

## **GIS Registry Disclaimer**

This case was closed by the DNR prior to August 1, 2002, when DNR began adding approved cleanups with residual soil contamination into the GIS Registry. Certain documents that are currently required by ch. NR 726, Wis. Adm. Code may therefore not be included in this packet as they were unavailable at the time the original case was closed.

The information contained in this document was assembled by DNR from a previously closed case file, and added to the GIS Registry to provide the public with information on closed sites with residual soil and/or groundwater contamination remaining above applicable state standards.

# GIS REGISTRY

## Cover Sheet

July, 2008  
(RR 5367)

### Source Property Information

**BRRTS #:**

**ACTIVITY NAME:**

**PROPERTY ADDRESS:**

**MUNICIPALITY:**

**PARCEL ID #:**

**CLOSURE DATE:**

**FID #:**

**DATCP #:**

**COMM #:**

#### \*WTM COORDINATES:

X:  Y:

*\* 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)

#### Contaminated Media:

Groundwater Contamination > ES (236)

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties  
see "Impacted Off-Source Property")*

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

Contamination in ROW

Off-Source Contamination

*(note: for list of off-source properties  
see "Impacted Off-Source Property")*

#### Land Use Controls:

Soil: maintain industrial zoning (220)

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

Structural Impediment (224)

Site Specific Condition (228)

Cover or Barrier (222)

*(note: maintenance plan for  
groundwater or direct contact)*

Vapor Mitigation (226)

Maintain Liability Exemption (230)

*(note: local government or economic  
development corporation)*

**Monitoring wells properly abandoned? (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 #:  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.)
- 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 8.5 x 14 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**                      **Title: Site Location Map**
  - 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 #: 2**                      **Title: Site Layout**
  - 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 #: 3**                      **Title: Summary of Soil Sample Analytical Results**

BRRTS #: 02-09-175743

ACTIVITY NAME: Wis 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 #: 6**                      **Title: Schematic Cross-Section**

**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 #: 4**                      **Title: Summary of Groundwater Sample Analytical Results**

- 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 #: 5**                      **Title: Groundwater Elevation Contour Map (April 15, 1999)**

**Figure #:**                      **Title:**

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

Tables must be no larger than 8.5 x 14 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, 2**                      **Title: Summary of Soil Sample 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 #: 3, 4**                      **Title: Summary of Groundwater Sample Analytical Results**

- 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 #: 6**                      **Title: Summary of Groundwater Elevation Data**

**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).

BRRTS #: 02-09-175743

ACTIVITY NAME: Wis Central Ltd Refueling Area

## NOTIFICATIONS

### Source Property

- 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.

- 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.
- 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:**

TR



**State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES**

Scott McCallum, Governor  
Darrell Bazzell, Secretary  
Scott A. Humrickhouse, Regional Director

Baldwin Service Center  
990 Hillcrest Street  
Suite 104  
Baldwin, Wisconsin 54002  
Telephone 715-684-2914  
FAX 715-684-5940

January 8, 2002

Mr. Geoffrey Nokes  
Wisconsin Central Ltd.  
P.O. Box 5062  
Rosemont, IL 60017-5062

**SUBJECT: Final Case Closure By Project Manager with Conditions Met  
Chippewa Falls Rail Yard – Former Refueling Area,  
214 Fleet Street, WDNR BRRTS #: 02-09-175743**

Dear Mr. Nokes:

On, August 31, 1999, your site as described above was reviewed for closure by the Department of Natural Resources. The Department reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. On September 2, 1999, you were notified that conditional closure was granted to this case.

On December 17, 2001, the Department received correspondence indicating that you have complied with the conditions of closure. I received both the recorded Deed Notification and the well abandonment forms. Based on the correspondence and data provided, it appears that your site has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code. The Department considers this case closed and no further investigation, remediation or other action is required at this time.

Please be aware that this case may be reopened pursuant to s. NR726.09, 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 the environment.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at 715 684-2914 ext. 117.

Sincerely,

Patrick J. Collins  
Hydrogeologist  
Bureau for Remediation & Redevelopment

cc: Daniel Pelczar - Key

FILE



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor  
George E. Meyer, Secretary  
Scott A. Humrickhouse, Regional Director

West Central Region Headquarters  
1300 W. Clairemont Avenue  
PO Box 4001  
Eau Claire, Wisconsin 54702-4001  
Telephone 715-839-3700  
FAX 715-839-6076  
TDD 715-839-2786

September 2, 1999

Site ID# 02-09-175743  
Chippewa County

Mr. Geoffrey C. Nokes  
P.O. Box 5062  
Rosemont, IL 60017-5062

**SUBJECT: Conditional Closure For the Chippewa Falls Refueling Area  
Located at 214 Fleet Street, Chippewa Falls, WI**

Dear Mr. Nokes:

The West Central Region Close-Out Committee has reviewed your site for closure. The committee recommended that this site be closed. Closure is contingent on the abandonment of all of the monitoring at the above-captioned site in accordance with NR 141, Wisconsin Administrative Code. Please contact your consultant concerning the necessary abandonment and submittal of proper abandonment forms to this office.

In addition, a deed affidavit complying with NR 726.05, (8),(b), Wisconsin Administrative Code, must be recorded at the office of the register of deeds for the county in which the property is located. The affidavit must specify the legal description of the property and the location of residual contamination on the property, and give notice to any prospective purchaser of the residual contamination. A copy of a model deed affidavit is enclosed for your use. Final closure is contingent on the receipt of the aforementioned documentation.

if you have any questions concerning this letter, please contact me at (715) 839-3775.

Sincerely,

John R. Grump  
Hydrogeologist

c: Bill Evans  
Larry Wehrheim, Key Engineering Group, Ltd.



Quality Natural Resources Management  
Through Excellent Customer Service





**ATTACHMENT #1  
LEGAL DESCRIPTION**

A portion of land located in part of Government Lot 3, Section 12, Township 28 North, Range 9 West, City of Chippewa Falls, Wisconsin described as follows:

Commencing at the intersection of the Easterly line of said Government Lot 3 and the Northerly right of way line of the Wisconsin Central Limited Railroad, said point being the POINT OF BEGINNING;

Thence S 81°47'09" W along the Northerly right of way line of the Wisconsin Central Limited Railroad, a distance of 35.25 feet to a Point on the Westerly line of Westwood Drive;

Thence continuing S 81°47'09" W along said Northerly right of way line, a distance of 260.39 feet;

Thence S 01°26'06" E, a distance of 157.75 feet more or less to a point on the Southerly right of way line of the Wisconsin Central Limited Railroad;

Thence N 81°47'09" E along said right of way line, a distance of 187.56 feet;

