

Source Property Information

CLOSURE DATE: 12/10/2013

BRRTS #: 02-20-297826
ACTIVITY NAME: Canadian National Railway - Storehouse
PROPERTY ADDRESS: 2 Harrison Street
MUNICIPALITY: North Fond du Lac
PARCEL ID #: V05-16-17-33-77-777-00

FID #: 420092420
DATCP #:
PECFA#:

***WTM COORDINATES:**

X: 642516 Y: 371874

** 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*

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 #: (No Dashes) PARCEL ID #:
ACTIVITY NAME: WTM COORDINATES: X: Y:

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

- Closure Letter**
- 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)
- Conditional Closure Letter**
- Certificate of Completion (COC)** (for VPLE sites)

SOURCE LEGAL DOCUMENTS

- 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:**
- 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.

- 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, 2 **Title: Site Location Map, Location of BRRTS Numbers**
- 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 and Monitoring Well Location Plan**
- 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 #: 5 **Title: Soil Results (Post-Excavation)**

BRRTS #: 02-20-297826

ACTIVITY NAME: Canadian National Railway - Storehouse

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 #: 8 Title: Post-Remedial Geological Cross Section C-C'

Figure #: 9 Title: Post-Remedial Geological Cross Section D-D'

- 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 #: Title:

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

Figure #: Title:

Figure #: Title:

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 #: 1, 4, 5 Title: Sum of Initial Subsurface Assessment Soil., Soil Field Observations, Soil Quality Data Sum..

- 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 #: Title:

- 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 #: Title:

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 #: Title:

- 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).

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ACTIVITY NAME: Canadian National Railway - Storehouse

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.

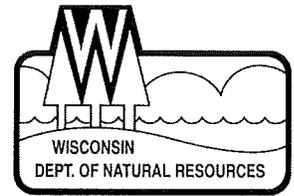
Certified Survey Map: A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

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:



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
Canadian National Railway - Storehouse, 2 Harrison Street, North Fond du Lac, WI
DNR BRRTS Activity # 02-20-297826

Dear Mr. Hayden:

The Department of Natural Resources (DNR) considers the Canadian National Railway - Storehouse site 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 (NER) Closure Committee reviewed the request for closure on June 7, 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 7, 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 likely source of lead contaminated soil at this site is imported soil fill material. Responses included soil excavation and on-site disposal in a soil pile currently capped and fenced. The soil pile is referred to as a biopile in the case file. Groundwater had previously been investigated and showed no lead impacts above detection limits. 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.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- The existing coarse sand/gravel, ballast rock and asphalt surfaces must be maintained over contaminated soil and the DNR must approve any changes to this barrier.

- 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.

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, ballast rock and asphalt surfaces is required and within the fenced bio-pile are, as shown on the **attached maps (Figure 1 and Figure 4)**, 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 Northeast Region DNR office in Green Bay, to the attention of Keld Lauridsen.

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 4)**. If any 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.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats., s. NR 726.15, s. NR 727.07 Wis. Adm. Code) The coarse sand/gravel, ballast rock and asphalt surfaces that exists in the location shown on the **attached map (Figure 4)** 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 and inspection log** 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.

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 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.

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. Chronoff, Team Supervisor
Northeast Region Remediation & Redevelopment Program

Attachments:

- remaining soil contamination map (Figure 4)
- extent of cap map (Figure 4)
- maintenance plan

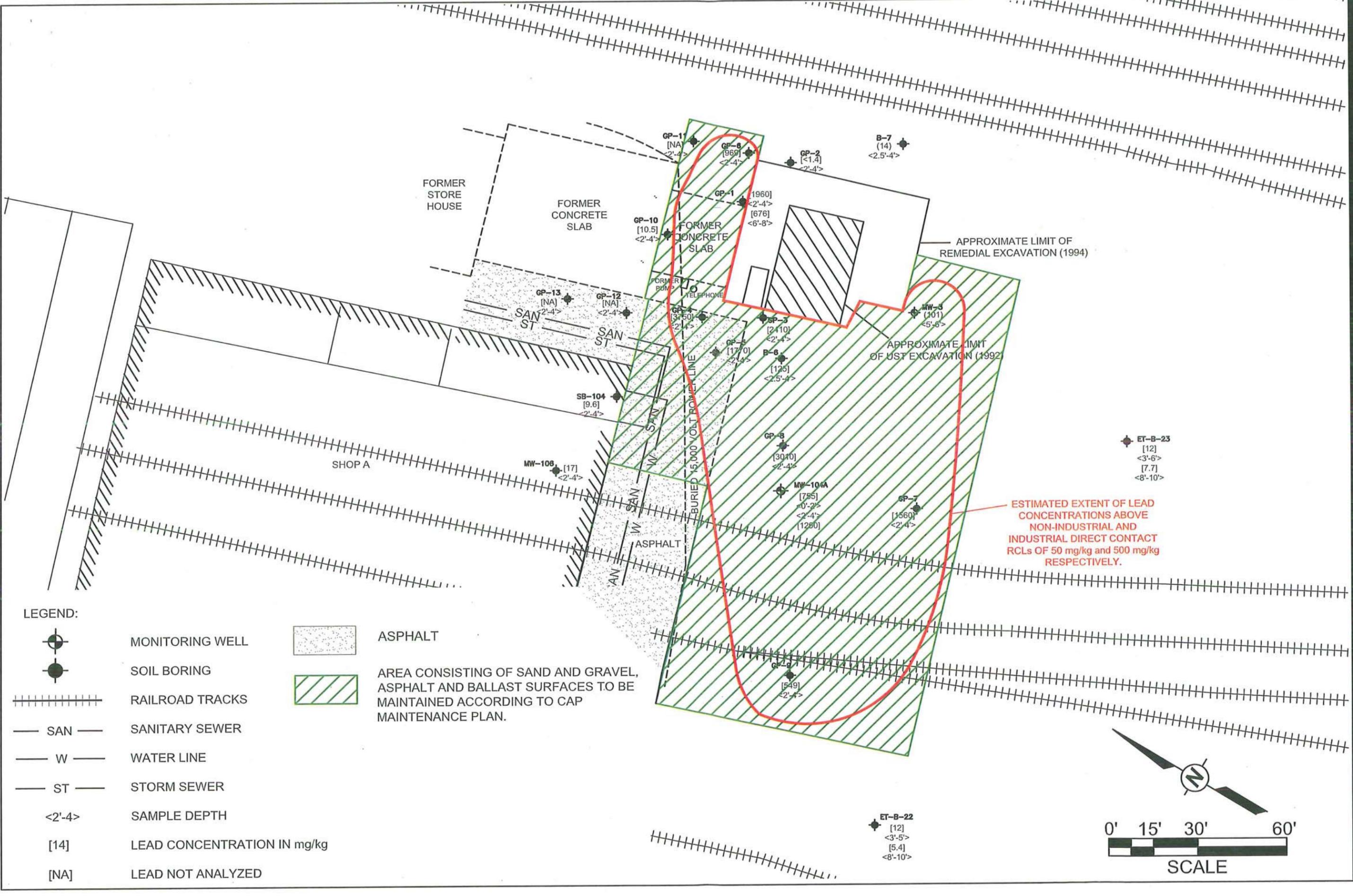
cc: Dennis Lawton, AECOM (e-copy - dennis.lawton@aecom.com)



OVERVIEW OF LOCATIONS OF BRRTS CASES AND BIOPILES

WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD

ANSI B 11" x 17" Project Management Initials: Designer: WAM Checked: RSR Approved: RSR
 Filename: L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\60135737_Figure 4.dwg



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 (BRRS No. 02-20-000914) and the former Storehouse Area (BRRS 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 BRRS 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

