge with a vacuum truck and was not observed in the borings after initial recovery activity.
- ***Road Excavation*** *(November-December 2018) (Table 1-Sheets 6, 7, 8):* Impacted soil and water in the eastern half of a pipeline construction project. The excavation was approximately 80 feet long by 40 feet wide by up to 12 feet deep.
- ***Manifold 213 Excavation*** *(July 2023) (Table 1-Sheet 9):* Impacted soil and water in the southeast half of the excavation. The excavation was approximately 60 feet long by 20 feet wide by up to 3 feet deep.

Due to the presence of nearby Terminal infrastructure, additional excavation of residual impacts in the above locations was not feasible. Soil and excavation water with identified hydrocarbon impacts that were removed from the excavation were segregated for off-site disposal. Impacted soil was transported to the Terminal Soil Management Area (SMA) until off-site disposal could be

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| | coordinated. Impacted water removed from the excavation was containerized until off-site disposal could be coordinated. All excavations were backfilled with clean fill material or terminal infrastructure was constructed within them. |
| **Groundwater Depth and Nearest Monitoring Well** | Water was observed in some of the excavations between 2 and 6 feet below ground surface. The water table at the Superior Terminal is typically between 3 and 6 feet below ground surface (bgs) based on data from the Superior Terminal Groundwater Monitoring Program. The nearest monitoring wells are *MW-24* located 400 feet to the northeast and *MW-20* located 800 feet to the south (Figure 2). |
| **Soil Field Screening Results Summary** | Field screening soil samples were collected from impacted MCA Site excavations, where feasible. Sample collection was limited in some locations by excavation size, unsafe entry conditions, and the use of excavation/trench boxes. Field screening results are summarized below and site investigation logs are provided in Table 1.<br><br>**<u>Pipe Rack Project (2012-2013):</u>**<br><br>• **LHB Investigation Borings** *(August/October 2012) (Figure 2):* Soil field screening was not feasible due to the excavation method (hydrovac), the size of the potholes, and the estimated contamination depth (greater than 4 feet bgs).<br>• **Water Valve Replacement Excavation** *(11/5, 11/15/2012) (Table 1-Sheet 1):* Five direct contact zone soil samples were collected and had headspace readings between 0.6 ppm and 1.1 ppm and no other evidence you hydrocarbon impacts. Soil sample *Office valve-S-2* was collected at 6 feet bgs and had a headspace reading of 150+ ppm and a petroleum odor and sheen.<br>• **Fire Hydrant Excavation** *(November 5, 2012) (Table 1-Sheet 2):* Seven field screening samples were collected from the excavation extents. Five of the samples were collected between 1 and 2 feet bgs and had headspace readings between 0.1 ppm and 1.2 ppm. Evidence of residual impacts was observed in two samples collected from the western corner of the excavation. *S-6* was collected from 3 feet bgs and had a headspace of 206 ppm and a hydrocarbon odor. *S-7* was collected from 6 feet bgs and had a headspace of 15.8 ppm and no other evidence of impacts was identified.<br>• **Pipe Rack Footing Excavations** *(July 9, 2013) (Table 1-Sheet 3):* Field screening samples were identified in 3 of the 4 excavations from 4 to 6 feet bgs. Headspace readings in the impacted samples were between 21.9 and 199 ppm and a hydrocarbon odor and sheen was identified in those samples.<br>• **Central Manifold Expansion Excavation** *(August 1, 2013) (Table 1-Sheet 4):* 18 field screening soil samples were collected from the accessible final excavation extents and only sample *R-15*'s (6 feet bgs) headspace reading of 26.8 ppm exceeded 10 ppm. No other evidence of hydrocarbon impacts was observed.<br><br>**<u>Manifold Corridor Area Excavations (2018-2023):</u>**<br><br>• ***Western Pothole Impacts*** *(November 2018) (Table 1-Sheet 5):* Soil field screening was not feasible due to the excavation method (hydrovac), |

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| | groundwater depth, pothole diameter, and the estimated contamination depth (greater than 4 feet bgs).<br>• ***Road Excavation*** *(November-December 2018) (Table 1-Sheets 6, 7, 8):* Impacted soil and water in a pipeline construction project that was approximately 80 feet long by 40 feet wide by up to 12 feet deep.<br>• ***Manifold 213 Excavation*** *(July 2023) (Table 1-Sheet 9):* Four of eighteen field screening samples collected from the final southeastern excavation extents had headspace readings between 10.6 ppm and 360.4 ppm from 1.5 feet bgs and 3 feet bgs. A petroleum odor and sheen was identified in three of the samples. |
| **Analytical Sampling Results Summary** | Analytical soil samples were collected from impacted MCA Site excavations, where feasible. Soil samples were submitted to Pace Analytical for some or all of the following laboratory analyses: petroleum volatile organic compounds (PVOCs), diesel range organics (DRO), and polycyclic aromatic hydrocarbons (PAH). Detected analyte concentrations were compared to the WDNR Direct Contact (DC) and Groundwater Residual Contaminant Levels (RCLs) and WDNR RCL Determination Hazard Index value was calculated. Analytical sampling locations are shown on Figure 2 and in Table 1 and the results are summarized below. Table 2 summarizes the available PVOC, Naphthalene, DRO, and PAH RCL exceedances and shows the Hazard Index value.<br><br>**<u>Pipe Rack Project (2012-2013):</u>**<br><br>• **LHB Investigation Borings** *(August/October 2012):* No confirmation samples were collected from the pothole excavations.<br>• **Water Valve Replacement Excavation** *(11/15/2012):* Soil samples *Office Valve-S-1* (1 foot bgs) and *Office Valve-S-1* (6 feet bgs) were collected from the excavation and all analyte concentrations were below WDNR DC RCLs and Groundwater RCLs.<br>• **Fire Hydrant Excavation** *(November 2012):* No samples were collected from the fire hydrant excavation.<br>• **Pipe Rack Footing Excavations** *(July 9, 2013):* Soil samples *2013 Pipe Rack-S-*1, 2013 *Pipe Rack-S-1,* and *2013 Pipe Rack-S-1* were collected from the three excavations with residual impacts. No analyte concentrations exceeded WDNR DC RCLs and only *2013 Pipe Rack-S-3* had analyte concentrations exceeding WDNR Groundwater RCLs.<br>• **Central Manifold Expansion Excavation** *(August 1, 2013):* Soil sample *2013 Pipe Rack-S-4* was collected from 3.5 feet bgs near the location of the identified residual impacts. Detected analyte concentrations were below WDNR DC RCLs and only exceeded the WDNR Groundwater RCL for Chrysene.<br><br>**<u>Manifold Corridor Area Excavations</u>** *<u>(2018-2023):</u>*<br><br>• ***Western Pothole Impacts*** *(November 2018):* No confirmation samples were collected from the MCA western potholes due to accessibility and the field screening results.<br>• ***Road Excavation*** *(November-December 2018):* No confirmation samples were collected from the MCA road excavation due to accessibility and the field screening results. |

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| | • ***Manifold 213 Excavation*** *(July 2023):* Soil sample *MAN213-S-1* was collected from 1.5 feet bgs near the location of the identified residual impacts. Detected analyte concentrations were below WDNR DC RCLs and only exceeded the WDNR Groundwater RCL for Naphthalene. |

| **Risk Assessment Discussion** | |
|---|---|
| **Direct Contact Receptor** | Subsurface residual hydrocarbon impacts are known to be present in the MCA based on field observations and previous investigations. The extents, depth, and magnitude of these impacts are unknown and difficult to delineate because of the presence of above and below ground pipeline infrastructure. In the Pipe Rack and Manifold Corridor MCA Site excavations described above, there is little to no direct contact risk based on field screening and analytical sampling results, the presence of clean backfill, and Enbridge employee awareness and safety requirements. |
| **Surface Water Receptor** | There does not appear to be a risk to surface water receptors from residual impacts based on field observations and assessment results, the site location, the depth of the identified residual impacts, and Terminal water management practices. |
| **Groundwater Receptor** | The nearest private water well receptor is located more than 2,000 feet to the west. Although soil analyte concentrations were detected above the Groundwater RCL, the groundwater pathway at the Superior Terminal is addressed on a facility-wide basis through the established hydrogeologic performance standard approved by the WDNR. |
| **Vapor Receptor** | The Terminal Office building and several small pipeline operation buildings are located within the MCA boundary. Only the Terminal Office Building was defined as a potential vapor receptor in the *Facility-Wide SI/RAP* and *Addendum*. The other buildings are not considered vapor receptors based on construction and occupancy.<br><br>Per the *Facility-Wide SI/RAP* and *Addendum* and vapor guidance in WDNR document *RR-800* (January 2018), it was determined that the risk of vapor intrusion into the Terminal Office Building was low based on the following observations from the *Office Excavation* (BRRTS #021655898) and the *MCA Pipe Rack: Water Valve Replacement Excavation*:<br>• Non-Aqueous Phase Liquids (NAPL; free-product) were not identified in excavations within 30 feet of the building,<br>• PVOC impacted soil within 5 feet of the building (*Office Excavation*) had field screening and analytical soil sampling results below the *NAPL Indicator* values (RR-800), and<br>• The source of the impacts was likely from older, heavier end petroleum products that "are not likely to be a source of vapors" (RR-800). |

