State of Wisconsin
Department of Natural Resources
P.O. Box 7921, Madison, WI 53707-7921

GIS REGISTRY (Cover Sheet)
Form 4400-280 (R 6/13)

Source Property Information

CLOSURE DATE: 12/10/2013

BRRTS #: 02-20-000914

FID #: 420092420

ACTIVITY NAME: Wisconsin Central Ltd - Refueling Area

DATCP #:

PROPERTY ADDRESS: 2 Harrison Street

PECFA#: 54936035002B

MUNICIPALITY: North Fond du Lac

PARCEL ID #: V05-16-17-33-77-777-00

***WTM COORDINATES:**

X: **642373** Y: **372127**

** Coordinates are in WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

◉ Approximate Center Of Contaminant Source

○ Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

☒ Groundwater Contamination > ES *(236)*

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

*(**note:** for list of off-source properties see "Impacted Off-Source Property Information, Form 4400-246")*

☒ Soil Contamination > *RCL or **SSRCL *(232)*

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

*(**note:** for list of off-source properties see "Impacted Off-Source Property Information, Form 4400-246")*

Site Specific Obligations:

☒ Soil: maintain industrial zoning *(220)*

*(**note:** soil contamination concentrations between non-industrial and industrial levels)*

☐ Structural Impediment *(224)*

☒ Site Specific Condition *(228)*

☒ Cover or Barrier *(222)*

- ☒ Direct Contact
- ☐ Soil to GW Pathway

☐ Vapor Mitigation *(226)*

☐ Maintain Liability Exemption *(230)*

*(**note:** local government unit or economic development corporation was directed to take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? *(234)*

○ Yes ◉ No ○ N/A

** Residual Contaminant Level*
***Site Specific Residual Contaminant Level*

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

PLEASE ASSEMBLE IN THIS ORDER

GIS Registry Checklist

Form 4400-245 (R 8/11)

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 02-20-000914 *(No Dashes)* PARCEL ID #: V05-16-17-33-77-777-00

ACTIVITY NAME: Wisconsin Central Ltd - Refueling Area WTM COORDINATES: X: 642373 Y: 372127

CLOSURE DOCUMENTS (the Department adds these items to the final GIS packet for posting on the Registry)

- [X] **Closure Letter**
- [X] **Maintenance Plan** (*if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.*)
- [ ] **Continuing Obligation Cover Letter** (for property owners affected by residual contamination and/or continuing obligations)
- [X] **Conditional Closure Letter**
- [ ] **Certificate of Completion (COC)** (for VPLE sites)

SOURCE LEGAL DOCUMENTS

- [X] **Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.
  Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*
- [ ] **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map *for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map.* (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

  Figure #: **Title:**
- [X] **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

MAPS (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 11 x 17 inches unless the map is submitted electronically.

- [X] **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.
  Note: *Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.*

  Figure #: 1,1 **Title: Site Location Map & Overview of Locations of BRRTS Cases and Biopiles**
- [X] **Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

  Figure #: 3 **Title: Soil Boring/Monitoring Well Location Diagram**
- [X] **Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL)as determined under s. NR 720.09, 720.11 and 720.19.

  Figure #: 4 **Title: Estimated Extent of Contaminated Soil**

BRRTS #: 02-20-000914 ACTIVITY NAME: Wisconsin Central Ltd - Refueling Area

MAPS (continued)

☒ **Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: 5 **Title: Cross Section A-A' Estimated Extent of Contaminated Soil**

Figure #: **Title:**

☒ **Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.
Note: *This is intended to show the total area of contaminated groundwater.*

Figure #: 8, 9, 1 **Title: Summary of Exceedances in Groundwater & Recent Groundwater Analytical Results**

☒ **Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more then 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: 10 **Title: Groundwater Flow Direction (12/13/99)**

Figure #: 11 **Title: Groundwater Flow Direction (4/8/09)**

TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))

Tables must be no larger than 11 x 17 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

☒ **Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.
Note: This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 3-5 **Title: Soil Analytical Results**

☒ **Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: 2, 6, 8 **Title: Groundwater Analytical Results, OWS Groundwater Results, Groundwater Data Summary**

☒ **Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: 1, 7 **Title: Groundwater Field Data Summary and OWS Groundwater Observations**

IMPROPERLY ABANDONED MONITORING WELLS

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.
Note: *If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.*

☐ **Not Applicable**

☒ **Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.
Note: *If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.*

Figure #: 2 **Title: Groundwater Monitoring Well Abandonments**

☒ **Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

☐ **Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

☒ **Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 02-20-000914 ACTIVITY NAME: Wisconsin Central Ltd - Refueling Area

NOTIFICATIONS

Source Property

☒ **Not Applicable**

☐ **Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.

☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

☒ **Not Applicable**

☐ **Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.
Note: *Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.*

Number of "Off-Source" Letters:

☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.

☐ **Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies).** This does not apply to right-of-ways.
Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*

☐ **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map *for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map.* (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

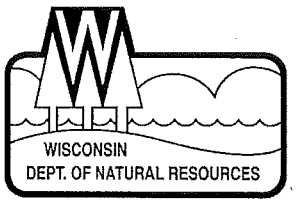
Figure #: **Title:**

☐ **Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

Number of "Governmental Unit/Right-Of-Way Owner" Letters:

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



December 10, 2013

Wisconsin Central, Ltd.
Attn: Mr. Brian Hayden
1 Waterfront Drive
Two Harbor, MN 55616

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Wisconsin Central Ltd – Refueling Area (BRRTS # 02-20-000914)
Canadian National Rail Yrd – Diesel Fuel Spill (BRRTS # 02-20-540810)
2 Harrison Street, North Fond du Lac, Wisconsin

Dear Mr. Hayden:

The Department of Natural Resources (DNR) considers the two adjacent cases listed above (Refueling Area and Diesel Fuel Spill) closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under ch. NR 726, Wis. Adm. Code. The Northeast Region Closure Committee reviewed the two requests for closure on June 11, 2012. The Closure Committee reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. A conditional closure letter was issued by the DNR on June 12, 2012, and documentation that the conditions in that letter were met was received on December 2, 2013.

The property is currently utilized by Canadian National Railway as a rail yard. The source of petroleum contamination was two separate diesel fuel release in the same general area. Responses included soil excavation and on-site disposal in a soil pile currently capped and fenced for the Refueling Area release and application of soil microbes to enhance biodegradation at the adjacent Diesel Fuel Spill release. The soil pile is referred to as a biopile in the case file. Groundwater has been impacted with petroleum compounds above the Enforcement Standard (ES). The conditions of closure and continuing obligations required were based on the property being used for industrial purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present above ch. NR 140, Wis. Adm. Code enforcement standards.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- One or more monitoring wells were not located and must be properly filled and sealed if found.
- The coarse sand/gravel in the vicinity of MW17 must be maintained over contaminated soil and the DNR must approve any changes to this barrier.
- Industrial soil standards were applied for closure, and industrial land use is required. Before the land use may be changed from industrial to non-industrial, additional environmental work must be completed.
- Contaminated soil was excavated and disposed of in a soil pile referred to as a biopile. This soil pile is located on a contiguous portion of the Canadian National Railway property and was capped historically. Recently a fence was installed to provide additional protection for the general public and site workers. The fence is to be maintained to prevent human contact with the contaminated soil in the biopile. Refer to the **attached map (Figure 1)** for the location of the biopile.

The DNR fact sheet, "Continuing Obligations for Environmental Protection", RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at http://dnr.wi.gov/topic/Brownfields/rrsm.html, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at http://dnr.wi.gov/topic/wells/documents/3300254.pdf.

All site information is also on file at the Northeast Region DNR office, at 2984 Shawano Avenue in Green Bay. This letter and information that was submitted with your closure request application, including any maintenance plan and maps, can be found as a PDF in BRRTS on the Web.

Prohibited Activities

Certain activities are prohibited at closed sites because maintenance of a barrier is intended to prevent contact with any remaining contamination. When a barrier is required, the condition of closure requires notification of the DNR before making a change, in order to determine if further action is needed to maintain the protectiveness of the remedy employed. The following activities are prohibited on any portion of the property where maintenance of the existing coarse sand/gravel is required and within the fenced biopile area, as shown on the **attached map (Figure 1 and Figure 6)**, unless prior written approval has been obtained from the DNR:

- removal of the existing barrier;
- replacement with another barrier;
- excavating or grading of the land surface;
- filling on covered or paved areas;

- plowing for agricultural cultivation;
- construction or placement of a building or other structure;
- changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings;

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which you, and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter and the attached maintenance plan are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats. to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to the Northeast region DNR office in Green Bay, to the attention of Keld Lauridsen

Residual Groundwater Contamination (ch. NR 140, 812, Wis. Adm. Code)
Groundwater contamination greater than enforcement standards is present on this contaminated property, as shown on the **attached map (Figure 9)**. If you intend to construct a new well, or reconstruct an existing well, you'll need prior DNR approval.

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.)
Soil contamination remains as indicated on the **attached map (Figure 6)**. If contaminated soil is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval.

In addition, all current and future owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

Monitoring Wells that could not be Properly Filled and Sealed (ch. NR 141, Wis. Adm. Code)
Monitoring wells MW4, MW5, MW14, MW15 and FRAOWS-MW3 shown on the **attached map (Figure 2)**, could not be properly filled and sealed because they were missing due to being paved over, covered or removed during site development activities. Your consultant made a reasonable effort to locate the wells and to determine whether they were properly filled and sealed, but was unsuccessful. You may be held liable for any problems associated with the monitoring wells if they create a conduit for contaminants to enter groundwater. If any of the groundwater monitoring wells are found, the then

current owner of the property on which the well is located is required to notify the DNR, to properly fill and seal the wells and to submit the required documentation to the DNR.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats., s. NR 726.15, s. NR 727.07 Wis. Adm. Code)
The existing coarse sand/gravel that exists in the location shown on the **attached map (Figure 6)** shall be maintained in compliance with **the attached maintenance plan** in order to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health.

A cover or barrier for industrial land uses, or certain types of commercial land uses may not be protective if the use of the property were to change such that a residential exposure would apply. This may include, but is not limited to single or multiple family residences, a school, day care, senior center, hospital or similar settings. In addition, a cover or barrier for multi-family residential housing use may not be appropriate for use at a single family residence.

The cover approved for this closure was designed to be protective for a commercial or industrial use setting. Before using the property for residential purposes, you must notify the DNR at least 45 days before taking an action, to determine if additional response actions are warranted.

A request may be made to modify or replace a cover or barrier. The replacement or modified cover or barrier must be protective of the revised use of the property, and must be approved in writing by the DNR prior to implementation.

The **attached maintenance plan** are to be kept up-to-date and on-site. Inspections shall be conducted annually, in accordance with the attached maintenance plan. Submit the inspection log to the DNR only upon request.

Industrial Soil Standards (s. NR 726.15, s. NR 727.07, Wis. Adm. Code)
Soil Meeting Industrial Standards for this Site
Soil contamination remains in vicinity of MW17 above the industrial soil standards, as shown on the **attached map (Figure 6).** Samples collected beyond the capped area in the vicinity of MW17 contained petroleum compounds and lead in concentrations that met the site-specific industrial soil standards developed for this site.

This property may not be used or developed for a residential, commercial, agricultural or other non-industrial use, unless prior written approval has been obtained from the DNR. An investigation and remedial action to meet applicable soil cleanup standards may be required at that time.

Site-Specific Condition (s. NR 726.05 (9), NR 726.15 (2) (m), s. NR 727.07 (7), Wis. Adm. Code)
Contaminated soil was excavated from Refueling Area release and disposed of in a soil pile referred to as a biopile. This soil pile is located on a contiguous portion of the Canadian National Railway property and was capped historically. Recently a fence was installed to provide additional protection for the general public and site workers. The fence is to be maintained to prevent human contact with the contaminated soil in the biopile. Refer to the **attached map (Figure 1)** for the location of the biopile.

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed

restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Keld Lauridsen at (920) 662-5420.

Sincerely,

Roxanne N. Chronert KD

Roxanne N. Chronert, Team Supervisor
Northeast Region Remediation & Redevelopment Program

Attachments:
- remaining groundwater contamination map (Figure 9)
- remaining soil contamination map (Figure 6)
- missing monitoring well location map (Figure 2)
- extent of cap map (Figure 6)
- map for soils meeting industrial standards (Figure 6)
- location of fenced biopile (Figure 1)
- maintenance plan

cc: Dennis Lawton, AECOM (e-copy - dennis.lawton@aecom.com)

AECOM
60135737
FIGURE 9

ET-MW-8
5/17/2011
VOCs < LOD
PAHs = DNE

MW-10
12/7/2010
VOCs < LOD
B(a)P = 0.022 A
B(b)F = 0.024 A
C = 0.097 A

MW-12
12/14/1999
PAHs = DNE
PVOCs ≤ LOD
10/13/2000
VOC = DNE

MW-16
VOCs < LOD
PAHs < DNE

MW-3
8/24/2011
1,2 - DCA = 2.1 A

MW-17
12/7/2010
VOCs < LOD
B(a)P = 0.090 A
B(b)F = 0.11 A
C = 0.17 A

12" CONCRETE
DIESEL ENGINE HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR
12" TRENCH W/. 4" DRAIN TILE
SUMP #1
SUMP #2
MW-12
KT-SOIL MICROBES DISPERSED IN THIS AREA (1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
GRAVEL
MW-100
MW-107R
MW-
ENGIN
OIL/W
SEPAR
ET-B-25
FORMER FUELING AREA
APPROXIMATE LOCATION OF PRODUCT RECOVERY TRENCH
12" DIA. CMP FOR AIR, HYDRAULIC OIL, LUBE OIL & ELECTRIC TRANSFER LINES
WCSA-19
FRAOWS-B4B/MW4
FRAOWS-FORMER REFUELING AREA OWS
TMW-3A
6" CHANGES TO 4" IRON AFTER 15'
WCSA-15
TURNTABLE
FRAOWS-B5/MW5
LINE PLUGGED
ABANDONED OIL SKIMMER
HP-2
HP-1
HP-3
HP-4
HP-5
HP-6
HP-7
HP-8
HP-9
B-1
B-2
B-3
B-4
B-5
B-6
B-7
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
TP-10
TP-11
TP-12
TP-13
TP-14
S-1
S-2
S-3
S-4
SB-1
SB-2
SB-3
SB-4
SB-5
MW-2W
MW-2R[P]
MW-4
MW-5
MW-6[P]
MW-6W
MW-7
MW-10
MW-11
MW-13
MW-14
MW-15
MW-16
MW-17
TMW-1
TMW-1A
FORMER SAND GONDOLA
FORMER TRUCK UNLOAD
SEPTIC TANK
FRAOWS-B3/MW3
FRAOWS-B1/MW1
FRAOWS-B2/MW2
400,000 GALLON FUEL STORAGE TANK
CONCRETE CONTAINMENT DIKE
FUEL PUMP BUILDING
CONCRETE LOADING PAD
CONTAINMENT AREA (12'X12'X0.5')
OIL/WATER SEPARATOR
#1 PIT DRAIN RIM EL. 762.86
#2 PIT DRAIN RIM EL. 762.84
FUELING BUILDING
OIL/WATER SEPARATOR (OFFLINE)
12" PVC
8" PVC
4" FORCE MAIN
GRAVEL DRIVE
GROUNDWATER COLLECTION SYSTEM
25' DIA. BELOW GRADE CONCRETE PAD
ROUNDHOUSE
GRAVEL
ENGINE WASH FACILITY
STOR
ASPHA
Building
762
764

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- RIGHT-OF-WAY LINE
- RR TRACKS
- 2 FOOT CONTOUR LINE

- ESTIMATED EXTENT OF PETROLEUM – IMPACTED GROUNDWATER EXCEEDING NR140 ENFORCEMENT STANDARD.
- ESTIMATED EXTENT OF PETROLEUM – IMPACTED GROUNDWATER EXCEEDING NR140 PREVENTATIVE ACTION LIMIT.
- MANHOLE
- TEST PIT (1989/1990)
- SOIL BORING
- MW-4 MONITORING WELL
- MW-1 ABANDONED MONITORING WELL
- S-2 HAND AUGER (7/2001)
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] PIEZOMETER

NOTES:

PAH: POLYNUCLEAR AROMATIC HYDROCARBONS
VOC: VOLATILE ORGANIC COMPOUNDS
PVOC: PETROLEUM VOLATILE ORGANIC COMPOUNDS
DNE: DETECTED WITH NO EXCEEDANCES
LOD: LESS THAN LABORATORY DETECTION LIMIT

VOC AND PAH CONCENTRATIONS EXPRESSED IN MICROGRAMS PER LITER.

A : CONCENTRATION EXCEEDS NR140 PREVENTATIVE ACTION LIMIT.
B : CONCENTRATION EXCEEDS NR140 ENFORCEMENT STANDARD.

0' 15' 30' 60'
SCALE

RECENT GROUNDWATER ANALYTICAL RESULTS
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS #02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810
NORTH FOND DU LAC, WISCONSIN

ANSI B 11" x 17"
Approved:
Checked:
Designer:
Project Management Initials:
L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\G42934201B-C01.dwg; 9/7/2012 12:32:47 PM; MITTELSTEADT, KARL

AECOM

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FIGURE 2

GROUNDWATER MONITORING WELL ABANDONMENTS

WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD

FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914

1,000 GALLON DIESEL FUEL RELEASE - BRRTS #02-20-540810

MW-2W
MW-2R[P]
ET-MW-8
MW-16
MW-10
MW-7
MW-14
MW-12
MW-13
MW-17
MW-3
TMW-3A
MW-100
MW-107R
MW-107
MW-6[P]
MW-6W
MW-1
TMW-1
TMW-1A
MW-11
MW-5
MW-4
MW-15

SUMP #1
SUMP #2
SUMP-1
GRAVEL 12" TRENCH W/. 4" DRAIN TILE
12" CONCRETE
DIESEL ENGINE HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR.
KT-SOIL MICROBES DISPERSED IN THIS AREA (1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
GRAVEL
TMW-3A AND MW-3 WERE NOT ABANDONED, THEY ARE BEING USED FOR OPEN BRRTS CASE #02-20-545105
6" CHANGES TO 4" IRON AFTER 15'
WCSA-18
WCSA-19
WCSA-15
TURNTABLE
LINE PLUGGED
ENGINE WASH FACILITY
ENGINI OIL/W SEPAR
ROUNDHOUSE
25' DIA. BELOW GRADE CONCRETE PAD
OIL/WATER SEPARATOR
12" PVC
GRAVEL DRIVE
764
762
FORMER FUELING AREA
APPROXIMATE LOCATION OF PRODUCT RECOVERY TRENCH
12" DIA. CMP FOR AIR, HYDRAULIC OIL, LUBE OIL & ELECTRIC TRANSFER LINES
FORMER REFUELING AREA OWS
ABANDONED OIL SKIMMER
FORMER SAND GONDOLA
FORMER TRUCK UNLOAD
SEPTIC TANK
FRAOWS-B1/MW1
FRAOWS-B2/MW2
FRAOWS-B3/MW3
FRAOWS-B4A
FRAOWS-B4B/MW4
FRAOWS-B5/MW5
4" IRON FORCE MAIN
8" PVC
OIL/WATER SEPARATOR (OFFLINE)
#1 PIT DRAIN RIM EL. 762.86
#2 PIT DRAIN RIM EL. 762.84
FUELING BUILDING
400,000 GALLON FUEL STORAGE TANK
CONCRETE CONTAINMENT DIKE
FUEL PUMP BUILDING
CONCRETE LOADING PAD
CONTAINMENT AREA (12'X12'X0.5')
GROUNDWATER COLLECTION SYSTEM
GRAVEL
Building
STORI
ASPHA

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- RIGHT-OF-WAY LINE
- RR TRACKS
- 2 FOOT CONTOUR LINE

- MANHOLE
- MW-4 MISSING GROUNDWATER MONITORING WELL
- MW-1 ABANDONED MONITORING WELL
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] PIEZOMETER

0' 15' 30' 60'
SCALE

CAP and BIOPILE MAINTENANCE PLAN

This Maintenance Plan pertains to the Wisconsin Central, Ltd portion of the North Fond du Lac Rail Yard where residual soil contamination has been left in-place within the top four feet of the ground surface. The source of the soil contamination is from spills and/or releases of petroleum related contaminants associated with five different Bureau for Remediation and Redevelopment Tracking System (BRRTS) cases. This plan also pertains to the maintenance of two soil BioPiles, which are associated with two of the five BRRTS cases. The locations of these five BRRTS cases and the BioPiles are shown on Figure 1.

Property Located at:
North Fond du Lac Rail Yard
2 Harrison Street
North Fond du Lac, Wisconsin

Wisconsin Department of Natural Resources (WDNR) Reference Information:
Canadian National Railway – Storehouse; BRRTS No. 02-20-297826
Canadian National – PAH; BRRTS No.02-20-549952
Wisconsin Central Ltd – Refueling Area; BRRTS No. 02-20-000914
Wisconsin Central RR – Diesel Spill Track 55; BRRTS No. 02-20-543232
Wisconsin Central LTD – Paint Shop UST; BRRTS No. 03-20-548039

Legal Description:
Source Areas
Due to the large size of the North Fond du Lac Rail Yard the following legal description (as shown on Figure 2) describes the portion of the North Fond du Lac Rail Yard, which includes the six separate BRRTS cases.

That part of the Southwest ¼ of Section 33, Township 16 North, Range 17 East, in the Village of North Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:

Commencing at the Southeast corner of said Southwest ¼ section;
Thence South 89°50'27" West, 121.71 feet, along the south line of said ¼ Section;
Thence North 16°46'00" West, 1133.41 feet, to the point of beginning;
Thence South 77°18'00" West, 950.00 feet;
Thence North 05°56'00" West, 1605.00 feet;
Thence South 83°47'54" East, 701.56 feet;
Thence South 16°46'00" East, 1370.00 feet, to the point of beginning.

This area contains 1,199,529.80 square feet, or 27.5374 acres, more or less.

BioPiles – Soil Disposal Location
The following legal description (as shown on Figure 3) describes the portion of the North Fond du Lac Rail Yard that includes the BioPile Area.

That part of the Northeast 1/4 of Section 4, Township 15 North, Range 17 East, in the Village of North Fond du Lac, and the City of Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:

Commencing at the Northwest corner of said Northeast 1/4 Section;
Thence South 89°50'27" West, 882.98 feet, along the north line of the Northwest 1/4 of said Section 4;
Thence South 42°45'00" East, 1710.77 feet, to the point of beginning;
Thence continue South 42°45'00" East, 1200.00 feet;
Thence South 47°15'00" West, 265.00 feet;
Thence North 42°45'00" West, 1200.00 feet;
Thence North 47°15'00" East, 265.00 feet, to the point of beginning.

This parcel contains 318,000.00 square feet, or 7.3003 acres, more or less.

Introduction:
This Maintenance Plan established for direct contact issues at the locations of the above referenced BRRTS locations meets the requirements of s. NR 724.13(2) of the Wisconsin Administrative Code. The maintenance activities relate to the coarse sand and gravel, ballast, and asphalt surfaces covering the areas containing residual industrial direct contact contaminant levels (RCLs). The locations of the ground surface areas that need to be maintained are shown on Figure 2. The maintenance activities associated with the BioPiles include maintaining a chain-link fence around the perimeter of the BioPiles.

A brief summary of the residual impacts at each BRRTS location is described below.

Canadian National Railway – Storehouse; BRRTS No. 02-20-297826
Fill material containing slag and foundry sand appears to be the source of lead contamination that was identified in the soil during subsurface investigations conducted in the area of the former Storehouse near Shop A.

Approximately 740 cubic yards of lead contaminated soil has been excavated to a depth of 7 to 12 feet from the location of the former USTs associated with the former Storehouse. The excavated soils were disposed in a BioPile that was constructed on the southern end of the rail yard. Approximately, 1,500 cubic yards of soil impacted with lead concentrations above the NR 720 industrial direct contact RCL of 500 mg/kg remain in the area of the former Storehouse. The remaining lead contaminated soil appears to be limited to within the fill material at depths of approximately 2 to 4 feet below grade. The soil samples collected from the underlying natural clay did not have RCL exceedances for lead. The clay soil is relatively dense and inhibits contaminant migration thus protecting the groundwater, which is anticipated to be present at depths below 8 feet below grade. Additionally, the soil lead concentrations are below NR 720 industrial direct contact RCLs for 0 to 2-foot interval, except for the area of MW-104A, which is capped by 1 foot of gravel.

Groundwater sampling performed on the site indicates groundwater is not impacted with lead.

The Cap and BioPile Maintenance Plan relates to the existing coarse sand and gravel, ballast rock, and asphalt surfaces over the area of residual lead-impacted soil. The location of the surfaces to be maintained in accordance with this Cap and BioPile Maintenance Plan is identified on the attached Figure 4.

Canadian National – PAH; BRRTS No.02-20-549952
An unknown source of polynuclear aromatic hydrocarbon (PAH) contamination was identified in the fill soil during subsurface investigations conducted near Shop A in January 2004. From 2006 through 2011, additional soil samples from borings (ET-B-19 through ET-B-22, SS-103A, and SS-19A through SS-22) were collected to evaluate soil quality and delineate the extent of contaminated soil. Results of the additional soil sampling determined that PAH and lead contamination is located in shallow fill soils (<3.5 feet below grade) at concentrations exceeding the NR 720 industrial direct contact RCLs and generic groundwater pathway RCLs.

Soil beneath the sandy fill soil consists of low permeability, dense, silty clay. Concentrations of PAH and Resource Conservation and Recovery Act (RCRA) metal compounds were not identified in soil samples collected from the underlying clay soil at concentrations above their respective RCLs. Therefore, considering the contaminants do not appear to have migrated into the underlying clay soil, the contaminants in the upper fill soils do not likely present a threat to groundwater quality.

Arsenic compounds were also detected in the five soil samples submitted for RCRA metals analysis at concentrations that exceed the industrial direct contact RCL; however, the concentrations are in the range of naturally occurring background concentrations.

Groundwater was not present in the soil boring advanced to a depth of 10 feet below ground surface (bgs).

The Cap and BioPile Maintenance Plan relates to the existing coarse sand and gravel, ballast rock, and asphalt surfaces over the area of contaminated soil. The location of the surfaces to be maintained in accordance with this Cap and BioPile Maintenance Plan is identified on the attached Figure 5.

Wisconsin Central Ltd – Refueling Area; BRRTS No. 02-20-000914
In September 1989 a release of approximately 1,300 gallons of diesel fuel occurred at the locomotive refueling station. Absorbent pads and a vacuum truck were used to collect the diesel fuel on the surface. Subsequently, a free product/groundwater recovery trench system to remove free product in the area was installed. The oil/water mixture was collected by two sumps which pumped the oil/water mixture into an aboveground 500-gallon oil/water separator. The oil/water separator was pumped out by an oil recycler.

Based on the preliminary subsurface investigation results from the early 1990s, a groundwater collection system was installed. The groundwater collection system, which included two product skimmer pumps and an oil/water separator, was installed in 1994/1995. As part of the construction of the groundwater collection system, a total of 2,227 cubic yards of petroleum impacted soil was excavated. The excavated soils were placed in the BioPile located on the south end of the Yard.

In June of 2008 a 500-gallon capacity oil-skimming collection underground storage tank (UST) and the oil-skimmer pump associated with the former free product removal system was removed. During removal of the collection UST, approximately 50 tons of visually-apparent petroleum-impacted soil was removed from within the collection UST cavity and disposed off-site.

Several soil borings and groundwater monitoring wells were installed throughout the refueling area and the extent of the petroleum impacted soil and groundwater has been defined. The results of the soil analytical testing indicate that there is only one industrial direct contact RCL exceedance, which is for benzo(a)pyrene located from 1 to 3 feet below the ground surface at MW-17. Groundwater pathway RCL exceedances are also present; however, the extent of the groundwater pathway RCL exceedances has been defined. The results of the most recent groundwater analytical testing indicate that NR 140 enforcement standard exceedances are not present in the area. PAL exceedances for benzo(a)pyrene, benzo(b)fluoranthene, and chrysene are present at MW-17.

The Cap and BioPile Maintenance Plan relates to the existing coarse sand and gravel surface over the area of contaminated soil near the location of MW-17. The location of the surface to be maintained in accordance with this Cap and BioPile Maintenance Plan is identified on the attached Figure 6.

Wisconsin Central RR – Diesel Spill Track 55; BRRTS No. 02-20-543232
A petroleum spill from a locomotive occurred along Track 55 in February 2000. WDNR records indicate between 10 and 80 gallons of diesel fuel were released onto the snow alongside Track 55, approximately 175 feet from the nearest track crossover. An interim remedial action was completed to contain and remediate the release. The remedial response consisted of recovering the free product and washing the trackside ballast and soil.

A surface sample (SS-113) was collected in the spill area in January 2004. Laboratory analytical results confirmed the presence of diesel range organics (DROs) and two PAHs, naphthalene and benzo(a)pyrene, at a concentration exceeding their respective groundwater pathway RCLs. Additionally, the benzo(a)pyrene concentration exceeds the industrial direct contact RCL.

Additional soil samples were collected from the soil/ballast interface in five borings (ET-B14, ET-B15, ET-B16, ET-B17, and ET-B18) to evaluate soil quality and delineate the extent of petroleum-contaminated soil. One sample was collected from the native soil material at least 2 feet below the soil/ballast interface in ET-B14, which was advanced in the approximate location of SS-113.

There was no evidence of free phase petroleum product in the soil borings. No volatile organic compounds (VOCs) or PAHs were detected at concentrations exceeding regulatory levels in the additional soil samples collected from the Track 55 release area.

Groundwater was not present in the soil boring advanced to a depth of 10 feet below ground surface. Soil beneath the ballast consists of relatively impermeable, dense, silty clay. Petroleum compounds were not identified in soil samples collected between 3 and 10 feet in the release area. The field observations and laboratory results confirm that the release is not a threat to groundwater quality.

