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

GIS REGISTRY (Cover Sheet)

Form 4400-280 (R 7/12)

Source Property Information

CLOSURE DATE: Apr 18, 2013

BRRTS #: 02-41-556655 (No Dashes)

FID #: 341200530

ACTIVITY NAME: 1027 N. Edison St.

DATCP #:

PROPERTY ADDRESS: 1027 N. Edison St.

PECFA#:

MUNICIPALITY: Milwaukee

PARCEL ID #: 39-21-177100

***WTM COORDINATES:**

X: 690016 Y: 287822

** 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)*

Continuing Obligations:

☐ 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)*

***Note:** Comments will not print out.*

Monitoring Wells:

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

◉ Yes ○ No ○ N/A

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

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

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

April 18, 2013

Ms. Karen Dettmer
Redevelopment Authority of the City of Milwaukee
809 N. Broadway
Milwaukee, WI 53202

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
1027 N. Edison St. site, 1027 N. Edison St., Milwaukee, WI
WDNR BRRTS Activity #: 02-41-556655 FID#341200530

Dear Ms. Dettmer:

The Department of Natural Resources (DNR) considers the 1027 N. Edison St. case closed, with continuing obligations. No further investigation or remediation is required at this time. However, the Redevelopment Authority of the City of Milwaukee (RACM) and future property owners must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that RACM complies with all conditions and other on-going requirements. Provide this letter and any attached maintenance plan to anyone who purchases this property from RACM. For residential property transactions, the property owner is required to make disclosures under s. 709.02, Wis. Stats.

This final closure decision is based on the correspondence and data provided, and is issued under ch. NR 726, Wisconsin Administrative Code. The DNR Southeast Region Project Manager reviewed this environmental remediation case request for compliance with state laws and standards to maintain consistency in the closure of these cases.

Historically this property has been used as a coal yard, a second-hand materials yard and a snow dump. Currently the site serves as landscaped green space bisected by a pedestrian walkway that spans the Milwaukee River. Historic fill is present at the site at depths of .5 to 12 feet below ground on the north side of the parcel and from 4 feet to 12 feet on the south side. Clean fill and topsoil is present from 0 to 4 feet below ground surface on the southern portion of the site. The conditions of closure and continuing obligations required were based on the current use of the property as green space.

Continuing Obligations

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

- Groundwater contamination is present above ch. NR 140, Wis. Adm. Code enforcement standards.
- Residual soil/fill contamination exists that must be properly managed should it be excavated or removed.
- A soil barrier must be maintained over contaminated soil and the DNR must approve any changes to this barrier.

GIS Registry

This site will be listed on the Remediation and Redevelopment Program's internet accessible Geographic Information System (GIS) Registry to provide notice of residual contamination and of any continuing obligations. DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09(4) (w), Wis. Adm. Code. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at http://dnr.wi.gov/topic/wells/documents/3300254.pdf or at the web address listed below for the GIS Registry.

All site information is also on file at the Southeast Regional DNR office, at 2300 N. Dr. Martin Luther King Jr. Dr., Milwaukee, WI. 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 site on the GIS Registry web page, visit the RR Sites Map page at http://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2.

Prohibited Activities

Certain activities are prohibited at closed sites because maintenance of a barrier is intended to prevent contact with any remaining contamination. When a barrier is required, the condition of closure requires notification of the DNR before making a change, in order to determine if further action is needed to maintain the protectiveness of the remedy employed. The following activities are prohibited on any portion of the property where a soil cover barrier is required, as shown on the **attached map**, unless prior written approval has been obtained from the DNR:

- removal of the existing barrier;
- replacement with another barrier;
- excavating or grading of the land surface;
- filling on covered or paved areas;
- plowing for agricultural cultivation;
- construction or placement of a building or other structure;
- changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which RACM and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter and the attached maintenance plans are met. If these requirements are not followed, the DNR 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.

Residual Groundwater Contamination (ch. NR 140, 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present on this contaminated property as shown on the **attached map**. If you intend to construct a new well, or reconstruct an existing well, you'll need prior DNR approval.

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.)

Soil/historic fill contamination remains as indicated on the **attached map**. If soil/fill in the locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated material to determine if 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 standards 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 to prevent a direct contact health threat to humans.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats.)

The soil cover that 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.

A cover or barrier for industrial land uses, or certain types of commercial land uses may not be protective if use of the property were to change such that a residential exposure would apply. This may include, but is not limited to single or multiple family residences, a school, day care, senior center, hospital or similar settings. Before using the property for such purposes, you must notify the DNR to determine if additional response actions are warranted.

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

A copy of the **maintenance plan and inspection log** shall are to be kept up-to-date and stored at the address of the property owner. Submit the inspection log to the DNR only upon request.

Historic Fill Site

Information presented in the site investigation report indicates that subsurface materials consist of historic fill material. As such, the owner must comply with any conditions required by solid waste rules in chs. NR 500 Wis. Adm. Code rules series as long as any waste materials remain in place. Any future redevelopment of this property must take into consideration the presence of waste materials and will require the issuance of an exemption from the DNR to build on an abandoned landfill prior to the start of any construction. Please refer to the following Development at Historic Fill Site or Licensed Landfill guidances for further information. They can be found on the internet at:
http://dnr.wi.gov/files/PDF/pubs/rr/RR685.pdf
http://dnr.wi.gov/files/PDF/pubs/rr/RR684.pdf
http://dnr.wi.gov/files/PDF/pubs/rr/RR683.pdf

Please send written notifications in accordance with the above requirements to the DNR Southeast Regional office at the letterhead address, to the attention of the Remediation and Redevelopment Environmental Program Associate.

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.

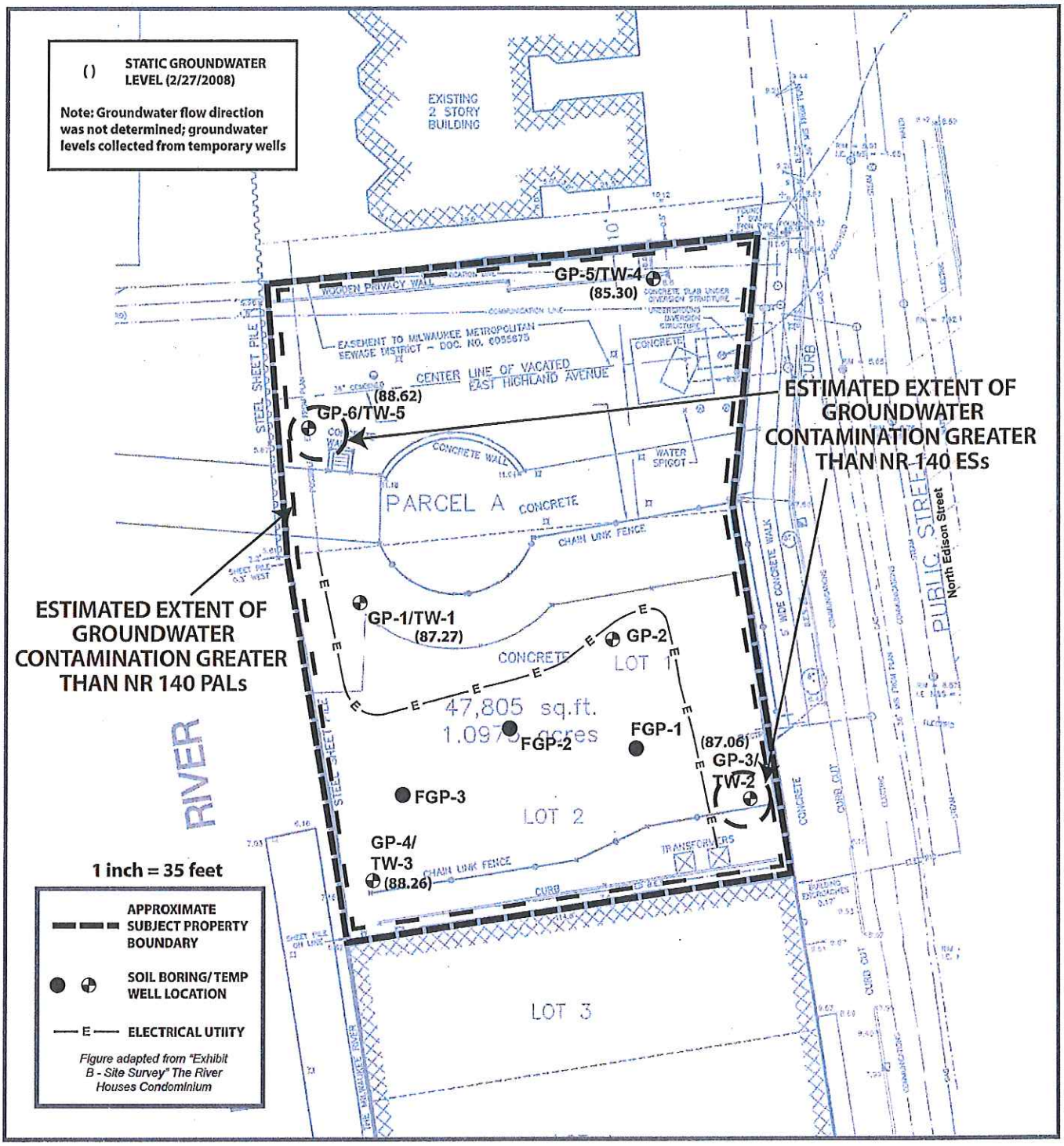
The DNR appreciates the efforts RACM has taken to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Nancy Ryan at (414) 263-8533.

Sincerely,

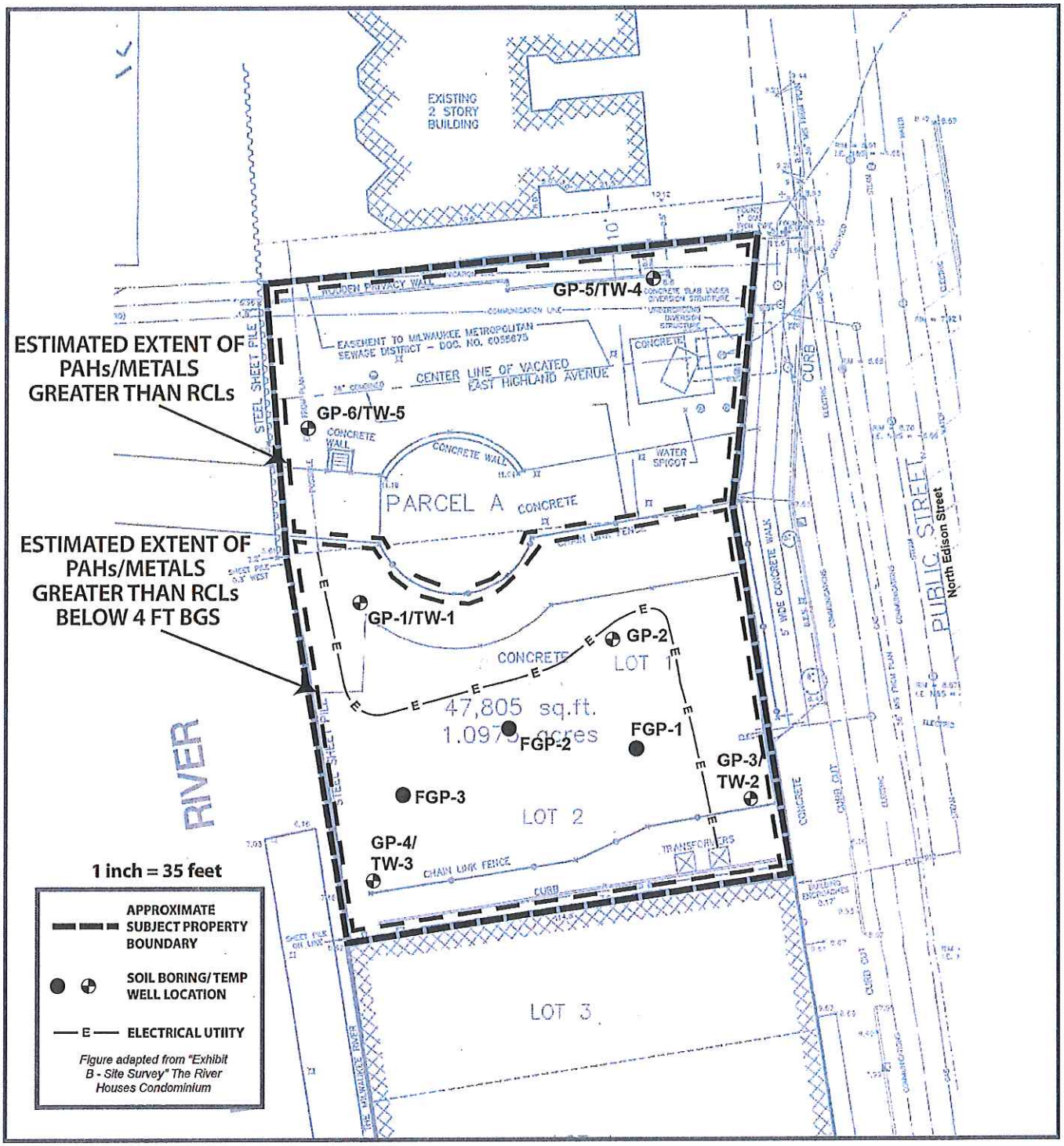
Pamela A. Mylotta, Team Supervisor
Southeast Region Remediation & Redevelopment Program

Attachments

cc: SER case file
Stephen Meer, Sigma – electronic copy



Client:	City of Milwaukee	THE SIGMA GROUP — Single Source. Sound Solutions. — www.thesigmagroup.com, 1300 West Canal Street, Milwaukee, WI 53233, 414-643-4200
Site Address:	1027 North Edison Street Milwaukee, WI 53202	N
Project:	#10813	**FIGURE B.3.b** **GROUNDWATER QUALITY MAP**



Client: City of Milwaukee

Site Address: 1027 North Edison Street
Milwaukee, WI 53202

Project: #10813

THE SIGMA GROUP
Single Source, Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
414-643-4200

N

FIGURE B.2.c
REMAINING SOIL CONTAMINATION MAP

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Legal Description: Lots 1 and 2 in Block 49, in the Plat of Milwaukee, a recorded subdivision in the Northeast Fractional ¼ of Section 29, Township 7 North, Range 22 East in the City of Milwaukee, County of Milwaukee, State of Wisconsin.

Also that part of vacated E. Highland Ave., in the Northeast ¼ of Section 29, Township 7 North, Range 22 East, which is bounded and described as follows:

Commencing at a point in the Northeasterly corner of Lot 1 in Block 49 of the Plat of Milwaukee, a recorded subdivision in said ¼ Section, running thence westerly along the north line of said Lot 1 and its extension westerly to a point in the easterly established dock line of the Milwaukee River; thence northerly along said easterly established dock line to a point in the center line of vacated E. Highland Ave., said point being the point of the beginning of the land to be described; thence continuing northerly along said established dock line to a point which is 10 feet South of the South line of Lot 11 in Block 50 of said subdivision; thence easterly and parallel to the South line of Lot 11 and its westerly extension to a point in the westerly line of N. Edison St.; thence southwesterly along the westerly line of N. Edison St. to the center line of vacated E. Highland Ave.; thence westerly along the center line of vacated E. Highland Ave. to the point of commencement.

Parcel ID Number: 392-1177-100-7

Introduction

This document is the Maintenance Plan ("Plan") for a barrier at the above referenced property in accordance with s. NR 724.13(2), Wis. Admin. Code. The maintenance activities relate to the existing clean soil cap occupying the area over the contaminated soil on-site.

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

- The case file in the WDNR Southeast regional office;
- BRRTS on the Web (WDNR's internet based data base of contaminated sites): http://dnr.wi.gov/botw/SetUpBasicSearchForm.do;
- GIS Registry PDF file for further information on the nature and extent of contamination: http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=brrts2; and
- The WDNR project manager for Milwaukee County.

Description of Contamination

Soil contaminated by arsenic, lead, and polynuclear aromatic hydrocarbon (PAH) compounds is located at a depth of 1 foot beneath the ground surface within the northern portion of the property located at 1027 North Edison Street, Milwaukee, Wisconsin. The extent of the soil contamination is shown on the attached Barrier Maintenance Plan Map, Figure 1.

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Description of the Barrier to be Maintained

The Barrier consists of six inches of topsoil and vegetation cover. The Barrier covers the northern portion of the site.

The clean soil barrier over the contaminated soil serves as a barrier to prevent direct human contact with residual soil contamination that might otherwise pose a threat to human health. Based on the current use of the property, the barrier should function as intended unless disturbed.

Maintenance Activities

The property owner shall take the following steps to assure that uncontrolled disturbances of the barrier do not occur:

- WDNR's case closure documents and GIS Registry will establish future land use, development, and/or management restrictions of the site. This Plan will be incorporated into the case closure documents and/or GIS Registry, which will together identify the environmental impacts, the nature of the barrier, the requirements regarding the management of impacted soils, and the availability of this Plan.

- A copy of this Plan will be available from the property owner to all interested parties.

- A copy of this Plan will be provided to all private utilities seeking easements for the purpose of installing facilities on the property.

- A copy of this Plan will be provided to all contractors and repair workers, including utility and landscaping services, during construction and repairs on the property.

- On-site personnel employed by current or future business operators will be made familiar with the contents and restriction requirements of this Plan.

Annual Inspection

The clean soil barrier overlying the contaminated soil will be inspected once a year, normally in the spring after all snow and ice is gone, for any potential problems that can cause 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. As necessary, the barrier will be repaired as soon as practical to maintain integrity. Repairs may include, but are not limited to, the following: application of additional clean soil to site, restoration of vegetation.

A log of the inspections and any repairs will be maintained by the property owner on the attached "Barrier Inspection Log". The log will include recommendations for necessary repair of any areas where the underlying soil is exposed. 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 will be made available for inspection by representatives of the WDNR upon reasonable prior request.

