GIS REGISTRY
Cover Sheet

August 2011
(RR-5367)

Source Property Information

CLOSURE DATE: Oct 3, 2011

BRRTS #: 02-41-550019

ACTIVITY NAME: Badger Railing

FID #: 341150370

PROPERTY ADDRESS: 1611 W. Canal St.

DATCP #:

MUNICIPALITY: Milwaukee

PECFA#:

PARCEL ID #: 34110050370

***WTM COORDINATES:**

X: 688332 Y: 286326

** 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" form)*

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

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

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

Land Use Controls:

☐ N/A (*Not Applicable*)

☐ 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)*

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

☐ 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 #: 02-41-550019 PARCEL ID #: 341150370

ACTIVITY NAME: Badger Railing WTM COORDINATES: X: 688332 Y: 286326

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** NA

☐ **Certificate of Completion (COC)** for VPLE sites NA

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: Soil Contamination Contour Map and Soil Sampling Locations**

BRRTS #: 02-41-550019 ACTIVITY NAME: Badger Railing

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 #: 4 **Title: Soil Geologic Cross Section Layout**

Figure #: 4A, 4B **Title: Soil Geologic Cross Section A-A', Soil Geologic Cross Section B-B'**

☒ **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 #: 5 **Title: Groundwater Contamination Isoconcentration Map**

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

Figure #: 6A **Title: Groundwater Flow Direction 08/22/07**

Figure #: 6B **Title: Groundwater Flow Direction 11/19/07**

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 **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 #: 2 **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 #: 3 **Title: Summary of Groundwater Depths and Elevations**

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 #: 02-41-550019 ACTIVITY NAME: Badger Railing

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:

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-0436

Scott Walker, Governor
Cathy Stepp, Secretary
John Hammen, Acting Regional Director
Telephone 414-263-8500
FAX 414-263-8716
TTY 414-263-8713

October 3, 2011

Mr. David Brein
Forest County Potawatomi Community
1721 West Canal St.
Milwaukee, WI 53233

SUBJECT: Final Case Closure with Continuing Obligations
Badger Railing, 1611 West Canal St., Milwaukee, WI
WDNR BRRTS Activity #: 02-41-550019
FID #: 341150370

Dear Mr. Brien:

On August 18, 2011, the Department of Natural Resources Southeast Region reviewed the above referenced case for closure. The Department reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases.

The Department reviewed the case closure request regarding the PAH and metals contamination in soil and groundwater at this site. Based on the correspondence and data provided, it appears that your case meets the closure requirements in ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time. However, you and future property owners must comply with certain continuing obligations as explained in this letter.

GIS Registry
This site will be listed on the Remediation and Redevelopment Program's internet accessible GIS Registry, to provide notice of residual contamination, and of any continuing obligations. The continuing obligations for this site are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed
- Pavement, an engineered cover or a soil barrier must be maintained over contaminated soil and the state must approve any changes to this barrier
- Groundwater contamination is present above Chapter NR 140 enforcement standards
- One or more monitoring wells were not located and must be properly abandoned if found.

All site information, including the maintenance plan, is also on file at the Southeast Regional DNR office, at2300 N. Martin Luther King Jr. Dr., Milwaukee, WI 53212. This letter and information that was submitted with your closure request application, including the maintenance plan, will be included on the GIS Registry, in a PDF attachment. To review the sites on the GIS Registry web page, visit the RR Sites Map page at http://dnr.wi.gov/org/aw/rr/gis/index.htm. If the property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need

prior Department approval in accordance with s. NR 812.09(4) (w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at http://dnr.wi.gov/org/water/dwg/3300254.pdf or at the web address listed above for the GIS Registry.

Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. You must pass on both the information about these continuing obligations and the maintenance plan to the next property owner or owners. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. The Department intends to conduct inspections in the future to ensure that the conditions included in this letter including compliance with **attached maintenance plans** are met.

Cover or Barrier

Pursuant to s. 292.12(2)(a), Wis. Stats., the pavement and soil cover that currently exists in the location shown on the attached map 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.

Soil contamination remains across the site as shown on the **attached map** and in the information submitted to the Department of Natural Resources. If soil in the specific locations shown on the attached map is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner 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 statutes and rules. In addition, all current and future owners and occupants of the property 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 during excavation activities to prevent a health threat to humans.

The **attached maintenance plan and inspection log** are to be kept up-to-date and on-site. Please submit the inspection log to the Department only upon request.

Prohibited Activities

The following activities are prohibited on any portion of the property where pavement, soil cover, or other barrier is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; 6) construction or placement of a building or other structure.

Upon Department approval to replace the existing barrier, the replacement barrier must be one of similar permeability, until contaminant levels no longer exceed the applicable standards.

Residual Groundwater Contamination

Groundwater impacted by arsenic and lead contamination greater than enforcement standards set forth in ch. NR140, Wis. Adm. Code, is present on this contaminated property, as shown on the **attached map**.

Monitoring Wells that could not be Properly Abandoned

On July 20, 2011 your consultant KEY Engineering Group notified the Department that monitoring well(s) MW-1 and MW-2 located in paved areas along the east side of the property shown on the attached map, could not be properly abandoned because they were missing due to being paved over, covered or removed during site development activities. Your consultant has made a reasonable effort to locate the wells shown on the attached map and to determine whether they were properly abandoned but has been unsuccessful in those efforts. You need to understand that in the future you may be held liable for any problems associated with monitoring wells MW-1 and MW-2 if they create a conduit for contaminants to enter groundwater. If in the future any of the groundwater monitoring wells are found, the then current owner of the property on which the well is located will be required to notify the Department, to properly abandon the wells in compliance with the requirements in ch. NR 141, Wis. Adm. Code, and to submit the required documentation of that abandonment to the Department.

Post-Closure Notification Requirements

In accordance with ss, 292.12 and 292.13, Wis. Stats., you must notify the Department before making changes that affect or relate to the conditions of closure in this letter. For this case, examples of changed conditions requiring prior notification include, but are not limited to:

- Disturbance, construction on, change or removal in whole or part of pavement, an engineered cover or a soil barrier that must be maintained over contaminated soil
- One or more monitoring wells that were not located are found and properly abandoned.

Please send written notifications in accordance with the above requirements to WDNR Southeast Region, 2300 N. Martin Luther King Jr. Dr., Milwaukee, WI 53212 to the attention of Victoria Stovall.

The following DNR fact sheet, RR-819, "Continuing Obligations for Environmental Protection" is available at http://dnr.wi.gov/org/aw/rr/archives/pubs/RR819.pdf to help explain a property owner's responsibility for continuing obligations on their property.

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.

The Department 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 Margaret Brunette at (414)263-8557.

Sincerely,

James A. Schmidt

James A. Schmidt, Team Supervisor
Southeast Region Remediation & Redevelopment Program

Attach.

- Remaining soil contamination map
- Remaining groundwater contamination map
- Extent of cap map
- Missing monitoring well location map
- Maintenance plan

COVER (BARRIER OR CAP) MAINTENANCE PLAN

March 30, 2011

Property Located at:

1611 West Canal Street, Milwaukee, Wisconsin

Fid # 341150370, WDNR BRRTS 02-41-550019

Legal Description: See attached deed for legal description;
Tax Number: 042-6011-100-0

Introduction

This document is the Maintenance Plan for a cap at the above-referenced property in accordance with the requirements of s. NR 724.13(2), Wisconsin Administrative Code. The maintenance activities relate to the existing cap occupying the area over the contaminated groundwater plume or soil on-site.

More site-specific information about this property may be found in:

- The case file in the DNR region name regional office
- BRRTS on the Web (DNR's internet based data base of contaminated sites):

  http://botw.dnr.state.wi.us/botw/GetActivityDetail.do?adn=0241550019&siteId=18745900&crumb=1&s=B
- GIS Registry PDF file for further information on the nature and extent of contamination: http://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2&qlyr=00brrts_open&qzoom=true&qbuf=250&qry=DETAIL_SEQ_NO%3D550019
- The DNR project manager for Milwaukee County.

Description of Contamination

- On December 27, 2005, KEY Engineering Group, Ltd. (KEY) advanced two soil probes (GP-1 and GP-2) on the subject site located at 1611 West Canal Street, Milwaukee Wisconsin. Each soil sample was also field screened for the presence of volatile organic compounds (VOCs) with a photo ionization detector (PID), and select soil samples were submitted to Test America Environmental Lab for analysis of VOC, polycyclic aromatic hydrocarbons (PAH), Resource Conservation and Recovery Act (RCRA) metals and polychlorinated biphenyls (PCB).
- Laboratory soil results for probe location GP-1 exhibited total lead, arsenic, and benzo(a)pyrene (Benzo(a)pyrene) values above their industrial direct contact levels as defined in NR 720.09 and Wisconsin Department of Natural Resources (WDNR) Guidance Document PUB RR519. GP-1 also exhibited phenanthrene above its WDNR generic residual contaminant level's (GRCLs) for protection of groundwater 2 to 5 ft below ground surface (bgs). Soil probe GP-2 exhibited Benzo(a)pyrene above its generic RCL for industrial direct contact and a trichloroethene (TCE) value of 79 micrograms per kilogram (µg/kg) 7 to 10 feet (ft) bgs. KEY determined that the PAH and metals contamination was most likely attributed to the industrial nature of the fill material within the Menomonee Valley region.

The following is a chronological summary of the technical components of the site investigation activities conducted by KEY in 2007:

- On August 8, 2007, KEY oversaw the advancement of 7 soil probes (GP-3, GP-4, GP-5, GP-6, GP-7, GP-8, GP-9).
- Soil sample analytical results from GP-3 exhibited phenanthrene at levels above its GRCL for the protection of groundwater at depths of 2 to 4 ft and naphthalene at 20 ft. Industrial direct contact limits were exceeded for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene and arsenic at 2 to 4 ft bgs, and lead at 2 to 4 and 20 ft bgs.
- Soil sample analytical results from GP-4 exhibited benzo(a)anthracene above its GRCL for the protection of groundwater at 2 to 4 ft bgs and arsenic above NR 720.09 (Table 2) at 20 ft bgs.
- Soil sample analytical results for GP-5 exhibited benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, arsenic, and lead above their respective industrial direct contact limits. Naphthalene and phenanthrene were above their GRCLs for the protection of groundwater at 2 to 4 ft bgs.
- Soil sample analytical results for GP-6 exhibited benzo(a)anthracene (20 ft bgs), benzo(a)pyrene (2 to 4, 20 ft bgs), benzo(b)fluoranthene (20 ft bgs), dibenzo(a,h)anthracene (20 ft bgs), Indeno(1,2,3-cd)pyrene (20 ft bgs), and arsenic (2 to 4, 20 ft bgs) were above their industrial direct contact limits. Naphthalene and phenanthrene were above their GRCLs for the protection of groundwater at 20 ft bgs.
- Soil sample analytical results for GP-7 exhibited benzo(a)pyrene, arsenic, and lead above their industrial direct contact limits at 20 ft bgs.
- Soil sample analytical results for GP-8 exhibited benzo(a)pyrene above its industrial direct contact limit.
- Soil sample analytical results for GP-9 exhibited benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and arsenic at levels above their industrial direct contact limits. Ethylbenzene, naphthalene and phenanthrene were above their GRCLs for the protection of groundwater at 2 to 4 ft bgs.
- On August 22, 2007 GP-3, GP-5, and GP-9 were converted to NR 141 compliant groundwater (GW) monitoring wells. A round of GW sampling on the same day exhibited MW-1 above its NR 140 enforcement standard (ES) for naphthalene and above its NR 140 preventative action limits (PAL) for arsenic and barium. MW-2 exhibited arsenic, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene above their PALs. MW-3 exhibited arsenic above its PAL.
- On November 19, 2007, a round of GW sampling exhibited MW-1 above its PALs for naphthalene, arsenic, barium, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. MW-2 was above its PALs for barium, cadmium, and mercury. MW-2 was above its ES for arsenic, and lead. MW-3 was above its PALs for arsenic, and J-flagged above its PAL for benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. MW-3 was above its ES for lead.
- KEY collected groundwater elevation data on four separate occasions. In all but one instance (August 22, 2007) groundwater flow was consistently northeast. It is KEY's opinion that the August 22, 2007 flow direction might have been skewed by casing elevation disturbance caused by building demolition. KEY is of the opinion that groundwater flow is consistently northeast.

The following is a chronological summary of the technical components of the site investigation activities conducted by KEY in 2008:

- On May 29, 2008, a round of GW sampling exhibited MW-1 above its PALs for naphthalene, arsenic, chromium benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and naphthalene. MW-2 was above its PALs for barium, cadmium, and mercury. MW-2 was above it PAL for arsenic, and chromium. MW-3 exhibited no contamination above the ES or PAL.

- On November 11, 2008 a round of GW sampling exhibited MW-1 above its PAL for naphthalene, barium, benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. MW-2 exhibited it was above its PAL for cadmium and above its ES for arsenic, and lead. MW-3 continued to show no contamination above its ES or PAL.

Groundwater VOC and PAH contamination concentrations in wells are declining or stable. Heavy metal concentrations such as arsenic, barium, cadmium, chromium, lead, and mercury are expected to fluctuate because of their ubiquitous concentrations in the fill material used throughout the Menomonee Valley Industrial Corridor.

Description of the cap to be maintained

The cap consists of the existing 3-foot thick clean fill cap, or 3-foot thick combination asphalt pavement and clean fill cap, located as shown on the attached Figure 2.

Cover Barrier Purpose

The cap over the contaminated groundwater plume and soil serve as a barrier to prevent direct human contact with residual soil contamination that might otherwise pose as a threat to human health. These also act as a barrier to minimize future soil-to-groundwater contamination migration that would violate the groundwater standards in ch. NR 140, Wisconsin Administrative Code. Based on the current and future use of the property, the barrier should function as intended unless disturbed.

Annual Inspection

The cap overlying the contaminated groundwater plume and soil, and as depicted in Figure 2 will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause additional infiltration into or exposure to underlying soils. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to become exposed and where infiltration from the surface will not be effectively minimized will be documented. A log of the inspections and any repairs will be maintained by the property owner and is included as Exhibit B, Cap Inspection Log. The log will include recommendations for necessary repair of any areas where underlying soils are exposed and where infiltration from the surface will not be effectively minimized. Once repairs are completed, they will be documented in the inspection log. A copy of the inspection log will be kept at the address of the property owner and available for submittal or inspection by WDNR representatives upon their request.

Note: The WDNR may, in some instances, require in the case closure letter that the inspection log be submitted at least annually after every inspection. If the case closure letter requires that, then add the following sentence to the paragraph above: A copy of the inspection log must be submitted to the WDNR at least annually after every inspection.

Maintenance Activities

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching and filling or larger resurfacing or construction operations. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment ("PPE"). The owner must also sample any soil that is excavated from the site prior to disposal to ascertain if contamination remains. The soil must be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law.

In the event the cap overlying the contaminated groundwater plume and soil are removed or replaced, the replacement barrier must be equally impervious. Any replacement barrier must be equally impervious. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the WDNR or its successor.

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

Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover or Cap

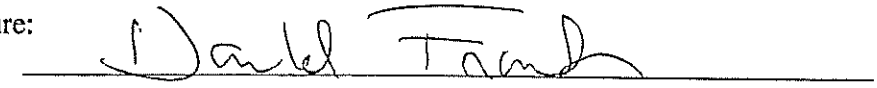
The following activities are prohibited on any portion of the property where pavement or a building foundation is required as shown on the attached map, unless prior written approval has been obtained from the WDNR: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

Amendment or Withdrawal of Maintenance Plan

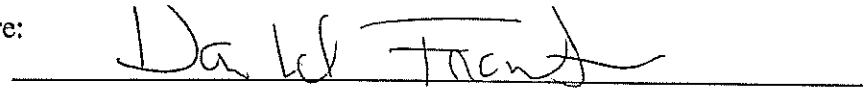
This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

Contact Information
February 2011

Site Owner and Operator: Mr. Harold Frank
Forest County Potawatomi Community
313 North 13th Street
Milwaukee, Wisconsin 53233
(414) 847-7750

Signature: 

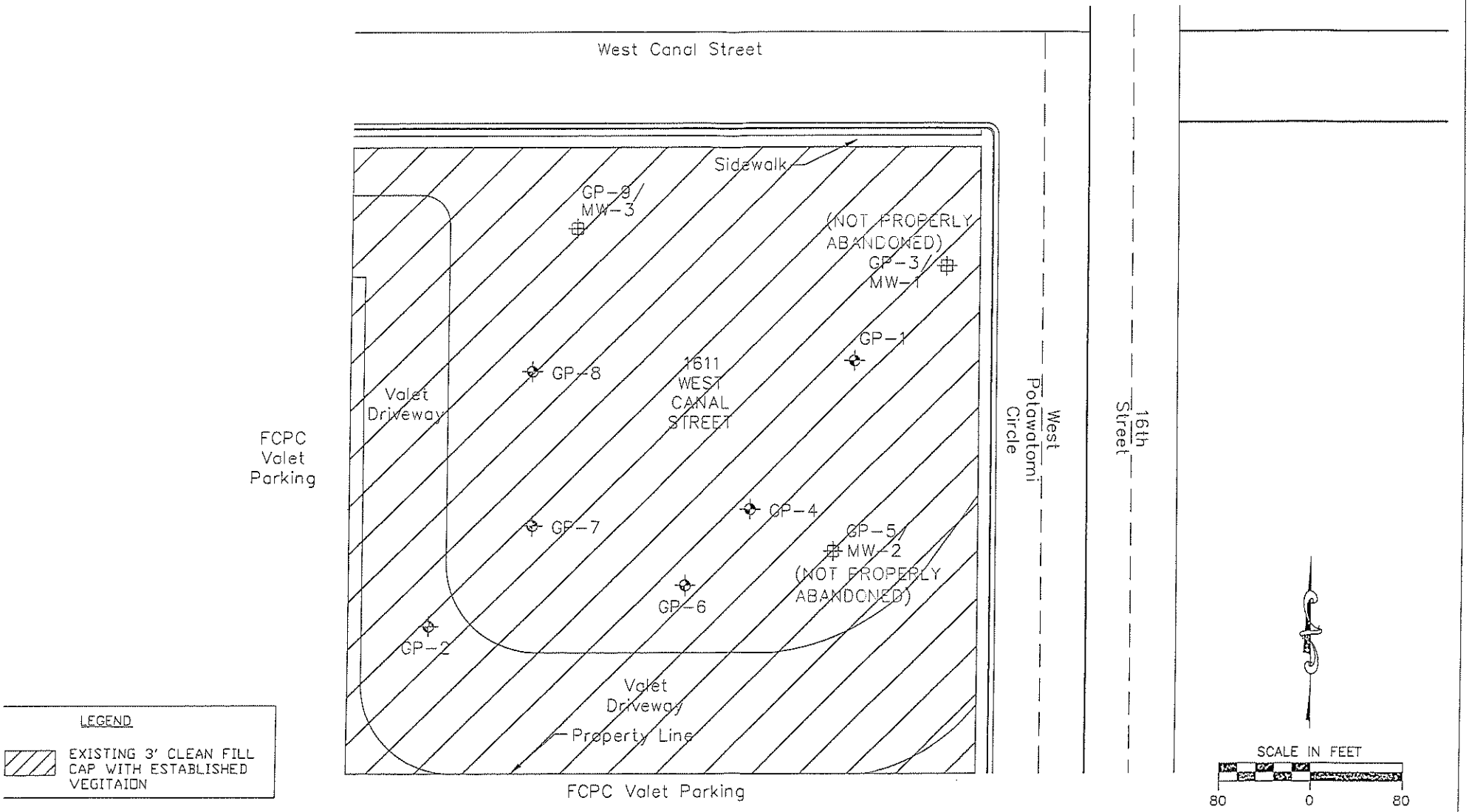
Property Owner: Mr. Harold Frank
Forest County Potawatomi Community
313 North 13th Street
Milwaukee, Wisconsin 53233
(414) 847-7750