The Cap and BioPile Maintenance Plan relates to the existing coarse gravel and ballast rock surface over the isolated area of contaminated soil at the location of SS-113. The location of the gravel and ballast rock surface to be maintained in accordance with this Cap and BioPile Maintenance Plan is identified on the attached Figure 7.

Wisconsin Central LTD – Paint Shop UST; BRRTS No. 03-20-548039
This area was previously used for painting locomotives and other rolling stock. A 1,000-gallon UST of unknown contents is registered with the Wisconsin Department of Safety and Professional Services (DSPS) as closed by removal.

A release from the UST was documented by the presence of gasoline range organics (GRO) and DRO at concentrations exceeding regulatory limits in soil samples collected beneath the UST. Soil samples were collected from borings advanced within and adjacent to the former UST cavity. The highest petroleum-related compound concentrations were detected in the shallow sample (3 to 5 feet bgs) at the location of ETMW-1/SS01 (located within the former UST cavity). The concentrations of ethylbenzene, 1,3,5-trimethylbenzene, xylene, and naphthalene exceed their respective NR720, NR746, or PAH interim guidance limits. The samples collected from the lower depth (5 to 10 feet bgs) within the former UST cavity did not exhibit petroleum volatile organic compound (PVOC) or PAH concentrations above regulatory or interim limits.

The Cap and BioPile Maintenance Plan relates to the existing paved surface over the area of contaminated soil at the location of ETMW-1/SS01. The location of the paved surface to be maintained in accordance with this Cap and BioPile Maintenance Plan is identified on the attached Figure 8.

Ground Cover and BioPile Barrier Purpose:
The asphalt, coarse sand and gravel, and ballast rock surfaces over the residual impacted soil in the areas of the five above referenced BRRTS cases serves as a barrier to prevent direct contact with residual contaminated soil that exceed industrial direct contact RCLs which might otherwise pose a threat to human health. The public will not encounter the soil, and workers are generally not actively working in these areas as these areas are primarily vacant land or used for storage of equipment. Based on the current and future use of the property, the existing ground cover should function as intended unless disturbed.

The BioPiles are located at the south end of the Yard (see Figure 1 for location). Contaminated soil excavated from the Refueling Area (BRRTS No. 02-20-000914) and the former Storehouse Area (BRRTS No. 02-20-297826) was disposed at this location for BioPile treatment. The contaminated soils within the BioPiles are covered with a Griffolyn TX 1200 nylon reinforced polyethylene liner. The polyethylene liner is secured by sand bags and tires. Additionally, the outer surfaces are heavily vegetated. A 6-foot high, 9-gauge chain-link fence will be placed around the perimeter of the BioPiles. The fence will serve as a barrier to prevent direct contact with the contaminated soil within the BioPiles. The polyethylene liner and heavy vegetation will provide additional protection from direct contact.

Annual Inspection:
The surfaces overlying the residual contaminated soils in the five BRRTS areas will be inspected once a year (normally in the spring after the snow and ice has melted) for asphalt, sand and gravel, and ballast displacement, settling, and other potential problems that may cause exposure to underlying soils. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, and other factors. Areas where soils have become or are likely to become exposed will be documented.

The chain-link fence around the BioPile will also be inspected annually (normally in the spring after the snow and ice has melted) for the presence of any damage that may have been caused by the fence (i.e. snow plowing).

A log of the inspections and repairs, if any, will be maintained by the property owner. An example inspection log is included as Exhibit A, Cap Inspection Log. The log will include recommendations for necessary repairs. Once repairs are completed, they will be documented in the inspection log.

Maintenance Activities:
If problems are noted during the annual inspections or at another time during the year, repairs will be completed as soon as practical. Repairs may include the addition of coarse gravel or ballast rock or patching holes in the asphalt. In the event that necessary maintenance activities expose the underlying soil, the owner will inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment (PPE). Residual contaminated soil that is excavated during maintenance activities will be treated, stored, or disposed of by the owner in accordance with applicable local, state and federal law.

In the event the surface overlying the contaminated soil is removed or replaced, the replacement barrier must be equally or more protective in reducing risk from direct contact with the soil. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Cap and BioPile Maintenance Plan unless indicated otherwise by the WDNR or its successor.

The property owner, in order to maintain the integrity of the protective surfaces, will maintain a copy of this Cap and BioPile Maintenance Plan on-site and make it available to all interested parties (i.e. on-site employees, contractors, future property owners, etc.) for viewing.

Amendment or Withdrawal of Maintenance Plan:
This Cap and BioPile Maintenance Plan can be amended or withdrawn by the property owner and its successors with written approval of the WDNR.

Contact Information (as of August 2012):

Site Owner and Operator:

Mr. Brian Hayden
Wisconsin Central, Ltd.
1 Waterfront Drive
PO Box 509
Two Harbors, MN 55616

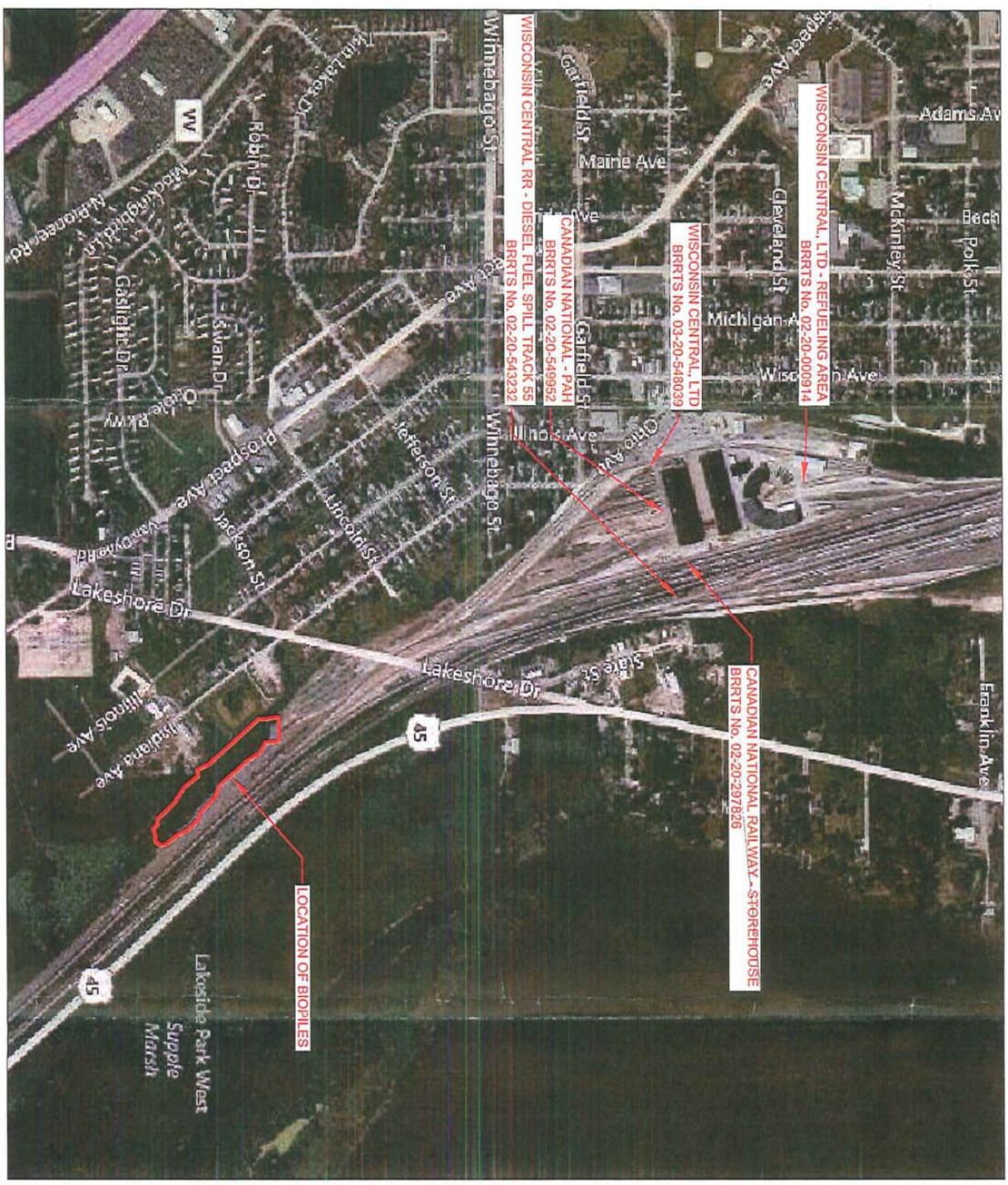
Consultant:

Mr. Dick Reesman
AECOM
1026 Willow Green Circle
Eau Claire, WI 54701

WDNR:

Mr. Keld Lauridsen
Wisconsin Department of Natural Resources
Northeast Regional Office
2984 Shawano Avenue
Green Bay, WI 54313-6727

NTS



OVERVIEW OF LOCATIONS OF BRRTS CASES AND BIOPILES

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

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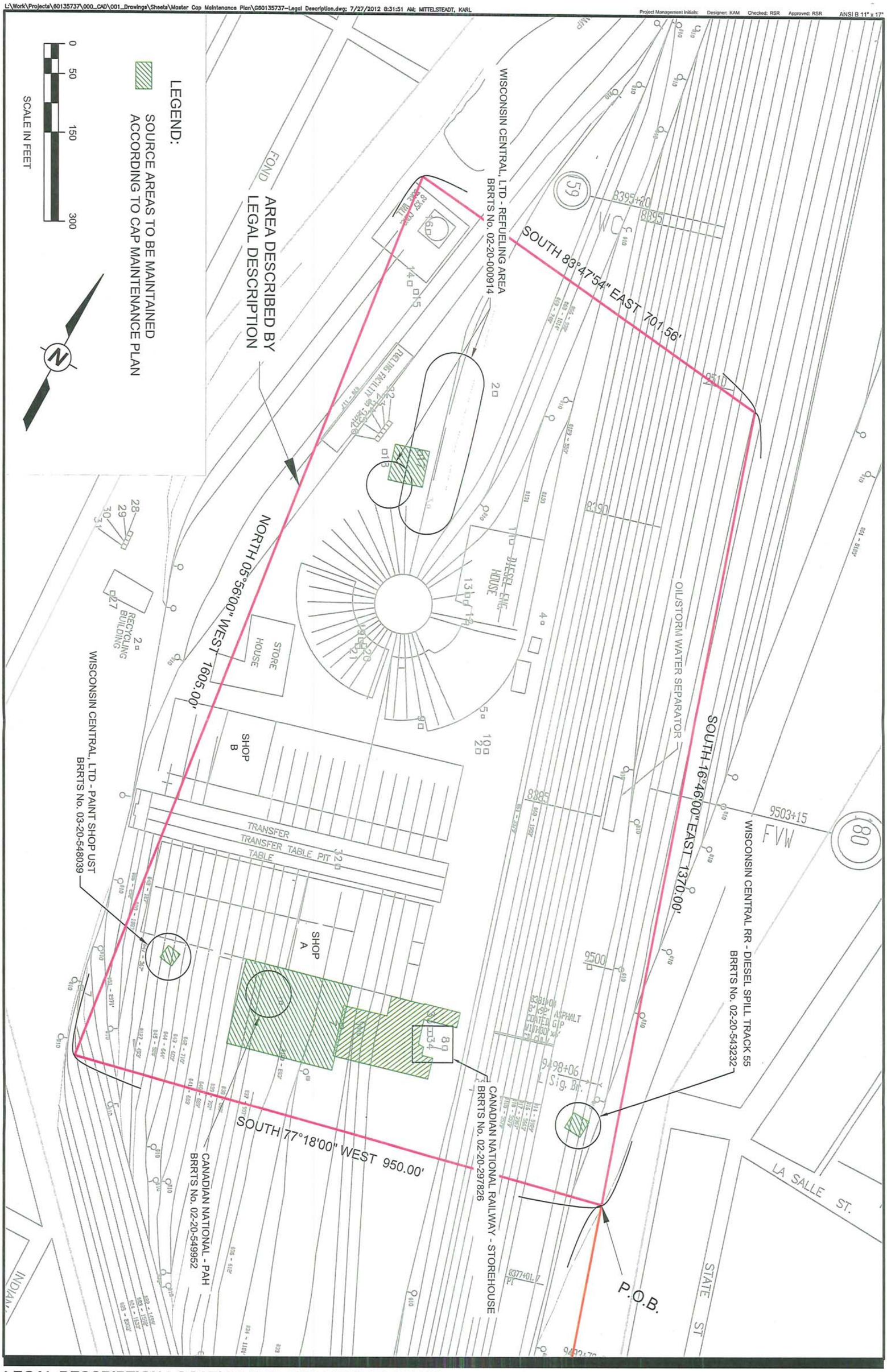
FIGURE 1



LEGAL DESCRIPTION LOCATION MAP FOR SOURCE AREAS

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

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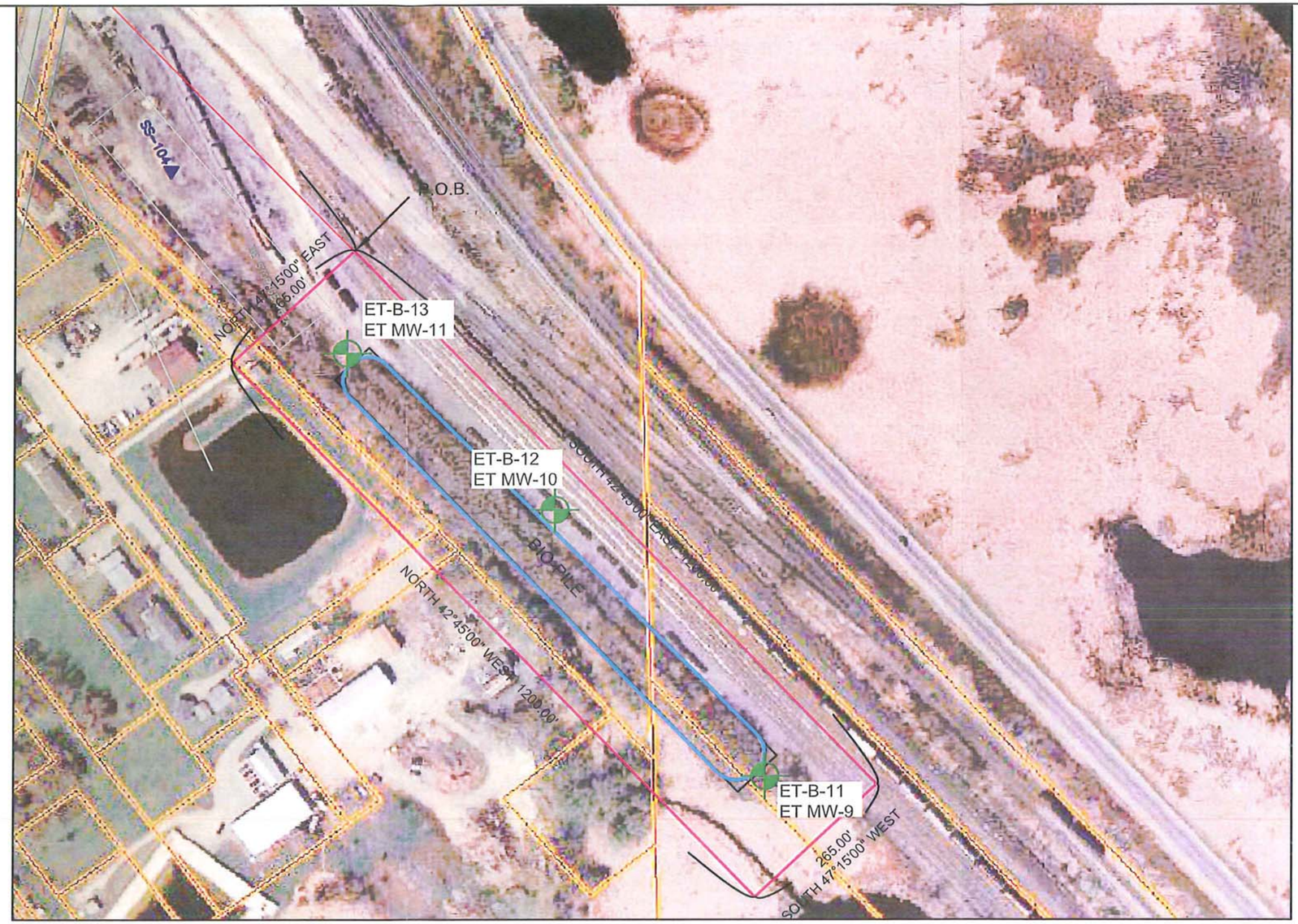
FIGURE 2



LEGAL DESCRIPTION - BIOPILE

That part of the Northeast 1/4 of Section 4, Township 15 North, Range 17 East, in the Village of North Fond du Lac, and the City of Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:

Commencing at the Northwest corner of said Northeast 1/4 Section;
Thence South 895027 West, 882.98 feet, along the north line of the Northwest 1/4 of said Section 4;
Thence South 424500 East, 1710.77 feet, to the point of beginning;
Thence continue South 424500 East, 1200.00 feet;
Thence South 471500 West, 265.00 feet;
Thence North 424500 West, 1200.00 feet;
Thence North 471500 East, 265.00 feet, to the point of beginning.

This parcel contains **318,000.00 square feet,** or **7.3003 acres,** more or less.

LEGEND

ET–B–11
ET MW–9

LOCATION OF BIOPILES
GROUNDWATER MONITORING WELL LOCATIONS

0' 100' 200' 400'
SCALE

SOURCE: THIS 2010 IMAGE WAS OBTAINED FROM THE FOND du LAC GEOGRAPHIC INFORMATION SYSTEM (GIS).

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FIGURE 2

LEGAL DESCRIPTION LOCATION MAP FOR BIOPILES
(ASSOCIATED WITH BRRTS NOS. 02-20-000914 AND 02-20-297826)
WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD

AECOM

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FIGURE 4

FORMER STOREHOUSE AREA - BRRTS No. 02-20-297826

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

FORMER STORE HOUSE

FORMER CONCRETE SLAB

FORMER CONCRETE SLAB

FORMER PUMP

TELEPHONE

SAN ST

SAN ST

SAN ST

SHOP A

ASPHALT

SAN W

BURIED 15,000 VOLT POWER LINE

GP-11 [NA] <2'-4'>

GP-6 [969] <2'-4'>

GP-2 [<1.4] <2'-4'>

B-7 (14) <2.5'-4'>

GP-1 1960] <2'-4'> [676] <6'-8'>

GP-10 [10.5] <2'-4'>

APPROXIMATE LIMIT OF REMEDIAL EXCAVATION (1994)

GP-13 [NA] <2'-4'>

GP-12 [NA] <2'-4'>

GP-4 [3750] <2'-4'>

GP-3 [2410] <2'-4'>

MW-3 (101) <5'-6'>

GP-5 [1770] <2'-4'>

B-8 [125] <2.5'-4'>

APPROXIMATE LIMIT OF UST EXCAVATION (1992)

SB-104 [9.6] <2'-4'>

GP-8 [3010] <2'-4'>

ET-B-23 [12] <3'-6'> [7.7] <8'-10'>

MW-108 [17] <2'-4'>

MW-104A [755] <0'-2'> <2'-4'> [1250]

GP-7 [1560] <2'-4'>

ESTIMATED EXTENT OF LEAD CONCENTRATIONS ABOVE NON-INDUSTRIAL AND INDUSTRIAL DIRECT CONTACT RCLs OF 50 mg/kg and 500 mg/kg RESPECTIVELY.

GP-9 [549] <2'-4'>

ET-B-22 [12] <3'-5'> [5.4] <8'-10'>

LEGEND:

- MONITORING WELL
- SOIL BORING
- RAILROAD TRACKS
- SAN — SANITARY SEWER
- W — WATER LINE
- ST — STORM SEWER
- <2'-4> SAMPLE DEPTH
- [14] LEAD CONCENTRATION IN mg/kg
- [NA] LEAD NOT ANALYZED

ASPHALT

AREA CONSISTING OF SAND AND GRAVEL, ASPHALT AND BALLAST SURFACES TO BE MAINTAINED ACCORDING TO CAP MAINTENANCE PLAN.

N

0' 15' 30' 60'

SCALE

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Project Management Initials: Designer: KAM Checked: RSR Approved: RSR ANSI B 11" x 17"

AECOM

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FIGURE 5

DIESEL ENG. HOUSE

STORE HOUSE

SHOP A

SHOP B

TRANSFER TABLE PIT

SAND GRAVEL & BALLAST

3 - 5'	8 - 10'
VOCs<LOD METALS=DNE PAHs<LOD	Pb=5.4

3 - 5'
VOCs<LOD METALS=DNE PAHs<LOD

0 - 3'
Pb=710 [A] PAHs=DNE

0 - 3'
Pb=224 Ace=1,610 [B] B(a)A=11,600 [A] B(a)P=11,800 [A] B(b)F=11,500 [A] Db(a,h)A=1,730 [A] IP=4,470 [A] N=3,530 [B]

4.5 - 6'
Pb=5.8 PAHs<LOD

3 - 5'
VOCs<LOD METALS=DNE PAHs=DNE

0 - 1.5'
VOCs<LOD METALS=DNE B(a)P=3,600 [A] B(b)F=7,100 [A] Db(a,h)A=820 [A] N=800 [B]

0 - 3'
Pb=18.1 PAHs=DNE

3 - 5'
VOCs<LOD METALS=DNE PAHs<DNE

0 - 3'	3 - 5'
Pb=150 PAHs=DNE	Pb=5.9

SS-21 ET-B-22 SS-22

SS-103A SS-103

SS-19/19A ET-B-19 ET-B-20 SS-20

INDIANA

ILLINOIS

LEGEND:

- SOIL BORING ADVANCED IN 2006 OR EARLIER
- SOIL BORING ADVANCED IN 2011
- ASPHALT
- AREA CONSISTING OF ASPHALT, GRAVEL, AND BALLAST SURFACES TO BE MAINTAINED ACCORDING TO CAP MAINTENANCE PLAN

VOCs:	VOLATILE ORGANIC COMPOUNDS
METALs:	RCRA METALS
PAHs:	POLYNUCLEAR AROMATIC HYDROCARBONS
B(a)P:	BENZO (a) PYRENE
B(b)F:	BENZO (b) FLUORONTHENE
Db(a,h)A:	DIBENZ (a,h) ANTHRACENE
Pb:	LEAD
Ace:	ACENAPHTHYLENE
B(a)A:	BENZO (a) ANTHRACENE
IP:	INDENO (1,2,3-cd) PYRENE
N:	NAPHTHALENE
LOD:	LABORATORY LIMIT OF DETECTION
DNE:	DETECTED WITH NO EXCEEDANCES

METAL RESULTS EXPRESSED IN MILLIGRAMS PER KILOGRAM.
VOCs AND PAH RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM.
[A] : EXCEEDS NR720 INDUSTRIAL DIRECT CONTACT RCL.
[B] : EXCEEDS NR720 GROUNDWATER PATHWAY RCL.

0' 50' 100' 200'

SCALE

CANADIAN NATIONAL PAH - BRRTS No. 02-20-549952

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

ANSI B 11" x 17"
Approved: RSR
Checked: RSR
Designer: KAM
Project Management Initials:

Filename: L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\60135737_Figure 5.dwg

AECOM

60135737

FIGURE 6

WISCONSIN CENTRAL, LTD - REFUELING AREA - BRRTS No. 02-20-000914

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

TP-12
B-2
WCSA-18
B-1
MW-2W
MW-2R[P]
TP-9
ET-MW-8
TP-11
SUMP #1
GRAVEL
12" TRENCH W/.
4" DRAIN TILE
SUMP #2
12" CONCRETE
DIESEL ENGINE
HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR
TP-8
FORMER
FUELING
AREA
SB-3
MW-12
KT-SOIL MICROBES DISPERSED IN THIS AREA
(1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
APPROXIMATE LOCATION OF
PRODUCT RECOVERY
TRENCH
12" DIA. CMP FOR
AIR, HYDRAULIC OIL,
LUBE OIL & ELECTRIC
TRANSFER LINES
WCSA-19
FRAOWS-
B4B/MW4
GRAVEL
MW-100
SB-2
TP-10
FRAOWS
FORMER REFUELING AREA OWS
TP-7
MW-16
HP-2
HP-1
ABANDONED
OIL SKIMMER
HP-4
TMW-3A
6" CHANGES TO 4" IRON AFTER 15'
MW-3
MW-107R
HP-3
B-4
B-3
HP-5
TP-1
HP-6
B-6
MW-10
TP-6
SUMP-1
S-5
FRAOWS
B5/MW5
TP-3
WCSA-15
TURNTABLE
ENGIN
OIL /W
SEPAR
FORMER SAND
GONDOLA
FORMER TRUCK UNLOAD
TP-2
S-2
S-4
S-3
B-7
B-5
HP-7
ET-B-25
SB-1
S-1
MW-17
LINE
PLUGGED
SEPTIC
TANK
FRAOWS-
B3/MW3
FRAOWS-
B1/MW1
ABANDONED
OIL SKIMMER
HP-8
HP-9
GRAVEL
400,000 GALLON
FUEL STORAGE
TANK
SB-5
MW-13
8" PVC
FRAOWS
B2/MW2
ENGINE WASH
FACILITY
MW-7
SB-4
MW-14
764
GRAVEL
OIL/WATER SEPARATOR
12" PVC
DRIVE
(OFFLINE)
ROUNDHOUSE
#1 PIT DRAIN
RIM EL. 762.86
TP-5
#2 PIT DRAIN
RIM EL. 762.84
FUELING BUILDING
CONCRETE
CONTAINMENT
DIKE
FUEL
PUMP
BUILDING
CONTAINMENT AREA
(12'X12'X0.5')
CONCRETE
LOADING PAD
OIL/WATER
SEPARATOR
25' DIA. BELOW GRADE
CONCRETE PAD
12" PVC
GRAVEL DRIVE
TP-13
GROUNDWATER
COLLECTION
SYSTEM
MW-1
MW-1
TMW-1A
MW-6[P]
MW-6W
GRAVEL
Building
MW-11
TP-14
762
GRAVEL
GRAVEL
STOR
ASPHA
MW-5
MW-4
MW-15

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UE — UNDERGROUND ELECTRIC
- E — E — OVERHEAD ELECTRIC
- P — RIGHT-OF-WAY LINE
- RR TRACKS
- 2 FOOT CONTOUR LINE
- GROUNDWATER PATHWAY RCL EXCEEDANCES
- INDUSTRIAL DIRECT CONTACT RCL EXCEEDANCES

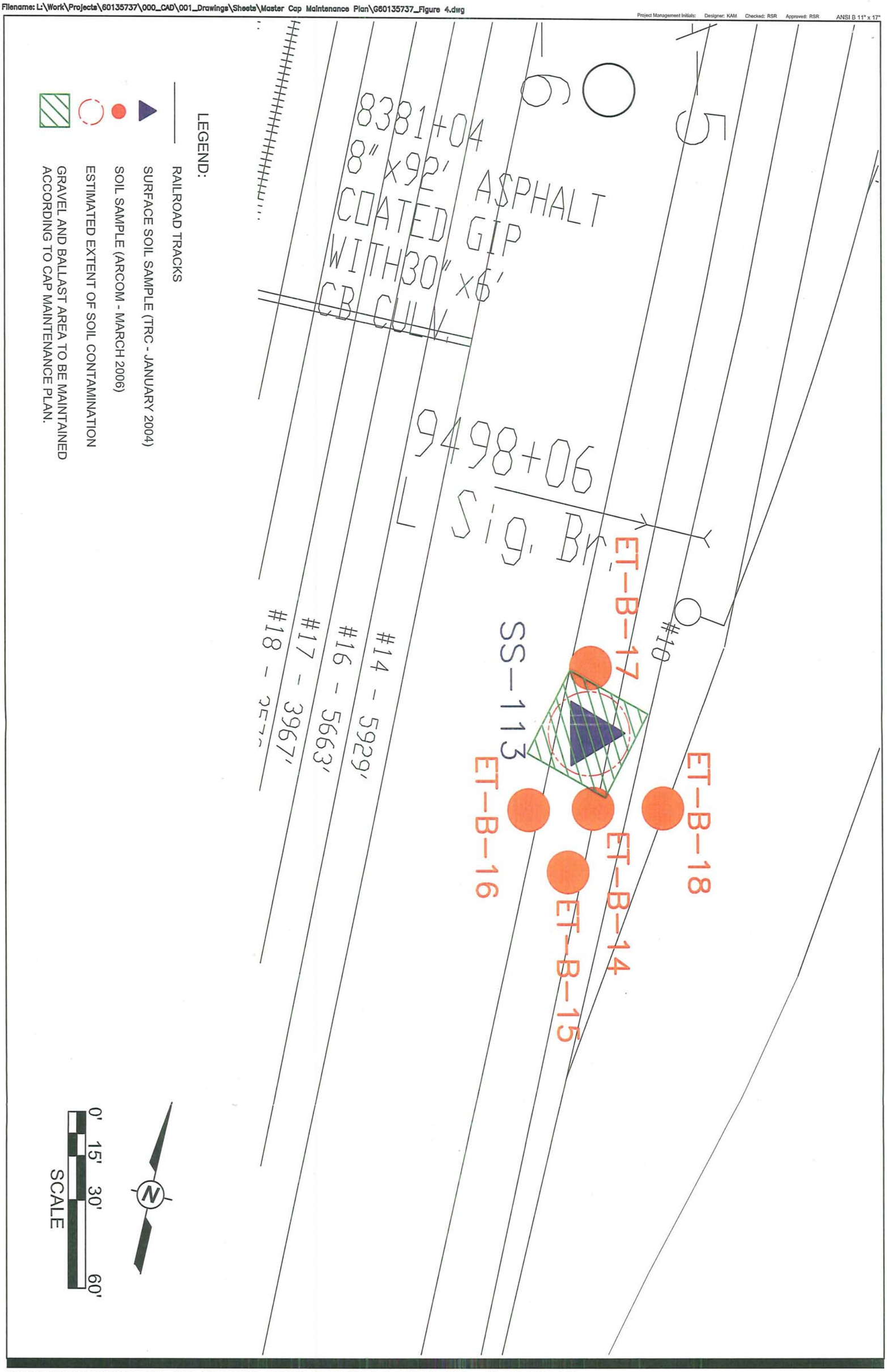
- AREA CONSISTING OF SAND AND GRAVEL SURFACE TO BE MAINTAINED ACCORDING TO THE CAP MAINTENANCE PLAN.
- MANHOLE
- TEST PIT (1989/1990)
- SOIL BORING
- MW-4 — MONITORING WELL
- MW-1 — ABANDONED MONITORING WELL
- S-2 — HAND AUGER (7/2001)
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] — PIEZOMETER