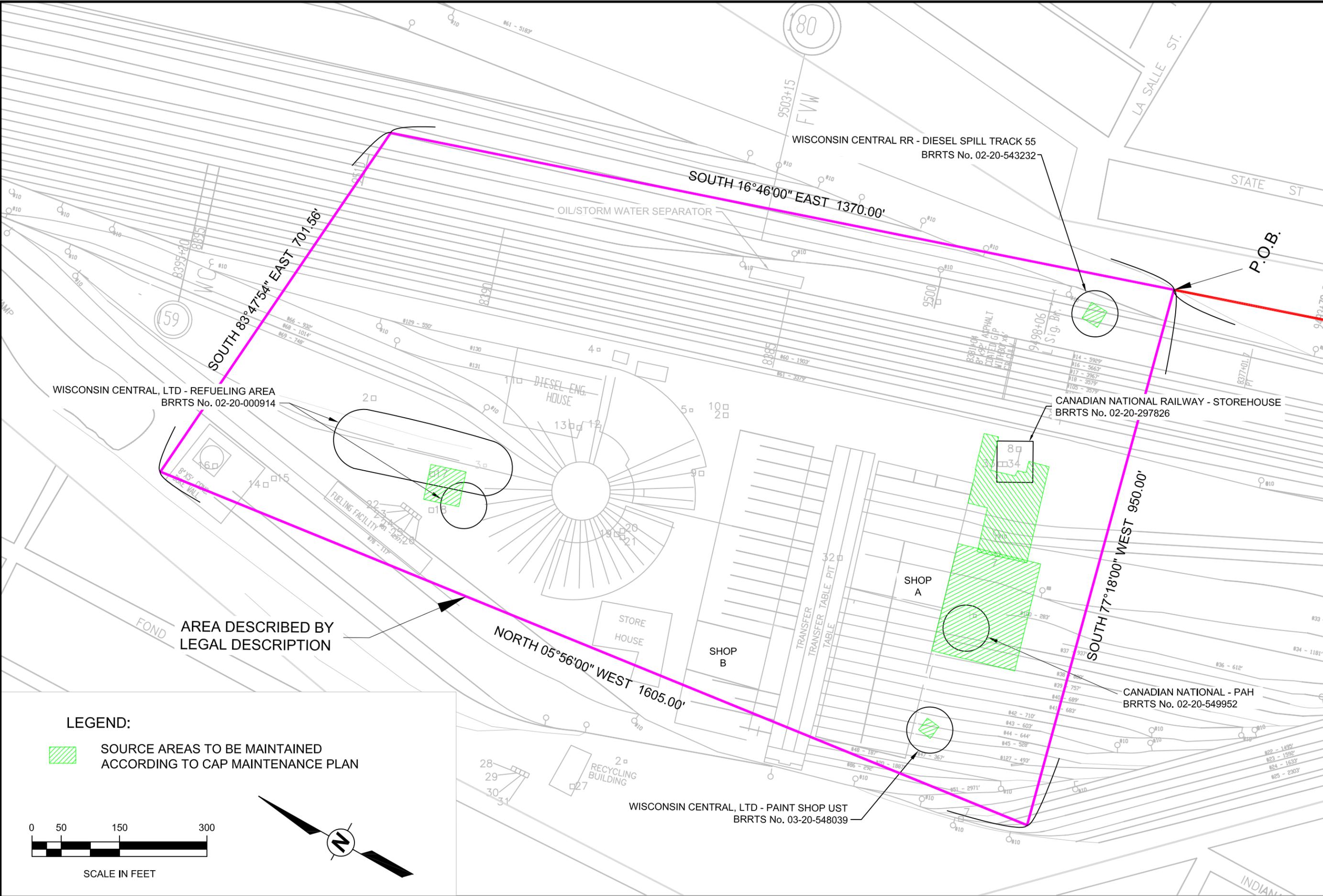
Figures



OVERVIEW OF LOCATIONS OF BRRTS CASES AND BIOPILES

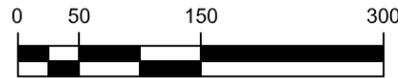
WISCONSIN CENTRAL, LTD
NORTH FOND DU LAC RAIL YARD
NORTH FOND DU LAC, WISCONSIN

L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\60135737-Legal Description.dwg; 7/27/2012 8:31:51 AM, MITTELSTADT, KARL
Project Management Initials: Designer: KAM Checked: RSR Approved: RSR ANSIB.11"x17"

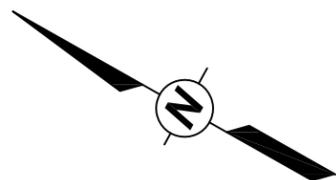


LEGEND:

-  SOURCE AREAS TO BE MAINTAINED ACCORDING TO CAP MAINTENANCE PLAN



SCALE IN FEET



LEGAL DESCRIPTION LOCATION MAP FOR SOURCE AREAS

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



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.

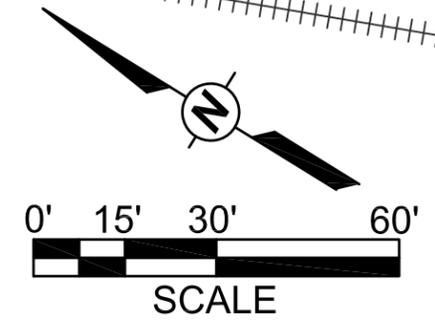
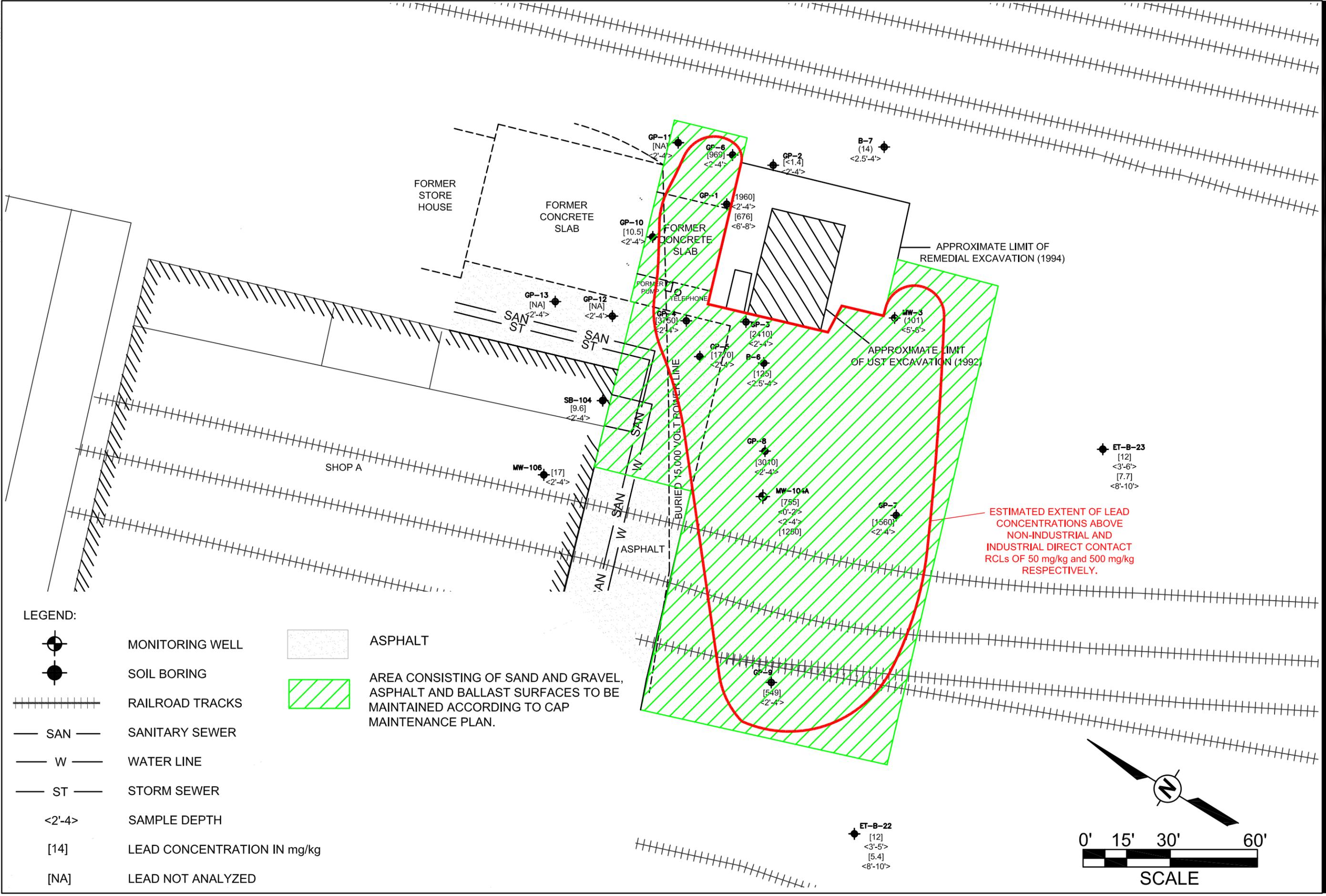
This parcel contains **318,000.00 square feet**, or **7.3003 acres**, more or less.