Signature: 

Consultant: Key Engineering Group
735 North Water Street, Suite 510
Milwaukee, WI 53202
(414) 224-8300

WDNR: Victoria Stovall
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King Jr. Drive
Milwaukee, Wisconsin 53212-3128
(414) 263-8500

F:\DJG\Review\15090030- Cap Maintenance Plan.doc



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SAO	11/24/09
AMB	1509003
SAO	1

FIGURE 2
SITE LAYOUT - CAP LIMITS
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
724 NORTH WATER STREET, SUITE 1000
MILWAUKEE, WI 53202

ATTACHMENT 1
CAP MAINTENANCE INSPECTION FORM

Badger Railing
1611 West Canal Street
Milwaukee, Wisconsin
BRRTS #: 02-41-550019
FID #: 341150370

LANDSCAPED AREA COVER:

INSPECTION CRITERIA	COMMENTS	MAINTENANCE ACTION REQUIRED
Evidence of Erosion		
Evidence of Ponding		
Vegetation Loss		

Limitations to Observation: _____

Completed by: _____

Date: _____

ATTACHMENT 2
CAP MAINTENANCE LOG
Badger Railing
1611 West Canal Street
Milwaukee, Wisconsin
BRRTS #: 02-41-550019
FID #: 341150370

Repair / Maintenance Description:		Date of Discovery:
Contractor / Individual Performing Repairs:		Date of Repair:
Inspector Name (Print)	Inspector Signature	Date of Inspection:

Repair / Maintenance Description:		Date of Discovery:
Contractor / Individual Performing Repairs:		Date of Repair:
Inspector Name (Print)	Inspector Signature	Date of Inspection:

Repair / Maintenance Description:		Date of Discovery:
Contractor / Individual Performing Repairs:		Date of Repair:
Inspector Name (Print)	Inspector Signature	Date of Inspection:

State Bar of Wisconsin Form 1-2003
WARRANTY DEED

Document Number | Document Name

09455688

DOC.# 09455688

REGISTER'S OFFICE | SS
Milwaukee County, WI
RECORDED 06/29/2007 09:44AM
JOHN LA FAVE
REGISTER OF DEEDS
AMOUNT: 13.00

Recording Area

Name and Return Address
William J. Guis, Esq.
Friebert, Finerty & St. John, S.C.
Two Plaza East
330 E. Kilbourn Ave., #1250
Milwaukee, WI 53202

THIS DEED, made between Robert J. Kinnier, a single person ("Grantor," whether one or more), and Forest County Potawatomi Community of Wisconsin ("Grantee," whether one or more).

Grantor, for a valuable consideration, conveys to Grantee the following described real estate, together with the rents, profits, fixtures and other appurtenant interests, in Milwaukee County, State of Wisconsin ("Property") (if more space is needed, please attach addendum):

Parcel 1 of Certified Survey Map No. 5100, recorded on April 4, 1988 in Reel 2196, Image 1890 as Document No. 6158094, being a redivision of Parcel 2 of Certified Survey Map No. 3997, in the Northwest 1/4 of the Northeast 1/4 of Section 31, Town 7 North, Range 22 East, City of Milwaukee, County of Milwaukee, State of Wisconsin.

TRANSFER
$21,000.00
FEE

426-0111-2
Parcel Identification Number (PIN)

This ~~is~~ is not homestead property.
~~(is)~~ (is not)

Grantor warrants that the title to the Property is good, indefeasible in fee simple and free and clear of encumbrances except: municipal and zoning ordinances and agreements entered under them, recorded easements for the distribution of utility and municipal services, recorded building and use restrictions and covenants, general taxes levied in the year of closing and those permitted encumbrances listed on Exhibit A attached hereto.

Dated: June 28, 2007.

* _____ (SEAL)

* Robert J. Kinnier (SEAL)

* _____ (SEAL)

* _____ (SEAL)

AUTHENTICATION

Signature(s) _____
_____
authenticated on _____.

_____
* _____
TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, _____
authorized by Wis. Stat. § 706.06)

THIS INSTRUMENT DRAFTED BY:

Karen DaCosta Perzan, Esq.
Quarles & Brady LLP

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss.
MILWAUKEE COUNTY)

Personally came before me on June 28, 2007,
the above named Robert J. Kinnier
_____
to me known to be the person(s) who executed the foregoing instrument and acknowledge the same.

_____
* _____
Notary Public, State of Wisconsin
My Commission (is permanent) (expires: 11-25-09)

NOTARY PUBLIC RENEE M. JACQUE STATE OF WISCONSIN

(Signatures may be authenticated or acknowledged. Both are not necessary.)

NOTE: THIS IS A STANDARD FORM. ANY MODIFICATIONS TO THIS FORM SHOULD BE CLEARLY IDENTIFIED.

© 2003 STATE BAR OF WISCONSIN

*Type name below signatures.

EXHIBIT A

PERMITTED ENCUMBRANCES

1. Restrictions contained on Certified Survey Map No. 5100, recorded as Document No. 6158094.

2. Covenants, conditions and restrictions as set forth in Agreement for Sale of Land recorded as Document No. 6157122, providing for forfeiture of deed and reversion of title in case of violation.

3. Party Wall and Easement Agreement recorded as Document No. 4340758.

4. Memorandum recorded as Document No. 4394996.

5. Reservation as contained in Warranty Deed recorded on December 30, 1976 as Document No. 5065814.

6. Permanent Limited Easement for public roadway and maintaining municipal utilities recorded as Document No. 8871445.

7. Permanent Limited Easements as set forth in Temporary Right of Entry Easement granted to the City of Milwaukee recorded as Document No. 8831910.

8. Communications Conduit Easement granted to the Forest County Potawatomi Community of Wisconsin recorded as Document No. 9231019.

9. Rights of utility companies to maintain the transformer pads, gas meter, electric meter, overhead utility line and power poles as disclosed on Survey prepared by STS Consultants, dated June 4, 2007.

10. Apparent unrecorded Access and/or Right-of-Way Agreement between property owner to the South disclosed by numerous curb cuts as disclosed on Survey prepared by STS Consultants, dated June 4, 2007.

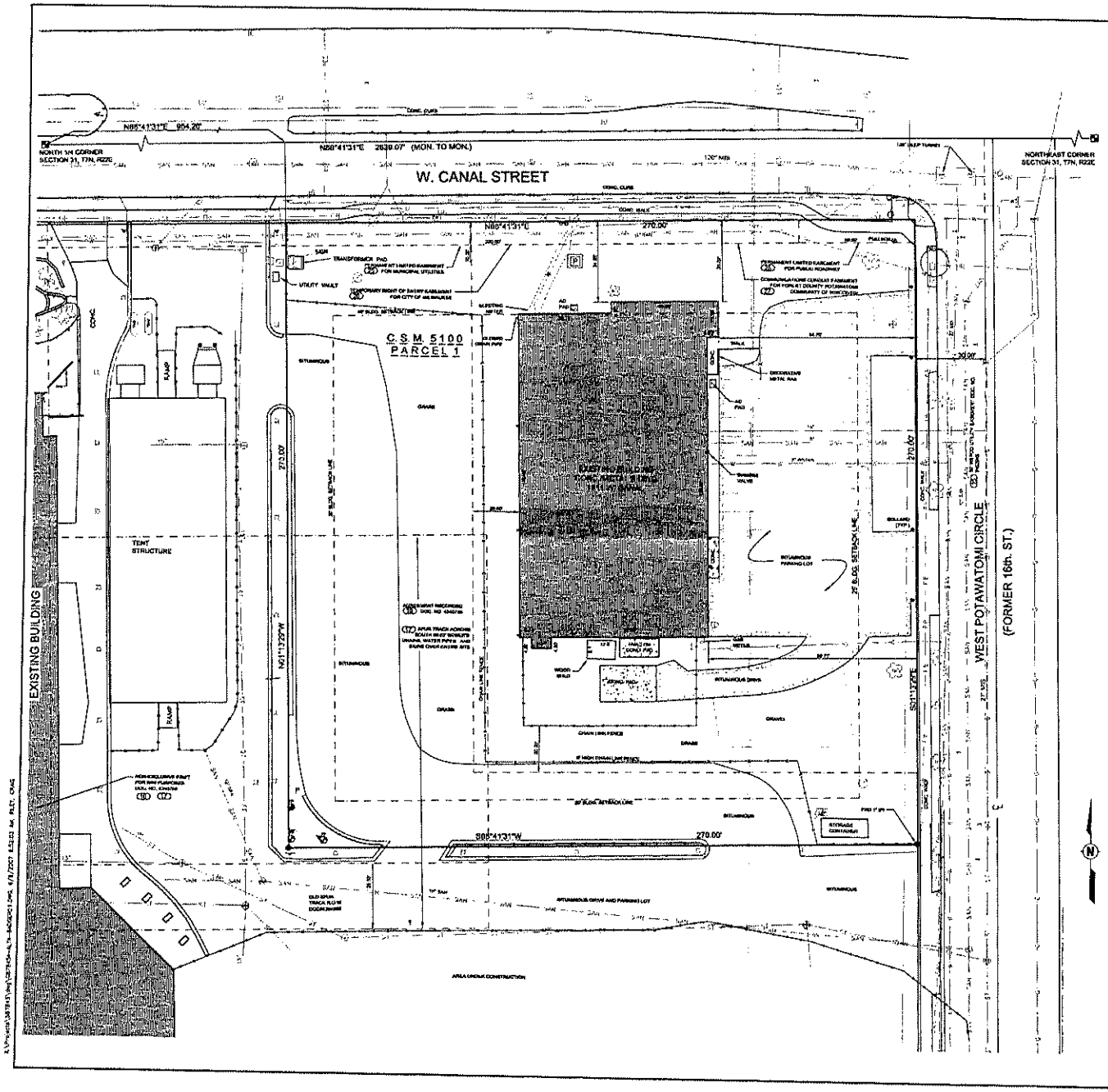
11. Encroachment of existing building into 40' building setback line along the East property line as disclosed on Survey prepared by STS Consultants, dated June 4, 2007.

12. Encroachment of concrete walk on subject premises along the Northeast corner as disclosed on Survey prepared by STS Consultants, dated June 4, 2007.

13. Redevelopment Plan for the Menomonee Valley Industrial Area "A" Urban Renewal Project recorded March 2, 1977, on Reel 996, Page 413, as Document No. 5079699, and Amendment No. 1 to the Redevelopment Plan for the Menomonee Valley Industrial Area "A" Urban Renewal Project recorded April 22, 1980, as Document No. 5395017, and Amendment No. 2 to the Redevelopment Plan for the Menomonee Valley Industrial Area "A" Urban Renewal Project recorded April 23, 1984, on Reel 1632, Image 570, as Document No. 5710522.

14. Water and sewer service charges, if any.

15. Judgments and/or liens, if any, docketed or filed against the Buyer.



LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EASEMENT LINE
- CHAIN LINK FENCE
- STEEL FENCE
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBER OPTIC
- UNDERGROUND GAS
- UNDERGROUND TELEPHONE
- OVERHEAD UTILITY
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- BEUREU OF ELECTRICAL SERVICES
- FOUND MONUMENT
- FOUND 1" IRON PIPE
- SET 1" IRON PIPE
- MANHOLE
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN - ROUND
- CATCH BASIN - SQUARE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- POWER POLE
- GUY WIRE
- WATER MANHOLE
- HYDRANT
- WATER VALVE
- TELEPHONE PEDESTAL
- ELECTRIC PEDESTAL
- LIGHT POLE
- SIGN
- LIGHT
- METAL POST/BOLLARD
- DRAIN PIPE
- UG SPRINKER
- DECIDUOUS TREE
- CONIFEROUS TREE
- ELECTRIC TRANSFORMER
- MAILBOX

(XX.XX') OR (XXX'XX'XX"E) RECORDED AS

20 0 20 40

1" = 20'

"THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO."

WISCONSIN LAND SURVEYOR
CRAIG W. RILEY

STB CONSULTANTS
11425 W. Lake Park Drive
Milwaukee, WI 53224
414-359-3030
www.stbconsultants.com

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ALTA/ACSM SURVEY

BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

Issued

Rev	Date	Description
1	8/4/2007	Updated ALTA

Designed
Drawn: DD 3/20/2006
Checked: CJH 3/20/2006
Approved: CWR 3/20/2006

PROJECT NUMBER
587845

SHEET REFERENCE NUMBER
S-1

SHEET 1 OF 1

Legal Description:

Parcel 1 of Certified Survey Map No. 5100, recorded on April 4, 1998 in Reel 2196, Image 1890 as Document No. 6158094, being a redivision of Parcel 2 of Certified Survey Map No. 3997, in the Northwest ¼ of the Northeast ¼ of Section 31, Town 7 North, Range 22 East, City of Milwaukee, County of Milwaukee, State of Wisconsin.

Forest County Potawatomi Community
P.O. Box 340, Crandon, Wisconsin 54520

POTAWATOMI
(Keeper of the Fire)

Reference: *Geographic Information System Registry*
Former Badger Railing
1611 West Canal Street
Milwaukee, Wisconsin
WDNR BRRTS # 02-41-550019

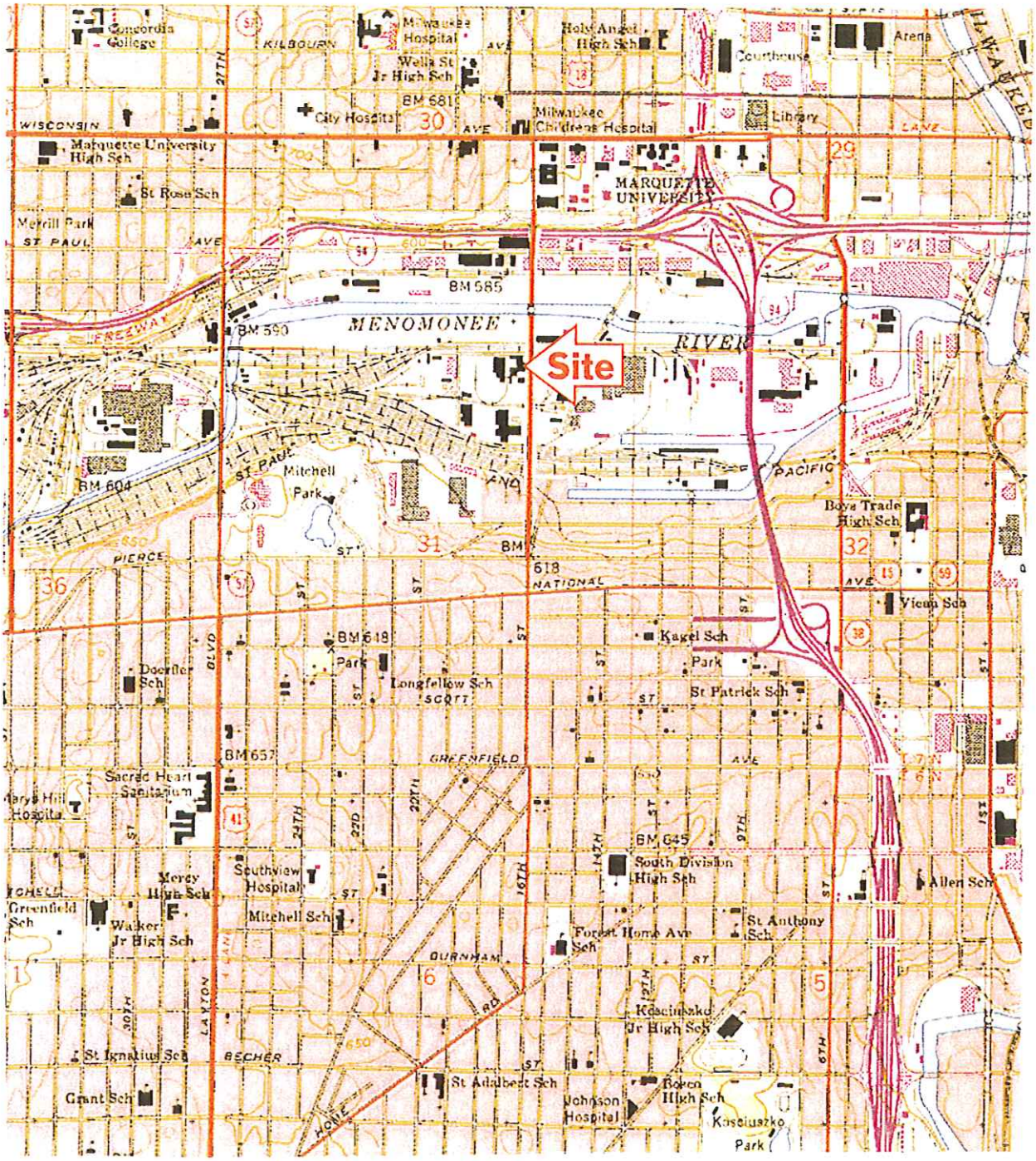
To Whom It May Concern:

I, Philip Shopodock, of the Forest County Potawatomi Community, representative of the responsible party do hereby declare to the best of my knowledge that the attached legal property description represents completely and accurately the above reference property for which I am requesting listing on the Wisconsin Department of Natural Resources Geographic Information System Registry of Closed Remediation Sites.