Planned Breaches of Barrier

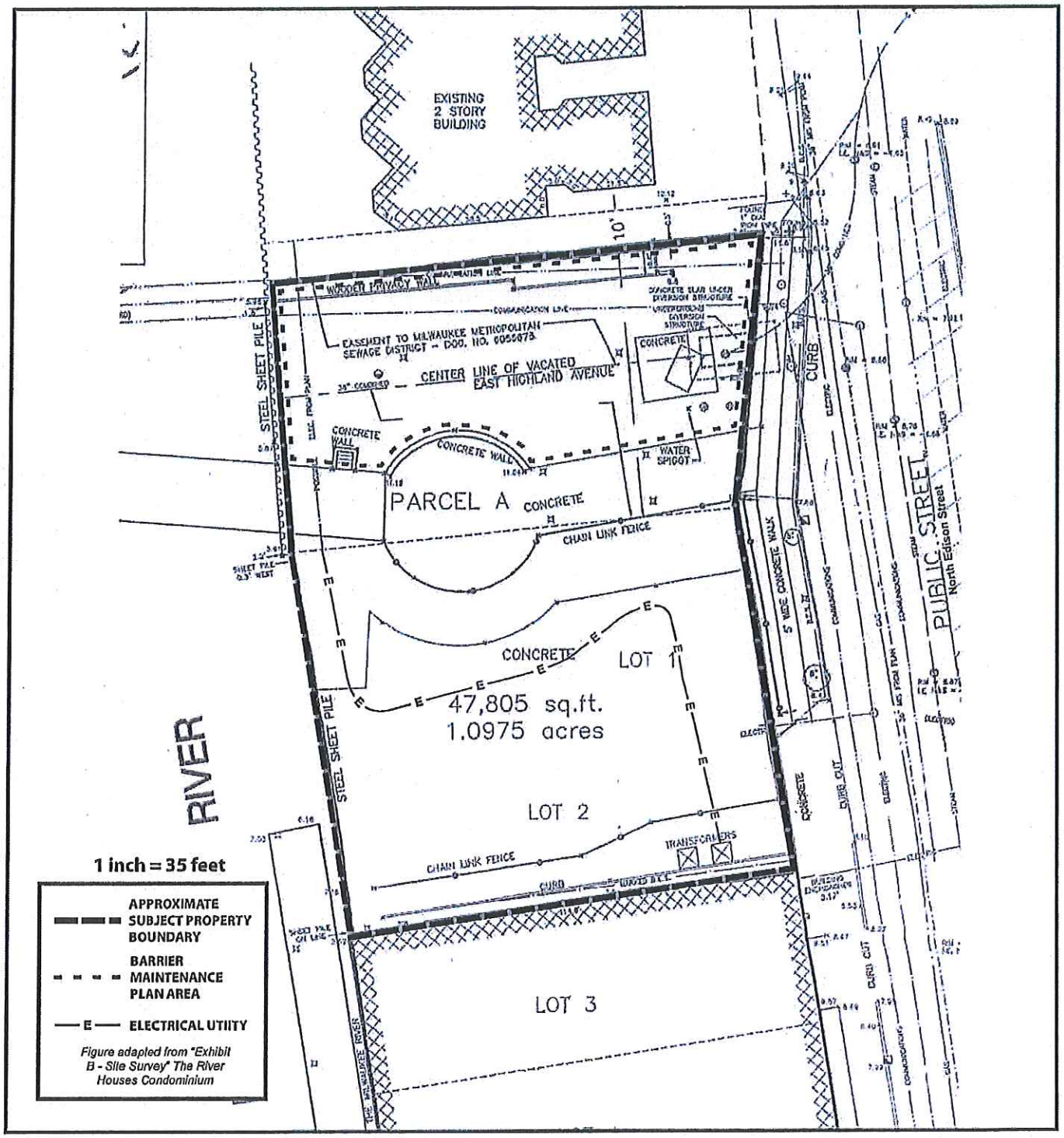
In the event the barrier is breached, the following precautions shall be taken:

- Property owner will make soil data available to workers who penetrate the barrier to allow for appropriate health and safety planning.

- The excavation zone and any soils excavated will be secured from public access until the cap is restored. The excavated soil will be placed on an impervious surface (e.g., existing concrete or asphalt pavement or plastic) and covered with plastic. Excavated soil shall be sampled and disposed of at a licensed landfill facility in accordance with applicable solid and/or hazardous waste rules and regulations, unless the WDNR or its successor agency grants approval to replace the soil into the same excavation.

- The barrier will be restored to meet original conditions. This work, including the proper disposal of excess soils, should be completed as soon as practical. Any replacement barrier will be subject to the same inspection and maintenance guidelines as outlined in this Plan unless otherwise indicated by the WDNR or its successor agency.

- Details of the barrier breach, the handling of excavated soils, individuals responsible for the work, and the restoration of the barrier shall be recorded in the barrier maintenance log. The maintenance log will be available for inspection by representatives of the WDNR upon reasonable prior request.



Client:	City of Milwaukee	THE SIGMA GROUP — Single Source. Sound Solutions. — www.thesigmagroup.com, 1300 West Canal Street, Milwaukee, WI 53233, 414-643-4200
Site Address:	1027 North Edison Street Milwaukee, WI 53202	N
Project:	#10813	**FIGURE 1** **BARRIER MAINTENANCE PLAN MAP**

THE SIGMA GROUP
Single Source. Sound Solutions.

Photo Page 1

Photo 1: Final site conditions. Structures, topsoil, and vegetation serve as a barrier. (looking west across northern portion of site.)

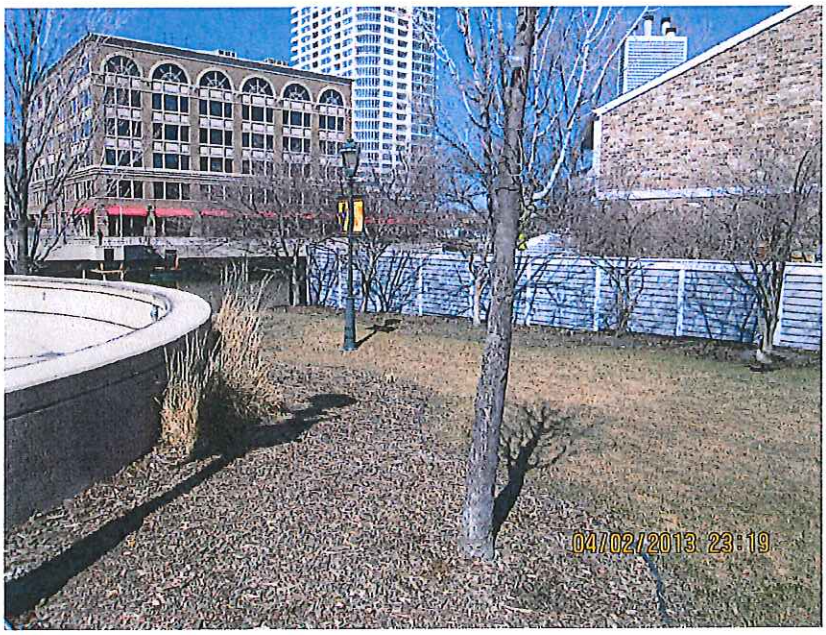


Photo 2: Final site conditions. Structures, topsoil, and vegetation serve as a barrier. (looking northwest on northern portion of site.)

SITE NAME:	**1027 N. Edison Street**		
ADDRESS:	**1027 N. Edison Street**	**Sigma Project Number:**	**10813**

BARRIER INSPECTION and MAINTENANCE LOG
MARCH 2013
1027 NORTH EDISON STREET, MILWAUKEE, WISCONSIN
FID #341200530 / WDNR BRRTS #02-41-556655

Inspection Date	Inspector	Condition of Barrier	Recommendations	Has recommended maintenance from previous inspection been implemented?

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Contact Information
March 2013

Responsible Party: Redevelopment Authority of the City of Milwaukee
Attention: Ms. Karen Dettmer, P.E.
809 N. Broadway
Milwaukee, WI 53202
Telephone: (414) 286-5642
Signature: _____

Consultant: Sigma Environmental Services, Inc.
1300 West Canal Street
Milwaukee, WI 53233
Telephone: (414) 643-4200
Email: smeer@thesimgagroup.com
Contact: Mr. Stephen Meer, P.E.

WDNR: Wisconsin Department of Natural Resources
Remediation & Redevelopment Program
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212
Telephone: (414) 263-8500
Email: nancy.ryan@wisconsin.gov
Contact: Ms. Nancy Ryan

State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided. Any section of the form not relevant to the case closure request must be fully filled out or explained on a separate page and attached to the relevant section of this form. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Site Information

BRRTS No. 02-41-556655	Parcel ID No. 39-21-177100		
BRRTS Activity (Site) Name 1027 North Edison Street	WTM Coordinates X 690016	Y 287822	
Street Address 1027 North Edison Street	City Milwaukee	State WI	ZIP Code 53202
Responsible Party (RP) Name Redevelop Authority of the City of Milwaukee			
Company Name Redevelop Authority of the City of Milwaukee			
Street Address 809 N. Broadway	City Milwaukee	State WI	ZIP Code 53202
Phone Number (414) 286-5642	Email Karen.Dettmer@milwaukee.gov		

☒ Check here if the RP is the owner of the source property.

Environmental Consultant Name Stephen Meer, P.E.			
Consulting Firm Sigma Environmental Services, Inc.			
Street Address 1300 W. Canal Street	City Milwaukee	State WI	ZIP Code 53233
Phone Number (414) 643-4200	Email smeer@thesigmagroup.com		
Acres Ready For Use 0.87	Voluntary Party Liability Exemption Site? ○ Yes ◉ No		

Fees and Mailing of Closure Request

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

1. **Send a copy of page one** of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR regional Environmental Program Associate at **http://dnr.wi.gov/topic/Brownfields/Contact.html**. Check all fees that apply:

   ☒ $750 Closure Fee

   ☒ $200 GIS Registry Fee for Soil

   ☒ $250 GIS Registry Fee for Groundwater Lost Well(s)

   Total Amount of Payment $ $1,200.00

2. **Send one paper copy and one e-copy on compact disk of the entire closure package** to the Regional Project Manager assigned to your site. Submit as *unbound, separate documents* in the order and with the titles prescribed by this form. For electronic document submittal requirements, see **http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf.**

Site Summary

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

A. **Site Location**: Describe the physical location of the site, both generally and specific to its immediate surroundings.
The site is located in the northeast ¼ of the northeast ¼ of Section 29, Township 7 North, Range 22 East in the City of Milwaukee, Milwaukee County, Wisconsin. The site is located on the west side of N. Edison Street on the east edge of the Milwaukee River between Juneau Avenue to the north and State Street to the south. The site is approximately 19,985 square feet in size and is neighbored by residential property to the north, Edison Street and parking garage to the east, commercial property to the south, and Milwaukee River to the west.

B. **Prior and current site usage**: Specifically describe the current and historic occupancy and types of use.
Historically, the site has been used as a coal yard, a second-hand materials yard, and a snow dump. Presently, the site serves as a landscaped green space bisected by a pedestrian bridge.

C. Describe how and when site contamination was discovered.
On February 25, 2008 Geoprobe soil borings were advanced to a depth of between 16 to 20 feet bgs as part of a Phase II Environmental Assessment conducted by Sigma. Select soil samples were submitted for laboratory analysis, and results indicated that the subsurface material contained PAH and lead contamination.

D. Describe the type(s) and source(s) or suspected source(s) of contamination.
Based on the presence, nature, and extent of fill material observed at the site and the nature of the subsurface PAH and lead impacts, the identified impacts appear to be associated with fill material present at the site and not with a specific "release". Additionally, chloride concentrations detected in groundwater samples are likely associated with the historic use of the site as a snow dumping area.

E. Other relevant site description information (or enter Not Applicable).
Not applicable.

F. List BRRTS activity site name and number for all other BRRTS activities at this property, including closed cases.
Not applicable.

G. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to this site, and those impacted by contamination from this site.
Not applicable.

H. **Current zoning** (e.g. industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
Zoning C9B(A): Residential and Specialty Use. Verified by the City of Milwaukee Property Database website.

2. General Site Conditions

A. Soil/Geology

i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
The site is covered with eight to twelve feet of fill comprised of soft sandy silts and silty sands containing gravel along with various amounts of brick and wood debris and traces of glass and cinders. The lithology beneath the fill material generally consists of deposits of saturated fine sandy and clayey silts and silty clays to the maximum depth investigated (20 feet bgs).

ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
The site is covered with eight to twelve feet of fill comprised of soft sandy silts and silty sands containing gravel along with various amounts of brick and wood debris and traces of glass and cinders.

iii. Depth to bedrock, bedrock type, and whether or not it was encountered during the investigation.
Bedrock was not encountered during the subsurface investigation. Based on general knowledge, Silurian dolomite should be encountered at an estimated depth of 100 feet bgs.

iv. Describe the nature and locations of current surface cover(s) across the site (e.g. natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).

The site is currently bisected by the east end of a pedestrian walkway that spans the Milwaukee River. North of the pedestrian walkway, the site is grass-covered with the exception of a concrete slab over a sewer diversion structure. South of the pedestrian walkway, the site is a landscaped green space. Based on the information obtained from site surveys completed to date, the elevation of the site slopes from approximately 589 feet MSL on the west to approximately 586 feet MSL on the east.

B. Groundwater

i. **Discuss depth to groundwater and piezometric elevations**. Describe and explain depth variations, and whether free product affects measurement or water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.

During groundwater sampling activities from the temporary wells, good water recovery was noted, and depths to groundwater ranged from 9 to 13 feet bgs. In general, the water table is located slightly below the fill material in the deposits of fine sandy and clayey silts and silty clays. No free product was observed.

ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.

Static groundwater elevation data was collected from temporary wells. Flow direction was not determined because no ch. 141 compliant wells have been installed to confirm the elevation data.

iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.

Information not obtained because these parameters were not critical in evaluating potential remedial actions or defining the degree and extent of impacts.

iv. Identify and describe locations/distance of potable and/or municipal Wells within 1200 feet of the site.

The site is located in downtown Milwaukee, and the City of Milwaukee is provided with municipal supplied water from Lake Michigan. No potable wells are located within 1200 feet of the site.

3. Site Investigation Summary

A. General

i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

All site investigation activities were described in Sigma's submission of "Site Investigation Report & Remedial Action Plan, 1027 N. Edison Street, Milwaukee, Wisconsin" (RAP) dated May 2011.

ii. Identify whether contamination extends beyond the source property boundary, describe the off-site media (e.g., soil, groundwater, etc.) impacted, and the vertical and horizontal extent of off-site impacts.

Impacts were not evaluated to extend beyond the site boundaries as impacts are associated with fill material present at the site.

iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.

Not applicable.

B. Soil

i. Describe degree and extent of **soil contamination** at and from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways.

No VOC constituents were reported greater than applicable RCLs.

Select PAH constituents and metals were reported above Groundwater Pathway RCLs and/or Non-Industrial Direct Contact RCLs within soil samples collected from soil boring locations: GP-1/TW-1, GP-2, GP-3/TW-2, GP-4/TW-3, GP-5/TW-4, GP-6/TW-5, FGP-1, FGP-2, and FGP-3. These PAH and metal impacts are associated with fill material at the site. Soil samples collected from native material beneath the fill from soil borings FGP-1, FGP-2, and FGP-3 did not exceed RCLs for PAHs or lead.

ii. Describe the level and types of **soil contaminants** found in the upper four feet of the soil column.
No VOC constituents were reported greater than applicable RCLs.

One PAH constituent, benzo(a)pyrene, was reported above the Non-Industrial Direct Contact RCL within soil samples collected from 0 to 4 feet bgs within soil borings GP-1/TW-1 and GP-3/TW-2. Additionally, six or seven PAH constituents were reported above Groundwater Pathway RCLs and/or Non-Industrial Direct Contact RCLs within soil samples collected from 0 to 4 feet bgs within soil borings FGP-2 and FGP-3.

All soil samples collected from 0 to 4 feet bgs within soil borings GP-1/TW-1, GP-2, GP-3/TW-2, GP-4/TW-3, GP-5/TW-4, GP-6/TW-5, FGP-1, FGP-2, and FGP-3 exceeded the Groundwater Pathway RCLs and/or Non-Industrial Direct Contact RCLs for one or more metals. Concentrations of arsenic that exceeded RCLs are typical of background concentrations at sites in southeastern Wisconsin.

iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site: for example, a Residual Contaminant Level (RCL) , a Site-Specific Residual Contaminant Level (SSRCL), or a Performance Standard as determined under ss NR 720.09, 720.11 and 720.19, Wis. Adm. Code. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.

Soil analytical results for soil samples collected within soil borings at the site were compared to Residual Contaminant Levels (RCLs) for protection of groundwater as presented on the WDNR's RCL Spreadsheet (dated May 2012) referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version) and Residual Contaminant Levels for protection of direct contact at a non-industrial property as presented on the WDNR's RCL Spreadsheet (dated May 2012) with default input parameters as referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version).

C. Groundwater

i. Describe degree and extent of groundwater contamination at or from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Pyridine was reported at a concentration greater than the ch. NR 140 PAL in the grab groundwater sample collected from temporary well TW-1. The grab groundwater sample collected from temporary well TW-5 contained a reported concentration of chrysene that was greater than the ch. NR 140 Enforcement Standard (ES). The pyridine and chrysene concentrations were flagged by the analytical laboratory as between the Limit of Detection and Limit of Quantitation. No other SVOC constituents were reported at concentrations greater than applicable ch. NR 140 PALs.

Concentrations of dissolved arsenic were reported at concentrations greater than the ch. NR 140 PAL in the grab groundwater samples collected from temporary wells TW-1, TW-2, TW-4, and TW-5. In addition, the grab groundwater sample collected from temporary well TW-2 contained chromium at a concentration greater than the ch. NR 140 PAL. No other reported concentrations of dissolved RCRA metals were greater than ch. NR 140 PALs.

Concentrations of chloride were reported greater than the ch. NR 140 ES in the grab groundwater sample collected from temporary well TW-2 and greater than the ch. NR 140 PAL in the grab groundwater sample collected from temporary wells TW-1 and TW-3.

Although groundwater data was compared to regulatory standards, the grab groundwater samples were collected from temporary wells and were not confirmed with samples collected from ch. NR 141 compliant wells.

ii. Describe the presence of free product at the site, including the thickness, depth, and locations.
No free product encountered in site wells.

D. Vapor

i. Describe how the vapor migration pathway was assessed, including locations where vapor or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

Vapor intrusion was not assessed as VOCs were not reported greater than standards within soil or groundwater samples.

Methane monitoring was completed, and results indicate that a negligible amount (0.1%) or no methane was present at temporary monitoring well locations TW-1, TW-3, and TW-4 during all closed cap and open cap methane monitoring events. Methane was detected at temporary well TW-2 at concentrations between 3.8% and 6.0% during closed cap monitoring and at concentrations between 0.5% and 16.4% during open cap monitoring.

ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).

Vapor intrusion was not assessed.

E. Surface Water and Sediment

i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

No data collected. No documented point source exists. Limited groundwater impacts associated with fill material prevalent along Milwaukee River.

ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

No surface water or sediment samples were collected.

4. Remedial Actions Implemented and Residual Levels at Closure

A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

To address residual PAH, lead, and arsenic impacts greater than Groundwater Pathway RCLs and/or Non-Industrial Direct Contact RCLs in the shallow fill material/soils beneath portions of the site, Sigma completed the activities described in "Site Investigation Report & Remedial Action Plan, 1027 N. Edison Street, Milwaukee, Wisconsin" (RAP) dated May 2011, which was approved by the WDNR.

All remaining site wells were abandoned. Then, between September 27 and 29, 2011, approximately 1,371 tons of existing fill material from the southern portion of the site were removed and disposed of at Waste Management's Orchard Ridge landfill in Menomonee Falls, WI. The excavation removed the concrete pavement as well as the fill material within the top four feet of proposed ground surface elevation throughout the portion of the site south of the pedestrian walkway. Following excavation, clean fill material and topsoil were imported to the site and placed to bring the site to grade.

Upon completion of backfilling activities, rip-rap material was brought in and placed in the northwest corner and west side of the site along the Milwaukee River. A concrete walkway was installed to connect the sidewalk along N. Edison Street to the existing Riverwalk in the southwest corner of the site. The remainder of the site was converted into green-space with open grass areas as well as planting areas.

B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.

Not applicable.

C. Describe the *active* remedial actions taken at the site, including: type of remedial system(s) used for each media impacted; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.

Not applicable.

D. Provide a discussion of the nature, degree and extent of residual contamination that will remain at the site or on off-site affected properties after case closure.

Fill material/soils remain on site within 4 to approximately 9 feet bgs within the southern portion of the site and 0.5 to approximately 12 feet bgs within the northern portion of the site. This fill material contains reported select PAH constituents and metals above Groundwater Pathway RCLs and/or Non-Industrial Direct Contact RCLs.