0' 15' 30' 60'
SCALE

ANSI B 11" x 17"
Approved: RSR
Checked: RSR
Designer: KAM
Project Management Initials:
L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\(060135737_Figure 6.dwg; 7/26/2012 1:42:00 PM; MITTELSTEADT, KARL

Filename: L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\G60135737_Figure 4.dwg

Project Management Initials: Designer: KAM Checked: RSR Approved: RSR ANSI B 11" x 17"



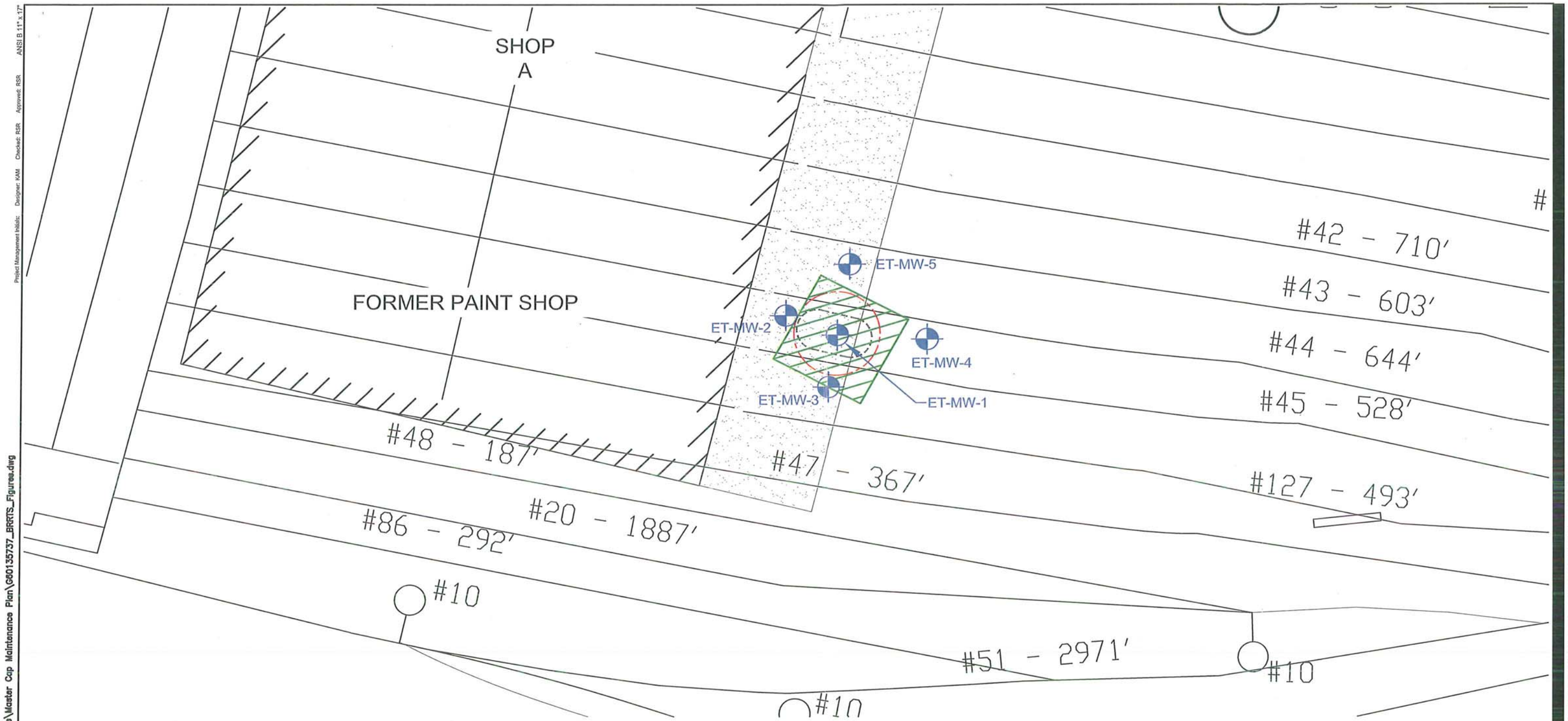
WISCONSIN CENTRAL RR - DIESEL SPILL TRACK 55 - BRRTS No. 02-20-543232

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

AECOM

60135737

FIGURE 7



LEGEND:

- ASPHALT PAVEMENT
- RAILROAD TRACKS
- MONITORING WELL (AECOM, APRIL 2007)
- FORMER 1,000 GALLON UST LOCATION
- ESTIMATED EXTENT OF SOIL CONTAMINATION
- ASPHALT AND GRAVEL AREA TO BE MAINTAINED ACCORDING TO CAP MAINTENANCE PLAN.

N

0' 15' 30' 60'

SCALE

WISCONSIN CENTRAL, LTD - PAINT SHOP UST - BRRTS No. 03-20-548039

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

AECOM
60135737
FIGURE 8

Filename: L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\60135737_BRRTS_Figure8.dwg
Project Management Initials: Designer: KAM Checked: RSR Approved: RSR ANSI B 11" x 17"

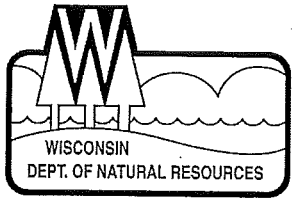
Exhibit A

Cap Inspection Log

Inspection Date	Inspector	Condition of Cap	Recommendations	Have recommendations from previous inspection been implemented?

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



June 12, 2012

Wisconsin Central, Ltd.
Attn: Mr. Brian Hayden
1 Waterfront Drive
Two Harbor, MN 55616

Subject: Conditional Closure Decision with Requirements to Achieve Final Closure
Wisconsin Central Ltd – Refueling Area (BRRTS # 02-20-000914)
Canadian National Rail Yrd – Diesel Fuel Spill (BRRTS # 02-20-540810)
2 Harrison Street, North Fond du Lac, Wisconsin

Dear Mr. Hayden:

On June 11, 2012, the Northeast Region Closure Committee reviewed your request for closure of the two cases described above. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, the Closure Committee has determined that the petroleum contamination identified at the site in the vicinity of the former refueling area and the diesel spill area (for the purpose of this closure the two release areas are kept as one contaminated area) appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

The monitoring wells at the site must be properly abandoned in accordance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to me on Form 3300-005, found at http://dnr.wi.gov/org/water/dwg/forms/3300005.pdf or provided by the Department of Natural Resources. The Department must be notified of any monitoring wells not properly abandoned or transferred to any open case with an ongoing environmental investigation.

Any remaining purge water, waste and/or soil piles generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Once that work is completed, please send appropriate documentation regarding the treatment or disposal of the remaining purge water, waste and/or soil piles. The Department must also receive any available documentation on the remaining soil impacts at the on-site biopiles.

When the above conditions have been satisfied, please submit the appropriate documentation (for example, well abandonment forms, disposal receipts, copies of correspondence, etc.) to verify that applicable conditions have been met, and your case will be closed.

Your site will be listed on the DNR's Remediation and Redevelopment GIS Registry. Information that was submitted with your closure request application will be included on the GIS Registry. To review the site on the GIS Registry web page, visit the RR Sites Map page at:

http://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2.

As part of the approval of the closure of this case, you will be responsible for maintaining the following continuing obligations (remaining groundwater contamination above the enforcement standard, proper handling of any contaminated soil excavated in the future, maintain existing industrial zoning, and cap maintenance for protection against human exposure to the remaining impacted soil above industrial soil standards). In the final closure approval, you will also be required to conduct annual inspections. Documentation of the inspection will be required to be kept on site.

The case referred to as WI Central RR – Oil Water Separator (BRRTS # 02-20-552126) has been removed from the BRRTS database and the file contents merged with the case Wisconsin Central Ltd – Refueling Area (BRRTS # 02-20-000914). It appears that both cases are part of the same release to the environment.

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at (920) 662-5420.

Sincerely,

Keld Lauridsen
Hydrogeologist
Remediation & Redevelopment Program

cc: Dick Reesman, AECOM (e-copy - Richard.Reesman@aecom.com)

AECOM
200 Indiana Avenue
Stevens Point, WI 54481
www.aecom.com

715 341 8110 tel
715 341 7390 fax

Memorandum

To WDNR

CC

Subject Legal Description – Former Refueling Area

From Dick Reesman

Date 2/21/12

Due to the large size of the North Fond du Lac Rail Yard the following legal description (as shown on Figure 2) describes the portion of the North Fond du Lac Rail Yard, which includes the Former Refueling Area (BRRTS #02-20-000914), the Former Refueling Area OWS (BRRTS #02-20-552126), and the 1,000-Gallon Diesel Fuel Release (BRRTS #02-20-540810).

That part of the Southwest ¼ of Section 33, Township 16 North, Range 17 East, in the Village of North Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:

Commencing at the Southeast corner of said Southwest ¼ section;
Thence South 89°50'27" West, 121.71 feet, along the south line of said ¼ Section;
Thence North 16°46'00" West, 1133.41 feet, to the point of beginning;
Thence South 77°18'00" West, 950.00 feet;
Thence North 05°56'00" West, 1605.00 feet;
Thence South 83°47'54" East, 701.56 feet;
Thence South 16°46'00" East, 1370.00 feet, to the point of beginning.

This area contains 1,199,529.80 square feet, or 27.5374 acres, more or less.

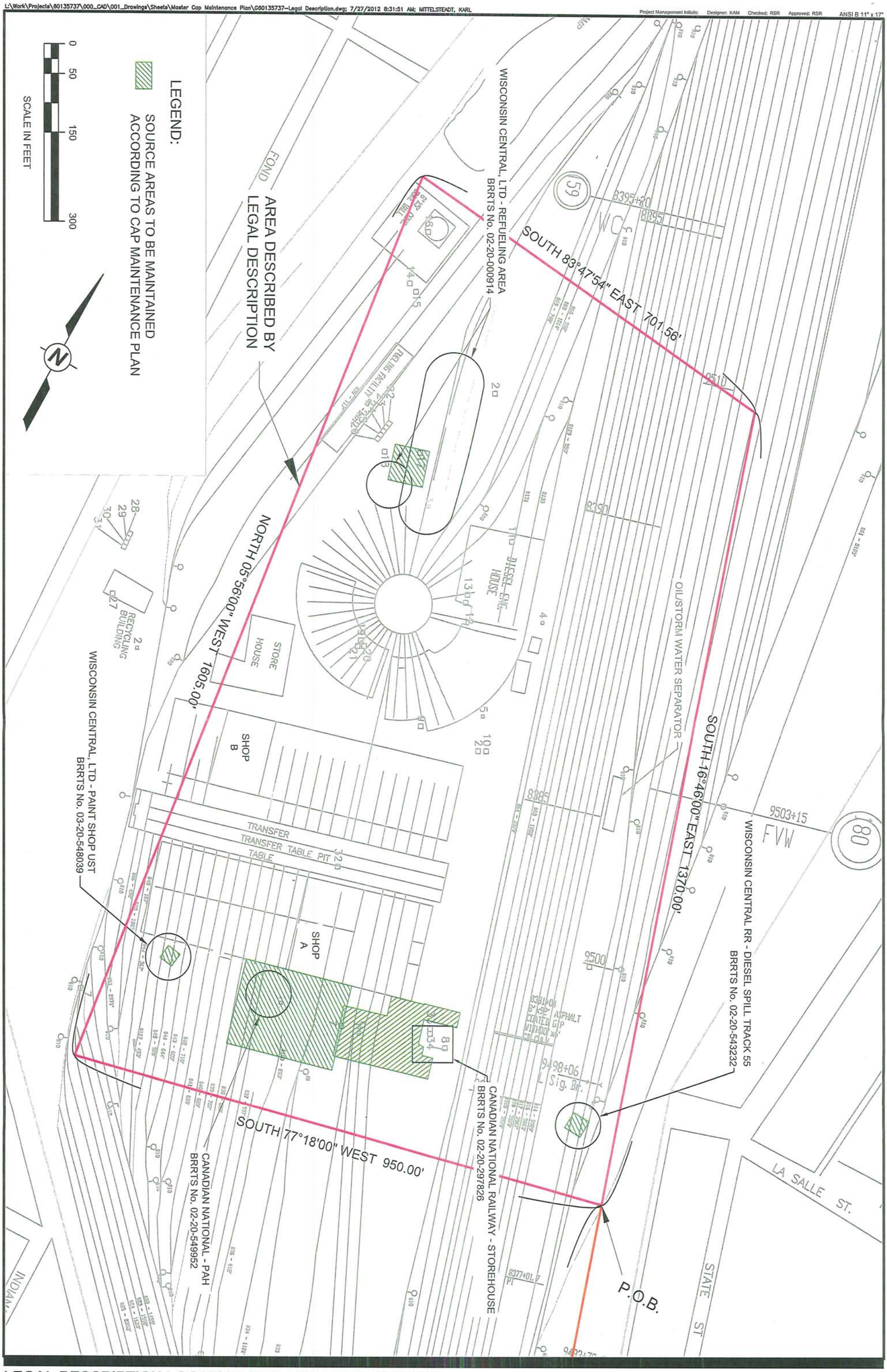
An illustration of the area described in the above legal description is presented on the attached Figure 2.

The WTM coordinates for the Former Refueling Area are: 642373E, 372127N. The WTM coordinates were obtained from the Wisconsin Department of Natural Resources RR Sites Map.

Regards,

Dick Reesman

Dick Reesman, P.E.
Senior Project Engineer
richard.reesman@aecom.com



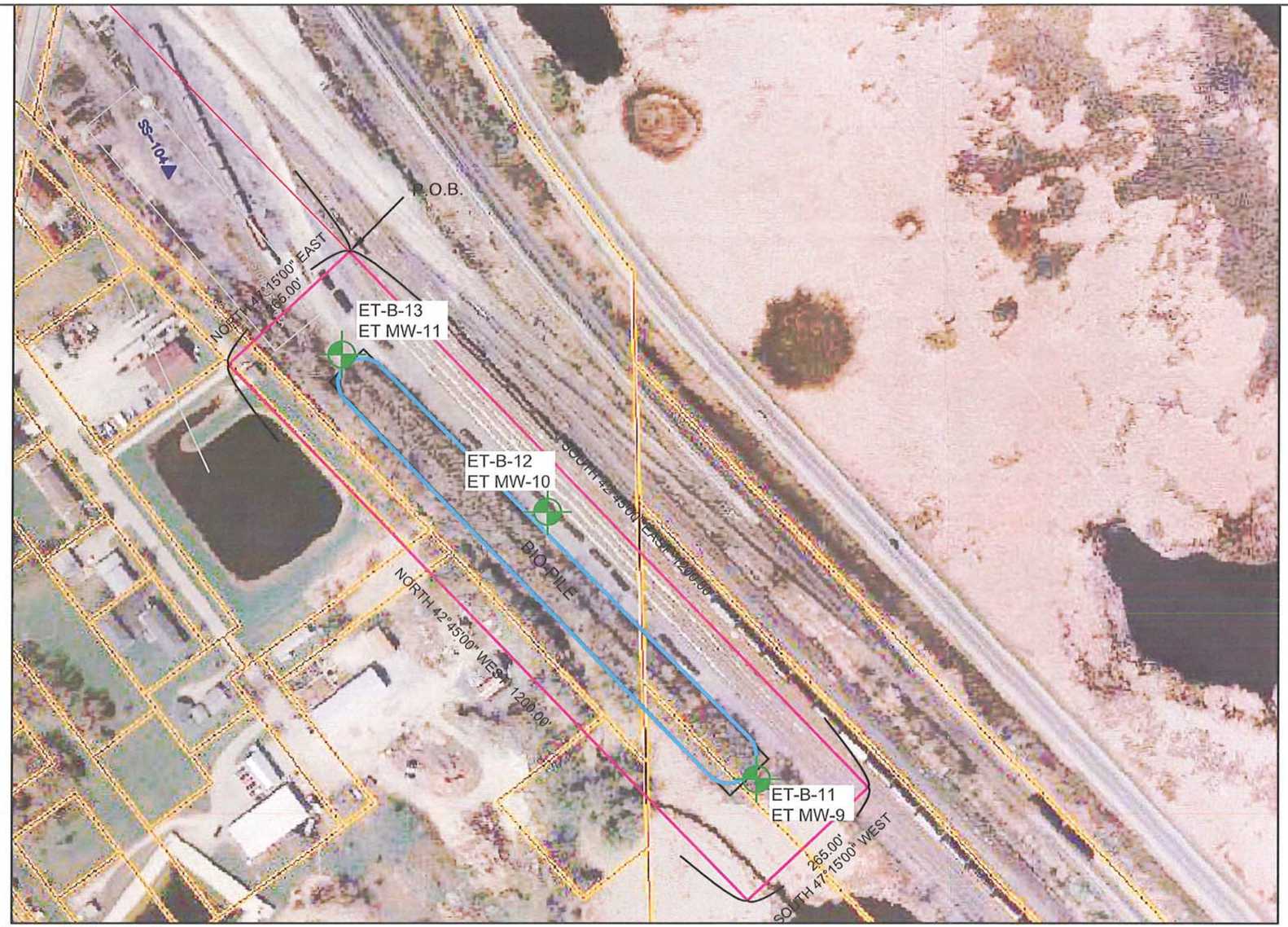
LEGAL DESCRIPTION LOCATION MAP FOR SOURCE AREAS

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

AECOM

60135737

FIGURE 2



LEGAL DESCRIPTION - BIOPILE

That part of the Northeast 1/4 of Section 4, Township 15 North, Range 17 East, in the Village of North Fond du Lac, and the City of Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:

Commencing at the Northwest corner of said Northeast 1/4 Section;
Thence South 895027 West, 882.98 feet, along the north line of the Northwest 1/4 of said Section 4;
Thence South 424500 East, 1710.77 feet, to the point of beginning;
Thence continue South 424500 East, 1200.00 feet;
Thence South 471500 West, 265.00 feet;
Thence North 424500 West, 1200.00 feet;
Thence North 471500 East, 265.00 feet, to the point of beginning.

This parcel contains **318,000.00 square feet,** or **7.3003 acres,** more or less.

LEGEND

ET–B–11
ET MW–9

LOCATION OF BIOPILES
GROUNDWATER MONITORING WELL LOCATIONS

0' 100' 200' 400'
SCALE

SOURCE: THIS 2010 IMAGE WAS OBTAINED FROM THE FOND du LAC GEOGRAPHIC INFORMATION SYSTEM (GIS).

LEGAL DESCRIPTION LOCATION MAP FOR BIOPILES
(ASSOCIATED WITH BRRTS NOS. 02-20-000914 AND 02-20-297826)
WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

AECOM
60135737
FIGURE 3

Environment

PO Box 509
Two Harbors, MN, USA
55616

February 21, 2012

To Whom It May Concern:

To the best of my knowledge, the following legal description completely and accurately describes an area on the North Fond du Lac Rail Yard that contains the Former Refueling Area (BRRTS #02-20-000914), the Former Refueling Area OWS (BRRTS #02-20-552126), and the 1,000-Gallon Diesel Fuel Release (BRRTS #02-20-540810):

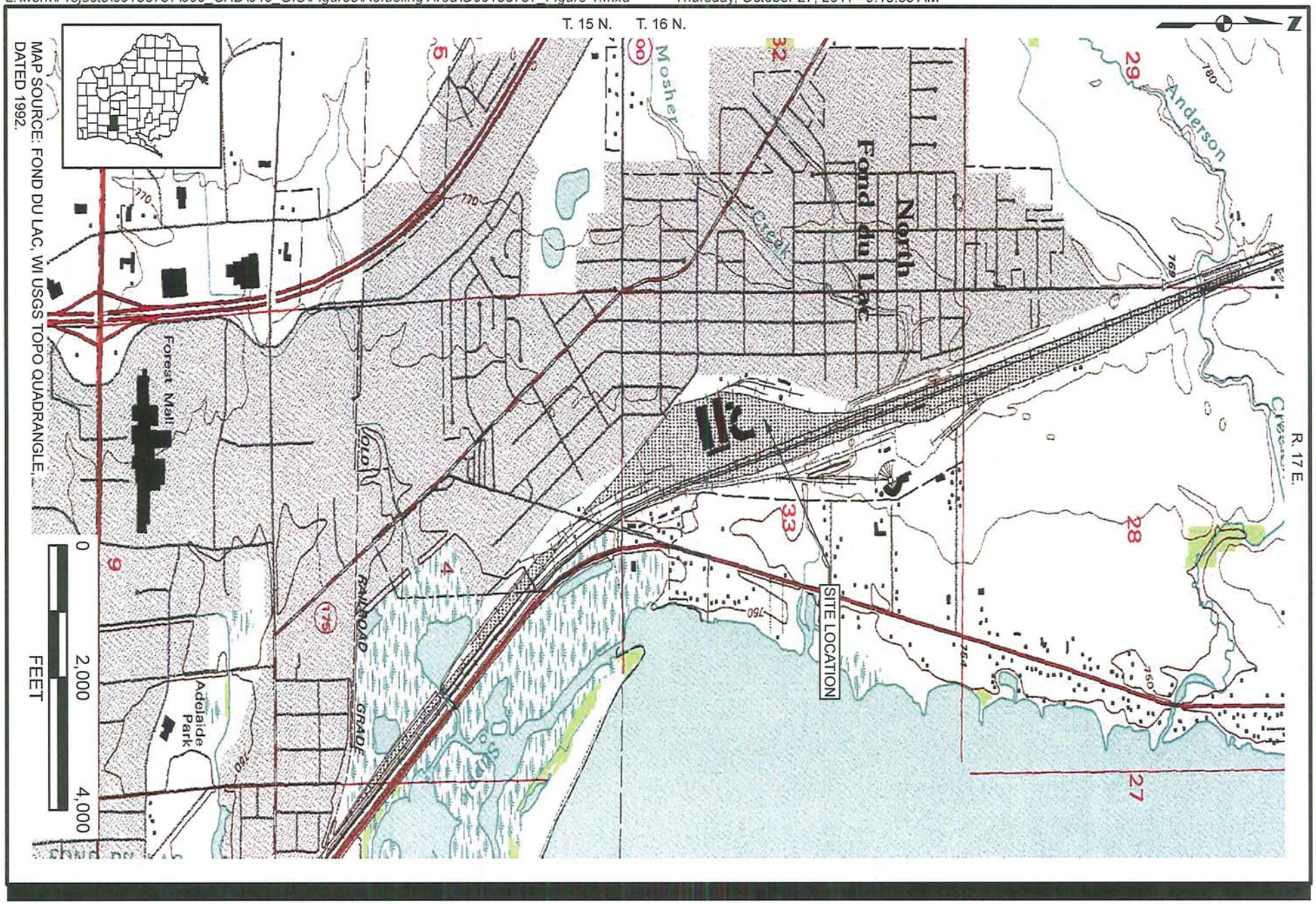
> That part of the Southwest 1/4 of Section 33, Township 16 North, Range 17 East, in the Village of North Fond du Lac, County of Fond du Lac, State of Wisconsin, more particularly described as:
>
> Commencing at the Southeast corner of said Southwest 1/4 section;
> Thence South 89°50′27″ West, 121.71 feet, along the south line of said 1/4 Section;
> Thence North 16°46′00″ West, 1133.41 feet, to the point of beginning;
> Thence South 77°18′00″ West, 950.00 feet;
> Thence North 05°56′00″ West, 1605.00 feet;
> Thence South 83°47′54″ East, 701.56 feet;
> Thence South 16°46′00″ East, 1370.00 feet, to the point of beginning.
>
> This parcel contains **1,199,529.80 square feet,** or **27.5374 acres,** more or less.

Respectfully,

Brian T Hayden

Brian Hayden
Regional Manager - Environment

L:\work\Projects\60135737\000_CAD\040_GIS\Figures\Refueling Area\G60135737_Figure 1.mxd Thursday, October 27, 2011 - 9:18:33 AM



SITE LOCATION MAP

WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS#02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810
NORTH FOND DU LAC, WISCONSIN

AECOM

60135737

FIGURE 1

NTS

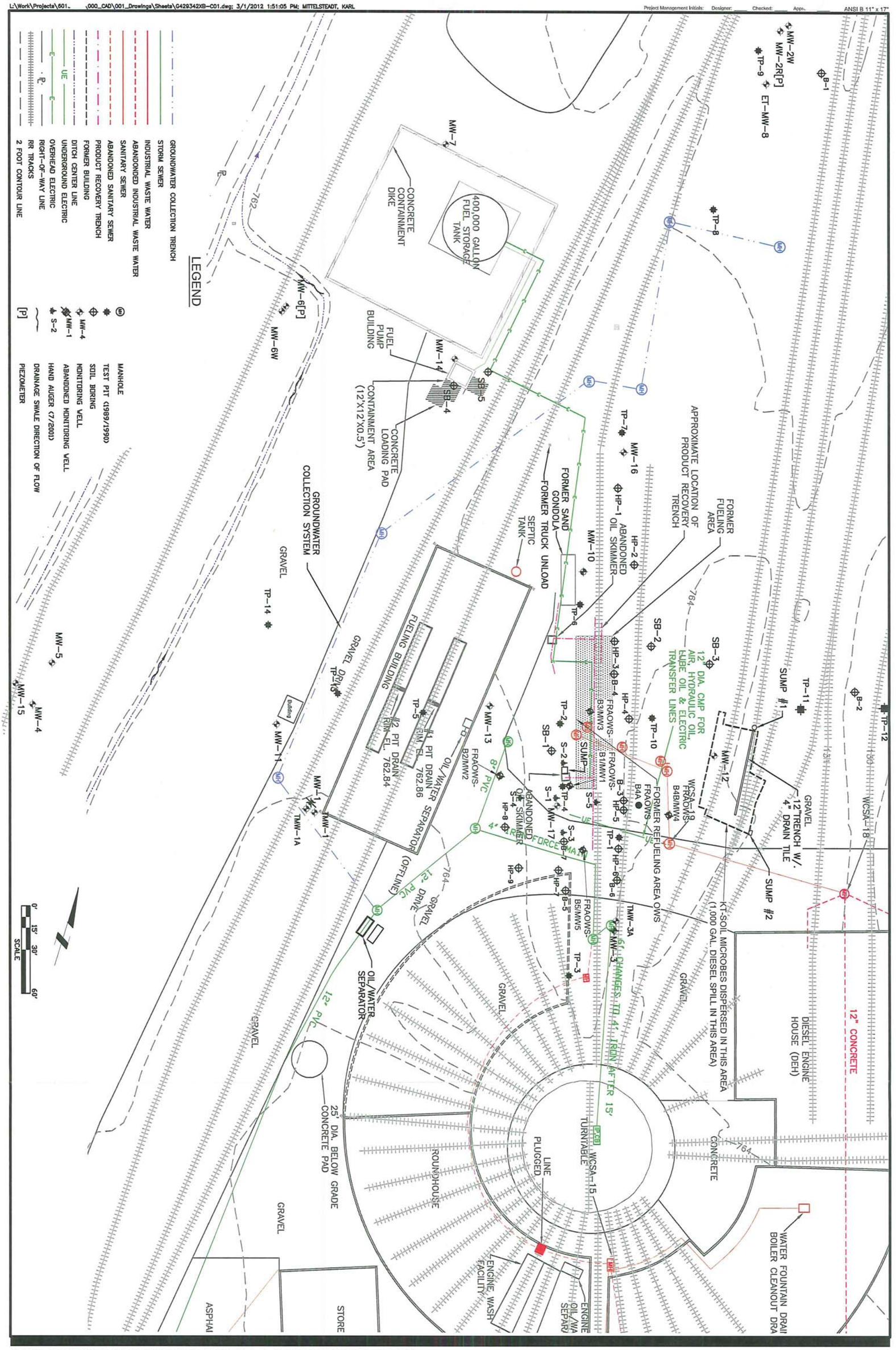
OVERVIEW OF LOCATIONS OF BRRTS CASES AND BIOPILES

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

AECOM

60135737

FIGURE 1



SOIL BORING/MONITORING WELL LOCATION DIAGRAM
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS #02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810
NORTH FOND DU LAC, WISCONSIN

AECOM
60135737
FIGURE 3

AECOM
60135737
FIGURE 4

ESTIMATED EXTENT OF CONTAMINATED SOIL
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS #02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810
NORTH FOND DU LAC, WISCONSIN