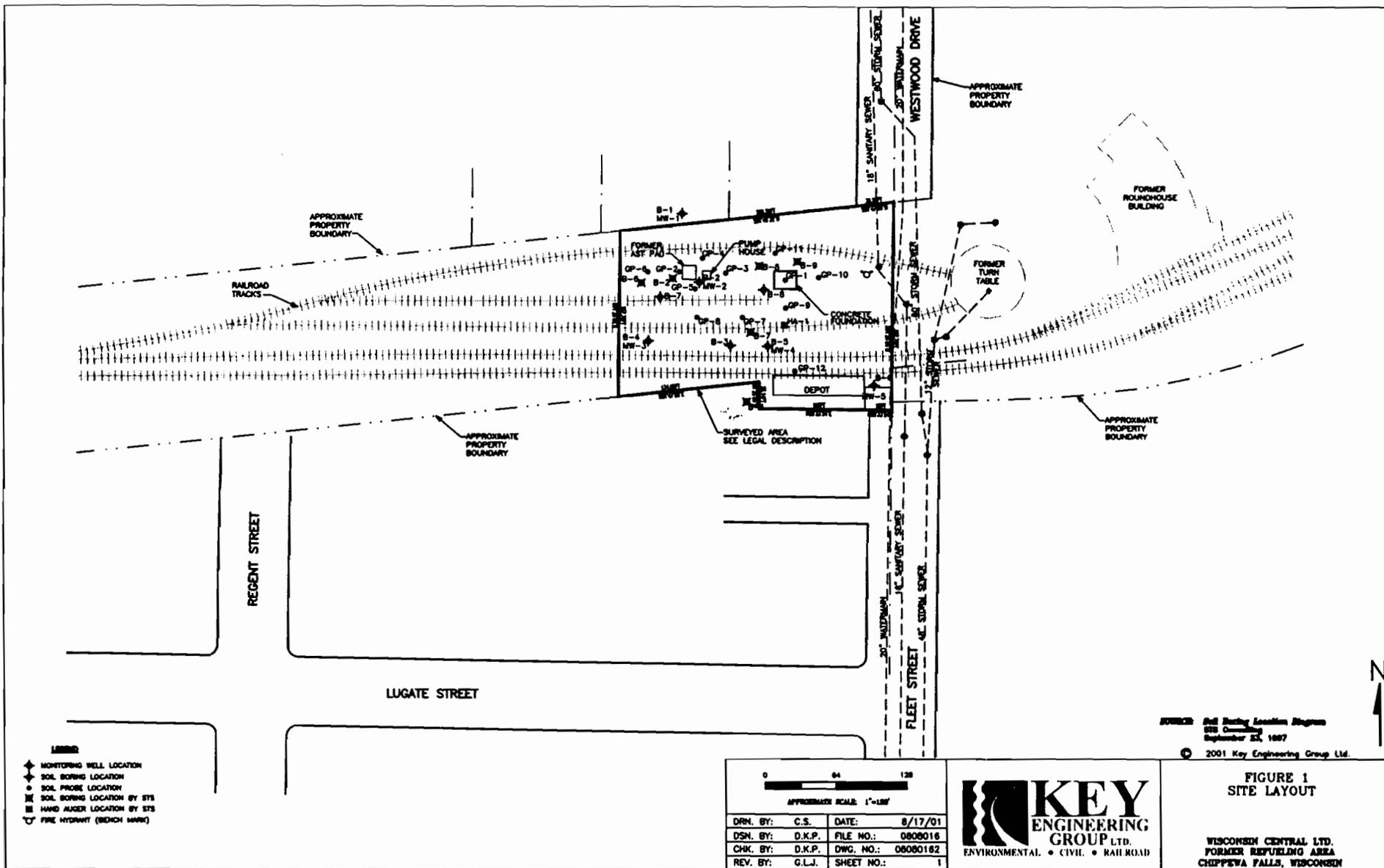
Thence S 01°26'06"E along said right of way line, a distance of 25.14 feet;

Thence N 88°33'54"E along said right of way line, a distance of 100.00 feet to a point on the Westerly line of Fleet Street;

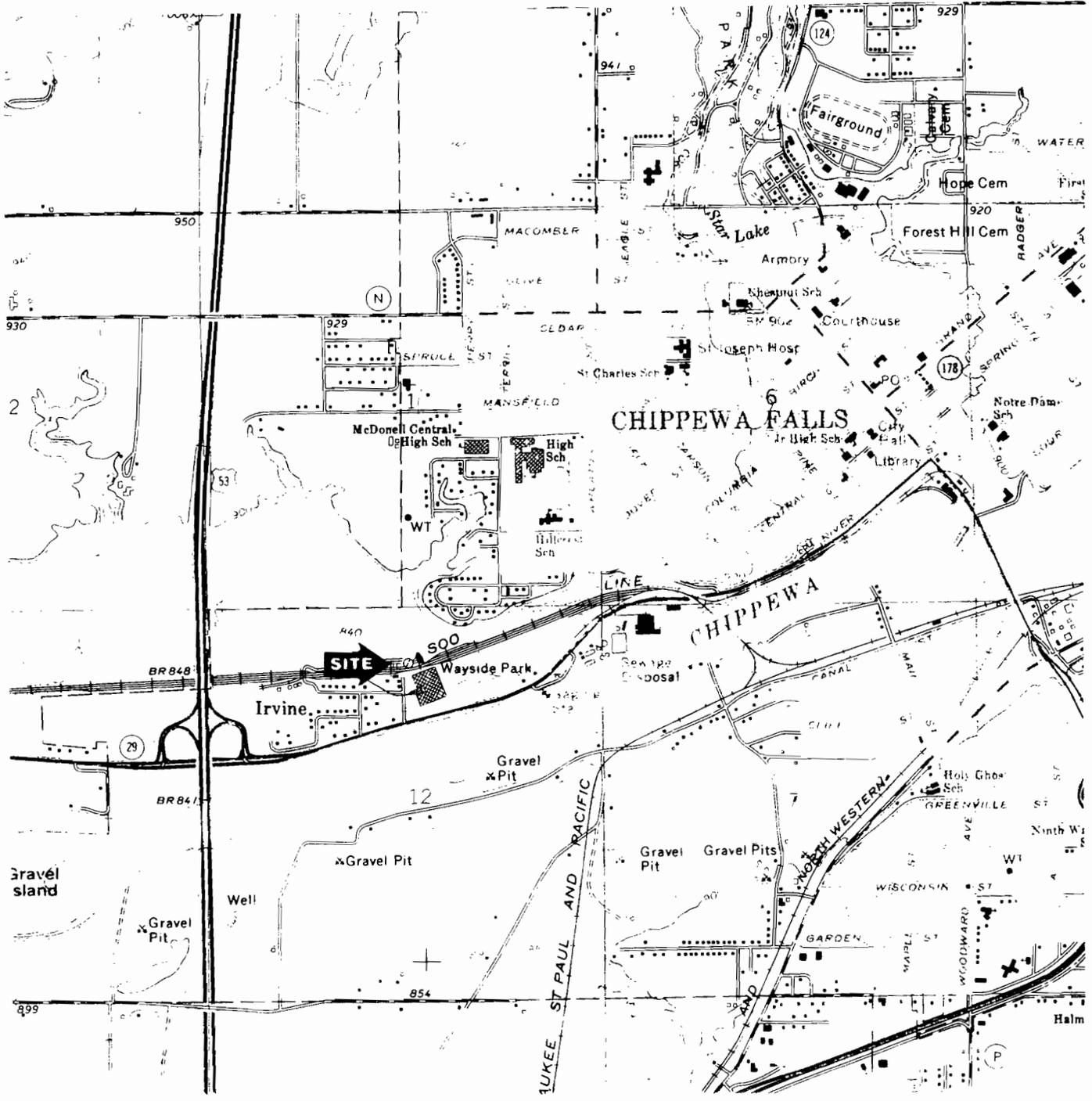
Thence continuing N 88°33'54"E, a distance of 25.00 feet to a point on the Easterly line of said Government Lot 3;

Thence N 01°26'06"W along the Easterly line of said Government Lot 3, a distance of 197.79 feet to the POINT OF BEGINNING.

Said parcel contains 44,888 square feet or 1.03 acres and is subject to all easements, roadways or other matters of public record.







N  
 SOURCE: USGS Chippewa Falls, Wisconsin Quadrangle Map  
 Topographic Map 1972  
 Photorevised 1981

© 1998 Key Engineering Group Ltd.