Although concentrations of chloride and chrysene greater than ch. NR 140 ESs have been reported within groundwater samples collected from temporary groundwater monitoring wells installed at the site, the risk associated with the identified shallow groundwater impact is minimal and no further action with respect to groundwater is warranted.

E. Describe the remaining soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds the ch. NR720, Wis. Adm. Code, standard(s) for direct contact.

Soil located within 4 feet of the ground surface with contamination attaining or exceeding the ch. NR 720, Wis. Adm. Code, standard(s) for direct contact within the southern portion of the site was removed through excavation.

Within the northern portion of the site, concentrations of arsenic within 0 to 4 feet bgs that exceeded RCLs are typical of background concentrations at sites in southeastern Wisconsin. Concentrations of lead and mercury were reported that slightly exceeded the Groundwater Pathway RCLs within 0 to 4 feet bgs.

F. Describe the remaining soil contamination in the vadose zone that attains or exceeds the soil standard(s) for the groundwater pathway.

Fill material/soils remain on site within 4 to approximately 9 feet bgs within the southern portion of the site and 0.5 to approximately 12 feet bgs within the northern portion of the site. This fill material contains reported select PAH constituents and metals above Groundwater Pathway RCLs. However, a lack of significant groundwater impacts exist based on sampling.

G. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.

Remedial excavation activities completed at the site have removed the risk associated with the direct contact exposure pathway on the southern portion of the site. The attached Barrier Maintenance Plan will address residual contamination on the northern portion of the site.

H. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration, (e.g. stable or receding groundwater plume).

Not applicable.

I. Identify how all exposure pathways were removed and/or adequately addressed by immediate and/or remedial action(s) described above in paragraphs, B, C, D, E and F.

• The direct contact exposure pathway was addressed by removal via excavation of all identified soil with contamination attaining or exceeding the Non-Industrial Direct Contact RCLs within 0 to 4 feet bgs within the southern portion of the site. The attached Barrier Maintenance Plan will address residual contamination on the northern portion of the site.

• Although concentrations of chloride and chrysene greater than ch. NR 140 ESs have been reported within grab groundwater samples collected from temporary groundwater monitoring wells installed at the site, the risk associated with the identified shallow groundwater impact is minimal and no further action with respect to protection of groundwater is warranted.

• Migration of volatile vapors to adjacent residential buildings is not a concern as VOC impacts are not present. Also, no buildings exist on-site.

J. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.

Not applicable.

K. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.

Based on the most recent data (2/2008), analytes that exceed ch. NR 140 PAL and/or ch. NR 140 ES within collected grab groundwater samples include:

• Pyridine was reported at a concentration greater than the ch. NR 140 PAL within the grab groundwater sample collected from temporary well TW-1.

• Chrysene was reported at a concentration greater than the ch. NR 140 ES within the grab groundwater sample collected from temporary well TW-5.

(The pyridine and chrysene concentrations were flagged by the analytical laboratory as between the Limit of Detection and Limit of Quantitation. No other SVOC constituents were reported at concentrations greater than applicable ch. NR 140 PALs.)

• Concentrations of dissolved arsenic were reported at concentrations greater than the ch. NR 140 PAL within the grab groundwater samples collected from temporary wells TW-1, TW-2, TW-4, and TW-5.

• The grab groundwater sample collected from temporary well TW-2 contained chromium at a concentration greater than the ch. NR 140 PAL.

• Concentrations of chloride were reported greater than the ch. NR 140 ES in the grab groundwater sample collected from temporary well TW-2 and greater than the ch. NR 140 PAL in the groundwater sample collected from temporary wells TW-1 and TW-3.

L. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.

Vapor data was not collected as no VOC impacts were reported greater than standards within soil or groundwater.

M. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.

Not applicable. No surface water and/or sediment samples were collected.

5. Continuing Obligations: Situations where a maintenance plan(s) and inclusion on DNR's GIS Registry are required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: Maintenance Plans and GIS Registry	Maintenance Plan (s) Required in Attachment D	GIS Registry Listing
	A. On-Site	B. Off-Site			
i.	☒	☐	Engineering Control/Barrier for Direct Contact	✓	✓
ii.	☐	☐	Engineering Control/Barrier for Groundwater Infiltration	✓	✓
iii.	☐	☐	Vapor Mitigation - post closure passive system	✓	✓
iv.	☐	☐	Vapor Mitigation - post closure active system	✓	✓
v.	☐	☒	None of the above scenarios apply to this case closure	NA	NA

6. Continuing Obligations: Situations where inclusion on DNR's GIS Registry is required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: GIS Registry Only	GIS Registry Listing
	A. On-Site	B. Off-Site		
i.	☒	☐	Residual soil contamination exceeds ch. NR 720 generic or site-specific RCLs	✓
ii.	☒	☐	Sites with groundwater contamination equal to or greater than the ch. NR 140, enforcement standards (ES)	✓
iii.	☐	☐	Monitoring wells: lost, transferred or remaining in use	✓
iv.	☐	☐	Structural Impediment (not as a performance standard)	✓
v.	☐	☐	Residual soil contamination remaining at ch. NR 720 Industrial Use levels	✓
vi.	☐	☐	Vapor intrusion may be future, post-closure issue if building use or land use changes	✓
vii.	☐	☒	None of the above scenarios apply to this case closure	NA

7. Underground Storage Tanks

A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? ○ Yes ◉ No

B. Do any upgraded tanks meeting the requirements of ch. SPS 310, Wis. Adm. Code, exist on the property? ○ Yes ◉ No

C. If the answer to question 7b is yes, is the leak detection system currently being monitored? ○ Yes ○ No

Data Tables (Attachment A)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form.All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General directions for Data Tables:

- Use bold and italics font on information of importance on tables and figures. Use **bold font** for ch. NR 140, Wis. Adm. Code, groundwater enforcement standard (ES) attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, groundwater preventive action limit (PAL) standard attainments or exceedances.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e. do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15 (2)(g)3, Wis. Adm. Code, in the format required in s. NR 716.15(2)(h)3, Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Pre-remedial Soil Analytical Table, etc).
- For required documents, each table (e.g., A.1., A.2., etc.,) should be a separate PDF.

A. Data Tables

A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates, for all groundwater sampling points e.g. monitoring wells, temporary wells, sumps, extraction wells, any potable wells and any other wells, extraction wells and any potable wells for which samples have been collected.

A.2. **Pre-remedial Soil Analytical Table(s): T**able(s) showing the soil analytical results and collection dates - prior to conducting the interim and/or remedial action. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).

A.3. **Post-remedial Soil Analytical Table(s):** Table(s) showing the post-remedial action soil analytical results and collection dates. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).

A.4. **Pre and Post Remaining Soil Contamination Soil Analytical Table(s):** Table(s) showing only the pre and post remedial action soil analytical results that exceed a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL).

A.5. **Vapor Analytical Table**: Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.

A.6. **Other Media of Concern (e.g., sediment or surface water)**: Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, time period for sample collection, method and results sampling.

A.7. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.

A.8. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps and Figures (Attachment B)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions for all Maps and Figures:

- If any map or figure is not relevant to the case closure request, you must fully explain the reason(s) why and attach that explanation (properly labeled with the map/ figure title) in Attachment B.
- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11x17 inches, in a portable document format (pdf) readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(2)(h)1 and 726.05(3)(a)4.d, Wis Adm. Code.
- Do not use shading or highlights on any of the analytical tables.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.,) should be a separate PDF.

B.1. Location Maps

B.1.a. **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 impacted and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.

B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for on-site and applicable off-site properties, 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 ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code.

B.1.c. **RR Site Map:** From RR Sites Map (http://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

B.2.a. **Pre-remedial Soil Contamination:** Figure(s) showing the sample location of all pre-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeded a Residual Contaminant Level (RCL) or a Site-Specific Residual Contaminant Level (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code.

B.2.b. **Post-remedial Soil Contamination :** Figure(s) showing the sample location of all post-remedial, unsaturated 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 ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

B.2.c. **Pre/Post Remaining Soil Contamination:** Figure(s) showing the only location of all pre and post remedial residual soil sample location(s) where unsaturated contaminated soil remains after remediation and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Admin. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

B.3. Groundwater Figures

B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:

- Source location(s) and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).
- Source location(s) and lateral and vertical extent if groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES)
- Surface features, including buildings and basements, and show surface elevation changes.
- Any areas of active remediation within the cross section path, such as excavations or treatment zones.
- Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1b)

B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, Preventive Action Limit (PAL) and/or an Enforcement Standard (ES). Indicate the date and direction of groundwater flow based on the most recent sampling data.

B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.

B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been previously abandoned.

B.4. Vapor Maps and Other Media

B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway, in relation to remaining soil and groundwater contamination, including sub-slab, indoor air, soil vapor, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.

B.4.b. **Other media of concern (e.g., sediment or surface water**): Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.

B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank)

Documentation of Remedial Action (Attachment C)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being

considered incomplete until corrected.

General Directions:

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc).
- If the documentation requested below is "not applicable" to the site-specific circumstances, include a brief explanation to support that conclusion.
- If the documentation requested below has already been submitted to the Department, please note the title and date of the report for that particular document requested.

C.1. **Site investigation documentation,** that has not otherwise been previously submitted.

C.2. **Investigative waste** disposal documentation.

C.3. **NR 720.19 analysis**, assumptions and calculations for site specific RCLs (SSRCLs) , with justification, including EPA Soil Screening Level Model Calculations and results.

C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.

C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment upon receiving conditional closure.

C.6. **Photos.** For sites or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system. Include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features should be visible and discernible. Photographs must be labeled with the site name, the features shown, location and the date on which the photograph was taken.

C.7. **Other**. Include any other relevant documentation not otherwise noted above. (This section may remain blank)

Maintenance Plan(s) (Attachment D)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

When one or more "maintenance plans" are required for a site closure, include in each maintenance plan all required information in sections D.1. through D.5. below, and attach the plan(s) in Attachment D. The following "model" maintenance plans can be located at: (1) Maintenance plan for a engineering control or cover: http://dnr.wi.gov/topic/Brownfields/documents/maintenance-plan.pdf; and (2) Maintenance plan for vapor intrusion: http://dnr.wi.gov/topic/Brownfields/documents/appendix5_606.pdf.

D.1. **Location map(s)** which show(s): (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) and all property boundaries.

D.2. **Brief descriptions** of the type, depth and location of residual contamination.

D.3. **Description of maintenance action(s)** required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.

D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter.

D.5. **Contact information,** including the name, address and phone number of the individual or facility who will be conducting the maintenance.

Monitoring Well Information (Attachment E)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

Attach monitoring well construction and development forms (DNR FORM 4400-113 A and B: http://dnr.wi.gov/org/water/dwg/gw/forms/4400_113_1_2.pdf) for all wells that will remain in-use, be transferred to another party or that could not be located. A figure of these wells should be included in Attachment B.3.d.

Select One:

○ No monitoring wells were required as part of this response action.

◉ All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site

○ ***Select One or More:***

☐ Not all monitoring wells can be located, despite good faith efforts. Attachment E must include description of efforts made to locate the "lost" wells.

☐ One or more wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s).

☐ One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason(s) the well(s) will remain in use.

Notifications to Owners of Impacted Properties (Attachment F)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- State law requires that the responsible party provide a 30-day, written advance notice (i.e., a letter) to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned.
- A model "template letter" for these mandatory notifications can be downloaded at: http://dnr.wi.gov/files/PDF/pubs/rr/RR919.pdf.

Check all that apply to the site-specific circumstances of this case closure:

	A. Impacted Source Property and Owner is not Conducting Cleanup	B. Impacted Right of Way	C. Impacted Off-Site Property Owner	Impacted Property Notification Situations: Ch. NR 726 Appendix A Letter
1.	☐	☐	☐	Residual groundwater contamination exceeds Ch. NR 140 Wis. Administrative Code enforcement standards.
2.	☐	☐	☐	Residual soil contamination that attains or exceeds standards is present after the remedial action is complete, and must be properly managed should it be excavated or removed.
3.	☐	☐	☐	An engineered cover or a soil barrier (e.g. pavement) must be maintained over contaminated soil for direct contact or groundwater infiltration concerns.
4.	☐	☐	☐	Industrial land use soil standards were used for the clean-up standard.
5.	☐	☐	☐	A vapor mitigation system (or other specific vapor protection) must be operated and maintained.
6.	☐	☐	☐	Vapor assessment needed if use changes.
7.	☐	☐	☐	Structural impediment.
8.	☐	☐	☐	Lost, transferred or open monitoring wells.
9.	☒	☒	☒	Not Applicable.

If any of the previous boxes in rows 1 thru 8 were checked, include the following as part of Attachment F:

- FORM 4400-246;
- Copy of each letter sent, 30 days or more prior to requesting closure; and
- Proof of receipt for each letter.
- For this site closure, ___0___ (number) property (ies) has/have been impacted, the owners have been notified, and copies of the letters and receipts are included in Attachment F.

Source Legal Documents (Attachment G)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form.All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Include all of the following documents, in this order, in Attachment G:

G.1. **Deeds - Source Property and Other Impacted Properties:** The most recent deed with legal descriptions clearly labeled for (1) the **Source Property** (where the contamination originated) and (2) all **off-source** (off-site) properties where letters were required to be sent per the ch. NR 700, Wis. Adm. Code, rule series (e.g., off-site cover maintenance required, lost monitoring well, off-site cover property impacts to groundwater exceeding the ch. NR 140, Wis. Adm. Code.

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.*

G.2. ***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)).

G.3. **Verification of Zoning**: Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.

G.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Check the correct signature block below for this case closure request, and have the proper environmental professional(s) sign this document, in accordance with the ch. NR 700 Wis. Adm. Code rule series. Both boxes may be checked if applicable to this case closure.

☒ A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies). In this situation, the closure request must be prepared by, or under the supervision of, a professional engineer and a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code. Include both signatures provided below with the submittal.

☒ The response action(s) for this site addresses media other than groundwater. In this situation, the case closure request must be prepared by, or under the supervision of, a professional engineer, as defined in ch. NR 712, Wis. Adm. Code. The "engineering certification" language below, at a minimum, must be signed.

Engineering Certification

I Stephen R. Meer, P.E. hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this case closure request has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. All phases of work necessary to obtain data, develop conclusions, recommendations and prepare submittals for this case closure request have been prepared by me, or their preparation has been supervised by me. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Stephen R. Meer, P.E.		Project Engineer
Printed Name		Title
	3/15/13	STEPHEN R MEER E-30330 3-15-13 WI
Signature	Date	P.E. Stamp and Number

Hydrogeologist Certification

I Kristin K. Kurzka, P.E. hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. All phases of work necessary to address groundwater contamination including obtaining data, developing conclusions, recommendations and preparing submittals for this case closure request have been prepared by me, or their preparation has been supervised by me. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Kristin K. Kurzka, P.E.	Senior Engineer
Printed Name	Title
	3.15.13
Signature	Date

Table A.1
Groundwater Analytical Data
1027 N. Edison Street, Milwaukee, Wisconsin
Sigma Project No. 10813

Well ID:		**TW-1**	**TW-2**	**TW-3**	**TW-4**	**TW-5**	**NR 140**	**NR 140**
Analytes	Date	02/29/08	02/29/08	02/29/08	02/29/08	02/29/08	**ES**	**PAL**
RCRA Metals - Soluble								
Arsenic	µg/L	*1.2*	*1.6*	0.34	*3.0*	*4.7*	10	1
Barium	µg/L	69	140	120	89	98	2,000	400
Cadmium	µg/L	0.05	0.02 J	<0.010	0.02 J	0.04	5	0.5
Chromium	µg/L	3.6	*20*	9.3	3.2	6.5	100	10
Lead	µg/L	0.24	0.42	0.04 J	0.08 J	0.36	15	1.5
Mercury	µg/L	0.086 J	0.089 J	0.082 J	0.082 J	0.078 J	2	0.2
Selenium	µg/L	0.85	1.5	1.1	4.3	7.8	50	10
Silver	µg/L	0.03 J	0.10 J	<0.02	0.02 J	0.02 J	50	10
PVOCs/Detected VOCs								
Benzene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	5	0.5
sec-Butylbenzene	µg/L	0.46 J	<0.25	<0.25	<0.25	<0.25	NS	NS
n-Butylbenzene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	NS	NS
1,2-Dichloroethane	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	5	0.5
Ethylbenzene	µg/L	1.6 J	<0.50	<0.50	<0.50	<0.50	700	140
Isopropylbenzene	µg/L	0.49 J	<0.20	<0.20	<0.20	<0.20	NS	NS
p-Isopropyltoluene	µg/L	0.42 J	<0.20	<0.20	<0.20	<0.20	NS	NS
Methyl-tert-butyl-ether	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	60	12
Naphthalene	µg/L	9.2	0.35 J	<0.25	<0.25	0.72 J	100	10
n-Propylbenzene	µg/L	0.85 J	<0.50	<0.50	<0.50	<0.50	NS	NS
Toluene	µg/L	1.9	<0.20	<0.20	<0.20	<0.20	1,000	200
1,2,4-Trimethylbenzene	µg/L	9	<0.20	<0.20	<0.20	<0.20	NS	NS
1,3,5-Trimethylbenzene	µg/L	1.7	<0.20	<0.20	<0.20	<0.20	NS	NS
Total Trimethylbenzene	µg/L	10.7	<0.40	<0.40	<0.40	<0.40	480	96
Xylenes, Total	µg/L	9.5	<0.50	<0.50	<0.50	<0.50	10,000	1,000
PAHs								
Acenaphthene	µg/L	<1.89	<2.10	<1.89	<1.89	<2.12	NS	NS
Acenaphthylene	µg/L	<1.41	<1.57	<1.41	<1.41	<1.58	NS	NS
Anthracene	µg/L	1.70 J	<1.28	<1.15	<1.15	<1.29	3000	600
Benz(a)anthracene	µg/L	<1.1	<1.22	<1.10	<1.10	1.49 J	NS	NS
Benzo(b)fluoranthene	µg/L	<1.9	<2.11	<1.90	<1.90	<2.13	0.2	0.02
Benzo(k)fluoranthene	µg/L	<2.12	<2.36	<2.12	<2.12	<2.38	NS	NS
Benzo(a)pyrene	µg/L	<1.93	<2.14	<1.93	<1.93	<2.17	0.2	0.02
Benzo(ghi)perylene	µg/L	<2.03	<2.26	<2.03	<2.03	<2.28	NS	NS
Chrysene	µg/L	<1.33	<1.48	<1.33	<1.33	***1.50 J***	0.2	0.02
Dibenz(a,h)anthracene	µg/L	<2.20	<2.44	<2.20	<2.20	<2.47	NS	NS
Fluoranthene	µg/L	<1.27	<1.41	<1.27	<1.27	3.51 J	400	80
Fluorene	µg/L	<1.56	<1.73	<1.56	<1.56	<1.75	400	80
Indeno(1,2,3-cd)pyrene	µg/L	<1.62	<1.80	<1.62	<1.62	<1.82	NS	NS
1-Methylnaphthalene	µg/L	NA	NA	NA	NA	NA	NS	NS
2-Methylnaphthalene	µg/L	7.37 J	<1.67	<1.50	<1.50	<1.69	NS	NS
Naphthalene	µg/L	5.13 J	<1.66	<1.49	<1.49	<1.67	100	10
Phenanthrene	µg/L	<1.37	<1.52	<1.37	<1.37	3.32 J	NS	NS
Pyrene	µg/L	<1.28	<1.42	<1.28	<1.28	3.34 J	250	50
Dimethyl phthalate	µg/L	3.23 J	<1.49	<1.55	<1.55	<1.74	NS	NS
2,4-Dimethylphenol	µg/L	0.899 J	<0.999	<0.899	<0.899	<1.01	NS	NS
Pyridine	µg/L	*5.28 J*	<0.744	<0.670	<0.670	<0.753	10	2
Chloride	µg/L	*200*	***350***	*130*	100	77	250	125
PCBs	µg/L	<0.490	<0.490	<0.490	<0.490	<0.557	0.03	0.003