LEGEND

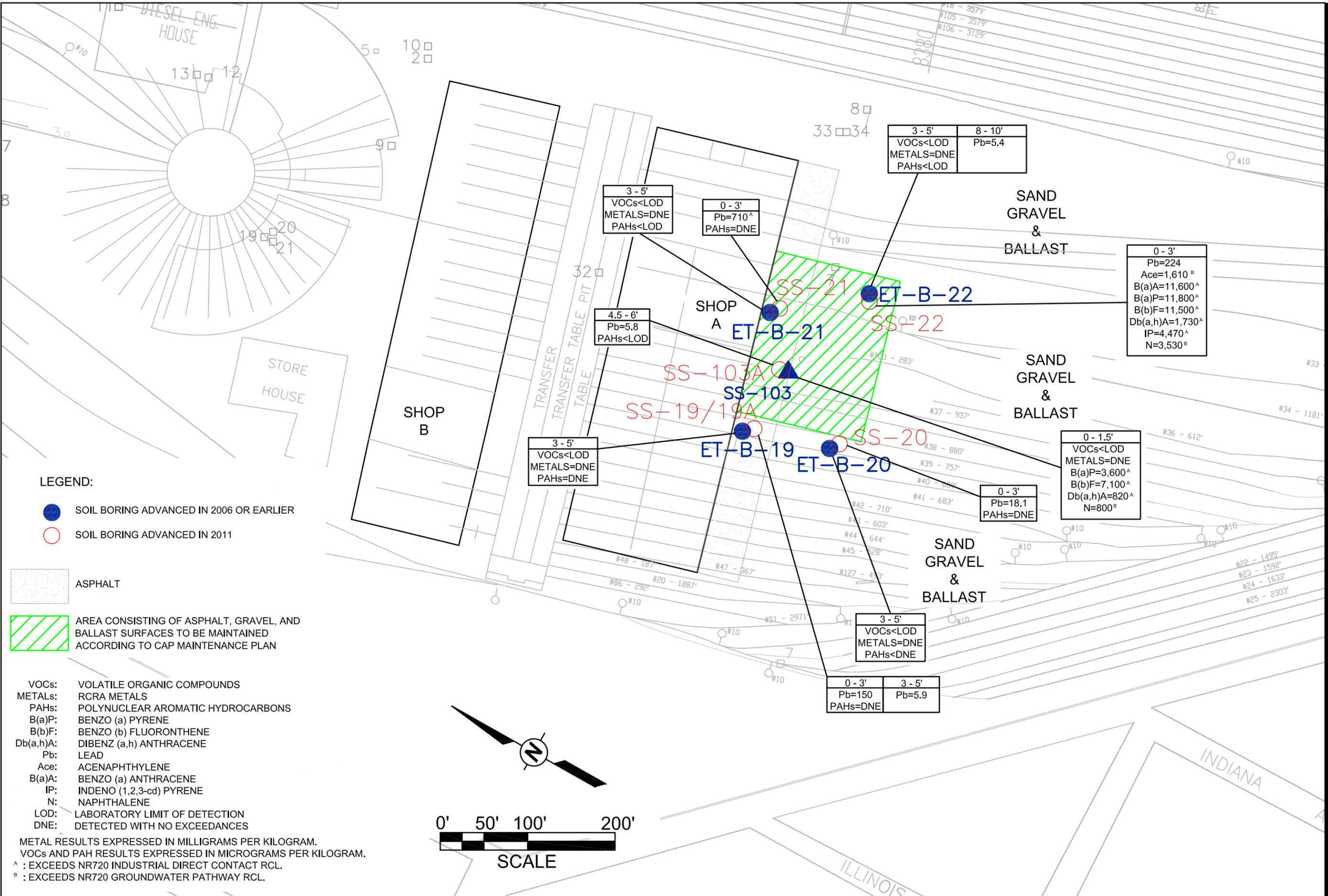
- LOCATION OF BIOPILES
- ET-B-11
ET MW-9 GROUNDWATER MONITORING WELL LOCATIONS



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



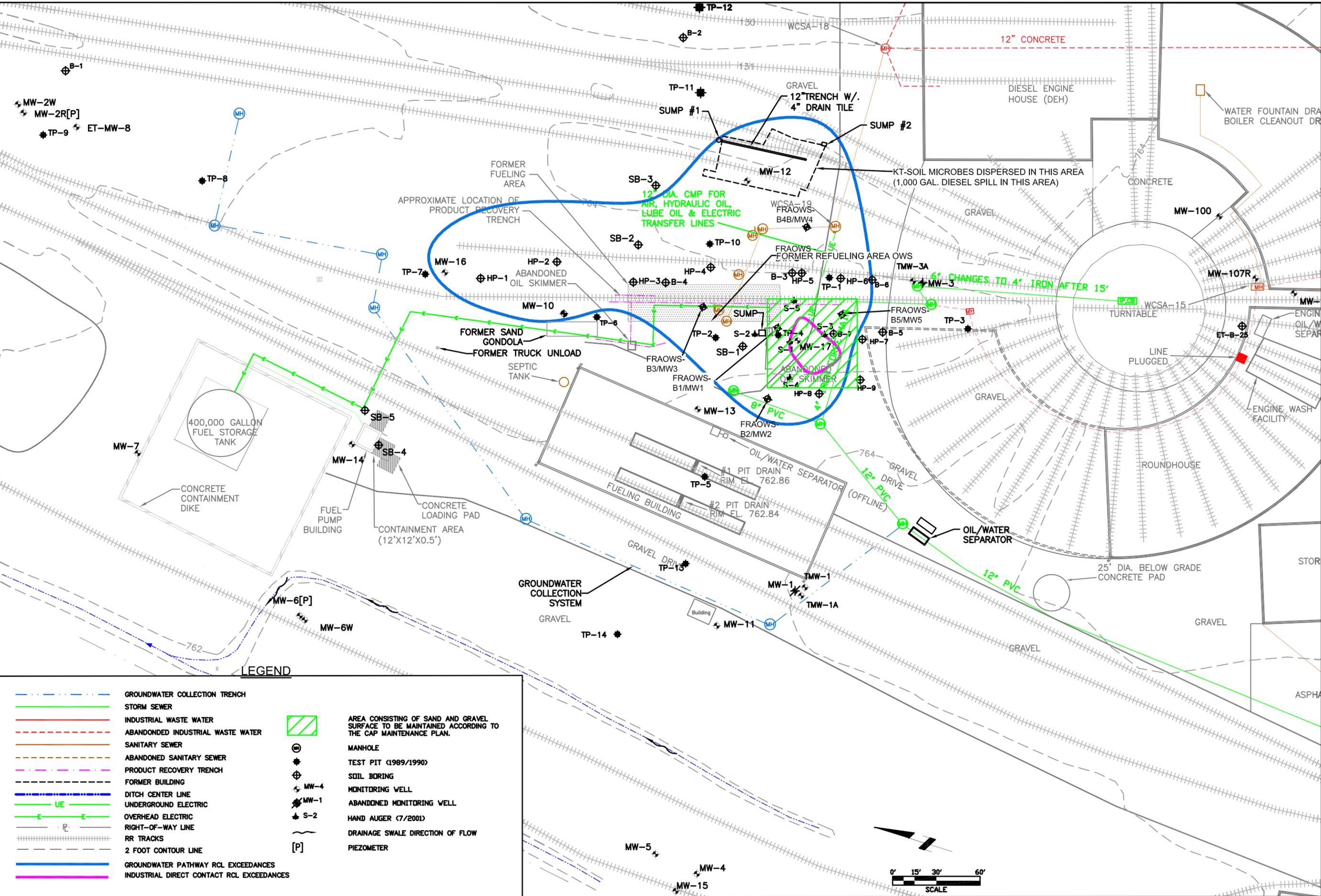
ESTIMATED EXTENT OF LEAD CONCENTRATIONS ABOVE NON-INDUSTRIAL AND INDUSTRIAL DIRECT CONTACT RCLs OF 50 mg/kg and 500 mg/kg RESPECTIVELY.



VOCs: VOLATILE ORGANIC COMPOUNDS
 METALS: RCRA METALS
 PAHs: POLYNUCLEAR AROMATIC HYDROCARBONS
 B(a)P: BENZO (a) PYRENE
 B(b)F: BENZO (b) FLUORANTHENE
 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.

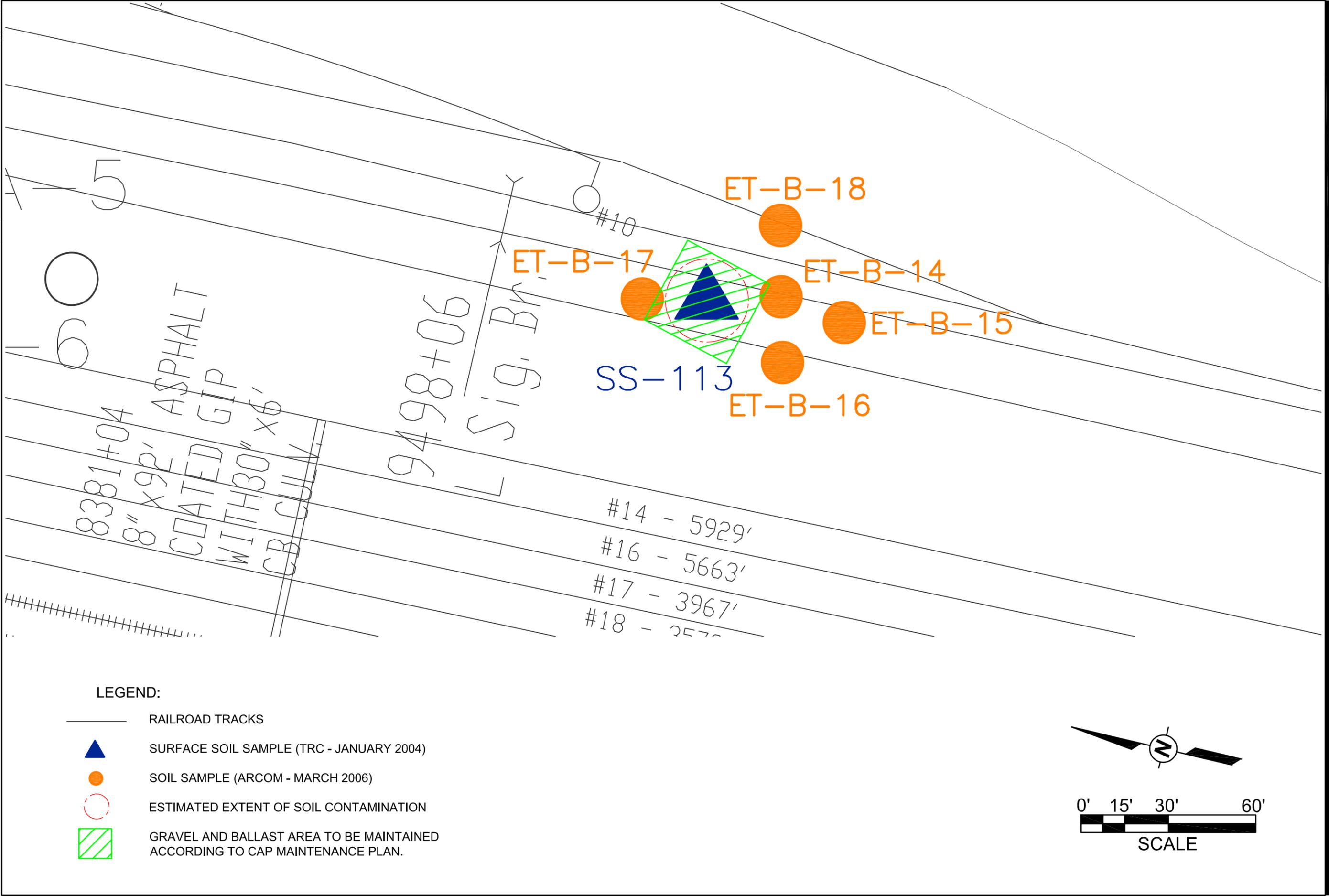
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 Project Management Initials: Designer: vcm Checked: RSR Approved: RSR
 ANSIB 11" x 17"



LEGEND	
	GROUNDWATER COLLECTION TRENCH
	STORM SEWER
	INDUSTRIAL WASTE WATER
	ABANDONED 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
	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
	PIEZOMETER

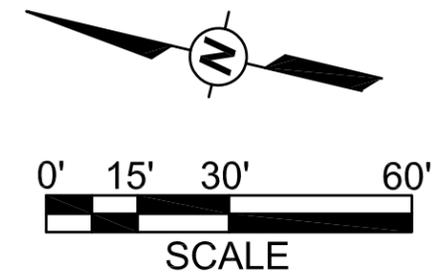
WISCONSIN CENTRAL, LTD - REFUELING AREA - BRRTS No. 02-20-000914