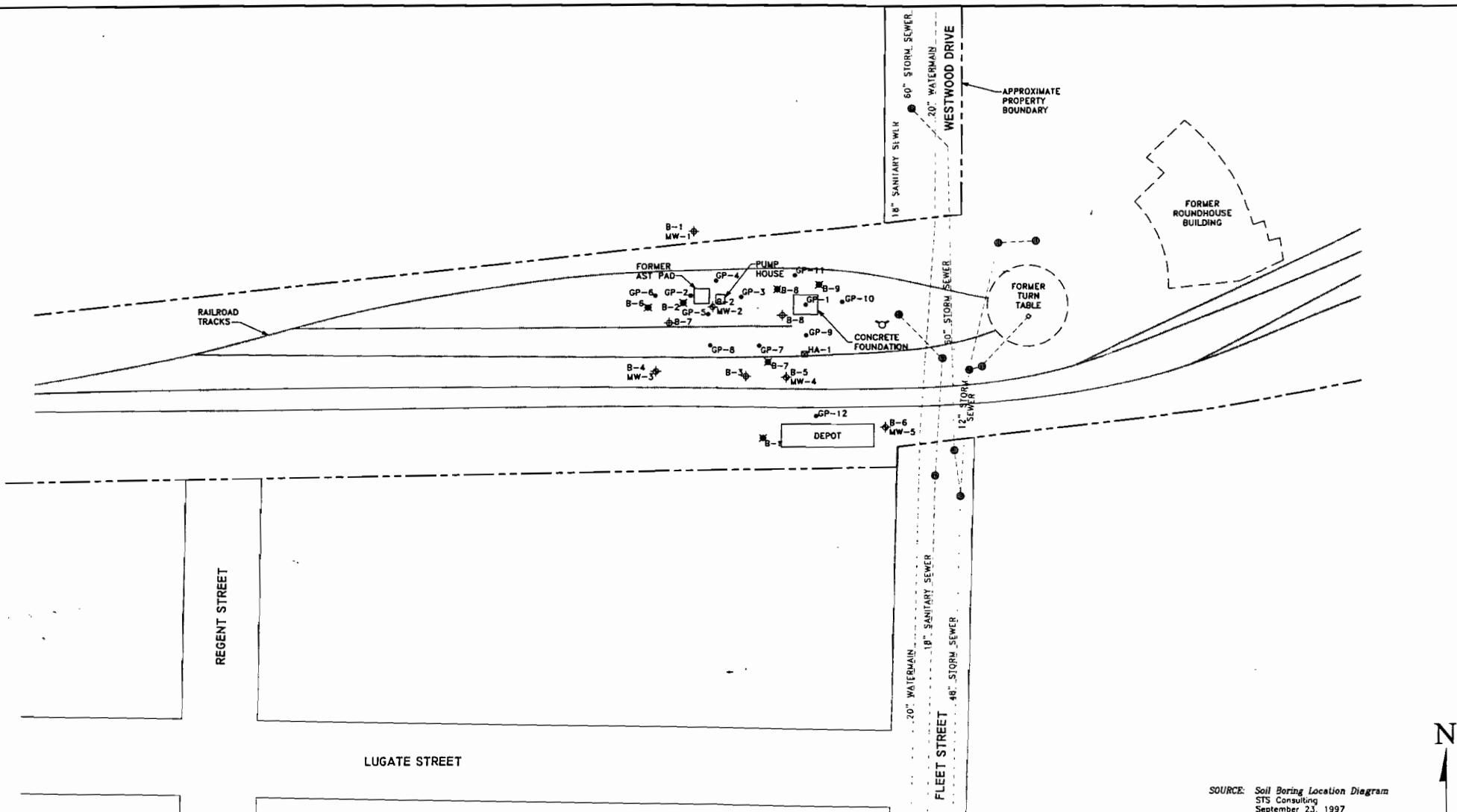
0 1000 2000  
 SCALE: 1"=2000'



FIGURE 1  
 SITE LOCATION MAP

DRN. BY:	J.J.J.	DATE:	06/21/99
DSN. BY:	L.J.W.	FILE NO.:	0808016
CHK. BY:	L.J.W.	DWG. NO.:	08080161
REV. BY:	G.L.J.	SHEET NO.:	1

SITE INVESTIGATION REPORT  
 WISCONSIN CENTRAL LTD.  
 FORMER REFUELING AREA  
 CHIPPEWA FALLS, WISCONSIN



- LEGEND**
- ◆ MONITORING WELL LOCATION
  - ⊕ SOIL BORING LOCATION
  - SOIL PROBE LOCATION
  - ⊗ SOIL BORING LOCATION BY STS
  - ⊙ HAND AUGER LOCATION BY STS
  - ⊕ FIRE HYDRANT (BENCH MARK)

0 40 80  
 APPROXIMATE SCALE: 1"=80'

DRN. BY:	J.J.J.	DATE:	06/07/99
DSN. BY:	G.L.J.	FILE NO.:	0808016
CHK. BY:	G.L.J.	DWG. NO.:	08080162
REV. BY:	K.W.W.	SHEET NO.:	2

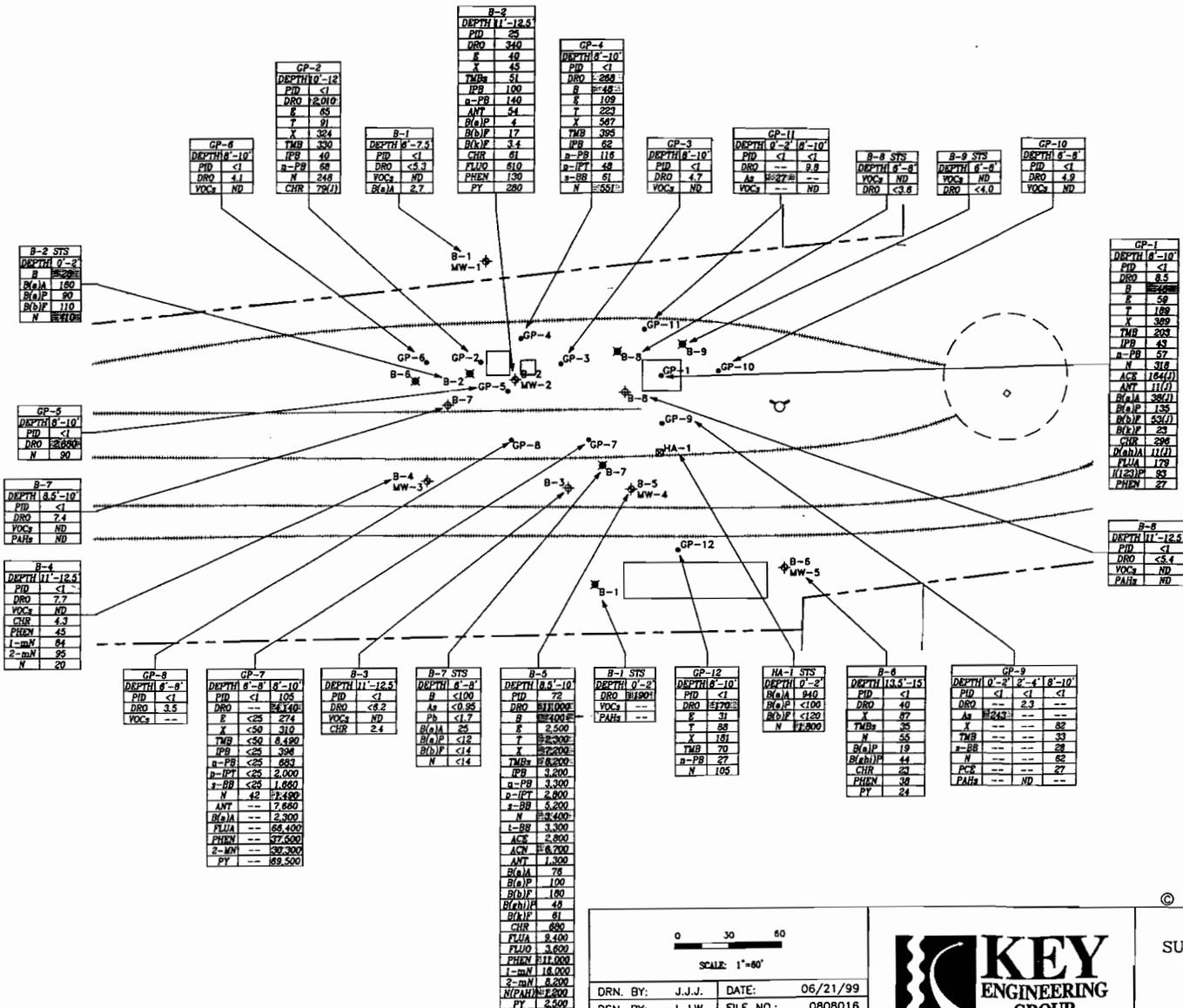


SOURCE: Soil Boring Location Diagram  
 STS Consulting  
 September 23, 1997  
 © 1999 Key Engineering Group Ltd.