TP-12
B-2
WCSA-18
12" CONCRETE
B-1
MW-2W
MW-2R[P]
TP-9
ET-MW-8
TP-11
GRAVEL
12"TRENCH W/.
4" DRAIN TILE
SUMP #1
SUMP #2
DIESEL ENGINE
HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR
TP-8
FORMER
FUELING
AREA
SB-3
MW-12
KT-SOIL MICROBES DISPERSED IN THIS AREA
(1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
APPROXIMATE LOCATION OF
PRODUCT RECOVERY
TRENCH
12" DIA. CMP FOR
AIR, HYDRAULIC OIL,
LUBE OIL & ELECTRIC
TRANSFER LINES
WCSA-19
FRAOWS-
B4B/MW4
GRAVEL
MW-100
SB-2
TP-10
FRAOWS
FORMER REFUELING AREA OWS
MW-16
HP-2
TP-7
HP-1
ABANDONED
OIL SKIMMER
HP-3
B-4
HP-4
B-3
HP-5
TP-1
HP-6
B-6
TMW-3A
MW-3
6' CHANGES TO 4' IRON AFTER 15'
MW-107R
MW-10
TP-6
SUMP-1
S-5
WCSA-15
TURNTABLE
FRAOWS-
B5/MW5
TP-3
B-5
HP-7
S-3
TP-2
S-2
TP-4
B-7
ET-B-25
FORMER SAND
GONDOLA
FORMER TRUCK UNLOAD
SB-1
S-1
MW-17
LINE
PLUGGED
FRAOWS-
B3/MW3
SEPTIC
TANK
ABANDONED
OIL SKIMMER
S-4
HP-8
HP-9
FRAOWS-
B1/MW1
GRAVEL
400,000 GALLON
FUEL STORAGE
TANK
MW-13
8" PVC
4" PVC
ENGINE WASH
FACILITY
SB-5
FRAOWS
B2/MW2
MW-7
SB-4
764
GRAVEL
OIL/WATER SEPARATOR
#1 PIT DRAIN
RIM EL. 762.86
TP-5
12" PVC
(OFFLINE)
ROUNDHOUSE
MW-14
CONCRETE
CONTAINMENT
DIKE
FUEL-
PUMP
BUILDING
CONCRETE
LOADING PAD
CONTAINMENT AREA
(12'X12'X0.5')
FUELING BUILDING
#2 PIT DRAIN
RIM EL. 762.84
OIL/WATER
SEPARATOR
25' DIA. BELOW GRADE
CONCRETE PAD
GRAVEL DRIVE
TP-15
GROUNDWATER
COLLECTION
SYSTEM
TMW-1
MW-1
TMW-1A
12" PVC
STOR
MW-6[P]
MW-6W
GRAVEL
Building
MW-11
TP-14
762
GRAVEL
ASPHA
MW-5
MW-4
MW-15
0' 15' 30' 60'
SCALE

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UNDERGROUND ELECTRIC (UE)
- OVERHEAD ELECTRIC (E)
- RIGHT-OF-WAY LINE (R/L)
- RR TRACKS
- 2 FOOT CONTOUR LINE
- GROUNDWATER PATHWAY RCL EXCEEDANCES
- INDUSTRIAL DIRECT CONTACT RCL EXCEEDANCES

- MH — MANHOLE
- TP-4 — TEST PIT (1989/1990)
- SB-4 — SOIL BORING
- MW-4 — MONITORING WELL
- MW-1 — ABANDONED MONITORING WELL
- S-2 — HAND AUGER (7/2001)
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] — PIEZOMETER

A

A'

MW-2W

MW-16

MW-10

MW-17

MW-3

766

763

760

757

754

751

748

745

ELEVATION-MEAN SEA LEVEL

RAILROAD TRACKS

FILL: SAND, GRAVEL, CINDERS

GROUNDWATER ELEVATION (12-13-99)

GROUNDWATER COLLECTION LINE

PEAT

ORGANIC SILT

CLAY

CLAY

<1

<1

<1

<1

<1

<1

<1

<1

<1

60

90

350

200

420

660

110

350

800

800

30

70

<1

<1

<1

–

SCALE: HORIZ. 1"=30'
VERT. 1"=3'

LEGEND

MONITORING WELL

SOIL BORING SAMPLE INTERVAL

PID READING=<1

GROUNDWATER ELEVATION (12-13-99)

ESTIMATED EXTENT OF PETROLEUM IMPACTED SOIL

CROSS SECTION INDEX

NOT TO SCALE

CROSS SECTION A-A ESTIMATED EXTENT OF CONTAMINATED SOIL

WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD

FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914

REFUELING AREA OWS - BRRTS #02-20-552126

1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810

NORTH FOND DU LAC, WISCONSIN

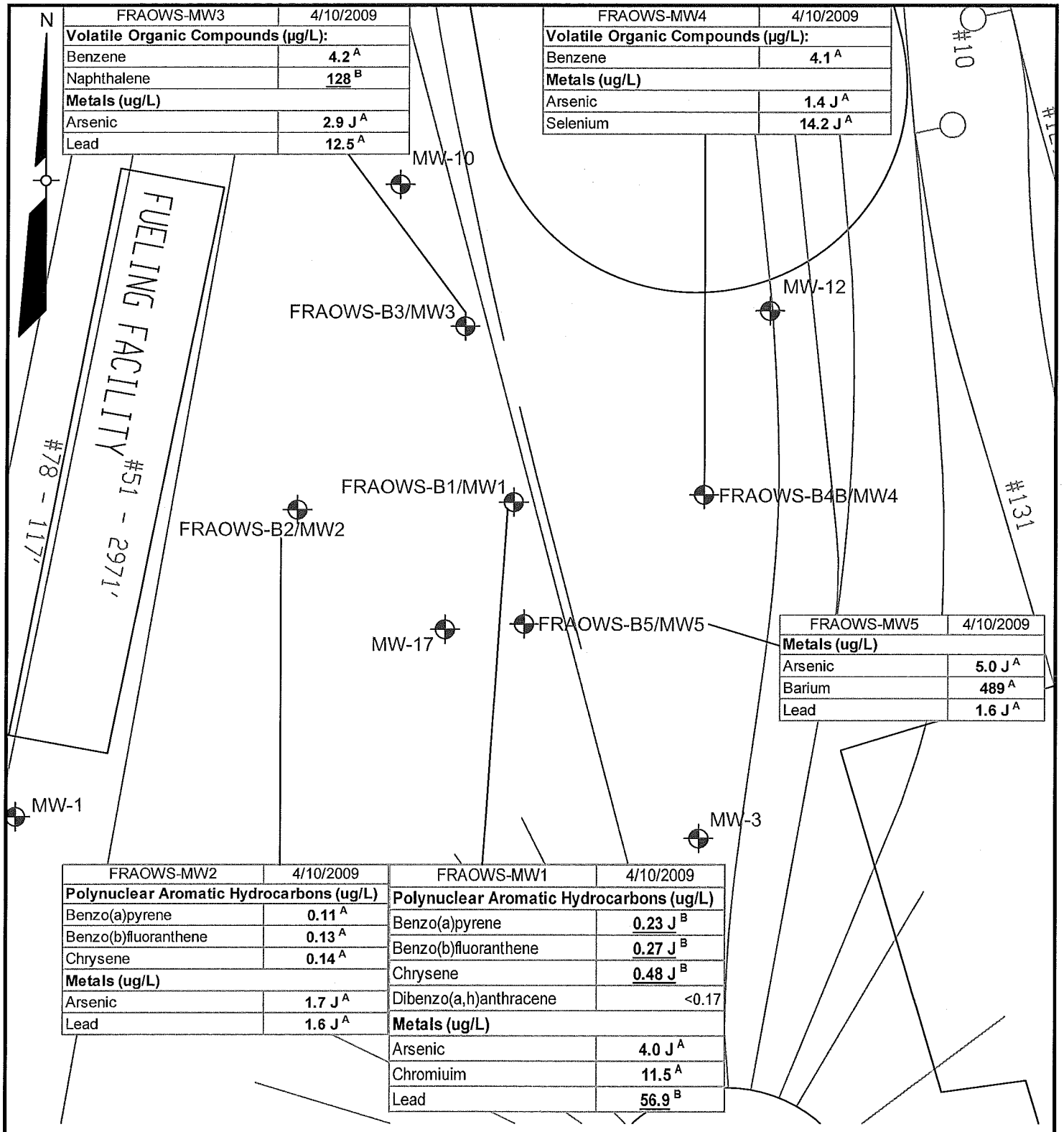
AECOM

60135737

FIGURE 5

Project Management Initials: ___ Designer: ___ Checked: ___ Approv.: ___ ANSI B 11" x 17"

Filename: L:\WORK\PROJs\...\135737\000_CAD\GIS_DRAWINGS\SHEETS\GIS\135737-FIGURE_4.DWG Last saved by: KOCHL Last Plotted: ___



FRAOWS-MW3	4/10/2009
Volatile Organic Compounds (µg/L):	
Benzene	**4.2** A
Naphthalene	**128** B
Metals (ug/L)	
Arsenic	**2.9 J** A
Lead	**12.5** A

FRAOWS-MW4	4/10/2009
Volatile Organic Compounds (µg/L):	
Benzene	**4.1** A
Metals (ug/L)	
Arsenic	**1.4 J** A
Selenium	**14.2 J** A

FRAOWS-MW5	4/10/2009
Metals (ug/L)	
Arsenic	**5.0 J** A
Barium	**489** A
Lead	**1.6 J** A

FRAOWS-MW2	4/10/2009
Polynuclear Aromatic Hydrocarbons (ug/L)	
Benzo(a)pyrene	**0.11** A
Benzo(b)fluoranthene	**0.13** A
Chrysene	**0.14** A
Metals (ug/L)	
Arsenic	**1.7 J** A
Lead	**1.6 J** A

FRAOWS-MW1	4/10/2009
Polynuclear Aromatic Hydrocarbons (ug/L)	
Benzo(a)pyrene	**0.23 J** B
Benzo(b)fluoranthene	**0.27 J** B
Chrysene	**0.48 J** B
Dibenzo(a,h)anthracene	<0.17
Metals (ug/L)	
Arsenic	**4.0 J** A
Chromiuim	**11.5** A
Lead	**56.9** B

LEGEND:
MONITORING WELL

NOTES:
NE = SOME DETECTS; NO EXCEEDANCES ABOVE STANDARDS
ND = NO DETECTS
BOLD = EXCEEDANCE ABOVE A STANDARD
A = EXCEEDS NR 140 PREVENTIVE ACTION LIMIT (PAL)
B = EXCEEDS NR 140 ENFORCEMENT STANDARDS (ES)

0' 25' 50' 100'

FORMER REFUELING AREA OWS GROUNDWATER RESULTS
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA OWS - BRRTS #02-20-552126

SUMMARY OF EXCEEDANCES IN GROUNDWATER

AECOM

PROJECT NO.	DRAWN BY:	DATE:	
60135737	KAM	11/2011	FIGURE 8

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AECOM
60135737
FIGURE 9

RECENT GROUNDWATER ANALYTICAL RESULTS
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS #02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810

ET-MW-8
5/17/2011
VOCs < LOD
PAHs = DNE

MW-10
12/7/2010
VOCs < LOD
B(a)P = 0.022 A
B(b)F = 0.024 A
C = 0.097 A

MW-12
12/14/1999
PAHs = DNE
PVOCs ≤ LOD
10/13/2000
VOC = DNE

MW-16
VOCs < LOD
PAHs < DNE

MW-3
8/24/2011
1,2 - DCA = 2.1 A

MW-17
12/7/2010
VOCs < LOD
B(a)P = 0.090 A
B(b)F = 0.11 A
C = 0.17 A

12" CONCRETE
DIESEL ENGINE HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR
12" TRENCH W/. 4" DRAIN TILE
SUMP #1
SUMP #2
MW-12
KT-SOIL MICROBES DISPERSED IN THIS AREA (1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
GRAVEL
MW-100
FORMER FUELING AREA
APPROXIMATE LOCATION OF PRODUCT RECOVERY TRENCH
12" DIA. CMP FOR AIR, HYDRAULIC OIL, LUBE OIL & ELECTRIC TRANSFER LINES
WCSA-19
FRAOWS-B4B/MW4
FRAOWS FORMER REFUELING AREA OWS
ABANDONED OIL SKIMMER
MW-10
MW-16
TMW-3A
MW-3
5" CHANGES TO 4" IRON AFTER 15'
WCSA-15
TURNTABLE
MW-107R
FRAOWS-B5/MW5
FORMER SAND GONDOLA
FORMER TRUCK UNLOAD
SEPTIC TANK
FRAOWS-B3/MW3
FRAOWS-B1/MW1
ABANDONED OIL SKIMMER
MW-17
LINE PLUGGED
ENGINE WASH FACILITY
400,000 GALLON FUEL STORAGE TANK
MW-13
FRAOWS-B2/MW2
OIL/WATER SEPARATOR
#1 PIT DRAIN RIM EL. 762.86
#2 PIT DRAIN RIM EL. 762.84
FUELING BUILDING
12" PVC (OFFLINE)
ROUNDHOUSE
MW-7
MW-14
CONCRETE CONTAINMENT DIKE
FUEL PUMP BUILDING
CONCRETE LOADING PAD
CONTAINMENT AREA (12'X12'X0.5')
GRAVEL DRIVE
GROUNDWATER COLLECTION SYSTEM
25' DIA. BELOW GRADE CONCRETE PAD
MW-6[P]
MW-6W
MW-1
TMW-1
TMW-1A
MW-11
MW-5
MW-4
MW-15
STOR
ASPHA

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UE — UNDERGROUND ELECTRIC
- E — E — OVERHEAD ELECTRIC
- P — RIGHT-OF-WAY LINE
- RR TRACKS
- 2 FOOT CONTOUR LINE
- ESTIMATED EXTENT OF PETROLEUM — IMPACTED GROUNDWATER EXCEEDING NR140 ENFORCEMENT STANDARD.
- ESTIMATED EXTENT OF PETROLEUM — IMPACTED GROUNDWATER EXCEEDING NR140 PREVENTATIVE ACTION LIMIT.
- MH — MANHOLE
- TEST PIT (1989/1990)
- SOIL BORING
- MW-4 — MONITORING WELL
- MW-1 — ABANDONED MONITORING WELL
- S-2 — HAND AUGER (7/2001)
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] — PIEZOMETER

NOTES:

PAH: POLYNUCLEAR AROMATIC HYDROCARBONS
VOC: VOLATILE ORGANIC COMPOUNDS
PVOC: PETROLEUM VOLATILE ORGANIC COMPOUNDS
DNE: DETECTED WITH NO EXCEEDANCES
LOD: LESS THAN LABORATORY DETECTION LIMIT

VOC AND PAH CONCENTRATIONS EXPRESSED IN MICROGRAMS PER LITER.

A : CONCENTRATION EXCEEDS NR140 PREVENTATIVE ACTION LIMIT.
B : CONCENTRATION EXCEEDS NR140 ENFORCEMENT STANDARD.

0' 15' 30' 60'
SCALE

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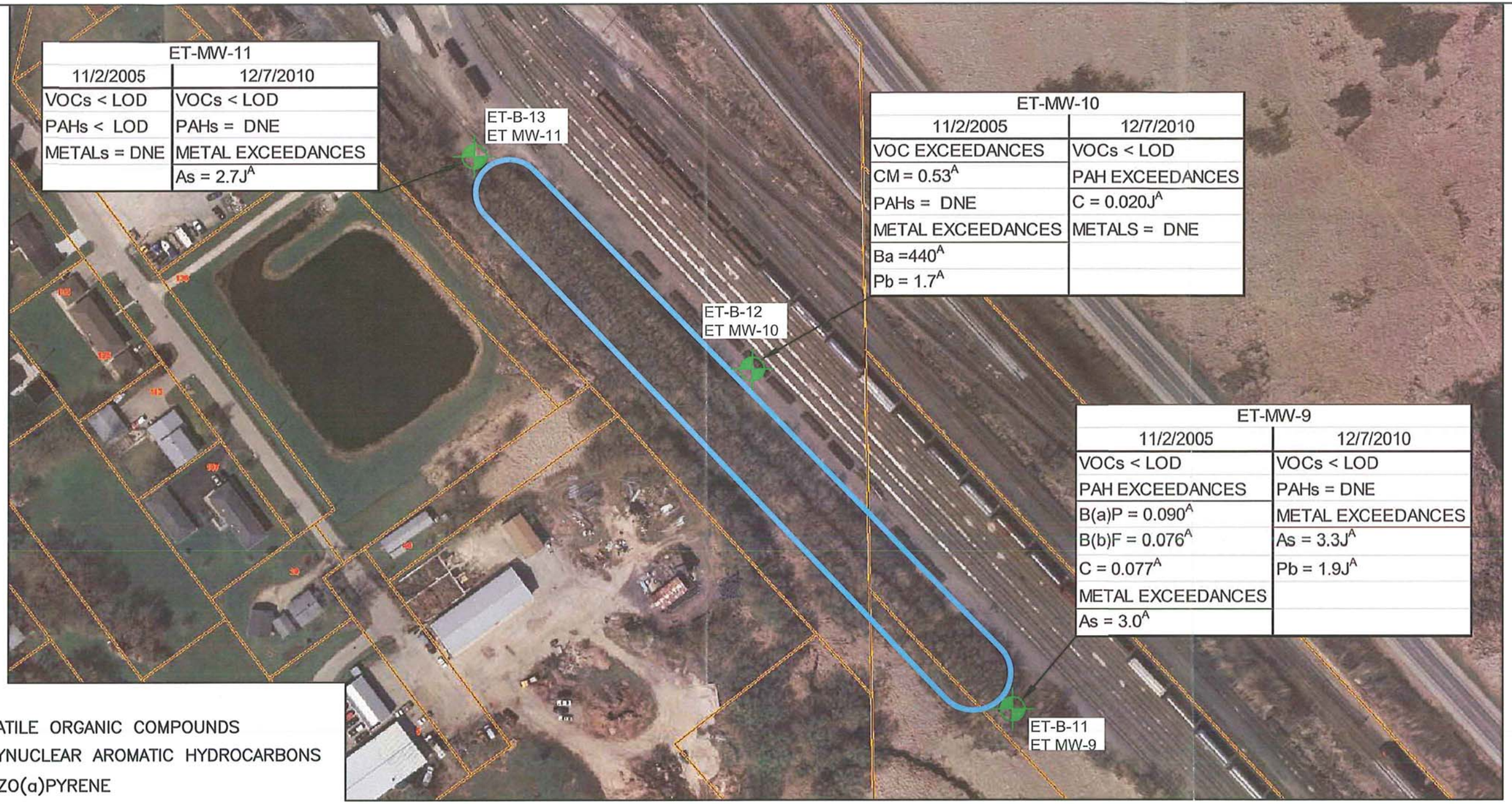
ANSI B 11" x 17"
Approved:
Checked:
Designer:
Project Management Initials:



NOTES:

VOCs:	VOLATILE ORGANIC COMPOUNDS
PAHs:	POLYNUCLEAR AROMATIC HYDROCARBONS
B(a)P:	BENZO(a)PYRENE
B(b)F:	BENZO(b)FLUORANTHRENE
C:	CHRYSENE
As:	ARSENIC
Pb:	LEAD
CM:	CHLOROMETHANE
J:	CONCENTRATION DETECTED BETWEEN LABORATORY DETECTION LIMIT AND QUANTITATION LIMIT
DNE:	DETECTED WITH NO EXCEEDANCES
LOD:	LABORATORY LIMIT OF DETECTION

VOC, PAH, METAL RESULTS EXPRESSED IN MICROGRAMS PER LITER.

A: CONCENTRATION EXCEEDS NR140 PREVENTIVE ACTION LIMIT.

LEGEND

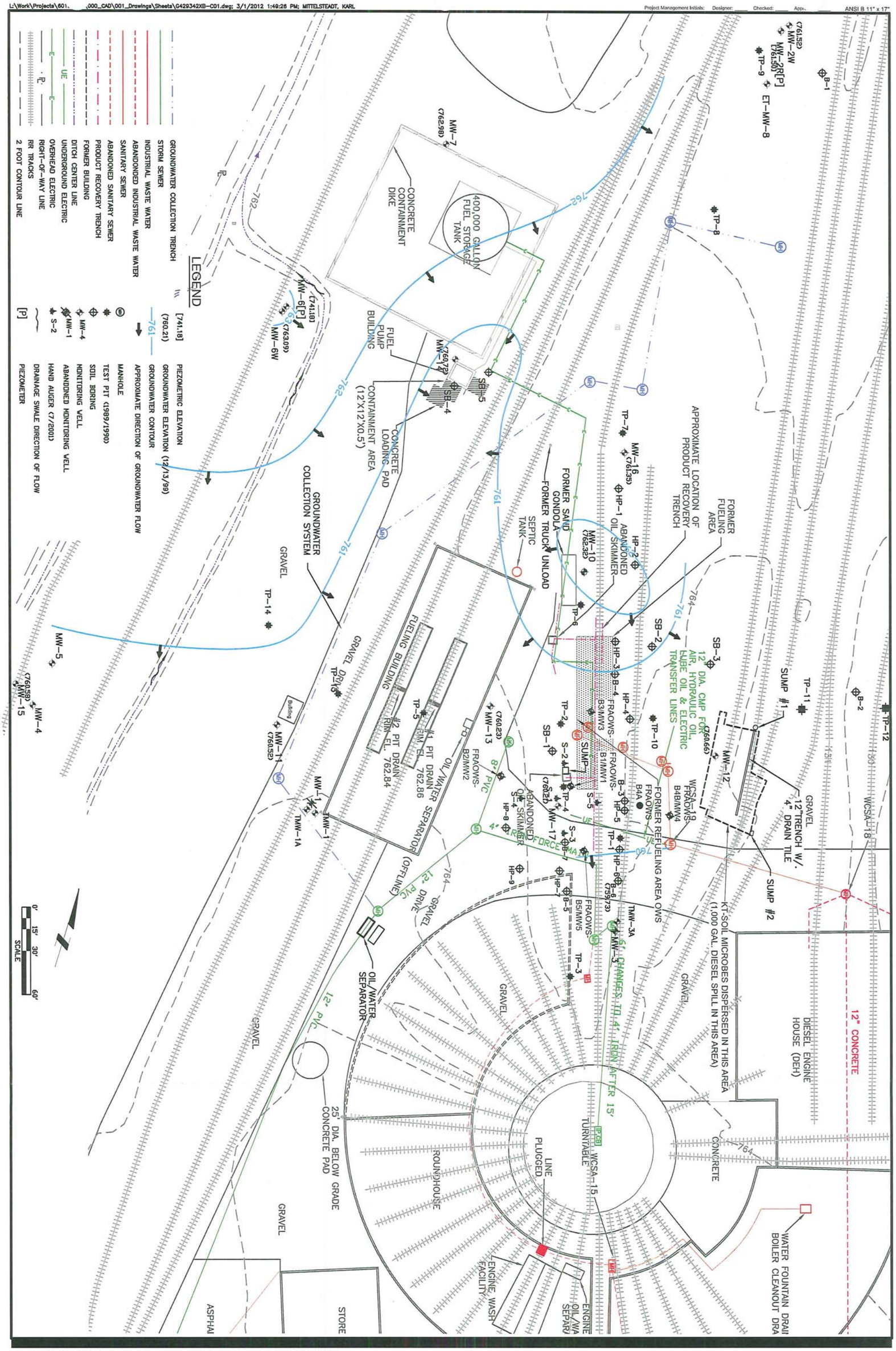
ET–B–11 / ET MW–9 — ESTIMATED LOCATION OF BIOPILES; GROUNDWATER MONITORING WELL LOCATIONS

SOURCE: THIS 2010 IMAGE WAS OBTAINED FROM THE FOND du LAC GEOGRAPHIC INFORMATION SYSTEM (GIS).

AECOM 60135737 FIGURE 1

GROUNDWATER ANALYTICAL RESULTS AT BIOPILES

WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER STOREHOUSE AREA / BIOPILE AREA - BRRTS #02-20-297826
NORTH FOND DU LAC, WISCONSIN



GROUNDWATER FLOW DIRECTION (12/13/99)
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914
REFUELING AREA OWS - BRRTS #02-20-552126
1,000-GALLON DIESEL FUEL RELEASE - BRRTS#02-20-540810
NORTH FOND DU LAC, WISCONSIN

AECOM
60135737
FIGURE 10

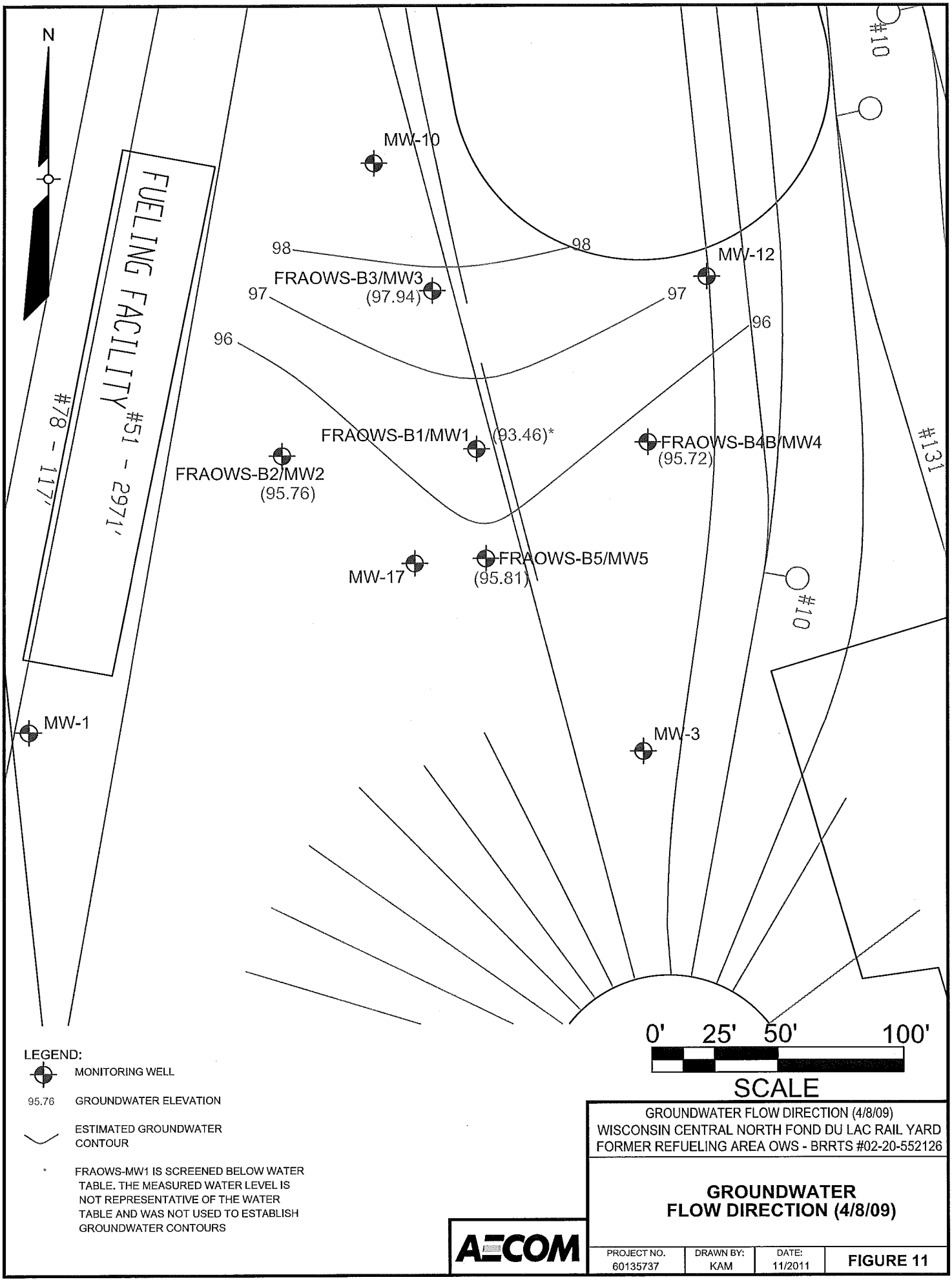


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TABLE 3
WISCONSIN CENTRAL REFUELING STATION
SOIL ANALYTICAL RESULTS
NORTH FOND DU LAC, WISCONSIN