WISCONSIN CENTRAL, LTD
 NORTH FOND DU LAC RAIL YARD
 NORTH FOND DU LAC, WISCONSIN
 AECOM
 60135737
 FIGURE 6

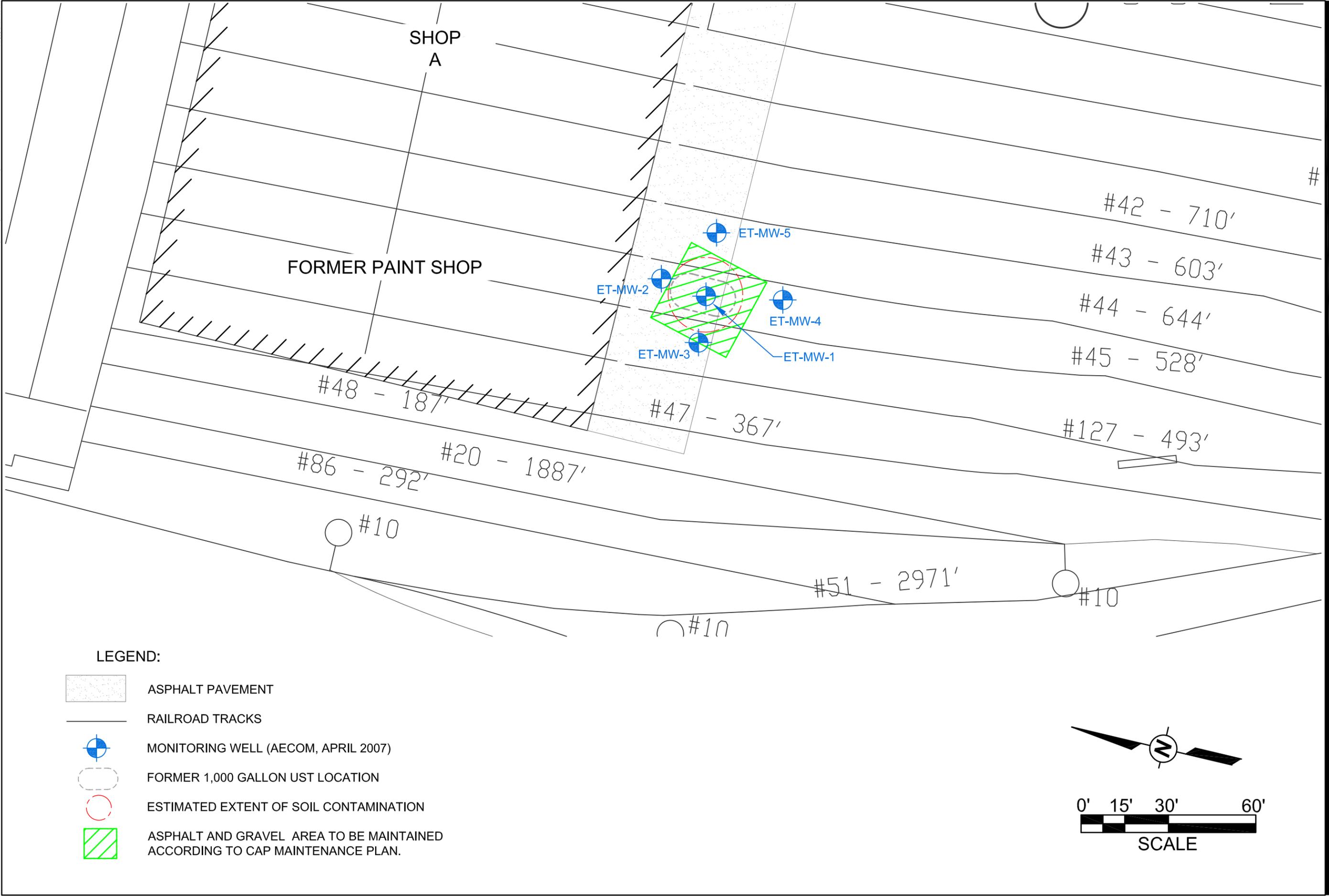


LEGEND:

- RAILROAD TRACKS
- SURFACE SOIL SAMPLE (TRC - JANUARY 2004)
- SOIL SAMPLE (ARCOM - MARCH 2006)
- ESTIMATED EXTENT OF SOIL CONTAMINATION
- GRAVEL AND BALLAST AREA TO BE MAINTAINED ACCORDING TO CAP MAINTENANCE PLAN.



Filename: L:\Work\Projects\60135737\000_CAD\001_Drawings\Sheets\Master Cap Maintenance Plan\660135737_BRRTS_Figures.dwg
Project Management Initials: Designer: KAM Checker: RSR Approver: RSR ANSIB 11" x 17"



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.

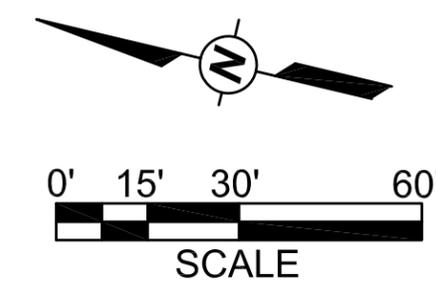


Exhibit A



June 7, 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
Canadian National Railway - Storehouse, 2 Harrison Street, North Fond du Lac, WI
WDNR BRRTS Activity # 02-20-297826

Dear Mr. Hayden:

On June 7, 2012, the Northeast Region Closure Committee reviewed your request for closure of the case 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 lead contamination identified at the site likely related to imported contaminated soil fill material 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.

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.

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://dnrmmaps.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 (proper handling of any contaminated soil excavated in the future and cap maintenance for protection against human exposure to the remaining impacted soil). In the final closure

approval, you will also be required to conduct annual cap inspections. Documentation of the inspection will be required to be kept on site.

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 in Green Bay at (920) 662-5420.

Sincerely,

A handwritten signature in black ink, appearing to read 'Keld Lauridsen', with a long horizontal flourish extending to the right.

Keld Lauridsen
Hydrogeologist
Remediation & Redevelopment Program

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



Environment

PO Box 509
Two Harbors, MN, USA
55616

April 9, 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 Storehouse Area:

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.

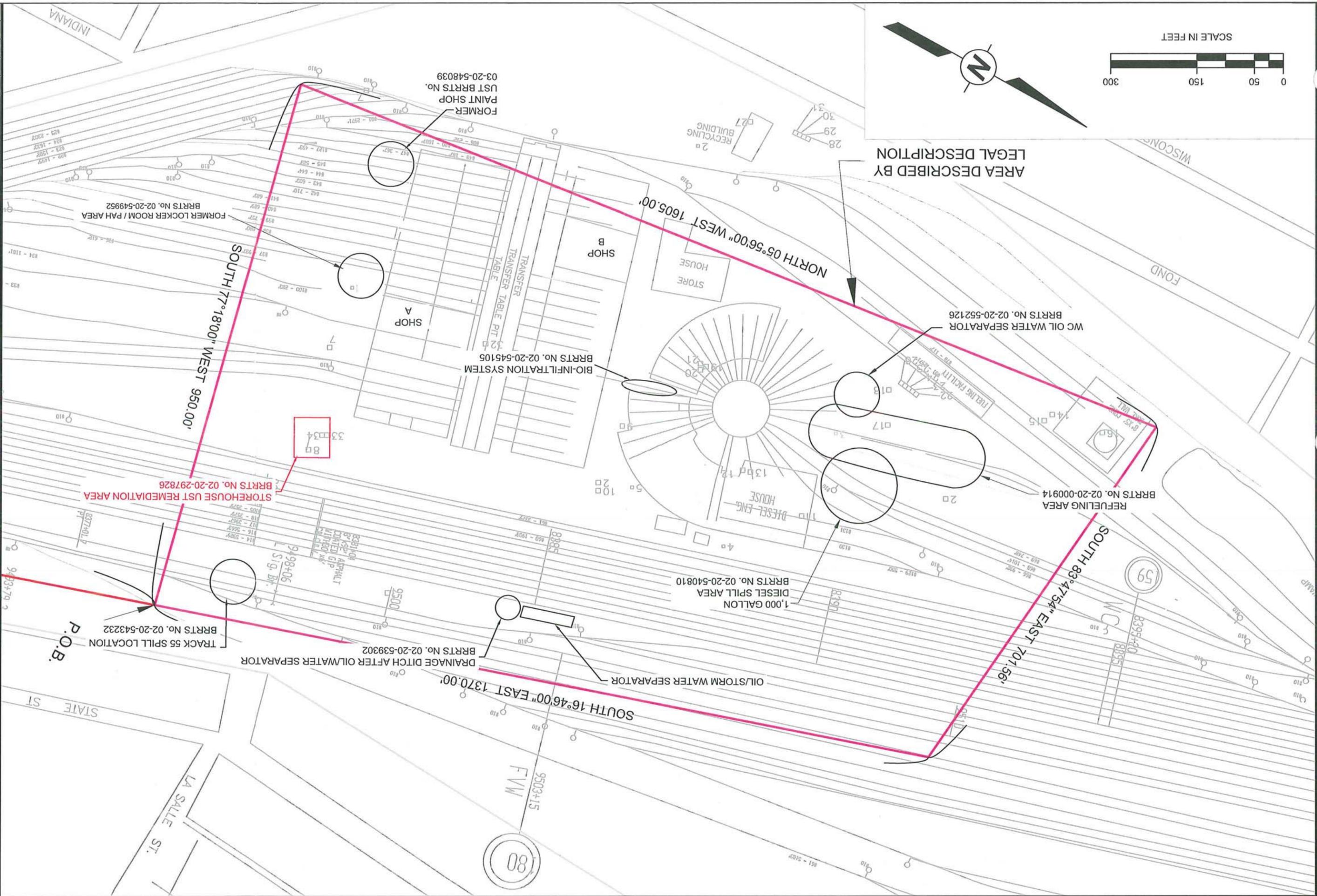
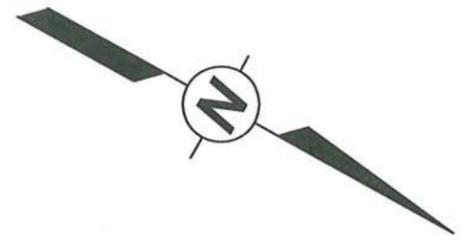
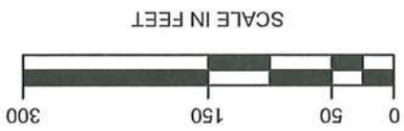
This parcel contains **1,199,529.80 square feet**, or **27.5374 acres**, more or less.

The Wisconsin Department of Natural Resources Bureau Remediation and Redevelopment Tracking System (BRRTS) number for the Former Storehouse Area Release is 02-20-297826.

Respectfully,

A handwritten signature in black ink that reads "Brian T. Hayden". The signature is written in a cursive, flowing style.

Brian Hayden
Regional Manager - Environment



Memorandum

To WDNR

CC

Subject Legal Description –
Former Storehouse Area

From Dick Reesman

Date 4/9/12

Due to the large size of the North Fond du Lac Rail Yard the following legal description (as shown on Figure 2) describes the southern portion of the North Fond du Lac Rail Yard, which includes the Former Storehouse Area.