Notes:
1. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard.
2. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit.
3. NS = no standard
4. µg/L = micrograms per liter (equivalent to parts per billion, ppb)
5. mg/L = milligrams per liter (equivalent to parts per million, ppm)
6. NA = Not Analyzed
7. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
8. Exceedances: **BOLD** = Concentration exceeds NR 140 ES
   ITALICS = Concentration exceeds NR 140 PAL

Table A.2
Pre-Remedial Soil Analytical Data
1027 N. Edison Street, Milwaukee, Wisconsin
Sigma Project No. 10813

Soil Sample Location:		GP-1/TW-1		GP-2		GP-3/TW-2		GP-4/TW-3		GP-5/TW-4		GP-6/TW-5		FGP-1		FGP-2		FGP-3		Groundwater Pathway RCL [4]	Non-Industrial Direct Contact RCL [5]
Sample Depth (feet bgs):		2 - 4	6-8	2-4	10-12	2 - 4	6 - 8	0-2	4-8	2-4	6-8	0-2	6-8	4-8	8-12	0-4	8-12	0-4	8-12		
Sample Collection Date:		02/25/08		02/25/08		02/25/08		02/25/08		02/25/08		02/25/08		05/21/08		05/21/08		05/21/08			
Approx. Depth to Groundwater (feet bgs):		10.22	10.22	12.5	12.5	13.14	13.14	9.79	9.79	12.75	12.75	9.43	9.43	13	13	10.5	10.5	10.2	10.2		
Unsaturated/Smear Zone (U) or Saturated (S):		U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	S	U	S		
Organic Vapor Monitor (ppm):		0.0	0.0	0.3	1.8	0.9	0.0	1.5	2.2	0.3	0.3	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	NS	NS
PVOCs & Detected VOCs																					
Benzene	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	5.1	1,490
Ethylbenzene	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	1,570	7,470
Methyl-tert-butyl-ether	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	27	59,400
Toluene	µg/kg	<30	68	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	1,107.2	818,000
1,2,4-Trimethylbenzene	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	NS	89,800
1,3,5-Trimethylbenzene	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	NS	182,000
Trimethylbenzene (total)	µg/kg	<30	<31	<30	<32	<31	<38	<29	<33	<28	<31	<30	<29	NA	NA	NA	NA	NA	NA	1,379.3	NS
Xylenes (total)	µg/kg	<100	<110	<100	<110	<110	<130	<97	<110	<94	<110	<100	<98	NA	NA	NA	NA	NA	NA	3,940	258,000
Naphthalene	µg/kg	130	67	<59	<64	75	<75	<57	<65	<55	<62	<61	<58	NA	NA	NA	NA	NA	NA	658.7	5,150
PAHs & Detected SVOCs																					
Acenaphthene	µg/kg	2.88	2,500	<1.96	<64	<2.05	<940	<0.377	1,200	<1.83	<7800	<2.01	880	75	<13	270	<13	1,150	96	NS	3,440,000
Acenaphthylene	µg/kg	<2.01	<1600	<1.96	<110	<2.05	<1600	<0.377	<1400	<1.83	<13000	<2.01	<1200	41 J	<14	<14	<14	390	37 J	NS	487,000
Anthracene	µg/kg	6.37	3,300	<1.96	<6.4	6.79	360	<0.377	2,300	<1.83	3,400	<2.01	2,800	267	9 J	710	<8.8	3,400	293	196,744.2	17,200,000
Benzo(a)anthracene	µg/kg	16.4	*5,800*	<1.96	<6.4	22.2	*1,000*	<0.377	*4,200*	<1.83	*5,400*	<2.01	*5,400*	*470*	10.7 J	*990*	10.3 J	*6,900*	500	NS	148
Benzo(a)pyrene	µg/kg	*15.9*	***5,200***	<1.96	<6.4	*21.7*	***1,100***	<0.377	***3,900***	<1.83	***5,000***	<2.01	***3,600***	*430*	<7.7	***990***	<7.7	***6,100***	500	470	15
Benzo(b)fluoranthene	µg/kg	12.3	***4,200***	<1.96	<6.4	17.4	***700***	<0.377	***2,900***	<1.83	***3,200***	<2.01	***2,800***	***530***	<11	***1,000***	<11	***6,800***	540	480	148
Benzo(ghi)perylene	µg/kg	10.1	3,000	<1.96	<6.4	11.4	510	<0.377	1,900	<1.83	2,600	<2.01	1,900	255	<12	560	<12	3,400	262	NS	NS
Benzo(k)fluoranthene	µg/kg	12.7	*2,600*	<1.96	<6.4	17.8	480	<0.377	*1,800*	<1.83	*2,100*	<2.01	*1,600*	164	<11	320	<11	*2,360*	173	NS	1,480
Chrysene	µg/kg	17.6	**4,000**	<1.96	<6.4	23.2	**160**	<0.377	**2,900**	<1.83	**4,300**	<2.01	**3,200**	**430**	7.5 J	**950**	6.9 J	**5,300**	470	145.1	14,800
Dibenzo(a,h)anthracene	µg/kg	3.22	*650*	<1.96	<9.6	4.27	<140	<0.377	*450*	<1.83	<1200	<2.01	*380*	*56*	<9.7	*137*	<9.7	*860*	79	NS	15
Fluoranthene	µg/kg	41.8	16,000	<1.96	<13	53.1	2,200	<0.377	11,000	<1.83	17,000	<2.01	12,000	1,070	12.4 J	2,310	12.7 J	16,000	1,150	88,817.9	2,290,000
Fluorene	µg/kg	2.96	1,600	<1.96	<13	2.15	<190	<0.377	1,000	<1.83	1,900	<2.01	1,400	144	18.6 J	263	<12	1,340	112	14,814.8	2,290,000
Indeno(1,2,3-cd)pyrene	µg/kg	8.92	*3,300*	<1.96	<6.4	10.9	*690*	<0.377	*2,300*	<1.83	*3,200*	<2.01	*2,300*	*207*	<9.9	*440*	<9.9	*2,950*	234	NS	148
1-Methylnaphthalene	µg/kg	<2.01	1,200	<1.96	<38	<2.05	<560	<0.377	770	<1.83	<4700	<2.01	1,100	59	<12	85	<12	360	29.5 J	NS	15,600
2-Methylnaphthalene	µg/kg	<2.01	8,400	<1.96	<32	<2.05	770	<0.377	5,000	<1.83	6,500	<2.01	6,500	74	<9.4	59	<9.4	298	28.8 J	NS	229,000
Naphthalene	µg/kg	2.88	**870**	<1.96	<32	<2.05	<560	<0.377	**770**	<1.83	<4700	<2.01	**1,500**	207	<12	53	<12	580	45	658.7	2,150
Phenanthrene	µg/kg	22.8	12,000	<1.96	<6.4	28.4	940	<0.377	8,100	<1.83	17,000	<2.01	10,000	810	19.2 J	2,330	<9.4	10,400	730	NS	115,000
Pyrene	µg/kg	27.0	9,000	<1.96	<6.4	41	2,000	<0.377	5,900	<1.83	17,000	<2.01	10,000	940	10.2 J	2,450	<9.9	14,400	960	54,472.5	1,720,000
Carbazole	µg/kg	2.23	NA	<1.96	NA	<2.05	NA	<0.377	NA	<1.83	NA	<2.01	NA	NA	NA	NA	NA	NA	NA	NS	NS
Metals																					
Arsenic	mg/kg	***13***	***10***	***16***	***3.2***	***9.6***	***8.7***	***2.8***	***9.3***	***5.7***	***17***	***8.6***	***6.3***	NA	NA	NA	NA	NA	NA	0.584	0.39
Barium	mg/kg	**200**	**280**	100	47	120	110	54	120	30	58	69	61	NA	NA	NA	NA	NA	NA	164.8	15,300
Cadmium	mg/kg	0.72	**0.92**	0.63	<0.13	**0.84**	0.48	<0.11	0.40	0.12	**0.93**	0.49	<0.12	NA	NA	NA	NA	NA	NA	0.752	70.2
Chromium	mg/kg	13	26	8.8	4.8	10	5.5	12	9.9	7.6	4.3	12	8.5	NA	NA	NA	NA	NA	NA	360,000	NS
Lead	mg/kg	***850***	***1,700***	**140**	5.2	***530***	**320**	17	***420***	**37**	**68**	**130**	***430***	**166**	3.08 J	**118**	4.43 J	***756***	477	27	400
Mercury	mg/kg	***37***	**1.5**	**0.32**	<0.013	**0.42**	**0.72**	0.13	0.17	**0.22**	0.18	0.14	**0.27**	NA	NA	NA	NA	NA	NA	0.208	3.13
Selenium	mg/kg	<4.9	<5.0	<4.8	<5.1	<5.0	<6.0	<4.6	<5.2	<4.4	<5.0	<4.9	<4.6	NA	NA	NA	NA	NA	NA	0.52	391
Silver	mg/kg	0.36	0.53	<0.13	0.34	0.31	0.38	0.31	0.42	0.2	<0.14	<0.13	<0.13	NA	NA	NA	NA	NA	NA	0.8497	391
PCBs	mg/kg	<0.0609	<1.26	<0.0594	<0.0637	<0.0623	<0.0751	<0.0571	<1.30	<0.0555	<0.0620	<0.0608	<0.0578	NA	NA	NA	NA	NA	NA	NS	5.358
Chloride	mg/kg	58	70	66	69	63	77	200	140	83	91	61	64	NA	NA	NA	NA	NA	NA	NS	NS

Notes:
1. Unsaturated/smear zone versus satured soil conditions based on: (1) measured water levels in adjacent/nearby monitoring wells, (2) soil moisture conditions recorded on soil boring logs, and/or (3) soil moisture contents reported on laboratory analytical reports.
2. Analytical units: µg/kg = micrograms per kilogram (equivalent to parts per billion, ppb)
   mg/kg = milligrams per kilogram (equivalent to parts per million, ppm)
3. NA = not analyzed
4. Groundwater Pathway RCL = Residual Contaminant Level for protection of groundwater as presented on the WDNR's RCL Spreadsheet (dated May 2012) referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version)
5. Non-Industrial Direct Contact RCL = Residual Contaminant Level for protection of direct contact at a non-industrial property as presented on the WDNR's RCL Spreadsheet (dated May 2012) with default input parameters as referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version)
6. NS = no standard established
7. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation
8. Exceedances: **BOLD** = Concentration exceeds Groundwater Pathway RCL (unsaturated soil samples only)
   ITALICS = Concentration exceeds Non-Industrial Direct Contact RCL (unsaturated soil samples only)

A.3. Post-remedial Soil Analytical Table

No data collected. Remedial excavation activities were conducted to remove the direct contact exposure pathway, but impacted soil is known to remain at depth.

Table A.4
Remaining Soil Contamination Analytical Data
1027 N. Edison Street, Milwaukee, Wisconsin
Sigma Project No. 10813

Soil Sample Location:		GP-1/TW-1	GP-2	GP-3/TW-2	GP-4/TW-3	GP-5/TW-4		GP-6/TW-5		FGP-1	Groundwater Pathway RCL [4]	Non-Industrial Direct Contact RCL [5]
Sample Depth (feet bgs):		6-8	10-12	6 - 8	4-8	2-4	6-8	0-2	6-8	4-8		
Sample Collection Date:		02/25/08	02/25/08	02/25/08	02/25/08	02/25/08		02/25/08		05/21/08		
Approx. Depth to Groundwater (feet bgs):		10.22	12.5	13.14	9.79	12.75	12.75	9.43	9.43	13		
Unsaturated/Smear Zone (U) or Saturated (S):		U	U	U	U	U	U	U	U	U		
Organic Vapor Monitor (ppm):		0.0	1.8	0.0	2.2	0.3	0.3	0.6	0.3	0.0	NS	NS
PVOCs & Detected VOCs												
Benzene	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	5.1	1,490
Ethylbenzene	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	1,570	7,470
Methyl-tert-butyl-ether	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	27	59,400
Toluene	µg/kg	68	<32	<38	<33	<28	<31	<30	<29	NA	1,107.2	818,000
1,2,4-Trimethylbenzene	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	NS	89,800
1,3,5-Trimethylbenzene	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	NS	182,000
Trimethylbenzene (total)	µg/kg	<31	<32	<38	<33	<28	<31	<30	<29	NA	1,379.3	NS
Xylenes (total)	µg/kg	<110	<110	<130	<110	<94	<110	<100	<98	NA	3,940	258,000
Naphthalene	µg/kg	67	<64	<75	<65	<55	<62	<61	<58	NA	658.7	5,150
PAHs & Detected SVOCs												
Acenaphthene	µg/kg	2,500	<64	<940	1,200	<1.83	<7800	<2.01	880	75	NS	3,440,000
Acenaphthylene	µg/kg	<1600	<110	<1600	<1400	<1.83	<13000	<2.01	<1200	41 J	NS	487,000
Anthracene	µg/kg	3,300	<6.4	360	2,300	<1.83	3,400	<2.01	2,800	267	196,744.2	17,200,000
Benzo(a)anthracene	µg/kg	*5,800*	<6.4	*1,000*	*4,200*	<1.83	*5,400*	<2.01	*5,400*	*470*	NS	148
Benzo(a)pyrene	µg/kg	***5,200***	<6.4	***1,100***	***3,900***	<1.83	***5,000***	<2.01	***3,600***	*430*	470	15
Benzo(b)fluoranthene	µg/kg	***4,200***	<6.4	***700***	***2,900***	<1.83	***3,200***	<2.01	***2,800***	***530***	480	148
Benzo(ghi)perylene	µg/kg	3,000	<6.4	510	1,900	<1.83	2,600	<2.01	1,900	255	NS	NS
Benzo(k)fluoranthene	µg/kg	*2,600*	<6.4	480	*1,800*	<1.83	*2,100*	<2.01	*1,600*	164	NS	1,480
Chrysene	µg/kg	**4,000**	<6.4	**160**	**2,900**	<1.83	**4,300**	<2.01	**3,200**	**430**	145.1	14,800
Dibenzo(a,h)anthracene	µg/kg	*650*	<9.6	<140	*450*	<1.83	<1200	<2.01	*380*	*56*	NS	15
Fluoranthene	µg/kg	16,000	<13	2,200	11,000	<1.83	17,000	<2.01	12,000	1,070	88,817.9	2,290,000
Fluorene	µg/kg	1,600	<13	<190	1,000	<1.83	1,900	<2.01	1,400	144	14,814.8	2,290,000
Indeno(1,2,3-cd)pyrene	µg/kg	*3,300*	<6.4	*690*	*2,300*	<1.83	*3,200*	<2.01	*2,300*	*207*	NS	148
1-Methylnaphthalene	µg/kg	1,200	<38	<560	770	<1.83	<4700	<2.01	1,100	59	NS	15,600
2-Methylnaphthalene	µg/kg	8,400	<32	770	5,000	<1.83	6,500	<2.01	6,500	74	NS	229,000
Naphthalene	µg/kg	**870**	<32	<560	**770**	<1.83	<4700	<2.01	**1,500**	207	658.7	2,150
Phenanthrene	µg/kg	12,000	<6.4	940	8,100	<1.83	17,000	<2.01	10,000	810	NS	115,000
Pyrene	µg/kg	9,000	<6.4	2,000	5,900	<1.83	17,000	<2.01	10,000	940	54,472.5	1,720,000
Carbazole	µg/kg	NA	NA	NA	NA	<1.83	NA	<2.01	NA	NA	NS	NS
Metals												
Arsenic	mg/kg	***10***	***3.2***	***8.7***	***9.3***	***5.7***	***17***	***8.6***	***6.3***	NA	0.584	0.39
Barium	mg/kg	**280**	47	110	120	30	58	69	61	NA	164.8	15,300
Cadmium	mg/kg	**0.92**	<0.13	0.48	0.40	0.12	**0.93**	0.49	<0.12	NA	0.752	70.2
Chromium	mg/kg	26	4.8	5.5	9.9	7.6	4.3	12	8.5	NA	360,000	NS
Lead	mg/kg	***1,700***	5.2	**320**	***420***	**37**	**68**	**130**	***430***	**166**	27	400
Mercury	mg/kg	**1.5**	<0.013	**0.72**	0.17	**0.22**	0.18	0.14	**0.27**	NA	0.208	3.13
Selenium	mg/kg	<5.0	<5.1	<6.0	<5.2	<4.4	<5.0	<4.9	<4.6	NA	0.52	391
Silver	mg/kg	0.53	0.34	0.38	0.42	0.2	<0.14	<0.13	<0.13	NA	0.8497	391
PCBs	mg/kg	<1.26	<0.0637	<0.0751	<1.30	<0.0555	<0.0620	<0.0608	<0.0578	NA	NS	5.358
Chloride	mg/kg	70	69	77	140	83	91	61	64	NA	NS	NS

Notes:
1. Unsaturated/smear zone versus satured soil conditions based on: (1) measured water levels in adjacent/nearby monitoring wells, (2) soil moisture conditions recorded on soil boring logs, and/or (3) soil moisture contents reported on laboratory analytical reports.
2. Analytical units: µg/kg = micrograms per kilogram (equivalent to parts per billion, ppb)
mg/kg = milligrams per kilogram (equivalent to parts per million, ppm)
3. NA = not analyzed
4. Groundwater Pathway RCL = Residual Contaminant Level for protection of groundwater as presented on the WDNR's RCL Spreadsheet (dated May 2012) referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version)
5. Non-Industrial Direct Contact RCL = Residual Contaminant Level for protection of direct contact at a non-industrial property as presented on the WDNR's RCL Spreadsheet (dated May 2012) with default input parameters as referenced in WDNR guidance document PUB-RR-890 "Soil Residual Contaminant Level Determinations Using the US EPA Regional Screening Level Web Calculator", dated December 20, 2011 (DRAFT version)
6. NS = no standard established
7. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation
8. Exceedances: **BOLD** = Concentration exceeds Groundwater Pathway RCL (unsaturated soil samples only)
ITALICS = Concentration exceeds Non-Industrial Direct Contact RCL (unsaturated soil samples only)

Table A.5
Vapor Analytical Data - Methane
1027 N. Edison Street, Milwaukee, WI
Project Reference #10813

Methane Monitoring Point	Methane Gas	Carbon Dioxide	Oxygen	LEL	Date	Comments
Units	%	%	%	%	-	(All readings open cap unless noted otherwise)
TW-1	0.0	6.0	7.9	0	05/29/08	Closed cap
	0.0	7.9	1.6	0	05/30/08	Closed cap
	0.0	5.1	10.3	0	06/02/08	Closed cap
	0.0	6.9	5.1	0	06/03/08	Closed cap
	0.1	8.0	3.9	2	06/04/08	Closed cap
	0.1	4.1	12.8	2	06/16/08	Open cap
	0.0	5.0	11.2	0	06/17/08	Open cap
	0.0	5.0	11.0	0	06/18/08	Open cap
	0.0	4.5	12.6	0	06/19/08	Open cap
	0.0	0.0	20.7	0	06/20/08	Open cap
TW-2	**4.5**	13.3	7.9	90	05/29/08	Closed cap
	5.4	13.3	0.0	108	05/30/08	Closed cap
	3.8	13.7	0.2	76	06/02/08	Closed cap
	4.3	13.7	0.0	86	06/03/08	Closed cap
	6.0	14.0	0.0	120	06/04/08	Closed cap
	16.0	14.2	0.0	320	06/16/08	Open cap
	16.4	14.0	0.0	328	06/17/08	Open cap
	15.1	14.1	0.0	302	06/18/08	Open cap
	13.1	14.1	0.0	262	06/19/08	Open cap
	0.5	0.6	20.1	12	06/20/08	Open cap
TW-3	0.0	0.9	16.0	0	05/29/08	Closed cap
	0.0	0.5	18.5	0	05/30/08	Closed cap
	0.0	1.1	15.9	0	06/02/08	Closed cap
	0.1	1.7	13.6	2	06/03/08	Closed cap
	0.1	2.2	13.1	2	06/04/08	Closed cap
	0.0	0.0	20.8	0	06/16/08	Open cap
	0.1	2.2	12.0	2	06/17/08	Open cap
	0.1	2.0	13.2	2	06/18/08	Open cap
	0.0	1.9	15.0	0	06/19/08	Open cap
	0.0	0.0	20.7	0	06/20/08	Open cap
TW-4	0.0	1.2	18.6	0	05/30/08	Closed cap
	0.0	1.1	18.2	0	06/02/08	Closed cap
	0.0	1.3	17.3	0	06/03/08	Closed cap
	0.0	1.5	17.6	0	06/04/08	Closed cap
	0.1	1.6	16.2	2	06/16/08	Open cap
	0.1	1.7	18.5	2	06/17/08	Open cap
	0.0	1.5	18.4	0	06/18/08	Open cap
	0.0	1.3	18.1	0	06/19/08	Open cap
	0.0	0.0	20.6	0	06/20/08	Open cap

Notes:

LEL = Lower explosive limit (5% for methane)
Bold = methane gas greater than 1.25%

A.6. Other Media of Concern (e.g. sediment or surface water)

No data collected. Groundwater was interpreted to flow northeast. The Milwaukee River is located to the west of the site. Therefore, surface water was not investigated.