| Residual Contamination and Facility-Wide Eligibility Discussion | |
|---|---|
| **Residual Contamination and Structural Impediments** | Based on analytical sampling results, no residual soil contamination exceeding WDNR Direct Contact Zone RCL criteria has been identified in the MCA. Residual soil contamination exceeding the Groundwater RCL criteria remains in some of the project locations. Additional excavation of this material was not feasible due to the presence Terminal infrastructure. The MCA *area of potential residual hydrocarbon impacts* boundary was drawn based on: the location of historical releases, previously identified residual historical impacts, and the presence of below ground pipeline infrastructure (e.g. potential preferential pathways). All excavations were backfilled with clean fill or covered by Terminal infrastructure. |
| **Response Action Approval and Continuing Obligations** | There is no identified risk to direct contact, surface water, or vapor receptors associated with the residual contamination identified during projects in the MCA. The risk to groundwater from the residual contamination will be addressed through the facility-wide hydrogeologic performance standard established for the Superior Terminal.<br><br>The WDNR will be notified about any identified change in environmental conditions in the MCA. As part of this hydrogeologic performance standard Enbridge will continue to monitor groundwater conditions of the site and, if evidence of contamination is identified, it will be reported to the WDNR and managed in accordance with the approved *Facility-Wide SI/RAP* and *Addendum*.<br><br>Based on the *Facility-Wide SI/RAP* and *Addendum* site classification, the conditions that were encountered in the field, and the December 11, 2018 WDNR email communication, the pathway to closure for this site is to transfer it to the Superior Terminal Facility-Wide Site (BRRTS#: 02-16-560657) and no additional response, investigation, or reporting activities will be required. |

**Attachments:**

| | |
|---|---|
| Table 1 | Site Investigation Field Sampling and Screening Logs |
| Table 2 | Soil Analytical Data Summary |
| Figure 1 | Site Location |
| Figure 2 | Site Layout |

Table 1
Sheet 1 of 9 (Pipe Rack Project)

SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG

Location: *Milepost or Facility* Superior Terminal Water Valve Replacement Excavation

Equipment used: PID *-ionization detector with* 10.6 *eV lamp*

Background Headspace: — ppm

Date: 11/5/12 11/15/12

Sampler: RCG

Calibration Time: -

Sample Nomenclature *(Location - sample type - #)*: _____

Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

| Sample ID | Depth (ft) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example R-1 | 4 | 16.30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| S-1 | 3 | 1310 11/5 | CL | Reddish Brown | N /N | 1.1 |
| S-2 | 3 | 1312 11/5 | | | N/N | .8 |
| S-3 | 2 | 1314 11/5 | | | N/N | .6 |
| S-4 | 4 | 1316 11/5 | | | N/N | 1.1 |
| Office valve-S-1 | 1 | 1015 11/15 | | | N/N | 1.0 |
| office valve-S-2 | 6 | 1030 11/15 | | | Petroleum/Y | X150 |

***SITE SKETCH:*** ~~*north is up*~~*; excavation extents and depths, sample locations, structures, utilities, boring locations, wells, natural features...* ***1 inch/grid = 4 FEET***

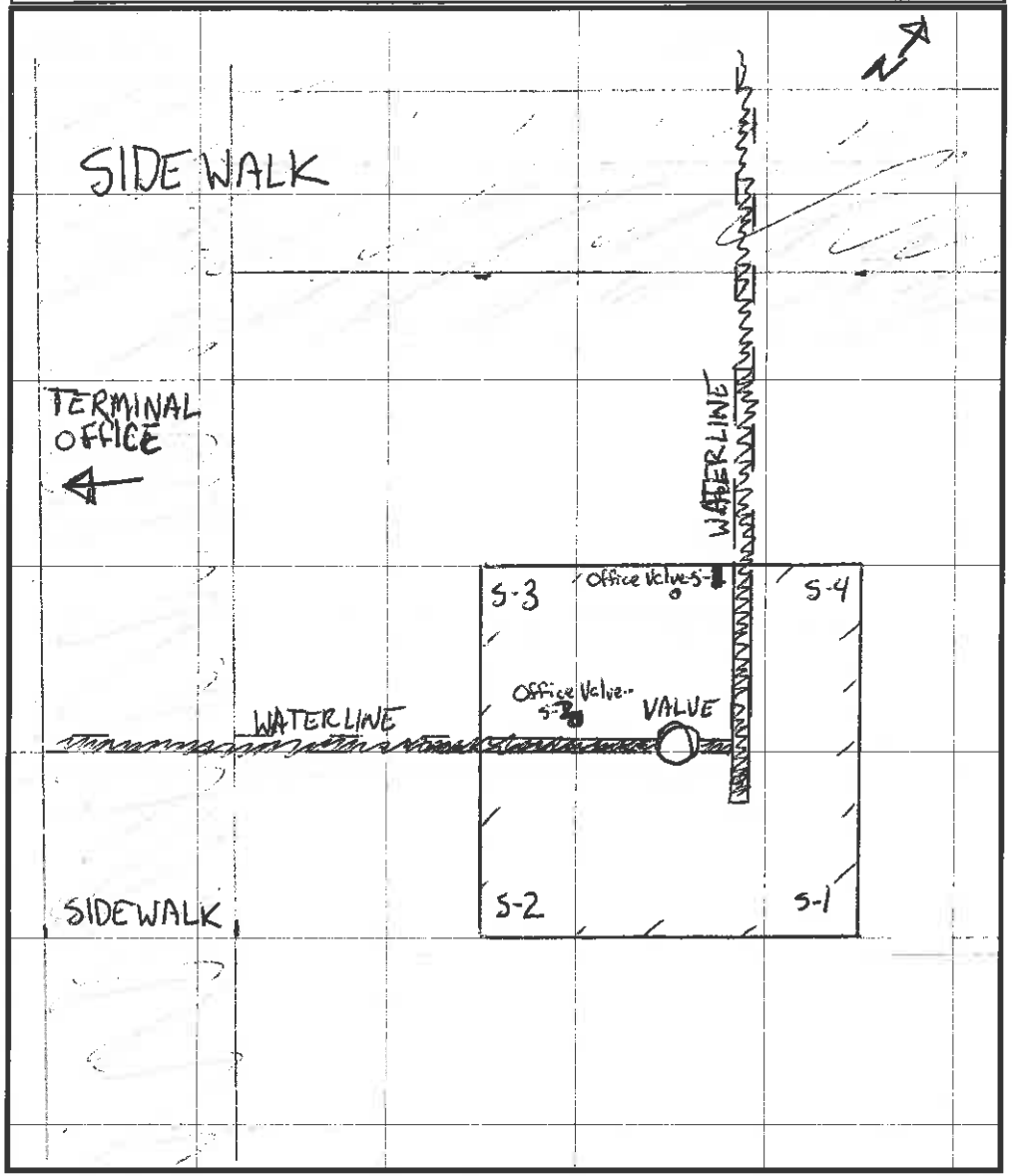

Table 1
Sheet 2 of 9 (Pipe Rack Project)

SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG

Date: 11/5/2012 11/7/2012

Location: *Milepost or Facility* Superior terminal fire Hydrant Excavation

Sampler: REE

Equipment used: PID *-ionization detector with* 10.6 *eV lamp*

Background Headspace: – ppm

Calibration Time: –

Sample Nomenclature *(Location - sample type - #)*: _____

Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

| Sample ID | Depth (ft) | Date/ Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example. R-1 | 4 | 16.30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| S-1 | 1 | 11/5 1030 | CL/GP | Red | N/- | .7 |
| S-2 | 1 | 11/5 1035 | CL | | N/- | .4 |
| S-3 | 1 | 11/5 1040 | CL | | N/- | .8 |
| S-4 | 1 | 11/5 1045 | CL | | N/- | 1.2 |
| S-5 | 2 | 11/7 900 | CL | | N/- | .1 |
| S-6 | 3 | 11/7 905 | CL | Discolored Grayish | Petroleum odor/ | 203 |
| S-7 | 6 | 11/7 910 | CL | | N/- | 15.8 |

***SITE SKETCH:*** ~~*north is up*~~*; excavation extents and depths, sample locations, structures, utilities, boring locations, wells, natural features...* ***1 inch/grid =*** 3 ***FEET***