Sample Number		MW-10W		MW-12W		MW-13W	MW-14W	MW-16W	MW-17W		SB-1	SB-2	SB-3	SB-4	SB-5	HP-1	HP-2	HP-3	HP-4	HP-5	HP-6	HP-7	HP-8	HP-9	S-1	S-2	S-3	S-4	S-5	NR 720	NR 746 - Values	
Depth (Feet)		3.0-4.0	11.0-13.0	1.0-3.0	5.0-7.0	1.0-3.0	1.0-3.0	1.0-3.0	1.0-3.0	12.5 - 14.5	1.0-3.0	1.0-3.0	1.0-3.0	1.0-3.0	1.0-3.0	0.0-2.0	2.0-4.0	2.0-4.0	2.0-4.0	0.0-2.0	2.0-4.0	2.0-4.0	2.0-4.0	2.0-4.0	0.0-0.5	0.0-1.0	0.0-0.5	0.0-0.5	0.0-1.0	Groundwater	Table 1	Table 2
Date Sampled		11/11/99	11/11/99	11/11/99	11/11/99	11/11/99	11/12/99	11/12/99	11/12/99	11/12/99	11/12/99	11/12/99	11/12/99	11/12/99	11/12/99	3/5/01	3/5/01	3/5/01	3/5/01	3/5/01	3/5/01	3/5/01	3/5/01	3/5/01	7/3/01	7/3/01	7/3/01	7/3/01	7/3/01	Pathway RCL	Soil Screening	Direct Contact
PVOCs																															
Benzene	(ug/kg)	**184**	<9.0	**38**	<9.0	<9.0	<9.0	**84**	**40**	<9.0	**30**	<90	<9.0	<9.0	<9.0	**151**	**234**	**246**	**581**	**233**	**226**	<9.0	**41**	<9.0	<11	<56	<10	<10	<56	5.5	8,500	1,100
Ethylbenzene	(ug/kg)	1620	<4.5	268	<4.5	<4.5	<4.5	101	120	<4.5	139	350	<4.5	<4.5	54	949	2170	3360	**12,500**	1990	**3380**	19	369	20	<11	405	13	<11	746	2900	4,600	--
Methyl tert-butyl ether	(ug/kg)	<55	<22	<22	<22	<22	<22	<22	<22	<22	<22	<220	<22	<22	<22	<22	<440	<440	<440	<440	<440	<22	<44	<22	<11	<58	<11	<11	<59	--	--	--
Toluene	(ug/kg)	674	<4.2	197	<4.2	<4.2	<4.2	258	106	<4.2	116	<42	<4.2	<4.2	<4.2	1310	680	118	543	481	218	29	166	49	12	204	21	17	121	1500	38,000	--
1,2,4-Trimethylbenzene	(ug/kg)	11100	<9.9	711	<9.9	<9.9	<9.9	164	445	<9.9	363	3290	<9.9	<9.9	230	1050	16,600	36,100	50,100	33,200	12,300	21	13,500	71	80	1,580	47	33	10,500	--	83,000	--
1,3,5-Trimethylbenzene	(ug/kg)	2800	<10	195	<10	<10	<10	35	124	<10	261	4367	<10	<10	98	371	7570	6160	<u>16,500</u>	<u>15,200</u>	2670	<10	8170	19	26	310	<19	<19	4,700	--	11,000	--
Xylenes	(ug/kg)	**5500**	<19	955	<19	<19	<19	398	371	<19	552	3440	<19	<19	119	2860	6270	4000	**13,600**	**8590**	2460	97	1530	100	76	983	72	38	**4260**	4100	42,000	--
PAHs																														1997 WDNR Interim Guidance Values (mg/kg)		
																														Groundwater Pathway	Non-industrial Direct Contact	Industrial Direct Contact
Acenaphthene	(mg/kg)	0.584	<0.016	0.056	<0.018	<0.015	<0.015	0.436	0.532	<0.03	0.279	7.38	0.031	0.035	0.022	<0.019	2.8	<0.018	12.1	11.0	8.63	0.022	<0.235	<0.019	<0.017	<0.169	<0.016	<0.016	<0.157	38	900	60000
Acenaphthylene	(mg/kg)	<0.024	<0.018	<0.019	<0.021	<0.018	<0.018	<0.02	0.291	<0.035	<0.159	<0.122	<0.022	0.027	<0.017	<0.023	<0.11	<0.021	<0.240	<0.101	<0.205	<0.023	<0.277	<0.023	<0.020	<0.199	<0.019	<0.019	<0.185	0.7	18	360
Anthracene	(mg/kg)	0.215	<0.015	0.121	<0.018	<0.015	<0.015	0.159	1.02	<0.029	0.49	2.83	<0.018	0.279	0.034	<0.019	1.22	0.785	3.0	20.8	2.28	0.1	<0.23	<0.019	<0.017	<0.165	<0.016	<0.016	8.92	3000	5000	300000
Benzo(a)anthracene	(mg/kg)	0.161	<0.020	0.148	<0.023	<0.019	<0.019	0.035	1.88	<0.037	0.416	0.146	<0.023	0.19	0.06	<0.024	0.27	0.058	0.59	0.265	0.433	0.098	<0.292	<0.024	<0.021	<0.210	<0.020	<0.020	<0.196	17	0.088	3.9
Benzo(a)pyrene	(mg/kg)	0.112	<0.015	0.114	<0.017	<0.014	<0.015	0.024	1.82*	<0.029	0.329	<0.099	<0.018	0.094	0.053	0.019	0.168	0.021	0.288	0.15	<0.166	0.101	<0.225	<0.018	<0.016	<0.162	<0.016	<0.015	<0.150	48	0.0088	0.39
Benzo(b)fluoranthene	(mg/kg)	0.109	<0.015	0.102	<0.017	<0.014	<0.015	0.027	2.26	<0.029	0.494	0.109	<0.018	0.132	0.057	<0.018	0.145	0.028	0.358	0.157	0.254	0.064	<0.225	<0.018	0.079	<0.162	<0.016	0.063	<0.150	360	0.088	3.9
Benzo(g,h,I)perylene	(mg/kg)	0.073	<0.03	0.048	<0.035	<0.029	<0.029	<0.033	0.892	<0.057	<0.258	<0.197	<0.036	0.028	<0.027	<0.037	<0.178	<0.034	<0.39	<0.164	<0.333	0.052	<0.449	<0.037	<0.033	<0.323	<0.031	<0.030	<0.301	6800	1.8	39
Benzo(k)fluoranthene	(mg/kg)	0.104	<0.027	0.102	<0.031	<0.026	<0.026	<0.03	1.43	<0.051	0.492	<0.177	<0.032	0.143	0.04	<0.033	0.179	<0.031	0.411	0.216	<0.298	0.1	<0.402	<0.033	<0.029	<0.289	<0.028	<0.027	<0.269	870	0.88	39
Chrysene	(mg/kg)	0.183	<0.018	0.176	<0.021	<0.017	<0.018	0.051	2.13	<0.035	0.658	0.187	<0.022	0.26	0.07	0.029	0.402	0.101	0.892	0.534	0.559	0.1	<0.272	<0.022	0.049	0.256	0.022	0.046	<0.182	37	8.8	390
Dibenzo(a,h)anthracene	(mg/kg)	<0.050	<0.038	<0.04	<0.044	<0.037	<0.037	<0.042	0.271	<0.073	<0.329	<0.252	<0.046	<0.034	<0.035	<0.047	<0.228	<0.044	<0.499	<0.210	<0.426	<0.048	<0.575	<0.047	<0.042	<0.413	<0.040	<0.039	<0.385	38	0.0088	0.39
Fluoranthene	(mg/kg)	0.488	<0.012	0.229	<0.013	<0.011	<0.011	0.053	5.52	<0.022	1.36	1.04	<0.014	0.954	0.13	0.027	0.796	0.477	2.2	1.41	2.4	0.27	0.407	<0.014	0.04	0.354	0.023	0.059	0.657	500	600	40000
Fluorene	(mg/kg)	0.99	<0.02	<0.02	<0.023	<0.019	<0.019	0.387	0.667	<0.037	0.5	13.4	0.037	0.096	0.026	<0.024	5.4	<0.022	21.2	11.2	15.5	0.025	0.507	0.029	<0.021	2.05	<0.020	<0.020	4.91	100	600	40000
Indeno(1,2,3-cd)pyrene	(mg/kg)	0.07	<0.042	0.046	<0.048	<0.04	<0.041	<0.046	1.01	<0.08	<0.359	<0.275	<0.05	0.037	<0.038	<0.051	<0.249	<0.048	<0.544	<0.229	<0.464	<0.052	<0.627	<0.051	<0.045	<0.451	<0.044	<0.042	<0.420	680	0.088	3.9
1-Methylnaphthalene	(mg/kg)	7.38	0.032	0.45	<0.02	<0.016	<0.017	0.742	0.668	<0.033	1.0	121	0.094	0.05	0.204	0.317	**31.4**	**28.5**	**131.0**	**49.2**	**74.7**	0.035	1.3	0.08	0.062	4.47	0.034	0.038	20.6	23	1100	70000
2-Methylnaphthalene	(mg/kg)	8.36	0.045	0.58	<0.02	<0.016	0.024	0.831	0.784	<0.033	1.23	135	0.117	0.049	0.302	0.406	**36.9**	**44.5**	**200.0**	63.9	**103.0**	0.043	1.89	0.113	0.1	4.49	0.048	0.061	27.8	20	600	40000
Naphthalene	(mg/kg)	0.963	<0.014	0.224	<0.017	<0.014	<0.014	**0.422**	0.9	<0.027	**1.23**	**10.4**	0.03	<0.013	0.086	0.225	**7.76**	**7.41**	**43.4**	**11.9**	**12.1**	0.023	**4.59**	<0.018	<0.016	<0.154	0.017	0.032	<0.143	0.4	20	110
Phenanthrene	(mg/kg)	**2.14**	0.017	0.809	<0.018	<0.015	<0.015	0.351	**4.08**	<0.03	**2.09**	**29.5**	0.083	0.926	0.226	0.229	12.2	11.3	**50.8**	**16.6**	**32.9**	0.29	1.39	0.063	0.084	**4.22**	0.047	0.067	<0.157	1.8	18	390
Pyrene	(mg/kg)	0.632	<0.015	0.251	<0.017	<0.014	<0.014	0.082	5.3	<0.028	1.5	1.51	<0.017	0.597	0.106	0.038	1.7	0.589	3.0	4.31	3.05	0.237	0.532	0.019	0.075	1.23	0.039	0.078	2.62	8700	500	30000
Total Organic Carbon	(mg/kg)	--	4690	--	5710	--	--	--	--	--	--	--	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	--	--

WAC = Wisconsin Administrative Code

Groundwater Pathway Exceedance (In Bold)

<u>NR 746 Table 1 Soil Screening Value Exceedance (Underlined)</u>

1997 Suggested PAH Non Industrial Direct Contact Exceedance

1997 Suggested PAH Industrial Direct Contact Exceedance*

Table 4
1,000 Gallon Diesel Fuel Release Soil Results
North Fond du Lac Rail Yard
BRRTS #02-20-540810
AECOM Project No. 60135737

Sample Date Sample Depth (feet)		TP-1 0.5' 2/2/05 Clearwater	TP-2 0.5' 2/2/05 Clearwater	TP-3 0.5' 2/2/05 Clearwater	TP-4 Surface 2/2/05 Clearwater	TP-5 Surface 2/2/05 Clearwater	TP-6 Surface 2/2/05 Clearwater	TP-7 Surface 2/2/05 Clearwater	TP-8 Surface 2/2/05 Clearwater	TP-9 Surface 2/2/05 Clearwater	S-1:0-6 0.5 3/31/05 Clearwater	S-1:0-6 (1 WK) 0.5 3/31/05 Clearwater	S-2:0-6 0.5 3/31/05 Clearwater	S-2:0-6 (1 WK) 0.5 4/8/05 Clearwater	NE-921 1 9/21/06 Earth Tech
DRO (mg/kg)	100	17.9	16	<9.1	16.4	<9.4	34.8	83.6	2	911	**3,700**	**7,100**	**5,200**	**17,000**	
Volatile Organic Compounds (µg/L):															
1,2,4-TMB	---, 83000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000
1,3,5-TMB	---, 11,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	480
Benzene	5.5, 8,500, 1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<25
Ethylbenzene	2,900, 4,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	210
Methyl-tert-butyl-ether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<25
Tolune	1,500, 38,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	140
Xylene, o	4,100, 42,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	580
Xylene, m+p	4,100, 42,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	320
Total Xylenes	4,100, 42,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	900
Polynuclear Aromatic Hydrocarbons (µg/L):	groundwater/direct contact - industrial														
1-Methylnaphthalene	23,000/70,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	38,000	7,500	23,000	17,000	4,200
2-Methylnaphthalene	20,000/40,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	46,000	2,400	25,000	14,000	7,200
Acenaphthene	38,000/60,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,200	2,700	4,700	2,900	300
Acenaphthylene	700/360,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	**880**	280	550	530	150
Anthracene	3,000,000/300,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,000	1,300	1,900	1,500	430
Benzo(a)anthracene	17,000/3,900	NA	NA	NA	NA	NA	NA	NA	NA	NA	740	<280	480	460	290
Benzo(a)pyrene	48,000/390	NA	NA	NA	NA	NA	NA	NA	NA	NA	<470	<210	<240	<310	280
Benzo(b)fluoranthene	360,000/3,900	NA	NA	NA	NA	NA	NA	NA	NA	NA	810	210	380	380	350
Benzo(ghi)perylene	6,800,000/39,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	<280	<120	<130	<170	100
Benzo(k)fluoranthene	870,000/39,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	<510	<230	310	<340	270
Chrysene	37,000/390,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300	330	770	610	370
Dibenz(a,h)anthracene	38,000/390	NA	NA	NA	NA	NA	NA	NA	NA	NA	<160	<88	<80		<68
Fluoranthene	500,000/40,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,200	700	1,700	1,300	870
Fluorene	100,000/40,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	20,000	5,100	12,000	8,200	670
Indeno(1,2,3-cd)pyrene	680,000/3,900	NA	NA	NA	NA	NA	NA	NA	NA	NA	<250	<110	<130		<62
Naphthalene	400/110,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4,400**	**850**	**3,100**	**2,200**	**1,800**
Phenanthrene	1,800/390,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	**37,000**	**8,000**	**21,000**	**13,000**	**2,700**
Pyrene	8,700,000/30,000,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,100	1,800	4,100	2,500	1,000

Notes:

mg/kg - milligrams per kilogram.

NA - Not analyzed.

µg/kg - micrograms per kilogram.

ND - Not Detected

Concentrations in bold indicated a groundwater pathway RCL exceedance

Bold numbers indicate a lookup standard has been exceeded.

Table 4
1,000 Gallon Diesel Fuel Release Soil Results
North Fond du Lac Rail Yard
BRRTS #02-20-540810
AECOM Project No. 60135737

Sample Date Sample Depth (feet)		SS09-1' 1 4/20/07 Earth Tech		SS09-3' 3 4/20/07 Earth Tech		NW-921 2 9/21/06 Earth Tech		SS13-2' 2 4/20/07 Earth Tech		SS13-3' 3 4/20/07 Earth Tech		SE 921 2 9/21/06 Earth Tech		SS11-2' 2 4/20/07 Earth Tech		SS11-4' 4 4/20/07 Earth Tech		SW 921 3 9/21/06 Earth Tech		SS12-3' 3 4/20/07 Earth Tech		SS12-4' 4 4/20/07 Earth Tech	
DRO (mg/kg)	100																						
Volatile Organic Compounds (µg/L):																							
1,2,4-TMB	---, 83000	<25		<25		280		<25		<25		590		6,600		72		330		1,400		<25	
1,3,5-TMB	---, 11,000	<25		<25		130		<25		<25		<310		1,300		50		180		670		<25	
Benzene	5.5, 8,500, 1,100	<25		<25		<25		<25		<25		<310		**200**		<25		<25		<50		<25	
Ethylbenzene	2,900, 4,600	<25		<25		85		<25		<25		1,500		1,600		<25		67		230		<25	
Methyl-tert-butyl-ether		<25		<25		<25		<25		<25		<310		<120		<25		<25		<50		<25	
Tolune	1,500, 38,000	<25		<25		110		35		<25		450		370		<25		55		67		<25	
Xylene, o	4,100, 42,000	<25		<25		270		<25		<25		1,800		2,600		<25		230		400		<25	
Xylene, m+p	4,100, 42,000	<25		<25		170		<25		<25		1,000		430		<25		130		140		<50	
Total Xylenes	4,100, 42,000	<25		<25		440		<25		<25		2,800		3,030		<50		360		540		<75	
Polynuclear Aromatic Hydrocarbons (µg/L):	groundwater/direct contact - industrial																						
1-Methylnaphthalene	23,000/70,000,000	65	ND			710		51	ND			9,200		**25,000**		16		750		1,100		19	
2-Methylnaphthalene	20,000/40,000,000	91	ND			930		71	ND			12,000		**31,000**		12		980		930		24	
Acenaphthene	38,000/60,000,000	<3.8	ND			65	ND			ND		7,800		1,500		14		77		1,200		13	
Acenaphthylene	700/360,000	<3.7	ND			53	ND			ND		**710**		420	ND			57		360		3.6	
Anthracene	3,000,000/300,000,000	<4.5	ND			130	ND			ND		4,900		450	ND			130		570		6.8	
Benzo(a)anthracene	17,000/3,900	<6.7	ND			130	ND			ND		160		<300		ND		130		<67		<6.2	
Benzo(a)pyrene	48,000/390	<3.6	ND			98	ND			ND		91		<160		ND		120		<36		<3.4	
Benzo(b)fluoranthene	360,000/3,900	<3.6	ND			120	ND			ND		140		<160		ND		160		<35		<3.3	
Benzo(ghi)perylene	6,800,000/39,000	<4.5	ND			38	ND			ND		<97		<200		ND		37		<45		<4.2	
Benzo(k)fluoranthene	870,000/39,000	<3.9	ND			97	ND			ND		92		<170		ND		110		<39		<3.6	
Chrysene	37,000/390,000	<5.5	ND			160	ND			ND		390		<250		ND		160		<55		<5.1	
Dibenz(a,h)anthracene	38,000/390	<3.5	ND			12	ND			ND		<75		<160		ND		12		<35		<3.2	
Fluoranthene	500,000/40,000,000	5	ND			290		6.3	ND			1,000		250	ND			300		140		<3.4	
Fluorene	100,000/40,000,000	6	ND			42	ND			ND		11,000		2,400		16		40		1,700		21	
Indeno(1,2,3-cd)pyrene	680,000/3,900	<3.2	ND			27	ND			ND		<69		<140		ND		280		<32		<2.9	
Naphthalene	400/110,000	34	ND			230		37	ND			**5,600**		**4,600**	ND			250		520		8.7	
Phenanthrene	1,800/390,000	31	ND			1,000		33	ND			**11,000**		**5,400**		5.8		1,100		600		17	
Pyrene	8,700,000/30,000,000	10	ND			350		8.6	ND			3,200		390	ND			330		240		5.9	

Notes:
mg/kg - milligrams per kilogram.
NA - Not analyzed.
µg/kg - micrograms per kilogram.
ND - Not Detected
Concentrations in bold indicated a groundwater pathway RCL exceedance

Bold numbers indicate a lookup standard has been exceeded.

TABLE 5
FORMER REFUELING AREA OWS SOIL ANALYTICAL RESULTS
NORTH FOND DU LAC RAIL YARD
BRRTS #02-20-552126
AECOM PROJECT NO. 60135737

	Generic RCLs[1][3]					NR 746 Criteria[2]		FRAOWS-B1	FRAOWS-B2	FRAOWS-B2	FRAOWS-B3	Dup01 FRAOWS-B3	FRAOWS-B3	FRAOWS-B4A	FRAOWS-B4B	FRAOWS-B5	FRAOWS-B5
	Protection of Groundwater	Direct Contact		Volatile Inhalation		Table 1	Table 2	19-21'	4-6'	10-12'	2-4'	2-4'	10-12'	5-7'	5-7'	3-5'	8-10'
								12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008	12/18/2008
		Non-Industrial	Industrial	Non-Industrial	Industrial	Indicator of Residual Petroleum Product in Soil Pores	Protection of Human Health from Direct Contact with Conatminated Soil	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM	AECOM
Petroleum Volatile Organic Compounds (µg/kg):																	
Benzene	5.5	1,100	52,000	160	2,700	8,500	1,100	<25.0	<25.0	<25.0	<312	<200	<25.0	<25.0	<25.0	<25.0	<25.0
sec-Butylbenzene								<25.0	45.5 J	<25.0	4,580	3,470	76.5	600	>25.0	1,320	>25.0
tert-Butylbenzene								<25.0	<25.0	<25.0	<25.0	<200	<25.0	90.7	>25.0	119	>25.0
Ethylbenzene	2,900	1,560,000	102,000,000	400,000	400,000	4,600		<25.0	<25.0	<25.0	**3,380 A**	1,860	<25.0	55.4 J	<25.0	85.9	<25.0
Isopropylbenzene (Cumene)								<25.0	<25.0	<25.0	2,130	1,690	<25.0	209	<25.0	452	<25.0
p-Isopropyltoluene								<25.0	<25.0	<25.0	1,290	589 J	<25.0	83.7	<25.0	<25.0	<25.0
Toluene	1,500	1,250,000	81,800,000	670,000	670,000	38,000		<25.0	<25.0	<25.0	<312	<200	<25.0	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene	7,573	782,000	51,100,000	47,000	330,000	83,000		<25.0	47.7 J	<25.0	**16,800 A**	**10,300 A**	<25.0	328	<25.0	237	<25.0
1,3,5-Trimethylbenzene	3,520	782,000	51,100,000			11,000		<25.0	<25.0	<25.0	2,570	1,400	<25.0	83.8	<25.0	59.1	<25.0
Methyl-tert-butyl-ether								<25.0	<25.0	<25.0	<312	<200	<25.0	<25.0	<25.0	<25.0	<25.0
Naphthalene	400	20,000	110,000	65,000	460,000			<25.0	181	<25.0	**24,500 A**	**14,100 A**	<25.0	**640 A**	<25.0	**2,060 A**	<25.0
n-Propylbenzene								<25.0	<25.0	<25.0	3,630	2,930	35.2 J	325	<25.0	719	<25.0
Xylene, o								<25.0	34.9 J	<25.0	433 J	<200	<25.0	34.7 J	<25.0	32.8J	<25.0
Xylenes, m + p								<25.0	46.0 J	<25.0	3,210 J	1,610	<25.0	101 J	<25.0	61.0J	<25.0
Total Xylenes	4,100	3,130,000	204,000,000			42,000		<25.0	80.9 J	<25.0	3,643 J	1,610	<25.0	135.7 J	<25.0	93.8J	<25.0
Metals (mg/kg)																	
Lead		50	500					5.0	318	6.4	86.3	31.4	5.6	13.5	5.3	374	5.5
PAH (µg/kg):																	
Acenaphthene	38,000	900,000	60,000,000					<1.1	183	5.2 J	13,400	13,200	19.2 J	591	2.7 J	3,370	<1.1
Acenaphthylene	700	18,000	360,000					<2.0	88.2	2.7 J	<914	<897	<2.0	26.0 J	<2.1	<211	<2.0
Anthracene	3,000,000	5,000,000	300,000,000					<5.4	255	7.7 J	4,360 J	4,700 J	5.6 J	210	<5.5	1,540 J	<5.5
Benzo(a)anthracene	17,000	88	3,900					<9.8	257	10.9 J	<4490	<4400	<10.0	<104	<10.1	<1040	<10
Benzo(a)pyrene	48,000	8.8	390					<4.3	186	5.9 J	<1950	<1910	<4.4	<45.0	<4.4	<450	<4.3
Benzo(b)fluoranthene	360,000	88	3,900					<6.7	263	8.1 J	<3040	<2980	<6.8	<70.3	<6.8	<702	<6.8
Benzo(g,h,i)perylene	6,800,000	1,800	39,000					<5.0	110	<5.1	<2260	<2220	<5.1	<52.3	<5.1	<522	<5.0
Benzo(k)fluoranthene	870,000	880	39,000					<7.3	206	<7.5	<3330	<3270	<7.4	<77	<7.5	<770	<7.4
Chrysene	37,000	8,800	390,000					<4.1	353	14.2 J	<1850	<1810	<4.1	<42.7	<4.1	<427	<4.1
Dibenzo(a,h)anthracene	38,000	8.8	390					<5.5	36.8 J	<5.7	<2500	<2450	<5.6	<57.9	<5.6	<578	<5.6
Fluoranthene	500,000	600,000.0	40,000,000					<1.3	671	20.1 J	2,550 J	3,090 J	4.4 J	167 J	<1.3	1,550 J	<1.3
Fluorene	100,000	600,000	40,000,000					<1.1	269	4.7 J	20,500	19,200 J	23.1	768	3.3 J	5,010	<1.1
Indeno(1,2,3-cd)pyrene	680,000	88	3,900					<5.0	91.4	<5.1	<2260	<2210	<5.0	<52.2	<5.1	<521	<5.0
1-methyl naphthalene	23,000	1,100,000	70,000,000					<2.2	675	25.6	**115,000 A**	**103,000 A**	129	3,840	6.7 J	**26,600 A**	<2.2
2-methyl naphthalene	20,000	600,000	40,000,000					<2.2	751	33.6	**206,000 A**	**175,000 A**	144	5,640	2.8 J	**35,700 A**	2.3 J
Naphthalene	400	20,000	110,000					5.7 J	**539 A**	35.1	**59,300 A**	**41,600 A**	16.1 J	**502 A**	2.3 J	**5,770 A**	3.1 J
Phenanthrene	1,800	18,000	390,000					<2.3	1,080	40.0	**43,500 A**	**41,300 A**	44.0	1,370	4.0 J	**9,400 A**	<2.4
Pyrene	8,700,000	500,000	30,000,000					<1.2	758	17.8 J	4,010 J	4,370 J	4.9 J	218	<1.2	1,530 J	<1.2
PCBs (µg/kg):																	
PCB Aroclor 1016								<15.0	<14.5	<15.4	<17.0	<16.7	<15.2	<15.8	<15.3	<15.7	<15.1
PCB Aroclor 1221								<15.0	<14.5	<15.4	<17.0	<16.7	<15.2	<15.8	<15.3	<15.7	<15.1
PCB Aroclor 1232								<15.0	<14.5	<15.4	<17.0	<16.7	<15.2	<15.8	<15.3	<15.7	<15.1
PCB Aroclor 1242								<15.0	19.5 J	<15.4	<17.0	<16.7	<15.2	<15.8	<15.3	<15.7	<15.1
PCB Aroclor 1248								<15.0	<14.5	<15.4	<17.0	<16.7	<15.2	<15.8	<15.3	<15.7	<15.1
PCB Aroclor 1254								<15.0	69.4 J	<15.4	<17.0	<16.7	<15.2	73.2 J	<15.3	<15.7	<15.1
PCB Aroclor 1260								<15.0	43.7 J	<15.4	<17.0	<16.7	<15.2	34.7 J	<15.3	16.2 J	<15.1
Total PCBs								<15.0	133	<15.4	<17.0	<16.7	<15.2	108 J	<15.3	16.2 J	<15.1

TABLE 5
FORMER REFUELING AREA OWS SOIL ANALYTICAL RESULTS
NORTH FOND DU LAC RAIL YARD
BRRTS #02-20-552126
AECOM PROJECT NO. 60135737

NOTES:

(1) Wisconsin Administrative Code Chapter NR 720, September 2007 - RCLs based on Table 1 (groundwater protection) or Table 2 (direct contact) values

) NR 746 - Wisconsin Administrative Code Chapter NR 746, September 2007.

(3) Interim PAH RCLs from "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance," Wisconsin Department of Natural Resources, April 1997 (corrected).

Generic RCLs not included in Wisconsin Administrative Code or Guidance are calculated from the US EPA Soil Screening Level Web Page and the default values contained in *Determining Residual Contaminant Levels using the EPA Soil Screening Level Web Site* - WDNR PUI

Blank cell indicates regulatory criteria have not been established.

bgs - below ground surface.

mg/kg - milligrams per kilogram.

µg/kg - micrograms per kilogram.

PAH - Polynuclear Aromatic Hydrocarbons

RCL - Residual Contaminant Level

NA - Not Analyzed

J - The analyte has been detected between the limit of detection and limit of quantitation. The results are qualified due to the uncertainty of concentrations in this range.

Bold indicates an industrial standard has been exceeded.

A = Exceeds NR 720 Groundwater Pathway RCL

B = Exceeds NR 720 Industrial Direct Contact RCL

EarthTech
A tyco International Ltd. Company

TABLE 1
FORMER STOREHOUSE BIOPILE AREA
SOILQUALITY DATA SUMMARY
WISCONSIN CENTRAL, LTD. - NORTH FOND DU LAC YARD
NORTH FOND DU LAC, WISCONSIN

	Sample Location:		ET-B-11	ET-B-11 (2)	ET-B-12	ET-B-13
		Sample Depth:	2.0-4.0 (FILL)	7.0-9.0 (Native Soil)	1.0-2.0	2.0-3.0
		Sample Date:	09/16/05	1/2/08	09/16/05	09/16/05
		Sampling Company:	Earth Tech	Earth Tech	Earth Tech	Earth Tech
Volatile Organic Compounds (µg/kg):	NR 720[1]	NR746 [4]				
1,2,4-Trimethylbenzene	NL	83,000	33		1,000	38
1,3,5-Trimethylbenzene	NL	11,000	<25	<25	540	<25
1,4-Dichlorobenzene	NL	NL	140	<25	<50	<25
Isopropylbenzene	NL	NL	<25	<25	57	<25
Naphthalene	NL	2,700	40	<25	1,000	41
n-Propylbenzene	NL	NL	<25	<25	110	<25
p-Isopropyltoluene	NL	NL	<25	<25	410	<25
sec-Butylbenzene	NL	NL	<25	<25	260	<25
Toluene	1,500	38,000	53	<25	<50	47
Xylene, o	NL	NL	<25	<25	120	29
Petroleum Hydrocarbons (mg/kg):						
Diesel Range Organics	250	NL	**570**	4.3	**870**	42
Metals (mg/kg):[3]						
Arsenic	1.6	NL	**29**	**4.8**	**2.4**	**6.2**
Barium	NL	NL	510	71	15	26
Cadmium	NL	NL	4.8	0.024	0.19	0.49
Chromium	NL	NL	130	23	5.7	5.3
Lead	500	NL	**2,300**	9.0	31	95
Selenium	NL	NL	1.0	<0.17	2.1	0.87
Silver	NL	NL	0.67	0.15	0.033	0.032
Mercury	NL	NL	0.077	0.023	0.012	0.013
Polynuclear Aromatic Hydrocarbons (µg/kg):[2]						
1-Methylnaphthalene	23,000/70,000,000	NL	120	71	2,000	170
2-Methylnaphthalene	20,000/40,000,000	NL	210	160	2,300	170
Acenaphthene	38,000/60,000,000	NL	37	<1.9	120	11
Acenaphthylene	700/360,000	NL	76	4.5	69	25
Anthracene	3,000,000/300,000,000	NL	240	7.4	89	65
Benzo(a)anthracene	17,000/3,900	NL	600	10	160	120
Benzo(a)pyrene	48,000/390	NL	**750**	9.5	200	100
Benzo(b)fluoranthene	360,000/3,900	NL	950	8.9	270	92
Benzo(ghi)perylene	6,800,000/39,000	NL	170	5.4	96	43
Benzo(k)fluoranthene	870,000/39,000	NL	950	9.9	140	93
Chrysene	37,000/390,000	NL	790	11	310	110
Dibenz(a,h)anthracene	38,000/390	NL	70	9.4	29	13
Fluoranthene	500,000/40,000,000	NL	1,600	17	200	200
Fluorene	100,000/40,000,000	NL	100	<2.0	180	13
Indeno(1,2,3-cd)pyrene	680,000/3,900	NL	190	4.0	58	35
Naphthalene	400/110,000	2,700	210	64	**510**	100
Phenanthrene	1,800/390,000	NL	1,200	14	580	270
Pyrene	8,700,000/30,000,000	NL	1,300	15	450	230

Notes:

mg/kg - milligrams per kilogram.
NA - Not analyzed.
NL - Standard not listed.
µg/kg - micrograms per kilogram.