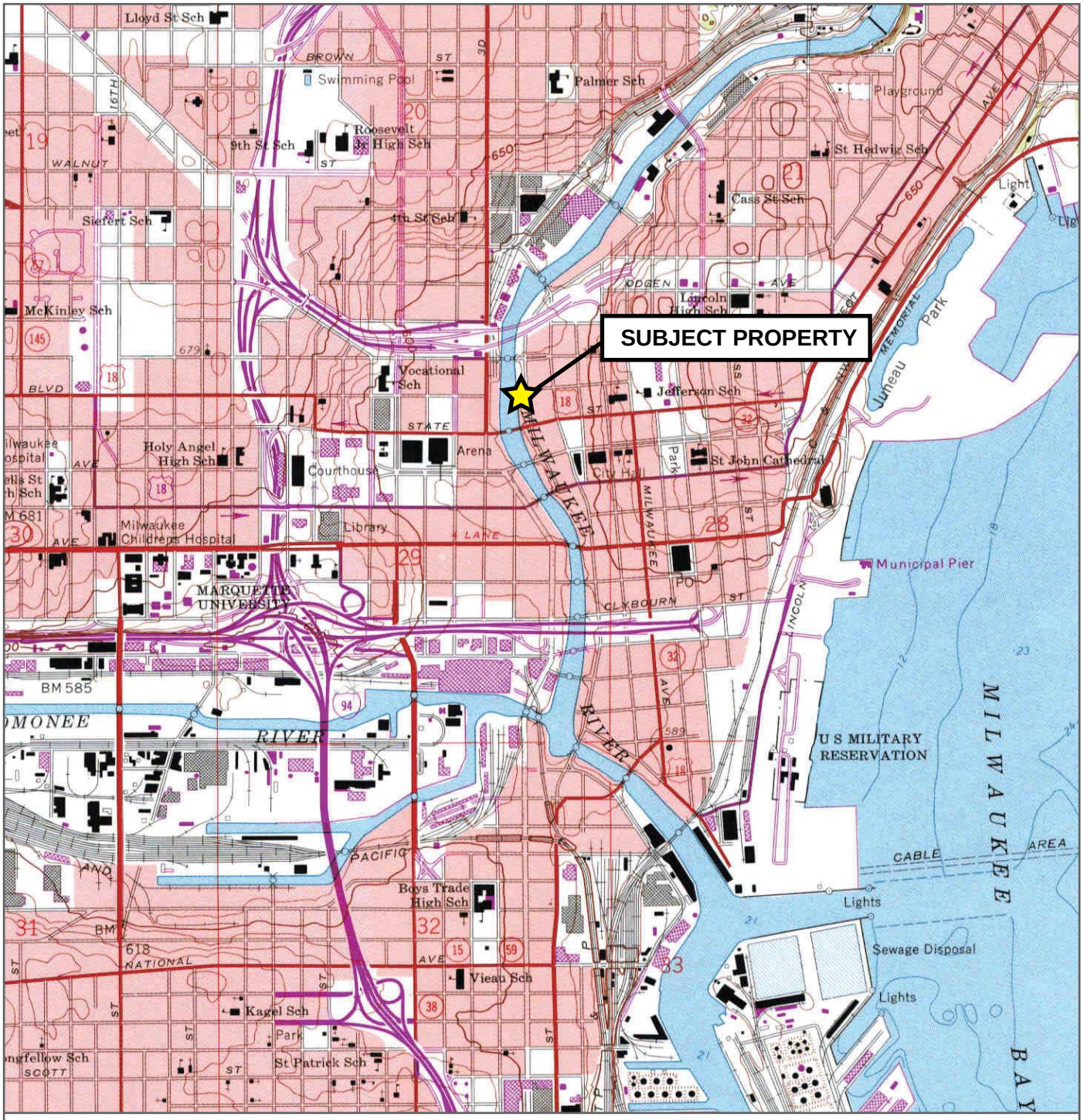
Table A.7
Groundwater Elevation Data
1027 N. Edison Street, Milwaukee, Wisconsin
Sigma Project #10813

Well Identification	Ground Surface Elevation (feet site)	Top of Casing Elevation (feet site)	Screen Interval (feet bgs)	Depth to Groundwater (feet toc)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet site)	Date
TW-1	97.49	98.74 Stick-Up	5-15	11.47	10.22	87.27	02/27/2008
TW-2	100.2	101.52 Stick-Up	7-17	14.46	13.14	87.06	02/27/2008
TW-3	97.39	99.12 Stick-Up	6-16	11.84	9.79	88.26	02/27/2008
TW-4	100.7	102.27 Stick-Up	7-17	14.80	12.75	85.30	02/27/2008
TW-5	98.05	100.10 Stick-Up	6-16	11.48	9.43	88.62	02/27/2008

Notes: MSL = mean sea level
feet toc = feet below top of casing
feet bgs = feet below ground surface

A.8. Other

Not applicable. No additional data collected.



N

Scale 1 : 24,000
1 inch = 2,000 feet

Located in the Northeast 1/4 of Section 29, T7N, R22E
USGS Milwaukee Quadrangle (1971, photorevised 1959)
7.5 minute, 1 : 24,000 Topographic Map Collection

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SITE LOCATION MAP

1027 N. EDISON STREET
MILWAUKEE, WISCONSIN

FIGURE

B.1.a

Date: 03/05/2013 | Created By: SLO | Filename: Fig1_SLM.pdf | Directory: Figures | Project: 10813

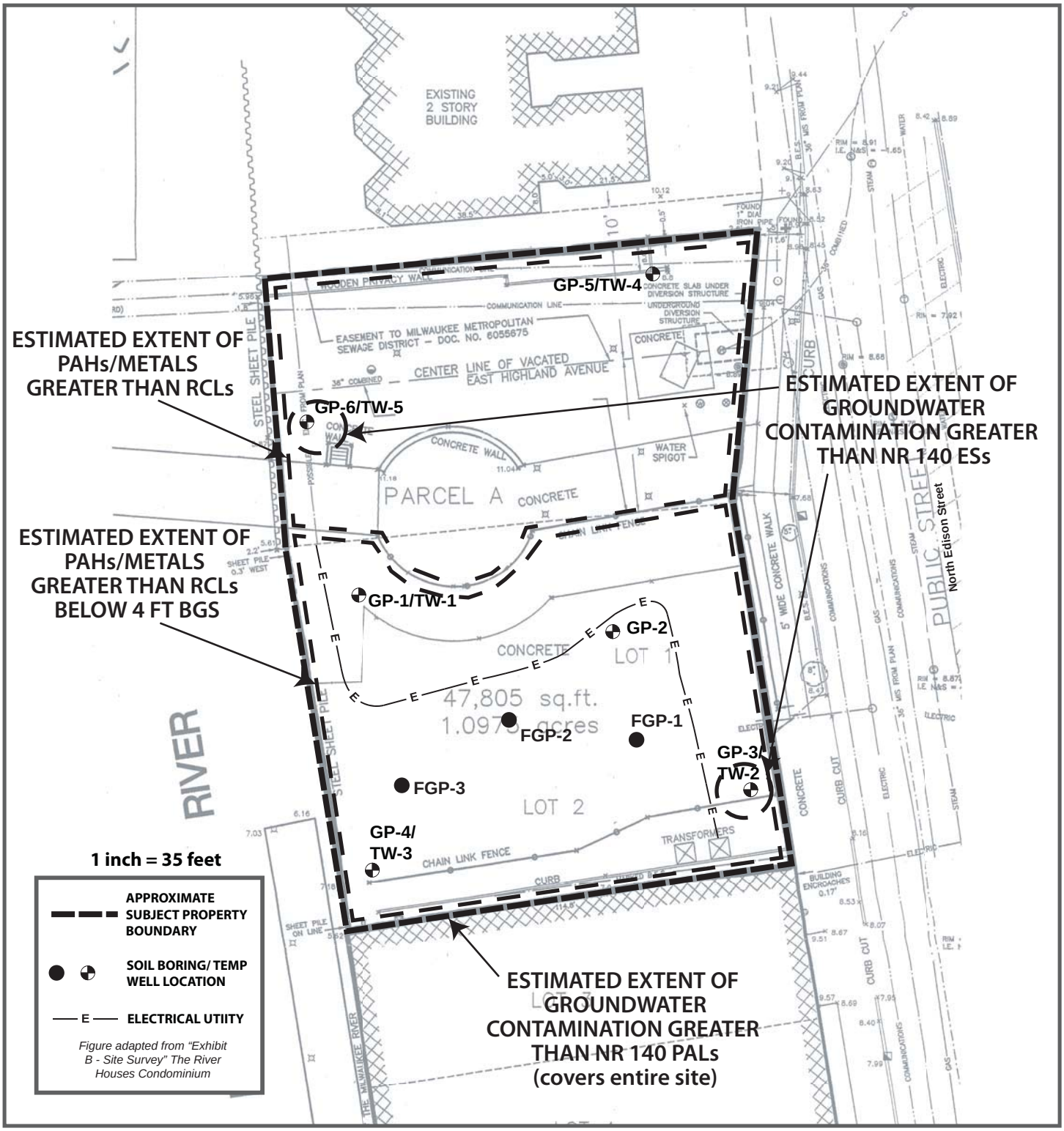

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FIGURE B.1.b
DETAILED SITE MAP

Wisconsin Department of Natural Resources

RR Sites Map

What is RRSitesMap?

Themes | Find Location | Layers | Legend | Download Data | Print | Not All Sites Located | Help

Full State | Zoom In | Zoom Out | Zoom Last | Move | XY | Identify/Site Info | Air Photo On/Off | Advanced Tools

Themes

Click on one of the highlighted theme names below to change to a different theme.

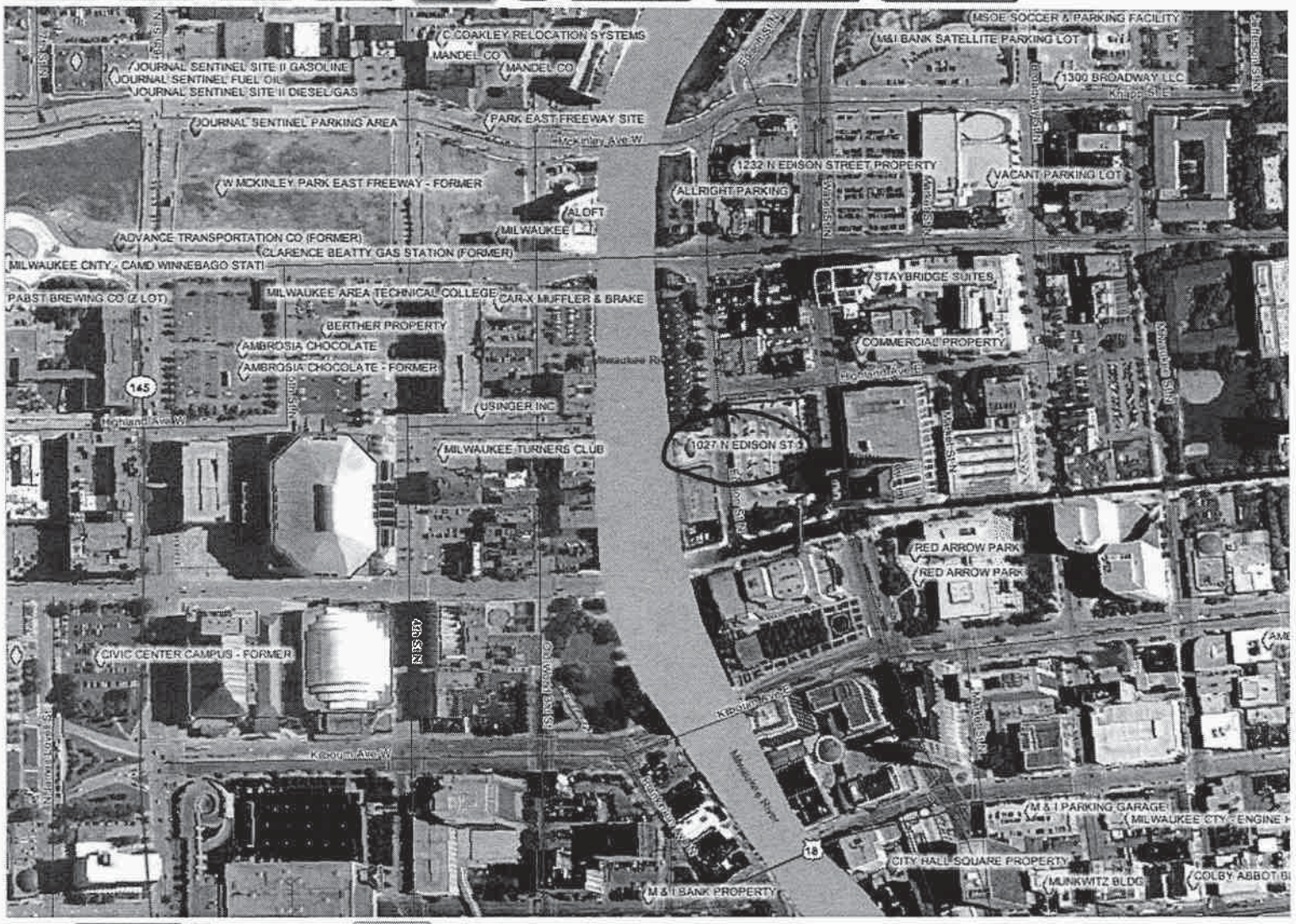
Contaminated and Cleaned Up Sites
more information

GIS Registry
more information

Liability Limitations and Clarifications
more information

DNR Financial Actions
more information

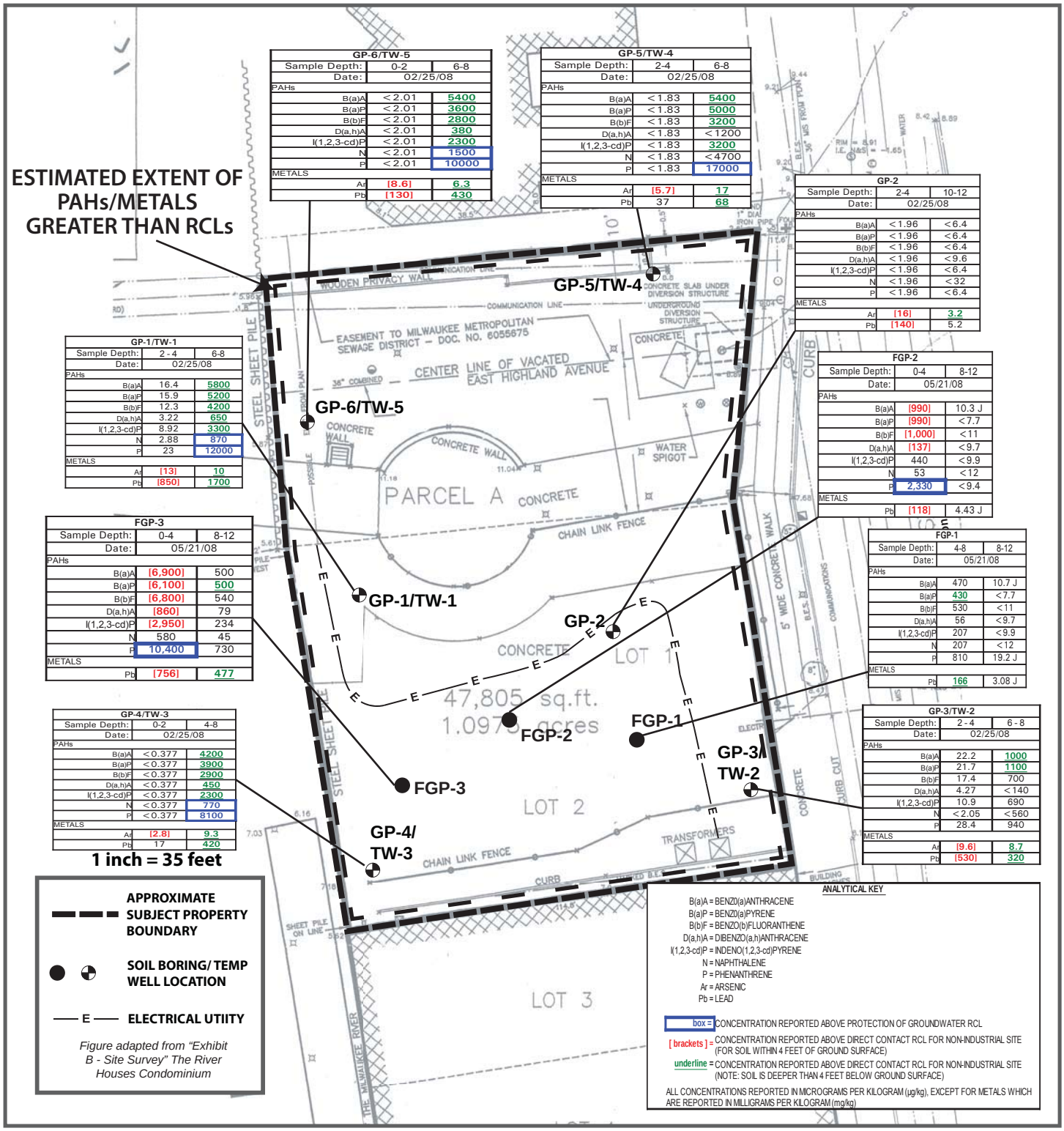
For more information on this page and to report incorrect locations, please contact Jane Lemcke at Jane.Lemcke@wisconsin.gov or at 608-267-0554.