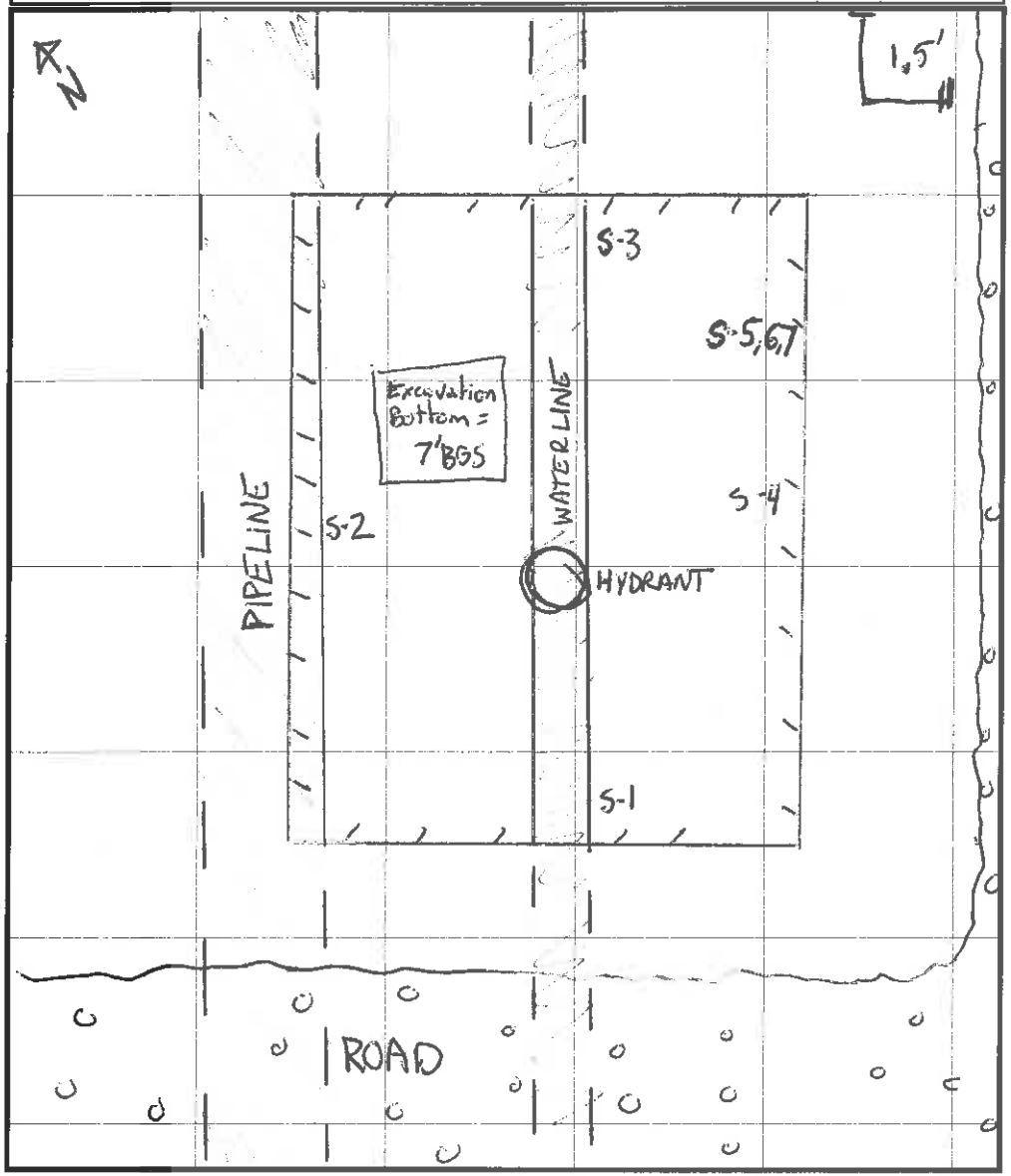

Table 1
Sheet 3 of 9 (Pipe Rack Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG

Location: *Milepost or Facility* Superior Terminal Pipe Rack Excavations

Equipment used: PID -*ionization detector with* 10.6 *eV lamp* Background Headspace: 1.0 ppm

Calibration

Date: 7/9/13
Sampler: OGZ
Time: 845

Sample Nomenclature *(Location - sample type - #)*: _____

Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

| Sample ID | Depth (ft) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example R-1 | 4 | 16 30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| R-1 | 5 | 1700 | CL | Red brown | none/none | 2.0 |
| R-2 | 5 | ↓ | ↓ | ↓ | ↓ | 2.1 |
| R-3 | 5 | | | | | 2.2 |
| R-4 | 6 | | | | | 2.7 |
| R-5 | 4 | ↓ | ↓ | ↓ | ↓ | 2.2 |
| R-6 | 4 | 1710 | CL | Red brown | none/none | 4.4 |
| R-7 | 6 | ↓ | ↓ | ↓ | ↓ | 2.7 |
| R-8 | 4 | | | | | 4.8 |
| R-9 | 4 | | | ↓ | ↓ | 2.2 |
| R-10 | 6 | | | discolored | Strong Petroleum/sheen | 199 |
| Analyzed * S-1 R-11 | 4 | ↓ | ↓ | Slightly discolored | Slight odor/ no sheen | 18.4 |
| R-12 | 4' | 1720 | CL | Red brown | none/none | 4.2 |
| Analyzed * S-2 R-13 | 4' | ↓ | ↓ | discolored | Slight odor/ sheen | 52.8 |
| R-14 | 6' | | | Slightly discolored | ↓ | 46.7 |
| R-15 | 4' | | | discolored | Strong odor/ rainbow sheen | 102.5 |
| R-16 | 6' | ↓ | ↓ | ↓ | ↓ | 119 |
| R-17 | 4' | ↓ | ↓ | Red brown | none/none | 3.8 |
| R-18 | 4' | 1730 | CL | Red brown | none/none | 2.9 |
| R-19 | 4' | ↓ | ↓ | ↓ | ↓ | 5.0 |
| Analyzed * S-3 R-20 | 4' | ↓ | ↓ | discolored | Strong odor/ sheen | 87.5 |
| R-21 | 4' | ↓ | ↓ | Slightly discolored | Slight odor/ slight sheen | 21.9 |
| S-1 | 4' | 1800 | CL | Slightly discolored | Slight odor/ no sheen | |
| S-2 | 4' | 1805 | CL | Discolored | Slight odor/ sheen | |
| S-3 | 4' | 1810 | CL | discolored | Strong odor/ sheen | |

***SITE SKETCH:*** ~~*north is up*~~*; excavation extents and depths, sample locations, structures, utilities, boring locations, wells, natural features...* ***1 inch/grid = 10' FEET***

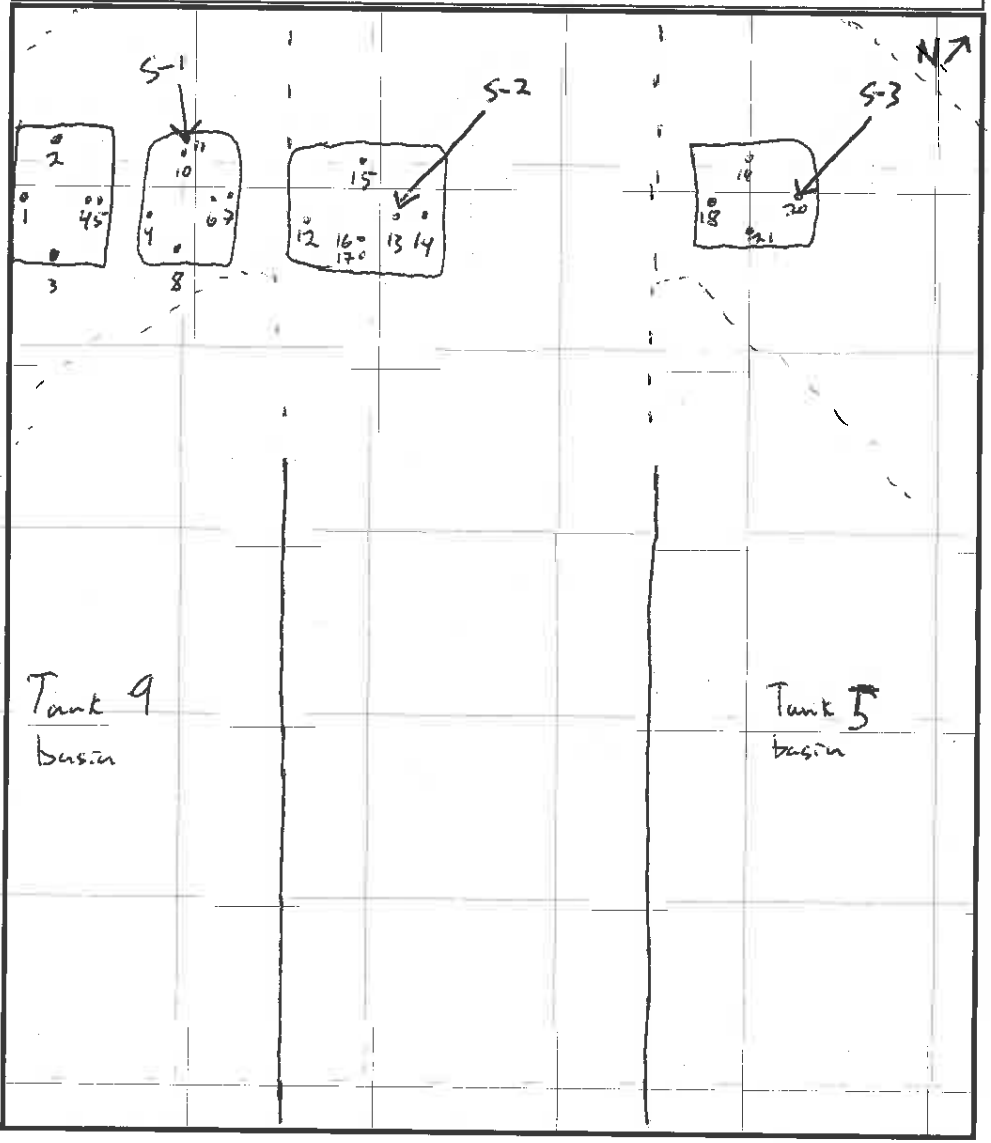

Table 1
Sheet 4 of 9 (Pipe Rack Project)

SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG

Location: *Milepost or Facility* Terminal Central Manifold Expansion Excavation

Date: 8/1/13

Equipment used: Photo -*ionization detector with* 10.6 *eV lamp* Mini RAE 3000 Background Headspace: ~1 ppm