**FIGURE 2**  
**SITE LAYOUT**

SITE INVESTIGATION REPORT  
 WISCONSIN CENTRAL LTD.  
 FORMER REFUELING AREA  
 CHIPPEWA FALLS, WISCONSIN





**NOTES**

F.I.D.: PHOTOMETRICAL DETECTOR L.U.  
L.U.: INSTRUMENT UNITS  
ORG: OXIDIZABLE ORGANICS mg/kg  
AC: AROMATICS mg/kg  
VOCs: VOLATILE ORGANIC COMPOUNDS mg/kg  
E: ETHYLENE mg/kg  
T: TOLUENE mg/kg  
E: ETHYLBENZENE mg/kg  
X: XYLENES mg/kg  
TMB: TOTAL TRIMETHYLBENZENES mg/kg  
IPB: ISOPROPYLBENZENE mg/kg  
n-PB: n-PROPYLBENZENE mg/kg  
p-PT: p-ISOPROPYLBENZENE mg/kg  
n-BB: n-BUTYLBENZENE mg/kg  
l-BB: l-BUTYLBENZENE mg/kg  
N: NAPHTHALENE mg/kg  
PCB: TETRACHLOROBENZENE mg/kg  
ACR: ACENAPHTHENE mg/kg  
ANT: ANTHRACENE mg/kg  
B(a)A: BENZO(a)ANTHRAcene mg/kg  
B(a)P: BENZO(a)PYRENE mg/kg  
B(b)F: BENZO(b)FLUORANTHENE mg/kg  
B(b)F: BENZO(b)FLUORANTHENE mg/kg  
CHR: CHRISTIANE mg/kg  
D(b)A: DEBENZO(a)ANTHRAcene mg/kg  
FlUA: FLUORENE mg/kg  
FlUA: FLUORENE mg/kg  
1-NT: 1-NITRIL NAPHTHALENE mg/kg  
2-NT: 2-NITRIL NAPHTHALENE mg/kg  
PT: PYRENE mg/kg  
mg/kg: MICROGRAMS PER KILOGRAM  
μg/kg: MICROGRAMS PER KILOGRAM  
<: LESS THAN  
--: NOT ANALYZED  
ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS  
(J): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION

**LEGEND**

◆ MONITORING WELL LOCATION  
⊕ SOIL BORING LOCATION  
● SOIL PROBE LOCATION  
⊗ SOIL BORING LOCATION BY STS  
⊠ HAND AUGER LOCATION BY STS  
□ CONCENTRATION GREATER THAN NR 720  
□ GENERIC RESIDUAL CONTAMINANT LEVEL (GRL)

0 30 60  
SCALE: 1"=80'

DRN. BY: J.J.J. DATE: 06/21/99  
DSN. BY: L.J.W. FILE NO.: 0808016  
CHK. BY: L.J.W. DWG. NO.: 8080163  
REV. BY: G.L.J. SHEET NO.: 3

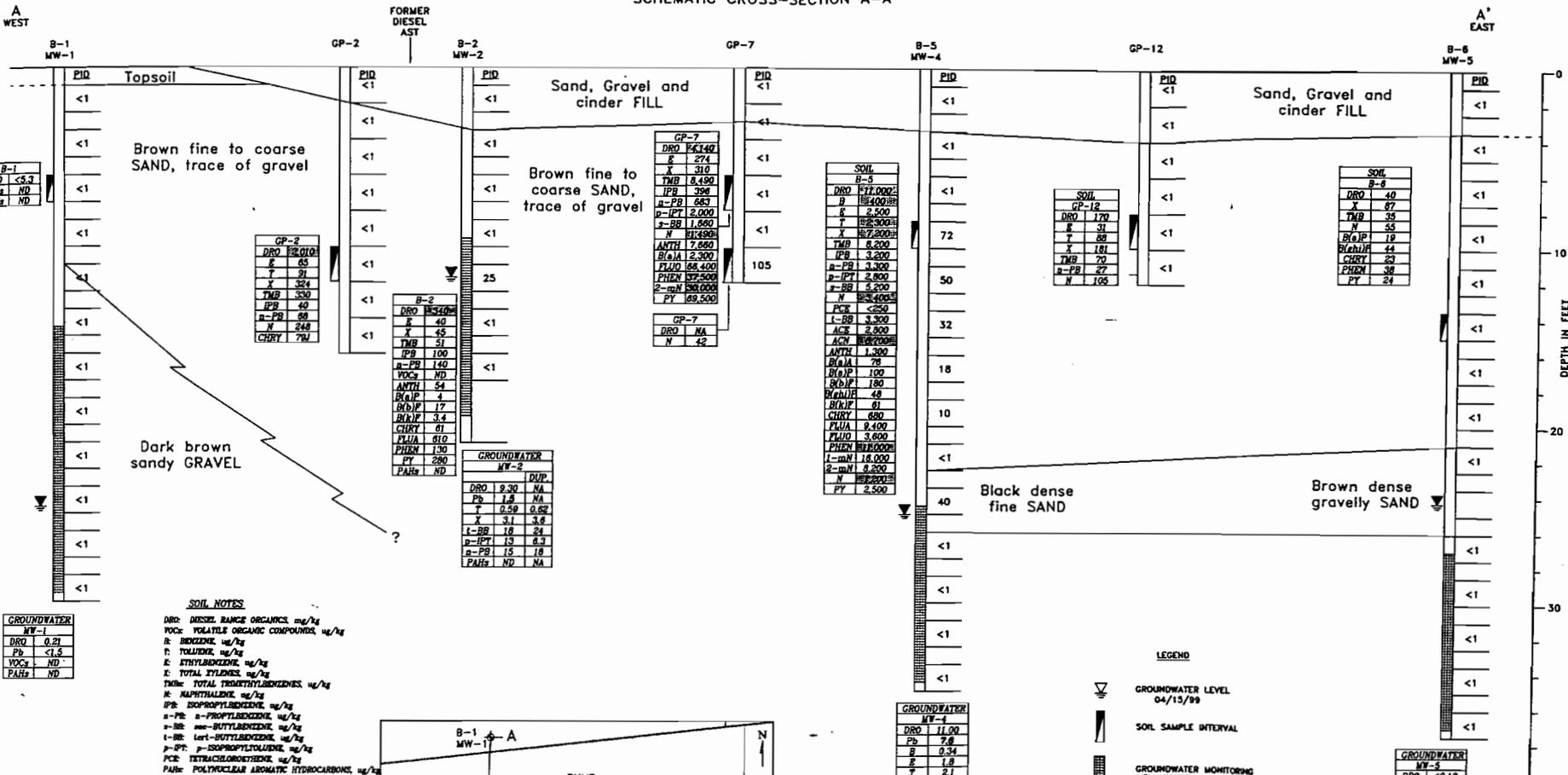


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FIGURE 3  
SUMMARY OF SOIL SAMPLE  
ANALYTICAL RESULTS

SITE INVESTIGATION REPORT  
WISCONSIN CENTRAL LTD.  
FORMER REFULFILL AREA  
CHIPPEWA FALLS, WISCONSIN

SCHMATIC CROSS-SECTION A-A'

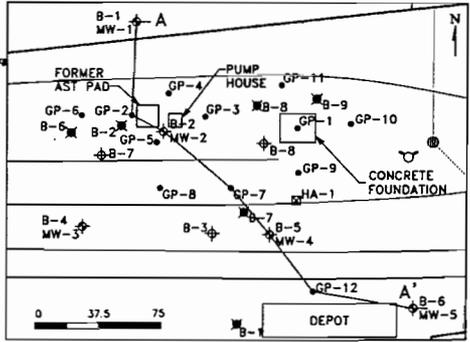


SOIL NOTES

- DRO: DIESEL RANGE ORGANICS ug/kg
- VOCs: VOLATILE ORGANIC COMPOUND ug/kg
- R: BENZENE ug/kg
- T: TOLUENE ug/kg
- E: ETHYLBENZENE ug/kg
- X: TOTAL XYLENES ug/kg
- TMB: TOTAL TRIMETHYLBENZENES ug/kg
- N: NAPHTHALENE ug/kg
- IPB: ISOPROPYLBENZENE ug/kg
- a-PR: a-PROPYLBENZENE ug/kg
- m-BB: m-BUTYLBENZENE ug/kg
- l-BB: l-BUTYLBENZENE ug/kg
- p-PT: p-ISOPROPYLTOLUENE ug/kg
- PCB: POLYCHLORINATED BENZENE ug/kg
- PAHs: POLYCYCLIC AROMATIC HYDROCARBONS ug/kg
- ACN: ACENAPHTHYLENE ug/kg
- ANTH: ANTHRACENE ug/kg
- B(a)A: BENZO(A)ANTHRACENE ug/kg
- B(a)P: BENZO(A)PYRENE ug/kg
- B(b)P: BENZO(B)FLUORANTHENE ug/kg
- B(k)P: BENZO(K)FLUORANTHENE ug/kg
- B(i)P: BENZO(I)FLUORANTHENE ug/kg
- CHRY: CHRYSENE ug/kg
- FLUA: FLUORANTHENE ug/kg
- FLUO: FLUORENE ug/kg
- 1-mN: 1-METHYL NAPHTHALENE ug/kg
- 2-mN: 2-METHYL NAPHTHALENE ug/kg
- PHEN: PHENANTHRENE ug/kg
- PT: PYRENE ug/kg
- MUG: MULLIGRAMS PER KILOGRAM ug/kg
- MC: MICROGRAMS PER KILOGRAM ug/kg
- <: LESS THAN
- NA: NOT ANALYZED
- ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
- EX: EXCEED THE GENERIC RCL'S FOR PROTECTION OF GROUNDWATER
- RES: RESULTS BETWEEN THE LEVEL OF DETECTION AND THE LIMIT OF QUANTIFICATION