Please find a copy of the legal description as stated in the property deed for the above reference property.

Signed: Philip Shopodock
Philip Shopodock, Tribal Chairman

Date: 8/19/09



SOURCE:
USGS
Milwaukee, Wisconsin
Quadrangle Map 1958, Photorevised 1971

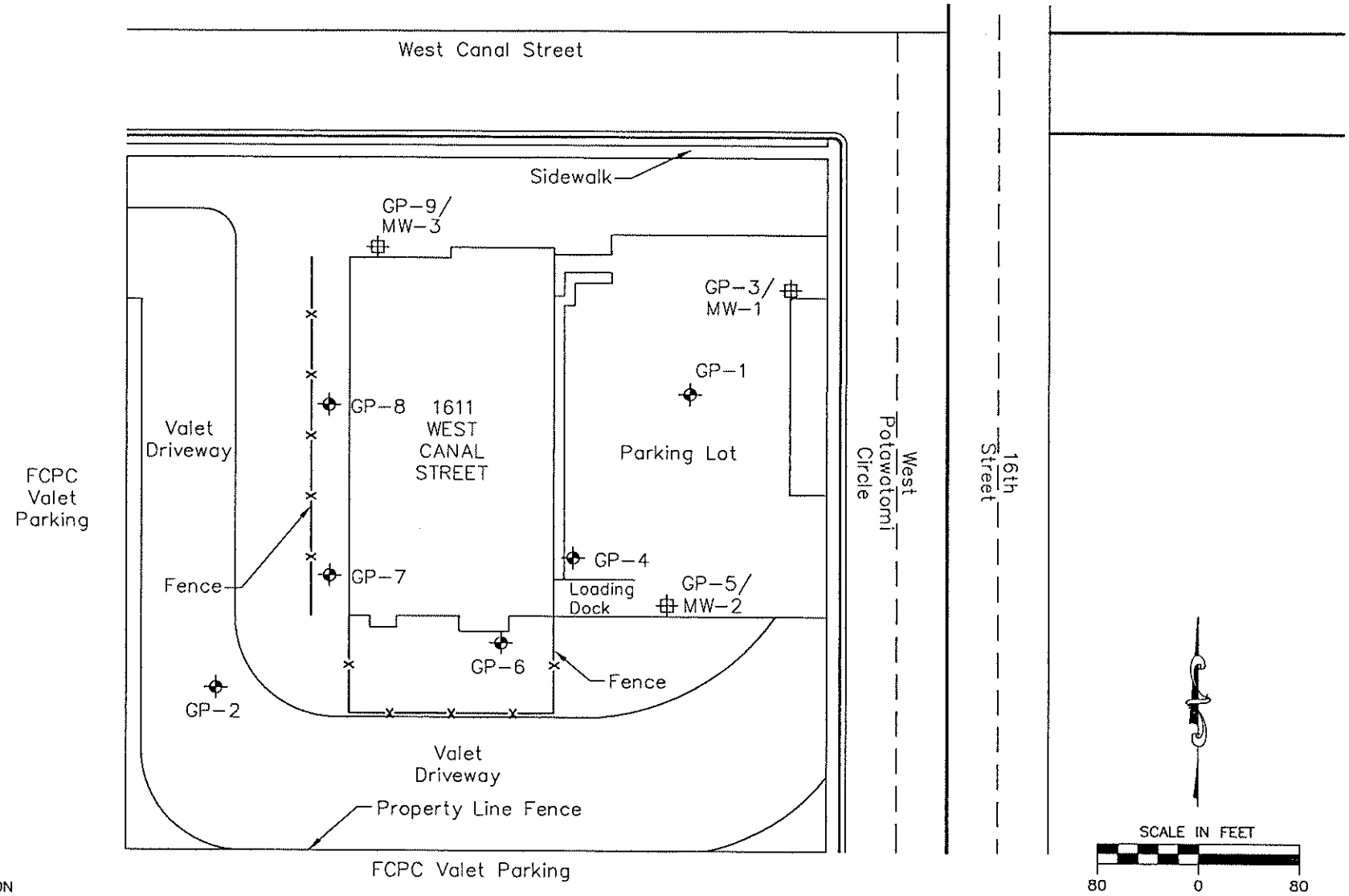
SCALE IN FEET
0 2000'

2002 Key Engineering Group Ltd.

DESIGNED BY DMO	DATE 5/28/09
DRAWN BY	PROJECT 1509003
APPROVED BY DMO	SHEET NO. 1
F:\DMO\Projects\1509003 Badger Railing	

FIGURE 1
SITE LOCATION MAP
PHASE I ENVIRONMENTAL SITE ASSESSMENT
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.



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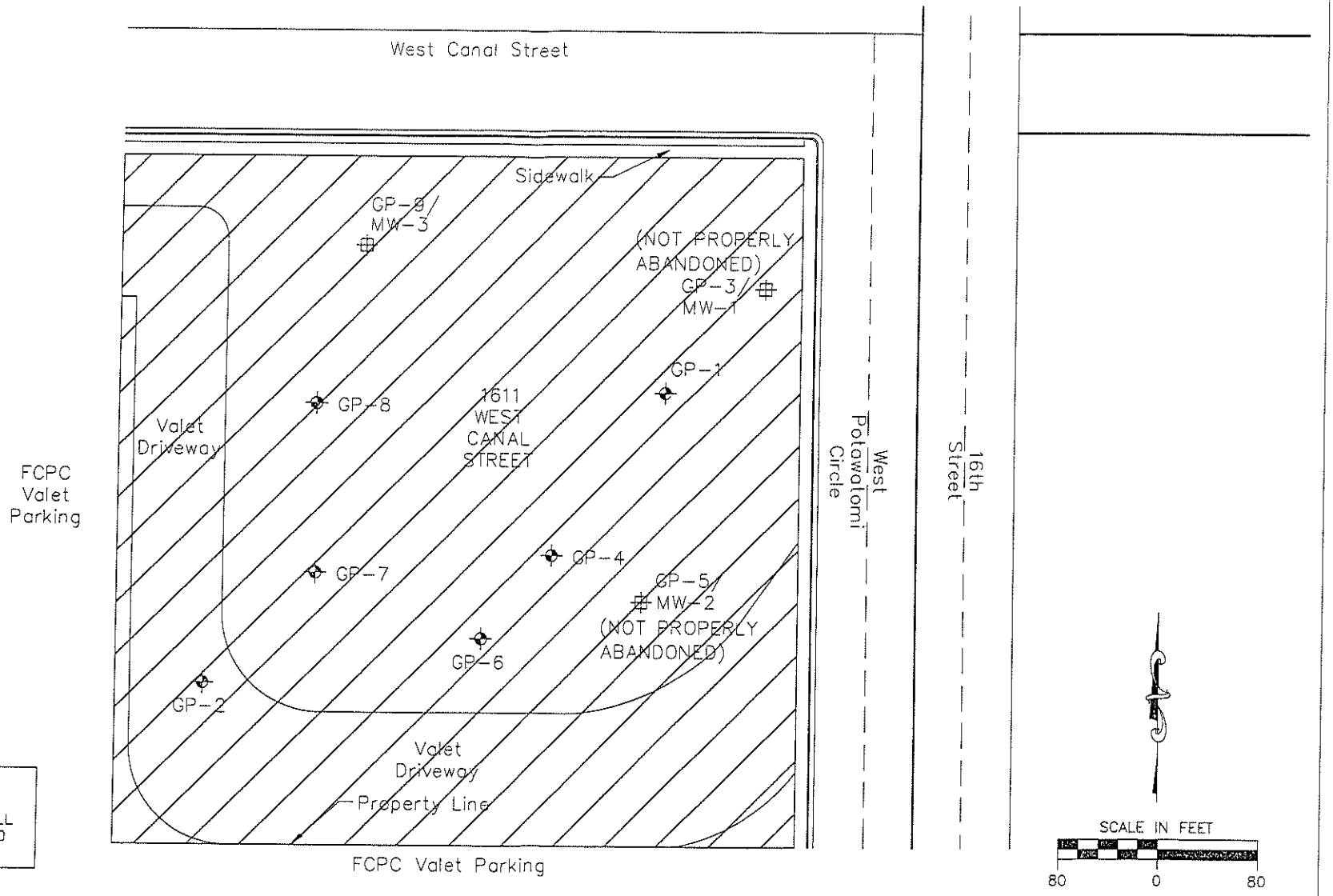
DESIGNED BY JLS	DATE 01/11/06
DRAWN BY JLS	PROJECT 1509003
APPROVED BY DJG	SHEET NO. 1

FIGURE 2
SITE LAYOUT
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.



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DRAWN BY	PROJECT
AMB	1509003
APPROVED BY	SHEET NO.
SAO	1

CADFILE G:\ACAD\1509003\Fig 2-CAP LIMITS-110304.dwg

FIGURE 2
SITE LAYOUT – CAP LIMITS
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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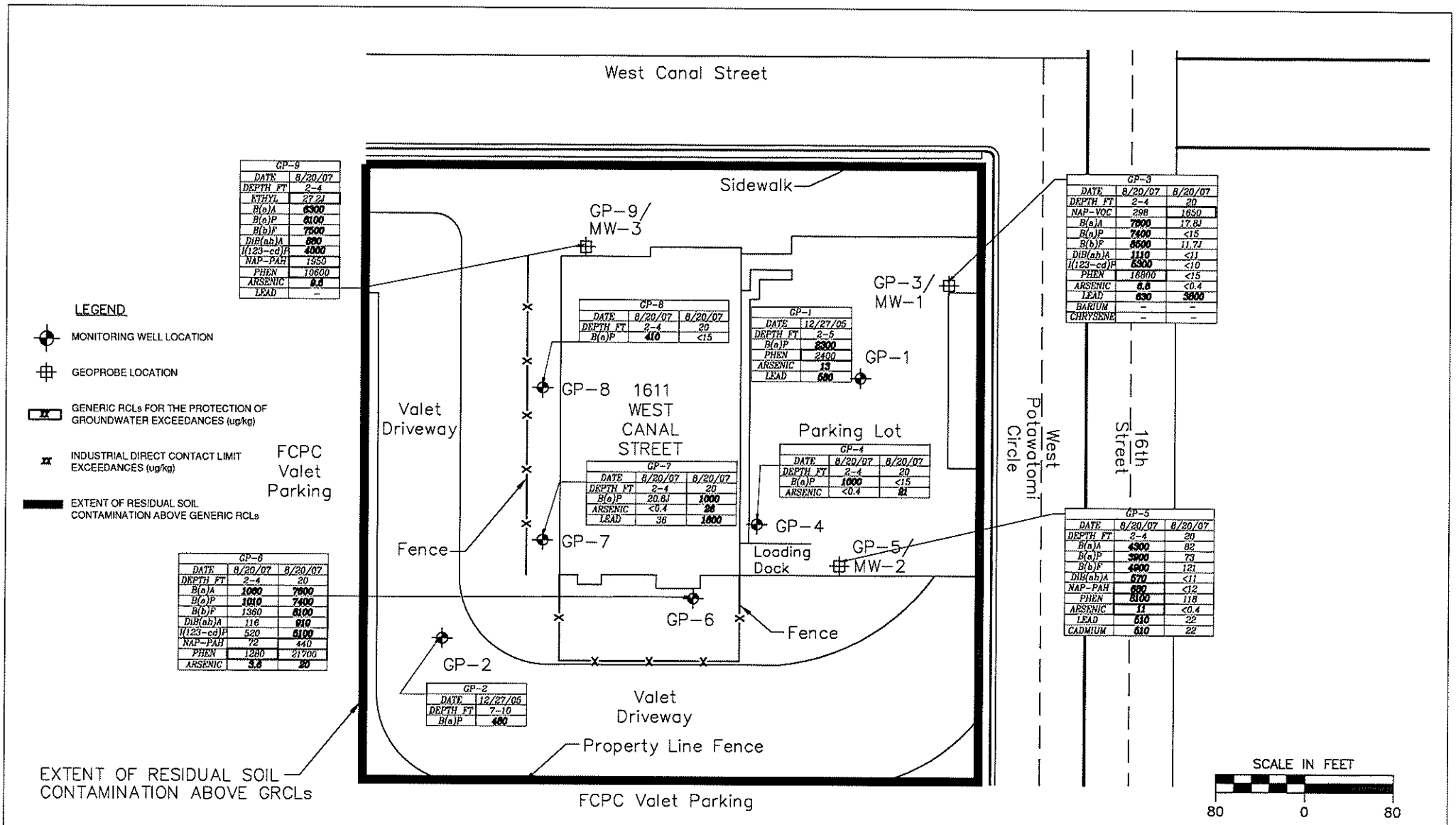

GP-9	
DATE	8/20/07
DEPTH FT	2-4
ETHYL	27.2J
B(a)A	6300
B(a)P	6100
B(b)F	7500
DiB(ah)A	880
I(123-cd)P	4000
NAP-PAH	1950
PHEN	10600
ARSENIC	9.8
LEAD	–

GP-8		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
B(a)P	410	<15

GP-1	
DATE	12/27/05
DEPTH FT	2-5
B(a)P	2300
PHEN	2400
ARSENIC	13
LEAD	580

GP-3		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
NAP-VOC	298	1650
B(a)A	7800	17.8J
B(a)P	7400	<15
B(b)F	8500	11.7J
DiB(ah)A	1110	<11
I(123-cd)P	5300	<10
PHEN	16800	<15
ARSENIC	6.8	<0.4
LEAD	630	3800
BARIUM	–	–
CHRYSENE	–	–

GP-7		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
B(a)P	20.8J	1000
ARSENIC	<0.4	26
LEAD	36	1600

GP-4		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
B(a)P	1000	<15
ARSENIC	<0.4	21

GP-5		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
B(a)A	4300	82
B(a)P	3900	73
B(b)F	4900	121
DiB(ah)A	570	<11
NAP-PAH	680	<12
PHEN	8100	118
ARSENIC	11	<0.4
LEAD	510	22
CADMIUM	510	22

GP-6		
DATE	8/20/07	8/20/07
DEPTH FT	2-4	20
B(a)A	1060	7600
B(a)P	1010	7400
B(b)F	1360	8100
DiB(ah)A	116	910
I(123-cd)P	520	5100
NAP-PAH	72	440
PHEN	1280	21700
ARSENIC	3.6	20

GP-2	
DATE	12/27/05
DEPTH FT	7-10
B(a)P	480

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APPROVED BY SAO	SHEET NO. 1
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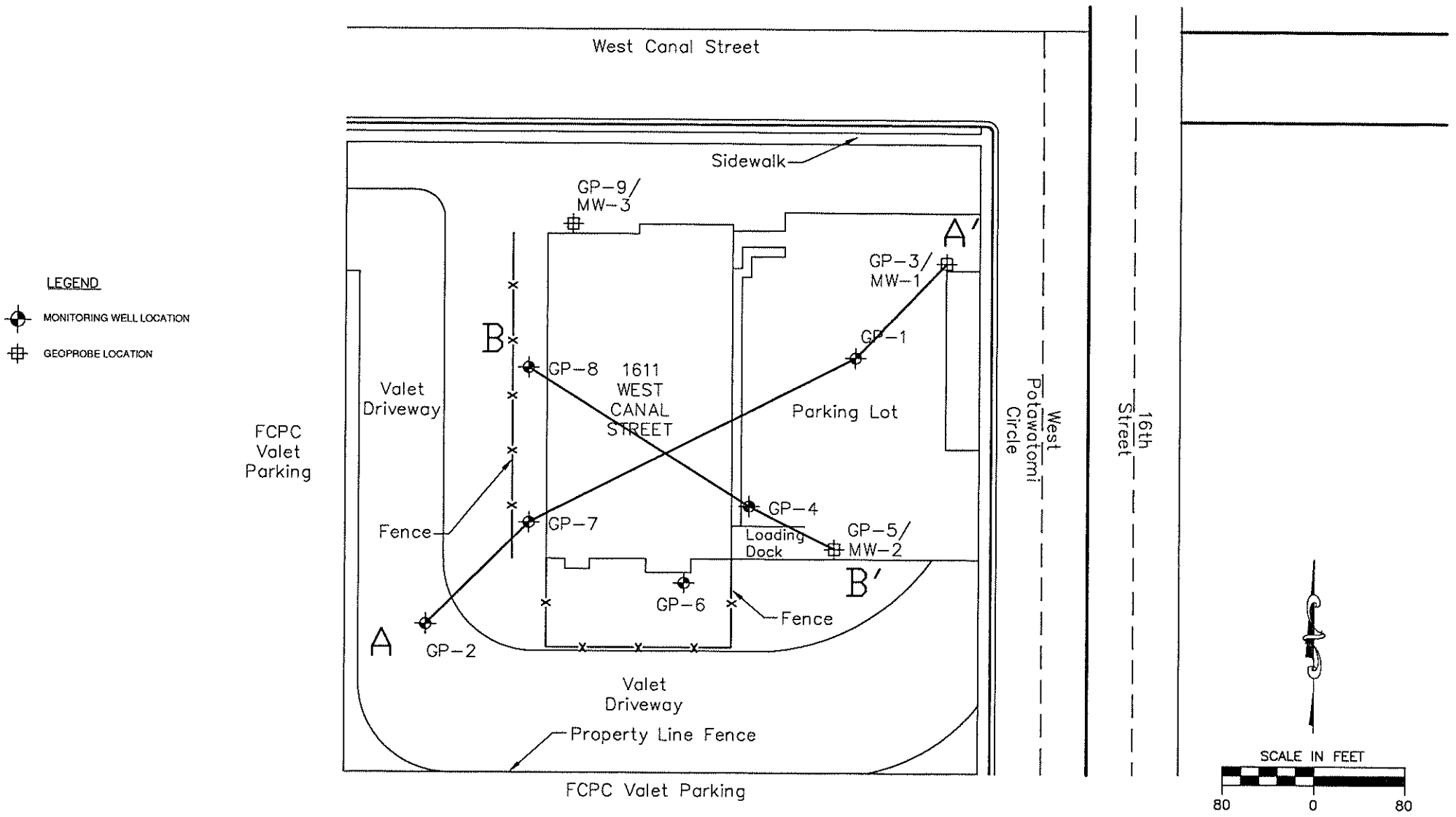
FIGURE 3
EXTENTS OF SOIL CONTAMINATION
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.