Scale: 1: 4,064 go Selected Map Tool: Move Pan

| BRRTS on the Web | Contaminated Databases | Comments | WTM Coordinates: X= 690882 Y= 286196 Meters --- Latitude= 43°2'50.0" N (43.04723), Longitude= 87°54'6.9" W (-87.90192)

Figure B.1.c.



GP-6/TW-5		
Sample Depth:	0-2	6-8
Date:	02/25/08	
PAHs		
B(a)A	< 2.01	5400
B(a)P	< 2.01	3600
B(b)F	< 2.01	2800
D(a,h)A	< 2.01	380
I(1,2,3-cd)P	< 2.01	2300
N	< 2.01	1500
P	< 2.01	10000
METALS		
Ar	[8.6]	6.3
Pb	[130]	430

GP-5/TW-4		
Sample Depth:	2-4	6-8
Date:	02/25/08	
PAHs		
B(a)A	< 1.83	5400
B(a)P	< 1.83	5000
B(b)F	< 1.83	3200
D(a,h)A	< 1.83	< 1200
I(1,2,3-cd)P	< 1.83	3200
N	< 1.83	< 4700
P	< 1.83	17000
METALS		
Ar	[5.7]	17
Pb	37	68

GP-2		
Sample Depth:	2-4	10-12
Date:	02/25/08	
PAHs		
B(a)A	< 1.96	< 6.4
B(a)P	< 1.96	< 6.4
B(b)F	< 1.96	< 6.4
D(a,h)A	< 1.96	< 9.6
I(1,2,3-cd)P	< 1.96	< 6.4
N	< 1.96	< 32
P	< 1.96	< 6.4
METALS		
Ar	[16]	3.2
Pb	[140]	5.2

GP-1/TW-1		
Sample Depth:	2 - 4	6-8
Date:	02/25/08	
PAHs		
B(a)A	16.4	5800
B(a)P	15.9	5200
B(b)F	12.3	4200
D(a,h)A	3.22	650
I(1,2,3-cd)P	8.92	3300
N	2.88	870
P	23	12000
METALS		
Ar	[13]	10
Pb	[850]	1700

FGP-2		
Sample Depth:	0-4	8-12
Date:	05/21/08	
PAHs		
B(a)A	[990]	10.3 J
B(a)P	[990]	< 7.7
B(b)F	[1,000]	< 11
D(a,h)A	[137]	< 9.7
I(1,2,3-cd)P	440	< 9.9
N	53	< 12
P	2,330	< 9.4
METALS		
Pb	[118]	4.43 J

FGP-3		
Sample Depth:	0-4	8-12
Date:	05/21/08	
PAHs		
B(a)A	[6,900]	500
B(a)P	[6,100]	500
B(b)F	[6,800]	540
D(a,h)A	[860]	79
I(1,2,3-cd)P	[2,950]	234
N	580	45
P	10,400	730
METALS		
Pb	[756]	477

FGP-1		
Sample Depth:	4-8	8-12
Date:	05/21/08	
PAHs		
B(a)A	470	10.7 J
B(a)P	430	< 7.7
B(b)F	530	< 11
D(a,h)A	56	< 9.7
I(1,2,3-cd)P	207	< 9.9
N	207	< 12
P	810	19.2 J
METALS		
Pb	166	3.08 J

GP-4/TW-3		
Sample Depth:	0-2	4-8
Date:	02/25/08	
PAHs		
B(a)A	< 0.377	4200
B(a)P	< 0.377	3900
B(b)F	< 0.377	2900
D(a,h)A	< 0.377	450
I(1,2,3-cd)P	< 0.377	2300
N	< 0.377	770
P	< 0.377	8100
METALS		
Ar	[2.8]	9.3
Pb	17	420

GP-3/TW-2		
Sample Depth:	2 - 4	6 - 8
Date:	02/25/08	
PAHs		
B(a)A	22.2	1000
B(a)P	21.7	1100
B(b)F	17.4	700
D(a,h)A	4.27	< 140
I(1,2,3-cd)P	10.9	690
N	< 2.05	< 560
P	28.4	940
METALS		
Ar	[9.6]	8.7
Pb	[530]	320

ANALYTICAL KEY

B(a)A = BENZO(a)ANTHRACENE
B(a)P = BENZO(a)PYRENE
B(b)F = BENZO(b)FLUORANTHENE
D(a,h)A = DIBENZO(a,h)ANTHRACENE
I(1,2,3-cd)P = INDENO(1,2,3-cd)PYRENE
N = NAPHTHALENE
P = PHENANTHRENE
Ar = ARSENIC
Pb = LEAD

box = CONCENTRATION REPORTED ABOVE PROTECTION OF GROUNDWATER RCL
[brackets] = CONCENTRATION REPORTED ABOVE DIRECT CONTACT RCL FOR NON-INDUSTRIAL SITE (FOR SOIL WITHIN 4 FEET OF GROUND SURFACE)
underline = CONCENTRATION REPORTED ABOVE DIRECT CONTACT RCL FOR NON-INDUSTRIAL SITE (NOTE: SOIL IS DEEPER THAN 4 FEET BELOW GROUND SURFACE)

ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER KILOGRAM (µg/kg), EXCEPT FOR METALS WHICH ARE REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

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FIGURE B.2.a
PRE-REMEDIAL SOIL QUALITY MAP

B.2.b. Post-remedial Soil Contamination Map

No data collected. Remedial excavation activities were conducted to remove the direct contact exposure pathway, but impacted soil is known to remain at depth.

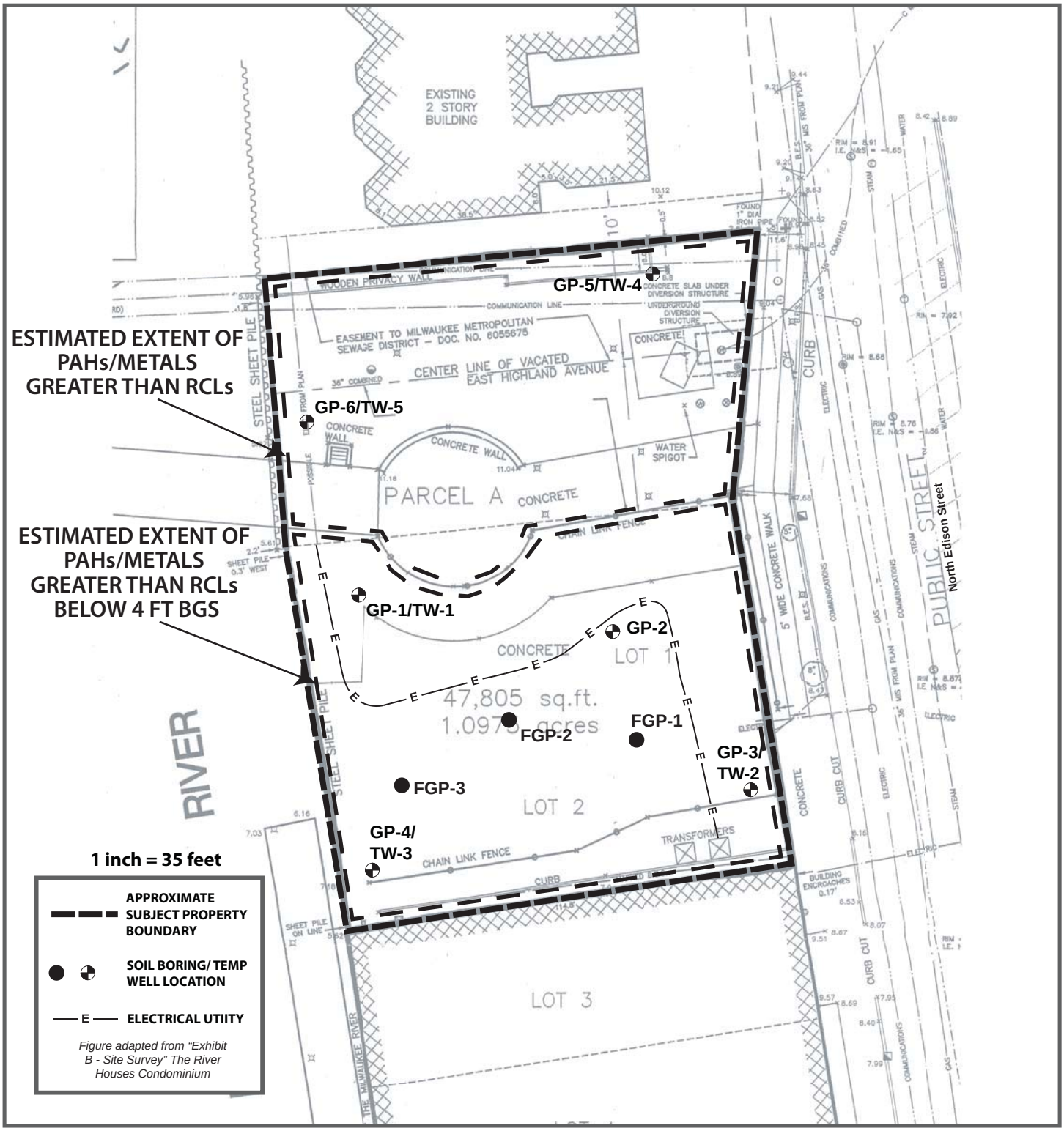

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FIGURE B.2.c
REMAINING SOIL CONTAMINATION MAP

B.3.a. Geological Cross-Section Figure(s)

Not included. Remaining groundwater contamination is remote and minimal. A cross-section was not critical in evaluating potential remedial actions or defining the degree and extent of impacts.

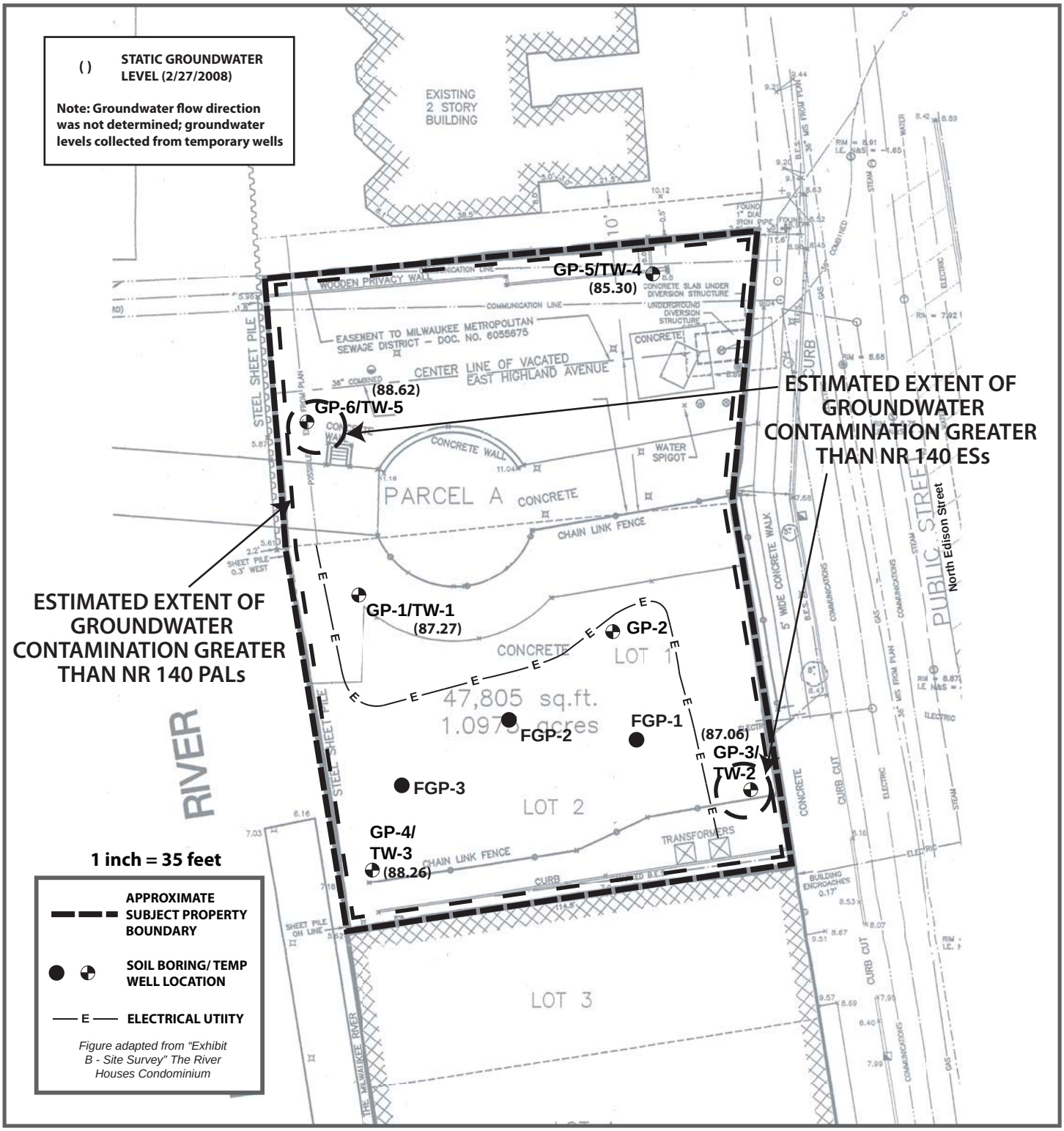

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FIGURE B.3.b
GROUNDWATER QUALITY MAP

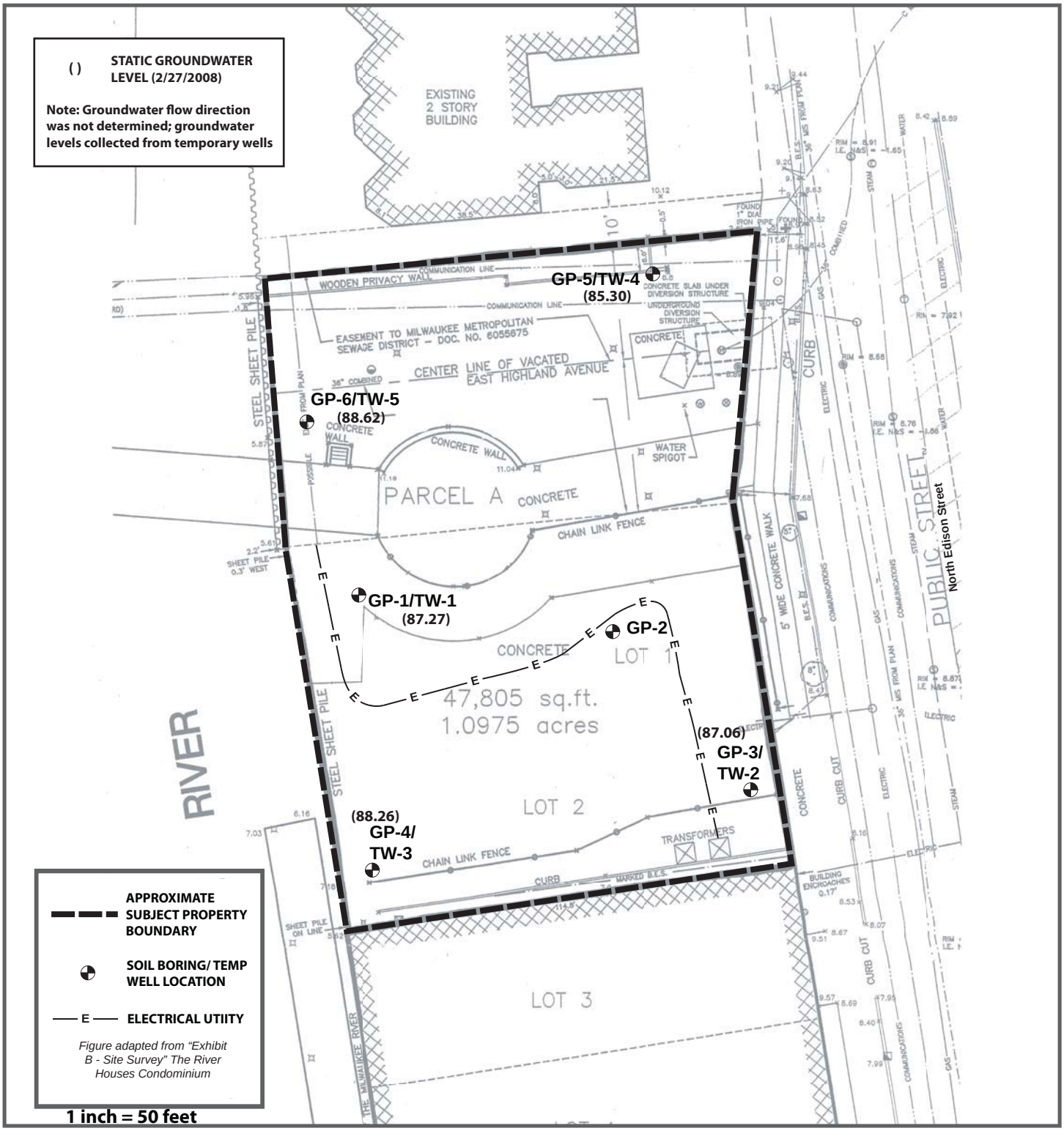

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FIGURE B.3.c

GROUNDWATER CONTOUR MAP (2/27/08)