That part of the Southwest $\frac{1}{4}$ 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 $\frac{1}{4}$ section;
Thence South $89^{\circ}50'27''$ West, 121.71 feet, along the south line of said $\frac{1}{4}$ Section;
Thence North $16^{\circ}46'00''$ West, 1133.41 feet, to the point of beginning;
Thence South $77^{\circ}18'00''$ West, 950.00 feet;
Thence North $05^{\circ}56'00''$ West, 1605.00 feet;
Thence South $83^{\circ}47'54''$ East, 701.56 feet;
Thence South $16^{\circ}46'00''$ 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 Storehouse Area are: 642516E, 371874N. The WTM coordinates were obtained from the Wisconsin Department of Natural Resources RR Sites Map.

Regards,

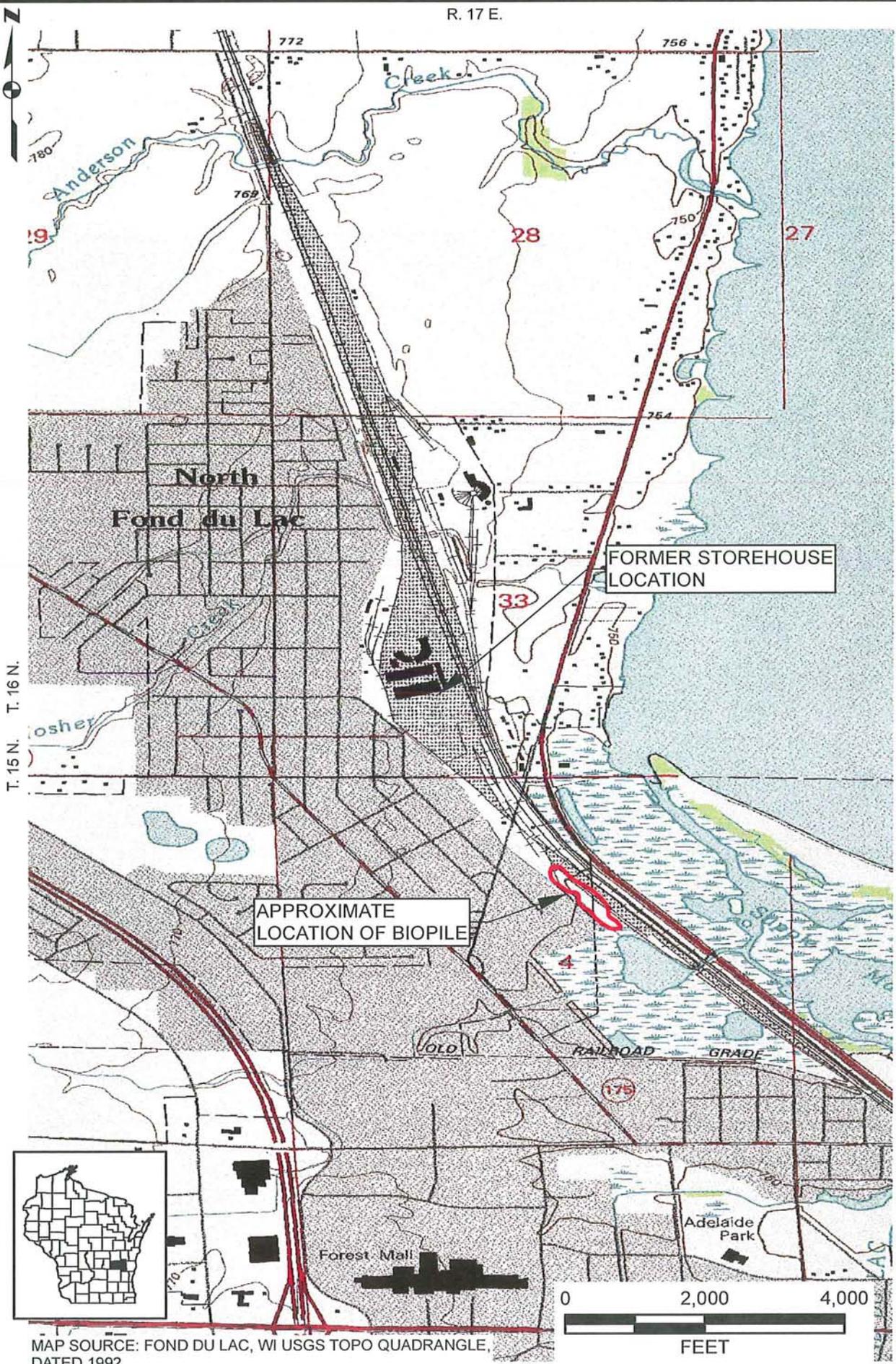


Dick Reesman, P.E.
Senior Project Engineer
richard.reesman@aecom.com

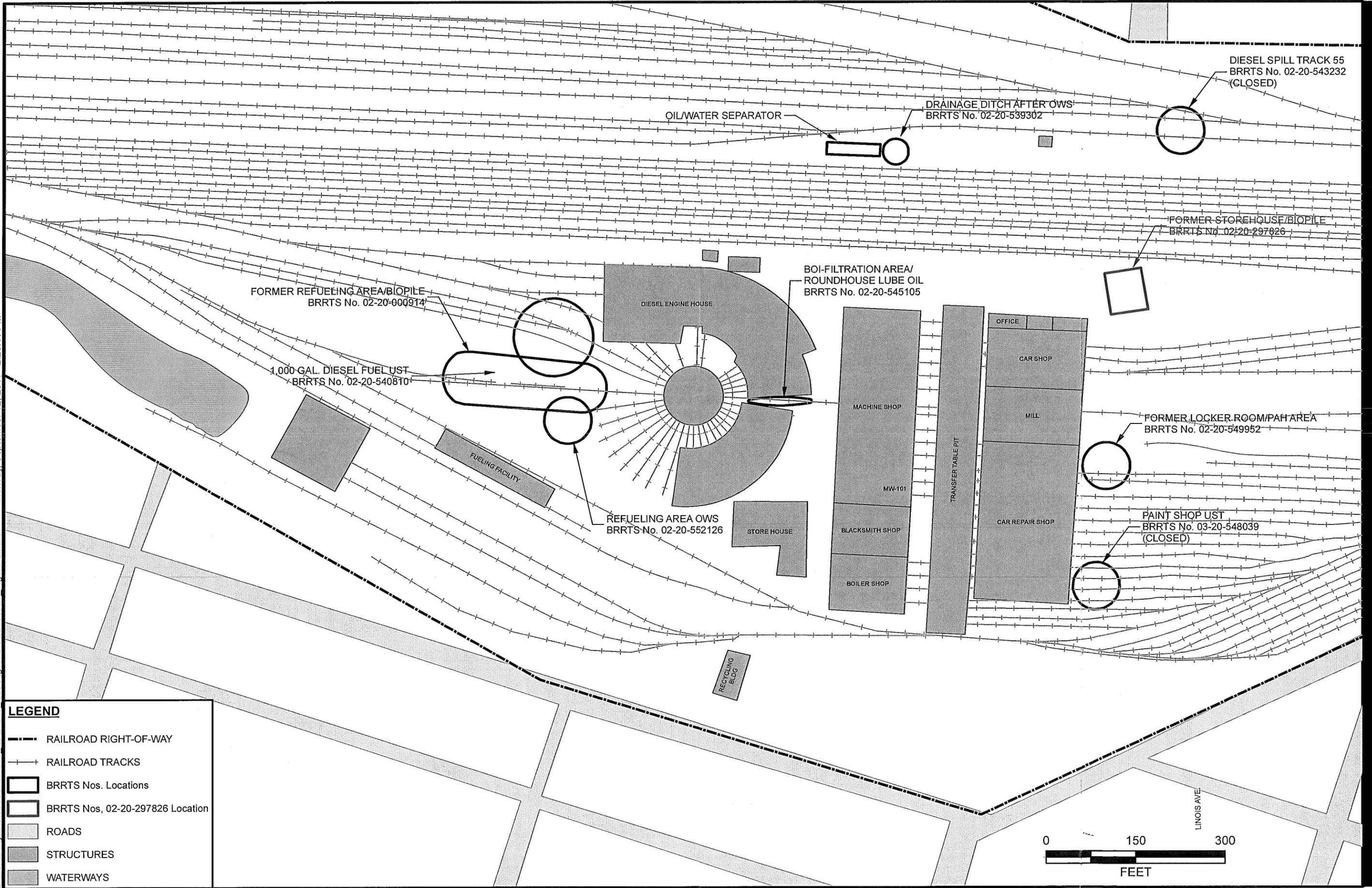
L:\work\Projects\60135737\000 CAD\040 GIS\Figures\G60135737 Figure 1.mxd Monday, September 12, 2011 - 1:47:30 PM

T. 15 N. T. 16 N.

R. 17 E.

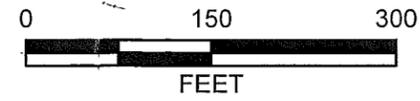


MAP SOURCE: FOND DU LAC, WI USGS TOPO QUADRANGLE, DATED 1992.