GROUNDWATER NOTES

- DRO: DIESEL RANGE ORGANICS ug/kg
- VOCs: VOLATILE ORGANIC COMPOUND ug/kg
- R: BENZENE ug/kg
- T: TOLUENE ug/kg
- E: ETHYLBENZENE ug/kg
- X: TOTAL XYLENES ug/kg
- TMB: TOTAL TRIMETHYLBENZENES ug/kg
- N: NAPHTHALENE ug/kg
- IPB: ISOPROPYLBENZENE ug/kg
- a-PR: a-PROPYLBENZENE ug/kg
- m-BB: m-BUTYLBENZENE ug/kg
- l-BB: l-BUTYLBENZENE ug/kg
- p-PT: p-ISOPROPYLTOLUENE ug/kg
- PCB: POLYCHLORINATED BENZENE ug/kg
- PAHs: POLYCYCLIC AROMATIC HYDROCARBONS ug/kg
- ACN: ACENAPHTHYLENE ug/kg
- ANTH: ANTHRACENE ug/kg
- B(a)A: BENZO(A)ANTHRACENE ug/kg
- B(a)P: BENZO(A)PYRENE ug/kg
- B(b)P: BENZO(B)FLUORANTHENE ug/kg
- B(k)P: BENZO(K)FLUORANTHENE ug/kg
- B(i)P: BENZO(I)FLUORANTHENE ug/kg
- CHRY: CHRYSENE ug/kg
- FLUA: FLUORANTHENE ug/kg
- FLUO: FLUORENE ug/kg
- 1-mN: 1-METHYL NAPHTHALENE ug/kg
- 2-mN: 2-METHYL NAPHTHALENE ug/kg
- PHEN: PHENANTHRENE ug/kg
- PT: PYRENE ug/kg
- MUG: MULLIGRAMS PER KILOGRAM ug/kg
- MC: MICROGRAMS PER KILOGRAM ug/kg
- <: LESS THAN
- NA: NOT ANALYZED
- ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
- EX: EXCEED THE WELLS 140 PAL



CROSS-SECTION LOCATION MAP

LEGEND

- GROUNDWATER LEVEL 04/13/99
- SOIL SAMPLE INTERVAL
- GROUNDWATER MONITORING WELL SCREEN INTERVAL
- CONCENTRATION GREATER THAN: NR 728 GENERIC RESIDUAL CONTAMINANT LEVEL (SOL) or NR 140 ENFORCEMENT STANDARD (GROUNDWATER)
- CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (GROUNDWATER)

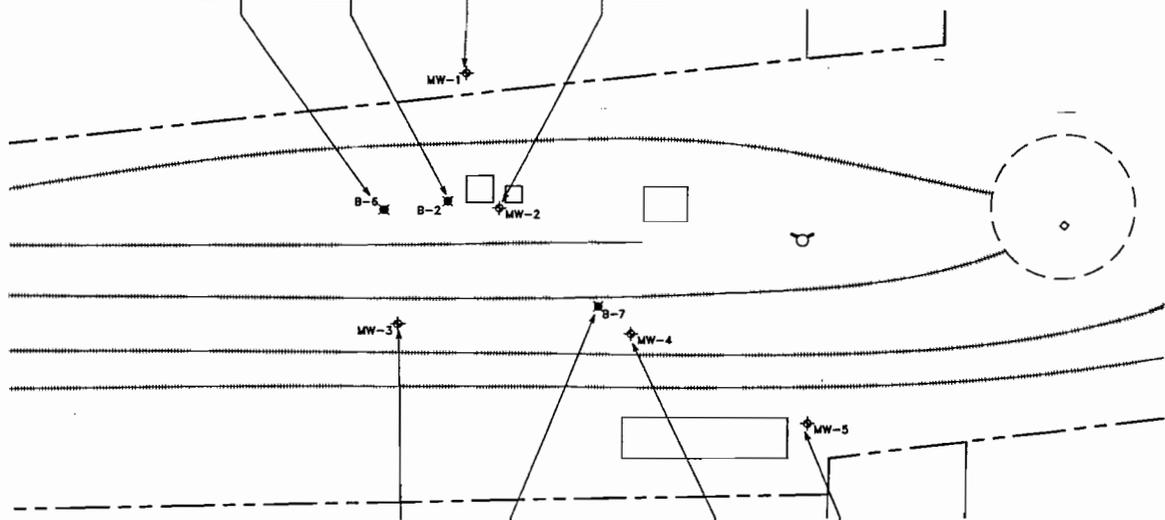
DRN. BY:	J.J.J.	DATE:	06/22/99
DSN. BY:	L.J.W.	FILE NO.:	080816
CHK. BY:	L.J.W.	DWG. NO.:	80816CS
REV. BY:	G.L.J.	SHEET NO.:	7



FIGURE 6  
SCHMATIC CROSS SECTION

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B-6 STS		B-2 STS		MW-1		MW-2	
DATE	19/17/97	DATE	19/17/97	DATE	12/17/99	DATE	12/17/99
DOC	ND	As	<5.2	DOC	ND	DRD	0.30
1-mM	0.59	Pb	<1.6	1-mM	0.21	Pb	1.5
2-mM	0.45	CHR	ND	2-mM	<1.5	T	0.59
PHEN	0.062	FLUA	0.10	PHEN	ND	X	3.1
		PT	0.13	PAHs	ND	1-BB	1.0
						IPB	ND
						P-PT	1.3
						n-PR	1.5
						PAHs	ND



**NOTES**  
 DRD: DISSOLVED RANCID ORGANICS mg/l  
 As: DISSOLVED ARSENIC mg/l  
 Pb: DISSOLVED LEAD mg/l  
 VOCs: VOLATILE ORGANIC COMPOUNDS mg/l  
 B: BENZENE mg/l  
 E: ETHYLBENZENE mg/l  
 T: TOLUENE mg/l  
 TMB: TOTAL TRIMETHYLBENZENES mg/l  
 R: NAPHTHALENE mg/l  
 X: TOTAL XYLENES mg/l  
 1-BB: m-1-BUTYLBENZENE mg/l  
 1-PR: ISOPROPYLBENZENE mg/l  
 P-PT: p-PROPYLENEDIOL mg/l  
 n-PR: n-PROPYLENEDIOL mg/l  
 CHR: CHRYSENE mg/l  
 1-mM: 1-METHYLNAPHTHALENE mg/l  
 2-mM: 2-METHYLNAPHTHALENE mg/l  
 FLUA: FLUORANTHENE mg/l  
 FLUD: FLUOROCENE mg/l  
 PHEN: PERENANTHRENE mg/l  
 PT: PYRENE mg/l  
 mg/l: MILLIGRAMS PER LITER  
 ug/l: MICROGRAMS PER LITER  
 <: LESS THAN  
 ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS

MW-3		B-7 STS		MW-4		MW-5	
DATE	12/18/99	DATE	19/17/97	DATE	12/18/99	DATE	12/18/99
DRD	1.60	Pb	2.5	DRD	11.00	DRD	<0.10
Pb	<1.5	E	3.2	Pb	7.8	Pb	<1.5
1-BB	0.85	T	0.70	T	0.34	VOCs	ND
IPB	0.87	X	28	E	1.8	PAHs	ND
n-PR	1.1	TMBs	31	T	2.1		
FLUD	1.7	N	9.3	TMBs	9.1		
PHEN	2.9	n-BB	2.5	X	6.7		
		IPB	1.5	n-BB	2.5		
		P-PT	4.4	1-BB	2.2		
		n-PR	1.2	IPB	2.2		
		As	6.7	n-PR	1.7		
		Pb	2.5	FLUA	5.4		
		BIaIA	0.36	FLUD	1.7		
		CHR	0.67	PHEN	1.8		
		FLUA	0.40				
		FLUD	3.9				
		1-mM	1.5				
		2-mM	0.7				
		PHEN	6.0				
		PT	1.3				