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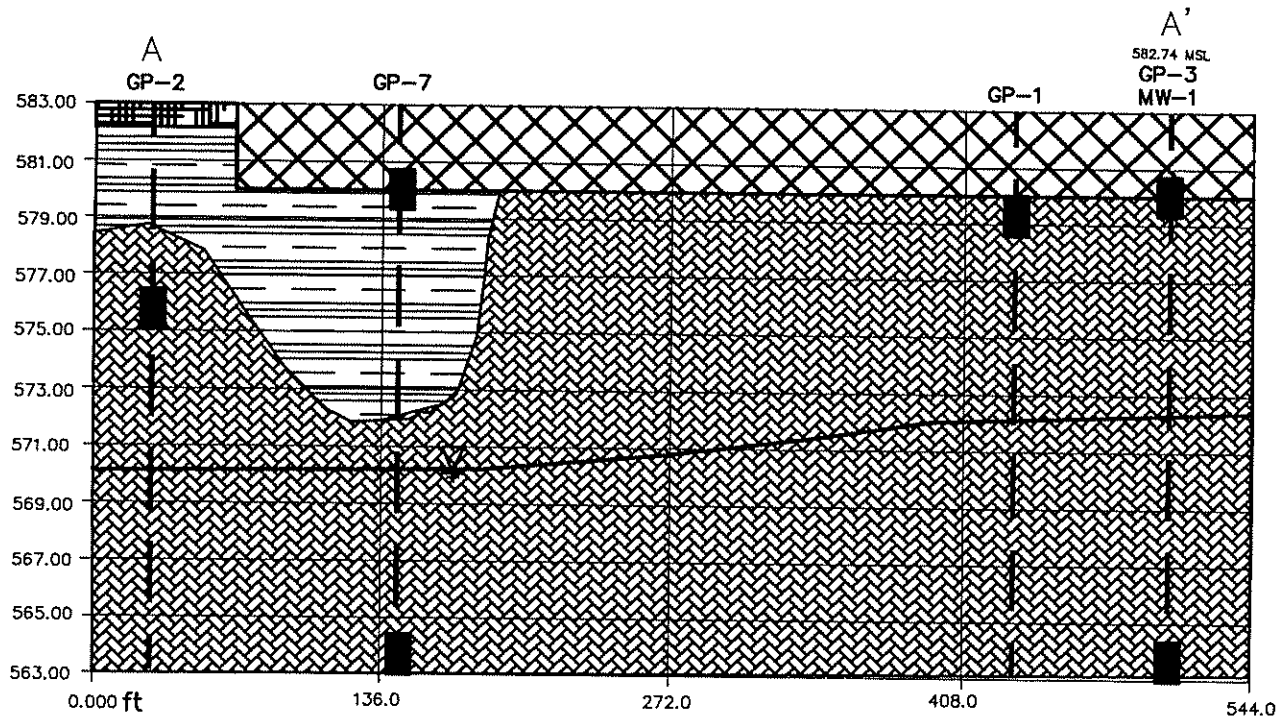
APPROVED BY DJG	SHEET NO. 1

FIGURE 4A
SOIL GEOLOGIC CROSS SECTION LAYOUT
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.



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APPROVED BY SAO	SHEET NO. 1

FIGURE 4B
SOIL GEOLOGIC CROSS SECTION A–A'
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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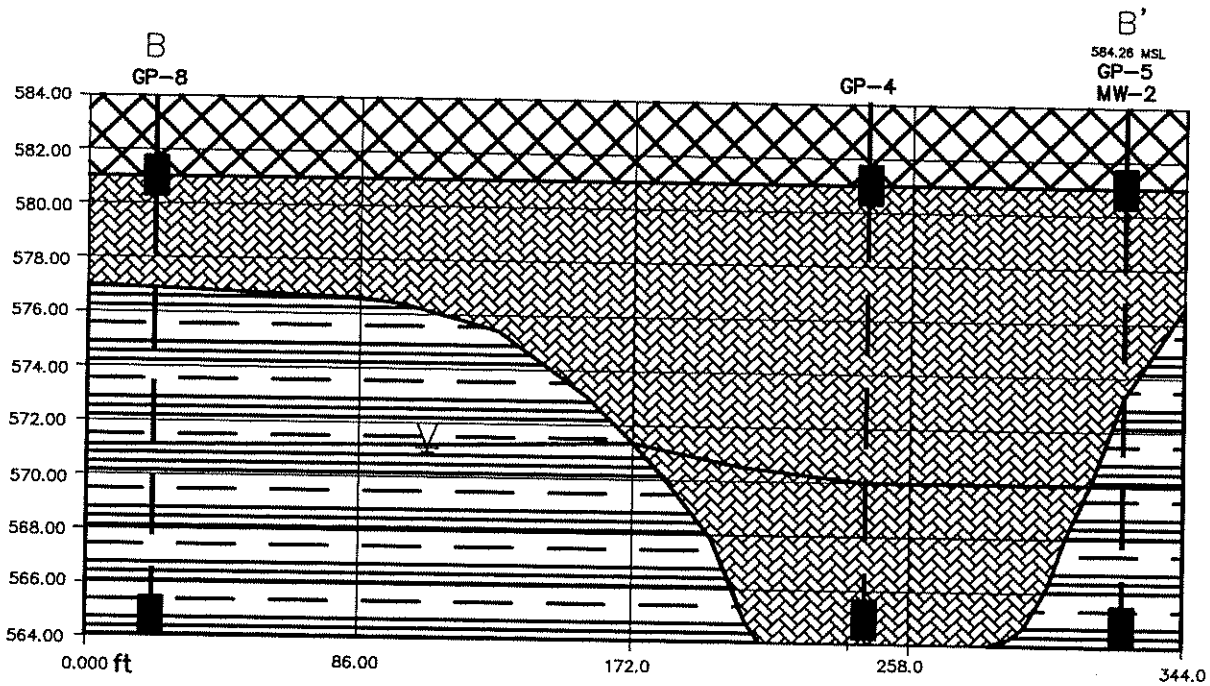

CLAY

EXISTING 3' CLEAN FILL CAP WITH ESTABLISHED VEGITATION

RESIDUAL SOIL CONTMINATION

STATIC WATER LEVEL

SOIL SAMPLE DEPTHS

SOIL BORING LOCATION

VE = 6.7

SCALE IN FEET

40 0 40

DESIGNED BY SAO	DATE 11/24/09
DRAWN BY AMB	PROJECT 1509003
APPROVED BY SAO	SHEET NO. 1
CADFILE \\Keydata01\pad\ACAD\1509003\Fig 4ABC.dwg XREF LMAN	

FIGURE 4C
SOIL GEOLOGIC CROSS SECTION B-B'
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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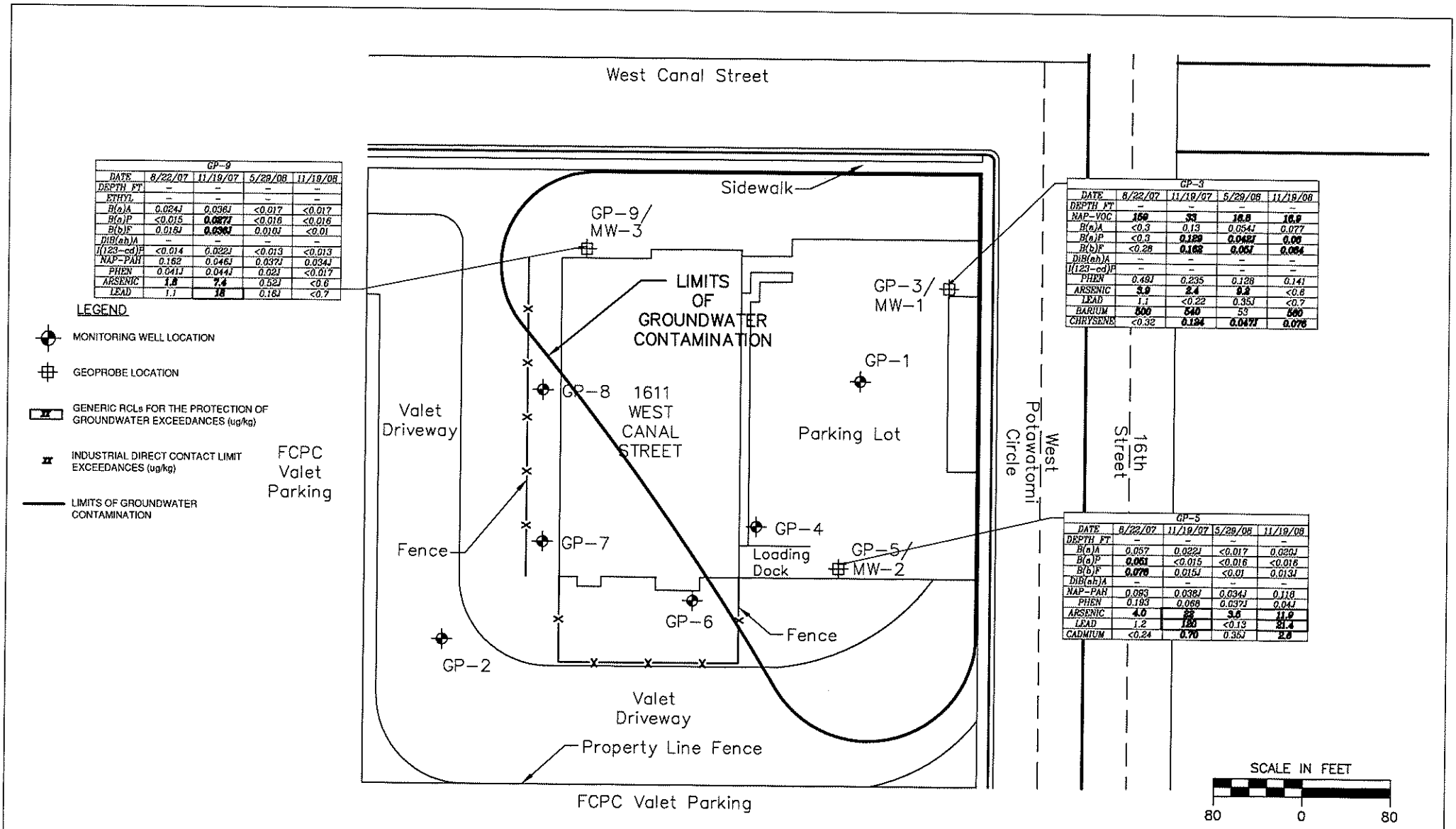

GP-9				
DATE	8/22/07	11/19/07	5/29/08	11/19/08
DEPTH FT	–	–	–	–
ETHYL	–	–	–	–
B(a)A	0.024J	0.036J	<0.017	<0.017
B(a)P	<0.015	**0.0877**	<0.016	<0.016
B(b)F	0.018J	**0.036J**	0.010J	<0.01
DiB(ah)A	–	–	–	–
I(123-cd)P	<0.014	0.022J	<0.013	<0.013
NAP-PAH	0.162	0.046J	0.037J	0.034J
PHEN	0.041J	0.044J	0.02J	<0.017
ARSENIC	**1.8**	**7.4**	0.52J	<0.6
LEAD	1.1	**18**	0.18J	<0.7

GP-3				
DATE	8/22/07	11/19/07	5/29/08	11/19/08
DEPTH FT	–	–	–	–
NAP-VOC	**150**	**53**	**16.8**	**16.9**
B(a)A	<0.3	0.13	0.054J	0.077
B(a)P	<0.3	**0.129**	**0.048J**	**0.06**
B(b)F	<0.28	**0.162**	**0.057**	**0.064**
DiB(ah)A	–	–	–	–
I(123-cd)P	–	–	–	–
PHEN	0.49J	0.235	0.128	0.141
ARSENIC	**5.9**	**2.4**	**0.2**	<0.6
LEAD	1.1	<0.22	0.35J	<0.7
BARIUM	**500**	**540**	53	**500**
CHRYSENE	<0.32	**0.134**	**0.0471**	**0.076**

GP-5				
DATE	8/22/07	11/19/07	5/29/08	11/19/08
DEPTH FT	–	–	–	–
B(a)A	0.057	0.022J	<0.017	0.020J
B(a)P	**0.063**	<0.015	<0.016	<0.016
B(b)F	**0.076**	0.015J	<0.01	0.013J
DiB(ah)A	–	–	–	–
NAP-PAH	0.083	0.038J	0.034J	0.118
PHEN	0.193	0.068	0.037J	0.04J
ARSENIC	**4.0**	**22**	**3.6**	**11.9**
LEAD	1.2	**120**	<0.13	**51.4**
CADMIUM	<0.24	**0.70**	0.35J	**2.8**

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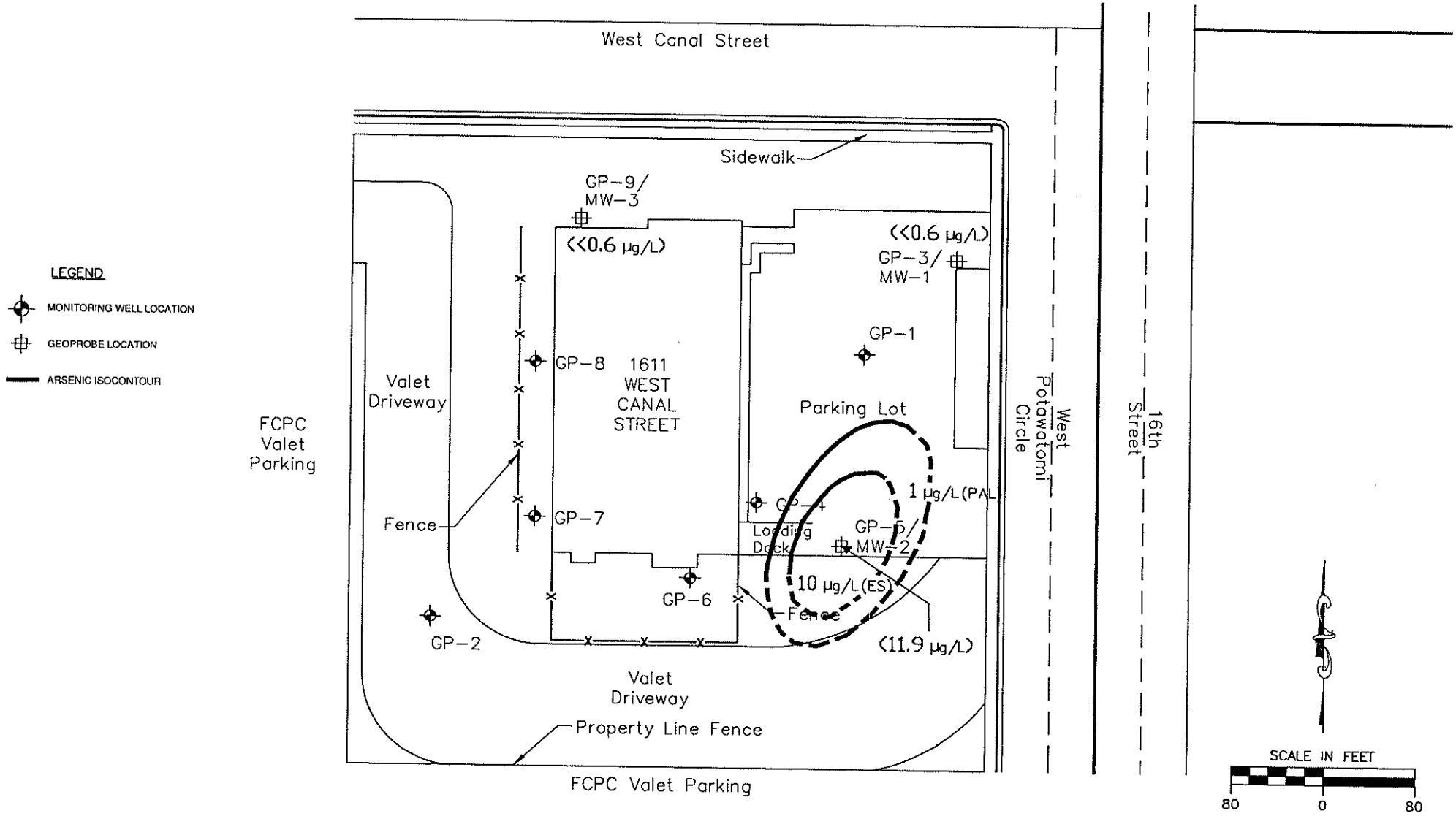
DRAWN BY: AMB	PROJECT: 1509003
APPROVED BY: SAO	SHEET NO.: 1
CADFILE G:\ACAD\1509003\Figure5.dwg	
SHEET: LMAP	

FIGURE 5
EXTENTS OF GROUNDWATER CONTAMINATION
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.
710 NORTH WATER STREET, SUITE 500
MILWAUKEE, WI 53202
414.224.8270 - FAX 414.224.8280