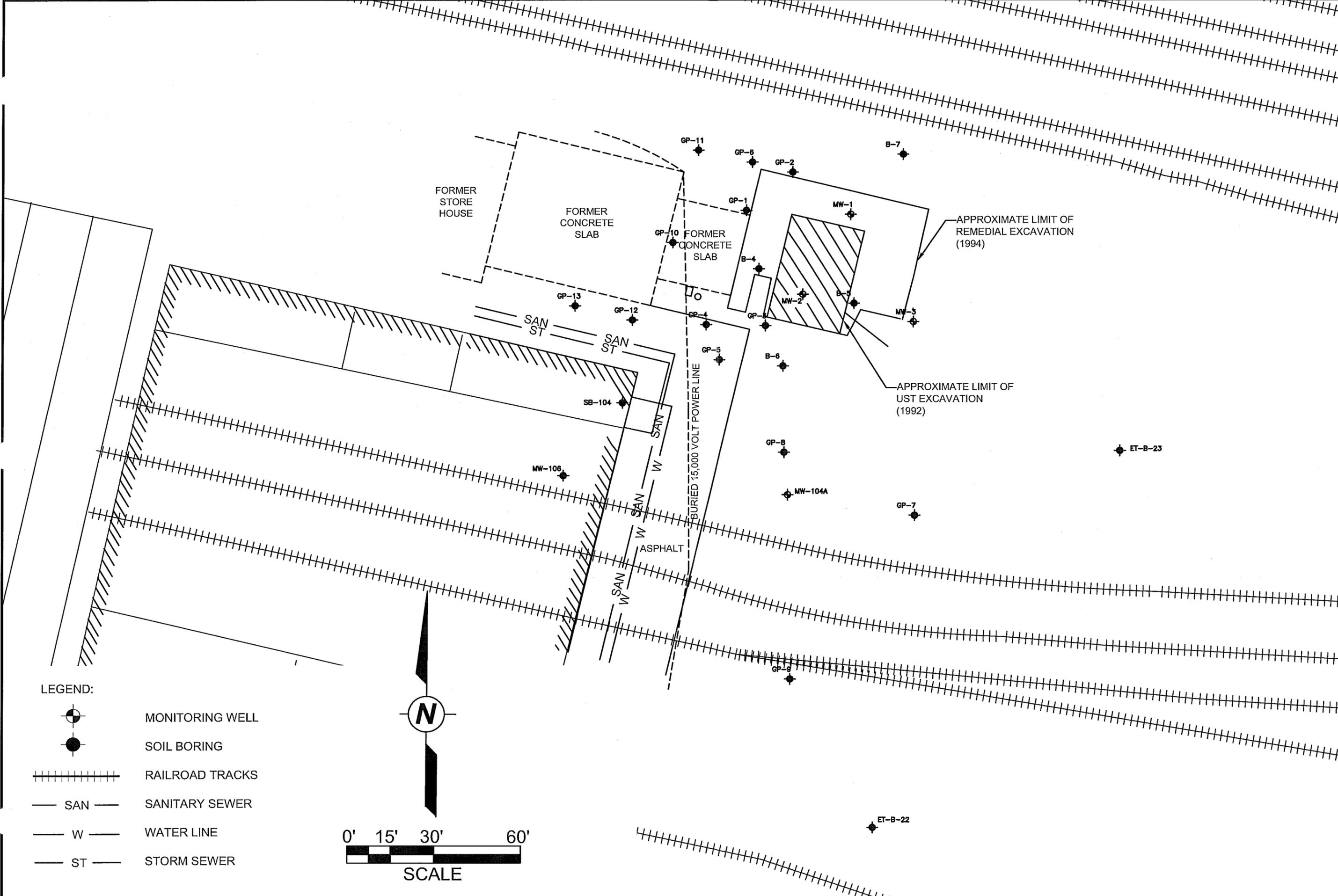


LEGEND

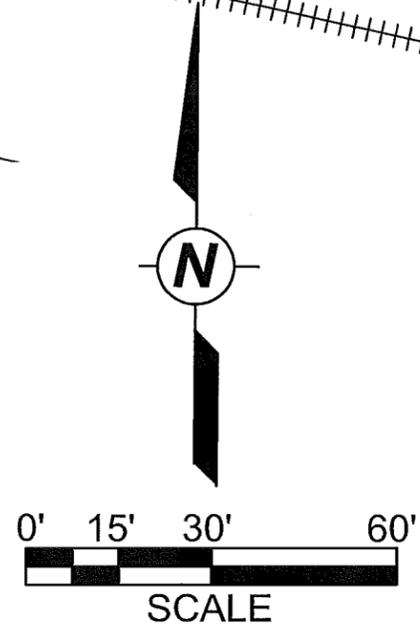
- RAILROAD RIGHT-OF-WAY
- +--- RAILROAD TRACKS
- BRRTS Nos. Locations
- BRRTS Nos, 02-20-297826 Location
- ▭ ROADS
- ▭ STRUCTURES
- ▭ WATERWAYS



Filename: L:\work\Projects\60135737\000_CAD\001_Drawings\Sheets\60135737_Former_Storehouse.dwg



- LEGEND:**
- MONITORING WELL
 - SOIL BORING
 - RAILROAD TRACKS
 - SAN SANITARY SEWER
 - W WATER LINE
 - ST STORM SEWER



REV	DESCRIPTION	DRN	CHK	DATE

AECOM

200 Indiana Avenue
Stevens Point, WI 54481
T 715.341.8110 F 715.341.7390
WWW.AECOM.COM

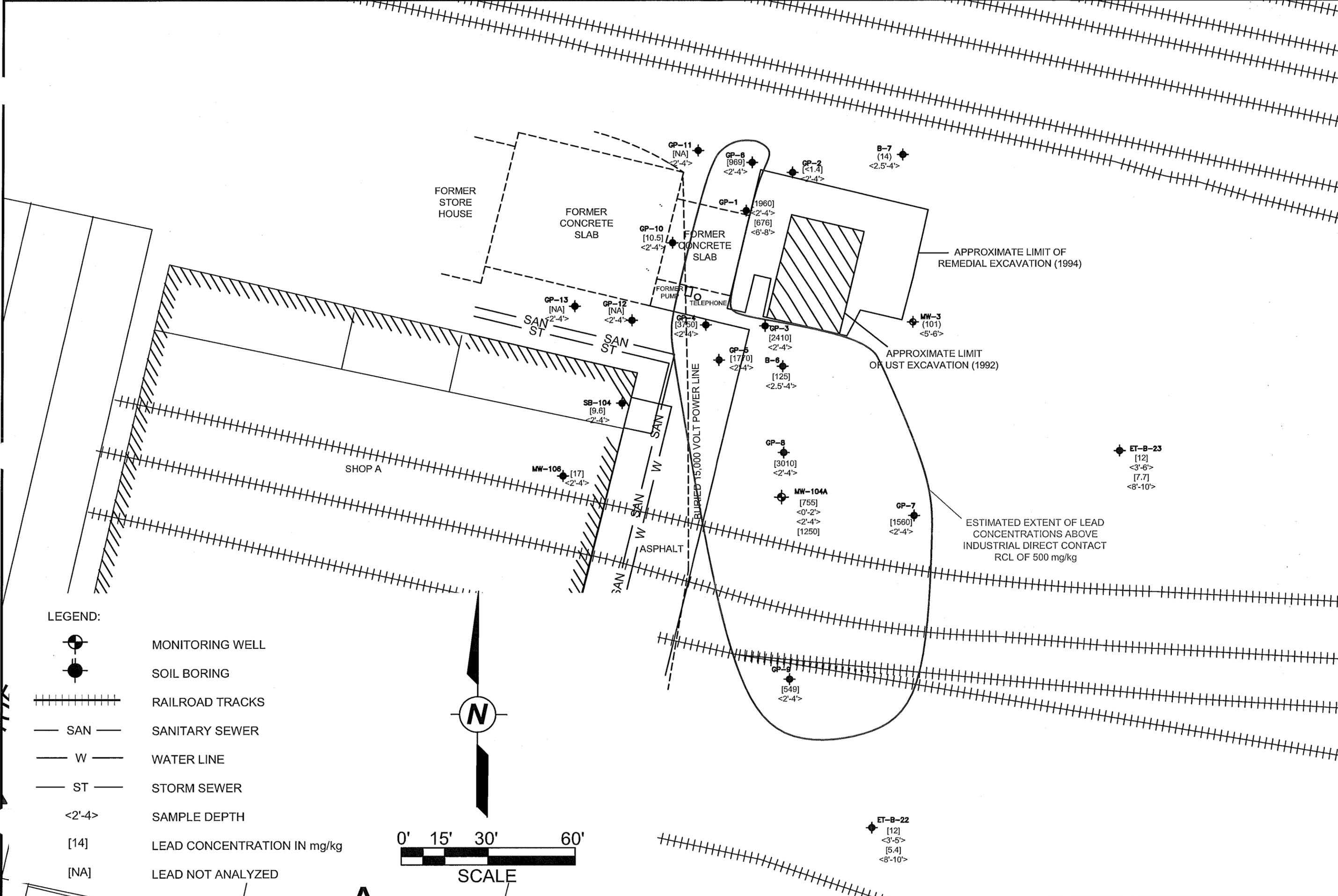
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
FORMER STOREHOUSE AREA-BRRTS #02-20-297826
NORTH FOND DU LAC, WI

**SOIL BORING AND MONITORING
WELL LOCATION PLAN**

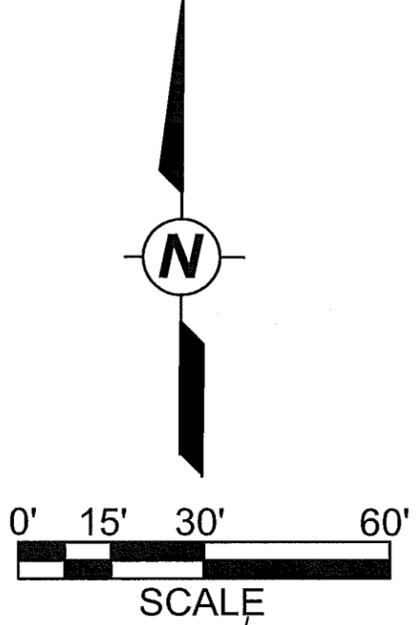
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PROJECT NO.	60135737
FILENAME	60135737_Former_Storehouse.dwg
SHEET NO.	
DRAWING NO.	FIGURE 3

VERIFY SCALE IF PLAN SHEET IS REDUCED

Filename: L:\work\Projects\60135737\Drawings\Sheets\60135737_Former_Storehouse_Annotations.dwg



- LEGEND:**
- MONITORING WELL
 - SOIL BORING
 - RAILROAD TRACKS
 - SANITARY SEWER
 - WATER LINE
 - STORM SEWER
 - SAMPLE DEPTH
 - LEAD CONCENTRATION IN mg/kg
 - LEAD NOT ANALYZED



		200 Indiana Avenue Stevens Point, WI 54481 T 715.341.8110 F 715.341.7390 WWW.AECOM.COM	
WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD FORMER STOREHOUSE AREA-BRRTS #02-20-297826 NORTH FOND DU LAC, WI			
SOIL RESULTS (POST-EXCAVATION)			
DATE	3/9/2012		
PROJECT NO.	60135737		
FILENAME	60135737_Former_Storehouse_Annotations.dwg		
SHEET NO.	FIGURE 5		
DRAWING NO.	FIGURE 5		