Sampler: CSG / RGG

Calibration Time: 1045

Sample Nomenclature *(Location - sample type - #)*: 2013 Pipe Rack –

Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

| Sample ID | Depth (ft) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example R-1 | 4 | 16:30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| R-1 | 3 | 1200 | CL | Red brown | none | 0.0 |
| R-2 | 2 | 1205 | CL | Red brown | none | 0.0 |
| R-3 | 2 | 1205 | CL | Red brown Lighter in color | none | 0.1 |
| R-4 | 3 | 1210 | CL | Red brown | none | 0.2 |
| R-5 | 2 | 1210 | CL | Red brown | none | 0.1 |
| R-6 | 2 | 1215 | CL | Red brown | none | 0.1 |
| R-7 | 3 | 1217 | CL | Red brown | N/N | 0.2 |
| R-8 | 2 | 1219 | CL | Red Brown | N/N | 0.2 |
| R-9 | 3 | 1221 | CL | Red Brown | N/N | 0.1 |
| R-10 | 3 | 1222 | CL | Red Brown | N/N | 0.1 |
| R-11 | 2' | 1224 | CL | Red Brown | N/N | 0.2 |
| R-12 | 5 | 1245 | CL | Red Brown | N/N | 0.6 |
| R-13 | 6' | 1247 | CL | Red Brown | N/N | 0.4 |
| R-14 | 6' | 1250 | CL | Red brown | N/N | 0.5 |
| R-15 | 6 | 1252 | CL | Red brown | N/Film | 26.8 |
| R-16 | 7' | 1254 | CL | Red brown | None | 0.5 |
| R-17 | 7' | 1256 | CL | Red brown | None | 0.6 |
| | | | | | | |
| S-4 | 3.5 | 1310 | CL | Red brown | None | 0.4 |
| | | | | | | |
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***SITE SKETCH:*** *north is up; excavation extents and depths, sample locations, structures, utilities, boring locations, wells, natural features...* ***1 inch/grid = 25 FEET***

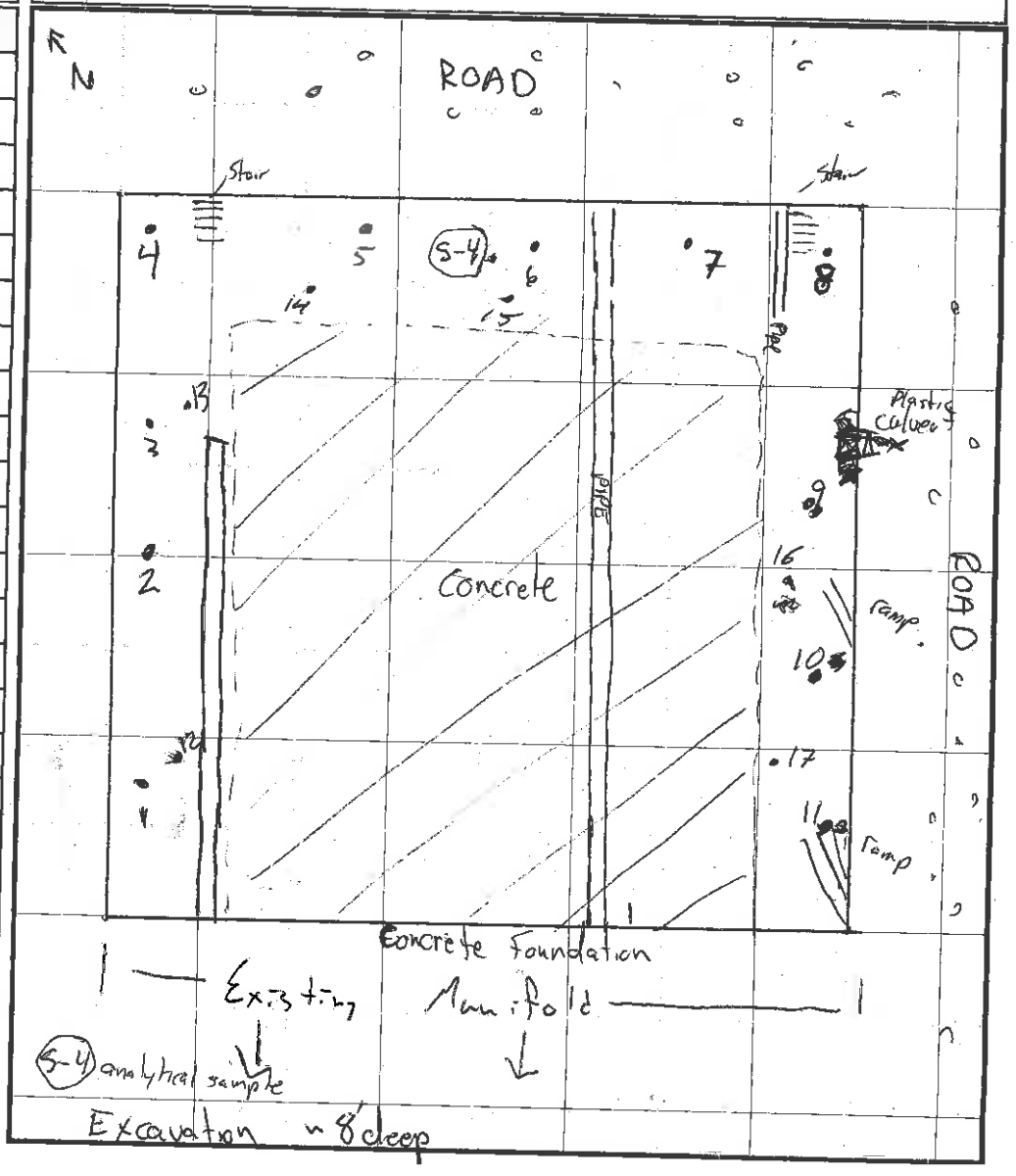


Table 1
Sheet 5 of 9 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Manifold Corridor Area Western Potholes



Equipment used: PID -ionization detector with 10.6 eV lamp  Background Headspace: 0 ppm  Date: 11/1/18
Sample Nomenclature *(Location - sample type - #)*: _____  Sampler: JEF
Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*  100ppm=107 ppm  Calibration Time: 08:30

| Sample ID | Depth (FT) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example: TK99-S-1 | 4 | 16:30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| | | | | | | |

not completed

***SITE SKETCH:*** *north is up; excavation extents & depths, impacted areas, sample locations, borings, wells, structures, utilities, natural features...* ***1 inch/grid =*** ***FEET***

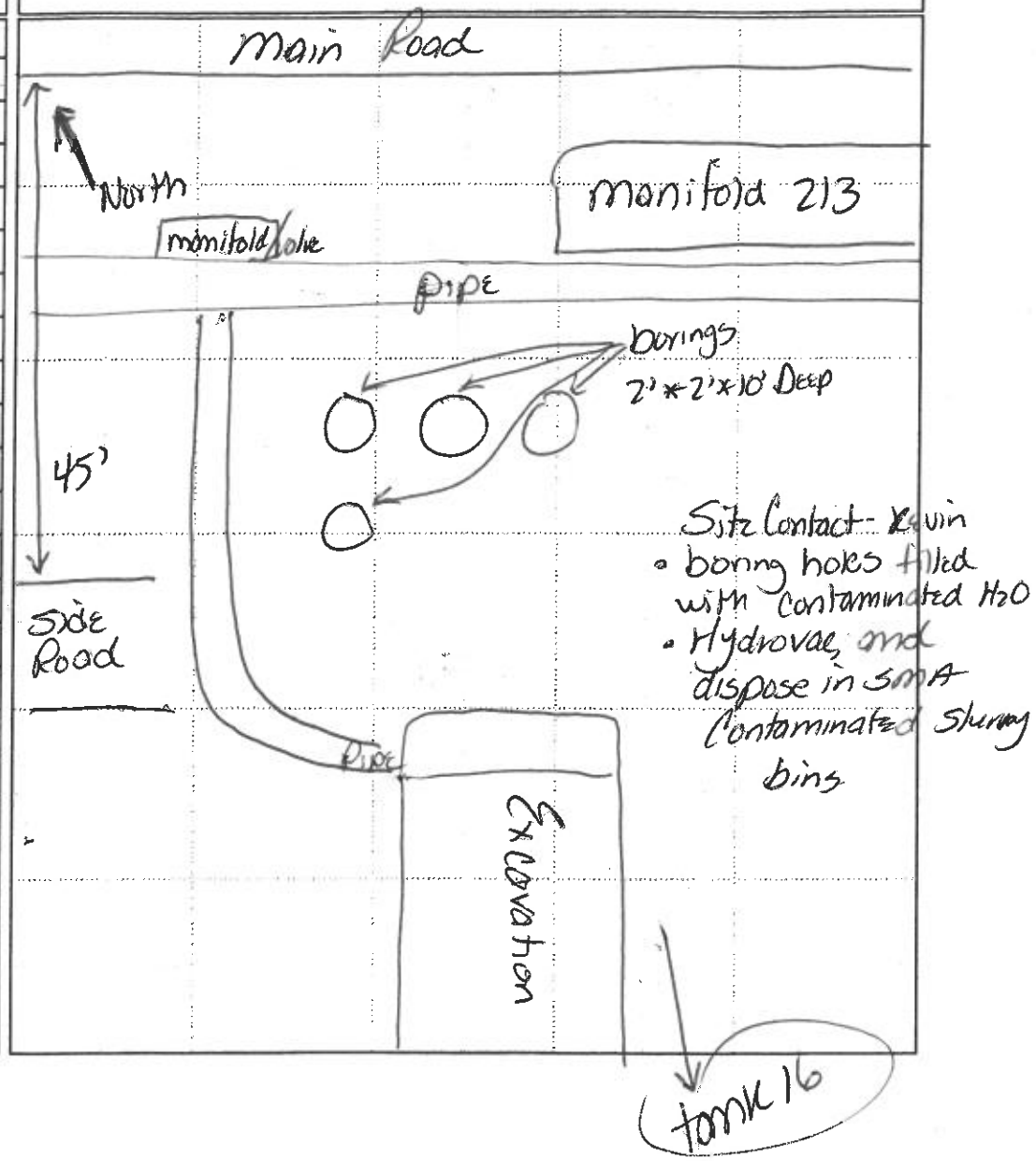


Table 1
Sheet 6 of 9 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Road Excavation