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APPROVED BY DJG	SHEET NO. 1

FIGURE 5A
ARSENIC GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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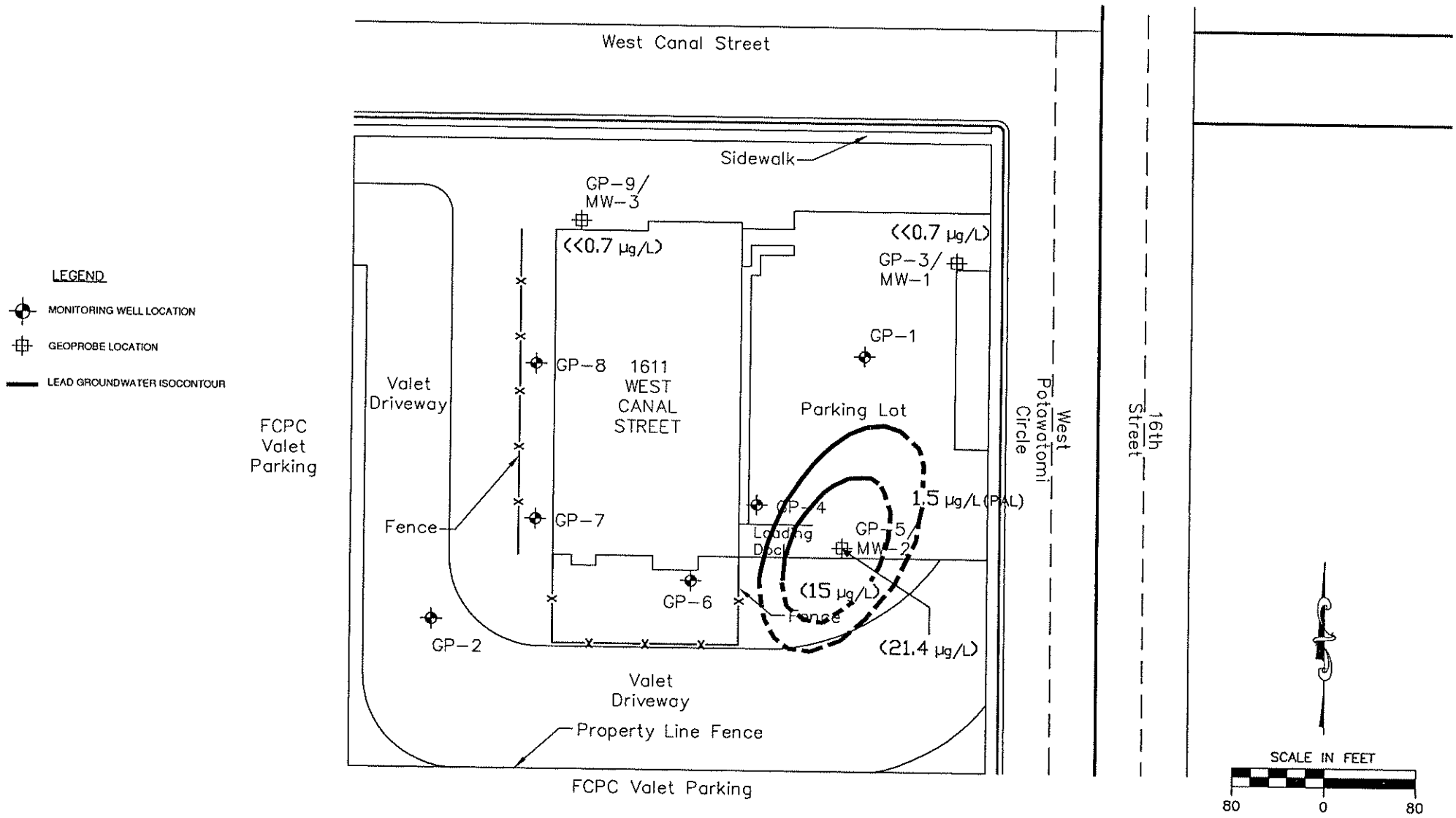

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APPROVED BY DJG	SHEET NO. 1

FIGURE 5B
LEAD GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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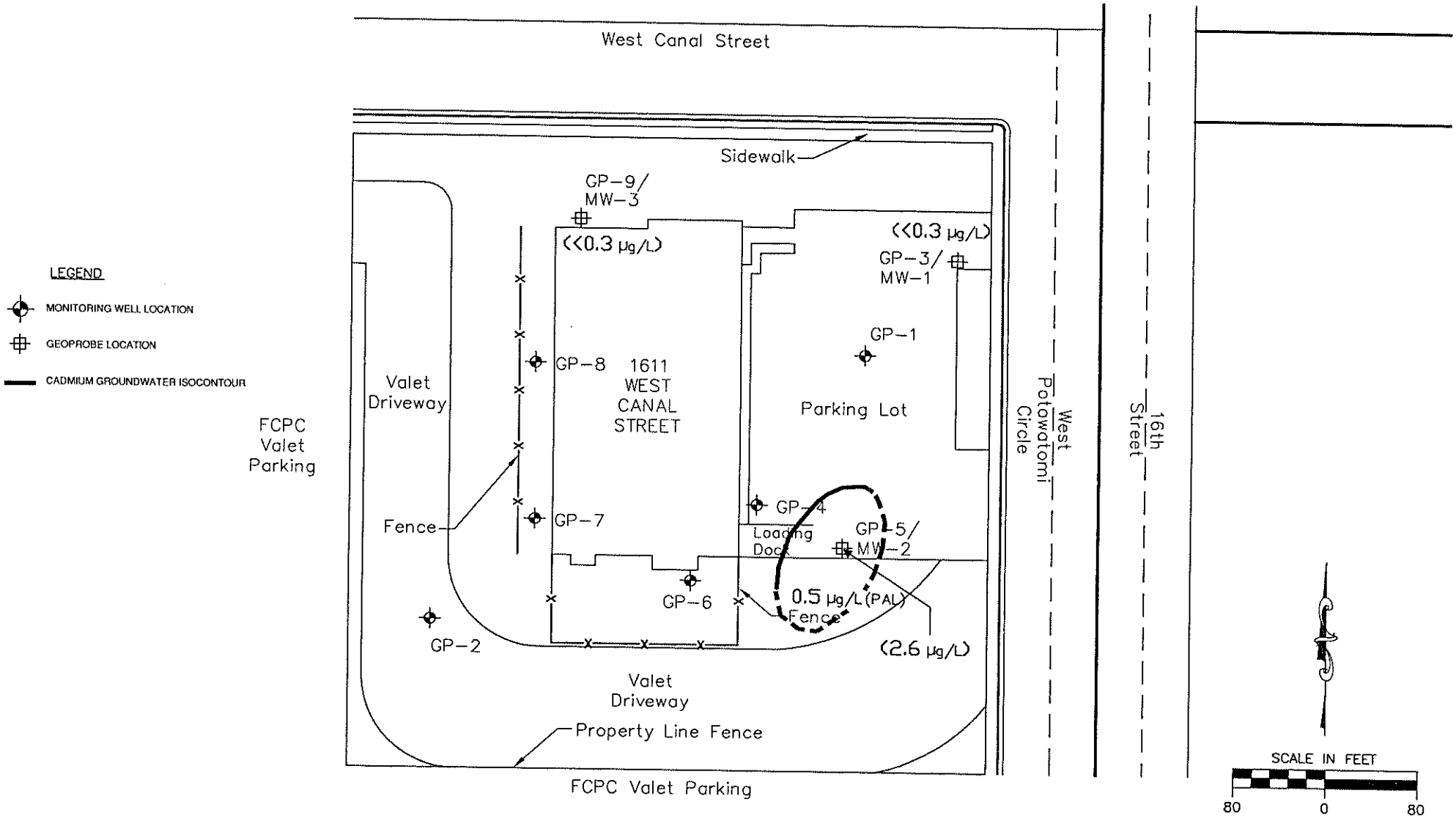

DESIGNED BY: JLS	DATE: 01/11/06
DRAWN BY: JLS	PROJECT: 1509803
APPROVED BY: DJG	SHEET NO.: 1

FIGURE 5C
CADMIUM GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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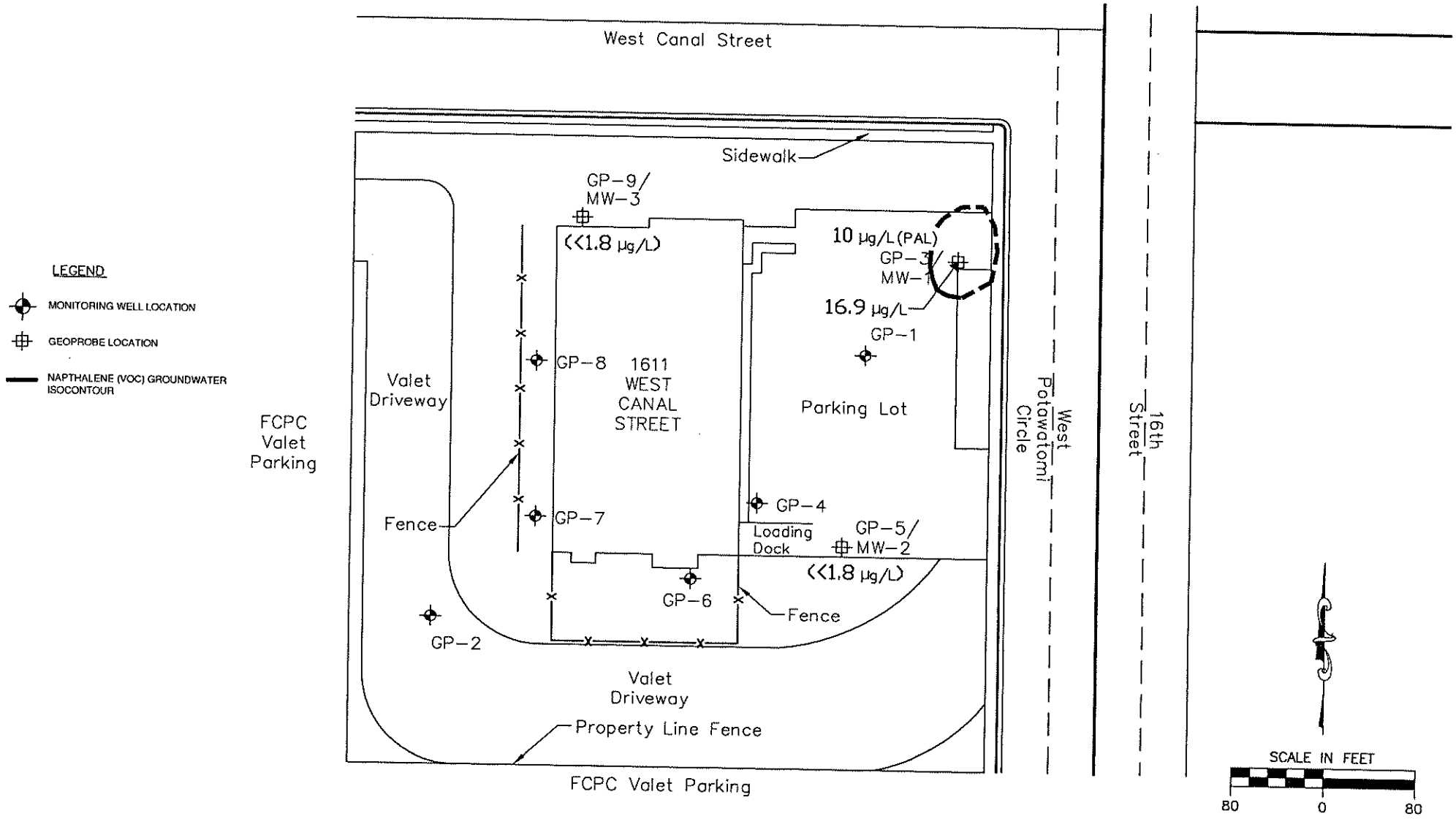

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FIGURE 5D
NAPTHALENE (VOC) GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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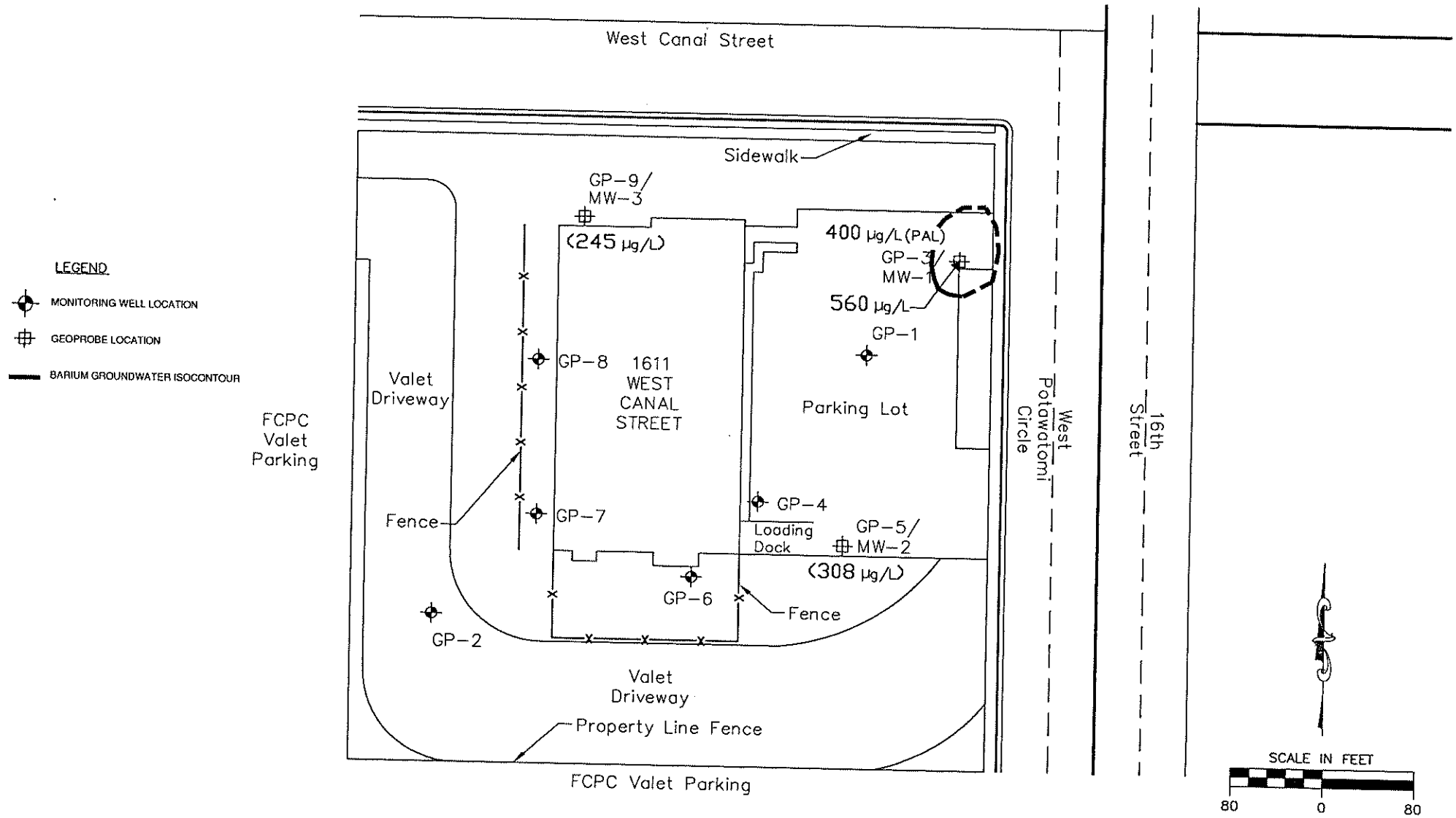

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FIGURE 5E
BARIUM GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
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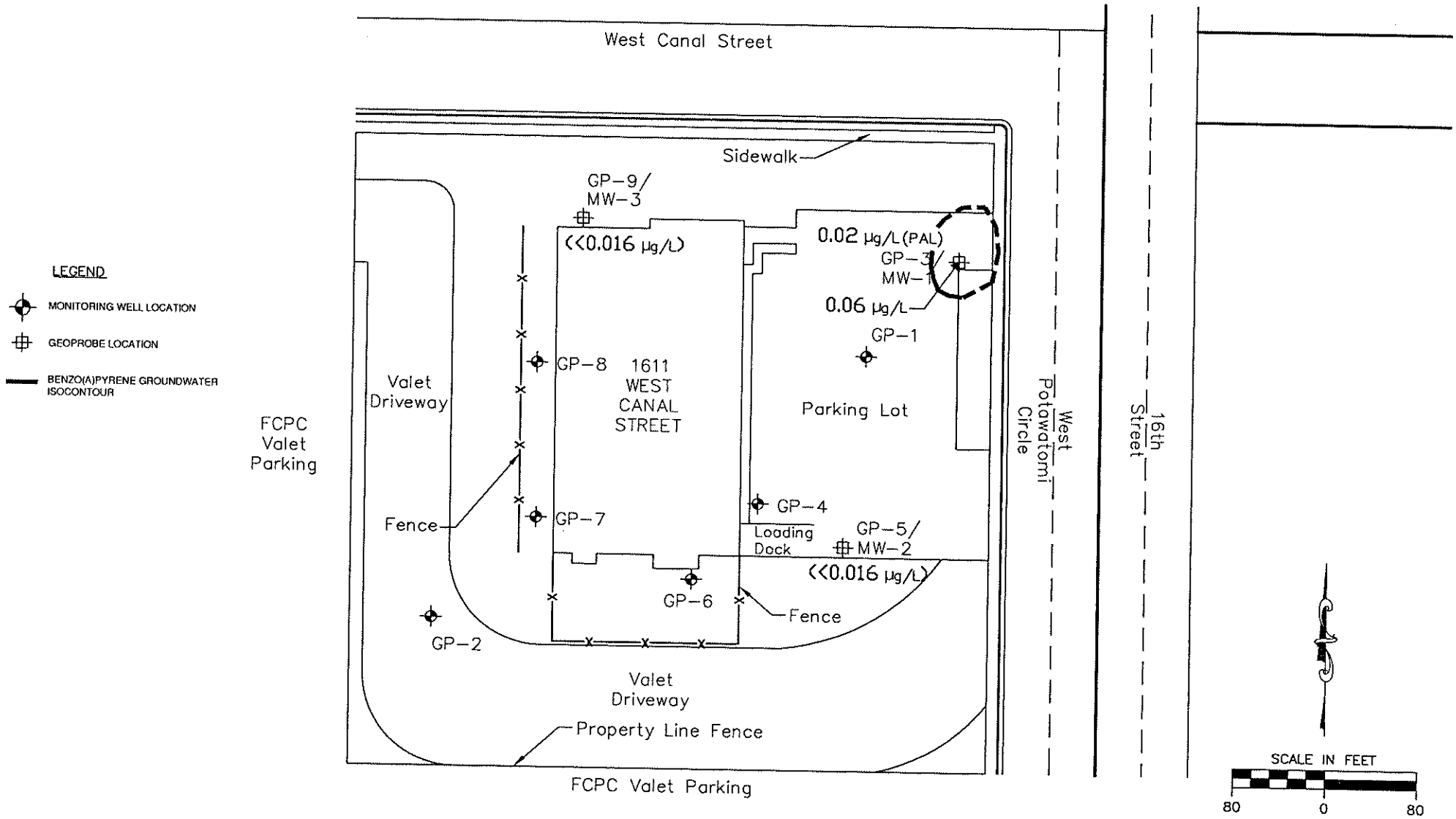