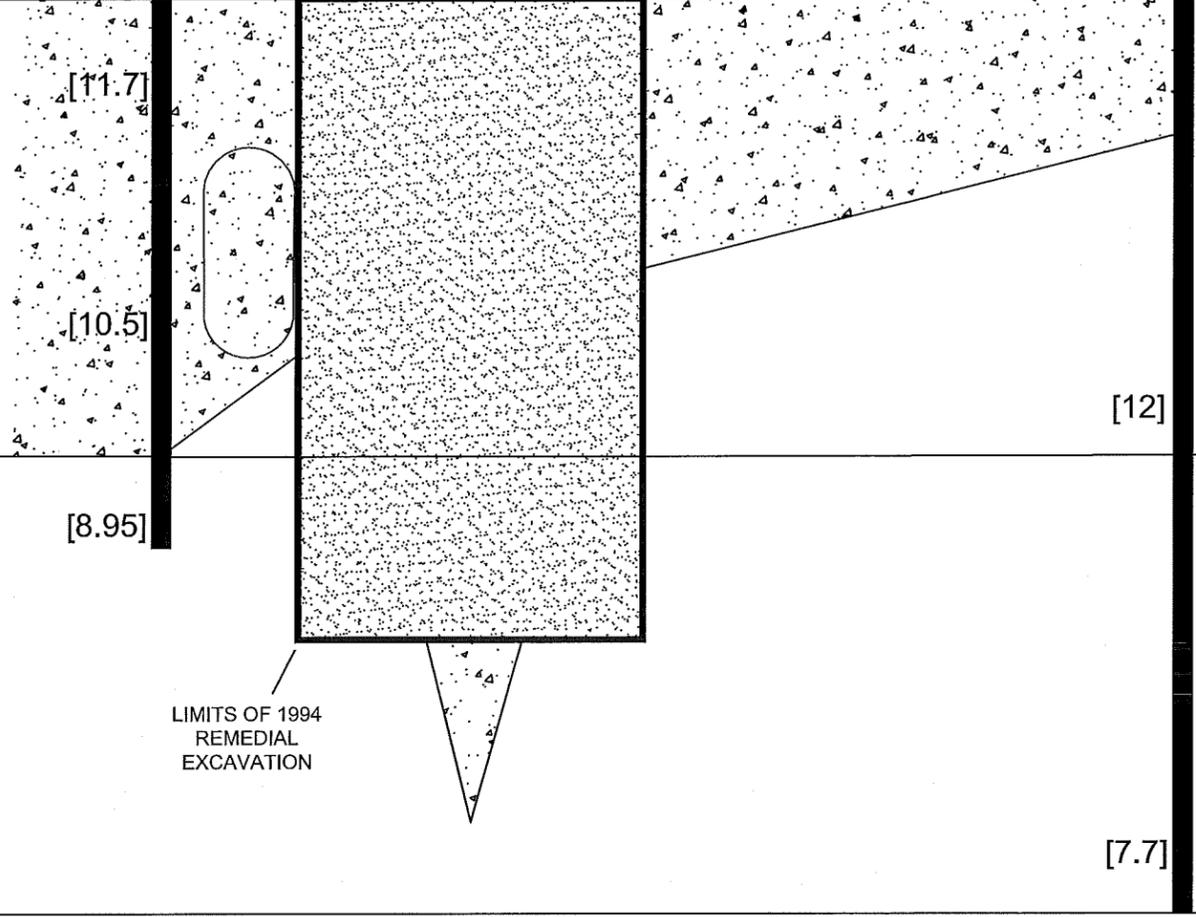
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C

C'

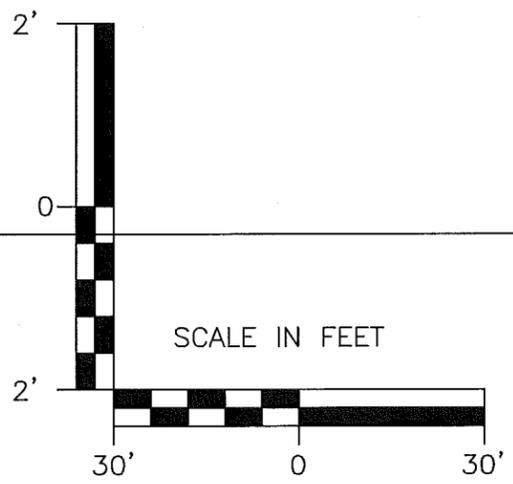
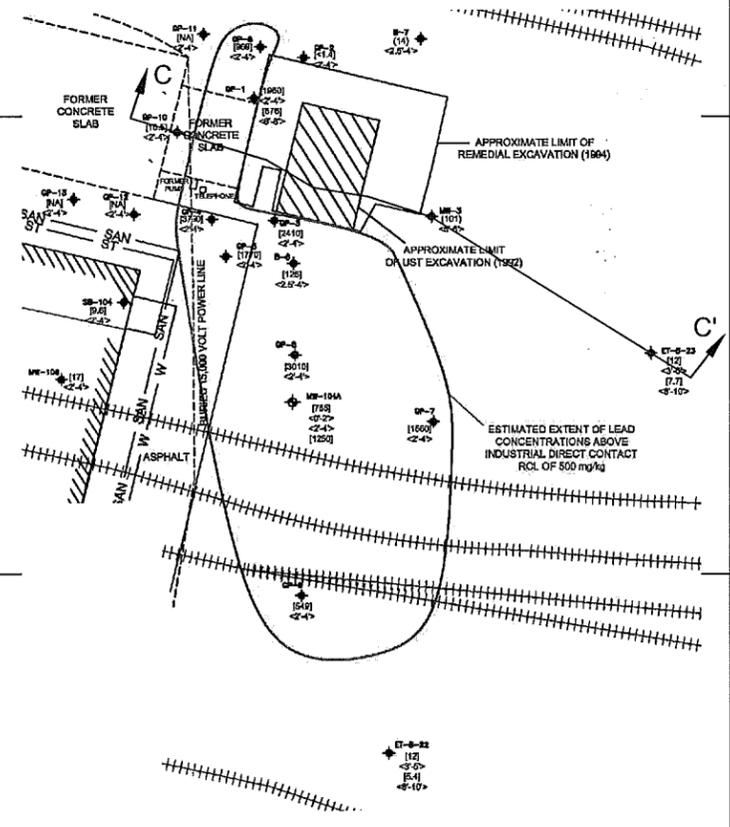
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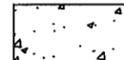
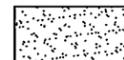
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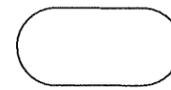


LIMITS OF 1994
REMEDIAL
EXCAVATION

KEY PLAN



-  FILL: SILTY SAND WITH VARYING AMOUNTS OF CONCRETE, WOOD, GLASS, ETC.
-  SILTY CLAY NATURAL SOILS
-  BLACK TO GRAY ORGANIC SILTY CLAY
-  SAND BACKFILL

-  ESTIMATED EXTENT OF LEAD CONCENTRATION EXCEEDING NR720 INDUSTRIAL DIRECT CONTACT RCL OF 500 MG/KG
- [40.8] LEAD CONCENTRATION IN MG/KG
- <1 PHOTOIONIZATION DETECTOR READING

POST-REMEDIATION GEOLOGICAL CROSS-SECTION C-C'
 WISCONSIN CENTRAL NORTH FOND DU LAC RAIL YARD
 FORMER STOREHOUSE-BRRTS #02-20-297826
 NORTH FOND DU LAC, WISCONSIN

Table 1
Summary of Initial Subsurface Assessment Soil Analysis Results
Wisconsin Central Ltd., North Fond du Lac, Wisconsin

These soils were removed as part of the remedial excavation.

Boring No. Sample No.	MW-1 S-2	MW-2 S-3	MW-2 S-5	MW-3 S-2	B-4 S-2	B-5 S-3	B-5 S-3A	B-6 S-2	B-7 S-2
Depth	(2.5'-4.0')	(5.0'-6.5')	(10.0'-11.5')	(2.5'-4.0')	(2.5'-4.0')	(5.0'-6.0')	(6.0'-6.5')	(2.5'-4.0')	(2.5'-4.0')
Date	8/25/93	8/24/93	8/24/93	8/26/93	8/25/93	8/24/93	8/24/93	8/26/93	8/26/93
Metals (ug/kg)									
Pb	241	45.2	8.1	101	6530	107	17.9	125	13.8
Cd	0.71	<0.3	<0.3	0.49	13.7	<0.3	<0.3	<0.2	0.39
Petroleum Hydrocarbons (mg/kg)									
GRO	110.0	180	--	<14	<16	93	590	<16	<13
DRO	21.0	23	--	8.6	120	96	<8.7	<9.5	<7.9
PVOCs (ug/kg)									
Methyl Tert Butyl Ether	<6.65	<68	--	<7.10	<7.85	<71	<68	<7.8	<6.50
Benzene	<1.33	69	--	<1.42	<1.57	34	407	<1.56	<1.30
Toluene	9.4	106	--	<1.42	<1.57	140	490	<1.56	<1.30
Ethylbenzene	<1.33	270	--	<1.42	<1.57	160	940	<1.56	<1.30
m- & p-Xylene	5.0	206	--	<2.84	<3.14	760	4009	<3.12	<2.60
o-Xylene	<1.33	53	--	<1.42	<1.57	57	560	<1.56	<1.30
1,3,5-Methylbenzene	<1.33	220	--	<1.42	<1.57	160	770	<1.56	<1.30
1,2,4-Methylbenzene	2.2	200	--	<1.42	<1.57	280	1700	<1.56	<1.30
Pesticides (ug/kg)									
1016	<64	<65	--	<77	<78	<70	<67	<74	<68
1221	<64	<65	--	<77	<78	<70	<67	<74	<68
1232	<64	<65	--	<77	<78	<70	<67	<74	<68
1242	<64	<65	--	<77	<78	<70	<67	<74	<68
1248	<64	<65	--	<77	<78	<70	<67	<74	<68
1254	<64	<65	--	<77	<78	<70	<67	<74	<68
1260	150	<65	--	<77	<78	<70	<67	<74	<68
PAHs (ug/kg)									
Naphthalene	210	45.3	--	<14.2	190	22.2	18.0	38.7	18.5
1-Methyl Naphthalene	990	68.8	--	6.21	550	26.3	5.84	105	33.3
2-Methyl Naphthalene	1200	84.6	--	7.77	640	44.9	26.9	133	42.5
Acenaphthylene	<27	<13.6	--	<14.2	<31	<14.1	<13.6	<15.6	<13.0
Acenaphthene	350	17.6	--	<14.2	32	<14.1	<13.6	<15.6	<13.0
Fluorene	580	11.2	--	20.2	92	12.4	11.1	55.9	<6.48
Phenanthrene	3800	59.2	--	27.6	820	57.4	62.0	207	38.8
Anthracene	610	4.48	--	5.12	96	8.95	11.6	24.4	3.27
Chrysene	920	22.5	--	12.6	330	14.9	14.0	40.9	10.7
Fluoranthene	2700	44.6	--	25.3	400	30.0	48.7	51.0	8.27
Pyrene	390	44.7	--	26.3	370	31.8	41.4	58.6	9.75
Benzo(a)anthracene	1010	16.1	--	10.9	82	9.7	14.7	20.3	5.37
Benzo(b)fluoranthene	620	19.4	--	8.79	350	7.18	10.0	16.3	4.74
Benzo(k)fluoranthene	390	11.0	--	4.42	120	4.09	5.88	8.53	1.83
Benzo(a)pyrene	670	17.3	--	10.9	250	6.02	8.55	15.2	4.87
Dibenzo(a,h)anthracene	78	1.47	--	0.83	35	0.83	<0.68	1.14	<0.65
Benzo(g,h,i)perylene	240	14.5	--	7.69	390	5.34	2.41	16.7	2.38
Indo(1,2,3-cd)pyrene	150	7.62	--	3.62	190	2.46	1.44	7.24	<1.30