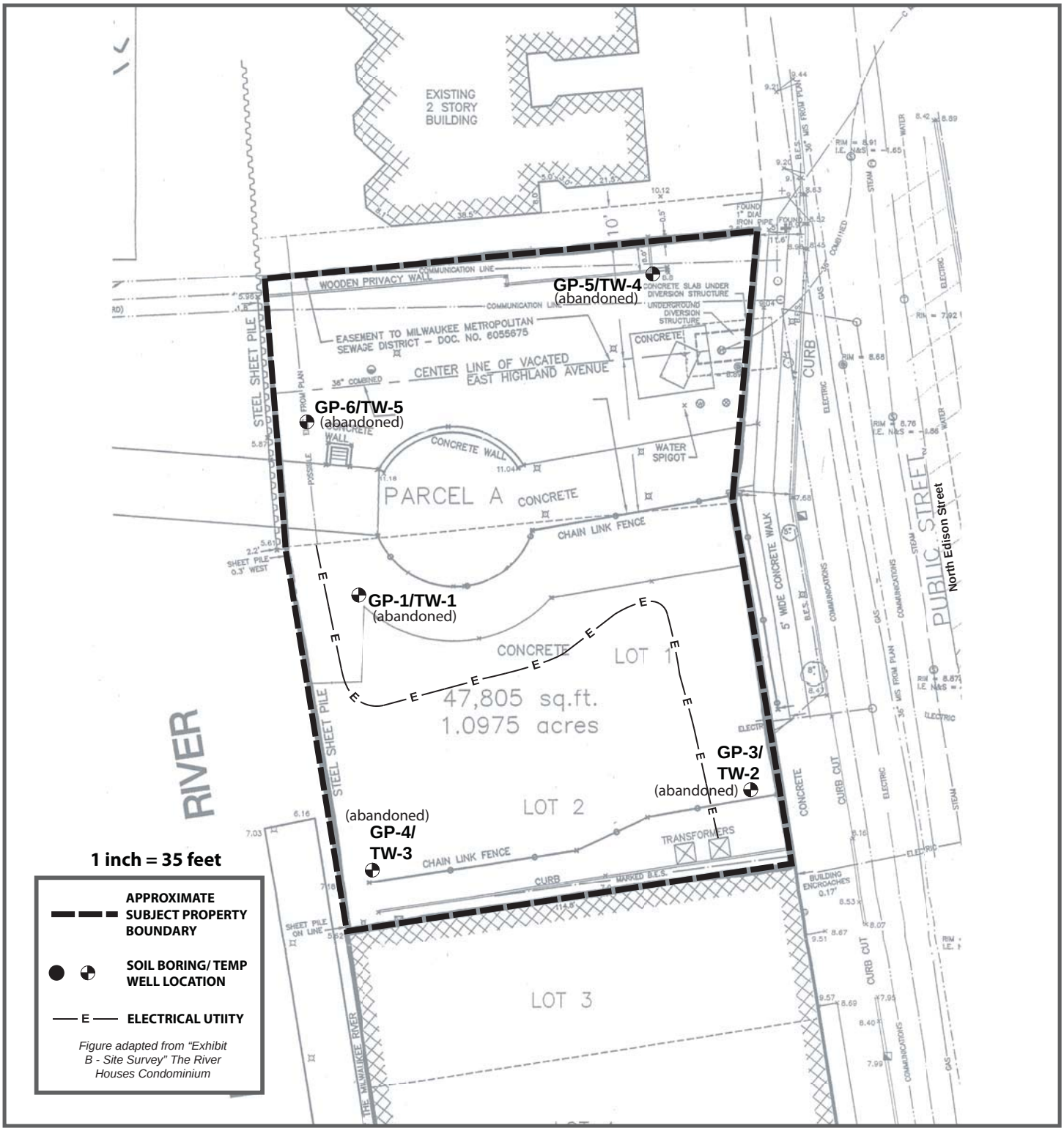

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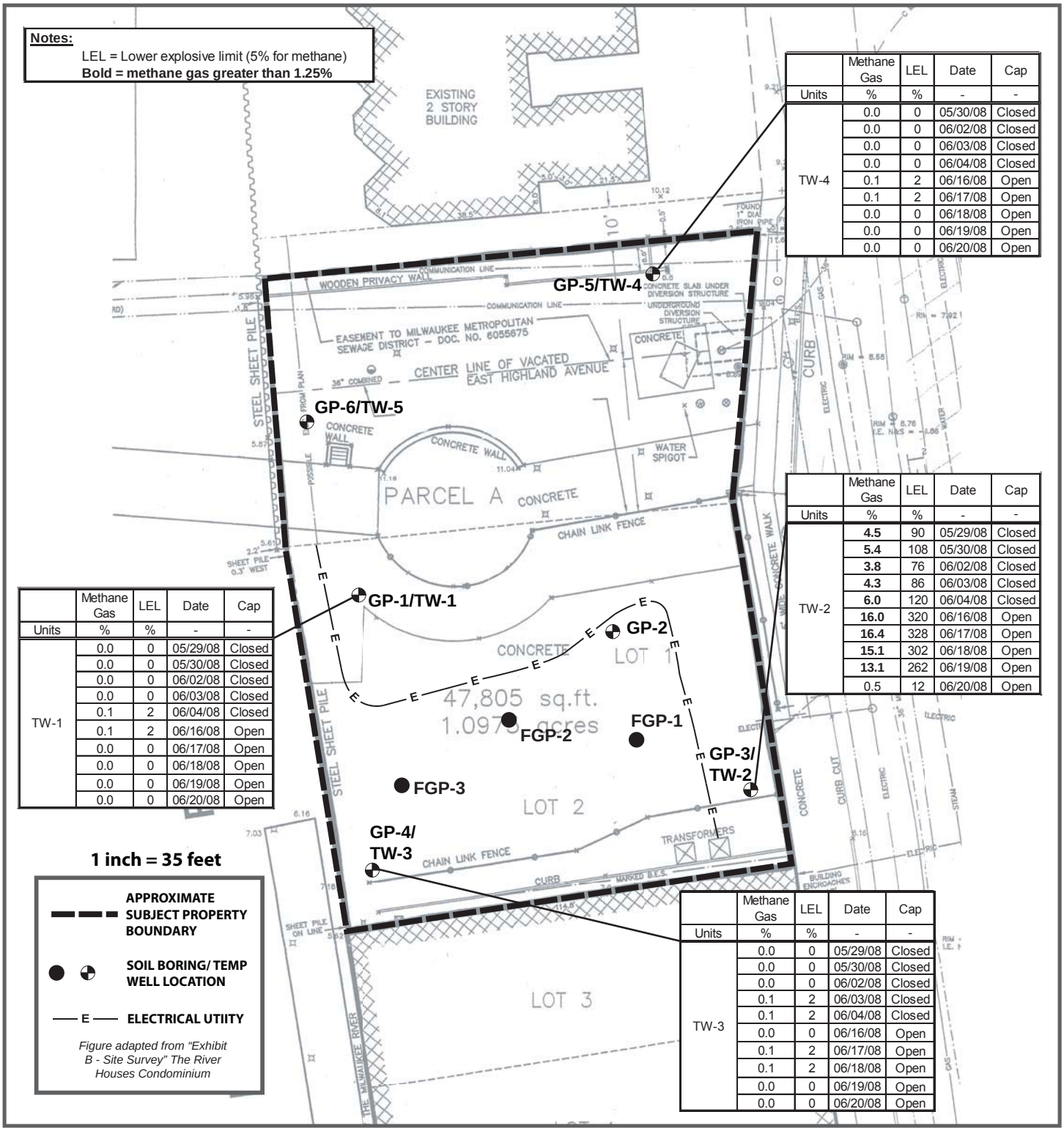
FIGURE B.3.d

MONITORING WELL MAP

Notes:
LEL = Lower explosive limit (5% for methane)
Bold = methane gas greater than 1.25%



	Methane Gas	LEL	Date	Cap
Units	%	%	-	-
TW-4	0.0	0	05/30/08	Closed
	0.0	0	06/02/08	Closed
	0.0	0	06/03/08	Closed
	0.0	0	06/04/08	Closed
	0.1	2	06/16/08	Open
	0.1	2	06/17/08	Open
	0.0	0	06/18/08	Open
	0.0	0	06/19/08	Open
	0.0	0	06/20/08	Open

	Methane Gas	LEL	Date	Cap
Units	%	%	-	-
TW-2	**4.5**	90	05/29/08	Closed
	5.4	108	05/30/08	Closed
	3.8	76	06/02/08	Closed
	4.3	86	06/03/08	Closed
	6.0	120	06/04/08	Closed
	16.0	320	06/16/08	Open
	16.4	328	06/17/08	Open
	15.1	302	06/18/08	Open
	13.1	262	06/19/08	Open
	0.5	12	06/20/08	Open

	Methane Gas	LEL	Date	Cap
Units	%	%	-	-
TW-1	0.0	0	05/29/08	Closed
	0.0	0	05/30/08	Closed
	0.0	0	06/02/08	Closed
	0.0	0	06/03/08	Closed
	0.1	2	06/04/08	Closed
	0.1	2	06/16/08	Open
	0.0	0	06/17/08	Open
	0.0	0	06/18/08	Open
	0.0	0	06/19/08	Open
	0.0	0	06/20/08	Open

	Methane Gas	LEL	Date	Cap
Units	%	%	-	-
TW-3	0.0	0	05/29/08	Closed
	0.0	0	05/30/08	Closed
	0.0	0	06/02/08	Closed
	0.1	2	06/03/08	Closed
	0.1	2	06/04/08	Closed
	0.0	0	06/16/08	Open
	0.1	2	06/17/08	Open
	0.1	2	06/18/08	Open
	0.0	0	06/19/08	Open
	0.0	0	06/20/08	Open

1 inch = 35 feet

APPROXIMATE SUBJECT PROPERTY BOUNDARY

SOIL BORING/ TEMP WELL LOCATION

ELECTRICAL UTIITY

Figure adapted from "Exhibit B - Site Survey" The River Houses Condominium

Client: City of Milwaukee

Site Address: 1027 North Edison Street
Milwaukee, WI 53202

Project: #10813

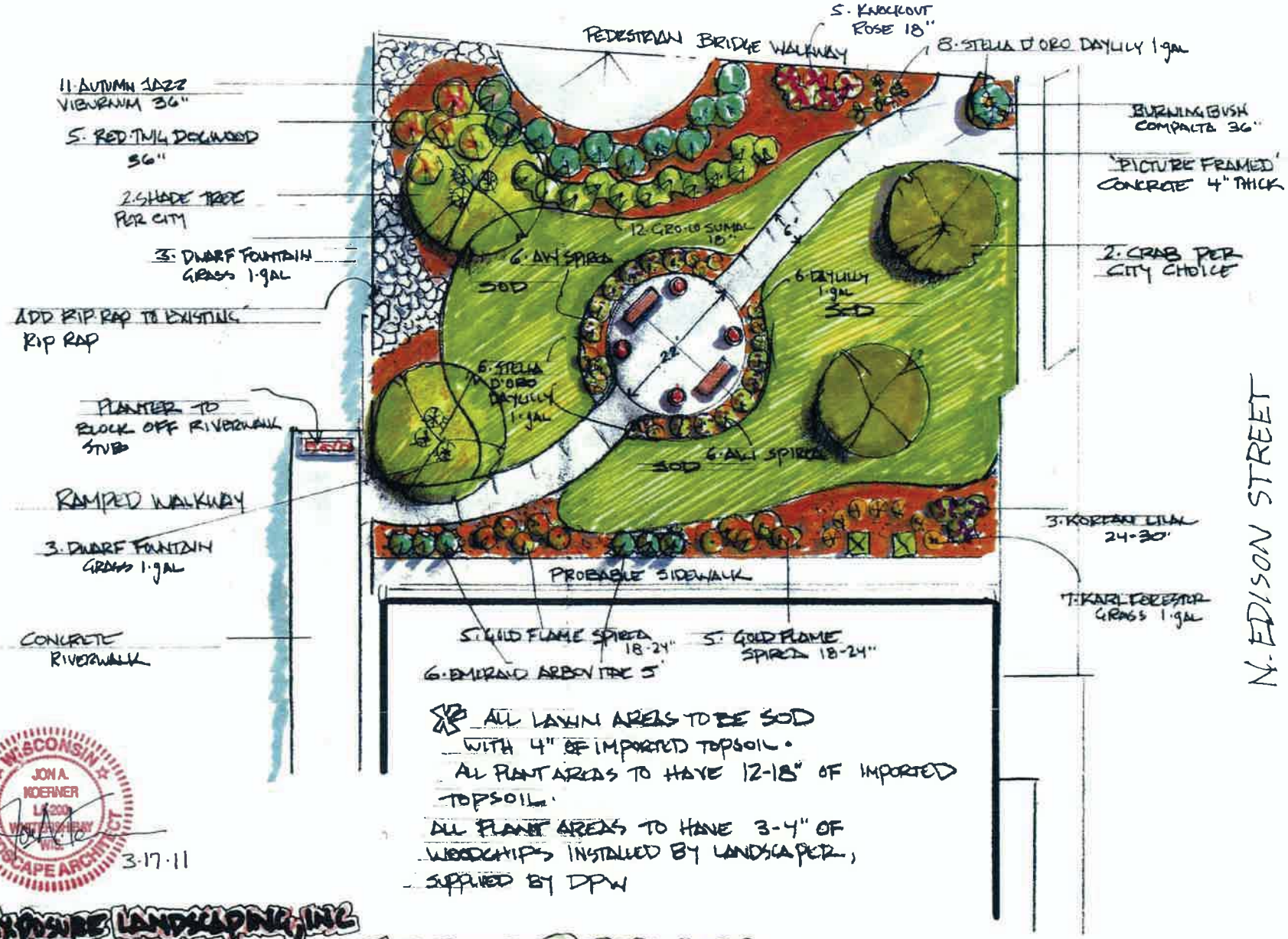
THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
414-643-4200

N

FIGURE B.4.a
VAPOR INTRUSION MAP

B.4.b. Other Media of Concern (e.g. sediment or surface water)

No data collected. Groundwater was interpreted to flow northeast. The Milwaukee River is located to the west of the site. Therefore, surface water was not investigated.



ALL LAWN AREAS TO BE SOD WITH 4" OF IMPORTED TOPSOIL.
ALL PLANT AREAS TO HAVE 12-18" OF IMPORTED TOPSOIL.
ALL PLANT AREAS TO HAVE 3-4" OF WOODCHIPS INSTALLED BY LANDSCAPER, SUPPLIED BY DPW

WISCONSIN JON A. NOERNER LA-2000 WHITEFISH BAY WI LANDSCAPE ARCHITECT
3-17-11

Northern Exposure Landscaping, Inc
9850 N. Wasaukee Rd.
Mequon, WI 53097
242-3877 3-17-11
SCALE: 1/16" = 1'-0"

EDISON PARKWAY · CONCEPTUAL PLAN

MILWAUKEE, WISCONSIN SHEET IS 11"x17"

Figure B.4.c. Current Landscaping

Documentation of Remedial Action (Attachment C)

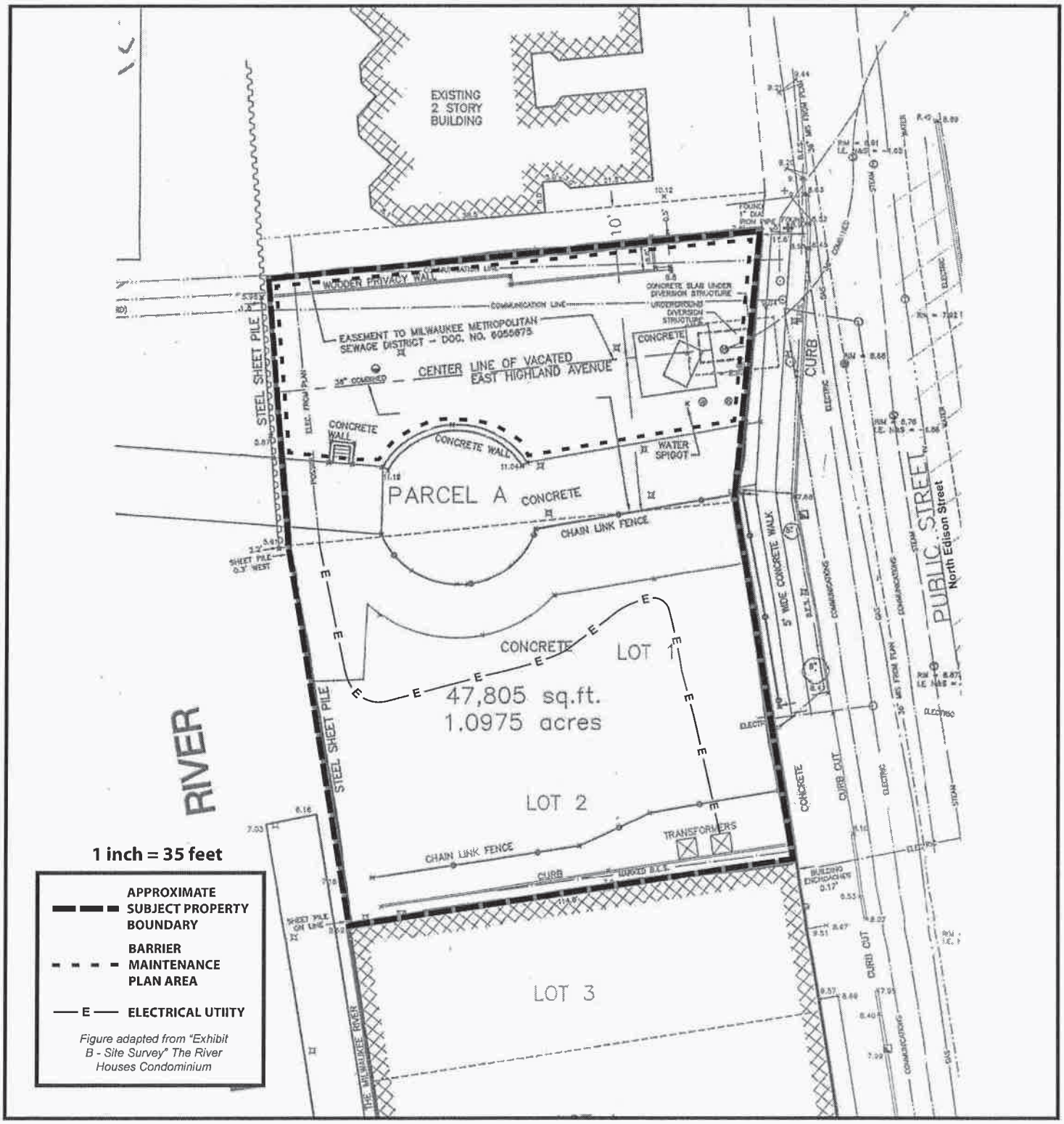
DISCLAIMER

Documents contained in Attachment C of the Case Closure – GIS Registry (Form 4400-202) are not included in the electronic version (GIS Registry Packet) available on RR Sites Map to limit file size.

For information on how to obtain a copy or to review the file, please contact the Remediation & Redevelopment (RR) Environmental Program Associate (EPA) at dnr.wi.gov/topic/Brownfields/Contact.html

WISCONSIN
DEPT. OF NATURAL RESOURCES

D.1. Location Map



Client: City of Milwaukee

Site Address: 1027 North Edison Street
Milwaukee, WI 53202

Project: #10813

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N

FIGURE 1
BARRIER MAINTENANCE PLAN MAP

THE SIGMA GROUP
Single Source. Sound Solutions.

Photo Page 1

Photo 1: Final site conditions. Structures, topsoil, and vegetation serve as a barrier. (looking west across northern portion of site.)

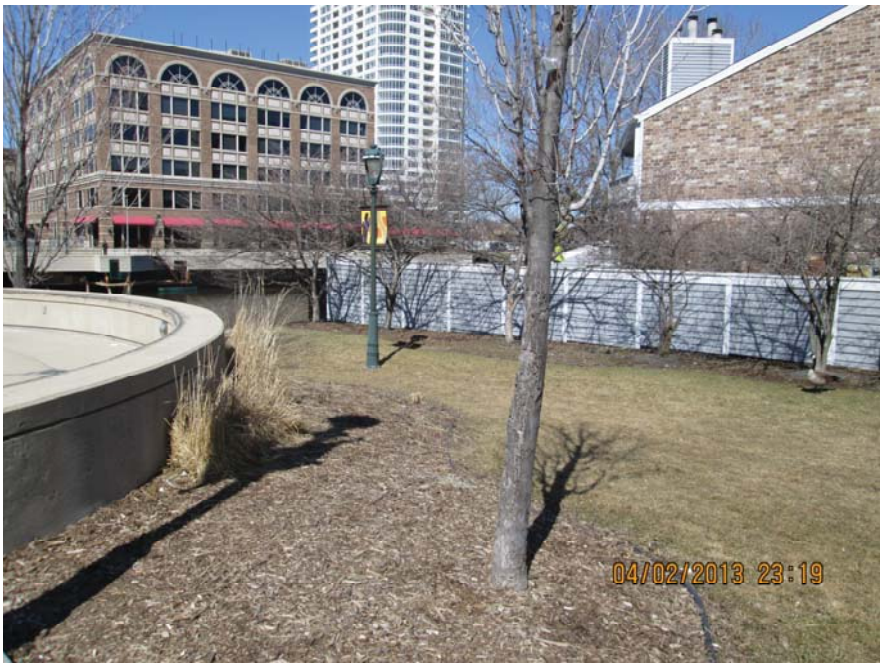


Photo 2: Final site conditions. Structures, topsoil, and vegetation serve as a barrier. (looking northwest on northern portion of site.)