Earth Tech samples "<x" are less than the limit of detection
TRC samples "<x" are less than the reporting limit

(1) Standards are from NR 720, *Soil Cleanup Standards*, January 2001, except for PAHs.

(2) PAH standards are from Table 1 of WDNR interim guidance document titled *Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance*, RR-519-97 (corrected), April 1997. Standards are listed for Groundwater Pathway / Direct Contact Pathway (Industrial Sites).

(3) For metals, NR720 Industrial standards are listed.

(4) Standards are from NR 746, *Risk Screening and Closure Criteria for Petroleum Product Contamianted Sites*, January 2001, except for PAHs.

Bold numbers indicate a standard has been exceeded.

SOIL ET B-12 (1'-2')	NR 720 RCL	PAH INTERIM GUIDE GW QUALITY STD	PAH INTERIM GUIDE DIRECT CONTACT STD
DRO 870 mg/kg	250	---	---
ARSENIC 2.4 mg/kg	2.4	---	---
NAPHTHALENE 510 ug/kg	---	400	110,000

GROUNDWATER ET MW-10	NR 140 PAL	NR 140 ES
CHLOROMETHANE 0.53 ug/L	0.3	3.0
BARIUM 440 ug/L	400	2,000
LEAD 1.7 ug/L	1.5	15

SOIL ET B-13 (2'-3')	NR 720 RCL
ARSENIC 6.2 mg/kg	1.6

SOIL ET B-11 (2'-4')	NR 720	PAH INTERIM GUIDE GW QUALITY STD	PAH INTERIM GUIDE DIRECT CONTACT STD
DRO 570 mg/kg	250	---	---
ARSENIC 29 mg/kg	1.6	---	---
LEAD 2,300 mg/kg	500	---	---
BENZO(a)PYRENE 750 ug/kg	---	48,000	390

GROUNDWATER ET MW-9	NR 140 PAL	NR 140 ES
ARSENIC 3.0 ug/L	1.0	10
BENZO(A)PYRENE 0.090 ug/L	0.02	0.2
BENZO(b)FLUORANTHENE 0.076 ug/L	0.02	0.2
CHRYSENE 0.077 ug/L	0.02	0.2

LEGEND

DRO	DIESEL RANGE ORGANICS
ES	ENFORCEMENT STANDARD
GW	GROUNDWATER
PAH	POLYNUCLEAR AROMATIC HYDROCARBONS
PAL	PREVENTIVE ACTION LIMIT
RCL	RESIDUAL CONTAMINANT LEVEL
mg/kg	MILLIGRAMS PER KILOGRAM
ug/L	MICROGRAMS PER LITER
---	NO ESTABLISHED REGULATORY LIMIT
ET-B-11 ET MW-9	ET BORINGS & MONITORING WELL LOCATIONS

SOURCE: TERRASERVER-USA, NORTH FOND DU LAC, WISCONSIN, MAY 1, 1992

FIGURE 3A
SUMMARY OF SOIL AND GROUNDWATER EXCEEDANCES
VISCONSIN CENTRAL LTD
FOND DU LAC, VISCONSIN
83103

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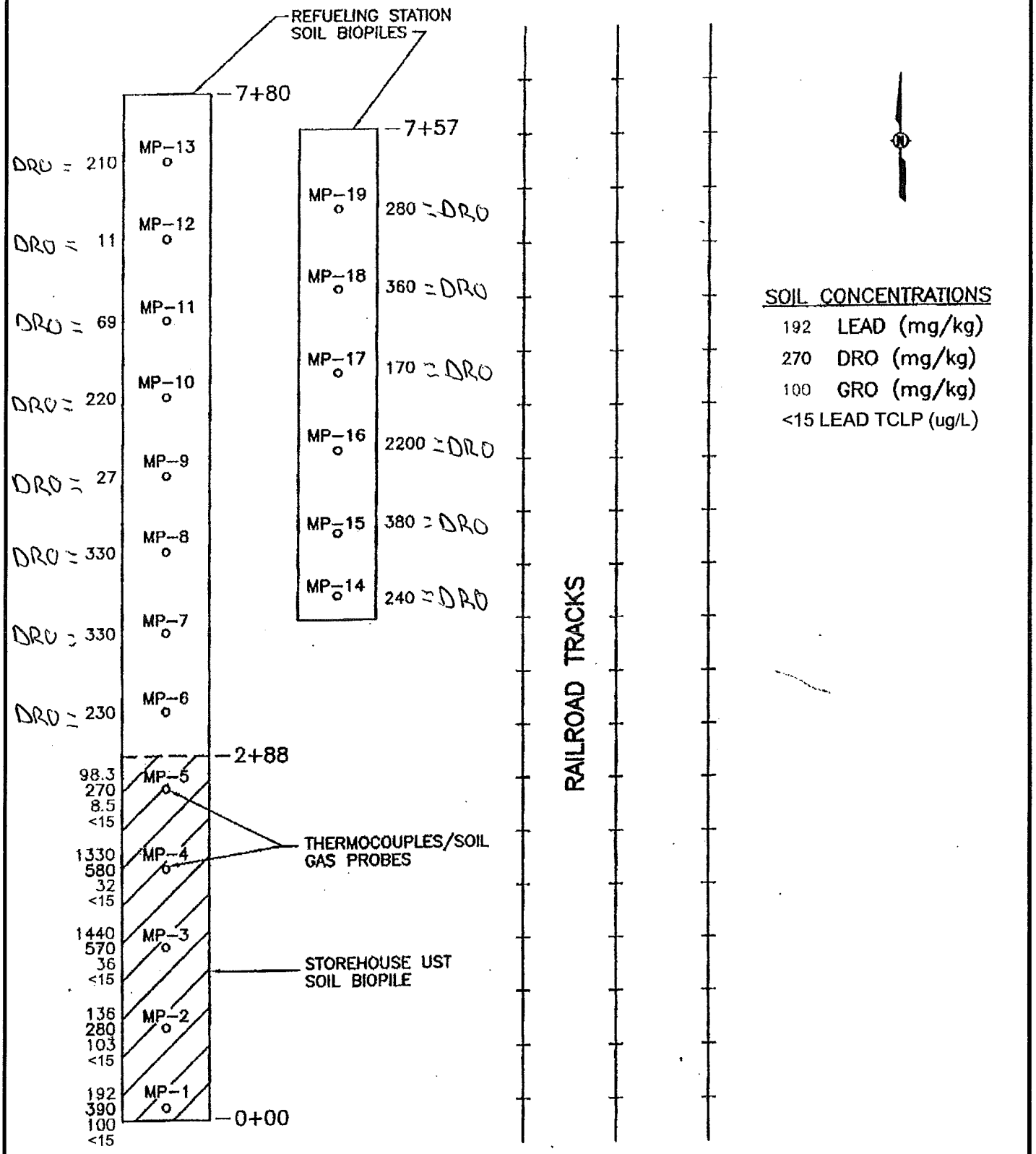

BIOPILE SOIL SAMPLE LOCATIONS

WISCONSIN CENTRAL NORTH FOND du LAC RAIL YARD
FORMER STOREHOUSE / BIOPILE AREAS
- BRRTS #02-20-297826
NORTH FOND du LAC, WISCONSIN

AECOM

PROJECT NO.	DRAWN BY:	DATE:	FIGURE 3
60135737	KAM	06/12/2012	

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
NORTH FOND DU LAC REFUELING STATION
FOND DU LAC, WISCONSIN

		MW-1														MW-11		TMW-1		TMW-1A		MW-2				MW-2R [P]									MW-2W		ES	PAL
	Units	5/30/91	3/27/91	7/11/91	11/20/91	4/23/92	6/25/92	12/22/92	1/20/97	8/22/97	11/18/97	3/2/98	3/19/98	6/2/98	10/28/98	12/14/99	10/13/00	3/14/01	6/27/01	3/14/01	6/27/01	5/30/90	4/23/92	6/25/92	12/22/92	8/22/97	11/18/97	3/2/98	3/19/98	6/2/98	10/28/98	11/2/98	12/14/99	10/13/00	12/14/99	10/13/00	µg/L	µg/L
Total Petroleum Hydrocarbons	mg/L	N/A	N/A	N/A	N/A	0.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N/A	1.6	X	X	X	X	X	X	X	X	X	X	X	X	X	--	--
VOCs																																						
Benzene	µg/L	N/A	N/A	N/A	N/A	<1	<1	<0.6	<0.5	<0.21	<0.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.19	<0.19	<0.19	0.92	1.7	N/A	<1	<1	<0.6	<0.21	<0.21	<0.5	<0.5	<0.5	<0.5	X	<0.5	<0.19	<0.5	<0.19	5	0.5
n-Butylbenzene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.9	X	X	X	<1.0	<1.0	<1.0	X	<0.18	<0.18	<0.18	<0.18	<0.18	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.18	X	<0.18	--	--
sec-Butylbenzene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.5	X	X	X	<1.0	<1.0	<1.0	X	<0.15	<0.15	<0.15	<0.15	<0.15	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.15	X	<0.15	--	--
tert-Butylbenzene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<2.0	X	X	X	<1.0	<1.0	<1.0	X	<0.13	<0.13	<0.13	<0.13	<0.13	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.13	X	<0.13	--	--
Chloroethane	µg/L	N/A	N/A	N/A	N/A	<1	<1	<1.0	<1.2	X	X	X	<1.0	<1.0	<1.0	X	<0.28	<0.28	<0.28	<0.28	<0.28	N/A	<1	<1	<1.0	X	X	X	<1.0	11.0	<1.0	X	X	<0.28	X	<0.28	400	80
Chloroform	µg/L	N/A	N/A	N/A	N/A	<1	<1	<0.5	<0.8	X	X	X	<1.0	X	X	X	<0.18	0.33	<0.18	<0.18	<0.18	N/A	<1	<1	<0.5	X	X	X	<1.0	X	X	X	X	<0.18	X	<0.18	6	0.6
1,1-Dichloroethane	µg/L	N/A	N/A	N/A	8	15	20	14	2.1	X	X	X	<1.0	2.46	1.69	X	<0.098	<0.098	<0.098	0.66	<0.098	N/A	<1	<1	<0.8	X	X	X	<1.0	<1.0	<1.0	X	X	<0.098	X	<0.098	850	85
1,2-Dichloroethane	µg/L	15	12	46	8	18	25	10	23	X	X	X	10.4	18.4	4.28	X	0.45	14	2.4	4.9	1.8	N/A	<1	<1	<0.9	X	X	X	<1.0	<1.0	<1.0	X	X	<0.084	X	<0.084	5	0.5
cis 1,2-Dichloroethylene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<2.1	X	X	X	<2.0	<2.0	<2.0	X	<0.19	<0.19	<0.19	<0.19	<0.19	N/A	X	X	X	X	X	X	<2.0	<2.0	<2.0	X	X	<0.19	X	<0.19	70	7
trans 1,2-Dichloroethylene	µg/L	N/A	N/A	N/A	N/A	<1	<1	<1.2	<1.1	X	X	X	<1.0	<1.0	<1.0	X	<0.17	<0.17	<0.17	<0.17	<0.17	N/A	<1	<1	<1.2	X	X	X	<1.0	<1.0	<1.0	X	X	<0.17	X	<0.17	100	20
Ethylbenzene	µg/L	N/A	N/A	N/A	N/A	<1	<1	<0.5	<0.6	<0.68	<0.68	<1.0	<1.0	<1.0	<1.0	<0.6	<0.13	<0.13	<0.13	<0.13	<0.13	N/A	3	<1	<0.5	<0.68	<0.68	<1.0	<1.0	<1.0	<1.0	X	<0.6	<0.13	<0.6	<0.13	700	140
Isopropylbenzene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.6	X	X	X	<1.0	<1.0	<1.0	X	<0.12	<0.12	<0.12	<0.12	<0.12	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.12	X	<0.12	--	--
MTBE	µg/L	N/A	N/A	N/A	N/A	X	X	X	X	<0.21	<0.21	<1.0	<1.0	<1.0	<1.0	<0.92	<0.2	<0.2	<0.2	<0.2	<0.2	N/A	X	X	X	<0.21	<0.21	<1.0	<1.0	<1.0	<1.0	X	<0.92	<0.2	<0.92	<0.2	60	12
Methylene Chloride	µg/L	N/A	N/A	N/A	N/A	2	<1	<2.1	<1.5	X	X	X	<2.0	<2.0	<2.0	X	<0.12	<0.12	<0.12	<0.12	<0.12	N/A	<1	<1	<2.1	X	X	X	<2.0	<2.0	<2.0	X	X	<0.12	X	<0.12	5	0.5
p-Isopropyltoluene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.3	X	X	X	<1.0	<1.0	<1.0	X	<0.13	<0.13	<0.13	<0.13	<0.13	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.13	X	<0.13	--	--
Naphthalene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.0	X	X	X	<1.0	<1.0	<1.0	X	<0.082	<0.082	<0.082	<0.082	<0.082	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.082	X	<0.082	40	8
n-Propylbenzene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.8	X	X	X	<1.0	<1.0	<1.0	X	<0.12	<0.12	<0.12	<0.12	<0.12	N/A	X	X	X	X	X	X	<1.0	<1.0	<1.0	X	X	<0.12	X	<0.12	--	--
Styrene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.6	X	X	X	X	X	X	X	X	X	X	X	X	N/A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100	10
Tetrachloroethene	µg/L	N/A	N/A	N/A	N/A	1	<1	<0.9	<0.9	X	X	X	<1.0	<1.0	X	X	<0.14	<0.14	<0.14	<0.14	<0.14	N/A	<1	<1	<0.9	X	X	X	<1.0	X	X	X	X	<0.14	X	<0.14	5	0.5
Toluene	µg/L	N/A	N/A	N/A	N/A	3	<1	6.5	<0.6	<1.5	<1.5	<1.0	<1.0	<1.0	<1.0	<0.6	<0.11	<0.11	<0.11	0.37	<0.11	N/A	14	<1	<0.7	<1.5	<1.5	<1.0	<1.0	<1.0	<1.0	X	<0.6	<0.11	<0.6	<0.11	1,000	200
1,1,1-Trichloroethane	µg/L	N/A	N/A	N/A	N/A	9	<1	6.5	<2.8	X	X	X	<1.0	X	X	X	<0.13	0.4	<0.13	0.81	<0.13	N/A	<1	<1	<0.8	X	X	X	<1.0	X	X	X	X	<0.13	X	<0.13	200	40
Trichloroethylene	µg/L	N/A	N/A	N/A	N/A	4	<1	<0.8	<0.7	X	X	X	<0.5	X	X	X	<0.098	<0.098	<0.098	<0.098	<0.098	N/A	1	<1	<0.8	X	X	X	<0.5	X	X	X	X	<0.098	X	<0.098	--	--
Total Trimethylbenzenes	µg/L	N/A	N/A	N/A	N/A	X	X	X	<2.6	<1.86	<1.86	<2.0	<2.0	<2.0	<2.0	<2.6	<0.23	0.14	<0.23	<0.23	<0.23	N/A	X	X	X	<1.86	<1.86	<2.0	<2.0	<2.0	<2.0	X	X	<2.6	<0.23	<2.6	<0.23	480	96
Vinyl Chloride	µg/L	N/A	N/A	N/A	N/A	<10	<10	<0.7	<1.3	X	X	X	<0.2	<0.2	<0.2	X	<0.23	<0.23	<0.23	<0.23	<0.23	N/A	<10	<10	<0.7	X	X	X	<0.2	<0.2	<0.2	X	X	<0.23	X	<0.23	0.2	0.02
Total Xylene	µg/L	N/A	N/A	N/A	N/A	4	<1	<1.0	<2.2	<1.8	<1.8	<2.0	<2.0	<2.0	<2.0	<1.7	<0.3	<0.30	<0.3	<0.30	<0.3	N/A	20	<1	<1.0	<1.8	<1.8	<2.0	<2.0	<2.0	<2.0	X	<1.7	<0.3	<1.7	<0.3	10,000	1,000
PAHs																																						
Acenaphthene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.5	<0.25	<2.0	<0.22	X	<0.11	<0.11	<0.15	X	X	X	X	X	N/A	X	X	X	<0.25	<2.0	<0.11	X	<0.11	X	<0.11	<0.15	X	<0.15	X	--	--
Anthracene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.11	0.1	<0.2	<0.06	X	<0.03	<0.03	1.7	X	X	X	X	X	N/A	X	X	X	<0.04	<0.2	<0.03	X	<0.03	X	<0.03	<0.022	X	0.15	X	3000	600
Benzo(a)anthracene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.11	<0.27	<0.1	<0.12	X	<0.06	0.113	<0.13	X	X	X	X	X	N/A	X	X	X	<0.27	<0.1	<0.06	X	<0.06	X	<0.06	<0.13	X	<0.13	X	--	--
Benzo(a)Pyrene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.22	<0.07	<0.1	<0.12	X	<0.06	0.178	<0.015	X	X	X	X	X	N/A	X	X	X	<0.07	<0.1	<0.06	X	<0.06	X	<0.06	<0.015	X	<0.015	X	0.2	0.02
Benzo(b)fluoranthene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.13	X	X	0.097	X	0.138	0.199	<0.062	X	X	X	X	X	N/A	X	X	X	<0.05	<0.2	<0.03	X	<0.03	X	<0.03	<0.062	X	<0.062	X	0.2	0.02
Benzo(k)fluoranthene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.13	0.17	<0.1	0.074	X	0.055	0.091	<0.13	X	X	X	X	X	N/A	X	X	X	<0.05	<0.1	<0.03	X	<0.03	X	<0.03	<0.13	X	<0.13	X	--	--
Benzo(g,h,i)perylene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<.24	<0.4	<0.4	<0.1	X	<0.05	0.107	<0.084	X	X	X	X	X	N/A	X	X	X	<0.4	<0.4	<0.05	X	<0.05	X	<0.05	<0.083	X	<0.083	X	--	--
Chrysene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.097	<0.7	<0.21	<0.08	X	0.055	<0.04	<0.068	X	X	X	X	X	N/A	X	X	X	<0.7	<0.21	<0.04	X	<0.04	X	<0.04	<0.067	X	<0.067	X	0.2	0.02
Dibenzo(a,h)anthracene	µg/L	N/A	N/A	N/A	N/A	X	X	X	X	X	X	X	X	X	0.074	<0.077	X	X	X	X	X	N/A	X	X	X	X	X	X	X	X	X	X	<0.06	<0.077	X	<0.077	X	--	--
Fluoranthene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.24	<1.3	0.4	0.5	X	0.386	0.542	<0.075	X	X	X	X	X	N/A	X	X	X	<1.3	<0.42	<0.04	X	<0.04	X	<0.04	<0.074	X	<0.074	X	400	80
Fluorene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.059	<0.6	<0.2	<0.08	X	<0.04	<0.04	<0.13	X	X	X	X	X	N/A	X	X	X	<0.6	<0.2	<0.04	X	<0.04	X	0.065	<0.13	X	<0.13	X	400	80
Indeno (1,2,3-cd) Pyrene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.12	<0.9	<0.27	0.101	X	0.09	0.115	<0.091	X	X	X	X	X	N/A	X	X	X	<0.9	<0.27	<0.4	X	<0.04	X	<0.04	<0.090	X	<0.090	X	--	--
1-Methylnaphthalene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<1.0	<0.2	<1.0	<0.12	X	<0.06	<0.06	<0.094	X	X	X	X	X	N/A	X	X	X	<0.2	<1.0	<0.06	X	0.088	X	0.198	<0.093	X	<0.093	X	--	--
2-Methylnaphthalene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.97	<0.19	<1.0	<0.14	X	<0.07	0.086	<0.082	X	X	X	X	X	N/A	X	X	X	<0.19	<1.0	<0.07	X	<0.07	X	<0.07	<0.081	X	<0.081	X	--	--
Naphthalene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.77	0.22	<1.0	<0.1	X	<0.05	<0.05	<0.063	X	X	X	X	X	N/A	X	X	X	<0.06	<1.0	<0.05	X	<0.05	X	<0.05	<0.063	X	<0.063	X	40	8
Phenanthrene	µg/L	N/A	N/A	N/A	N/A	X	X	X	0.17	0.28	0.28	<0.16	X	0.125	0.185	<0.052	X	X	X	X	X	N/A	X	X	X	0.17	<0.1	<0.08	X	<0.08	X	<0.08	<0.051	X	<0.051	X	--	--
Pyrene	µg/L	N/A	N/A	N/A	N/A	X	X	X	<0.41	0.23	<0.1	<0.34	X	0.600	0.362	<0.037	X	X	X	X	X	N/A	X	X	X	<0.18	<0.1	<0.17	X	<0.17	X	<0.17	<0.036	X	<0.036	X	250	50
Inorganics																																						
Lead	µg/L	400	N/A	N/A	N/A	39	X	X	X	X	X	X	X	X	X	X	<1.5	X	X	X	X	100	10	X	X	X	X	X	X	X	X	X	X	<1.5	X	<1.5	15	1.5

Notes:
X = Not analyzed
N/A = Data Not Available
ES = NR 140 Enforcement Standard Established December 1998
PAL = NR 140 Preventive Action Limit Established December 1998
0.22 NR 140 Enforcement Standard Exceedance
Total Petroleum Hydrocarbons based on a diesel fuel standard using the State of California Method
Monitoring Well MW-2 ([P]) was replaced with MW-2R(P) in 1999

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
NORTH FOND DU LAC REFUELING STATION
FOND DU LAC, WISCONSIN

	Units	MW-3														TMW-3A		MW-4		MW-5			MW-15		MW-6W			MW-6 [P]						ES	PAL
		11/20/91	4/23/92	6/25/92	12/22/92	1/20/97	8/22/97	11/18/97	3/2/98	3/19/98	6/2/98	10/28/98	12/14/99	10/13/00	6/27/01	3/14/01	6/27/01	4/23/92	6/25/92	4/23/92	6/25/92	12/22/92	12/14/99	10/13/00	12/14/99	10/13/00	3/14/01	4/23/92	6/25/92	12/22/92	10/22/99	12/14/99	10/13/00	µg/L	µg/L
Total Petroleum Hydrocarbons	mg/L	N/A	2.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	<0.2	X	<0.2	X	X	X		X	X	X	<0.2	X	X	X	X	X	--	--
VOCs																																			
Benzene	µg/L	N/A	<5	<50	<0.6	<0.5	<0.21	<0.21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.19	<0.19	50	<9.4	<1	<1	<1	<1	<0.6	<0.5	<0.19	<0.5	<0.19	<0.21	<1	<1	<0.6	<0.5	<0.5	0.4	5	0.5
n-Butylbenzene	µg/L	N/A	X	X	X	<1.9	X	X	X	<1.0	<1.0	<1.0	X	0.2	<0.18	<8.9	<8.9	X	X	X	X	X	X	<0.18	X	<0.18	X	X	X	X	X	X	<0.18	--	--
sec-Butylbenzene	µg/L	N/A	X	X	X	<1.5	X	X	X	<1.0	<1.0	<1.0	X	<0.15	<0.15	<7.3	<7.3	X	X	X	X	X	X	<0.15	X	<0.15	X	X	X	X	X	X	<0.15	--	--
tert-Butylbenzene	µg/L	N/A	X	X	X	<2.0	X	X	X	<1.0	<1.0	<1.0	X	<0.13	<0.13	<6.5	<6.5	X	X	X	X	X	X	<0.13	X	<0.13	X	X	X	X	X	X	<0.13	--	--
Chloroethane	µg/L	N/A	<5	<50	<1.0	15	X	X	X	1.33	11	7.13	X	<0.28	<0.28	<14	<14	<1	<1	<1	<1	<1.0	X	<0.28	X	<0.28	X	<1	<1	<1.0	X	X	<0.28	400	80
Chloroform	µg/L	N/A	<5	<50	<0.5	<0.8	X	X	X	<1.0	X	X	X	<0.18	<0.18	<8.9	<8.9	<1	<1	<1	<1	<0.5	X	<0.18	X	<0.18	X	<1	<1	<0.5	X	X	<0.18	6	0.6
1,1-Dichloroethane	µg/L	N/A	43	<50	3	6.7	X	X	X	1.97	4.1	5.99	X	5.2	3.5	<4.9	<4.9	<1	<1	<1	<1	<0.8	X	<0.098	X	<0.098	X	<1	<	<0.8	X	X	<0.098	850	85
1,2-Dichloroethane	µg/L	N/A	<5	<50	3	1.1	X	X	X	<1.0	1.25	1.41	X	0.66	<0.35	<18	<18	<1	<1	<1	<1	<0.9	X	<0.35	X	<0.35	X	<1	<1	<0.9	X	X	<0.35	5	0.5
cis 1,2-Dichloroethylene	µg/L	N/A	X	X	X	<2.1	X	X	X	<2.0	<2.0	<2.0	X	0.95	0.45	<9.3	<9.3	X	X	X	X	X	X	<0.19	X	<0.19	X	X	X	X	X	X	<0.19	70	7
trans 1,2-Dichloroethylene	µg/L	N/A	<5	<50	<1.2	<1.1	X	X	X	<1.0	<1.0	<1.0	X	<0.17	<0.17	<8.6	<8.6	<1	<1	<1	<1	<1.2	X	<0.17	X	<0.17	X	<1	<1	<1.2	X	X	<0.17	100	20
Ethylbenzene	µg/L	N/A	<5	<50	<0.5	<0.6	<0.68	<0.68	<1.0	<1.0	<1.0	<1.0	<0.6	<0.13	<0.13	13	<6.6	<1	<1	<1	<1	<0.5	<0.6	<0.13	<0.6	<0.13	<0.23	<1	<1	<0.5	<0.6	<0.6	<0.13	700	140
Isopropylbenzene	µg/L	N/A	X	X	X	<0.6	X	X	X	<1.0	<1.0	<1.0	X	<0.12	<0.12	<6.1	<6.1	X	X	X	X	X	X	<0.12	X	<0.12	X	X	X	X	X	X	<0.12	--	--
MTBE	µg/L	N/A	X	X	X	X	1.7	1.6	<1.0	<1.0	<1.0	<1.0	2.2	1.4	<0.2	<9.8	<9.8	X	X	X	X	X	<0.92	<0.2	<0.92	<0.2	<0.091	X	X	X	<0.92	<0.92	<0.2	60	12
Methylene Chloride	µg/L	N/A	<1	<50	<2.1	<1.5	X	X	X	<2.0	<2.0	<2.0	X	<0.12	<0.12	<5.9	<5.9	<1	<1	<1	<1	<2.1	X	<0.12	X	<0.12	X	<1	<1	<2.1	X	X	<0.12	5	0.5
p-Isopropyltoluene	µg/L	N/A	X	X	X	<1.3	X	X	X	<1.0	<1.0	<1.0	X	<0.13	<0.13	<6.3	<6.3	X	X	X	X	X	X	<0.13	X	<0.13	X	X	X	X	X	X	<0.13	--	--
Naphthalene	µg/L	N/A	X	X	X	<1.0	X	X	X	<1.0	<1.0	<1.0	X	0.61	<0.082	8.5	<4.1	X	X	X	X	X	X	<0.082	X	<0.082	X	X	X	X	<2.8	X	<0.082	40	8
n-Propylbenzene	µg/L	N/A	X	X	X	<0.8	X	X	X	<1.0	<1.0	<1.0	X	<0.12	<0.12	<6.1	<6.1	X	X	X	X	X	X	<0.12	X	<0.12	X	X	X	X	X	X	<0.12	--	--
Styrene	µg/L	N/A	X	X	X	<0.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100	10
Tetrachloroethene	µg/L	N/A	5	<50	3.4	<0.9	X	X	X	<1.0	X	X	X	<0.14	<0.14	<7.1	<7.1	<1	<1	<1	<1	<0.9	X	<0.14	X	<0.14	X	<1	<1	<0.9	X	X	<0.14	5	0.5
Toluene	µg/L	N/A	13	<50	<0.7	<0.6	<1.5	<1.5	<1.0	<1.0	<1.0	<1.0	<0.6	<0.11	<0.11	89	<5.5	1	<1	<1	<1	<0.7	<0.6	<0.11	<0.6	<0.11	<0.22	<1	<1	<0.7	<0.6	1.9	2.6	1,000	200
1,1,1-Trichloroethane	µg/L	290	413	554	180	<2.8	X	X	X	<1.0	X	X	X	0.15	<0.13	<6.6	<6.6	<1	<1	<1	<1	<0.8	X	<0.13	X	<0.13	X	<1	<1	<0.8	X	X	<0.13	200	40
Trichloroethylene	µg/L	N/A	5	<50	1.8	<0.7	X	X	X	<0.5	X	X	X	0.11	<0.098	<4.9	<4.9	<1	<1	<1	<1	<0.8	X	<0.098	X	<0.098	X	<1	<1	<0.8	X	X	<0.098	--	--
Total Trimethylbenzenes	µg/L	N/A	X	X	X	<2.6	<1.86	<1.86	<2.0	<2.0	<2.0	<2.0	<2.6	<0.23	<0.23	55	<11.8	X	X	X	X	X	<2.6	<0.23	<2.6	<0.23	<0.44	X	X	X	<2.6	<2.6	0.91	480	96
Vinyl Chloride	µg/L	N/A	<50	<500	<0.7	<1.3	X	X	X	<0.2	0.208	<0.2	X	<0.23	<0.23	<12	<12	<10	<10	<10	<10	<0.7	X	<0.23	X	<0.23	X	<10	<10	<0.7	X	X	<0.23	0.2	0.02
Total Xylene	µg/L	N/A	23	<50	<1.0	<2.2	<1.8	<1.8	<2.0	<2.0	<2.0	<2.0	<1.7	<0.3	<0.3	197	<15	2	<1	<1	<1	<1.0	<1.7	<0.3	<1.7	<0.3	<).44	<1	<1	<1.0	<1.7	3.3	3.9	10,000	1,000
PAHs																																			
Acenaphthene	µg/L	N/A	X	X	X	<1.7	0.9	<2.0	0.839	X	0.443	0.163	<0.15	X	X	X	X	X	X	X	X	X	<0.14	X	<0.13	X	X	X	X	X	X	<0.14	X	--	--
Anthracene	µg/L	N/A	X	X	X	<0.13	0.08	<0.2	<0.03	X	<0.03	<0.03	<0.022	X	X	X	X	X	X	X	X	X	2.2	X	1.8	X	X	X	X	X	X	<0.021	X	3000	600
Benzo(a)anthracene	µg/L	N/A	X	X	X	<0.13	<0.27	<0.1	<0.06	X	<0.06	<0.06	<0.13	X	X	X	X	X	X	X	X	X	<0.12	X	<0.12	X	X	X	X	X	X	<0.12	X	--	--
Benzo(a)Pyrene	µg/L	N/A	X	X	X	<0.25	<0.07	<0.1	<0.06	X	<0.06	<0.06	<0.015	X	X	X	X	X	X	X	X	X	<0.014	X	<0.013	X	X	X	X	X	X	<0.014	X	0.2	0.02
Benzo(b)fluoranthene	µg/L	N/A	X	X	X	<0.05	<0.05	<0.2	0.033	X	<0.03	<0.03	<0.062	X	X	X	X	X	X	X	X	X	<0.058	X	<0.056	X	X	X	X	X	X	<0.057	X	0.2	0.02
Benzo(k)fluoranthene	µg/L	N/A	X	X	X	<0.15	<0.05	<0.1	<0.03	X	<0.03	<0.03	<0.13	X	X	X	X	X	X	X	X	X	<0.12	X	<0.12	X	X	X	X	X	X	<0.12	X	--	--
Benzo(g,h,i)perylene	µg/L	N/A	X	X	X	<.27	<0.4	<0.4	<0.05	X	<0.05	<0.05	<0.083	X	X	X	X	X	X	X	X	X	<0.078	X	<0.075	X	X	X	X	X	X	<0.077	X	--	--
Chrysene	µg/L	N/A	X	X	X	<0.11	<0.7	<0.21	<0.04	X	<0.04	<0.04	<0.067	X	X	X	X	X	X	X	X	X	<0.063	X	<0.061	X	X	X	X	X	X	<0.062	X	0.2	0.02
Dibenzo(a,h)anthracene	µg/L	N/A	X	X	X	X	X	X	X	X	X	<0.06	<0.077	X	X	X	X	X	X	X	X	X	<0.072	X	<0.069	X	X	X	X	X	X	<0.071	X	--	--
Fluoranthene	µg/L	N/A	X	X	X	<0.27	<1.3	<0.42	<0.04	X	<0.04	<0.04	<0.074	X	X	X	X	X	X	X	X	X	<0.070	X	<0.067	X	X	X	X	X	X	<0.069	X	400	80
Fluorene	µg/L	N/A	X	X	X	0.31	<0.6	1.2	<0.04	X	0.214	0.065	<0.13	X	X	X	X	X	X	X	X	X	<0.12	X	<0.12	X	X	X	X	X	X	<0.12	X	400	80
Indeno (1,2,3-cd) Pyrene	µg/L	N/A	X	X	X	<0.14	<0.9	<0.27	<0.4	X	<0.04	<0.04	<0.090	X	X	X	X	X	X	X	X	X	<0.085	X	<0.082	X	X	X	X	X	X	<0.084	X	--	--
1-Methylnaphthalene	µg/L	N/A	X	X	X	3.1	1.4	2.7	1.44	X	0.488	0.198	<0.093	X	X	X	X	X	X	X	X	X	<0.087	X	<0.084	X	X	X	X	X	X	<0.086	X	--	--
2-Methylnaphthalene	µg/L	N/A	X	X	X	<1.1	<0.19	<1.0	0.225	X	<0.07	<0.07	<0.081	X	X	X	X	X	X	X	X	X	<0.076	X	<0.073	X	X	X	X	X	X	<0.075	X	--	--
Naphthalene	µg/L	N/A	X	X	X	<0.88	<0.06	<1.0	<0.05	X	<0.05	<0.05	<0.063	X	X	X	X	X	X	X	X	X	<0.059	X	<0.057	X	X	X	X	X	X	<0.058	X	40	8
Phenanthrene	µg/L	N/A	X	X	X	0.38	0.29	0.28	<0.08	X	<0.08	<0.08	<0.051	X	X	X	X	X	X	X	X	X	<0.048	X	<0.046	X	X	X	X	X	X	<0.048	X	--	--
Pyrene	µg/L	N/A	X	X	X	<0.47	<0.18	0.52	<0.17	X	<0.17	<0.17	<0.036	X	X	X	X	X	X	X	X	X	<0.034	X	<0.033	X	X	X	X	X	X	<0.034	X	250	50
Inorganics																																			
Lead	µg/L	N/A	23	X	X	X	X	X	X	X	X	X	X	<1.5	X	X	X	82	X	49	X	X	X	<1.5	X	<1.5	X	31	X	X	X	X	<1.5	15	1.5