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FIGURE 5F
BENZO(A)PYRENE GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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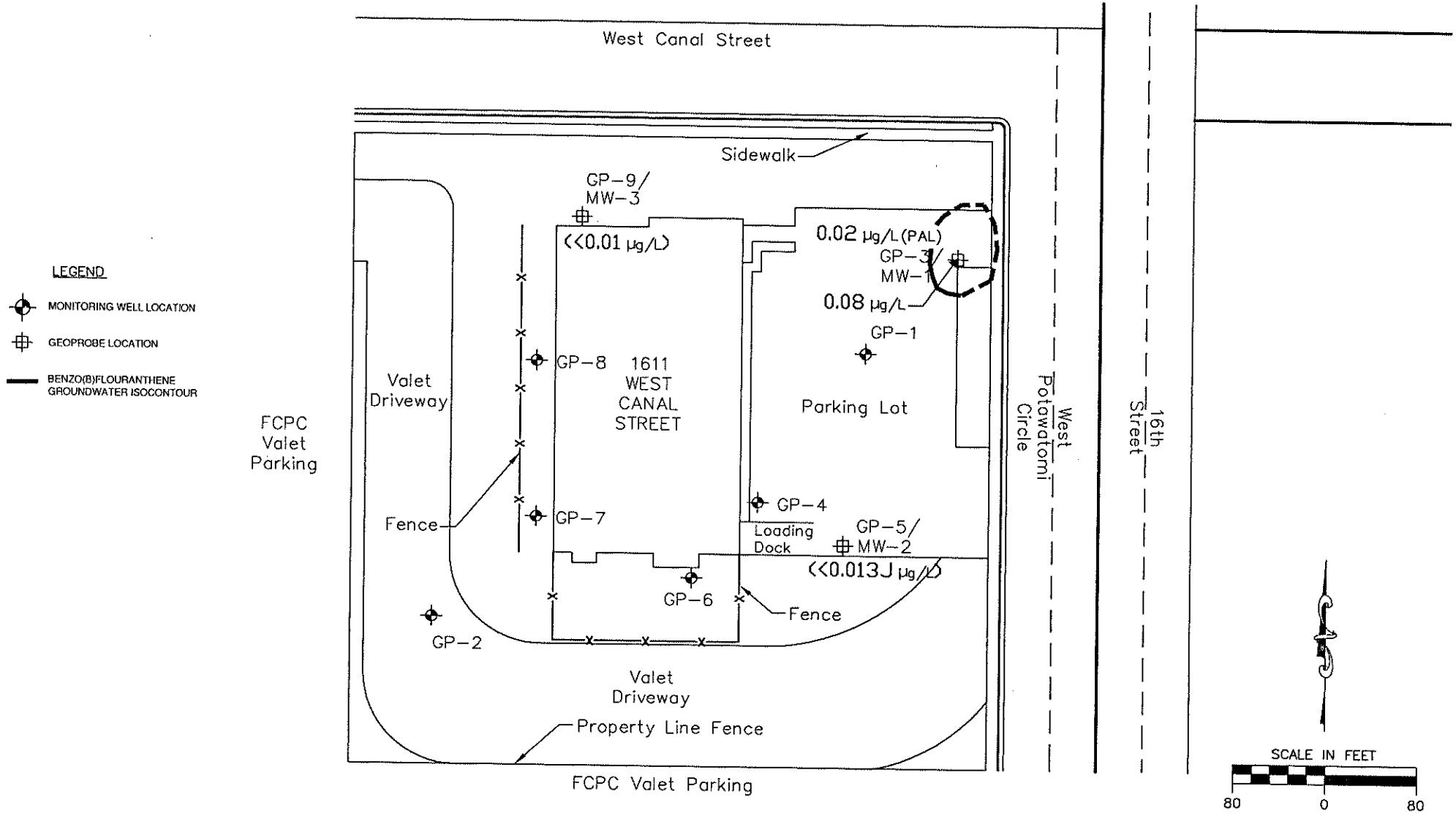

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FIGURE 5G
BENZO(B)FLOURANTHENE GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
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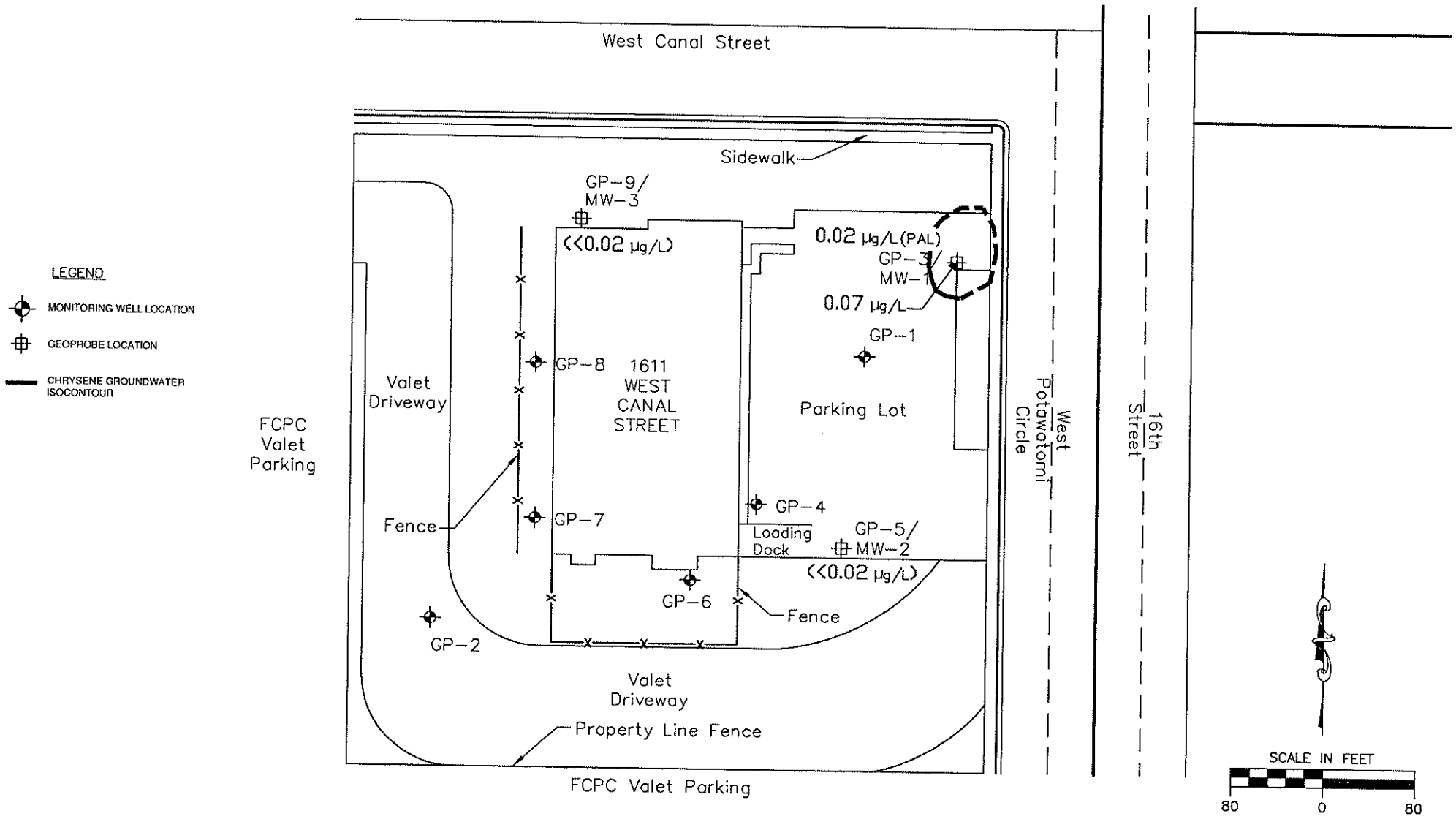

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FIGURE 5H
CHRYSENE GROUNDWATER ISOCONTOUR MAP
BADGER RAILING
1611 WEST CANAL STREET
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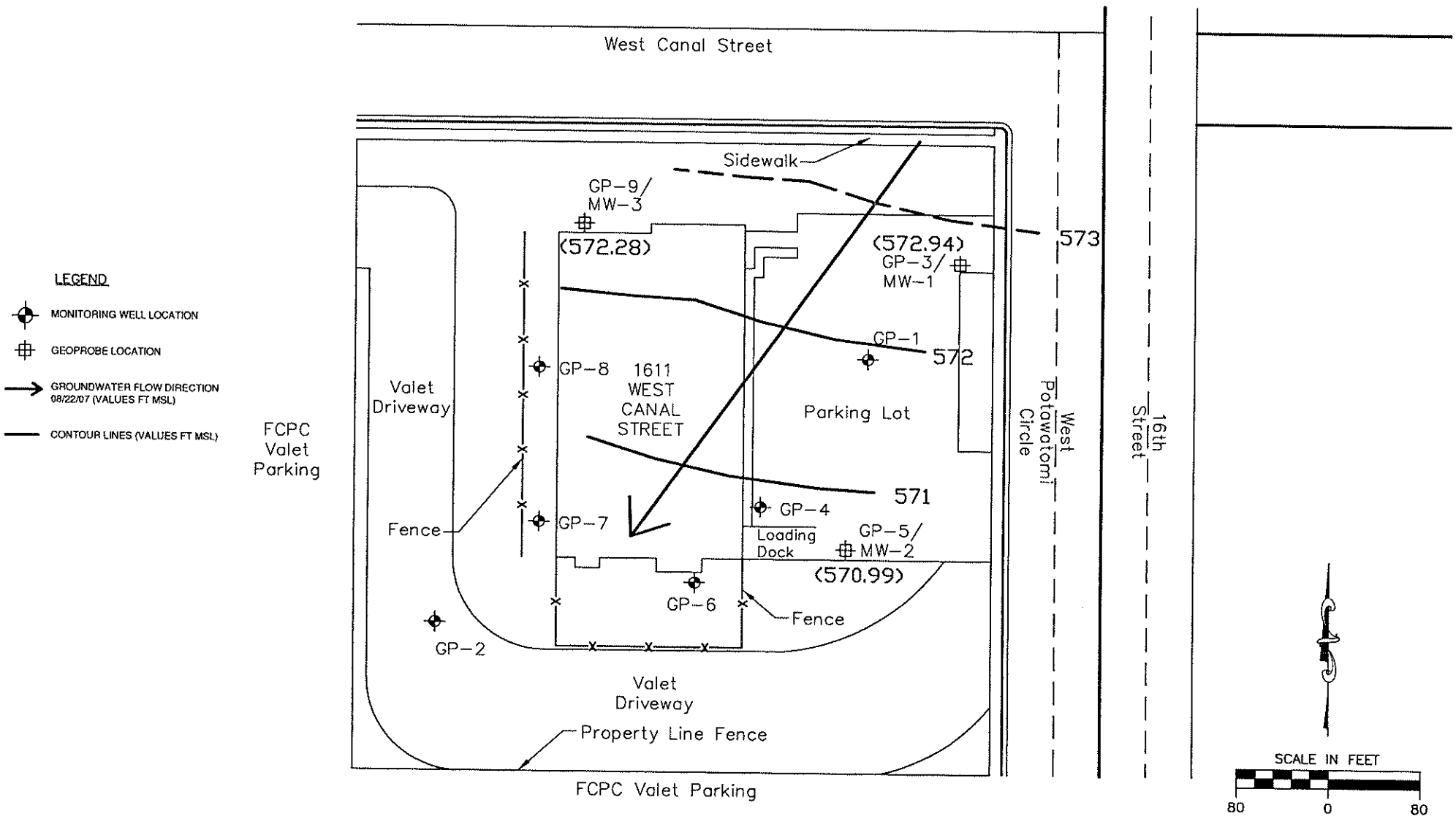

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FIGURE 6A
GROUNDWATER FLOW DIRECTION 08/22/07
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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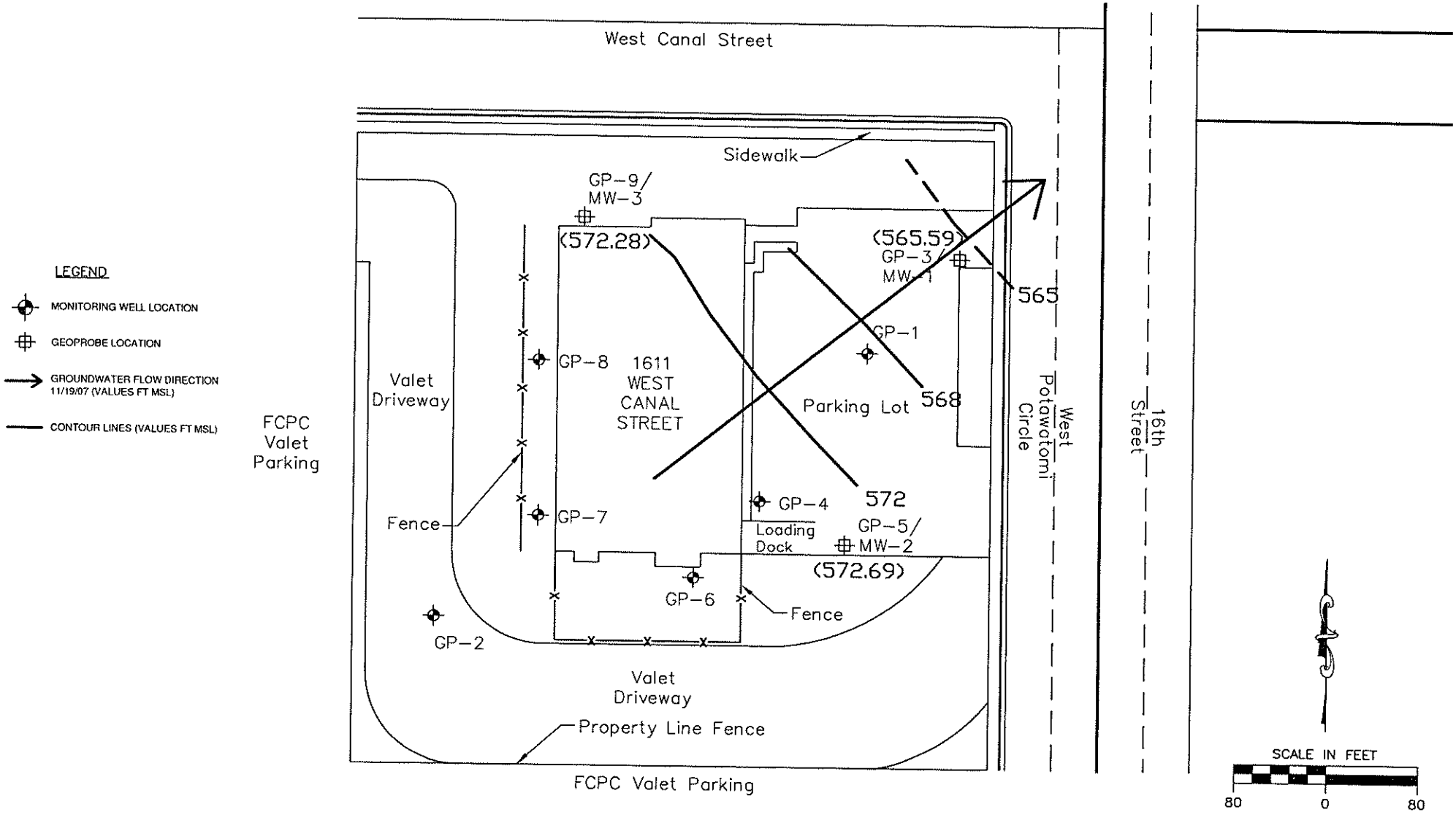