SITE NAME:	**1027 N. Edison Street**		
ADDRESS:	**1027 N. Edison Street**	**Sigma Project Number:**	**10813**

D.2. Brief Description of Residual Contamination

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Legal Description: Lots 1 and 2 in Block 49, in the Plat of Milwaukee, a recorded subdivision in the Northeast Fractional ¼ of Section 29, Township 7 North, Range 22 East in the City of Milwaukee, County of Milwaukee, State of Wisconsin.

Also that part of vacated E. Highland Ave., in the Northeast ¼ of Section 29, Township 7 North, Range 22 East, which is bounded and described as follows:

Commencing at a point in the Northeasterly corner of Lot 1 in Block 49 of the Plat of Milwaukee, a recorded subdivision in said ¼ Section, running thence westerly along the north line of said Lot 1 and its extension westerly to a point in the easterly established dock line of the Milwaukee River; thence northerly along said easterly established dock line to a point in the center line of vacated E. Highland Ave., said point being the point of the beginning of the land to be described; thence continuing northerly along said established dock line to a point which is 10 feet South of the South line of Lot 11 in Block 50 of said subdivision; thence easterly and parallel to the South line of Lot 11 and its westerly extension to a point in the westerly line of N. Edison St.; thence southwesterly along the westerly line of N. Edison St. to the center line of vacated E. Highland Ave.; thence westerly along the center line of vacated E. Highland Ave. to the point of commencement.

Parcel ID Number: 392-1177-100-7

Introduction

This document is the Maintenance Plan ("Plan") for a barrier at the above referenced property in accordance with s. NR 724.13(2), Wis. Admin. Code. The maintenance activities relate to the existing clean soil cap occupying the area over the contaminated soil on-site.

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

- The case file in the WDNR Southeast regional office;
- BRRTS on the Web (WDNR's internet based data base of contaminated sites): http://**dnr.wi.gov/botw**/SetUpBasicSearchForm.do;
- GIS Registry PDF file for further information on the nature and extent of contamination: http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=brrts2; and
- The WDNR project manager for Milwaukee County.

Description of Contamination

Soil contaminated by arsenic, lead, and polynuclear aromatic hydrocarbon (PAH) compounds is located at a depth of 1 foot beneath the ground surface within the northern portion of the property located at 1027 North Edison Street, Milwaukee, Wisconsin. The extent of the soil contamination is shown on the attached Barrier Maintenance Plan Map, Figure 1.

D.3. Description of Maintenance Action(s)

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Description of the Barrier to be Maintained

The Barrier consists of six inches of topsoil and vegetation cover. The Barrier covers the northern portion of the site.

The clean soil barrier over the contaminated soil serves as a barrier to prevent direct human contact with residual soil contamination that might otherwise pose a threat to human health. Based on the current use of the property, the barrier should function as intended unless disturbed.

Maintenance Activities

The property owner shall take the following steps to assure that uncontrolled disturbances of the barrier do not occur:

- WDNR's case closure documents and GIS Registry will establish future land use, development, and/or management restrictions of the site. This Plan will be incorporated into the case closure documents and/or GIS Registry, which will together identify the environmental impacts, the nature of the barrier, the requirements regarding the management of impacted soils, and the availability of this Plan.

- A copy of this Plan will be available from the property owner to all interested parties.

- A copy of this Plan will be provided to all private utilities seeking easements for the purpose of installing facilities on the property.

- A copy of this Plan will be provided to all contractors and repair workers, including utility and landscaping services, during construction and repairs on the property.

- On-site personnel employed by current or future business operators will be made familiar with the contents and restriction requirements of this Plan.

Annual Inspection

The clean soil barrier overlying the contaminated soil will be inspected once a year, normally in the spring after all snow and ice is gone, for any potential problems that can cause 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. As necessary, the barrier will be repaired as soon as practical to maintain integrity. Repairs may include, but are not limited to, the following: application of additional clean soil to site, restoration of vegetation.

A log of the inspections and any repairs will be maintained by the property owner on the attached "Barrier Inspection Log". The log will include recommendations for necessary repair of any areas where the underlying soil is exposed. 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 will be made available for inspection by representatives of the WDNR upon reasonable prior request.

Planned Breaches of Barrier

In the event the barrier is breached, the following precautions shall be taken:

- Property owner will make soil data available to workers who penetrate the barrier to allow for appropriate health and safety planning.

- The excavation zone and any soils excavated will be secured from public access until the cap is restored. The excavated soil will be placed on an impervious surface (e.g., existing concrete or asphalt pavement or plastic) and covered with plastic. Excavated soil shall be sampled and disposed of at a licensed landfill facility in accordance with applicable solid and/or hazardous waste rules and regulations, unless the WDNR or its successor agency grants approval to replace the soil into the same excavation.

- The barrier will be restored to meet original conditions. This work, including the proper disposal of excess soils, should be completed as soon as practical. Any replacement barrier will be subject to the same inspection and maintenance guidelines as outlined in this Plan unless otherwise indicated by the WDNR or its successor agency.

- Details of the barrier breach, the handling of excavated soils, individuals responsible for the work, and the restoration of the barrier shall be recorded in the barrier maintenance log. The maintenance log will be available for inspection by representatives of the WDNR upon reasonable prior request.

Prohibition of Activities and Notification of WDNR

The following activities are prohibited on any portion of the property where the clean soil cap is to be maintained as shown on the attached "Cap Maintenance Plan Map", unless prior written approval has been obtained from the WDNR or its successor agency: (1) removal of the existing barrier; (2) replacement with another barrier; (3) excavating or grading of the land surface; (4) filling on capped 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 may be amended or withdrawn upon written approval from the WDNR or its successor agency.

D.4. Inspection Log

BARRIER INSPECTION and MAINTENANCE LOG
MARCH 2013
1027 NORTH EDISON STREET, MILWAUKEE, WISCONSIN
FID #341200530 / WDNR BRRTS #02-41-556655

Inspection Date	Inspector	Condition of Barrier	Recommendations	Has recommended maintenance from previous inspection been implemented?

D.5. Contact Information

BARRIER MAINTENANCE PLAN
MARCH 2013

PROPERTY LOCATED AT:
1027 NORTH EDISON STREET
MILWAUKEE, WISCONSIN

FID #341200530
WDNR BRRTS #02-41-556655

Contact Information
March 2013

Responsible Party: Redevelopment Authority of the City of Milwaukee
Attention: Ms. Karen Dettmer, P.E.
809 N. Broadway
Milwaukee, WI 53202
Telephone: (414) 286-5642

Signature: _____

Consultant: Sigma Environmental Services, Inc.
1300 West Canal Street
Milwaukee, WI 53233
Telephone: (414) 643-4200
Email: smeer@thesimgagroup.com
Contact: Mr. Stephen Meer, P.E.

WDNR: Wisconsin Department of Natural Resources
Remediation & Redevelopment Program
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212
Telephone: (414) 263-8500
Email: nancy.ryan@wisconsin.gov
Contact: Ms. Nancy Ryan

ATTACHMENT E
Monitoring Well Information

All five temporary monitoring wells were located and properly abandoned prior to remedial excavation activities.

ATTACHMENT F
Notifications to Owners of Impacted Properties

No neighboring properties were impacted in relation to the site.

G.1. Deeds

DOC.# 09804648

REGISTER'S OFFICE
Milwaukee County, WI

RECORDED
10/16/2009 11:18AM

JOHN LA FAVE
REGISTER OF DEEDS
AMOUNT: $13.00

FEE EXEMPT #: 2
0
** The above recording information verifies that this document has been electronically recorded and returned to the submitter. **

Document Number

QUIT CLAIM DEED
Document Title

Name and Return Address
Redevelopment Authority of the City of Milwaukee
Attn: Real Estate Section (Miller)
809 North Broadway
Milwaukee, WI 53202-3617

Tax Key No.: 392-1177-100-7

This transaction is exempt from the Wisconsin Real Estate Transfer Fee and Transfer Return pursuant to Sec. 77.25(2) and 77.255 of the Wisconsin Statutes. Grantor is not a lender in this transaction.

Recording Area

THIS INDENTURE, Made this 15th Day of October, 2009, between the **CITY OF MILWAUKEE**, a municipal corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin, located at Milwaukee, Wisconsin as Grantor, and the **REDEVELOPMENT AUTHORITY OF THE CITY OF MILWAUKEE**, an agency created, organized and existing as a separate and distinct body corporate of the State of Wisconsin under Section 66.1333, Wisconsin Statutes, hereinafter referred to as the Act, as Grantee:

WITNESSETH, That the said Grantor, for and in consideration of One Dollar and other good and valuable consideration, has given, granted, bargained, sold, remised, released, and quit claimed, and by these presents does give, grant, bargain, sell, remise, release, and quit claim unto the said Grantee, and to its successors and assigns forever, whatever interest Grantor has in the real estate situated in the City of Milwaukee, County of Milwaukee, State of Wisconsin, the following described real estate ("Property"):

Lots 1 and 2 in Block 49, in the Plat of Milwaukee, a recorded subdivision in the Northeast Fractional ¼ of Section 29, Township 7 North, Range 22 East in the City of Milwaukee, County of Milwaukee, State of Wisconsin.

Also that part of vacated E. Highland Ave., in the Northeast ¼ of Section 29, Township 7 North, Range 22 East, which is bounded and described as follows:
Commencing at a point in the Northeasterly corner of Lot 1 in Block 49 of the Plat of Milwaukee, a recorded subdivision in said ¼ Section, running thence westerly along the north line of said Lot 1 and its extension westerly to a point in the easterly established dock line of the Milwaukee River; thence northerly along said easterly established dock line to a point in the center line of vacated E. Highland Ave., said point being the point of beginning of the land to be described; thence continuing northerly along said established dock line to a point which is 10 feet South of the South line of Lot 11 in Block 50 of said subdivision; thence easterly and parallel to the South line of Lot 11 and its westerly extension to a point in the westerly line of N. Edison St.; thence southwesterly along the westerly line of N. Edison St. to the center line of vacated E. Highland Ave.; thence westerly along the center line of vacated E. Highland Ave. to the point of commencement.

Address: 1027 North Edison Street
Tax Key No.: 392-1177-100-7

Conveyance of the Property was approved by Grantor's Common Council by passage of Resolution No. 090700 on October 13, 2009 and by Grantee on September, 2009 by passage of Resolution No. 10127.

TO HAVE AND TO HOLD, the same, together with all and singular the appurtenances and privileges as thereunto belonging or in any wise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever of the said Grantor, either in law or equity, either in possession or expectancy of, to the only proper use, benefit and behoof of the said Grantee, its successors and assigns forever, but subject to the terms and conditions hereinbefore set forth in this Deed.

IN WITNESS WHEREOF, Grantor has executed this Deed in its name by its Special Deputy Commissioner of the Department of City Development, at Milwaukee, Wisconsin, this 15th Day of October, 2009.

CITY OF MILWAUKEE

Elaine M. Miller
Special Deputy Commissioner
Department of City Development

STATE OF WISCONSIN)
)SS
COUNTY OF MILWAUKEE)

Personally came before me this 15th Day of October, 2009, Elaine M. Miller, Special Deputy Commissioner of the Department of City Development, to me known to be the person who executed the foregoing instrument pursuant to Resolution File No. 090700 adopted by its Common Council on October 13, 2009.

Rhonda G. Szallai
Notary Public
Milwaukee County, Wisconsin
My commission October 14, 2012

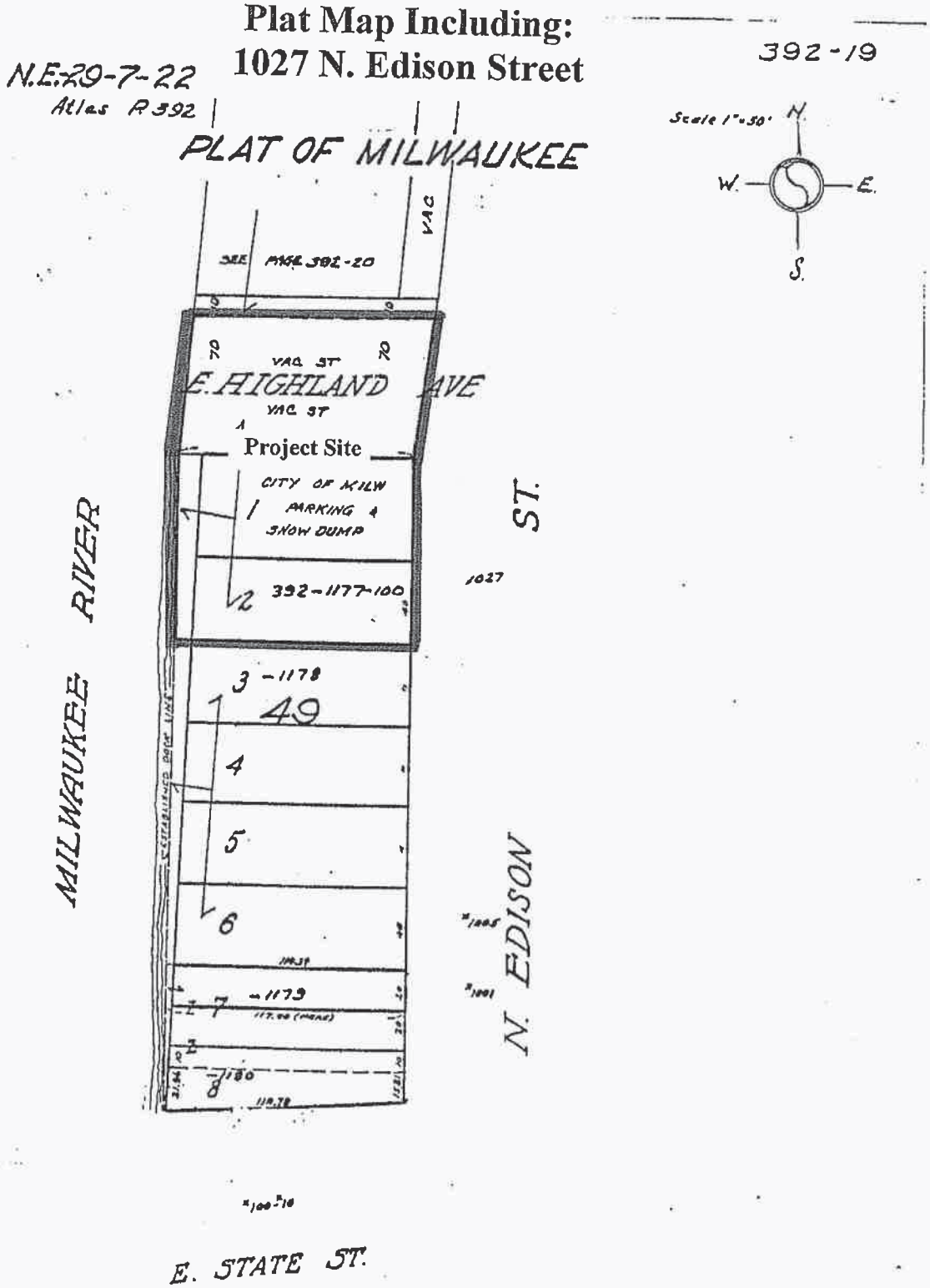
RHONDA G. SZALLAI NOTARY STATE OF WISCONSIN

This document was drafted by the City of Milwaukee Department of City Development (Miller).

G.2. Certified Survey Map

Map 2

Plat Map Including:
1027 N. Edison Street



G.3. Verification of Zoning

Assessment Detail and Listing Characteristics

Taxkey	Premise Address	Nbhd	Plat	Assessment County	Class
3921177100	1027 N EDISON ST	6460	39219	Milwaukee	Exempt

Ownership Information

CITY OF MILW REDEV AUTH

809 N BROADWAY
MILWAUKEE WI 532023617

Conveyance

Deed Type	QC
Date	2009-10-15
Fee	0.00

Name Change: 1900-01-01

Assessment Information

Year	Current	Previous
Land	0	0
Imprv	0	0
Total	0	0

Org Year	Drop Year	Zoning	Ald. District	Census
		C9B(A)	4	144-113

Legal Description

PLAT OF MILWAUKEE IN SECS (28-29-33)-7-22 BLOCK 49 LOTS 1 & 2 & PART VAC ST ADJ

Exempt Property Attributes Not Available

Recent Permits | Sale History | Assessment History | Tax Balance | About Site

Data Provided By Assessor Query From: 98.103.53.250

SUBCHAPTER 7
DOWNTOWN DISTRICTS

295-701. Purposes. 1. HIGH-DENSITY RESIDENTIAL (C9A). The high-density residential district is designed and intended to serve as a highly urban living environment for those persons or families desirous of a residential location in close proximity to the city's downtown, as delineated in the city's comprehensive plan.

2. RESIDENTIAL AND SPECIALTY USE (C9B). The residential and specialty use district is designed and intended to allow a compatible mix of urban activities which together result in a cohesive district offering a variety of residential, employment-generating, and neighborhood-serving or specialty retail uses.

3. NEIGHBORHOOD RETAIL (C9C). The neighborhood retail district is designed and intended as a convenience shopping district serving surrounding residential neighborhoods.

4. CIVIC ACTIVITY (C9D). The civic activity district is designed and intended to serve as a regional center for office, governmental, educational, cultural and recreational activities. Retail uses should be limited and should be designed to serve employes in the district, patrons of cultural, recreational, or educational activities, or district residents.

5. MAJOR RETAIL (C9E). The major retail district is designed and intended to be a highly active, intensely developed regional shopping district featuring both convenience and shoppers' retail goods and services.

6. OFFICE AND SERVICE (C9F). The office and service district is designed and intended to serve both as a retail trade and a personal and business services district, as well as a major center of office commercial activities.

7. MIXED ACTIVITY (C9G). The mixed activity district is designed and intended to permit a wide range of retail, service, light manufacturing, warehousing and residential uses. Because of their operational characteristics, many of the uses allowed in the mixed activity district should be relegated to the peripheral portions of the downtown district.

8. WAREHOUSING AND LIGHT MANUFACTURING (C9H). The warehousing and light manufacturing district is designed and intended to permit those manufacturing, warehousing and distribution uses which, because of tradition or because of functional relationships, choose to locate in the peripheral portions of the downtown district.

295-703. Uses. 1. USE TABLE. Table 295-703-1 indicates the use classifications for various land uses in the downtown districts. The uses in this table are defined in s. 295-201. The following are the use classifications indicated in Table 295-703-1:

a. "Y" indicates a permitted use. This use is permitted as a matter of right subject to all performance standards.

b. "L" indicates a limited use. This use is permitted only when the use meets the standards of sub. 2. If the use cannot meet these standards, it shall be permitted only upon board approval of a special use permit pursuant to s. 295-311-2, unless otherwise prohibited by sub. 2.

c. "S" indicates a special use. This use is permitted only if the board approves a special use permit pursuant to s. 295-311-2.

d. "N" indicates a prohibited use.

G.4. Signed Statement

STATEMENT BY RESPONSIBLE PARTY

The Redevelopment Authority of the City of Milwaukee, the responsible party for the property located at 1027 N. Edison Street, Milwaukee, Wisconsin, states that the legal description for each property within the contaminated site boundaries for case file reference 02-41-556655 is attached.

K. Dethmer Karen Dethmer — 3/14/13

Signature of Representative for Responsible Party — Date

Senior Environmental Project Engineer
Redevelopment Authority of the City of Milwaukee