Notes:
X = Not analyzed
N/A = Data Not Available
ES = NR 140 Enforcement Standard Established December 1998
PAL = NR 140 Preventive Action Limit Established December 1998
0.22 NR 140 Enforcement Standard Exceedance
Total Petroleum Hydrocarbons based on a diesel fuel standard using the State of California Method

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
NORTH FOND DU LAC REFUELING STATION
FOND DU LAC, WISCONSIN

	Units	MW-7						MW-8	MW-10			MW-12		MW-13			MW-14			MW-16			MW-17			ES	PAL
		4/23/92	6/25/92	12/22/92	10/22/99	12/14/99	10/13/00	4/23/92	12/14/99	10/13/00	3/14/01	12/14/99	10/13/00	12/14/99	10/13/00	3/14/01	12/14/99	10/13/00	3/14/01	12/14/99	10/13/00	3/14/01	12/14/99	11/15/00	3/14/01	µg/L	µg/L
Total Petroleum Hydrocarbons	mg/L	<0.2	X	X	X	X	X	<0.2	X	X	X	X	X	X	X	X	X	X	X	<0.2	X	X	X	X	X	--	--
VOCs																											
Benzene	µg/L	<1	<1	<0.6	<0.5	<0.5	<0.19	<1	<0.5	0.33	0.29	<0.5	<0.19	<0.5	0.34	<0.21	<0.5	<0.19	<0.21	<0.5	<0.19	<0.21	<0.5	<0.19	<0.19	5	0.5
n-Butylbenzene	µg/L	X	X	X	X	X	<0.18	X	X	0.72	X	X	<0.18	X	<0.18	X	X	<0.18	X	X	<0.18	X	X	<0.18	X	--	--
sec-Butylbenzene	µg/L	X	X	X	X	X	<0.15	X	X	0.53	X	X	<0.15	X	0.17	X	X	<0.15	X	X	<0.15	X	X	<0.15	X	--	--
tert-Butylbenzene	µg/L	X	X	X	X	X	<0.13	X	X	0.26	X	X	<0.13	X	<0.13	X	X	<0.13	X	X	<0.13	X	X	<0.13	X	--	--
Chloroethane	µg/L	<1	<1	<1.0	X	X	<0.28	<1	X	<0.28	X	X	<0.28	X	<0.28	X	X	<0.28	X	X	<0.28	X	X	<0.28	X	400	80
Chloroform	µg/L	<1	<1	<0.5	X	X	<0.18	2	X	<0.18	X	X	<0.18	X	<0.18	X	X	<0.18	X	X	<0.18	X	X	<0.18	X	6	0.6
1,1-Dichloroethane	µg/L	<1	<1	<0.8	X	X	<0.098	<1	X	<0.098	X	X	<0.098	X	0.3	X	X	<0.098	X	X	<0.098	X	X	0.25	X	850	85
1,2-Dichloroethane	µg/L	<1	<1	<0.9	X	X	<0.35	<1	<1	<0.35	X	X	<0.35	X	<0.35	X	X	<0.35	X	X	<0.35	X	X	<0.35	<0.35	5	0.5
cis 1,2-Dichloroethylene	µg/L	X	X	X	X	X	<0.19	X	X	<0.19	X	X	<0.19	X	<0.19	X	X	<0.19	X	X	<0.19	X	X	<0.19	X	70	7
trans 1,2-Dichloroethylene	µg/L	<1	<1	<1.2	X	X	<0.17	<1	X	<0.17	X	X	<0.17	X	<0.17	X	X	<0.17	X	X	<0.17	X	X	<0.17	X	100	20
Ethylbenzene	µg/L	<1	<1	<0.5	<0.6	<0.6	<0.13	<1	<0.6	0.23	0.3	<0.6	<0.13	<0.6	<0.13	<0.23	<0.6	<0.13	<0.23	<0.6	<0.13	<0.23	<0.6	<0.13	<0.13	700	140
Isopropylbenzene	µg/L	X	X	X	X	X	<0.12	X	X	0.74	X	X	<0.12	X	0.23	X	X	<0.12	X	X	<0.12	X	X	<0.12	X	--	--
MTBE	µg/L	X	X	X	<0.92	<0.92	<0.2	X	2.1	2	2	<0.92	<0.2	<0.92	<0.2	0.11	<0.92	<0.2	<0.091	<0.92	<0.2	0.44	7	7.1	6.5	60	12
Methylene Chloride	µg/L	<1	<1	<2.1	X	X	<0.12	<1	X	<0.12	X	X	<0.12	X	<0.12	X	X	<0.12	X	X	<0.12	X	X	<0.12	X	5	0.5
p-Isopropyltoluene	µg/L	X	X	X	X	X	<0.13	X	X	3	X	X	<0.13	X	<0.13	X	X	<0.13	X	X	<0.13	X	X	<0.13	X	--	--
Naphthalene	µg/L	X	X	X	<2.8	X	<0.082	X	X	1.9	3	X	<0.0082	X	0.28	X	X	<0.082	X	X	<0.082	X	X	0.14	X	40	8
n-Propylbenzene	µg/L	X	X	X	X	X	<0.12	X	X	0.53	X	X	<0.12	X	<0.12	X	X	<0.12	X	X	<0.12	X	X	X	X	--	--
Styrene	µg/L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100	10
Tetrachloroethene	µg/L	<1	<1	<0.9	X	X	<0.14	<1	X	<0.14	X	X	<0.14	X	<0.14	X	X	<0.14	X	X	<0.14	X	X	<0.14	X	5	0.5
Toluene	µg/L	<1	<1	<0.7	<0.6	<0.6	<0.11	1	<0.6	0.26	<0.22	<0.6	<0.11	<0.6	0.14	<0.22	<0.6	<0.11	<0.22	<0.6	<0.11	<0.22	<0.6	0.11	<0.11	1,000	200
1,1,1-Trichloroethane	µg/L	<1	<1	<0.8	X	X	<0.13	<1	X	<0.13	X	X	<0.13	X	<0.13	X	X	<0.13	X	X	<0.13	X	X	<0.13	X	200	40
Trichloroethylene	µg/L	1	<1	<0.8	X	X	<0.098	1	X	<0.098	X	X	<0.098	X	<0.098	X	X	<0.098	X	X	<0.098	X	X	<0.098	X	--	--
Total Trimethylbenzenes	µg/L	X	X	X	<2.6	<2.6	<0.23	X	1.4	0.77	1.45	<2.6	<0.23	<2.6	0.61	1.31	<2.6	<0.23	<0.44	<2.6	<0.23	<0.44	<2.6	<0.23	<0.23	480	96
Vinyl Chloride	µg/L	<10	<10	<0.7	X	X	<0.23	<10	X	<0.23	X	X	<0.23	X	<0.23	X	X	<0.23	X	X	<0.23	X	X	<0.23	X	0.2	0.02
Total Xylene	µg/L	<1	<1	<1.0	2.6	<1.7	<0.3	1	<1.7	<0.30	0.81	<1.7	<0.3	<1.7	<0.3	0.63	<1.7	<0.3	<0.44	<1.7	<0.3	<0.44	<1.7	<0.3	<0.3	10,000	1,000
PAHs																											
Acenaphthene	µg/L	X	X	X	X	<0.4	X	X	<0.16	X	X	<0.15	X	0.42	X	X	<0.14	X	X	<0.13	X	X	<0.14	X	X	--	--
Anthracene	µg/L	X	X	X	X	<0.060	X	X	5.6	X	X	1.6	X	2.4	X	X	0.98	X	X	1.3	X	X	<0.022	X	X	3000	600
Benzo(a)anthracene	µg/L	X	X	X	X	<0.34	X	X	<0.13	X	X	<0.13	X	<0.11	X	X	<0.12	X	X	<0.11	X	X	<0.12	X	X	--	--
Benzo(a)Pyrene	µg/L	X	X	X	X	<0.040	X	X	<0.016	X	X	<0.015	X	<0.013	X	X	<0.014	X	X	<0.013	X	X	<0.014	X	X	0.2	0.02
Benzo(b)fluoranthene	µg/L	X	X	X	X	<0.17	X	X	<0.064	X	X	<0.062	X	<0.055	X	X	<0.060	X	X	<0.055	X	X	<0.060	X	X	0.2	0.02
Benzo(k)fluoranthene	µg/L	X	X	X	X	<0.34	X	X	<0.13	X	X	<0.13	X	<0.11	X	X	<0.12	X	X	<0.11	X	X	<0.12	X	X	--	--
Benzo(g,h,i)perylene	µg/L	X	X	X	X	<0.22	X	X	<0.087	X	X	<0.083	X	<0.074	X	X	<0.080	X	X	<0.074	X	X	<0.080	X	X	--	--
Chrysene	µg/L	X	X	X	X	<0.18	X	X	<0.070	X	X	<0.067	X	<0.059	X	X	<0.065	X	X	<0.059	X	X	<0.065	X	X	0.2	0.02
Dibenzo(a,h)anthracene	µg/L	X	X	X	X	<0.21	X	X	<0.080	X	X	<0.077	X	<0.068	X	X	<0.074	X	X	<0.068	X	X	<0.074	X	X	--	--
Fluoranthene	µg/L	X	X	X	X	<0.2	X	X	<0.078	X	X	<0.074	X	<0.066	X	X	<0.072	X	X	<0.066	X	X	<0.072	X	X	400	80
Fluorene	µg/L	X	X	X	X	<0.34	X	X	<0.13	X	X	<0.13	X	<0.11	X	X	<0.12	X	X	<0.11	X	X	<0.12	X	X	400	80
Indeno (1,2,3-cd) Pyrene	µg/L	X	X	X	X	<0.24	X	X	<0.094	X	X	<0.090	X	<0.080	X	X	<0.088	X	X	<0.080	X	X	<0.088	X	X	--	--
1-Methylnaphthalene	µg/L	X	X	X	X	<0.25	X	X	0.2	X	X	<0.093	X	<0.082	X	X	<0.090	X	X	<0.082	X	X	<0.090	X	X	--	--
2-Methylnaphthalene	µg/L	X	X	X	X	<0.22	X	X	<0.084	X	X	<0.081	X	<0.072	X	X	<0.078	X	X	<0.072	X	X	<0.078	X	X	--	--
Naphthalene	µg/L	X	X	X	X	<0.17	X	X	<0.066	X	X	<0.063	X	<0.056	X	X	<0.061	X	X	<0.056	X	X	<0.061	X	X	40	8
Phenanthrene	µg/L	X	X	X	X	<0.14	X	X	<0.053	X	X	<0.051	X	<0.045	X	X	<0.049	X	X	<0.045	X	X	<0.049	X	X	--	--
Pyrene	µg/L	X	X	X	X	<0.097	X	X	<0.038	X	X	<0.036	X	<0.032	X	X	<0.035	X	X	<0.032	X	X	<0.035	X	X	250	50
Inorganics																											
Lead	µg/L	32	X	X	X	X	<1.5	7	X	<1.5	X	X	<1.5	X	2.3	X	X	<1.5	X	X	<1.5	X	X	0.78	X	15	1.5

Notes:
X = Not analyzed
N/A = Data Not Available
ES = NR 140 Enforcement Standard Established December 1998
PAL = NR 140 Preventive Action Limit Established December 1998
0.22 NR 140 Enforcement Standard Exceedance
Total Petroleum Hydrocarbons based on a diesel fuel standard using the State of California Method
Dichlorodifluromethane dectected in MW-13 @ 0.78 ug/L

TABLE 6

REFUELING AREA OWS GROUNDWATER ANALYTICAL RESULTS
NORTH FOND DU LAC RAIL YARD
BRRTS NO. 02-20-552126
AECOM PROJECT NO. 60135737

	NR 140 Groundwater Quality Standard		FRAOWS-MW1	FRAOWS-MW2	FRAOWS-MW3	FRAOWS-MW4	FRAOWS-MW5
			4/10/2009	4/10/2009	4/10/2009	4/10/2009	4/10/2009
	ES	PAL					
Detected Volatile Organic Compounds (µg/L):							
Benzene	5	0.5	<0.41	<0.41	**4.2** [A]	**4.1** [A]	<0.41
n-Butylbenzene	NS	NS	<0.93	<0.93	9.2	3.5	<0.93
sec-Butylbenzene	NS	NS	<0.89	<0.89	6.0	4.4J	<0.89
Chloromethane	3	0.3	<0.24	0.29 J	<0.97	<0.97	<0.97
2-Chlorotoluene	NS	NS	<0.85	<0.85	<0.85	<0.85	<0.85
1,1-Dichloroethane	850	85	<0.75	<0.75	1.5	1.5	<0.75
Ethylbenzene	700	140	<0.54	<0.54	20.3	2.3	<0.54
Isopropylbenzene	NS	NS	<0.59	<0.59	8.7	6.3	<0.59
p-Isopropyltoluene	NS	NS	<0.67	<0.67	9.8	1.3	<0.67
Methyl-tert-butyl-ether	60	12	<0.61	<0.61	6.4	2.0	<0.61
Naphthalene	100	10	<0.89	<0.89	**128** [B]	7.6	<0.89
n-Propylbenzene	NS	NS	<0.81	<0.81	9.6	6.1	<0.81
Toluene	1,000	200	<0.67	<0.67	<0.67	<0.67	<0.67
1,2,4-Trimethylbenzene	NL	NL	<0.97	<0.97	27.5	6.5	<0.97
1,3,5-Trimethylbenzene	NL	NL	<0.83	<0.83	22.6	2.0	<0.83
Total Trimethylbenzene	480	96	<0.97	<0.97	50.1	8.5	<0.97
Xylene, o	NL	NL	<0.83	<0.83	<0.83	2.0	<0.83
Xylene, m + p	NL	NL	<1.8	<1.8	15.6	3.2	<1.8
Total Xylene	10,000	1,000	<1.8	<1.8	15.6	5.2	<1.8
Polynuclear Aromatic Hydrocarbons (ug/L)							
Acenaphthene	NL	NL	1.2 J	0.074	8.8	8.4	0.015J
Acenaphthylene	NL	NL	<0.20	0.033J	<0.5	<0.5	0.0084J
Anthracene	3,000	600	0.75 J	0.077	1.8 J	1.3 J	0.023J
Benzo(a)anthracene	NL	NL	0.40 J	0.14	<0.35	<0.35	0.011J
Benzo(a)pyrene	0.2	0.02	**0.23 J** [B]	**0.11** [A]	<0.54	<0.54	0.010J
Benzo(b)fluoranthene	0.2	0.02	**0.27 J** [B]	**0.13** [A]	<0.51	<0.51	0.015J
Benzo(g,h,i)perylene	NL	NL	<0.25	0.084	<0.62	<0.62	0.013J
Benzo(k)fluoranthene	NL	NL	<0.31	0.095	<0.78	<0.78	0.0086J
Chrysene	0.2	0.02	**0.48 J** [B]	**0.14** [A]	<0.70	<0.70	.015J
Dibenzo(a,h)anthracene	NL	NL	<0.17	0.026 J	<0.43	<0.43	<0.0043
Fluoranthene	400	80	1.6 J	0.25	1.0 J	0.81 J	0.028J
Fluorene	400	80	2.4	0.077	12.4	10.4	0.024J
Indeno(1,2,3-cd)pyrene	NL	NL	<0.14	0.069	<0.36	<0.36	0.0071J
1-methyl naphthalene	NL	NL	7.9	0.11	78.	66.7	0.11
2-methyl naphthalene	NL	NL	2.2	0.12	45.9	15.0	0.16
Naphthalene	100	10	1.0 J	0.11	11.1	5.7	0.041J
Phenanthrene	NL	NL	4.2	0.26	11.8	5.6	0.071
Pyrene	250	50	2.2	0.27	2.1 J	1.2 J	0.060
Metals (ug/L)							
Arsenic	10	1	**4.0 J** [A]	**1.7 J** [A]	**2.9 J** [A]	**1.4 J** [A]	**5.0 J** [A]
Barium	2,000	400	297.	269	281	78.3	**489** [A]
Cadmium	5	0.5	0.23 J	<0.10	0.18J	<0.10	0.19J
Chromiuim	100	10	**11.5** [A]	<0.57	3.0J	0.58J	0.86J
Lead	15.0	1.50	**56.9** [B]	**1.6 J** [A]	**12.5** [A]	1.4 J	**1.6 J** [A]
Selenium	50	10	2.4 J	2.5 J	2.7 J	**14.2 J** [A]	3.6 J
Silver	50	10	0.39 J	0.56 J	<0.34	0.49 J	<0.45
Mercury	2	0.2	<0.10	<0.10	<0.10	<0.10	<0.10

TABLE 6

REFUELING AREA OWS GROUNDWATER ANALYTICAL RESULTS
NORTH FOND DU LAC RAIL YARD
BRRTS NO. 02-20-552126
AECOM PROJECT NO. 60135737

NOTES:
PAL - Preventive Action Limit, Wisconsin Administrative Code Chapter NR 140, January 2008.
ES - Enforcement Standard, Wisconsin Administrative Code Chapter NR 140, January 2008.
NL - Not Listed.
µg/L - micrograms per liter.
[A] - Exceeds NR 140 PAL
[B] - Exceeds NR 140 ES
J - The analyte has been detected between the limit of detection and limit of quantitation. The results are qualified due to the uncertainty of concentrations in this range.

TABLE 8
GROUNDWATER QUALITY DATA SUMMARY
TRC, INC. AND AECOM - JANUARY 2004 TO AUGUST 2011
WISCONSIN CENTRAL, LTD. - NORTH FOND DU LAC YARD
BRRTS NOs. 02-20-000914, 02-20-552126, 02-20-540810
AECOM PROJECT NO. 60135737

	Sample Location:		ET MW-8		MW-3		MW-10		MW-12		MW-16	MW-17	
	Sample Date:		11/03/05	5/17/11	3/2/06	8/24/11	1/15/2004	12/7/2010	12/14/1999	10/13/2000	12/7/2010	1/15/2004	12/7/2010
	Sampling Company:		Earth Tech	AECOM	Earth Tech	AECOM	TRC	AECOM	STS	STS	AECOM	TRC	AECOM
Polynuclear Aromatic Hydrocarbons (µg/L):	**PAL[A]**	**ES[B]**											
1-Methylnaphthalene	NL	NL	<0.011	0.0093J	--	--	<0.041	0.021J	<0.093	--	0.013J	<0.041	0.43
2-Methylnaphthalene	NL	NL	0.018	0.011J	--	--	4.8	0.031J	<0.081	--	0.022J	0.12	0.63
Acenaphthene	NL	NL	<0.0086	0.011J	--	--	2.4	<0.0047	<0.15	--	<0.0047	<0.041	0.17J
Acenaphthylene	NL	NL	<0.0086	<0.0038	--	--	0.48	0.0098J	--	--	<0.0037	<0.041	0.067J
Anthracene	600	3,000	<0.012	<0.0061	--	--	0.2	0.023J	1.6	--	0.019J	0.14	0.25
Benzo(a)anthracene	NL	NL	<0.017	<0.0038	--	--	0.21	0.019J	<0.13	--	0.0087J	0.044	0.14J
Benzo(a)pyrene	0.02	0.2	<0.019	<0.0030	--	--	**0.11[A]**	**0.022J[A]**	<0.015	--	0.0087J	<0.041	**0.090J[A]**
Benzo(b)fluoranthene	0.02	0.2	<0.017	<0.0036	--	--	**0.17[A]**	**0.024J[A]**	<0.062	--	0.013J	**0.098[A]**	**0.11J[A]**
Benzo(ghi)perylene	NL	NL	<0.020	<0.0051	--	--	<0.041	0.021J	<0.13	--	0.013J	<0.041	0.086J
Benzo(k)fluoranthene	NL	NL	<0.020	<0.0046	--	--	<0.041	0.025J	<0.083	--	0.0079J	<0.041	0.079J
Chrysene	0.02	0.2	<0.020	<0.0037	--	--	**0.097[A]**	**0.025J[A]**	<0.067	--	0.015J	<0.041	**0.17J[A]**
Dibenz(a,h)anthracene	NL	NL	<0.020	<0.0034	--	--	<0.041	0.0064J	<0.077	--	<0.0033	<0.041	0.021J
Fluoranthene	80	400	<0.016	<0.0047	--	--	0.45	0.032J	<0.074	--	0.025J	0.089	0.36
Fluorene	80	400	<0.0096	0.0056J	--	--	2.5	<0.0049	<0.13	--	0.0068J	<0.041	0.39
Indeno(1,2,3-cd)pyrene	NL	NL	<0.020	<0.0050	--	--	<0.041	0.018J	<0.090	--	0.0075J	<0.041	0.056J
Naphthalene	10	100	<0.050	0.014J	--	--	0.83	0.025J	<0.063	--	0.018J	0.07	0.18J
Phenanthrene	NL	NL	0.018	0.0086J	--	--	2.4	0.034J	<0.051	--	0.028J	0.18	0.7
Pyrene	50	250	<0.015	<0.0050	--	--	0.59	0.037J	<0.036	--	0.024J	0.15	0.49
Dissolved Metals (µg/L):													
Arsenic	1	10	<2.0	--	--	--	--	--	--	--	--	--	--
Barium	400	2,000	230	--	--	--	--	--	--	--	--	--	--
Cadmium	0.5	5	<0.28	--	--	--	--	--	--	--	--	--	--
Chromium	10	100	2.8	--	--	--	--	--	--	--	--	--	--
Lead	1.5	15	<1.0	--	--	--	--	--	--	--	--	--	--
Selenium	10	50	<3.6	--	--	--	--	--	--	--	--	--	--
Silver	10	50	<1.1	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (µg/L):													
1,1,1-Trichloroethane	40	200	<0.90	<0.90	<0.90	<0.90	<1	<0.90	--		<0.90	--	<0.90
1,1-Dichloroethane	85	850	<0.75	<0.75	1.4	<0.75	<1	<0.75	--	<0.098	<0.75	--	<0.75
1,2-Dichloroethane	0.5	5	<0.36	<0.36	**1.9[A]**	**2.1[A]**	<1	<0.36	--	<0.35	<0.36	--	<0.36
2-Chlorotoluene	NL	NL	<0.85	<0.85	<0.85	<0.85	<1	<0.85	--	--	<0.85	--	<0.85
Benzene	0.5	5	<0.41	<0.41	<0.41	<0.41	<1	<0.41	<0.5	<0.19	<0.41	<5	<0.41
Chloroethane	80	400	<0.97	<0.97	1.7	<0.97	<1	<0.97	--	<0.28	<0.97	--	<0.97
Chloromethane	0.3	3	<0.24	<0.24	**0.37[A]**	<0.24	<1	<0.24	--	<0.28	<0.24	--	<0.24
Ethylbenzene	140	700	<0.54	<0.54	<0.54	<0.54	<1	<0.54	<0.6	<0.13	<0.54	<5	<0.54
Isopropylbenzene (Cumene)	NL	NL	<0.59	<0.59	<0.59	<0.59	2.2	<0.59	--	<0.12	<0.59	--	<0.59
Methyl-tert-butyl-ether	12	60	<0.61	<0.61	0.96	0.89J	0.77	<0.61	<0.92	<0.3	<0.61	--	<0.61
Naphthalene	10	100	<0.74	<0.89	<0.74	<0.89	<1	<0.89	--	<0.0082	<0.89	--	<0.89
n-Butylbenzene	NL	NL	<0.93	<0.93	<0.93	<0.93	1.9	<0.93	--	<0.18	<0.93	--	<0.93
n-Propylbenzene	NL	NL	<0.81	<0.81	<0.81	<0.81	2	<0.81	--	0.17	<0.81	--	<0.81
sec-Butylbenzene	NL	NL	<0.89	<0.89	<0.89	<0.89	2.6	<0.89	--	--	<0.89	--	<0.89
Toluene	200	1,000	<0.67	<0.67	<0.67	<0.67	<1	<0.67	<0.6	<0.11	<0.67	<5	<0.67
Total Xylenes	1,000	10,000	<2.63	<2.63	<2.63	<2.63	<3	<2.63	<1.7	<0.3	<2.63	<15	<2.63
Organic Ranges (µg/L):													
Diesel Range Organics	NL	NL	--	--	--	--	5.3	--	--	--	--	15	--

NOTES:

ES: Enforcement Standard.
J: Compound detected between the method detection limit and quantification limit.
--: Not analyzed
NL: WDNR has not established a regulatory standard.
PAL: Preventive Action Limit.
µg/l: micrograms per liter.