Date: 11/16/2018

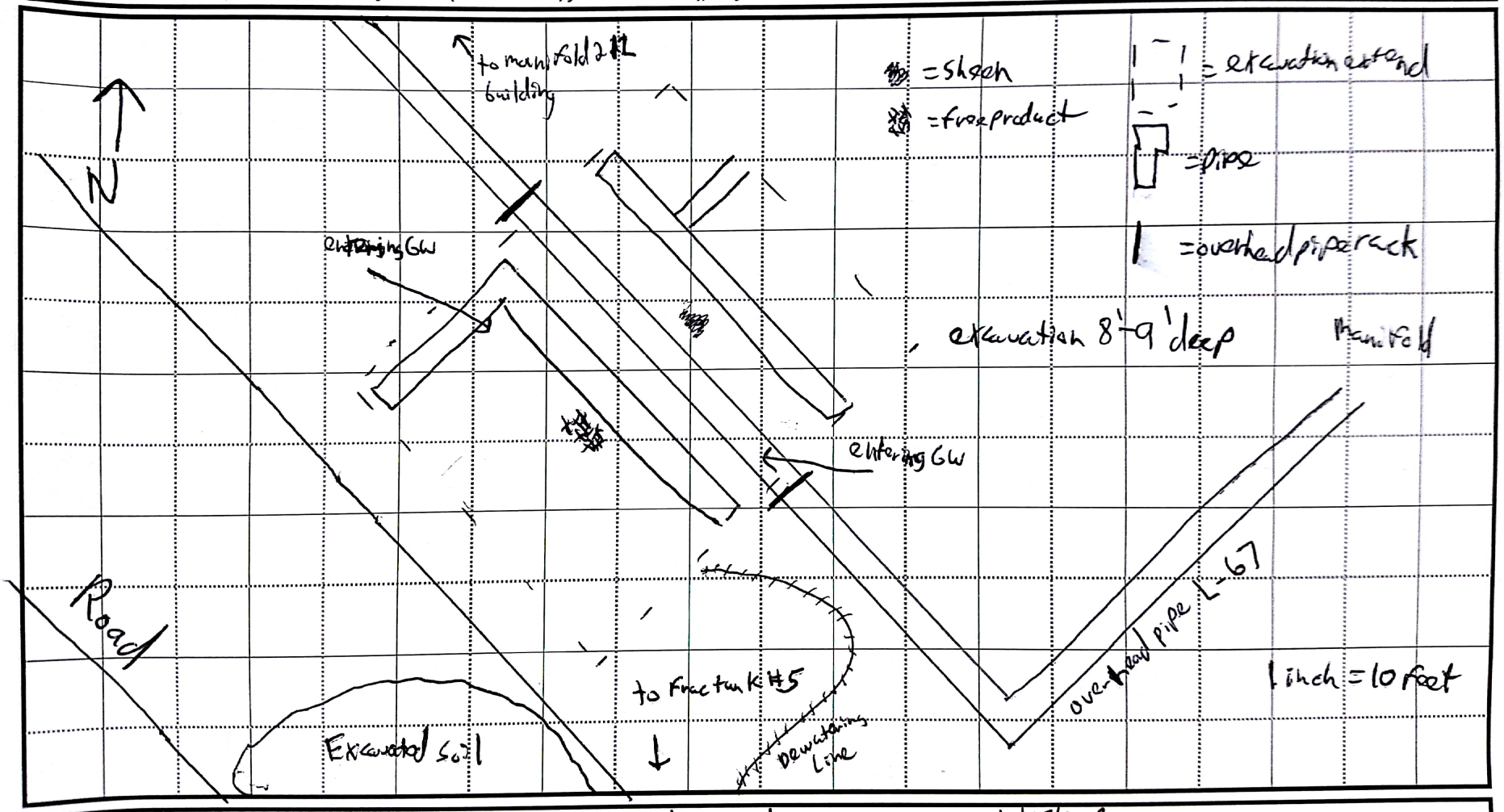


Barr Personnel: MJP

Was a GPS used to document the location of site features? YES or (NO)

Identify the GPS unit: _____

**SITE SKETCH:** *north is up; DRAW (to scale) AND LABEL THE LOCATION OF THE FOLLOWING SITE FEATURES, if applicable: release location, maximum extent of release impacts, roads, structures, pipelines and pipeline infrastucture, excavations, stockpiles, borings, wells, water tankers/frac tanks, roll-off containers, equipment staging areas, municipal utilities (electric, water, sewer...), culverts, natural features (water bodies, forested areas...), surface water drainage pathways/direction, other site features* **1 inch/grid = FEET**




**SITE NOTES/LEGEND:** Hydrocarbon impacted soil and water discovered in excavation on 11/15/2018
- ~~Free~~ product observed floating on water within excavation. Sheen also observed on saturated soil surface in excavation and stockpile
- 6" of standing water - light hydrocarbon odor from excavation
- water from dewatering being pumped into Frac tank #5. Soil (solid) being brought to bay 2 on 3 of SMA

Table 1
Sheet 7 of 9 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Road Excavation (11/19/2018; PLL)



R = Removed S = Sidewall B = Bottom **Stockpile** = Stockpile

| Sample ID | Depth (FT) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| *Example: Stockpile-1* | *4* | *16:30* | *CL* | *Reddish brown* | *Petroleum/ Rainbow* | *275* |
| S-1 | 0-2 | 1455 | CL | Reddish brown / None | none / None | 0.8 |
| S-2 | | | CH | | | 1.1 |
| S-3 | | | SC | | | 0.8 |
| S-4 | | | SW | Brown / None | | 0.9 |
| S-5 | | 1505 | GW | Reddish brown / None | | 0.8 |
| S-6 | | | CL | | Slight petro odor | PID 0.9 ~~0.7~~ |
| S-7 | | | SP | | none / None | PID ~~0.7~~ 0.9 |
| S-8 | | | SW | Brown / None | | 0.7 |
| | | | | | | |
| B-1 | 8-10 | 1515 | CH | Reddish Brown / None | Petro / Slight Rainbow | 16.7 |
| B-2 | | | CL | Reddish Brown / Dark Brown | Slight Petro / None | 1.7 |
| B-3 | | | SP | Brown / None | none / None | 0.6 |
| B-4 | | | SW | | Slight Petro / None | 1.4 |
| | | | | | | |
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| | | | | | | |

Equipment: Photoionization detector with 10.6 eV bulb

| | Calibration | Bump Test 1 | Bump Test 2 |
|---|---|---|---|
| Time | 0959 | 1522 | 1620 |
| Zero reading (ppm) | 0.0 | 0.2 | 0.1 |
| Span reading (ppm) | 100.0 | 98.9 | 98.4 |
| Background (ppm) | 0.6 | 0.2 | 0.1 |

BARR

*Site Sketch: north arrow, scale, excavation extents & depths, impacted areas, sample locations ,borings, wells, structures, utilities, natural features...*