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FIGURE 68
GROUNDWATER FLOW DIRECTION 11/19/07
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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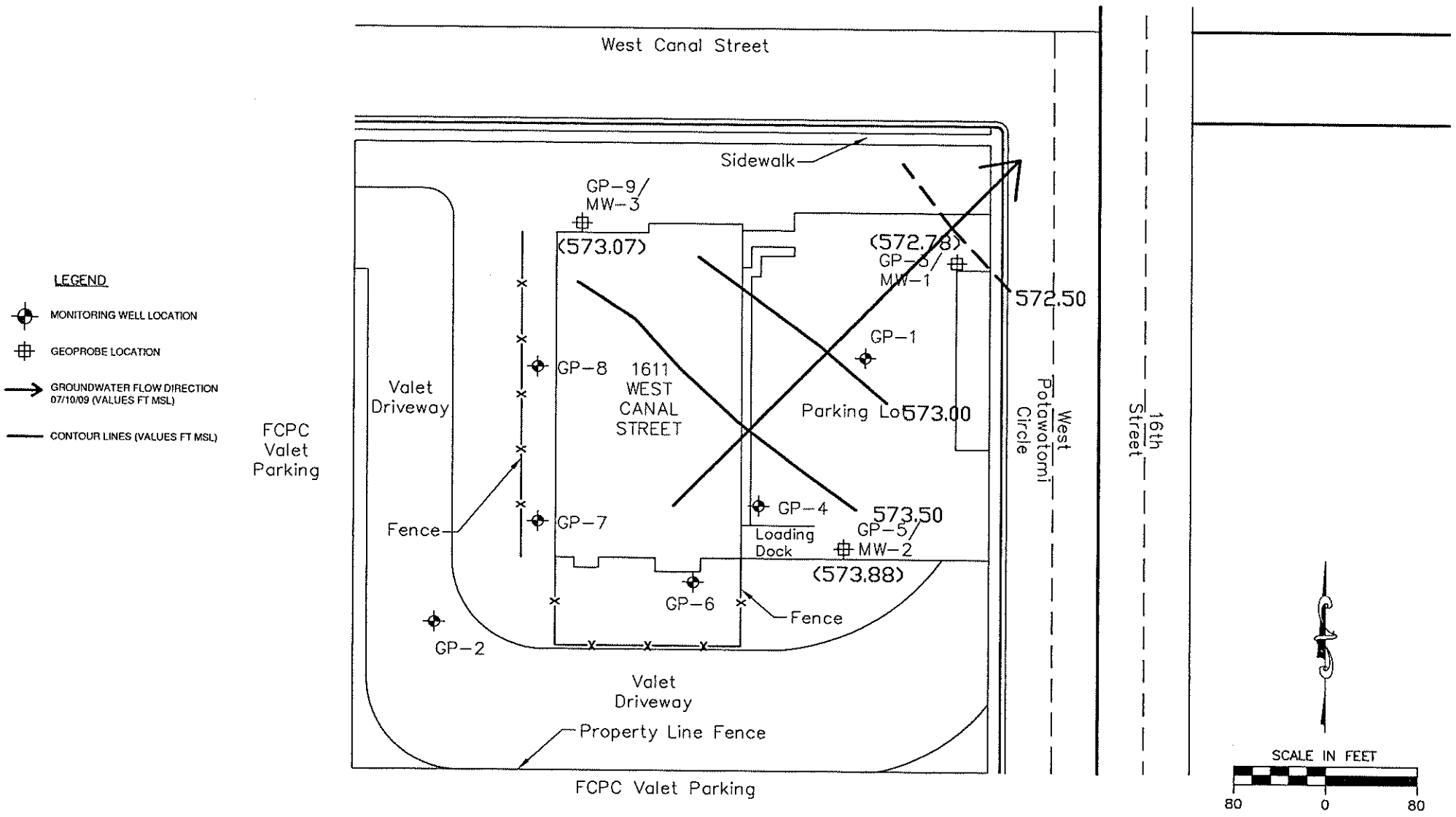

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FIGURE 6C
GROUNDWATER FLOW DIRECTION 07/10/09
BADGER RAILING
1611 WEST CANAL STREET
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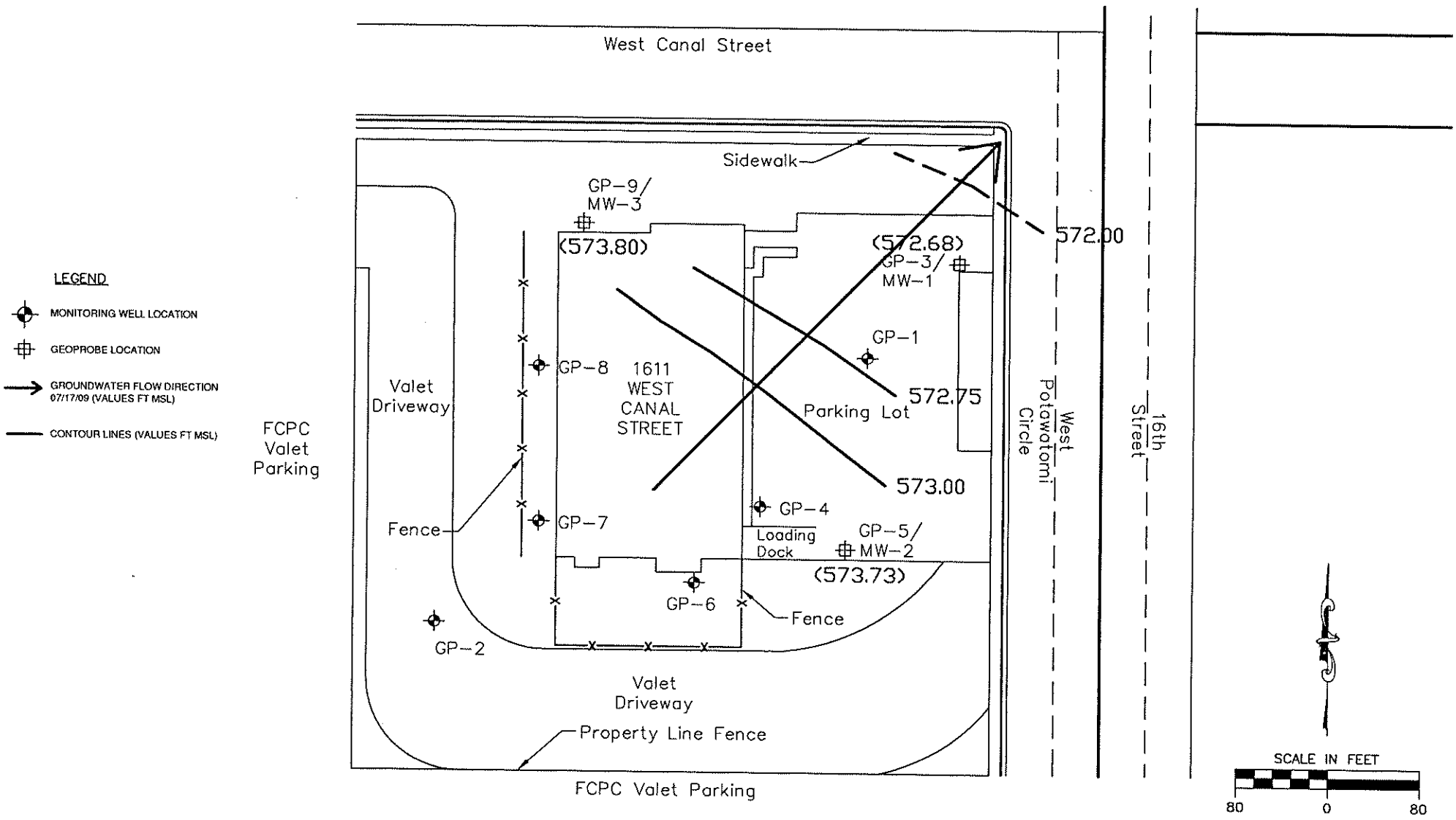

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APPROVED BY DJG	SHEET NO. 1
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FIGURE 6D
GROUNDWATER FLOW DIRECTION 07/17/09
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

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TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

BADGER RAILING
1611 West Canal Street
Milwaukee, Wisconsin

PARAMETERS	SAMPLE IDENTIFICATION																GENERIC RCLs	
	GP-1	GP-2	GP-3		GP-4		GP-5		GP-6		GP-7		GP-8		GP-9		PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)
Date Collected	12/27/05	12/27/05	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07	8/20/07		
Depth (feet bgs)	2-5	7-10	2-4	20	2-4	20	2-4	20	2-4	20	2-4	20	2-4	20	2-4	20	---	---
Detected VOCs (µg/kg)																	---	---
Ethylbenzene	<29	<30	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	27.2 J	<25	5.5 (1)	---
p-Isopropyltoluene	<29	<30	<25	<25	<25	<25	<25	<25	<25	38 J	<25	<25	<25	<25	<25	<25	---	---
Methylene chloride	<59	<59	162	<25	<25	<25	<25	<25	<25	<25	106	<25	<25	<25	<25	<25	---	---
Naphthalene	96	<59	298	1,650	214	48 J	39 J	<25	163	79	<25	<25	33 J	<25	360	<25	400 (2)	---
Toluene	<29	<30	36 J	<25	68	<25	<25	<25	57 J	<25	<25	<25	<25	<25	97	<25	1,500 (1)	---
Trichloroethene	<29	79	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	---	---
1,2,4-Trimethylbenzene	<29	<30	<25	<25	47 J	<25	<25	<25	50 J	<25	<25	<25	<25	<25	71	<25	---	---
Xylenes	<100	<100	<75	<75	138 J	<75	<75	<75	141 J	<75	<75	<75	<75	<75	121 J	<75	4,100 (1)	---
Detected PAHs (µg/kg)																		
Acenaphthene	<590	<300	2,050	<7.2	30.5	<7.2	850	<7.2	101	2,460	<7.2	225	27.7	<7.2	1,200	<7.2	38,000 (2)	60,000,000 (2)
Acenaphthylene	<1,000	<500	101 J	<7	71	<7	440	<7	49	62 J	<7	53	17.1 J	<7	278	<7	700 (2)	360,000 (2)
Anthracene	810	240	5,400	<14	166	<14	2,360	26.7 J	291	7,000	<14	410	106	<14	2,570	<14	3,000,000 (2)	300,000,000 (2)
Benzo(a)anthracene	2,500	1,100	**7,800**	17.8 J	1,050	<15	**4,300**	82	1,060	**7,600**	25.8 J	1,070	500	<15	**6,300**	<15	17,000 (2)	3,900 (2)
Benzo(a)pyrene	**2,300**	**480**	**7,400**	<15	**1,000**	<15	**3,900**	73	**1,010**	**7,400**	20.6 J	**1,000**	**410**	<15	**6,100**	<15	48,000 (2)	390 (2)
Benzo(b)fluoranthene	1,500	440	**8,500**	11.7 J	1,420	<8.1	**4,900**	121	1,360	**8,100**	29	1,310	580	<8.1	**7,500**	11.5 J	360,000 (2)	3,900 (2)
Benzo(g,h,i)perylene	1,900	360	4,700	<14	430	<14	2,090	35 J	410	4,500	<14	390	146	<14	3,200	<14	6,800,000 (2)	39,000 (2)
Benzo(k)fluoranthene	930	400	2,630	<11	460	<11	1,460	38	400	2,670	<11	470	182	<11	2,460	<11	870,000 (2)	39,000 (2)
Chrysene	1,900	430	6,900	<13	980	<13	3,800	94	990	6,200	25.5 J	1,010	470	<13	5,800	<13	37,000 (2)	390,000 (2)
Dibenzo(a,h)anthracene	240	47	**1,110**	<11	126	<11	**570**	<11	116	**910**	<11	110	47	<11	**880**	<11	38,000 (2)	390 (2)
Fluoranthene	4,600	1,000	19,400	20.3 J	1,820	<13	10,500	246	2,440	24,100	42 J	2,520	1,150	<13	14,100	15.3 J	500,000 (2)	40,000,000 (2)
Fluorene	240	71	2,030	<8.5	29.3	<8.5	1,270	13.3 J	109	3,300	<8.5	198	22.1 J	<8.5	1,080	<8.5	100,000 (2)	40,000,000 (2)
Indeno(1,2,3-cd)pyrene	1,500	330	**5,300**	<10	540	<10	2,630	41	520	**5,100**	10.4 J	500	198	<10	**4,000**	<10	680,000 (2)	3,900 (2)
1-methyl naphthalene	<350	<180	420	<13	15.2 J	<13	370	<13	60	480	<13	156	<13	<13	650	<13	23,000 (2)	70,000,000 (2)
2-methyl naphthalene	1,400	440	380	<17	20.2 J	<17	400	<17	71	580	<17	190	<17	<17	730	<17	20,000 (2)	40,000,000 (2)
Naphthalene	<350	<180	263	24.9 J	24.3 J	<12	680	<12	72	440	<12	217	<12	<12	1,950	<12	400 (2)	110,000 (2)
Phenanthrene	2,400	460	16,800	<15	480	<15	8,100	118	1,280	21,700	22 J	1,640	320	<15	10,600	<15	1,800 (2)	390,000 (2)
Pyrene	4,700	580	17,200	21.2 J	1,600	<13	8,700	190	2,150	19,700	38 J	2,270	1,010	<13	13,000	14 J	8,700,000 (2)	30,000,000 (2)
Metals (mg/kg)																		
Arsenic	13	0.16	**6.8**	<0.4	<0.4	**21**	11	<0.4	**3.6**	**20**	<0.4	**26**	<0.4	<0.4	**9.6**	<0.4	---	1.6 (1)
Barium	150	26	210	71	66	49	170	120	46	290	36	290	31	19	350	11	---	---
Cadmium	1.4	<0.12	2.3	1.1	0.43	0.88	1.9	1.2	1.1	2.0	0.62	16	0.64	0.46	2.2	0.36	---	510 (1)
Chromium	25	5.9	18	8.5	22	12	13	24	13	16	11	<2.3	11	5.8	16	5.2	---	200 (1) (3)/- (1) (4)
Lead	**580**	66	**630**	**3,800**	33	37	**510**	22	75	370	36	**1,600**	19	11	480	10	---	500 (1)
Mercury	2.0	0.37	1.5	0.23	0.052	0.053	1.2	0.22	0.100	1.1	0.052	1.9	0.050	0.026	1.3	0.021	---	---
Selenium	<4.7	<4.7	<0.92	<2.3	<4.6	<2.3	<2.3	<0.46	<4.6	<2.3	<4.6	<4.6	<4.6	<4.6	<2.3	<4.6	---	---
Silver	0.34	0.29	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	6.3	<0.12	<0.12	<0.12	<0.12	---	---
PCBs (µg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---

Notes:

Bold concentrations exceed direct contact (industrial) values
Boxed concentrations exceed protection of groundwater values
--- - not analyzed or no standard established
(1) - NR 720 generic RCLS
(2) - Suggested generic RCLs PAHs Interim Guidance (WDNR), Publication RR-519-97, April 1997 corrected).
(3) - hexavalent
(4) - trivalent
bgs - below ground surface
mg/kg - milligrams per kilogram
PAHs - polynuclear aromatic hydrocarbons
PCB - polychlorinated byphenyl
Q - anlayte detected between limit of detection and limit of quantitation
RCL - residual contaminant level
µg/kg - micrograms per kilogram
VOCs - volatile organic compounds

TABLE 2

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

BADGER RAILING
1611 West Canal Street
Milwaukee, Wisconsin

PARAMETERS	SAMPLE IDENTIFICATION														NR 140	
	GP-1	GP-2	MW-1				MW-2				MW-3				ES	PAL
Date Collected	12/27/05	12/27/05	8/22/07	11/19/07	5/29/08	11/19/08	8/22/07	11/19/07	5/29/08	11/19/08	8/22/07	11/19/07	5/29/08	11/19/08		
VOCs (µg/l)															—	—
Naphthalene	—	—	**159**	**33**	**18.8**	**16.9**	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	100	10
Toluene			<0.46	<0.46	<0.39	<0.39	<0.46	<0.46	<0.39	0.72 J	<0.46	0.52 J	<0.39	0.43 J	38,000	—
Metals (µg/l)															—	—
Arsenic	0.0017 J	<0.00079	**3.9**	**2.4**	**9.2**	<0.6	**4.0**	22	3.5	**11.9**	**1.8**	**7.4**	0.52 J	<0.6	10	1
Barium	0.54	0.24	**500**	**540**	53	**560**	240	**570**	26	308	160	280	54	245	2,000	400
Cadmium	<0.00014	0.00030 J	<0.24	<0.24	0.15 J	<0.3	<0.24	**0.70**	0.35 J	**2.6**	<0.24	<0.24	0.16 J	<0.3	5	0.5
Chromium	0.0055 J	<0.0021	3.3	3.1	**13**	<1.2	2.8	8.8	**11**	<1.2	2.2	5.8	1.9	<1.2	100	10
Lead	<0.0014	<0.0014	1.1	<0.22	0.35 J	<0.7	1.2	120	<0.13	**21.4**	1.1	**18**	0.16 J	<0.7	15	1.5
Mercury	<0.000092	<0.000092	0.10 J	<0.044	<0.044	<0.04	0.090 J	**0.86**	<0.044	<0.04	0.080 J	<0.044	<0.044	<0.04	2	0.2
Selenium	<0.0032	<0.0032	0.96 J	3.2 J	6.7	<0.9	2.9	7.1	8.3	<0.9	1.1	<2.15	1.3	<0.9	50	10
Silver	<0.0013	0.0013 J	0.98	<0.12	<0.13	<4.4	<0.12	<0.12	0.95	<4.4	0.55	<0.12	<0.13	<4.4	50	10
PAHs (µg/l)															—	—
Acenaphthene	—	—	0.36 J	0.117	0.108	0.11	0.074	0.023 J	0.016 J	0.022 J	<0.015	<0.015	<0.013	<0.013	—	—
Anthracene	—	—	<0.26	0.067	0.051 J	0.056	0.036 J	<0.013	<0.014	<0.014	<0.013	0.014 J	<0.014	<0.014	3,000	600
Benzo(a)anthracene	—	—	<0.3	0.13	0.054 J	0.077	0.057	0.022 J	<0.017	0.020 J	0.024 J	0.036 J	<0.017	<0.017	—	—
Benzo(a)pyrene	—	—	<0.3	**0.129**	**0.042 J**	**0.06**	**0.051**	<0.015	<0.016	<0.016	<0.015	**0.027 J**	<0.016	<0.016	0.2	0.02
Benzo(b)fluoranthene	—	—	<0.28	**0.162**	**0.05 J**	**0.084**	**0.076**	0.015 J	<0.01	0.013 J	0.018 J	**0.036 J**	0.010 J	<0.01	0.2	0.02
Benzo(g,h,i)perylene	—	—	<0.3	0.078	<0.04	0.045	0.047	<0.015	<0.02	<0.02	<0.015	0.021 J	<0.02	<0.02	—	—
Benzo(k)fluoranthene	—	—	<0.46	0.054 J	<0.046	0.033 J	0.034 J	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	—	—
Chrysene	—	—	<0.32	**0.124**	**0.047 J**	**0.076**	**0.063**	<0.016	<0.02	<0.02	<0.016	**0.028 J**	<0.02	<0.02	0.2	0.02
Fluoranthrene	—	—	0.33 J	0.39	0.149	0.251	0.171	0.054	0.028 J	0.059	0.040 J	0.067	0.019 J	0.018 J	400	80
Fluorene	—	—	<0.38	0.048 J	0.052 J	0.038 J	0.039 J	<0.019	<0.015	<0.015	<0.019	<0.019	<0.015	<0.015	400	80
Indeno(1,2,3-cd)pyrene	—	—	<0.28	0.086	0.027 J	0.042	0.039 J	<0.014	<0.013	<0.013	<0.014	0.022 J	<0.013	<0.013	—	—
1-Methyl Naphthalene	—	—	0.46 J	0.065	0.069 J	0.048 J	0.055	0.019 J	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	—	—
2-Methyl Naphthalene	—	—	<0.42	0.086	0.045 J	0.031 J	0.086	0.023 J	<0.016	<0.016	<0.021	<0.021	<0.016	<0.016	—	—
Naphthalene	—	—	51	1.12	**10.5**	3.2	0.093	0.038 J	0.034 J	0.118	0.162	0.046 J	0.037 J	0.034 J	100	10
Phenanthrene	—	—	0.49 J	0.235	0.128	0.141	0.193	0.068	0.037 J	0.04 J	0.041 J	0.044 J	0.02 J	<0.017	—	—
Pyrene	—	—	<0.3	0.36	0.139	0.233	0.137	0.046 J	0.019 J	0.046 J	0.037 J	0.06	<0.016	<0.016	250	50