Earth Tech (AECOM) samples "<x" are less than the limit of detection
TRC samples "<x" are less than the reporting limit

[A]: Concentration Exceeds NR 140 Preventive Action Limit
[B]: Concentration Exceeds NR 140 Enforcement Standard

TABLE 1
WISCONSIN CENTR FUELING STATION
GROUNDWATER F... DATA SUMMARY
NORTH FOND DU LAC, WISCONSIN

Monitoring Well	Date Sampled	Water Level TPVC (feet)	TPVC Elevation* (feet)	Water Elevation* (feet)	Dissolved Oxygen (mg/l)	pH (standard units)	Specific Conductance (umho/cm@25°C)	Temperature °F	Color	Odor	Ferrous Iron (mg/kg)
MW-1	01/20/1997	--	--	--	--	7.05	1,060	33	Brown	None	--
	11/18/1997	--	--	--	--	7.83	935	45	Clear	None	--
	03/02/1998	--	--	--	--	7.08	1,600	40	Dark	None	--
	03/19/1998	--	--	--	--	--	--	--	Clear	None	--
	06/02/1998	--	--	--	--	7.11	2,250	60	Clear	None	--
	10/28/1998	--	--	--	1.5	7.22	13,700	60	Sandy Brown	Slight	--
Abandoned during construction of new refueling building											
MW-11	12/13/1999	3.02	763.54	760.52	5.0	7.04	2,500	53	Clear	None	<0.1
	10/13/2000	2.90	763.54	760.64	<1.0	6.99	2,620	58	Clear	None	--
	06/26/2001	2.55	763.54	760.99	--	--	--	--	--	--	--
MW-2	12/13/1999	4.44	765.96	761.52	1.0	6.81	1,080	52	Sl Cloudy	None	7
	10/13/2000	4.32	765.96	761.64	1.0	6.35	970	58	Reddish Brown	None	--
	03/14/2001	3.90	765.96	762.06	--	--	--	--	--	--	--
	06/26/2001	3.85	765.96	762.11	--	--	--	--	--	--	--
MW-2R [P]	11/18/1997	--	--	--	--	7.15	1,435	48	Clear	None	--
	03/02/1998	--	--	--	--	6.84	960	40	--	None	--
	03/19/1998	--	--	--	--	--	--	--	Clear	None	--
	06/02/1998	--	--	--	--	6.39	1,113	58	Clear	None	--
	10/28/1998	--	--	--	1.0	6.55	1,250	60	Reddish Brown	None	--
	12/13/1999	4.15	765.65	761.50	<1	6.76	1,010	50	Clear	None	6
	10/13/2000	4.17	765.65	761.48	1.0	6.54	3,050	60	Reddish Brown	None	--
	03/14/2001	4.86	765.65	760.79	--	--	--	--	--	--	--
	06/26/2001	3.75	765.65	761.90	--	--	--	--	--	--	--
MW-3	01/20/1997	--	--	--	--	6.73	4,590	41	Black	None	--
	11/18/1997	--	--	--	--	7.02	4,320	47	Grey	Yes	--
	03/02/1998	--	--	--	--	6.54	2,380	42	--	Slight	--
	03/19/1998	--	--	--	--	--	--	--	Clear	None	--
	06/02/1998	--	--	--	--	6.43	2,350	58	Clear	None	--
	10/28/1998	--	--	--	2.5	6.90	2,270	62	Grey	Slight	--
	12/13/1999	4.50	764.23	759.73	2.0	6.80	2,810	53	Clear	None	>10
	10/13/2000	3.77	764.23	760.46	1.0	6.63	1,910	64	Black	Medium	--
	06/26/2001	3.12	764.23	761.11	2.0	6.83	1,260	60	--	--	--
MW-6[P]	10/22/1999	23.30	35.00	11.70	1.0	--	340	47	--	None	--
	12/13/1999	22.50	763.68	741.18	<1	7.86	930	52	Clear	None	<0.1
	10/13/2000	23.12	763.68	740.56	1.0	6.79	630	58	Slight Green	None	--
	03/14/2001	23.75	763.68	739.93	--	--	--	--	--	--	--
	06/26/2001	22.75	763.68	740.93	--	--	--	--	--	--	--
MW-6	12/13/1999	2.45	765.54	763.09	4.0	7.14	2,190	53	Clear	None	<0.1
	10/13/2000	1.84	765.54	763.70	1.0	6.99	2,620	58	Clear	None	--
	03/14/2001	2.40	765.54	763.14	<1.0	6.61	2,250	43	Clear	None	--
	06/26/2001	1.70	765.54	763.84	--	--	--	--	--	--	--
MW-7	10/22/1999	1.10	--	--	2.0	--	730	55	--	None	--
	12/13/1999	0.71	763.69	762.98	3.0	7.47	770	48	Sl Cloudy	None	<0.1
	10/13/2000	1.28	763.69	762.41	1.0	6.95	870	60	Reddish Brown	Medium	--
	03/14/2001	1.35	763.69	762.34	--	--	--	--	--	--	--
	06/26/2001	1.20	763.69	762.49	--	--	--	--	--	--	--

TABLE 1
WISCONSIN CENTR[illegible]FUELING STATION
GROUNDWATER FIELD DATA SUMMARY
NORTH FOND DU LAC, WISCONSIN

Monitoring Well	Date Sampled	Water Level TPVC (feet)	TPVC Elevation* (feet)	Water Elevation* (feet)	Dissolved Oxygen (mg/l)	pH (standard units)	Specific Conductance (umho/cm@25°C)	Temperature °F	Color	Odor	Ferrous Iron (mg/kg)
MW-10	12/13/1999	2.85	765.17	762.32	2.0	7.10	1,736	57	Clear	Yes	5
	10/13/2000	3.27	765.17	761.90	1.0	6.52	2,000	61	--	None	--
	03/14/2001	3.80	765.17	761.37	<1.0	6.73	2,130	47	Clear	Slight	--
	06/26/2001	2.56	765.17	762.61	--	--	--	--	--	--	--
MW-12	12/13/1999	3.80	764.46	760.66	3.0	7.13	2,910	54	Clear	None	0.5
	10/13/2000	3.80	764.46	760.66	1.5	6.80	3,110	60	--	None	--
	06/26/2001	4.34	764.46	760.12	--	--	--	--	--	--	--
MW-13	12/13/1999	5.00	765.23	760.23	3.0	7.12	1,290	57	Clear	None	0.3
	10/13/2000	4.96	765.23	760.27	1.0	6.84	2,110	62	Yellow	Light	--
	03/14/2001	4.55	765.23	760.68	3.0	6.80	2,230	47	Cloudy	Slight	--
	06/26/2001	4.35	765.23	760.88	--	--	--	--	--	--	--
MW-14	12/13/1999	2.42	763.14	760.72	3.0	7.04	3,780	53	Clear	None	<0.1
	10/13/2000	2.23	763.14	760.91	2.5	6.72	3,670	59	Clear	None	--
	03/14/2001	3.85	763.14	759.29	<1.0	6.92	3,520	47	Clear	None	--
	06/26/2001	3.75	763.14	759.39	--	--	--	--	--	--	--
MW-15	12/13/1999	2.75	763.33	760.58	4.0	7.57	1,440	57	Clear	None	<0.1
	10/13/2000	1.72	763.33	761.61	1.5	6.75	1,630	60	Clear	None	--
	06/26/2001	1.18	763.33	762.15	--	--	--	--	--	--	--
MW-16	12/13/1999	3.11	764.46	761.35	2.0	7.04	2,220	58	Clear	None	<0.2
	10/13/2000	2.91	764.46	761.55	1.0	6.82	3,050	59	Clear	None	--
	03/14/2001	3.45	764.46	761.01	<1.0	6.57	2,930	50	Clear	None	--
	06/26/2001	2.45	764.46	762.01	--	--	--	--	--	--	--
MW-17	12/13/1999	4.91	765.12	760.21	3.0	6.76	3,070	56	Clear	Piney	>10
	10/13/2000	--	--	--	--	--	--	--	--	--	--
	03/14/2001	4.81	765.12	760.31	<1.0	6.51	2,520	51	Cloudy	None	--
	06/26/2001	3.42	765.12	761.70	--	--	--	--	--	--	--
TMW-1	03/14/2001	6.35	--	--	4.0	6.69	1,470	41	Cloudy	None	--
	06/26/2001	6.35	--	--	--	7.04	1,440	61	--	--	--
TMW-1A	03/14/2001	7.44	--	--	4.0	6.80	1,370	41	Clear	None	--
	06/26/2001	7.39	--	--	--	7.12	1,600	65	--	--	--
TMW-3A	03/14/2001	7.15	--	--	2.0	6.32	2,510	47	Clear	None	--
	06/26/2001	5.65	--	--	--	7.04	1,590	61	--	--	--

*TPVC Elevation referenced to benchmark with mean sea level elevation of 764.74 feet on December 1, 1999.

Table
Former Refueling Area OWS Groundwater Observations
North Fond du Lac Rail Yard
BRRTS #02-20-552126
AECOM Project No. 60135737

Well Identification	Coordinates		Surface Elevation	TOC Elevation	Screen Elevation		Depth to Bottom	Depth to Groundwater		Groundwater Elevation	Date
	Northing	Easting			top of screen	bottom of screen	(ft. from TOC)	(ft. BGS)	(ft. from TOC)		
FRAOWS-MW1	398294	808674	100.43	99.88	85.30	75.30	24.58	6.97	6.42	93.46	3/18/2009
					85.30	75.30	24.58	6.97	6.42	93.46	4/8/2009
FRAOWS-MW2	398291	808596	100.50	100.15	98.52	88.52	11.63	4.70	4.35	95.80	3/18/2009
					98.52	88.52	11.63	4.74	4.39	95.76	4/8/2009
FRAOWS-MW3	398358	808656	100.31	99.69	98.07	88.07	11.62	3.57	2.95	96.74	3/18/2009
					98.07	88.07	11.62	2.37	1.75	97.94	4/8/2009
FRAOWS-MW4	398296	808742	99.65	99.21	97.55	87.55	11.66	3.82	3.38	95.83	3/18/2009
					97.55	87.55	11.66	3.93	3.49	95.72	4/8/2009
FRAOWS-MW5	398250	808677	100.37	99.70	98.16	88.16	11.54	2.75	2.08	97.62	3/18/2009
					98.16	88.16	11.54	4.56	3.89	95.81	4/8/2009
Sump-1	398300	808682	100.76	104.25	109.70	99.70		0.67		99.70	3/18/2009
					109.70	99.70		0.67		99.70	4/8/2009

Notes:
BGS = Below Ground Surface
TOC = Top of Casing
The horizontal datum of these coordinates is the Wisconsin County Coordinate System, Fond du Lac County Zone.
Elevations are referenced to an onsite benchmark identified as 100; that benchmark is the top of concrete at the northwest corner of the Diesel Engine House

AECOM

60135737

FIGURE 2

GROUNDWATER MONITORING WELL ABANDONMENTS

WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD

FORMER REFUELING AREA/BIOPILE - BRRTS#02-20-000914

1,000 GALLON DIESEL FUEL RELEASE - BRRTS #02-20-540810

NORTH FOND DU LAC, WISCONSIN

MW-2W
MW-2R[P]
ET-MW-8
SUMP #1
GRAVEL 12" TRENCH W/. 4" DRAIN TILE
SUMP #2
WCSA-18
12" CONCRETE
DIESEL ENGINE HOUSE (DEH)
WATER FOUNTAIN DRA
BOILER CLEANOUT DR
MW-12
KT-SOIL MICROBES DISPERSED IN THIS AREA (1,000 GAL. DIESEL SPILL IN THIS AREA)
CONCRETE
FORMER FUELING AREA
APPROXIMATE LOCATION OF PRODUCT RECOVERY TRENCH
12" DIA. CMP FOR AIR, HYDRAULIC OIL, LUBE OIL & ELECTRIC TRANSFER LINES
WCSA-19
FRAOWS-B4B/MW4
FRAOWS-B4A
GRAVEL
TMW-3A AND MW-3 WERE NOT ABANDONED, THEY ARE BEING USED FOR OPEN BRRTS CASE #02-20-545105
MW-100
FORMER REFUELING AREA OWS
MW-16
ABANDONED OIL SKIMMER
FRAOWS-B1/MW1
TMW-3A
MW-3
6" CHANGES TO 4" IRON AFTER 15'
MW-107R
MW-10
SUMP-1
FRAOWS-B5/MW5
WCSA-15
TURNTABLE
MW-107
ENGINE OIL /W SEPAR
FORMER SAND GONDOLA
FORMER TRUCK UNLOAD
FRAOWS-B3/MW3
MW-17
LINE PLUGGED
SEPTIC TANK
ABANDONED OIL SKIMMER
4" FORCE MAIN
8" PVC
MW-13
FRAOWS-B2/MW2
GRAVEL
ENGINE WASH FACILITY
400,000 GALLON FUEL STORAGE TANK
MW-14
MW-7
764
OIL/WATER SEPARATOR (OFFLINE)
#1 PIT DRAIN RIM EL. 762.86
#2 PIT DRAIN RIM EL. 762.84
FUELING BUILDING
GRAVEL DRIVE
12" PVC
ROUNDHOUSE
OIL/WATER SEPARATOR
25' DIA. BELOW GRADE CONCRETE PAD
CONCRETE CONTAINMENT DIKE
FUEL PUMP BUILDING
CONCRETE LOADING PAD
CONTAINMENT AREA (12'X12'X0.5')
GRAVEL DRIVE
GROUNDWATER COLLECTION SYSTEM
GRAVEL
MW-1
TMW-1
TMW-1A
MW-11
Building
MW-6[P]
MW-6W
762
GRAVEL
GRAVEL
STORI
ASPHA
MW-5
MW-4
MW-15

LEGEND

- GROUNDWATER COLLECTION TRENCH
- STORM SEWER
- INDUSTRIAL WASTE WATER
- ABANDONDED INDUSTRIAL WASTE WATER
- SANITARY SEWER
- ABANDONED SANITARY SEWER
- PRODUCT RECOVERY TRENCH
- FORMER BUILDING
- DITCH CENTER LINE
- UE — UNDERGROUND ELECTRIC
- E — E — OVERHEAD ELECTRIC
- PL — RIGHT-OF-WAY LINE
- RR TRACKS
- 2 FOOT CONTOUR LINE

- MH — MANHOLE
- MW-4 — MISSING GROUNDWATER MONITORING WELL
- MW-1 — ABANDONED MONITORING WELL
- DRAINAGE SWALE DIRECTION OF FLOW
- [P] — PIEZOMETER

SOURCE PROPERTY

MONITORING WELL NOT ABANDONED

0' 15' 30' 60'
SCALE

L:\Work\Projects\60135737\000_CAD\001_Drawings\Shaela\GW Well Abandonment\60135737_GW_Abandonment.dwg; 9/21/2012 3:16:40 PM; MITTELSTEADT, KARL

SOURCE PROPERTY

MONITORING WELL NOT ABANDONED

State of Wisconsin
Department of Natural Resources

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☑ Other ☐

Facility/Project Name **Wisconsin Central Ltd.** **Fond Du Lac Yard**	Local Grid Location of Well ft N S ft E W	Well Name **FRAOWS-MW3** **(flushmount)**
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ estimated: ☐ or Well Location ☐	Wis. Unique Well No: **VU374** / DNR Well Id No.
Facility ID	Lat. Long or St. Plane ft N ft E S/C/N	Date Well Installed **12** / **18** / **2008** m m d d y y y y
Type of Well - **Monitoring Well** Well Code ____ / ____	Section Location of Waste/Source SE 1/4 of SW of Sec. 33, T, 16 N, R 17 ☑ E ☐ W	Well Installed By: Name (first, last) and Firm **Tony Kapugi**
Distance from Waste/ Source ____ ft. / Enf. Stds. Apply ☐	Location of Well relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot No. ____ **Onsite Environmental Services**

A. Protective pipe, top elevation	100.31 ft. MSL		
B. Well casing, top elevation	99.69 ft. MSL		
C. Land surface elevation	100.31 ft. MSL		
D. Surface seal, bottom	99.81 ft. MSL or	0.5 Ft.	
E Bentonite seal, top	99.81 ft. MSL	0.5 ft.	
F. Fine sand, top	98.81 ft. MSL	1.5 ft.	
G. Filter Pack, top	98.81 ft. MSL	1.5 ft.	
H. Screen joint, top	98.31 ft. MSL	2.0 ft.	
I. Well Bottom	88.31 ft. MSL	12.0 ft.	
J. Filter Pack, bottom	88.31 ft. MSL	12.0 ft.	
K. Borehole, bottom	87.81 ft. MSL	12.5 ft.	
L. Borehole, diameter	8.25 In..		
M. O.D. well casing	2.37 In..		
N. I.D. well casing	2.06 In..		

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☑
SM ☐ SC ☐ ML ☐ MH ☐ CL ☑ CH ☐
Bedrock ☐

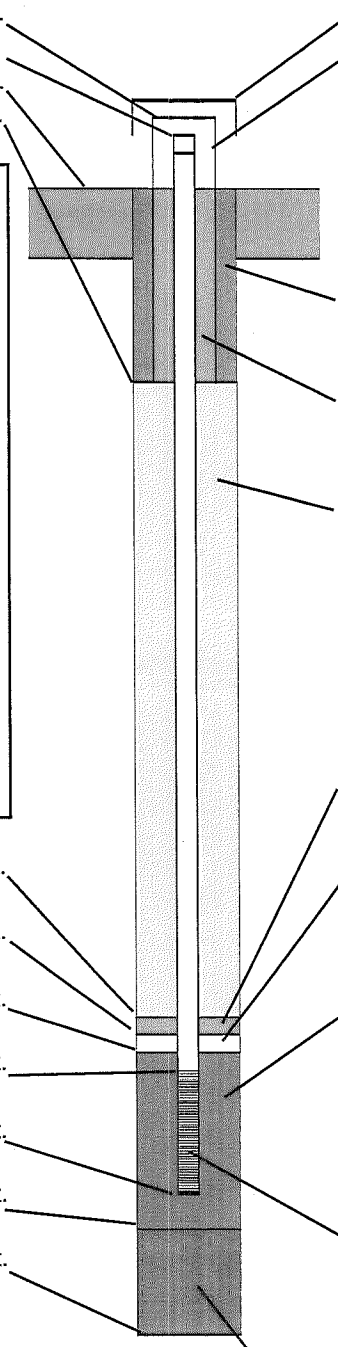
13. Sieve analysis performed? ☐ Yes ☑ No

14 Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☑ 41; ____. Other ☐ ___.

15 Drilling fluid used: Water ☐ 02 Air ☐ 01; Drilling Mud ☐ 03 None ☑ 99

16 Drilling additives used? ☐ Yes ☑ No
Describe ____.

17. Source of water (attach analysis, if required):
NA



1. Cap and lock? ☑ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 In.
b. Length: 1.0 Ft.
c. Material: Steel ☑ 04; ____. Other ☐ ___.
d. Additional Protection? ☐ Yes ☑ No
If yes, describe: flush mount
3. Surface seal: Bentonite ☐ 30; Concrete ☐ 01; ____ Other ☑ ___.
4. material between well casing and protective pipe: Bentonite ☐ 30
Filter Sand 10/20 (#5). Other ☑ ___.
5. Annular space seal: a. Granular/Chipped Bentonite ☑ 33
b. ____. Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. ____. Lbs/gal mud weight... Bentonite slurry ☐ 31
d. ____.% Bentonite..... Bentonite-cement grout ☐ 50
e. <0.5. Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie Pumped ☐ 02; Gravity ☑ 08
6. Bentonite Seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☑ 3/8 in. ☐ 1/2 in. Bentonite Chips ☐ 32
c. ____ Other ☑ ___.
7. Fine sand material: Manufacturer, product name & mesh size
a. NA ☐ ___.
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. IES Drilling Supply, 10/20 (#5) ☐ ___.
b. Volume added 3 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☑ 23; Flush threaded PVC schedule 80 ☐ 24; ____. Other ☐ ___.
10. Screen Material: PVC ☐ ___.
a. screen type: Factory cut ☑ 11; Continuous slot ☐ 01; ____. Other ☐ ___.
b. Manufacturer Monoflex
b. Slot size: 0.010 in.
c. slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☑ 14
Native Other ☐ ___.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Sarah Roost for Tory Schultz	Firm **Earth Tech Inc.** 1020 N. Broadway, Milwaukee WI 53202

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In

State of Departm SOURCE PROPERTY our MONITORING WELL NOT ABANDONED

d/Wastewater ☐ Waste Management ☐ **MONITORING WELL CONSTRUCTION**
Remediation/Redevelopment ☐ Other ☐ Form 4400-113A Rev. 6-97

Facility/Project Name: Wisconsin Central Refueling Area	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-14
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well Number
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 11/12/1999
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of SW 1/4 of Sec. 33 T. 16 N, R. 17 ☒E ☐W	Well Installed By: (Person's Name and Firm): Jeff Flamino
Distance Well Is From Waste/Source Boundary ____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☒ Downgradient n ☐ Not Known	Boart Longyear

A. Protective pipe, top elevation 763.48 ft. MSL
B. Well casing, top elevation 763.14 ft. MSL
C. Land surface elevation 763.4 ft. MSL
D. Surface seal, bottom 762.4 ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

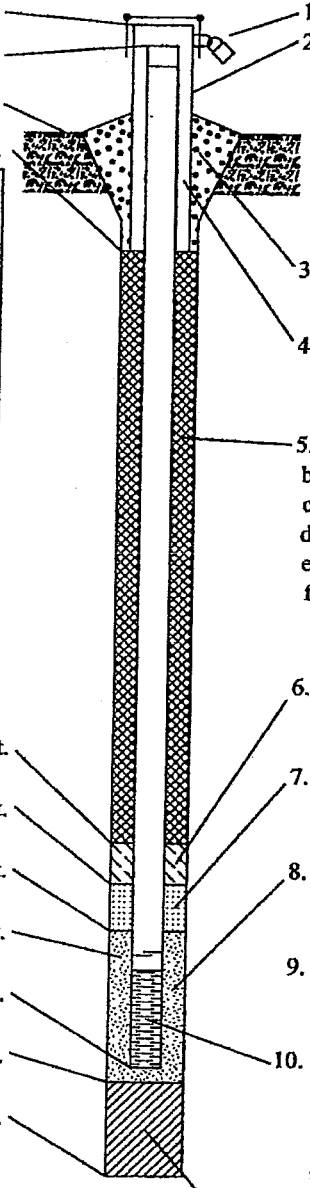
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis):
____

E. Bentonite seal, top 762.4 ft. MSL or 1.0 ft.
F. Fine sand, top 762.4 ft. MSL or 1.0 ft.
G. Filter pack, top 760.4 ft. MSL or 3.0 ft.
H. Screen joint, top 759.1 ft. MSL or 4.3 ft.
I. Well bottom 748.9 ft. MSL or 14.5 ft.
J. Filter pack, bottom 748.4 ft. MSL or 15.0 ft.
K. Borehole, bottom 748.4 ft. MSL or 15.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.00 in.
N. I.D. well casing 1.87 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
____ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____
3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Concrete Other ☒
4. Material between well casing and protective pipe:
Bentonite ☒ 30
____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. 1.5 Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. ____
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. Badger Mines, Filter Sand 20/40
b. Volume added 12.0 ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11
Continuous slot ☐ 01
____ Other ☐
b. Manufacturer Boart Longyear
c. Slot size: 0.006 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14
____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Robert J. Mottl Firm STS Consultants Ltd. 1035 Kepler Drive, Green Bay, Wisconsin Tel: 920-468-1978 Fax: 920-468-3312

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State Dep SOURCE PROPERTY Resourc MONITORING WELL NOT ABANDONED Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 6-97

Facility/Project Name: Wisconsin Central Refueling Area	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: MW-15
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or St. Plane ____ ft. N, ____ ft. E. S/C/N	Wis. Unique Well No. / DNR Well Number
Facility ID		Date Well Installed: 11/12/1999
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of SW 1/4 of Sec. 33, T. 16 N, R. 17 ☒E ☐W	Well Installed By: (Person's Name and Firm): Jeff Flamino
Distance Well Is From Waste/Source Boundary ____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☒ Downgradient n ☐ Not Known	Boart Longyear

A. Protective pipe, top elevation 763.85 ft. MSL
B. Well casing, top elevation 763.33 ft. MSL
C. Land surface elevation 763.8 ft. MSL
D. Surface seal, bottom 762.8 ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

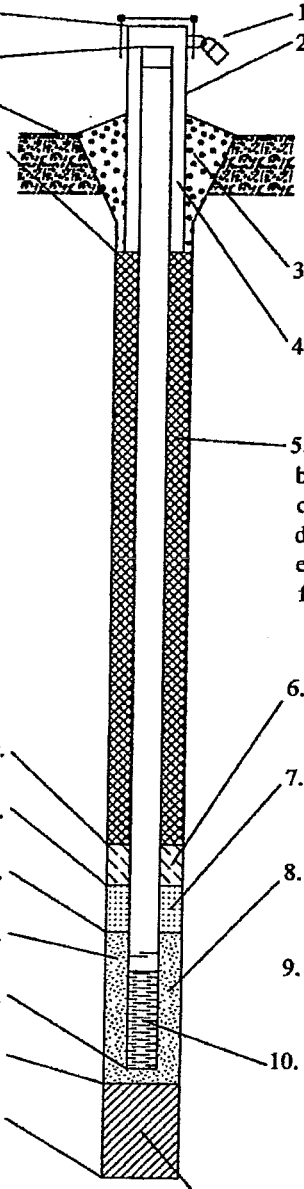
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
____ Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe ____

17. Source of water (attach analysis):
____

E. Bentonite seal, top 762.8 ft. MSL or 1.0 ft.
F. Fine sand, top 762.8 ft. MSL or 1.0 ft.
G. Filter pack, top 760.8 ft. MSL or 3.0 ft.
H. Screen joint, top 759.3 ft. MSL or 4.5 ft.
I. Well bottom 749.3 ft. MSL or 14.5 ft.
J. Filter pack, bottom 748.8 ft. MSL or 15.0 ft.
K. Borehole, bottom 748.8 ft. MSL or 15.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.00 in.
N. I.D. well casing 1.87 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04
____ Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____
3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Concrete Other ☒
4. Material between well casing and protective pipe:
Bentonite ☒ 30
____ Other ☐
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
e. 1.5 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. ____
b. Volume added ____ ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. Badger Mines, Filter Sand 20/40
b. Volume added 12.0 ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
____ Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☒ 11
Continuous slot ☐ 01
____ Other ☐
b. Manufacturer Boart Longyear
c. Slot size: 0.006 in.
d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14
____ Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Robert J. Mottl
Firm: STS Consultants Ltd.
1035 Kepler Drive, Green Bay, Wisconsin
Tel: 920-468-1978
Fax: 920-468-3312

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

MONITORING WELL
NOT ABANDONED

SOURCE
PROPERTY

Groundwater monitoring wells MW-4 and MW-5 were installed around 1990. However, well construction forms for these two wells could not be located.

AECOM

MONITORING WELL NOT ABANDONED

AECOM
200 Indiana Avenue
Stevens Point, Wisconsin 54481
www.aecom.com

715 341 8110 tel
715 341 7390 fax

SOURCE PROPERTY

September 28, 2012

Mr. Brian Hayden
CN
1 Waterfront Drive
P.O. Box 509
Two Harbors, WI 55616

Subject: **Notification of Missing Groundwater Monitoring Wells**
Wisconsin Central Ltd. - North Fond du Lac Rail Yard
Refueling Area (BRRTS No. 02-20-000914)
Canadian National Rail Yard – Diesel Fuel Spill (BRRTS No. 02-20-540810)
2 Harrison Street
North Fond du Lac, Wisconsin
AECOM Project No. 60135737

Dear Mr. Hayden:

As you are aware, AECOM has been providing services to obtain closure status for the open BRRTS Cases 02-20-000914 and 02-20-540810 located within the Former Refueling Area at the North Fond du Lac Rail Yard. See Figure 1 for locations of the BRRTS cases. The environmental investigation/remediation activities have taken place at this location dating back to 1989. On May 16, 2012, AECOM submitted a Closure Request report to the Wisconsin Department of Natural Resources (WDNR). The WDNR subsequently issued a Conditional Closure Decision with Requirements to Achieve Final Closure letter dated June 12, 2012. One of the requirements to obtain final closure is to abandon all of the groundwater monitoring wells associated with the investigation/remediation activities associated with these two BRRTS cases.

As part of the site investigation/remediation activities, 22 groundwater monitoring wells were completed between 1989 and 2005. The locations of the groundwater monitoring wells are shown on the attached Figure 2. On August 22 and 23, 2012 AECOM monitored and documented the abandonment of the groundwater monitoring wells. However, 5 of the 22 groundwater monitoring wells (MW-4, MW-5, MW-14, MW-15, and FRAOWS-MW-3) could not be located and therefore, were not abandoned. The wells that could not be located in the field are also shown on Figure 2.

This notification is being submitted in accordance with requirements in Wisconsin Administrative Code (WAC), Chapter NR 726 for the WDNR to review and approve conditional case closure of the project. With this letter, AECOM is notifying Wisconsin Central, LTD that groundwater monitoring wells MW-4, MW-5, MW-14, MW-15, and FRAOWS-MW-3 could not be located and remain in-place. If these wells are located in the future they should be properly abandoned in accordance with NR 141 of the WAC.

A copy of this notification letter will be included as part of the site file on the GIS Registry of Closed Remediation Sites.

Could you please sign below and email back a signed copy indicating that you have been notified of the five groundwater monitoring wells that remain in-place in the general vicinity of the former refueling area and, if found, that proper steps will be taken to ensure the wells will be properly abandoned in accordance with the requirements of NR 141.

AECOM

Brian T Hayden
(Signature)

9/24/12
(Date)

Brian T. Hayden
(Name)

Environmental Manager
(Title)

Wisconsin Central Ltd.
(Company)

If you have any questions, please contact Dick Reesman at (715) 833-8680 (richard.reesman@aecom.com) or Dennis Lawton at (414) 944-6183 (dennis.lawton@aecom.com).

Sincerely yours,
AECOM Technical Services, Inc.

Richard S Reesman

Richard S. Reesman, P.E.
Senior Project Engineer

Dennis R. Lawton, P.G., CPG
Associate – Senior Hydrogeologist

Attachments
Figure 1 – Locations of BRRTS Numbers
Figure 2 – Groundwater Monitoring Well Abandonments