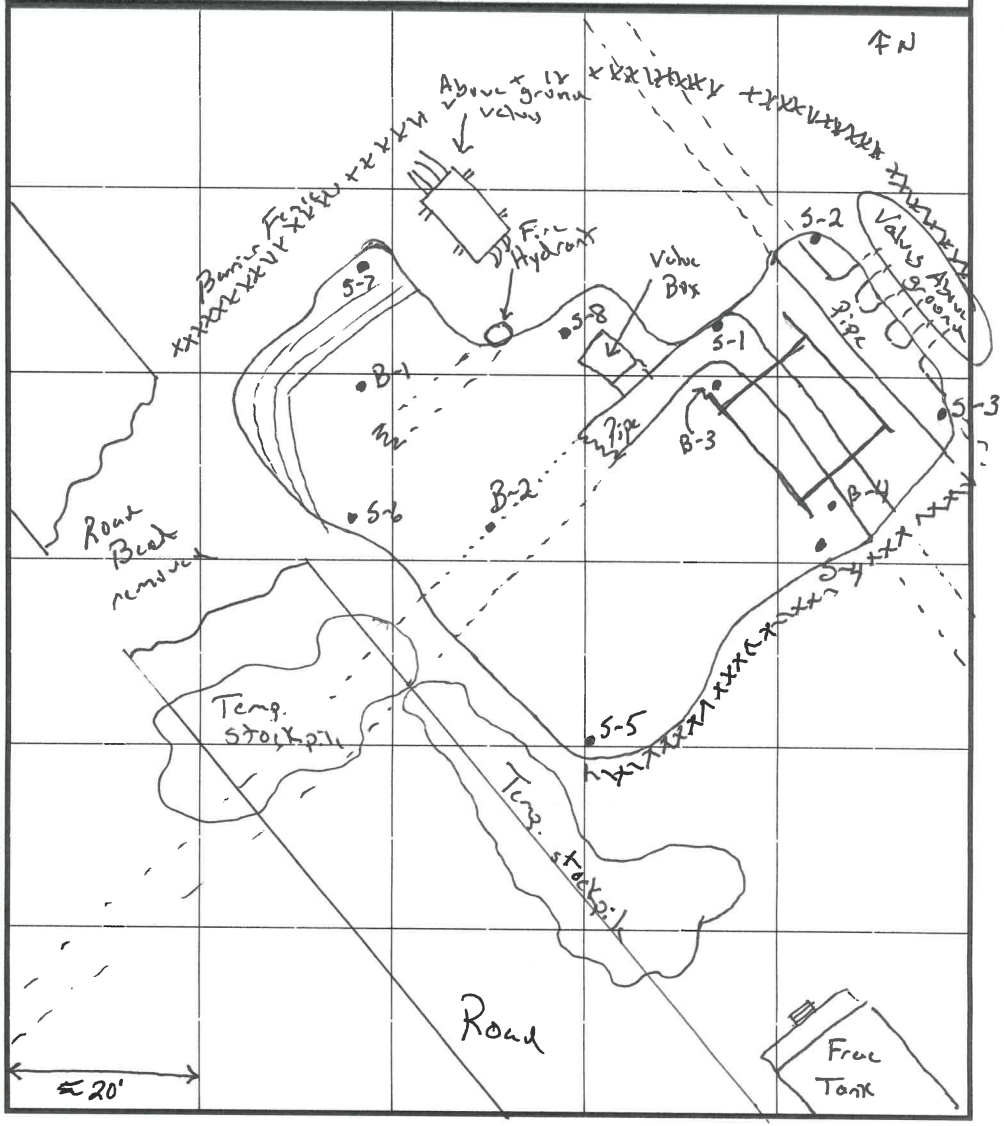


Table 1
Sheet 8 of 9 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Road Excavation

Page 1 of 1

Equipment used: PID -ionization detector with 10.6 eV lamp  Background Headspace: 0 ppm
Sample Nomenclature *(Location - sample type - #)*: MC-B (Bottom) MC-S-Sidewall
Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

Date: 12/4/18
Sampler: JET
Calibration Time: 07:30

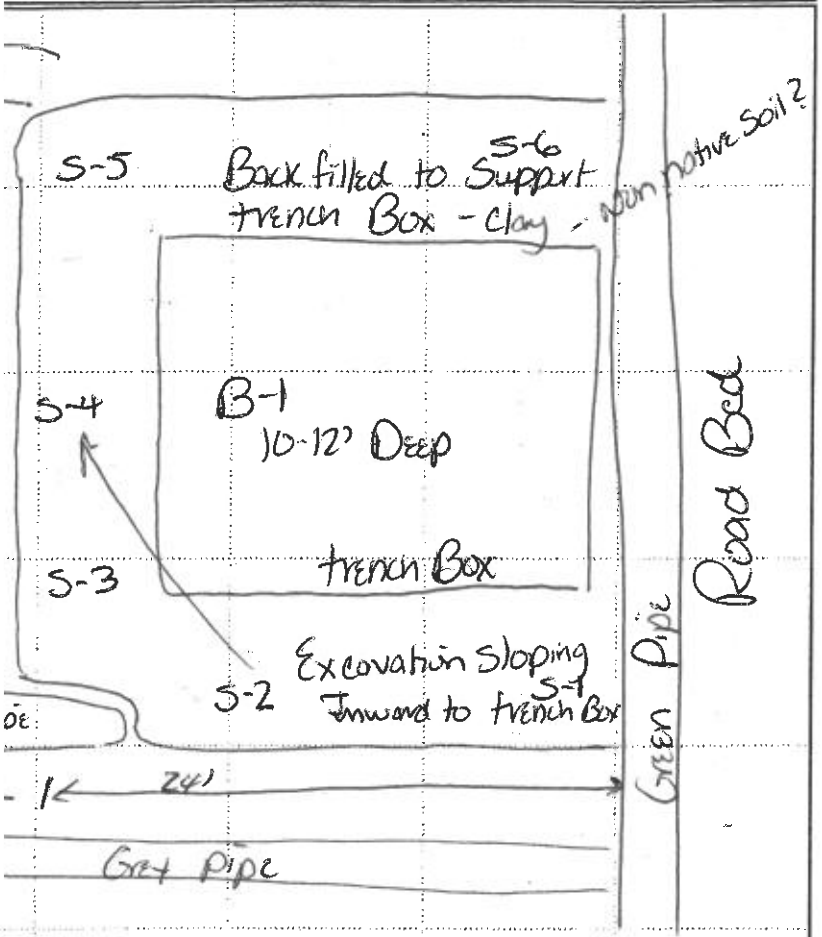
BARR

| Sample ID | Depth (FT) | Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) |
|---|---|---|---|---|---|---|
| Example: TK99-S-1 | 4 | 16:30 | CL | Reddish brown | Petroleum/ Rainbow | 275 |
| MC-B-1 | 10-12 | 11:00 | CL | Red/Brown | None/none | 0.1 |
| MC-S-1 | 2 | | SW | Red/gray | None/none | 0.1 |
| MC-S-2 | 2 | | SW | Red/gray | None/none | 0.1 |
| MC-S-3 | 2 | | SW | Red/gray | None/none | 0.7 |
| MC-S-4 | 2 | | SW | Red/gray | None/none | 1.2 |
| MC-S-5 | 2 | | SW | Red/gray | None/none | 1.7 |
| MC-S-6 | 2 | ↓ | SW | Red/gray | None/none | 5.9 |

JET
12-4-18
(12-20-18)

Table 1
Sheet 6 of 8 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Road Excavation

*North is up; excavation extents & depths, impacted areas, sample locations, structures, utilities, natural features...*  **1 inch/grid =** **FEET**




Site Contact
Jake Wohlrabe
218-341-2824

Table 1
Sheet 9 of 9 (Manifold Corridor Area Pipeline Project)
SITE INVESTIGATION FIELD SCREENING AND SAMPLING LOG
Road Excavation

Date: 7/14/2023
Sampler: JSP
Calibration Time: 07:30

Equipment used: Photo -ionization detector with 10.6 eV lamp  Background Headspace: 0.0 ppm

Sample Nomenclature *(Location - sample type - #)*: MAN213 -

Soil Sample Types: **R** = *Removed Sample* ; **S** = *Sidewall Sample* ; **B** = *Bottom Sample* ; **Stockpile** = *Stockpile Sample*

| | Sample ID | Depth (FT) | Date / Time (military) | Soil Type (USCS) | Color/ Discolor | Odor/ Sheen | Headspace Reading (ppm) | |
|---|---|---|---|---|---|---|---|---|
| | Example: A3-NE | 4 | 16:30 | CL | Reddish brown | Petroleum/ Rainbow | 275 | |
| B | 1 | 3 | 08:55 | SP | reddish brown | N/N | 1.8 | |
| B | 2 | 3 | | | | N/N | 2.1 | |
| B | 3 | 3 | | | | faint Petro/N | 12.8 | * |
| B | 4 | 3 | | | | N/N | 3.3 | |
| B | 5 | 3 | 08:58 | | | N/N | 1.0 | |
| S | 6 | 2.5 | 09:02 | SP | | N/N | 3.0 | |
| S | 7 | 1.5 | | SP | | N/N | 1.5 | |
| S | 8 | 1.5 | | CH | | N/N | 3.4 | |
| S | 9 | 1.5 | | SP | | N/N | 10.6 | |
| S | 10 | 1.5 | 09:06 | CH | | mod Petro/N | 127.1 | * |
| S | 11 | 2.5 | 09:08 | SP | red brown/brown | mod petro/free product | 360.4 | * |
| S | 12 | 1 | 09:23 | SP | reddish brown | N/N | 1.3 | |
| S | 13 | 1 | | | | N/N | 1.5 | |
| S | 14 | 1 | | | | N/N | 1.1 | |
| S | 15 | 1 | 09:28 | | | N/N | 1.1 | |
| S | 16 | 2 | 09:43 | SP | reddish brown | N/N | 1.0 | |
| B | 17 | 3 | 09:44 | SP | | N/N | 1.8 | |
| S | 18 | 2 | 09:45 | SP | | N/N | 1.6 | |

***SITE SKETCH:*** *north is up; excavation extents & depths, impacted areas, sample locations, borings, wells, structures, utilities, natural features...* ***1 inch/grid = 20 FEET***