Notes:

Bold concentrations exceed NR 140 PAL
Boxed concentrations exceed NR 140 ES
— - not analyzed, not applicable or no standard established
ES - enforcement standard
J - analyte detected between limit of detection and limit of quantitation
ND - none detected
PAHs - polynuclear aromatic hydrocarbons
PAL - preventive action limit
µg/l - micrograms per liter
VOCs - volatile organic compounds

TABLE 3

SUMMARY OF GROUNDWATER DEPTHS AND ELEVATIONS

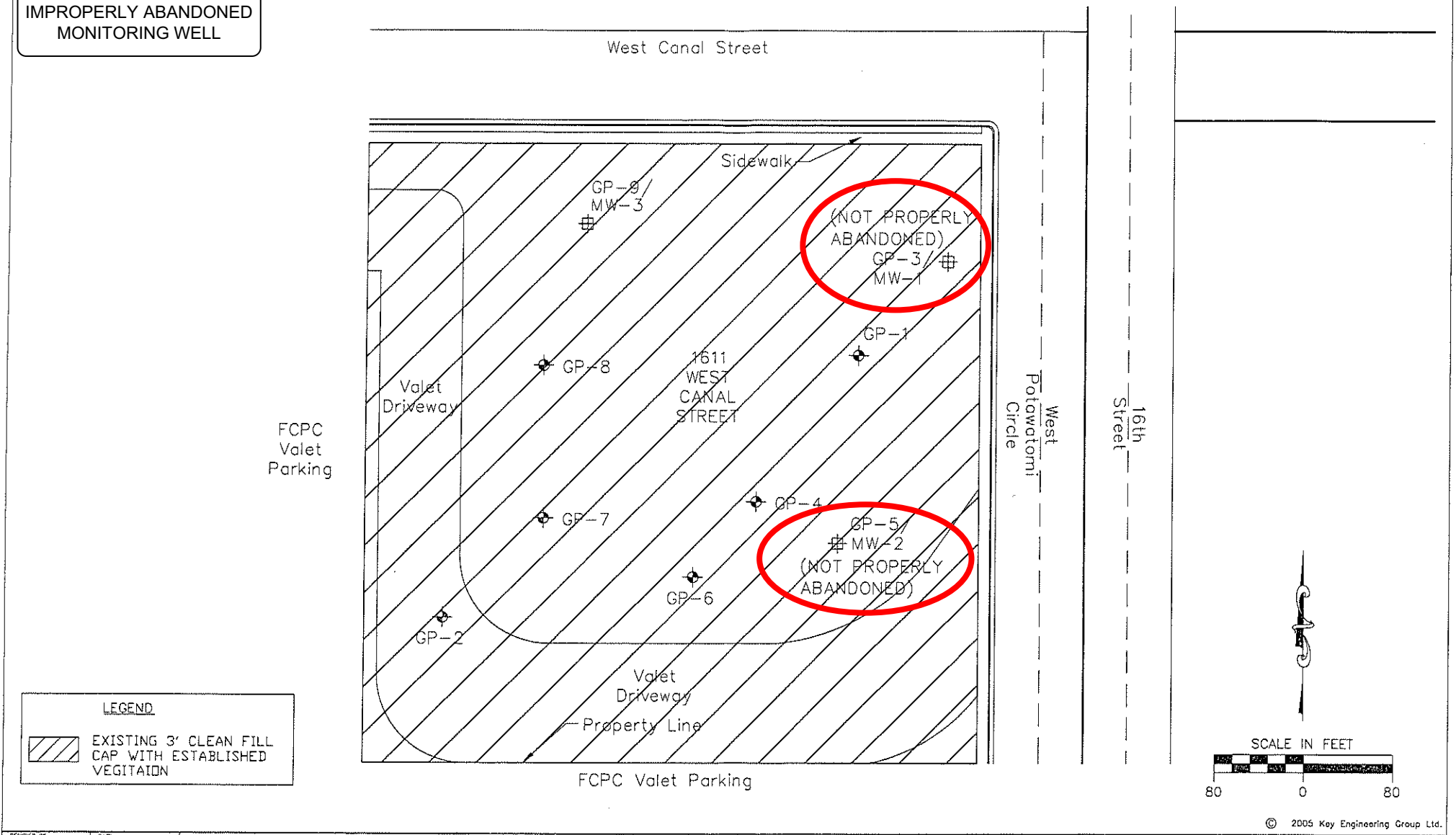
BADGER RAILING
1611 West Canal Street
Milwaukee, Wisconsin

WELL IDENTIFICATION (DATE MEASURED)	TOP OF WELL CASING ELEVATION (FEET MSL)	GROUND SURFACE ELEVATION (FEET MSL)	DEPTH TO GROUNDWATER (FEET)	GROUNDWATER ELEVATION (FEET MSL)	DEPTH TO GROUNDWATER (FEET BGS)
MW-1					
8/22/07	582.4	582.74	9.46	572.94	9.8
11/19/07			16.81	565.59	17.15
5/29/08			9.63	572.77	9.97
11/19/08			10.12	572.28	10.46
MW-2					
8/22/07	583.99	584.26	13.00	570.99	13.27
11/19/07			11.3	572.69	11.57
5/29/08			10.68	573.31	10.95
11/19/08			11.30	572.69	11.57
MW-3					
8/22/07	582.99	583.20	10.71	572.28	10.92
11/19/07			10.71	572.28	10.92
5/29/08			10.23	572.76	10.44
11/19/08			10.71	572.28	10.92

Notes:

BGS - below ground surface
MSL - mean sea level

IMPROPERLY ABANDONED MONITORING WELL



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DESIGNED BY SAO	DATE 11/24/09
DRAWN BY AMB	PROJECT 1509003
APPROVED BY SAO	SHEET NO. 1

CADFILE D:\ACAD\1509003\fig 2-CAP LIMITS-110304.dwg
XREF
LMAN

FIGURE 2
SITE LAYOUT – CAP LIMITS
BADGER RAILING
1611 WEST CANAL STREET
MILWAUKEE, WISCONSIN

KEY ENGINEERING GROUP LTD.

IMPROPERLY ABANDONED MONITORING WELL

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Badger Railing

Facility License, Permit or Monitoring No.: -

Facility ID: 341150370

Type of Well: Well Code 11/mw

Distance from Waste/Source ft. | Enf. Stds. Apply ☐

Local Grid Location of Well: ☐ N. ☐ S. ft. ☐ E. ☐ W. ft.

Local Grid Origin ☒ (estimated: ☐) or Well Location ☐

Lat. ° ' " Long. ° ' " or

St. Plane ft. N, ft. E. S/C/N

Section Location of Waste/Source: NW 1/4 of NE 1/4 of Sec. 31 T. 7 N, R. 22 ☐ E ☒ W

Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known

Gov. Lot Number:

Well Name: MW-1

Wis. Unique Well No. | DNR Well Number

Date Well Installed: 08/20/2007

Well Installed By: (Person's Name and Firm): Adam Sweet; Moraine Environmental

A. Protective pipe, top elevation 582.70 ft. MSL

B. Well casing, top elevation 582.40 ft. MSL

C. Land surface elevation 582.7 ft. MSL

D. Surface seal, bottom 582.2 ft. MSL or 0.5 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0; Hollow Stem Auger ☒ 4 1; Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1 Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe

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

E. Bentonite seal, top 582.2 ft. MSL or 0.5 ft.

F. Fine sand, top 579.2 ft. MSL or 3.5 ft.

G. Filter pack, top 578.7 ft. MSL or 4.0 ft.

H. Screen joint, top 577.7 ft. MSL or 5.0 ft.

I. Well bottom 564.7 ft. MSL or 18.0 ft.

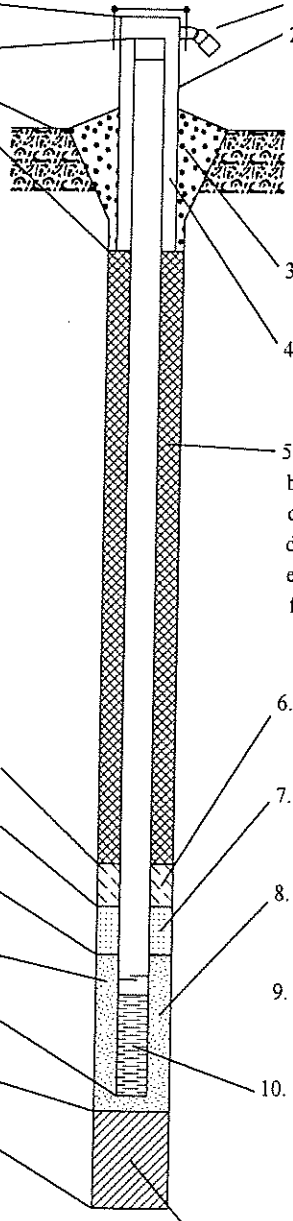
J. Filter pack, bottom 564.7 ft. MSL or 18.0 ft.

K. Borehole, bottom 562.7 ft. MSL or 20.0 ft.

L. Borehole, diameter 6.3 in.

M. O.D. well casing 2.83 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4 Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:

3. Surface seal: Bentonite ☐ 3 0 Concrete ☒ 0 1 Other ☐

4. Material between well casing and protective pipe: Bentonite ☒ 3 0 Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. ____Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
c. ____Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____% Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____Ft³ volume added for any of the above
f. How installed: Tremie ☐ 0 1 Tremie pumped ☐ 0 2 Gravity ☐ 0 8

6. Bentonite seal: a. Bentonite granules ☒ 3 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 3 2
c. 1 bag Bentonite Other ☒

7. Fine sand material: Manufacturer, product name & mesh size
a. RWSidley Fine Sand 4000 - 1/2 bag
b. Volume added ____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. RWSidley Silca #5 - 5 bags
b. Volume added ____ ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 Flush threaded PVC schedule 80 ☐ 2 4 Other ☐

10. Screen material: PVC
a. Screen Type: Factory cut ☒ 1 1 Continuous slot ☐ 0 1 Other ☐
b. Manufacturer Environmental Products
c. Slot size: 0.010 in.
d. Slotted length: 15.0 ft.

11. Backfill material (below filter pack): None ☒ 1 4 Other ☐

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

Signature

Firm: KEY ENGINEERING GROUP, LTD.
1000 N WATER ST, SUITE 1000 MILWAUKEE, WI 53202
Tel: (414) 224-8300 Fax: (414) 224-8383

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

IMPROPERLY ABANDONED MONITORING WELL

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

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

Facility/Project Name: Badger Railing	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-2
Facility License, Permit or Monitoring No.: -	Local Grid Origin ☒ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well Number
Facility ID: 341150370	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 08/20/2007
Type of Well: Well Code 11/mw	Section Location of Waste/Source: NW 1/4 of NE 1/4 of Sec. 31, T. 7 N, R. 22 ☐ E ☒ W	Well Installed By: (Person's Name and Firm) Adam Sweet, Moraine Environmental
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☒ Not Known / Gov. Lot Number	

A. Protective pipe, top elevation 584.23 ft. MSL

B. Well casing, top elevation 583.99 ft. MSL

C. Land surface elevation 584.3 ft. MSL

D. Surface seal, bottom 583.8 ft. MSL or 0.5 ft.

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

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0
Hollow Stem Auger ☒ 4 1
____ Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1
Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

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

E. Bentonite seal, top 583.8 ft. MSL or 0.5 ft.

F. Fine sand, top 582.3 ft. MSL or 2.0 ft.

G. Filter pack, top 580.3 ft. MSL or 4.0 ft.

H. Screen joint, top 579.3 ft. MSL or 5.0 ft.

I. Well bottom 569.3 ft. MSL or 15.0 ft.

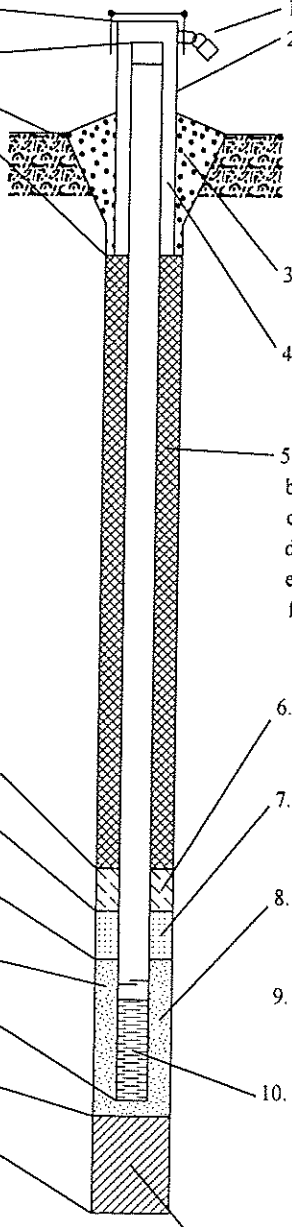
J. Filter pack, bottom 569.3 ft. MSL or 15.0 ft.

K. Borehole, bottom 569.3 ft. MSL or 15.0 ft.

L. Borehole, diameter 6.3 in.

M. O.D. well casing 2.83 in.

N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: ____ in.
   b. Length: ____ ft.
   c. Material: Steel ☒ 0 4 Other ☐
   d. Additional protection? ☐ Yes ☒ No
   If yes, describe: ____
3. Surface seal: Bentonite ☐ 3 0 Concrete ☒ 0 1 Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 3 0 Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
   b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3 5
   c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
   d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
   e. ____ Ft^3 volume added for any of the above
   f. How installed: Tremie ☐ 0 1 Tremie pumped ☐ 0 2 Gravity ☐ 0 8
6. Bentonite seal: a. Bentonite granules ☒ 3 3
   b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 3 2
   c. 1 bag Bentonite Other ☒
7. Fine sand material: Manufacturer, product name & mesh size
   a. RWSidley Fine Sand 4000
   b. Volume added 3 ft^3
8. Filter pack material: Manufacturer, product name & mesh size
   a. RWSidley Silca #5 - 5 bags
   b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3 Flush threaded PVC schedule 80 ☐ 2 4 Other ☐
10. Screen material: PVC
    a. Screen Type: Factory cut ☒ 1 1 Continuous slot ☐ 0 1 Other ☐
    b. Manufacturer Environmental Products
    c. Slot size: 0.010 in.
    d. Slotted length: 15.0 ft.
11. Backfill material (below filter pack): None ☒ 1 4 Other ☐

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

Signature	Firm	
[signature]	KEY ENGINEERING GROUP, LTD. 1000 N WATER ST, SUITE 1000 MILWAUKEE, WI 53202	Tel: (414) 224-8300 Fax: (414) 224-8383

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

IMPROPERLY ABANDONED MONITORING WELL

KEY ENGINEERING GROUP, LTD.

735 North Water Street, Suite 510
Milwaukee, Wisconsin 53202

(414) 224-8300
(800) 645-7365
Fax (414) 224-8383

March 29, 2011

Mr. David Brien
Forest County Potawatomi Community
1721 West Canal Street
Milwaukee Wisconsin 53233

Via Email: dbrien@paysbig.com
and First Class Mail

Reference: *Case Closure Request – Improperly Abandoned Monitoring Wells*
Badger Railing
1611 West Canal Street
Milwaukee, Wisconsin
FID # 341150370
BRRTS # 02-41-550019

KEY ENGINEERING GROUP, LTD.
File No. 1509003

Dear Mr. Brien:

In accordance with a Wisconsin Department of Natural Resources (WDNR) requirement for case closure and Geographic Information System (GIS) registration, Key Engineering Group, Ltd. (KEY) is informing you that on March 7, 2011, KEY attempted to locate with a metal detector and shovel the three monitoring wells constructed on site. KEY was only able to locate and properly abandon one of the three monitoring wells.

MW-1 and MW-2 were originally placed in paved areas along the east side of the property. Since the former site building and majority of its pavement areas have been demolished, and the vegetated barrier cap is now in place, it is likely that the monitoring wells MW-1 and MW-2 were disturbed and buried during site demolition.

No further action is necessary, this letter is a requirement for WDNR GIS registry for sites with improperly abandoned wells. If you should have any questions regarding this letter, please contact our office at (414) 224-8300.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Scott Odya, P.E.
Project Engineer

D'Arcy J. Gravelle, PG
Vice President – Environmental Division

SAO/dmm

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