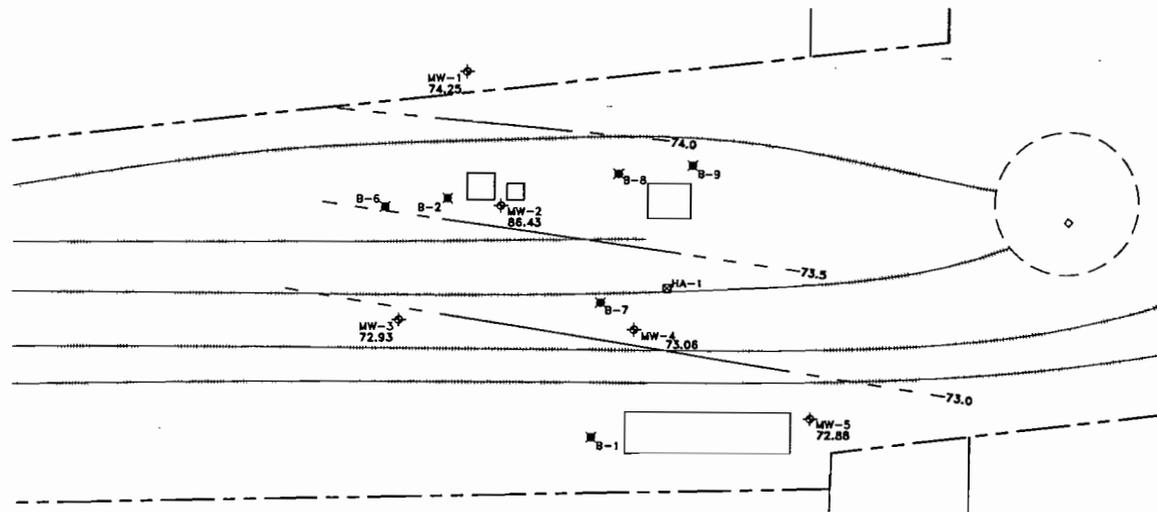
**LEGEND**  
 ◆ MONITORING WELL LOCATION  
 ✕ SOIL BORING LOCATION BY STS  
 ⊗ HANO AUGER LOCATION BY STS  
 [2.5] CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (PAL)  
 [15] CONCENTRATION GREATER THAN NR 140 ENFORCEMENT STANDARD

0 30 60  
 SCALE: 1"=60'

DRN. BY:	J.J.J.	DATE:	06/30/99
DSM. BY:	L.J.W.	FILE NO.:	0808016
CHK. BY:	L.J.W.	DWG. NO.:	8080164
REV. BY:	G.L.J.	SHEET NO.:	4



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**FIGURE 4**  
**SUMMARY OF GROUNDWATER**  
**SAMPLE ANALYTICAL RESULTS**  
 SITE INVESTIGATION REPORT  
 WISCONSIN CENTRAL LTD.  
 FORMER REFUELING AREA  
 CHIPPEWA FALLS, WISCONSIN



**LEGEND**

- ◆ MONITORING WELL LOCATION
- ✱ SOIL BORING LOCATION BY STS
- HAND AUGER LOCATION BY STS

\* WELL MW-2 IS APPARENTLY INSTALLED IN PERCHED GROUNDWATER AND THE WATER LEVEL IN THIS WELL WAS NOT USED TO CONSTRUCT THE WATER TABLE CONTOUR MAP

<p>SCALE: 1"=60'</p>			
DRN. BY:	J.J.J.	DATE:	06/07/99
DSN. BY:	L.J.W.	FILE NO.:	0808016
CHK. BY:	L.J.W.	DWG. NO.:	8080165
REV. BY:	G.L.J.	SHEET NO.:	5



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**FIGURE 5**  
GROUNDWATER ELEVATION  
CONTOUR MAP (APRIL 15, 1999)

SITE INVESTIGATION REPORT  
WISCONSIN CENTRAL LTD.  
FORMER REFUELING AREA  
CHIPPEWA FALLS, WISCONSIN



TABLE 1

## SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS AND ARSENIC

WISCONSIN CENTRAL, LTD.  
Former Refueling Area  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETER	SAMPLE IDENTIFICATION															RCLs			
	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-7		GP-8	GP-9		GP-10	GP-11		GP-12	PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)	DIRECT CONTACT (NON-INDUSTRIAL)	
Date Collected	9/16/98	9/16/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98	9/17/98			
Depth (feet)	8-10	10-12	8-10	8-10	8-10	8-10	8-10	6-8	6-8	0-2	2-4	8-10	6-8	0-2	8-10	8-10			
DRO (mg/kg)	8.5	2,010	4.7	268	2,880	4.1	4,140	NA	3.5	NA	2.3	NA	4.9	NA	9.8	170	100/250 (1)	---	---
PID (i.u.)	<1	<1	<1	<1	35	<1	105	<1	<1	<1	<1	<1	<1	<1	<1	<1	---	---	---
Arsenic (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	243	NA	NA	NA	27	NA	NA	---	18 (1)	0.039 (1)
Detected VOCs (ug/kg)																			
Benzene	46	<25	<25	46	<25	<25	<250	<25	<25	NA	NA	<25	<25	NA	<25	<25	5.5 (1)	---	---
Ethylbenzene	59	65	<25	109	<25	<25	274	<25	<25	NA	NA	<25	<25	NA	<25	31	2,900 (1)	---	---
Toluene	189	91	<25	223	<25	<25	<250	<25	<25	NA	NA	<25	<25	NA	<25	88	1,500 (1)	---	---
Xylenes	389	324	<50	587	<50	<50	310	<50	<50	NA	NA	82	<50	NA	<50	181	4,100 (1)	---	---
Trimethylbenzenes	203	330	<50	395	<50	<50	8,490	<50	<50	NA	NA	33	<50	NA	<50	70	---	---	---
Isopropylbenzene	43	40	<25	62	<25	<25	396	<25	<25	NA	NA	<25	<25	NA	<25	<25	---	---	---
n-Propylbenzene	57	68	<25	116	<25	<25	683	<25	<25	NA	NA	<25	<25	NA	<25	27	---	---	---
p-Isopropyltoluene	<25	<25	<25	48	<25	<25	2,000	<25	<25	NA	NA	<25	<25	NA	<25	<25	---	---	---
sec-Butylbenzene	<25	<25	<25	61	<25	<25	1,660	<25	<25	NA	NA	28	<25	NA	<25	<25	---	---	---
Naphthalene	318	248	<25	551	90	<25	1,490	42	<25	NA	NA	62	<25	NA	<25	105	400 (2)	110,000 (2)	20,000 (2)
Tetrachloroethene	<25	<25	<25	<25	<25	<25	<250	<25	<25	NA	NA	27	<25	NA	<25	<25	---	---	---
Tert-Butylbenzene	<25	<25	<25	<25	<25	<25	<250	<25	<25	NA	NA	<25	<25	NA	<25	<25	---	---	---

## Notes:

(1) - NR 720 generic RCLs

(2) - Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, Wisconsin Department of Natural Resources, RR-519-97, April 1997 (corrected)

--- - no established RCL

DRO - diesel range organics

i.u. - instrument units

mg/kg - milligrams per kilogram

NA - not analyzed

PID - photoionization detector

RCLs - residual contaminant levels

Shaded values exceed the generic RCLs

ug/kg - micrograms per kilogram

VOCs - volatile organic compounds

TABLE 1 (CONTINUED)

## SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS AND ARSENIC

WISCONSIN CENTRAL, LTD.  
Former Refueling Area  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETER	SAMPLE IDENTIFICATION													RCLs		
	B-1		B-2	B-3		B-4		B-5		B-6	B-7	B-8		PROTECTION OF GROUNDWATER	DIRECT CONTACT	
	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/17/99	2/17/99	2/17/99	2/17/99	2/17/99	2/17/99		(INDUSTRIAL)	(NON-INDUSTRIAL)
Date Collected	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/16/99	2/17/99	2/17/99	2/17/99	2/17/99	2/17/99	2/17/99			
Depth (feet)	1-2.5	6-7.5	11-12.5	1-2.5	11-12.5	1-2.5	11-12.5	1-2.5	8.5-10	13.5-15	8.5-10	1-2.5	11-12.5			
DRO (mg/kg)	NA	<5.3	340	NA	<6.2	NA	7.7	NA	11,000	40	7.4	NA	<5.4	100/250 (1)	—	—
Arsenic (mg/kg)	<2.6	NA	NA	<3.2	NA	<3.0	NA	<3.1	NA	NA	NA	<2.7	NA	—	0.039 (1)	1.6 (1)
Detected VOCs (µg/kg)																
Benzene	NA	<25	<25	NA	<25	NA	<25	NA	400	<25	<25	NA	<25	5.5 (1)	—	—
Ethylbenzene	NA	<25	40	NA	<25	NA	<25	NA	2,500	<25	<25	NA	<25	2,900 (1)	—	—
Toluene	NA	<25	<25	NA	<25	NA	<25	NA	2,300	<25	<25	NA	<25	1,500 (1)	—	—
Xylenes	NA	<25	45	NA	<25	NA	<25	NA	7,200	87	<25	NA	<25	4,100 (1)	—	—
Trimethylbenzenes	NA	<50	51	NA	<50	NA	<50	NA	8,200	35	<50	NA	<50	—	—	—
Isopropylbenzene	NA	<25	100	NA	<25	NA	<25	NA	3,200	<25	<25	NA	<25	—	—	—
n-Propylbenzene	NA	<25	140	NA	<25	NA	<25	NA	3,300	<25	<25	NA	<25	—	—	—
p-Isopropyltoluene	NA	<25	<25	NA	<25	NA	<25	NA	2,800	<25	<25	NA	<25	—	—	—
sec-Butylbenzene	NA	<25	<25	NA	<25	NA	<25	NA	5,200	<25	<25	NA	<25	—	—	—
Naphthalene	NA	<25	<25	NA	<25	NA	<25	NA	3,400	55	<25	NA	<25	400 (2)	110,000 (2)	20,000 (2)
Tetrachloroethene	NA	<25	<25	NA	<25	NA	<25	NA	<250	<25	<25	NA	<25	—	—	—
Tert-Butylbenzene	NA	<25	<25	NA	<25	NA	<25	NA	3,300	<25	<25	NA	<25	—	—	—

## Notes:

(1) - NR 720 generic RCLs

(2) - Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, Wisconsin Department of Natural Resources, RR-519-97, April 1997 (corrected)

— - no established RCL

DRO - diesel range organics

i.u. - instrument units

mg/kg - milligrams per kilogram

NA - not analyzed

RCLs - residual contaminant levels

Shaded values exceed the generic RCLs

µg/kg - micrograms per kilogram

VOCs - volatile organic compounds

TABLE 1 (CONTINUED)

## SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS AND ARSENIC

WISCONSIN CENTRAL, LTD.  
Former Refueling Area  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETER	SAMPLE IDENTIFICATION					RCLs		
	B-1*	B-2*	B-7*	B-8*	B-9*	PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)   (NON-INDUSTRIAL)	
Date Collected	9/17/97	9/17/97	9/17/97	9/17/97	9/17/97			
Depth (feet)	0-2	0-2	6-8	6-8	6-8			
DRO (mg/kg)	190	NA	NA	<3.6	<4.0	100/250 (1)	---	---
FID (i.u.)	1.8	<1	250	<1	1.5	---	---	---
Arsenic (mg/kg)	NA	NA	<0.95	NA	NA	---	0.039 (1)	1.6 (1)
Lead (mg/kg)	NA	NA	<1.7	NA	NA	500		
Detected VOCs (µg/kg)								
Benzene	NA	28	<100	<25	<25	5.5 (1)	---	---
Ethylbenzene	NA	86	<100	<25	<25	2,900 (1)	---	---
Toluene	NA	200	<100	<25	<25	1,500 (1)	---	---
Xylenes	NA	540	<100	<25	<25	4,100 (1)	---	---
Trimethylbenzenes	NA	500	<100	<25	<25	---	---	---
Isopropylbenzene	NA	NA	<100	<25	<25	---	---	---
n-Propylbenzene	NA	NA	<100	<25	<25	---	---	---
p-Isopropyltoluene	NA	NA	<100	<25	<25	---	---	---
sec-Butylbenzene	NA	NA	<100	<25	<25	---	---	---
Methyl tert-butyl Ether	NA	<25	<100	<25	<25	---	---	---
Naphthalene	NA	NA	<100	<25	<25	400 (2)	110,000 (2)	20,000 (2)
Tetrachloroethene	NA	NA	<100	<25	<25	---	---	---
Tert-Butylbenzene	NA	NA	<100	<25	<25	---	---	---

## Notes:

\* - soil boring done by STS Consultants September 1997

(1) - NR 720 generic RCLs

(2) - Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance, Wisconsin Department of Natural Resources, RR-519-97, April 1997 (corrected)

--- - no established RCL

DRO - diesel range organics

FID - flame ionization detector

i.u. - instrument units

mg/kg - milligrams per kilogram

NA - not analyzed

RCLs - residual contaminant levels

Shaded values exceed the generic RCLs

µg/kg - micrograms per kilogram

VOCs - volatile organic compounds

TABLE 2

## SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - POLYCYCLIC AROMATIC HYDROCARBONS

WISCONSIN CENTRAL, LTD.  
Former Refueling Area  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETER	SAMPLE IDENTIFICATION												RCL		
	GP-1	GP-2	GP-7	GP-9	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)	DIRECT CONTACT (NON-INDUSTRIAL)
Date Collected	9/16/98	9/16/98	9/17/98	9/17/98	2/16/99	2/16/99	2/16/99	2/16/99	2/17/99	2/17/99	2/17/99	2/17/99	NA	NA	NA
Depth (feet)	8-10	10-12	8-10	2-4	6-7.5	11-12.5	11-12.5	11-12.5	8.5-10	13.5-15	8.5-10	11-12.5	NA	NA	NA
PAHs (ug/kg)															
Acenaphthene	164 J	<712	<12,600	<63	<110	<110	<120	<110	2,800	<120	<110	<110	38,000	60,000,000	900,000
Acenaphthylene	<54	<617	<10,900	<54	<220	<220	<240	<220	6,700	<240	<220	<220	700	360,000	18,000
Anthracene	11 J	<116	7,660	<10	<0.55	54	<0.60	<0.55	1,300	<0.60	<0.55	<0.55	3,000,000	300,000,000	5,000,000
Benzo(a)anthracene	38 J	<14	2,300	<1.3	2.7	<0.55	<0.60	<0.55	76	<0.60	<0.55	<0.55	17,000	3,900	88
Benzo(a)pyrene	135	<32	<565	<2.8	<1.1	4	<1.2	<1.1	100	19	<1.1	<1.1	48,000	390	8.8
Benzo(b)fluoranthene	53 J	<23	<398	<2.0	<1.1	17	<1.2	<1.1	180	<1.2	<1.1	<1.1	360,000	3,900	88
Benzo(ghi)perylene	<27	<31	<545	<2.7	<2.2	<2.2	<2.4	<2.2	48	44	<2.2	<2.2	6,800,000	39,000	1,800
Benzo(k)fluoranthene	23	<5.9	<105	<0.5	<0.55	3.4	<0.60	<0.55	61	<0.60	<0.55	<0.55	870,000	39,000	880
Chrysene	296	79 J	<1,240	<6.2	<2.2	61	2.4	4.3	680	23	<2.2	<2.2	37,000	390,000	8,800
Dibenzo(a,h)anthracene	11 J	<11	<188	<0.9	<1.1	<1.1	<1.2	<1.1	<11	<1.2	<1.1	<1.1	38,000	390	8.8
Fluoranthene	179	<285	66,400	<25	<55	610	<60	<55	9,400	<60	<55	<55	500,000	40,000,000	600,000
Fluorene	<6.7	<77	<6.7	<6.8	<5.5	<5.5	<60	<5.5	3,600	<6.0	<5.5	<5.5	100,000	40,000,000	600,000
Indeno(1,2,3-cd)pyrene	93	<93	<1,630	<8.1	<22	<22	<24	<22	<220	<24	<22	<22	680,000	3,900	88
Phenanthrene	27	<66	37,500	<5.8	<5.5	130	<6.0	45	11,000	38	<5.5	<5.5	1,800	390,000	18,000
1-methyl naphthalene	<49	<558	<9,840	<49	<55	<55	<60	84	16,000	<60	<55	<55	23,000	70,000,000	1,100,000
2-methyl naphthalene	<46	<522	30,300	<46	<55	<55	<60	95	8,200	<60	<55	<55	20,000	40,000,000	600,000
Naphthalene	<85	<973	<17,200	<86	<5.5	<5.5	<6.0	20	1,200	<6.0	<5.5	<5.5	400	110,000	20,000
Pyrene	<87	<100	69,500	<8.8	<22	280	<24	<22	2,500	24	<22	<22	8,700,000	30,000,000	500,000