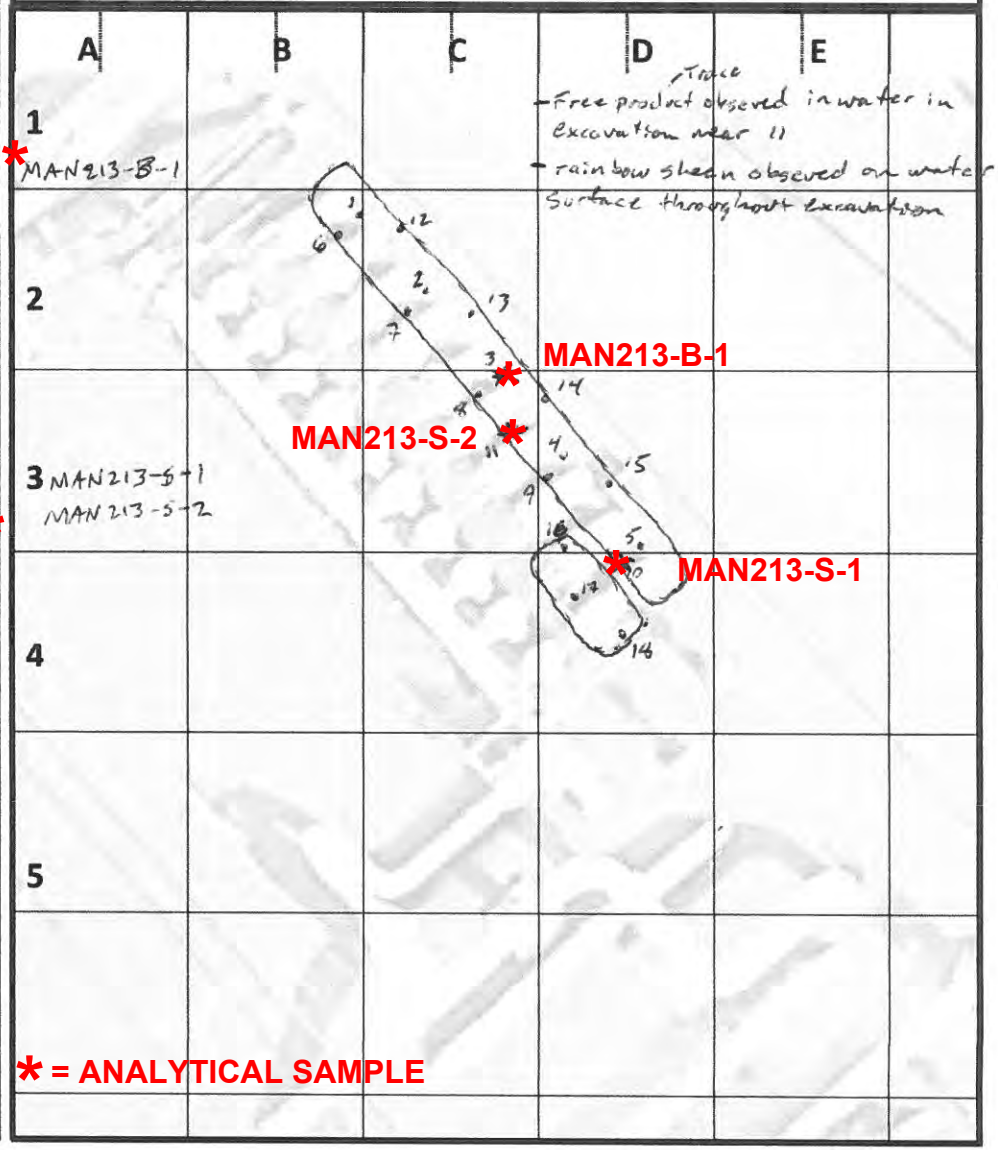


**Table 2**
**Soil Analytical Data Summary**
**Pipe Rack and Manifold Corridor Area Associated Projects**
**Enbridge Energy Terminal - Superior, Wisconsin**
**Units, mg/kg (unless otherwise noted)**

| | | Parameter | Benzene | Ethyl benzene | Toluene | Xylene, total | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Diesel Range Organics | Chrysene | Naphthalene | WDNR RCL Determinations[1] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Hazard Index | Cumulative Cancer Risk | Pass or Fail |
| | **Effective Date** | **Exceedance Key** | | | | | | | | | | | | |
| **Groundwater RCL, DF=2** | 12/01/2018 | **Bold** | 0.0051 | 1.57 | 1.1072 | 3.96 | **1.3787 (1)** | **1.3787 (1)** | | **0.1442** | **0.6582** | | | |
| **Industrial Direct Contact RCL** | 12/01/2018 | No Exceed | 7.07 | 35.4 | 818 | 260 | 219 | 182 | | 2110 | 24.1 | 1.0 | 1.00E-05 | Pass |
| **Location** | **Date** | **Depth (ft)** | | | | | | | | | | | | |
| *Water Valve Replacement Excavation* | | | | | | | | | | | | | | |
| Office Valve-S-1 | 11/15/2012 | 1 | < 0.067 | < 0.067 | < 0.067 | < 0.20 | < 0.067 | < 0.067 | < 12.3 | -- | -- | 0.0003 | 1.1E-08 | Pass |
| Office Valve-S-2 | 11/15/2012 | 6 | < 0.078 | < 0.078 | < 0.078 | < 0.23 | 0.56 | 0.22 | 222 | -- | -- | 0.0017 | 1.3E-08 | Pass |
| *Pipe Rack Footing Excavations* | | | | | | | | | | | | | | |
| 2013 Pipe Rack-S-1 | 7/09/2013 | 4 | < 0.071 | < 0.071 | < 0.071 | < 0.21 | < 0.071 | < 0.071 | -- | -- | -- | 0.0004 | 1.2E-08 | Pass |
| 2013 Pipe Rack-S-2 | 7/09/2013 | 4 | < 0.15 * | 0.22 * | < 0.15 * | 1.2 * | 0.85 * | 0.58 * | -- | -- | -- | 0.0029 | 2.6E-08 | Pass |
| 2013 Pipe Rack-S-3 | 7/09/2013 | 4 | < 0.63 * | < 0.63 * | < 0.63 * | 3.4 * | **5.4 *** | **3.5 *** | -- | **0.291 *** | 0.251 * | 0.0169 | 1.3E-06 | Pass |
| *Central Manifold Expansion Excavation* | | | | | | | | | | | | | | |
| 2013 Pipe Rack-S-4 | 8/01/2013 | 3.5 | < 0.065 | < 0.065 | < 0.065 | < 0.20 | < 0.065 | < 0.065 | -- | 0.126 | < 0.0135 | 0.0004 | 6.5E-07 | Pass |
| *Manifold 213 Excavation* | | | | | | | | | | | | | | |
| MAN213-B-1 | 7/14/2023 | 3 | < 0.0079 U | < 0.0198 U | 0.0264 HJ | < 0.0334 U | < 0.0171 U | < 0.0165 U | -- | -- | 0.0460 HJ | 0.00009 | 3.6E-09 | Pass |
| MAN213-S-1 | 7/14/2023 | 1.5 | < 0.0086 U | < 0.0216 U | 0.0376 HJ | 0.161 J | 0.127 | 0.0324 J | -- | -- | **0.739 H** | 0.001 | 3.3E-08 | Pass |
| MAN213-S-2 | 7/14/2023 | 2.5 | < 0.0086 U | < 0.0214 U | 0.674 | < 0.0362 U | 0.0751 | < 0.0179 U | -- | -- | 0.106 HJ | 0.0002 | 6.3E-09 | Pass |

Table shows results for PVOC's, Naphthalene, DRO, and the one PAH analyte (Chrysene) that exceeded WDNR Groundwater RCLs.

[1]WDNR RCL Determinations based on guidance criteria described in WDNR document PUB-RR-890. Hazard index is based a cumulative direct contact standard.

XYL - Based on Xylenes (m-, o-, p- combined).

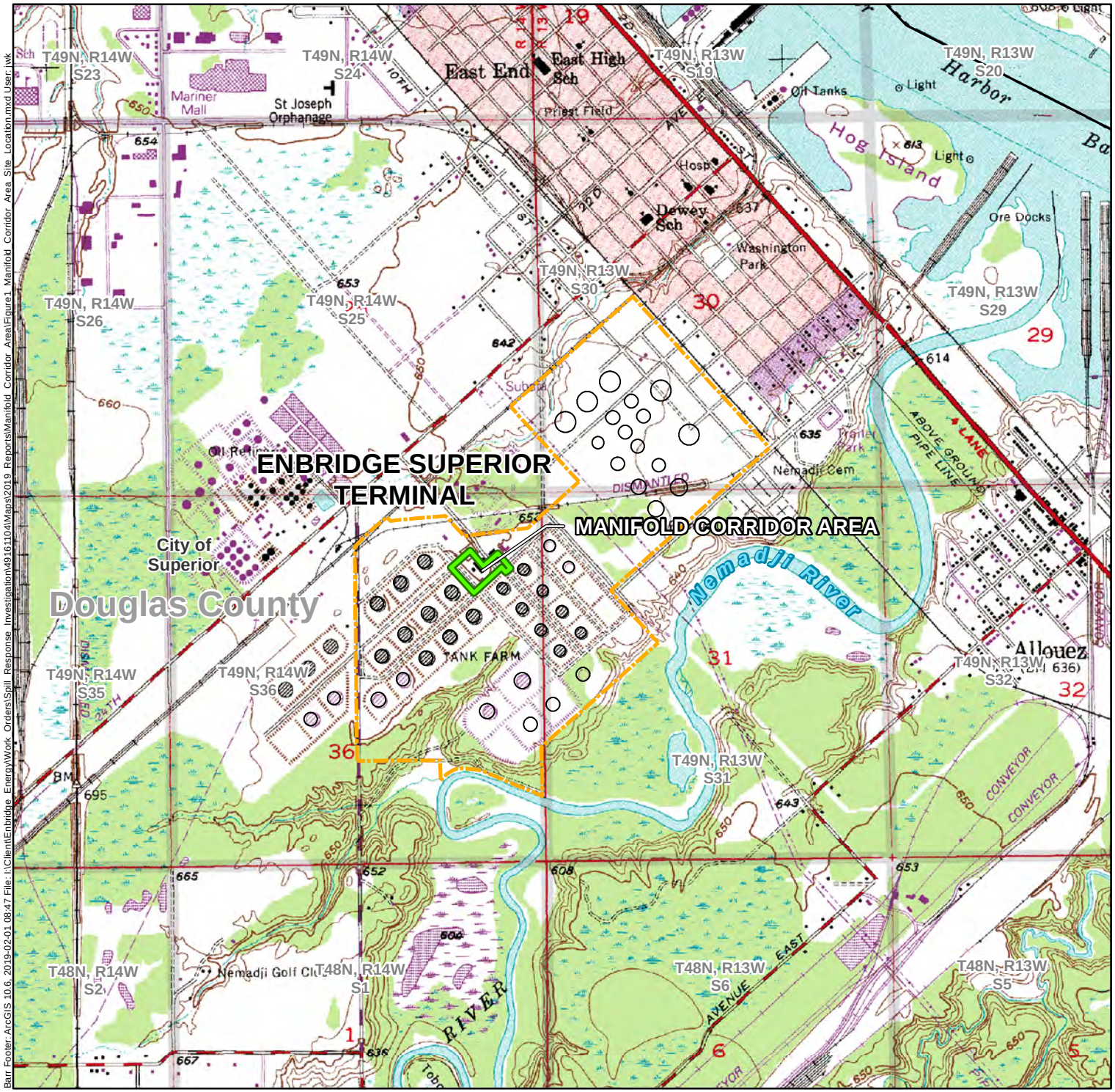
* - Estimated value, QA/QC criteria not met.