Table 4

**TABLE 4
SOIL FIELD OBSERVATIONS AND ANALYTICAL RESULTS
CANADIAN NATIONAL - WISCONSIN CENTRAL DIVISION
FORMER STOREHOUSE UST AREA
NORTH FOND DU LAC YARD
NORTH FOND DU LAC, WISCONSIN**

Boring ID	Sample No.	Depth (Feet)	Description	PID	Wet	Lead mg/kg
GP-1 (8-23-02)	S-1	0 - 2	Fill: Brown to Black Course Gravel Trace Topsoil, Cinders	<1	Moist	87.2
	S-2	2 - 4	Fill: Brown to Black Course Sand Trace Topsoil, Cinders	<1	Moist	1960
	S-3	4 - 6	Fill: Brown to Black Clay Trace Topsoil	<1	Moist	18.9
	S-4	6 - 8	Fill: Brown to Black Course Sand Trace Topsoil, Cinders	8	Wet	676
	S-5	8 - 10	Red Brown Silty Clay	<1	Wet	8.46
GP-2 (8-23-02)	S-1	0 - 2	Fill: Course Gravel	<1	Moist	<1.30
	S-2	2 - 4	Fill: Course Gravel	<1	Wet	<1.40
	S-3	4 - 6	Fill: Course Gravel	<1	Wet	7.55
	S-4	6 - 8	Red Brown Silty Clay	<1	Moist	4.90
GP-3 (8-23-02)	S-1	0 - 2	Fill: Brown to Black Course Sand Trace Topsoil, Cinders	<1	Moist	60.7
	S-2	2 - 4	Fill: Brown to Black Course Sand Trace Topsoil, Cinders	<1	Wet	2410
	S-3	4 - 6	Brown Silty Clay	<1	Moist	12.9
	S-4	6 - 6.5	Brown Silty Clay	<1	Moist	12.8
GP-4 (8-23-02)	S-1	0 - 2	Fill: Brown Course Sand Trace Cinders	<1	Moist	40.8
	S-2	2 - 4	Fill: Brown Course Sand Trace Cinders	<1	Moist	3750
	S-3	4 - 6	No Sample Recovered	--	--	--
	S-4	6 - 6.5	Brown Silty Clay	<1	Moist	34.4
GP-5 (8-23-02)	S-1	0 - 2	Fill: Black Course Sand Trace Cinders	<1	Moist	54.3
	S-2	2 - 4	Fill: Black Course Sand Trace Cinders	<1	Moist	1770
GP-6 (6/8/04)	S-1	0 - 2	Fill: Cinders	NS	Moist	10.9
	S-2	2 - 5	Fill: Cinders and Gravel	NS	Wet	969
	S-3	5 - 6	Reb Brown Silty Clay Trace Roots	NS	Moist	144
GP-7 (6/8/04)	S-1	0 - 2	Fill: Course Gravel	NS	Moist	24.1
	S-2	2 - 4	Fill: Dark Brown Silty Clay with Some Gravel	NS	Wet	1560
	S-3	4 - 6	Red Brown Silty Clay	NS	Wet	76.3
GP-8 (6/8/04)	S-1	0 - 2	Fill: Cinders	NS	Moist	274
	S-2	2 - 4	Fill: Cinders and Foundry Sand	NS	Moist	3010
	S-3	4 - 4.5	Fill: Woodchips	NS	Wet	NA
	S-4	4.5 - 6	Red Brown Silty Clay	NS	Moist	20.8
GP-9 (6/8/04)	S-1	0 - 2	Fill: Course Gravel with Trace Cinders	NS	Moist	184
	S-2	2 - 4	Fill: Course Gravel with Trace Cinders	NS	Moist	549
	S-3	4 - 6	Fill: Black Course Sand	NS	Wet	NA
	S-4	6 - 6.5	Fill: Black Course Sand	NS	Wet	NA
	S-5	6.5 - 8	Red Brown Silty Clay	NS	Moist	18.2
GP-10 (6/8/04)	S-1	0 - 2	Fill: Foundry Sand	NS	Moist	11.7
	S-2	2 - 5	Fill: Light brown Silty Clay with Trace Cinders	NS	Moist	10.5
	S-3	5 - 5.5	Fill: Cinders	NS	Wet	NA
	S-4	5.5 - 6	Brown Silty Clay with Trace Roots	NS	Moist	8.95
GP-11 (6/8/04)	S-1	0 - 2	Fill: Foundry Sand and Cinders	NS	Moist	NA
	S-2	2 - 4	Fill: Foundry Sand and Cinders	NS	Moist	NA
	S-3	4 - 5	Fill: Light Brown Silty Clay with Trace Gravel and Cinders	NS	Moist	NA
	S-4	5 - 6	Brown Silty Clay with Trace Roots	NS	Wet	NA
GP-12 (6/8/04)	S-1	0 - 2	Fill: Orange to Black Foundry Sand	NS	Moist	NA
	S-2	2 - 4	Fill: Brown Silty Clay with Trace Cinders	NS	Moist	NA
	S-3	4 - 6	Fill: Brown Silty Clay with Trace Cinders	NS	Moist	NA
	S-4	6 - 8	Brown Silty Clay with Trace Roots	NS	Moist	NA
GP-13 (6/8/04)	S-1	0 - 2	Fill: Brown Silty Clay with Trace Cinders	NS	Moist	NA
	S-2	2 - 4	Fill: Brown Silty Clay with Trace Cinders	NS	Moist	NA
	S-3	4 - 6	Brown Silty Clay	NS	Moist	NA
GP-14 (6/8/04)	S-1	0 - 2	Fill: Dark Brown Silty Sand Some Fine Gravel	NS	Moist	6.22
	S-2	2 - 4	Red Brown Silty Clay	NS	Moist	14.6
GP-15 (6/8/04)	S-1	0 - 2	Fill: Dark Brown Silty Sand and Gravel	NS	Moist	2.04
	S-2	2 - 4	Red Brown Silty Clay	NS	Wet	5.9
WAC NR 720.11 Non-Industrial Direct Contact Generic RCL						50
WAC NR 720.11 Industrial Direct Contact Generic RCL						500

NOTES:

WAC = Wisconsin Administrative Code

mg/kg = milligrams per kilogram

2960 = Exceeds NR 720 industrial direct contact pathway

NS = Not Screened with PID

NA = Not Analyzed

**TABLE 5
FORMER STOREHOUSE UST AREA
SOIL QUALITY DATA SUMMARY
WISCONSIN CENTRAL, LTD. - NORTH FOND DU LAC YARD
NORTH FOND DU LAC, WISCONSIN
WDNR BRRTS No. 02-20-297826
AECOM Project No. 60135737**

	Sample Location:		MW-104	MW-104	MW-106	MW-104A	MW-104A	ET-B-22	ET-B-22	ET-B-23	ET-B-23	
	Sample Depth:		2-4	4-6	2-4	0-2	2-4	3-5	8-10	3-6	8-10	
	Sample Date:		1/6/2004	1/6/2004	1/6/2004	1/13/2004	1/13/2004	3/2/06	3/2/06	3/2/06	3/2/06	
	Sampling Company:		TRC	TRC	TRC	TRC	TRC	AECOM	AECOM	AECOM	AECOM	
Volatile Organic Compounds (µg/kg):	NR 720 ⁽¹⁾	NR746 ⁽²⁾	NONE DETECTED				NA	NA	<LOD	NA	NONE DETECTED	
Petroleum Hydrocarbons (mg/kg):												
Diesel Range Organics	250	NL	<4.1	<4.5	NA	NA	NA	NA	NA	NA	NA	
Metals (mg/kg):												
Lead	500	NL	9.61	NA	17	755	1,250	12	5.4	12	7.7	
Polynuclear Aromatic Hydrocarbons (µg/kg):⁽²⁾												
Naphthalene	400/110,000	2,700	6.2 J	<14	<12	NA	NA	<5.2	NA	NA	NA	
Phenanthrene	1,800/390,000	NL	6.2 J	<14	<13	NA	NA	<3.8	NA	NA	NA	

Notes:

mg/kg - milligrams per kilogram.

NA - Not analyzed.

NL - Standard not listed.

µg/kg - micrograms per kilogram.

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

Shading and bold numbers indicate a standard has been exceeded.