## Notes:

J - results between the level of detection and the limit of quantitation

NA - not analyzed

PAHs - polynuclear aromatic hydrocarbons

RCL - residual contaminant level

Shaded values exceed the generic RCLs for protection of groundwater

ug/kg - micrograms per kilogram

TABLE 2 (CONTINUED)

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - POLYCYCLIC AROMATIC HYDROCARBONS

WISCONSIN CENTRAL, LTD.  
Former Refueling Area  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETER	SAMPLE IDENTIFICATION			RCL		
	HA-1*	B-2*	B-7*	PROTECTION OF GROUNDWATER	DIRECT CONTACT	
					(INDUSTRIAL)	(NON-INDUSTRIAL)
Date Collected	9/17/97	9/17/97	9/17/97	NA	NA	NA
Depth (feet)	0-2	0-2	6-8	NA	NA	NA
PAHs (µg/kg)						
Acenaphthene	<120	190	<14	38,000	60,000,000	900,000
Acenaphthylene	<130	<76	<15	700	360,000	18,000
Anthracene	<110	87	<13	3,000,000	300,000,000	5,000,000
Benzo(a)anthracene	940	160	25	17,000	3,900	88
Benzo(a)pyrene	<100	90	<12	48,000	390	8.8
Benzo(b)fluoranthene	<120	110	<14	360,000	3,900	88
Benzo(ghi)perylene	<120	110	<14	6,800,000	39,000	1,800
Benzo(k)fluoranthene	<110	130	<13	870,000	39,000	880
Chrysene	920	190	32	37,000	390,000	8,800
Dibenzo(a,h)anthracene	<170	<100	<20	38,000	390	8.8
Fluoranthene	4,000	270	<14	500,000	40,000,000	600,000
Flourene	<140	<84	<17	100,000	40,000,000	600,000
Indeno(1,2,3-cd)pyrene	<110	82	<13	680,000	3,900	88
Phenanthrene	1,500	1,700	<15	1,800	390,000	18,000
1-methyl naphthalene	3,100	2,500	<17	23,000	70,000,000	1,100,000
2-methyl naphthalene	6,100	4,200	<16	20,000	40,000,000	600,000
Naphthalene	1,800	410	<14	400	110,000	20,000
Pyrene	4,400	320	260	8,700,000	30,000,000	500,000

Notes:

\* - soil boring done by STS Consultants September 1997.

NA - not analyzed

PAHs - polynuclear aromatic hydrocarbons

RCL - residual contaminant level

Shaded values exceed the generic RCLs for protection of groundwater

µg/kg - micrograms per kilogram

TABLE 3

**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL  
RESULTS FOR VOCs, DRO, LEAD AND ARSENIC**

**WISCONSIN CENTRAL, LTD.**  
Former Refueling Areas  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETERS	SAMPLE IDENTIFICATION								NR 140	
	MW-1	MW-2	MW-2 (DUP)	MW-3	MW-4	MW-5	B-2*	B-7*	ES	PAL
Date Collected	2/17/99	2/17/99	2/17/99	2/18/99	2/18/99	2/18/97	9/17/97	9/17/97	NA	NA
DRO mg/L	0.21	9.30	NA	1.60	11.00	<0.10	NA	NA	---	---
Lead µg/L	<1.5	<b>1.5</b>	NA	<1.5	<b>7.6</b>	<1.5	<1.8	<b>2.5</b>	15	1.5
Arsenic µg/L	<50	<50	NA	<50	<50	<50	<5.2	<b>6.7</b>	50	5
VOCs µg/L										
Benzene	ND	ND	ND	ND	0.34	ND	NA	<0.41	5	0.5
Ethylbenzene	ND	ND	ND	ND	1.8	ND	NA	3.2	700	140
Toluene	ND	0.59	0.62	ND	2.1	ND	NA	0.70	343	68.6
Trimethylbenzenes	ND	ND	ND	ND	9.1	ND	NA	51	480	96
Xylenes	ND	3.1	3.6	ND	6.7	ND	NA	28	620	124
sec-Butylbenzene	ND	ND	ND	ND	2.5	ND	NA	2.6	---	---
tert-Butylbenzene	ND	18	24	0.82	2.2	ND	NA	<0.24	---	---
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	NA	<0.29	75	15
Isopropylbenzene	ND	ND	16	0.87	2.2	ND	NA	1.5	---	---
p-Isopropyltoluene	ND	13	6.3	ND	ND	ND	NA	4.4	---	---
n-propylbenzene	ND	15	18	1.1	1.7	ND	NA	1.2	---	---
Naphthalene	ND	ND	NA	ND	ND	ND	NA	<b>9.3</b>	40	8

**Notes:**

\* - sample collected by STS Consultants September 1997

--- - no established limit

Bold values exceed the NR 140 PAL

DRO - diesel range organics

DUP - duplicate sample

ES - enforcement standard

mg/L - milligrams per liter

NA - not analyzed

ND - none detected

PAL - preventive action limit

µg/L - micrograms per liter

VOCs - volatile organic compounds

TABLE 4

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR POLYCYCLIC AROMATIC HYDROCARBONS

WISCONSIN CENTRAL, LTD.  
Former Refueling Areas  
214 Fleet Street  
Chippewa Falls, Wisconsin

PARAMETERS	SAMPLE IDENTIFICATION									NR 140	
	MW-1	MW-2	MW-3	MW-4	MW-5	B-2*	B-6*	B-7*	ES	PAL	
Date Collected	2/17/99	2/17/99	2/18/99	2/18/99	2/18/99	9/17/97	9/17/97	9/17/97	NA	NA	
PAHs $\mu\text{g/L}$											
Benzo(a)anthracene	ND	ND	ND	ND	ND	0.23	ND	0.36	NE	NE	
Chrysene	ND	ND	ND	ND	ND	1.1	ND	0.67	0.2	0.02	
Fluoranthene	ND	ND	ND	5.4	ND	0.10	ND	0.40	400	80	
Fluorene	ND	ND	1.7	1.7	ND	ND	ND	3.0	400	80	
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	0.59	15	NE	NE	
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	0.42	8.7	NE	NE	
Phenanthrene	ND	ND	2.9	1.8	ND	ND	0.082	6.0	NE	NE	
Pyrene	ND	ND	ND	ND	ND	0.13	ND	1.3	250	50	

Notes:

\* - sample collected by STS Consultants September 1997

ES - enforcement standard

NA - not applicable

NE - no established limit

PAL - preventive action limit

$\mu\text{g/L}$  - micrograms per liter

TABLE 6

SUMMARY OF GROUNDWATER ELEVATION DATA

SITE INVESTIGATION REPORT

CHIPPEWA FALLS RAIL YARD

214 Fleet Street

Chippewa Falls, Wisconsin

WELL ID	ELEVATION (feet MSL)		DEPTH TO GROUNDWATER FROM TOP OF PVC (feet)	DEPTH TO GROUNDWATER FROM GROUND SURFACE (feet)	GROUNDWATER ELEVATION (feet MSL)
	TOP OF PVC	GROUND SURFACE			
<b>MW-1</b>					
2/17/99	101.52	98.8	29.52	26.8	72.00
4/15/99			27.27	24.6	74.25
<b>MW-2</b>					
2/17/99	100.61	98.1	19.53	17.0	81.08
4/15/99			14.18	11.7	86.43
<b>MW-3</b>					
2/17/99	97.10	97.5	26.96	27.4	70.14
4/15/99			24.17	24.6	72.93
<b>MW-4</b>					
2/17/99	97.40	98.2	27.17	28.0	70.23
4/15/99			24.34	25.1	73.06
<b>MW-5</b>					
2/17/99	96.55	97.3	26.64	27.4	69.91
4/15/99			23.67	24.4 <i>Submerged</i>	72.88

Notes:

Elevations are relative to a site datum, the top nut of a fire hydrant located approximately 60 feet east of the southeast corner of concrete foundation in the center of rail yard.

Locations surveyed by Heiss-Loken and Associates on April 12, 1999.