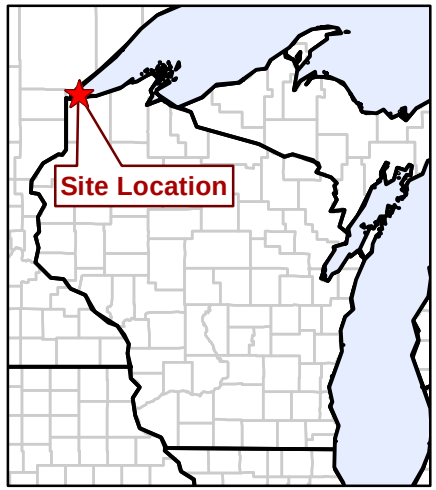
H - Recommended sample preservation, extraction or analysis holding time was exceeded.

J - Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

TR - Based on 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene combined.

U - The analyte was analyzed for, but was not detected.




Site Location

Manifold Corridor Area

Terminal Property Boundary

N

0 2,000 4,000

Feet

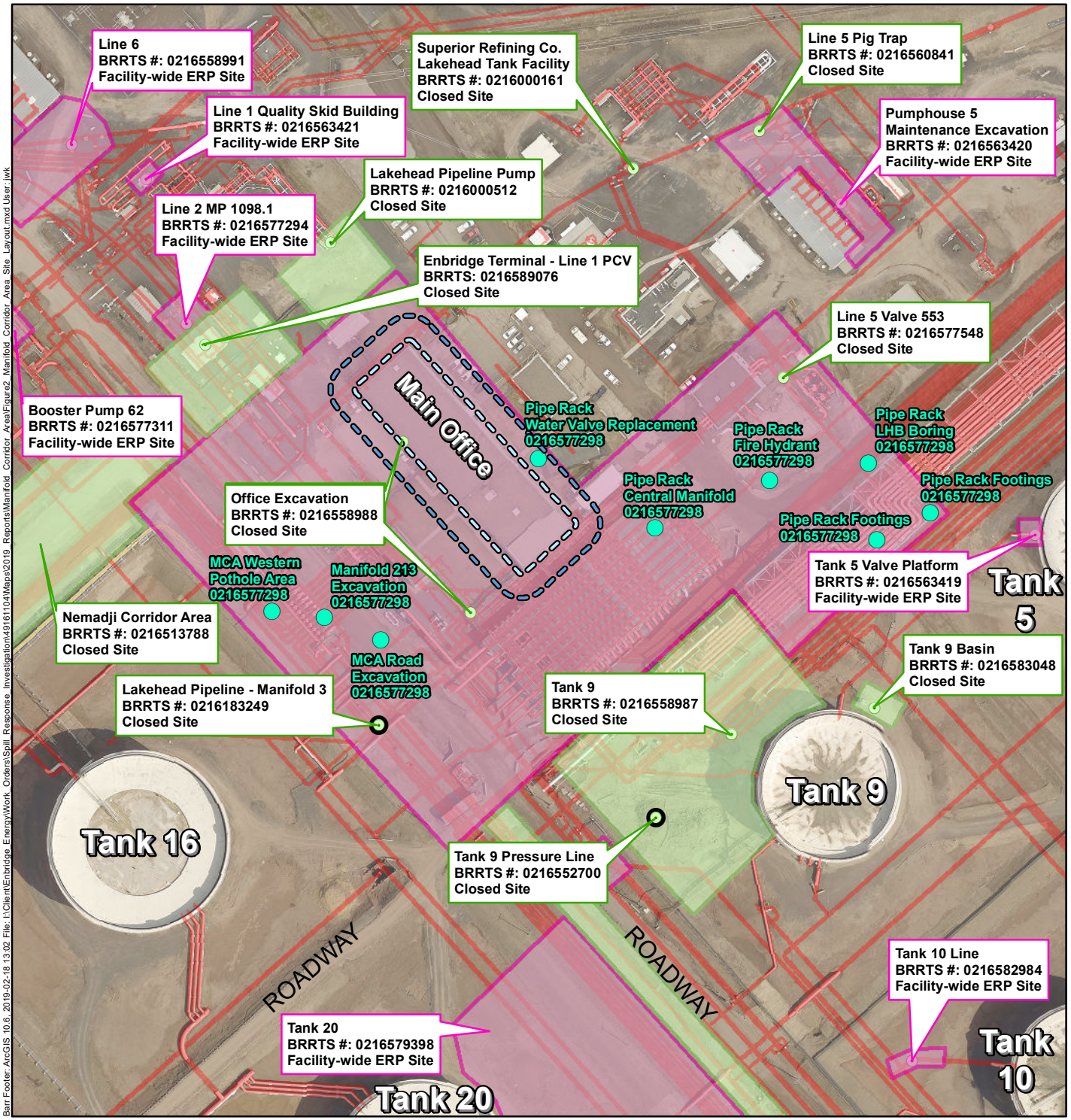
1 Inch = 2,000 Feet

Figure 1

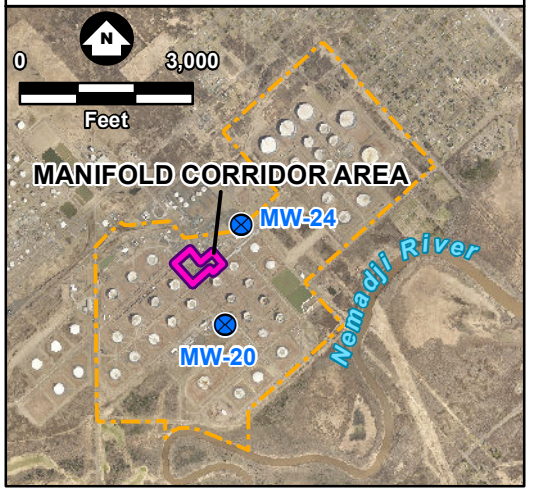
**SITE LOCATION**
**MANIFOLD CORRIDOR AREA**
**SUPERIOR TERMINAL**
Enbridge Energy, L.P.
Superior, Wisconsin

ENBRIDGE

Barr Footer: ArcGIS 10.6, 2019-02-01 08:47 File: I:\Client\Enbridge_EnergyWork_Orders\Spill_Response_Investigation\49161104\Maps\2019_Reports\Manifold_Corridor_Area\Figure1_Manifold_Corridor_Area_Site_Location.mxd User: jwk




## ENBRIDGE SUPERIOR TERMINAL




- Estimated extent of potential residual impacts - Facility-wide BRRTS sites
- Estimated extent of residual impacts - Closed BRRTS sites
- Project excavations with identified residual impacts inside the MCA boundary
- Facility-wide BRRTS Sites
- Closed BRRTS Sites without continuing obligations
- Closed BRRTS Sites with continuing obligations
- Enbridge Monitoring Well
- 5-Foot Vapor Buffer
- 30-Foot Vapor Buffer
- Pipeline Infrastructure
- Terminal Property Boundary

N

0 150 300

Feet

1 Inch = 150 Feet

*Douglas County Imagery Circa May, 2016*

Figure 2

**SITE LAYOUT**
**MANIFOLD CORRIDOR AREA**
**SUPERIOR TERMINAL**
Enbridge Energy, L.P.
Superior, Wisconsin

ENBRIDGE

Barr Footer: ArcGIS 10.6, 2019-02-18 13:02 File: I:\Client\Enbridge_EnergyWork_Orders\Spill_Response_Investigation\49161104\Maps\2019_Reports\Manifold_Corridor_AreaFigure2_Manifold_Corridor_Area_Site_Layout.mxd User: jwk